

# ALLIED RADIO

100 N. WESTERN AVE., CHICAGO 80, ILL.

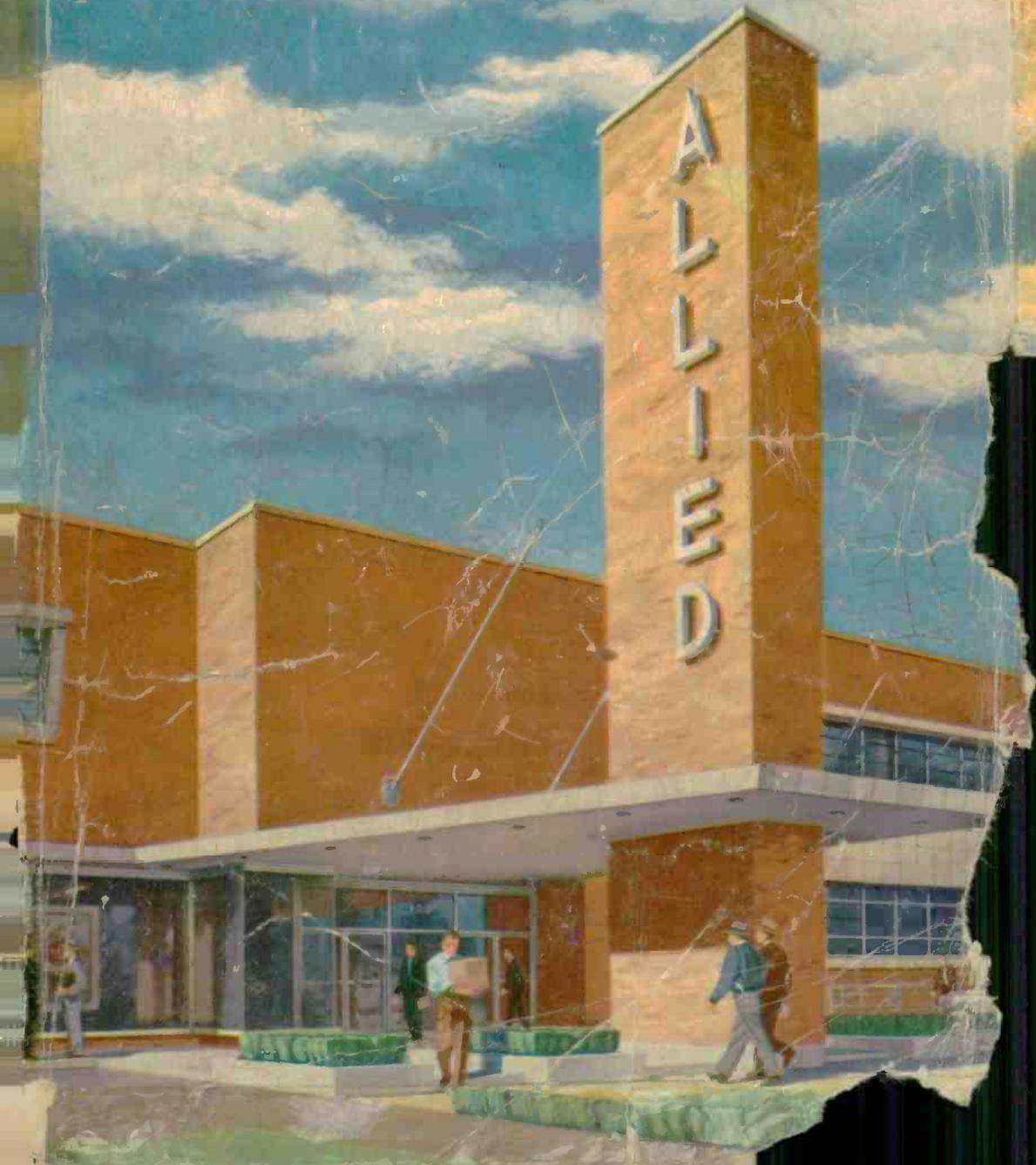
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CATALOG NO. 140

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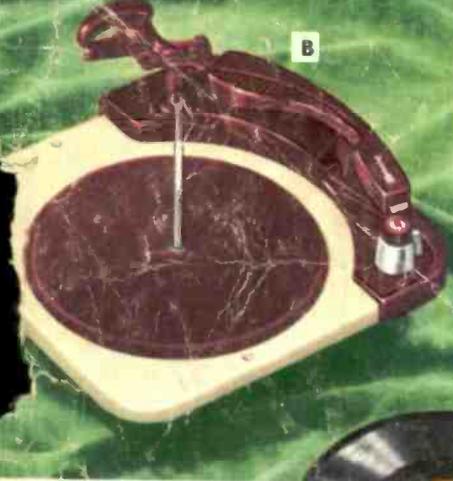
*Everything in Radio, Television & Industrial Electronics*



Best Hi-Fi  
**EBCOR**  
 3-Speed diskchangers



A



B



**Hi-Fi Series Webcor 3-Speed Diskchangers**

Latest Webcor 3-speed record changers. Offer outstanding performance and smart, up-to-the-minute styling. Available in colors to match any interior motif. Automatically play 7", 10" or 12" records at 33½, 45 or 78 rpm. "Step-drive" coupling assures positive speed selection. Have push-off type changer mechanism with cushioned spindle for fast, gentle changing. Properly balanced arm for minimum record and stylus wear. Needle set down clutch mechanism assures smooth pickup arm operation and precise indexing. High-quality four-pole, shaded-pole motor for constant turntable speed and minimum hum level. Mechanism is jam-proof. Motor automatically shuts off after last record is played (on all sizes). In "off" position, idler is disengaged; prevents "flat spots." No AC "pop" when changer is turned on or off. Housings and inside-out recordings may be played manually. Require spindle spiders for 45 rpm records (see p. 34). For 105-120 v., 60 cycle AC.

Fig. A—Series 1126-27 with Plug-In Heads

For custom installation and modernization of existing phono systems. Supplied with two plug-in heads which accommodate magnetic cartridges; also take ceramic and crystal cartridges having conventional ½-inch mounting centers. Magnetic cartridges require preamplifier. Plug-in heads are easily inserted in pickup arm. Will replace Webcor Models 56, 156, 256, 356, 106 and 126. Available in russet and beige, burgundy and beige; also chrome and ebony model (bottom of page). Minimum mounting space: 15x15"; 6½" above and 3" below top of mounting board. With 3-ft. AC cord and plug, 3-ft. phono cable and pin plug, template, and instructions. Less cartridges. Shpg. wt., 16 lbs.

96 RX 785. Russet and beige. List Each. \$50.50  
 96 RX 786. Burgundy and beige. NET EACH. 39.59

Fig. B—Series 1126-1 with Ceramic Cartridge

Same as above, but equipped with dual-stylus, turnover-type ceramic cartridge. Lever on end of pickup arm selects proper stylus for microgroove or standard records. Stylus have osmium tips.

96 RX 787. Russet and beige. List Each. \$55.50  
 96 RX 788. Burgundy and beige. NET EACH. 43.51

Series 1126-270 with G. E. Triple-Play Cartridge

Same as above, but equipped with G.E. RPX-050 triple-play magnetic cartridge. Dual-tip sapphire stylus. Knob at top of arm selects proper tip for microgroove or standard records. Requires preamplifier. Available in colors below; also in chrome and ebony (see below).

96 RX 789. Russet and beige. List Each. \$58.00  
 96 RX 790. Burgundy and beige. NET EACH. 45.47

**Hi-Fi Series 1127 Diskchangers on Bases**

Series 1126-27, 1126-1 and 1126-270 changers (described above), but mounted on smartly styled, matching metal bases. Ready for use on bookshelf, table, etc. With 8-ft. AC cord and plug, 8-ft. phono cable and pin plug. Same type of base as illustrated with chrome and ebony model at bottom of page. Size: 14x14x9" high. Shpg. wt., 18 lbs.

MODEL 1127-27, 1126-27 on base.  
 96 RX 791. Russet and beige. List Each. \$56.75  
 96 RX 792. Burgundy and beige. NET EACH. 44.49  
 MODEL 1127-1, 1126-1 on base.  
 96 RX 793. Russet and beige. List Each. \$61.50  
 96 RX 794. Burgundy and beige. NET EACH. 48.22  
 MODEL 1127-270, 1126-270 on base.  
 96 RX 795. Russet and beige. List Each. \$62.50  
 96 RX 796. Burgundy and beige. NET EACH. 49.00

For listings of Webcor Series 1121 changers, see page 34.

**EASY TO INSTALL.** All Webcor Diskchangers are designed for maximum ease of installation. Webcor pre-cut mounting boards (see page 34) eliminate need for making motor cut-outs. Units are supplied with phono and AC cables equipped with plugs. Depend on Webcor for easy installation as well as top performance.



**New Chrome & Ebony Hi-Fi Diskchangers**

Series 1126-27 and 1126-270 changers with all features and specs described above—but styled in chrome and ebony. The gleaming chrome and rich, contrasting ebony of these changers lend an ultra-smart custom appearance to any installation. May be mounted on matching ebony base (below). The 1126-270 is shown mounted on this base in the illustration at left. Shpg. wt., 16 lbs.

1126-27. Supplied with two plug-in heads which accommodate magnetic cartridges; also take ceramic and crystal cartridges with conventional ½-inch mounting centers. Magnetic cartridges require preamplifier. Less cartridges.  
 96 RX 797. List. \$57.50. NET. 45.08

1126-270. Equipped with G.E. RPX-050 triple-play magnetic cartridge. Dual-tip sapphire stylus. Knob at top of arm selects proper tip for microgroove or standard records. Requires preamplifier.  
 96 RX 798. List. \$64.50. NET. 50.57

**EBONY BASE.** Ebony-finish metal base. Permits using above changers on bookshelf, table top, etc. Shown with 1126-270 changer in illustration at left. Shpg. wt., 2 lbs.  
 96 RX 782. List. \$8.75. NET. 6.86

# ALLIED Guarantees Your Complete Satisfaction

We guarantee to bring you the world's largest and finest stocks of radio, television and electronic equipment at lowest prices.

We guarantee to give you the immediate benefit of any price reductions made after this catalog is printed.

We guarantee that our merchandise conforms to the standards of the Radio-Electronics-Television Manufacturers' Association and will perform in the manner intended for such apparatus.

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in every way—or we want you to return  
it at once for exchange or refund.**

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from One Reliable Source**

### ALLIED RADIO

100 N. WESTERN AVE., CHICAGO 80, ILL.

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*For Time Payment Plan, See Page 299*

**SEE INDEX ON PAGE 301**



# ALLIED

*your Electronic Supply House*

Your orders are shipped promptly and efficiently from our modern plant, designed by experts to give you the best service in the Electronic industry. Our new building covers a full city block in the center of Chicago, with 147,000 square feet of efficient floor space for better, faster service. Ultra-modern facilities, including the use of pneumatic tubes and conveyor belts, carefully planned and time-saving routines, a unique method of stock-keeping, a superbly trained staff—all contribute to cut hours off normal handling time on your orders. Finally, our central location, both in Chicago and in the country, enables us to make best use of all available transportation agencies to speed your orders on their way. Depend on ALLIED to *serve you best*.



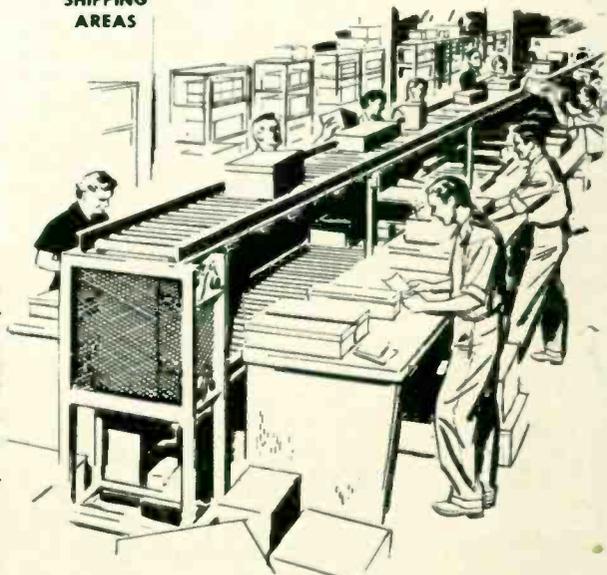
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Over 1500 feet of conveyor belts and 7200 feet of pneumatic tubes carry transactions and merchandise on a speedy order-filling schedule. Skilled, *interested* people, operating in a pleasant environment, give your orders special attention all along the line. Up-to-date numbering and stocking systems, personal inspection, and double-checking insure that your orders are filled accurately at ALLIED. At the end of the conveyor line there is a final check of each order before it is referred for careful packing and proper shipment. We follow your shipping instructions or ship your order by the best method of transportation.

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GENERAL OFFICE VIEW

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You are invited to consult with our technical experts for information and advice in making your selections. Our staff includes specialists in every type of electronic equipment for high fidelity, amateur, service, builders' or industrial applications. Write to us and you will receive a prompt, authoritative and friendly reply. Take advantage of this free service.

### friendly, personal help

Our greatest satisfaction comes from giving you personal service and attention.

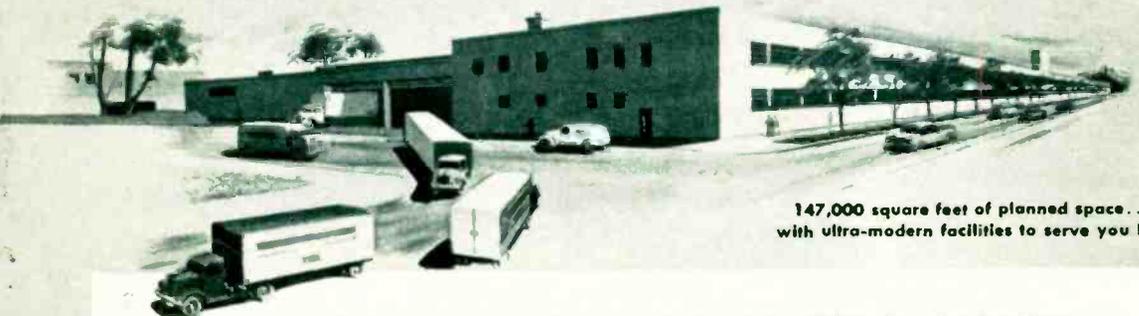
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PHONE ORDER SECTION

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147,000 square feet of planned space...  
with ultra-modern facilities to serve you best

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world's largest electronic stocks, one order to ALLIED will cover all your needs. Ultra-modern facilities and skilled organization assure you of fast delivery of your orders. To speed procurement, to save effort and money, order from this catalog—recognized everywhere as the most widely used Electronic Supply Guide.

at **ALLIED** you get the most  
for your money in thrilling  
**HIGH FIDELITY**



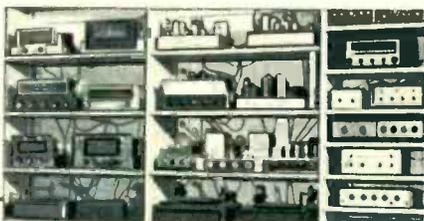
One of ALLIED'S  
Audition and Test  
Hi-Fi Sound Studios

You get more from the foremost supplier of High Fidelity equipment



buy with confidence... enjoy the very finest in Hi-Fi

Only specialized audio components can provide true fidelity reproduction of voice and music. High Fidelity components have been available from ALLIED since the very first units were designed, and we have been pioneers in the supply of everything new in high fidelity. When you place an order with ALLIED, you can buy with confidence. Select the system or separate units you want from the pages that follow and enjoy the very finest in hi-fi. *Your complete satisfaction is guaranteed.* See our money-back guarantee below.



select from the world's largest stocks

This catalog presents the world's largest selection of high-fidelity components—amplifiers, tuners, speakers, enclosures, record changers, recorders. The famous names, the dependable standard brands, the hard-to-get accessories—all are included in a wide range of prices. Whether you select a complete system or separate components, ALLIED ships your orders promptly.

**15-day trial—  
money-back guarantee**

Order any high fidelity system or separate component on our regular terms. Test the performance under your own operating conditions. If within 15 days you are not fully satisfied, return the equipment to us. We will refund your full purchase price, less transportation charges. Every hi-fi unit, also, is covered by the regular RETMA warranty against defects in material and workmanship.

**easy terms to fit your budget**

Hi-fi systems and separate components priced at \$45.00 or more may be purchased on ALLIED'S Easy Payment Plan. Pay only 10% down. See page 299 for full details.



**quality checked in our labs**

ALLIED stocks only the quality products of reputable and established manufacturers. New high fidelity components selected by our buyers are tested in our laboratories. Performance checks are also made with the *Auditioner* described on the opposite page. Catalog descriptions are, therefore, reliable and authoritative. You can depend on ALLIED'S quality checks.



**expert, personal consulting service**

The audio specialists on our technical staff have had many years of practical experience in matching high fidelity components. Let us help you select a music system of well-balanced custom hi-fi components to fit your taste and purse. Your inquiry will receive a prompt reply with detailed recommendations. Take advantage of this free, personal consulting service.

# ALLIED'S

personally recommended

**BEST BUYS** in

**Auditioner-Selected\***

**COMPLETE MUSIC SYSTEMS**

The **ALLIED Auditioners**. Our salesrooms feature two ultra-modern Hi-Fi Studios, each equipped with the exclusive *Auditioner*. These push-button consoles permit instant "A-B" comparison of any combination of amplifier, speaker, enclosure, tuner, changer, pickup and cartridge. Lights on a "scoreboard" identify units in operation. The *Auditioner* was utilized as an invaluable aid in selecting the ALLIED matched systems featured in this catalog.

Each of the custom high fidelity systems listed below and on pages 6-8 is an outstanding "best buy" in its price class. Using the "Auditioner," discriminating music lovers and our technicians compared numerous combinations. Other systems were selected on recommendations of product research organizations, authoritative publications and experts in the field. System components may be installed anywhere, with or without cabinets—in existing furniture, on book shelves, or in custom cabinets.

Should you prefer, you may replace any one component used in a system with another of your own selection; just add or subtract the difference in price. A system modified in this way retains all easy assembly features. For expert assistance please write to our Audio Division.



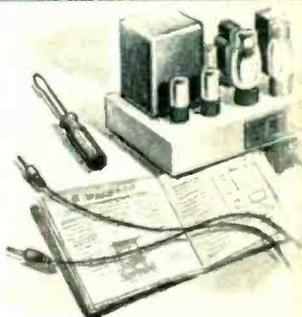
### Easy-to-install plug-in components

No soldering, no special skill needed

All custom-packaged systems listed below are complete with tubes, hardware, easy-to-follow instructions, and interconnecting cables. We've even color-coded all cables, terminals and sockets, so that hook-up is just as simple as matching colors! Cables have plugs—cartridges are mounted. All you need is a screwdriver. Installation is easy.

**CHOICE OF PHONO OR PHONO-RADIO SYSTEMS.** Systems are available with or without radio tuner. (Tuner may be added later to phono systems.) There are separate price and stock number columns for systems with and without tuner.

**RECOMMENDATIONS.** Styl: Many of the systems employ diamond, rather than sapphire styli. Diamond styli, in spite of higher initial cost, are better because they last longer and minimize record wear. Cabinets: We can supply cabinets for almost any set of components. See pages 22 and 31 for descriptions; write for literature and prices on other cabinets.



### SELECT AN ALLIED "BEST BUY" MATCHED HI-FI SYSTEM

Amplifier	Phono	Cartridge	Speaker	Stock No. Phono System	NET	Tuner	Stock No. Radio-Phono System†	NET
Grommes LJ-3	V-M 935HF	G.E. RPX-050	G.E. 850-D	94 PA 138	98.50	Harman-Kardon A-100	94 PA 139‡	157.25
Bell 2122C	W/C 1127-270 (on base)	G.E. RPX-050	G.E. S1201A	94 PA 140	120.25	Harman-Kardon A-200	94 PA 141‡	189.00
Grommes 55-PG	W/C 1126-27	G.E. RPX-040, -041	E-V SP12-B	94 PA 142	138.25	Pilot AF-723	94 PA 143‡	217.50
Knight 720 (Amplifier section)	W/C 1126-27	G.E. RPX-040, -041	University 6201	.....	.....	Knight 720 (Tuner section)	94 PA 154‡	224.00
Pilot AA-903	W/C 1126-27	G.E. RPX-040, -041	University "Diffusicone" 12	94 PA 144	146.75	Pilot AF-723	94 PA 145‡	226.00
"Golden Knight"	W/C 1126-27	G.E. RPX-050	E-V 12TRX-B	94 PA 146	185.25	Knight 727	94 PA 147‡	237.50
Bogen D010	W/C 1126-27	G.E. RPX-052	E-V SP12	.....	.....	Bogen R300	94 PA 155‡	251.25
Craftsmen C400	Garrard RC80	G.E. RPX-052	E-V SP15	.....	.....	Craftsmen C10	94 PA 156‡	321.50
Bogen DB20	Garrard RC80	G.E. RPX-052	Jim Lansing D130	94 PA 148	245.75	Bogen R640	94 PA 149‡	350.75
Bell 2200C	Garrard RC80	Pickering D-240 S-220	Stephens 206AX	94 PA 150	317.95	Bell 2210	94 PA 151‡	459.50
Craftsmen C550	Garrard RC80	Pickering 260-DS	E-V 12TRX	.....	.....	Craftsmen C1000	94 PA 157‡	496.50
Fisher 70-A	Garrard RC90	Pickering 260-DD	E-V 15TRX	.....	.....	Fisher 70-RT	94 PA 158‡	543.50
Fisher 50-A & 50-CM	Rek-O-Kut B-12H Pickering 190D	Fisher 50-LP, 50-ST	E-V Georgian (mahogany)	94 PA 152	967.50	Fisher 50-R	94 PA 153‡	1131.50

†The radio-phono systems listed above can be divided into two basic types: ‡Systems with centralized control at tuner. In these systems, all controls (volume, bass, treble, AC off-on, function selector, etc.) are located on FM-AM tuner panel; amplifiers in

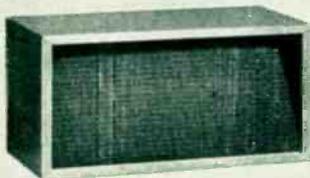
these systems have no controls and may be installed in virtually any location, concealed or unconcealed. §Systems with centralized control at amplifier. In these systems, practically all controls are located on amplifier chassis.



"Bantam"



Webcor  
1127-270



"Diminette"

### "Space Saver" Hi-Fi Systems No Cabinets Required

The two hi-fi systems on this page feature ALLIED's "Space Saver" design—occupy minimum space and require no cabinets. Changers mount on base; amplifiers and speaker systems are housed in compact enclosures. "Space Saver" systems can be installed in small homes and apartments which previously had insufficient space for hi-fi equipment.

## New High-Fidelity "Space Saver" Phono System

The outstanding "Space Saver" phono system—delivers authentic high-fidelity reproduction, yet occupies an extremely small amount of space. The perfect system for small rooms and apartments—and there's no need to invest in cabinetry. Every component has been selected with the greatest care to assure the ultimate in installation simplicity, plus top performance within limited space. The heart of the "Space Saver" system is the sensational new Knight 12-Watt "Bantam" Amplifier. Speaker system is the Permoflux "Diminette"; highly praised for excellent response and ultra-compact size. Also includes the famous G. E. Triple-Play Cartridge and the new Webcor 1127-270 Record Changer on metal base.

This fine system offers important features that result in a standard of performance far superior to commercially assembled phonos at substantially higher prices—magnetic cartridge provides exceptionally clean, full-range response; speaker system has separate speakers for bass and treble; amplifier delivers very wide, clean response and includes highly flexible controls that give the listener complete mastery of system performance. Speaker system is in ultra-compact cabinet; changer is mounted on base; amplifier is in smartly styled metal enclosure—system is ready for installation on bookshelf, table-top, or wherever there's just a little space to spare.

**Knight 12-Watt "Bantam" Amplifier:** Has 3-position record compensator. Calibrated bass and treble controls. Loudness control; also functions as volume control. Response.  $\pm 0.75$  db from 20-20,000 cps at 12 watts. Black-wrinkle metal case.  $3\frac{1}{2} \times 13 \times 10\frac{1}{4}$ " deep. **Webcor 1127-270 Record Changer:** Very smooth operation. Fast, gentle changing. High-quality 4-pole, shaded-pole motor. Available in russet and beige or burgundy and beige. Size, 9" high, 14" wide, 14" deep. **General Electric RPX-050 Triple-Play Magnetic Cartridge:** Dual-tip sapphire stylus; just twist selector knob and it's ready for standard or microgroove. Low mass and high compliance assure minimum record wear. **Permoflux "Diminette" Speaker System:** Three speakers housed in modified bass-reflex enclosure. Bass and middle-range frequencies reproduced by two 6" speakers; treble reproduced by cone-type super-tweeter.  $11\frac{1}{2}$ " high,  $23\frac{1}{2}$ " wide, 12" deep. In mahogany or blonde finish.

No technical knowledge required; no soldering. With all components, plugs and cables—plus hi-fi demonstration record. For 110-120 volts, 60 cycles AC. Specify color of changer and finish of "Diminette". Shpg. wt., 56 lbs.

94 PA 129. NET ..... 156.50

For full descriptions of individual components in the "Space Saver" hi-fi phono system, see pages 9, 29, 36 and inside front cover.

**Our Top Recommendations  
In Home Music Systems  
Offering Maximum  
Performance and Value**

Easy to Install



Just Plug In!

## Deluxe Hi-Fi Phono System . . . No Cabinets Required

This deluxe high-fidelity phono system reproduces recorded music with jewel-like precision and rich, thrilling realism. A notably fine choice for those who demand outstanding fidelity plus the utmost in installation simplicity. Consists of Scott 99A Amplifier, Garrard RC80 Record Changer, Pickering 260-DS Turnover Cartridge, and the Electro-Voice Aristocrat I Corner Speaker System. Although deluxe in every respect, this new system requires only a minimum of space and there's no need to invest in cabinets. Amplifier is housed in handsome metal enclosure and record changer comes with base—both are ready for use on shelf, table-top, etc. Speaker system occupies minimum space in corner of room.

Each of these components has earned the highest praise of critical music lovers and recognized audio experts. **Scott Type 99A Amplifier:** Unusually compact; highly versatile amplifier. Rated, 12 watts. Response, 20-30,000 cps. Separate 3-position roll-off and turnover controls for extremely accurate record reproduction. Has loudness control for proper tonal balance at even very low volume levels. Handsome metal case finished in maroon-wrinkle enamel. Size,  $3\frac{3}{4} \times 13\frac{1}{4} \times 9\frac{3}{4}$ " deep. **Garrard RC80 Record Changer:** Famous British-made 3-speed changer. Pickup is jewel-mounted. Constant-speed, 4-pole, shaded-pole motor. Heavily weighted turntable provides smooth flywheel action. Shuts off after last record plays. Supplied with base. Size,  $8\frac{1}{2}$ " high, 15 $\frac{1}{2}$ " wide, 13" deep. Less 45 rpm spindle.

**Pickering Model 260-DS Turnover Cartridge:** Extremely wide response and maximum convenience. Consists of two "Dynamic Coupling" magnetic cartridges mounted back-to-back; diamond stylus for microgroove and sapphire stylus for standard records. Lever for easy selection of proper cartridge. **Electro-Voice Aristocrat I Speaker System:** 12" woofer, 800-cycle crossover network, and tweeter. Utilizes Klipsch horn-loading principle to achieve greatly extended, remarkably distinct bass reproduction. For use in corner of room; walls serve as extension to the folded horn. Mahogany finish. Size,  $29\frac{3}{8}$ " H, 19" W,  $16\frac{5}{8}$ " D.

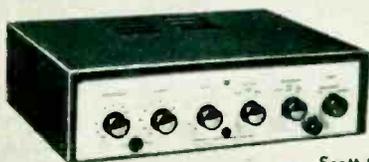
Ready for installation. Plugs are attached to cables and phono cartridge is mounted. No technical knowledge required and there's no need for a soldering iron. Supplied with hi-fi demonstration record. For 110-120 volts, 60 cycles AC. Shpg. wt., 95 lbs.

94 PA 130. NET ..... 375.00

SYSTEM WITH WEBCOR CHANGER. As above, but with Webcor 1127-27 changer (see inside-front cover) in place of Garrard.

94 PA 131. NET ..... 364.50

Full descriptions of above components on pages 18, 25, 34 and 37.



Scott 99A



Garrard  
RC80



E.V.  
Aristocrat I

## "Saturday Review" High-Fidelity Music System

An expertly balanced combination of high-fidelity components—recommended in the noted "Saturday Review" hi-fi book. Although this system is in the low-price category, it incorporates important features that mean excellent audio fidelity and very smooth, dependable performance. Includes: Bogen DB10A amplifier with 3-position compensator for accurate record reproduction; General Electric plug-in magnetic cartridges; diamond stylus for maximum protection of microgroove records; the precision-built, smooth-operating Garrard RC80 record changer; speaker is the highly popular Electro-Voice SP12-B. The "Saturday Review" is an exceptionally fine, low-cost system.

**Bogen DB10A 10-Watt Amplifier:** Latest version of the value-packed DB10. Response,  $\pm 1$ db from 30-18,000 cps. Has 3 position record compensator, calibrated bass and treble controls. Pre-amplifier circuit is shock-mounted. Gold-finish escutcheon and turquoise hammertone-finish chassis. 6x11x7" deep. Garrard RC80 Record Changer: Famous British-made 3-speed changer. Jewel-mounted pickup arm for excellent tracking. 4-pole, shaded-pole motor assures minimum hum pickup and constant-speed operation. Less 45 rpm spindle. Minimum mounting space: 15½" wide, 13¼" deep; 3½" below and 5¼" above top of mounting board. General Electric RPX-040 and RPX-061 Cartridges: Plug-in magnetic cartridges. RPX-040 has sapphire stylus for standard records; RPX-061 has diamond stylus for microgroove records. Have excellent frequency response. High-compliance for minimum record wear. Electro-Voice SP12-B 12" Rodax Speaker: Famous for excellent, wide-range reproduction. Features 1-pound Alnico V magnet and 2" aluminum voice coil to provide exceptionally high efficiency and very distinct, crisp bass reproduction. Incorporates "Whizzer" high-frequency radiator for extended, widely dispersed treble. Mechanical crossover at 4500 cps.

Ready for installation. No technical knowledge required and there's no need for a soldering iron. Includes all components, plugs and cables—also supplied with hi-fi demonstration record. For operation from 110-120 volts, 60 cycles AC. Shpg. wt., 45 lbs.

94 PA 132. NET ..... 156.50

**FM-AM-PHONO SYSTEM.** As above, but includes Bogen's new R640 FM-AM tuner. High sensitivity, drift compensation, and automatic frequency control. Fine performance in all signal areas. Smooth, effortless tuning. 6x13¼x7½" deep. System shpg. wt., 60 lbs.

94 PA 133. NET ..... 261.25

For full descriptions of individual components in the "Saturday Review" high-fidelity music systems, see pages 11, 23, 34 and 36.



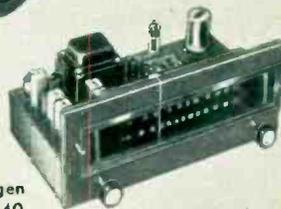
Bogen DB10A



E-V  
SP12-B



Garrard  
RC80



Bogen  
R640

## No Soldering . . . All Cables Color-Coded

You Can't Make a Wrong Connection! Installing an ALLIED high-fidelity system is simplicity itself. There's no need for technical knowledge and you don't have to do any soldering. Cartridges are mounted and plugs are attached to interconnecting cables. All cables, terminals and sockets are color-coded. Hook-up is just as simple as matching colors—you can't make a wrong connection! Each system is supplied with a highly informative manual, contains operating instructions, plus valuable hints and data to help you derive full enjoyment from your new high-fidelity equipment.

## Deluxe "Golden Knight" Hi-Fi Phono System

Latest version of the "Golden Knight" super-value high-fidelity system. Now includes important "plus" features that make it a greater value than ever! In addition to the famous "Golden Knight" amplifier, system includes the Electro-Voice 12TRX 3-Way speaker. This new speaker employs three coaxially mounted sections to achieve remarkably faithful response. Another "plus" feature is the G. E. "Golden Treasure" triple-play cartridge; stylus has diamond tip for microgroove records and sapphire tip for standard. Changer is precision-built Garrard RC80.

**"Golden Knight" 24-Watt Amplifier:** A nationwide favorite. High power handling capacity and very wide, clean response. Includes 3-position record compensator. Response,  $\pm 0.75$  db from 20-40,000 cps. Satin-gold finish. 8x14x9" deep. Garrard RC80 Record Changer: Famous British-made 3-speed changer. Jewel-mounted arm. 4-pole, shaded-pole motor assures minimum hum and constant speed. Less 45 rpm spindle. Min. intg. space: 15½" wide, 13¼" deep; 3½" below and 5¼" above top of mounting board. G. E. RPX-052 Triple-Play Cartridge: Deluxe "Golden Treasure" magnetic cartridge. Dual-tipped stylus; diamond tip for microgroove and sapphire tip for standard. Convenient knob selects proper stylus tip. Electro-Voice 12TRX 3-Way Speaker: Three coaxially mounted sections. Delivers very rich bass, full-bodied mid-range and crystal-clear treble. Response,  $\pm 5$  db from 30-15,000 cps. Has 3½-lb. magnet. Includes high-frequency level control. 8" deep.

No technical knowledge; no soldering. System supplied with all components—hardware, plugs and cables—plus hi-fi demonstration record. For 110-120 volts, 60 cycles AC. Shpg. wt., 92 lbs.

94 PA 134. NET ..... 261.75

**PHONO SYSTEM WITH WEBCOR CHANGER.** As above, but with Webcor 1126-27 changer in place of Garrard changer.

94 PA 135. NET ..... 252.75

**FM-AM-PHONO SYSTEM.** Consists of "Golden Knight" Amplifier, Garrard RC80 Changer, G. E. RPX-052 Triple-Play Cartridge, Electro-Voice 12TRX 3-Way Speaker—plus feature-packed Knight 719 FM-AM Tuner. Tuner features excellent sensitivity, AFC for easy tuning, and handsome styling. Tuner size, 7¼x13½x10" deep. System shpg. wt., 108 lbs.

94 PA 136. NET ..... 347.50

**FM-AM-PHONO SYSTEM.** As above, but with Webcor 1126-27 changer.

94 PA 137. NET ..... 338.50

Full descriptions of above components on pages 9, 23, 34 and 36.

## High-Fidelity Systems For Custom Installations

The two music systems described on this page represent outstanding values for those who wish to custom install their hi-fi equipment. Enclosures for speakers, cases for amplifiers, and bases for record changers are not included. These systems are specifically for installation in custom cabinets, "customized" existing furniture, wall, etc.



"Golden  
Knight"



E-V  
12TRX



Garrard  
RC80

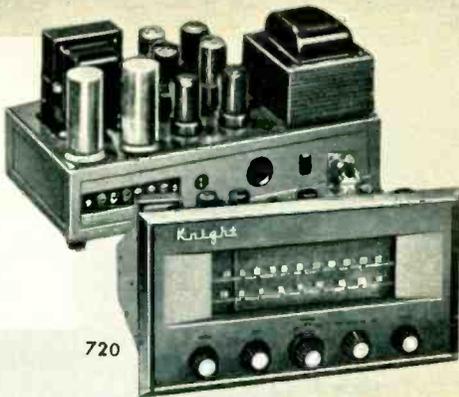


719



721

**KNIGHT  
HIGH-QUALITY  
COMPLETE  
FM-AM-PHONO  
CHASSIS**



720

**Two FM-AM Phono Chassis for Custom Installations**

Here are complete FM-AM and phono chassis. Both of these compact chassis provide: FM-AM tuner; high fidelity audio amplifier; phono preamplifier for magnetic cartridges; 3-position record equalizer; bass control and treble control. Ideally suited for replace-

ment of equipment in existing cabinets, or, by adding a record changer and speaker a moderately-priced music entertainment center can be easily assembled. High quality components—latest circuit designs. Simple one-hole cabinet mounting.

**Knight Model 721 Deluxe Chassis**

An outstanding value in the famous Knight line. Separate RF stages for FM and AM to assure high sensitivity. Temperature-compensated FM front-end for minimum drift. Ratio detector on FM with automatic frequency control. Wide-range bass and treble controls. Preamplifier for magnetic phono cartridges; 3-position equalizer for accurate playback of all records now on the market. Hum-balance adjustment assures minimum hum. Push-pull, beam-power amplifier delivers very clean, extended output. Built-in antennas for FM and AM.

**SPECIFICATIONS.** *Audio Response:* ±1.5 db from 30-15,000 cps at 2 watts output. *Maximum Output:* 10 watts. *Harmonic Distortion:* 2% at 2 watts output. *Sensitivity:* FM, 8 microvolts for 30 db quieting; AM, 75 microvolts for 6 db signal-to-noise ratio. *Outputs:* 4, 8 and 500 ohms to speakers plus high impedance output to tape recorder. *Inputs:* 1—magnetic phono for all types of cartridges and 1—crystal phono, tape recorder playback, TV, etc. *Panel Controls:* Bass, Treble, Off-On-Volume, Equalizer (LP, RIAA & European), Function switch and Tuning; Off-On-Volume and Equalizer are combined on a concentric control. Has 2 AC outlets on rear of chassis controlled by main Off-On switch for TV, record changer, etc.

*Tubes:* 3—6BA6, 2—6BE6, 6AU6, 6AL5, 6C4, 6AV6, 12AT7, 12AX7, 2—6V6GT; 5Y3GT rectifier. Beautiful edge-lighted, fly-wheel tuning dial. Handsomely finished in gray. Size, 7 3/4" high, 13 1/2" wide, 10" deep. Less speaker. Choose any high quality PM speaker with 4 or 8 ohm voice coil impedance. For 110-120 v., 50-60 cycle AC. Shpg. wt., 24 lbs.

94 SX 721, NET

92.50

**Knight Model 720 Master Deluxe Chassis**

For deluxe FM-AM reception plus unusually fine phono reproduction. Features two separate chassis—one includes tuner; other includes power supply and 20-watt amplifier.

**AMPLIFIER CHASSIS.** *Audio Output:* 20 watts. *Response:* ±1.5 db 20-20,000 cps with 1% harmonic distortion. *Impedance:* 4, 8, 15, 250 and 500 ohms. Push-pull parallel output.

**TUNER CHASSIS.** Includes inputs and controls. Tuned RF stages for FM and AM. Preamplifier for magnetic phono; 3-position equalizer. Hum-balance. Built-in antennas for FM and AM. Ratio detector with AFC. *Sensitivity:* FM, 8 μv for 30 db quieting; AM, 75 μv for 6 db signal-to-noise ratio. *Inputs:* 1—magnetic phono and 1—crystal phono, TV, tape, etc. *Controls:* Bass, Treble, Off-On-Volume, Equalizer (LP, RIAA & European), Function switch, Tuning; Volume and Equalizer combined in dual control. High-impedance output for tape recorder. 17 tubes, plus rectifiers. Two AC outlets. Gray panel. *Size:* Tuner, 8 1/2 x 13 1/2 x 9"; amplifier, 7 1/4 x 13 1/2 x 10". Less speaker. Use any high-quality PM speaker. For 110-120 v., 50-60 cycle AC. Shpg. wt., 38 lbs.

94 SX 720, NET

129.50

**MODEL 725 AMPLIFIER ONLY.** Same as amplifier above. Suitable wherever a high quality audio amplifier is required. *Output Impedances:* 4, 8, 15, 2.0 and 500 ohms for any high quality PM speaker, 6 tubes plus 2 rectifiers. For 110-120 v., 50-60 cycle AC. Shpg. wt., 18 lbs.

94 SX 725, NET

43.30

**High-Quality FM-AM-Phono Home Music System  
For Only \$168.75**

This Allied "best buy" system consists of the Knight Model 721 FM-AM Chassis, described above, and other tried and proved components. Delivers rich, living sound for full-toned FM-AM reception and outstanding reproduction of records. Complete system includes everything necessary for quick, simple installation. Includes hardware, all inter-connecting cables and simple assembly instructions. We've even color-coded all cables, terminals and sockets, so that hookup is just as easy as matching colors. Cables have plugs and phono cartridge is mounted—there's no need for a soldering iron.

Every component in this "best buy" system has proved its merit in thousands of home music systems. In addition to the Model 721 FM-AM Chassis (Fig. A), the following components are included: (Fig. B) Webster-Chicago Model 1126-27HF 3-Speed Record Changer. Automatically plays 7", 10" and 12" records at 33 1/3, 45 and 78 rpm. Jam-proof mechanism. Push-off mechanism with cushioned spindle for fast, gentle changing. Four pole, shaded-pole motor, assures smooth, constant-speed operation and minimum hum. Balanced magnesium tone arm for minimum lateral pressure and resonance. Motor automatically shuts off and arm comes to rest after last record plays. Minimum mounting space: 15x15", 6 1/2" above and 3" below top of mounting board. (Fig. C) General Electric RPX-050 Triple-Play High-Fidelity Magnetic Cartridge. Has dual-tip sapphire stylus; just twist selector knob and it's ready for standard or microgroove records. Low mass and high compliance assure minimum record wear. Response from 30 to 15,000 cps. (Fig. D) Electro-Voice Model SP12-B 12" Radax Speaker—famous for excellent, wide-range performance. Incorporates "Whizzer" high-frequency radiator for extended, widely dispersed treble. Depth, 3 3/4".

Check these features and components. Excellently matched, they will equal or surpass commercial units costing up to three times this low price. Ready for installation. Includes all components, hardware, plugs and cables. No technical knowledge required. For 110-120 volts, 60 cycle AC. Shpg. wt., 52 lbs. See pages 23, cover 2 and 36 for detailed descriptions of speaker, changer and cartridge.

94 PA 102, NET

168.75



See Page 299 for Easy Payment Plan



Golden Knight

**MORE FOR YOUR MONEY!**  
**FAMOUS**  
**KNIGHT**  
**HIGH-FIDELITY**  
**AMPLIFIERS**



Bantam

**"Golden Knight" 24-Watt Hi-Fi Amplifier**

The "Golden Knight" 24-watt high-fidelity amplifier. The outstanding choice among those who demand brilliant, authentic music reproduction at moderate cost. It delivers exceptionally pure, extremely wide frequency response, has high power handling capacity, includes all controls essential to convenient, flexible operation in up-to-the-minute custom systems. *Unconditionally guaranteed for one full year.*

**FEATURES.** Specially designed, grain-orientated interleaved-winding output transformer for virtually flawless, distortion-free output. Has microphone input. Switch for proper loading of GE, Pickering, and Audak cartridges. Screwdriver adjustment for output tube bias, tube balancing and hum balancing are among the important refinements included.

**SPECIFICATIONS.** *Rated Output:* 24 watts. *Response:*  $\pm 75$  db from 20-40,000 cps at rated output. *Harmonic Distortion:* Less than 1% at rated output. *IM Distortion:* Less than .5% at listening level; less than 2% at rated output. *Hum:* 80 db below rated output. *Output Imp.:* 8 and 16 ohms.

**INPUTS AND CONTROLS.** *Four Inputs:* 1—magnetic phono; 1—high-impedance mike; 1—auxiliary (for TV, tape, etc.); 1—tuner. *Input Impedance:* Tuner and auxiliary inputs, 47,000 ohms; microphone input, 1 megohm; magnetic phono input, 27,000 or 49,000 ohms. *Gain:* Tuner and auxiliary inputs, .5 volt for rated output; magnetic phono and mike, .2 volts for rated output. *Controls:* Input-Compensation Selector (Aux, Tuner, Mic, Flat, AFS and NARTB), Bass, Treble, Off-On-Volume, Input switch (GE/Audak-Pickering), output tube bias, tube balance, hum balance. *Tubes:* 3—12AX7, 2—6L6; 5U4G rectifier. Transformer cases and chassis have rich, satin-gold finish. *Size:* 8" high, 14" wide, 9" deep. Fused. Supplied complete with connectors and instructions; also shaft extenders and removable panel to simplify cabinet installation. For 110-120 v., 50-60 cycle AC. Shpg. wt., 30 lbs.

93 SX 321. NET ..... 79.50

**New Knight "Bantam" 12-Watt Hi-Fi Amplifier**

New Knight 12-watt amplifier features versatility and efficiency at moderate cost. Completely self-contained in one chassis—everything necessary for fine reproduction from phonograph records, tape recordings or AM-FM tuners. Its compactness makes it ideal for book-shelf, table-top or end table type of installation. Has phono preamplifier for magnetic cartridges with 3-position equalizer to assure proper playback of all types of recordings. Microphone pre-amplifier and tape recorder input and output adds to its versatility. Makes recording extremely easy and simple. Has continuously variable bass and treble controls and choice of standard or loudness type volume control for proper bass response at low listening levels. Two convenience AC outlets on rear panel controlled by off-on switch on amplifier. *Unconditionally guaranteed for one full year.*

**SPECIFICATIONS.** *Output:* 12 watts with less than 1% total harmonic distortion (at 16 ohm secondary of output transformer). *IM Distortion:* Less than 2% measured at 60 cps and 7 kc at 4 to 1 ratio. *Hum:* 75 db below rated output on tape and tuner; 55 db below rated output on magnetic phono and microphone. *Frequency Response:* 20-20,000 cps.  $\pm 5$  db. *Inputs:* 1—tuner, crystal phono, etc.; 2—magnetic phono for high- and low-level cartridges; 1—tape recorder; 1—microphone. *Panel Controls:* Selector-Equalizer switch (6-positions for Tuner, Tape, Mic, FFRR, RIAA and Quiet—for old 78 rpm records); Bass; Treble; Off-On-Volume. Loudness control switch on chassis bottom. *Output Impedance:* 8 and 16 ohms plus high impedance out to tape recorder. *Tubes:* 3—12AX7, 2—6V6GT; 5Y3GT rectifier. *Size:* 3½" high, 13" wide, 10¼" deep.

Enclosed in handsome metal cabinet finished in black, with black panel etched in gold. Attractive black and gold matching knobs. Panel slides forward to permit behind-cabinet panel mounting. Handsome styling blends with any decor. For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 14 lbs.

93 SX 312. NET ..... 59.50

**Knight FM-AM High-Fidelity Tuners**

**Model 719 Deluxe FM-AM Tuner**

A feature-packed tuner for the moderate-budget high-fidelity custom installation. Skillfully engineered circuit delivers highly sensitive full-fidelity FM-AM reception; preamplifier for magnetic cartridges and 3-position record equalizer assure a very high standard of record reproduction. Requires separate amplifier.

**CIRCUIT FEATURES.** Tuned RF stages for FM and AM provide very high sensitivity. FM front-end is temperature compensated. Ratio detector with AFC. Preamp takes magnetic cartridges; 3-position equalizer. Hum balance. Built-in antennas for FM-AM.

**SPECIFICATIONS.** *Sensitivity:* FM, 8 microvolts for 30 db quieting. AM, 75 microvolts for 6 db signal-to-noise ratio. *Two Inputs:* 1—magnetic phono; 1—auxiliary, for crystal phono, tape, etc. *Maximum Output:* 12 volts. *Controls:* Off-On-Volume, Equalizer (LP, RIAA, & European), Function Selector, and Tuning; Off-On-Volume and Equalizer controls are on concentric shaft. Employs 10 tubes plus rectifier; 6BA6 FM RF; 6BA6 AM RF; 6BE6 FM mixer; 6C4 FM oscillator; 6BE6 AM converter; 6BA6 IF amplifier; 6AU6 FM driver; 6AT6 AM detector and audio amplifier; 6AL5 FM detector; 12AX7 phono preamp; 5Y3GT rect.

Gray finish panel; tape recorder output; edge-illuminated slide-rule dial. Two auxiliary AC outlets. *Size:* 7¼x13½x10". For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 17 lbs.

94 SX 719. NET ..... 86.50

**Model 727 FM-AM Tuner**

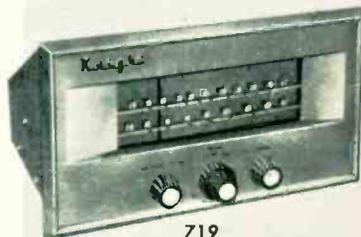
The Model 727 FM-AM Tuner is in a value class all by itself. It's priced at only \$52.80—yet it delivers reception comparable to many far more costly units. High-fidelity custom systems can be assembled at surprisingly low cost when using this stand-out-value tuner. Handsome panel—only a single rectangular cutout required. Requires separate amplifier.

**MANY FEATURES.** RF amplifier stage on FM provides very high sensitivity for excellent reception in all signal areas. Improved FM circuit is temperature compensated. Incorporates built-in antennas for both FM and AM; ferrite loopstick antenna for AM and built-in antenna for FM; also terminals for connection of outdoor antennas. Phono input jack accommodates crystal cartridges or magnetic preamplifier. Hum balance adjustment on chassis. High-impedance output for tape recorders.

**SPECIFICATIONS.** *Controls:* Off-On-Volume, Tuning, and Function Selector (Phono, FM, and AM). *Maximum Output:* 12 volts. Employs 7 tubes plus rectifier; 6BA6 FM RF amplifier; 6BE6 AM converter; 12AT7 FM converter; 6BE6 IF amplifier; 12AU6 FM driver; 6AL5 FM detector; 6AT6 AM detector-audio; 5Y3GT rectifier.

Gray panel. Large, illuminated slide-rule dial. *Size:* 7½" high x 13½" wide x 10" deep. Auxiliary AC outlet on rear of chassis. For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 16 lbs.

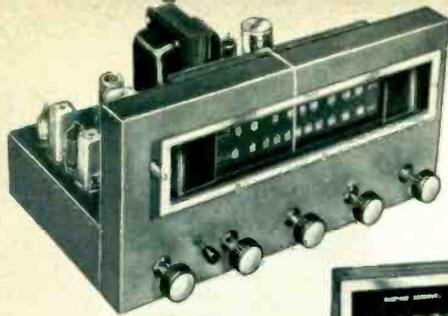
94 SX 727. NET ..... 52.80



719



727



R750

**BOGEN  
HIGH-FIDELITY  
AUDIO  
COMPONENTS**



EL1



DO30A

**Bogen's Finest Tuner-Amplifier Combination**

**Model R750 FM-AM High-Fidelity Tuner**

Offers the utmost in tuning ease and delivers exceptionally fine FM-AM music reproduction. Includes bass and treble controls and preamp for magnetic phono. Automatic frequency control circuit and flywheel dial provide velvety smooth tuning. RF stage on FM and AM. Super-sensitive, cascade-type FM RF stage, plus dual limiters. FM sensitivity is 3 microvolts for 30 db quieting; 5 microvolts on AM. Low impedance output permits long lead lengths to amplifier; also output for tape recorder. Has AM whistle filter. Two AM selectivity positions for best reception under good or poor signal conditions. Two Inputs: 1—auxiliary; 1—for magnetic, crystal or ceramic cartridges. Built-in FM-AM antenna. Controls: Volume; AFC Off-On; Function (Phono, AM Normal, AM Hi-Fi, FM, Aux); Off-On-Treble; Bass; Tuning. 14 tubes plus rectifier. Gold-and-brown escutcheon. 7½x14½x9¼" deep. For 110-120 v., 60 cycles AC. Shpg. wt., 19 lbs.

93 SX 963. NET ..... 149.99

**MODEL EL1 RECORD & LOUDNESS COMPENSATOR.** Plugs into R750 above. 15 push-buttons. 5 turnover and 5 rolloff push buttons for extremely accurate reproduction with magnetic cartridges. Also 5 loudness push-buttons. 1½x12x3¼". Shpg. wt., 5 lbs.

93 S 964. NET ..... 34.99

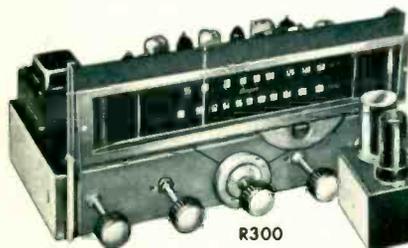
**Model DO30A 30-Watt High-Fidelity Amplifier**

The new DO30A basic amplifier reproduces music with a richness of tone and a degree of realism that thrills even the most critical ear. Extremely uniform output, very low distortion, and high power handling capacity assure faithful reproduction of any and all music, regardless of volume level. Turquoise chassis with gold-finish cover; may be installed in any out-of-the-way place or mounted in open bookshelf or cabinet.

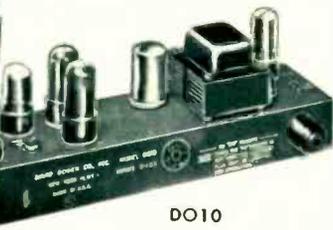
Incorporates Bogen's new, exclusive damping factor control network; provides cleaner bass response by permitting precise coupling of the amplifier to the loudspeaker system. A simple screwdriver adjustment, made upon installation, permits variation of damping factor from 2 through infinity to —2; "tunes out" resonant peaks and reduces most non-linear characteristics of the speaker system, as well as standing waves in the room which may affect speaker operation.

**Rated Output:** 30 watts. **Distortion:** .05% at 10 watts; 1% at 30 watts. **Response:** ±0.2 db from 10-20,000 cps. **Hum:** 90 db below 30 watts. **Output Impedance:** 8 and 16 ohms. **Tubes:** 12AT6, 12AU7, 2—KT66; 5U4G rectifier. Size, 7¼x15x5¼" deep. For 110-120 volts, 60 cycles AC. Shpg. wt., 28 lbs.

93 SX 870. NET ..... 99.00



R300



DO10

**Bogen High-Quality, Moderate-Cost Tuner and Amplifier**

**MODEL R300 FM-AM TUNER.** Offers excellent selectivity, high sensitivity and very clean audio—a fine choice for the custom hi-fi system. Employs equalized preamp for use with magnetic cartridges; has separate bass and treble tone controls. Detector output for tape recording. Automatic frequency control on FM for simplified "lock-in" tuning.

FM front-end employs triode RF amplifier and mixer for very high signal-to-noise ratio. **FM Sensitivity:** 7 microvolts for 30 db quieting. Low-impedance loop and high-Q type input transformer provide high AM sensitivity. **Bandwidth:** FM, 180 kc at 6 db down; AM, 8 kc at 6 db down. **Controls:** Volume, Bass, Tuning, Treble, and Selector. **Inputs:** Magnetic phono; TV or crystal phono. **Tubes:** 2—12AT7, 6BE6, 6BA6, 3—6AU6, 6AL5, 12AU7; 6X4 rect. 7x13½x8". Brown-and-gold escutcheon. For 110-120 v., 60 cycles AC. Wt., 13 lbs.

93 SX 966. NET ..... 95.70

**MODEL DO10 AMPLIFIER.** Popular basic amplifier. Delivers excellent hi-fi music reproduction—at a price just right for limited-budget custom installations. Serves as a fine, low-cost companion unit for the R300, at left, or any other tuner. Has no controls, permitting installation in any convenient, out-of-the-way place; the unusually narrow chassis fits almost anywhere. Two screwdriver-slot adjustments on chassis: Hum balance adjustment for reducing hum to extremely low level; also input level adjustment. **Output:** Rated, 10 watts; peak, 15 watts. **Harmonic Distortion:** 1% at 10 watts. **Frequency Response:** ±0.2 db, 20-20,000 cps at 10 watts. **Hum Level:** 70 db below 10 watts. **Speaker Output Impedance:** 4, 8 and 16 ohms.

**Tubes:** 6J5, 6SN7GT, 2—6V6GT; 5Y3GT rectifier. 5x15x3¼" deep. Turquoise finish. For 110-120 volts, 60 cycles AC. U.L. Approved. Shpg. wt., 11 lbs.

93 SX 918. NET ..... 37.95



**Model RR500  
Single-Chassis Tuner-Amplifier**

FM-AM chassis complete with built-in 10-watt hi-fi amplifier. Just connect a speaker and it's ready for full-toned FM-AM reception. Preamp for magnetic phono; triode RF and mixer stages on FM for high signal-to-noise ratio. Built-in AM loop antenna. Output for tape recorder. **Amplifier Response:** ±2 db, 30-18,000 cps. **Sensitivity:** FM, 7 microvolts for 30 db quieting; AM, 50 microvolts. **Two Inputs:** 1—TV, crystal phono, tape, etc.; 1—magnetic phono. **Controls:** Volume, Bass, Treble, Tuning, Function Selector. **Speaker Outputs:** 3.2, 8, and 16 ohms. 9 tubes plus rect. Brushed brass panel. Flywheel tuning. 7x13½x8". For operation from 110-120 v., 60 cycles AC. Shpg. wt., 17 lbs.

93 SX 967. NET ..... 109.75

**Model RE5 Record Compensator for R300 and RR500**



Five-position record compensator; plugs into R300 tuner (above), RR500 chassis (at right), or any other tuner, chassis or amplifier with input for magnetic phono cartridges. Brings out the best from recorded music by compensating for recording characteristics of the various record manufacturers—assures full-toned, properly balanced reproduction. Five push-buttons select following curves: Flat; Popular; Ortho-RIAA; AES; NARTB. Size, only 2¼x5x3¼" deep. Shpg. wt., 1½ lbs.

93 S 871. NET ..... 13.20



**Cabinet  
for  
RR500  
Chassis**

Handsome mahogany-finish wood cabinet for Model RR500 Chassis above. Size, 9¼x16x9¼". Shpg. wt., 9 lbs.

93 SX 872. NET ..... 22.30



R640G

**BOGEN  
HIGH-  
FIDELITY  
AUDIO  
COMPONENTS**



DB15G

**New Bogen Space-Saving Tuner-Amplifier Combination**

These new space-saving high-fidelity components, available with or without enclosures, solve virtually any installation problem where space is limited. The Model R640 tuner and DB15 amplifier are supplied less enclosure—their ultra-compact size greatly sim-

plifies mounting in console cabinet, wall, existing furniture, etc. The Model R640G tuner and DB15G amplifier are housed in handsome, unusually compact enclosures—ready for use on table top, in open cabinet, open bookshelf, etc.

**Model R640 FM-AM High-Fidelity Tuner**

This new ultra-compact tuner is a noteworthy choice for those who insist on a very high standard of FM-AM reception. Only two controls—an ideal companion unit for the DB15 or other quality amplifier. Highly sensitive, drift-compensated circuit with automatic frequency control assures smooth, simple tuning and exceptionally fine performance in all signal areas. RF stage on FM and AM. Switch permits cutting out automatic frequency control circuit; simplifies tuning of distant stations adjacent in frequency to local stations. Loop antenna for AM. *Sensitivity:* FM, 5 microvolts for 20 db quieting; AM, 5 microvolts. *Controls:* Tuning; Selector (Power Off, AM, FM with AFC, FM without AFC); 10 tubes plus rectifier. Brown-and-gold escutcheon. Only 6x13 $\frac{1}{2}$ x7 $\frac{1}{2}$ " deep. For operation from 110-120 v., 60 cycles AC. Less enclosure. Shpg. wt., 15 lbs.

93 SX 968. NET ..... 105.50

MODEL R640G. As above, but in modern gold Metallustre enclosure. Size, 6 $\frac{1}{4}$ x13 $\frac{1}{2}$ x9 $\frac{1}{4}$ ". Shpg. wt., 18 lbs.

93 SX 969. NET ..... 112.95

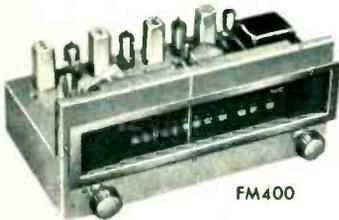
**Model DB15 15-Watt High-Fidelity Amplifier**

Exceptional versatility and full-toned, well-balanced reproduction. Loudness Contour Selector preserves tonal balance at all levels. Separate high- and low-frequency equalization controls. *Four Inputs:* 1—magnetic phono; 1—tuner; 1—tape; 1—mike. Output jack for tape recording. *Output:* 15 watts. *Response:*  $\pm 0.5$  db, 20-20,000 cps. *Harmonic Distortion:* 0.5% at 15 watts. *Hum:* —70 db. *Damping Factor:* 20. *Controls:* Off-On-Treble; Volume; High Equalization (LP-NARTB, AES, Ortho-RIAA, Pop, Flat); Low Equalization and Function Selector (LP, AES, Ortho-RIAA-European 78, Tape, Tuner, Mike); 5-pos. Loudness Contour Selector; Bass. *Output Imp:* 8 and 16 ohms. *Tubes:* 2—12AT7, 12AX7, 2—6L6GT, 5Y3GT rect. 4 $\frac{1}{2}$ x12 $\frac{1}{2}$ x9 $\frac{1}{4}$ " deep. For 110-120 volts, 60 cycles AC. Less enclosure. Shpg. wt., 22 lbs.

93 SX 997. NET ..... 89.95

MODEL DB15G. As above, but in modern gold Metallustre enclosure. Size, 6 $\frac{1}{4}$ x13 $\frac{1}{2}$ x9 $\frac{1}{4}$ " deep. Shpg. wt., 25 lbs.

93 SX 998. NET ..... 99.00



FM400

**New Bogen FM or AM Tuners**

FM400 FM TUNER. Expertly engineered tuner for those who require FM reception only. Tuned RF stage. Very high sensitivity. Automatic frequency control and temperature compensation provide easy tuning and freedom from drift. Only two controls: Tuning; Selector (Power Off, FM, and AFC Off). *Sensitivity:* 6 microvolts for 30 db quieting. *Tubes:* 2—12AT7, 3—6AU6, 6AL5; 6X4 rectifier. With shock mounts and handsome brown-and-gold escutcheon. Size, 5 $\frac{1}{4}$ x12x7 $\frac{1}{2}$ " deep. For operation from 110-120 v., 60 cycles AC. Shpg. wt., 14 lbs.

93 SX 873. NET ..... 69.95



AM901-1  
AM  
Tuner

AM901-1 AM TUNER. Tuned RF stage and two-position selectivity. Provides excellent long-distance and local AM reception. Crystal phono input. Two controls; Tuning and Selector Switch. 4 tubes plus rectifier. 7x10x7 $\frac{1}{2}$ ". Brown-and-gold escutcheon. For 110-120 volts, 60 cycles AC. Shpg. wt., 13 lbs.

93 SX 913. NET ..... 69.30



DB20

**Nationally Recommended Bogen Amplifiers**

DB20. Highly rated by famous national research organization. Has unusual degree of control versatility. Loudness "contour" selector provides choice of optimum compensation at any listening level; 7-position record equalizer for accurate playback of all types of records. DC-operated preamp filaments minimize hum; 5 feedback loops including partial cathode-loaded output assure extremely low distortion. Output jack for tape recording. Removable escutcheon for simplified cabinet installation.

*Output:* 20 watts. *Distortion:* 0.3% at 20 watts. *Frequency Response:*  $\pm 0.7$  db, 20-20,000 cps. *Hum and Noise:* 75 db below 20 watts. *Output Impedance:* 8 and 16 ohms. *Damping Factor:* 13. *Five Inputs:* High-level magnetic phono; low-level magnetic phono; tuner; tape; and auxiliary. *Controls:* Selector; Equalizer (LP, AFS, NAB, AM 78, Eur 78, RIAA-Ortho, Popular); Bass (+17 to -18 db at 40 cps); Treble (+15 to -21 db at 15,000 cps); 5-position Loudness Contour Selector; Loudness-Volume.

*Tubes:* 3—12AT7, 12AU7, 2—6L6G, 5U4G rectifier. *Size:* 8x15x10" deep. Turquoise finish. For 110-120 volts, 60 cycles AC. Shpg. wt., 30 lbs.

93 SX 917. NET ..... 99.00

DB20DF. As above, but with adjustable Damping Factor Network; see DO30A amplifier (page 10) for description.

93 SX 999. NET ..... 108.00



DB10A

DB10A. Latest version of highly rated DB10 amplifier. New features: 3-position record compensator; calibrated bass and treble controls; improved circuits for better bass; mike input; output jack for tape recording; removable escutcheon for simplified cabinet installation. Preamp takes G.E., Pickering and similar magnetic cartridges. *Output:* 10 watts. *Response:*  $\pm 1$  db, 30-18,000 cps. *Harmonic Distortion:* 1% at 10 watts. *Hum Level:* 58 db below 10 watts. *Speaker Outputs:* 4, 8, and 16 ohms. *Five Inputs:* High-level magnetic cartridges; low-level magnetic cartridges; mike; tuner; auxiliary (for TV, tape, etc.) *Controls:* Function-Compensator switch (LP, 78, Pop, Mic, Tuner, and Aux); Volume, Bass, Treble. *Tubes:* 6SF5, 12AT7, 6SL7, 2-6V6GT, 5Y3GT rectifier. *Size:* 6x11x7" deep. Gold-finish escutcheon and turquoise, hammertone finish chassis. For 110-120 volts, 60 cycles AC. Shpg. wt., 15 lbs.

93 SX 944. NET ..... 54.45

PH10-1. (Not illustrated.) 10-watt hi-fi amplifier. *Response:*  $\pm 1$  db, 40-15,000 cps. *Tone Control:* Deep Bass, Mellow Bass, Wide Range, Extended Range. *Inputs:* Crystal phono, TV, tuner; input selector switch. *Hum:* —80 db. *Output Imp:* 3.2, 8 ohms. *Tubes:* 6SL7GT, 2-6V6GT, 5Y3GT rect. 6x11x5". For operation from 110-120 v., 60 cycles AC. Shpg. wt., 10 lbs.

93 S 923. NET ..... 35.50



AF-860

**PILOT  
HIGH FIDELITY  
TUNERS  
AND  
AMPLIFIERS**



AA-904

**New Pilotuner and Pilotone Matching Hi-Fi Components**

**Deluxe Model Pilot Tuner and Amplifier**

**DELUXE MODEL AF-860 FM-AM TUNER.** New FM-AM tuner with complete preamp and equalizer built in. May be used with any basic hi-fi amplifier. Armstrong dual cascade limiter-discriminator circuit on FM. Excellent sensitivity. Continuously variable AFC. 2-stage IF amplifier with broad or sharp AM bandwidth. 10 kc whistle filter. Tuned RF amplifier stage. Dual equalization—5 positions of Roll-off and Turnover. Hum-balancing control. Cathode follower output. *Sensitivity:* FM; 1.5  $\mu$ v for 20 db quieting. AM; 2  $\mu$ v for 20 db quieting. *Distortion:* Less than 0.2% at 1 v. output. *Inputs:* 1—magnetic phono; 1—tape; 1—auxiliary. *Controls:* Off-On-Volume; Roll-Off (0, 8, 16, 20 and 13.5 db); Turnover (500 cps, LP, AFS, NAB, and 800 cps); Treble; Bass; Selector (AM Sharp, AM Broad, FM Phono, Tape and Auxiliary); Tuning and AFC Off-On. Has tuning meter. Brushed gold chassis; gold and maroon front panel, easily dismantled for cabinet installation. *Size:* 7 $\frac{1}{2}$ " H, 14 $\frac{1}{4}$ " W, 9" deep. For 110-120 v., 60 cyc. AC. Shpg. wt., 21 lbs. 98 SX 647. List. \$299.25. NET.

179.50



AF-824

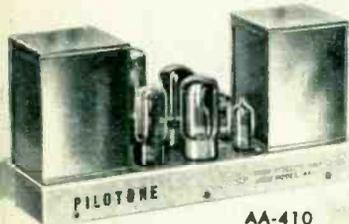
**DELUXE MODEL AA-904 30-WATT AMPLIFIER.** Williamson-type basic amplifier. Delivers superb music reproduction. Has no controls. Power, volume and tone are controlled with tuner or remote control unit. *Max. Output:* 30 watts. *Response:*  $\pm$  1 db. 20-20,000 cps at 15 watts. *Harmonic Distortion:* Less than 0.3% at 25 watts; less than 0.1% at 10 watts. *IM:* Less than 0.5% at 10 watts. *Hum and Noise:* 90 db below 25 watts. *Negative Feedback:* 24 db. *Outputs:* 8, 16 ohms. *Input:* 470,000 ohms. *Sensitivity:* 8 volt rms input for 25 watts output. *Tubes:* 2—6SN7GT, 2—KT66; 5U4G rectifier. Hum balance adjustment. Brushed gold finish. *Size:* 7 $\frac{1}{2}$ "x14" x4 $\frac{1}{4}$ " deep. With 4' shielded cable. U.L. Approved. For 110-120 v., 60 cyc. AC. Shpg. wt., 25 lbs. 98 SX 664. List. \$149.25. NET.

89.50

**High Quality Tuner and Amplifier at Moderate Cost**

**MODEL AF-824 FM-AM TUNER.** This high-quality FM-AM tuner includes many circuit refinements. Automatic frequency control on FM provides "lock-in" tuning; AFC may be switched off. Has compensated oscillator for minimum drift. Three inputs for magnetic cartridges; equalizer for accurate playback of all records. Cathode-follower output. Hum balance control. *FM Section:* Broadband RF stage. *Sensitivity:* 10 microvolts for 20 db quieting. *Built-in-line antenna;* 300-ohm input for outdoor antenna. *AM Section:* Tuned RF stage. *Sensitivity:* 10 microvolts for 0.2 v. output. *Loopstick antenna.* *Inputs:* 1—TV or crystal phono; 3—magnetic phono (15,000, 27,000 and 47,000 ohms). *Controls:* Off-On-Volume, Equalizer (4-pos.), Treble, Bass, Function Selector, Tuning, and AFC Off-On. *Output:* 3 v. Nine tubes and rectifier. Bronze finish panel. *Size:* 7 $\frac{1}{2}$ "x14 $\frac{1}{16}$ "x8 $\frac{3}{16}$ " deep. For 110-120 v., 60 cycles AC. Shpg. wt., 15 lbs. 98 SX 656. List. \$199.95. NET.

119.50



AA-410

**MODEL AA-410 15-WATT AMPLIFIER.** New, moderately priced Williamson-type basic amplifier. Has no controls—ideal basic power amplifier for remote control use with Pilot tuners. Output transformer with interleaved windings for reduced leakage inductance. *Rated Output:* 15 watts. *Frequency Response:*  $\pm$  1 db. 15-40,000 cps at 15 watts output. *Harmonic Distortion:* Less than 1% at 15 watts; *IM:* Less than 2% at 15 watts. *Hum and Noise Level:* 90 db below 15 watts. *Negative Feedback:* 15 db. *Speaker Output Impedances:* 4, 8 and 16 ohms. Heavy gauge steel chassis finished in attractive brushed gold; potted transformers in gleaming black enamel. *Tubes:* 1—6C4, 1—12AU7, 2—5881; 5Y3GT rectifier. *Size:* 12 $\frac{1}{2}$ "x5 $\frac{1}{4}$ "x4" deep. U.L. Approved. For 110-120 v., 60 cyc. AC. Shpg. wt. 15 lbs. 98 SX 648. List. \$82.50. NET.

49.50

**FM Tuner and Matching Amplifier**

**MODEL FM-607 FM TUNER.** Low-cost tuner designed for a very high standard of FM performance. Incorporates automatic frequency control for simple "lock-in" tuning and drift-free reception; AFC can be switched off. Tuned RF amplifier stage provides high sensitivity for excellent results in all FM signal areas. Has cathode-follower with 500-ohm output impedance; long interconnecting cable may be used between tuner and amplifier. *Response:*  $\pm$  0.5 db from 20 to 20,000 cps. *Sensitivity:* 5 microvolts for 20 db quieting. *Hum:* 70 db below 1 volt. *Maximum Output:* 5 volts. *Input* for crystal phono. *Controls:* Off-On-Volume, Function (FM, FM AFC, Phono), and Tuning. Has built-in antenna; also terminals for external antenna. *Tubes:* 2—6BA6, 6U8, 6AU6, 6AL5, 12AU7, 6AB4; 6X4 rectifier. *Size:* 10" smart satin-gold panel. *Size:* 7 $\frac{1}{4}$ " high, 10 $\frac{1}{2}$ " wide and 7 $\frac{1}{4}$ " deep behind panel. For 110-120 volts, 60 cycle AC. Shpg. wt., 10 lbs. 98 SX 661. List. \$99.25. NET.

59.50

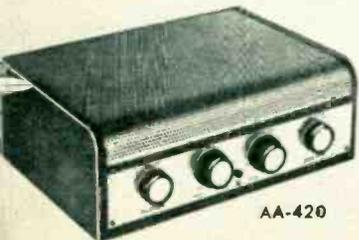
**TUNER CABINET.** (Not illustrated.) Handsome, walnut veneer table model cabinet for Model FM-607 tuner. Shpg. wt., 5 lbs.

98 SX 663. List. \$16.55. NET.

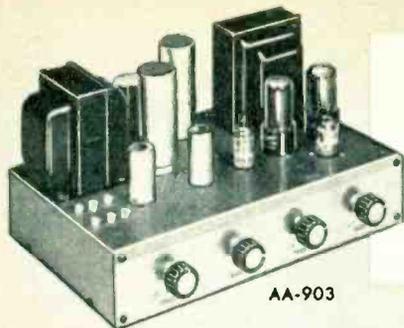
10.00

**MODEL AA-420 15-WATT AMPLIFIER.** New, Williamson-type high-fidelity audio amplifier with professional preamp for maximum efficiency and flexibility. With push-pull 5881's for full 15 watt output. In beautiful gold and maroon metal case, suitable for cabinet, panel or shelf mounting. Ideal as companion unit to tuner listed above. Dual equalization switches provide 5 roll-off and 5 turnover positions. Level set controls for each input. Dual tone controls. Loudness control. Preamp inputs variable from 6800-100,000 ohms. *Output:* 15 watts. *Response:*  $\pm$  1 db. 15-40,000 cps at rated output. *Harmonic Distortion:* Less than 1% at 15 watts. *Intermodulation Distortion:* Less than 2% at rated output. *Hum and Noise Level:* 90 db below rated output. *Imp.:* 4, 8 and 16 ohms. *Size:* 13 $\frac{1}{2}$ "x10" deep. 6 tubes and rectifier. U.L. Approved. For 110-120 v., 60 cyc. AC. Shpg. wt., 21 lbs. 98 SX 649. List. \$165.75. NET.

99.50



AA-420



AA-903

**SPECIAL VALUE  
PILOT AMPLIFIER  
AND TUNER ENSEMBLE  
TOGETHER ONLY**

**\$149.45**



AF-723

**Nationally Recommended AA-903 Amplifier**

Williamson-type, 10-watt hi-fi amplifier recommended by nationally known research organization. An ideal low-cost unit for any custom home installation. Popular, versatile amplifier is an excellent companion piece for Pilot tuners; may also be used with any other hi-fi tuner. Detachable front panel plate for convenient custom installation using up to 3/8" wood panel. With preamp and 4-position record equalizer (LP, NAB, AES, Foreign). *Output:* 10 watts maximum. *Frequency Response:* ±1 db, 15-40,000 cps at rated output. *Harmonic Distortion:* Less than 1% at 10 watts (30-15,000 cps); 0.1% at 1 watt (30-15,000 cps). *Hum Level:* 80 db below 1 volt. *Intermodulation Distortion:* Less than 2% at rated output. *Negative Feedback:* 15 db. *Speaker Output Impedances:* 4, 8 and 16 ohms. *Input Impedance:* Radio, Aux 1, Aux 2, 500,000 ohms; Phono, adjustable from 6800 to 100,000 ohms. *Controls:* Off-On-Volume, Input-Equalizer switch (7 pos.), Bass, Treble. *Tubes:* 2-12AX7, 1-6C4, 1-12AU7, 2-6V6GT, 5Y3GT rectifier. *Size:* 12x7x8 1/4" deep. Output transformer has interleaved windings for reduced leakage inductance. Attractive gold finish. With removable rubber feet, thru-chassis mounting screws and washers. For 110-120 v., 60 cyc. AC. Shpg. wt., 15 lbs.

98 SX 662. List, \$116.00. NET..... 69.50

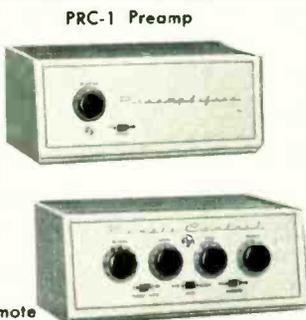
**Popular Basic AF-723 FM-AM Tuner**

A great tuner value for hi-fi FM-AM reception. Many important features. Automatic frequency control on FM for simple "lock-in" tuning; switch to cut out AFC—allows tuning to a weak station which is adjacent to a strong station. RF stage on FM and AM for high sensitivity. Delivers up to 5 volts output. Cathode-follower permits use of 100 ft. of inter-connecting cable between tuner and amplifier. *FM Section:* Tunes 88-108 mc. Broadband RF stage. Temperature-compensated oscillator. Built-in line cord antenna; 300 ohm input for external antenna. Uses new coaxial condenser tuning system. *AM Section:* Tunes 540 to 1700 kc. Tuned RF stage. Built-in, highly efficient loop-stick antenna; provision for external antenna. *Sensitivity:* FM, 10µv. for 20 db quieting AM, 10µv. for 0.1 v. audio output. *Controls:* Off-On-Volume, Tone, Selector (AM-FM-Phono-TV), Tuning, AFC On-Off. *Inputs:* Crystal Phono and TV. *Tubes:* 6BA6 RF, 6U8 osc-mixer, 6BA6 FM-AM IF, 6AU6 2nd FM IF and AM det., 6AL5 FM ratio detector, 12AU7 amp., 6AB4 AFC, 6X5GT rectifier. Bronze Hammertone finish panel. Slide rule dial with individually illuminated scales. 7 1/2 x 14 x 8 1/2" deep. For operation from 110-120 v., 60 cycles AC. Shpg. wt., 16 lbs.

98 SX 653. List, \$133.25. NET..... 79.95



A-30 Amplifier



PRC-1 Preamp

PRC-1 Remote



A-20-C Amplifier

**Electro-Voice Amplifiers Featuring Wiggins "Circlotron Circuit" and Controlled Damping**

**A-30 and PRC-1 Combination**

Sensational new design in amplifiers employs "Circlotron Circuit" and controlled damping for superior hi-fi reproduction. Provides unity coupling between tubes with no switching transients and no DC in output transformer. Damping factor control assures perfect matching to speaker; prevents bass losses from over-damping. Also prevents under-damping, eliminating low frequency distortion and voice coil override. Permits matching amplifier to speaker, speaker to enclosure, and enclosure to room.

**A-30 AMPLIFIER:** Designed for use with PRC-1 or any other preamp. *Specifications:* *Response:* ±.25 db, 20-50,000 cps. *Output:* Rated at 30 watts. *Harmonic Distortion:* .1% at 10 watts; .5% at 30 watts. *IM:* Less than .3% at 5 watts; less than 1% at 30 watts. *Hum and Noise:* -90 db. *Feedback:* 31 db negative. *Speaker Outputs:* 4, 8 and 16 ohms; 600 ohms balanced. *Damping Factor:* Adjustable between .1 and 15. *Sensitivity:* 1.25 v. for rated output. *Size:* 13 1/4 x 7 x 8 1/4" deep. For 110-120 v., 60 cycles AC. Shpg. wt., 25 lbs.

94 SX 302. List, \$241.67. NET..... 142.10

**A-20-C Complete 20-Watt Amplifier**

Features new "Circlotron Circuit" and Controlled Damping for superb high-fidelity reproduction. All DC is removed from output transformer. Eliminates switching transients. Reduces leakage reactance of output circuits to provide vastly extended, distortion-free response at full-rated output. Unique damping factor control permits perfect matching to speaker, to type of enclosure and to location. Control eliminates speaker bass losses from over-damping. Critical damping assures optimum amplifier operation.

**SPECIFICATIONS.** *Output:* 20 watts; 40 watts peak. *Response:* ±1 db, 20-20,000 cps at 20 watts. *Harmonic Distortion:* Less than 0.5% at 20 watts. *IM:* Less than 0.3% at 5 watts; less than 1.5% at 20 watts. *Hum and Noise:* -70 db. *Outputs:* 4, 8 and 16 ohms; 600 ohms balanced. *Feedback:* 33 db negative. *Damping Factor:* Adjustable between 0.1 and 15. *Inputs:* Ceramic magnetic, phono, tuner, tape, high Z mic. *Controls:* Function Selector, Record Compensation (7 positions), Level, Loudness, Bass, Treble, Damping Factor; 2 Hum Adjustments. *Size:* 10 1/4 x 7 1/4 x 11 1/4" deep. For operation from 110-120 v., 60 cycles AC. Shpg. wt., 23 lbs.

94 SX 303. List, \$183.33. NET. 107.80

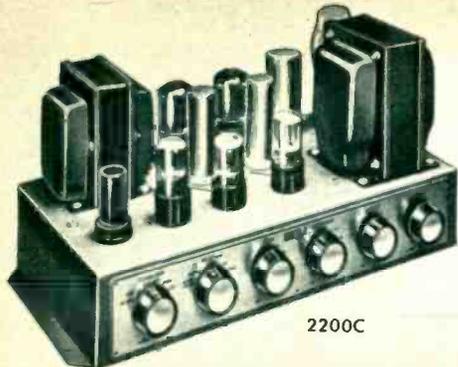
**PRC-1 PREAMP AND REMOTE-CONTROL:** Designed specifically for use with A-30 Amplifier. *Specifications (when used with A-30 Amplifier):* *Response:* ±.5 db, 20-20,000 cps. *Harmonic Distortion:* Less than .5% at rated output. *IM:* Less than 1.5% at rated output. *Hum and Noise Level:* -80 db. *Inputs:* 3 Phono, Tuner, Tape, TV and Auxiliary. *Preamp Controls:* On-Off, Selector, 4 Level Controls, Equalizer. *Controls on Remote:* Record Compensation Switch (9-pos.), Level, Volume-Loudness, Rumble Filter, Presence, Bass, Treble. Takes power from A-30 Amplifier. Cathode follower output. *Sizes:* Remote, 10 1/4 x 4 3/4 x 7 1/4" deep; Preamp, 10 1/4 x 4 3/4 x 7 1/4" deep. Shpg. wt., 15 lbs.

PRC-1, Preamplifier and Remote Control Unit in Mahogany Cabinets. 117.60

94 SX 300. List, \$200.00. NET..... 117.60

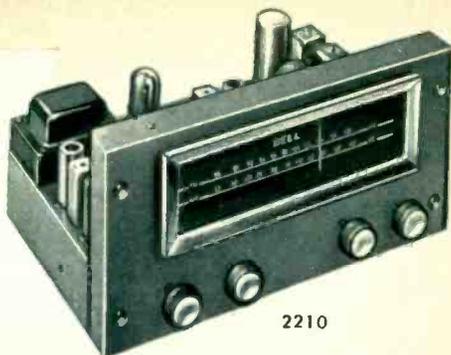
PRC-1, Preamplifier and Remote Control Unit in Blonde Cabinets. 117.60

94 SX 301. List, \$200.00. NET..... 117.60



2200C

**BELL  
CUSTOM  
HIGH  
FIDELITY  
EQUIPMENT**



2210

**Bell's "Perfection Pair" Amplifier and FM-AM Tuner**

**Model 2200C 20-Watt Amplifier**

Versatile high-fidelity amplifier. Quality companion unit to the 2210 FM-AM tuner at right; ideal as a basis for any deluxe, custom music ensemble. Exceptionally flexible.

Features loudness control independent of volume control. 5-position magnetic phono equalizer (78 rpm; Columbia-LP; RCA-AES; FFRR; European). Selector switch for choice of phono with rumble filter, phono without rumble filter, tuner, TV or tape recorder. With shaft extension kit and dial plate. *Output:* 20 watts at less than .3% distortion. *Response:*  $\pm 2$  db, 20-20,000 cycles. *Hum:* 80 db below rated output. *7 Inputs:* Tuner, TV, recorder playback, microphone, crystal phono, high-level magnetic phono, and low-level magnetic phono. *Output Impedance:* 4, 8, and 16 ohms; plus tape recorder.

*Controls:* Volume, Loudness, Bass (-17 db to +15 db @ 40 cycles), Off-On-Treble (-28 db to +18 db @ 15 kc), Phono Equalizer switch and Input Selector switch. *Tubes:* 6SN7GT, 6SC7, 2-6SL7GT, 2-5881, 5L4G rectifier. *Size:* 7 $\frac{1}{2}$ x16x8 $\frac{3}{4}$ ". For 110-120 volts, 50-60 cycle AC. Shpg. wt., 23 lbs.

98 SX 608. List. \$166.60. NET **97.95**

**Model 2210 Deluxe FM-AM Tuner**

An excellent companion FM-AM tuner for Model 2200C amplifier. Incorporates all features required for exceptional fidelity, sensitivity and stability.

**LATEST FEATURES.** Continuously variable AFC (automatic frequency control) circuit; strength of AFC action easily adjustable. Two cathode follower outputs: 1—detector, independent of volume control (for tape recorders); 2—through volume control (for connection to 2200C amplifier or any other hi-fi amplifier having tone controls). Tuned RF stage on both AM and FM. Indoor antenna for FM-AM.

**SPECIFICATIONS.** *FM:* Sensitivity of 5 microvolts for 30 db of quieting, 190 kc bandwidth, 300-ohm input for outdoor antenna. *AM:* Sensitivity of 5 microvolts for .5 v. output, high and low impedance inputs for antenna. Whistle filter. *Controls:* Off-On-Volume, Tuning, FM-AM selector and AFC, 10 tubes plus rectifier. Blue-gray hammer-tone with brushed bronze trim. For 110-120 v., 50-60 cycle, 7x13 $\frac{1}{2}$ x10 $\frac{1}{2}$ ". Wt., 16 lbs.

98 SX 607. List. \$241.70. NET **142.10**

**Fine Bell Quality at Moderate Cost**



2122C

**Model 2122C Amplifier**

Latest version of the popular Bell 2122 amplifier. Has many deluxe features for exceptional performance in the low-cost high-fidelity system.

**FEATURES.** 3-position record compensator. High-impedance output for tape recording. Two auxiliary AC outlets controlled by off-on switch on amplifier. Dial plate may be removed for behind panel mounting. With four 1 $\frac{1}{4}$ " extension shafts.

**SPECIFICATIONS.** *Response:*  $\pm .75$  db, 20-20,000 cps. *Output:* 10 watts @ less than 2% distortion. *Hum:* 65 db below rated output. *Four Inputs:* High-level and low-level magnetic phono; Tuner; Auxiliary (TV, crystal phono, tape playback, etc.). *Controls:* Selector-equalizer switch; Volume; Bass; Off-On-Treble. *Outputs:* 4, 8, and 16 ohms plus high-impedance to tape recorder. *Tubes:* 2-6SC7, 6SL7GT, 2-6V6GT, 5Y3GT rect. 6x11 $\frac{1}{2}$ x8". For 110-120 v., 50-60 cycle AC. Shpg. wt., 14 lbs.

98 SX 606. List. \$89.90. NET **52.87**

**MODEL 2201 PILOT LIGHT ASSEMBLY.** Plugs into socket provided on Models 2200C, 2199B, 2122C and 3-D amplifiers. With 5-foot cord. Shpg. wt., 5 oz.

98 S 600. List. \$3.25. NET **1.91**



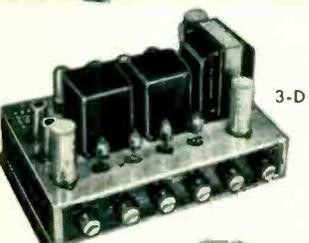
2199B

**Model 2199B Amplifier**

This very moderately priced amplifier includes all the quality features of the 2122C amplifier at left, plus many deluxe circuit refinements.

**FEATURES.** Five-position record compensator. Continuously variable loudness control. Turntable rumble filter. High-impedance output jack for tape or disc recording. Removable dial plate and 5 extension shafts simplify panel installation. 3 AC outlets. **SPECIFICATIONS.** *Output:* 12 watts, with less than 1% harmonic distortion. *Response:*  $\pm .5$  db from 20-20,000 cps. *Hum:* 70 db below rated output. *Six Inputs:* Radio, crystal phono, high and low-level magnetic phono; tape playback or TV. *Controls:* 7-position Selector-Equalizer, Loudness; Gain; Bass; Treble-Off-On. Rumble filter switch on chassis. *Outputs:* 4, 8, and 16 ohms. *Tubes:* 6SC7, 2-6SL7GT, 2-6V6GT, 5Y3GT rectifier. *Size:* 6 $\frac{1}{4}$ x13x8 $\frac{3}{4}$ ". For 110-120 volts, 50-60 cycle AC. Shpg. wt., 18 lbs.

98 SX 604. List. \$133.25. NET **78.35**



3-D

**Model 3-D Binaural Amplifier**

Dual channel high-fidelity amplifier. Especially designed for reproduction of binaural records, binaural tape recordings or binaural radio broadcasts. May also be used as a conventional monaural amplifier.

**FEATURES.** Two complete amplifiers on a single chassis. Dual inputs and outputs. 3 auxiliary AC outlets.

**SPECIFICATIONS.** *Output:* 10 watts per channel. Less than .5% total distortion. *Response:*  $\pm .5$  db from 20-20,000 cps. *Hum:* 70 db below rated output. *Dual Inputs:* Radio, tape, magnetic phono. *Dual Outputs:* 4, 8, and 16 ohms plus dual tape recording. *Controls:* 3-position Selector; 6-position Function Switch (binaural, monaural, binaural reverse); Balance (gain of the two channels); Gain (both channels simultaneously); Bass; Off-On-Treble. *Tubes:* 2-12AX7, 2-12A7, 2-12AX7, 4-6V6GT, 5L4G rectifier. 8x16x11". For 110-120 volts, 50-60 cycle AC. Wt., 28 lbs.

98 SX 605. List. \$249.90. NET **146.95**

**Model 2145A Remote Control Amplifier**

An extremely flexible remote-controlled hi-fi all-triode amplifier. All inputs on main amplifier chassis. Up to 50' cable may be used to control unit. Ideal for chairside operation. Features shock-mounted preamps. Compensated volume control assures full tone at low listening levels. *Output:* 15 watts at less than .4% distortion. Peak output, 30 watts. *Response:*  $\pm .25$  db 20-30,000 cps. *Hum:* 80 db below rated output. *Six Inputs:* High- and low-level magnetic phono, crystal phono, microphone, radio and TV. *Outputs:* 4, 8 and 16 ohms. *Controls:* Remote unit, Selector-Equalizer switch; compensated volume control; Bass; Treble. Amplifier unit, Master gain control; AC Switch. *Tubes:* 3-12AU7, 3-12AX7, 2-6SN7GT, 2-6BA6; 5V4G rectifier. *Sizes:* Remote unit, 4 $\frac{1}{2}$ x10x3 $\frac{1}{2}$ ". Amplifier, 7x17x8 $\frac{1}{2}$ ". For 110-120 v., 50-60 cycle AC. With 5' connecting cable and plugs. Shpg. wt., 30 lbs.

97 SX 737. List. \$316.60. NET **186.15**

97 S 741. 20' extension cable. NET **7.20**



2145A



## GROMMES CUSTOM MUSIC AMPLIFIERS



### Top Quality High-Fidelity Amplifiers of Versatile Design

#### Professional Remote Amplifier and Preamplifier

#### New 60PG Tri-Linear 20-Watt Amplifier

MODEL 2168A. Improved basic amplifier. Combines two of the finest circuits in use—advanced Williamson (triode) and tri-linear (tapped screen). Slide-switch selection of circuit (desired). *Output:* Tri-linear, 30 watts; triode, 15 watts. *Response:*  $\pm .5$  db, 5-100,000 cps with .5% IM distortion. *Outputs:* 4, 8 and 16 ohms. *Hum:* 90 db below rated output. *Controls:* Input gain; Output tube balance. *Tubes:* 2—12AU7, 2—6BG6G; 5U4G rectifier. For 110-120 volts, 50-60 cycle AC. Chrome chassis, 14x7x8". Shpg. wt., 25 lbs.

93 SX 978. List, \$145.00. NET..... 97.51

MODEL 210PA. Deluxe, completely variable equalizer-preamplifier with specs that exceed broadcast standards. Features professional 11-step calibrated bass and treble controls plus separate turnover and roll-off controls permitting equalization of any record. Cathode follower output. Six inputs. *Response:*  $\pm .5$  db, 6-100,000 cps with .1% IM distortion. *Tubes:* 3—6SJ7 and 1—6SN7GT. Takes power from 2168A amplifier or 117PS power supply, below. With 3-ft. connecting cables. Chrome chassis, 14x5½x6". Wt., 6 lbs.

93 SX 982. List, \$145.00. NET..... 97.51

Meets the most rigid requirements for the home music-TV entertainment center. Features choice of either the popular advanced Williamson circuit (triode) or the latest tri-linear circuit (tapped screen). Cathode-coupled bass and treble controls calibrated in db steps. Turntable rumble filter. Removable control panel simplifies cabinet installation. Two auxiliary AC outlets.

**SPECIFICATIONS.** *Output:* Tri-linear, 20 watts; triode, 10 watts. *Response:*  $\pm .5$  db, 15-50,000 cps with 1.5% IM distortion. *Hum:* 85 db below rated output. *Inputs:* Two high impedance channels and 2 phono channels. *Controls:* Selector-Equalizer switch (TV, Radio, Phono Flat, RCA-AES, NAB, Cel. LP); slide-switch rumble filter; Off-On-Volume; slide-switch Loudness off-on; Bass. (-15 to +15 db); Treble. (-15 to +15 db). Slide-switch for choice of circuit operation. *Outputs:* 4, 8 and 16 ohms plus high impedance to tape recorder. *Tubes:* 3—12AX7, 2—5881; 5U4G rectifier. Brown hammerloid finish. For 110-120 v., 50-60 cycle AC. Size, 13x7x7¼". Shpg. wt., 23 lbs.

93 SX 987. List, \$145.00. NET..... 97.51

### Excellent Hi-Fi Performance at Moderate Cost

#### New Preamplifier-Amplifier Combination

MODEL 206PA. A complete, fine quality equalizer-preamplifier control unit with simplified four knob control. Record compensator provides correct equalization for all recordings. Cathode-follower output. *Controls:* Selector-Equalizer switch (Tape-Television; Radio; Phono. Flat; RCA-AES; NAB; Columbia); Loudness type Volume-Off-On; Bass; Treble. *Outputs:* To basic amplifier or tape recorder. *Tubes:* 12AX7 and 2—12AU7. Takes power from Model 100BA below or 117PS supply. Size, 10½x6½x3". Shpg. wt., 6 lbs.

93 SX 866. List, \$79.00. NET..... 53.90

MODEL 100BA. Wide-range 12 watt basic amplifier. Has no controls. Ideal for out-of-sight installation. High quality, full-frequency response achieved when used with Model 206PA above or any preamp or tuner having a full set of controls. *Output:* 12 watts with 2% IM distortion. *Response:*  $\pm .5$  db 20-50,000 cps. *Hum:* -80 db. *Outputs:* 4, 8 and 16 ohms. *Tubes:* 6SL7GT, 2—6V6GT; 5Y3GT rectifier. 14x4½x5½". For 105-125 v., 50-60 cycle AC. Wt., 14 lbs.

93 SX 985. List, \$62.00. NET..... 40.42

#### Modernization Components

MODEL 5-PA PREAMPLIFIER. Self-powered unit. Adapt any radio or amplifier to any magnetic phono cartridge. Takes both high- and low-level cartridges by slide-switch selection. Feedback equalization to 30 cps. Turnover at 500 cps. Flat response to 20,000 cps. 12AX7 tube; selenium rectifier. For 110-120 v., 50-60 cycle AC. Size, 4x3½x4½". Wt., 2 lbs.

93 S 868. List, \$16.50. NET..... 11.27

MODEL RC-1 EQUALIZER. Provides correct playback curve for all records when connected between magnetic cartridge and preamplifiers not having equalization. Five position switch. For panels up to ½" thick. Brown dial plate—gold lettering. Size, 2½x2½x2½". Shpg. wt., 1 lb.

93 S 869. List, \$15.00. NET..... 9.80

MODEL 117PS POWER SUPPLY. Supplies necessary voltages to Models 206PA and 210PA preamps. For 110-120 v., 50-60 cycle AC. 6¼x3½x4¼". Wt., 4 lbs.

93 S 983. List, \$18.50. NET..... 12.25

#### New 55PG 12 Watt Amplifier

New, 12-watt successor to the highly popular 50PG. This extremely versatile, high-quality amplifier is an excellent basis around which to assemble a music system.

**FEATURES.** Turntable rumble filter. Loudness control. Feedback phono equalization. Cathode-coupled bass and treble controls. Control panel may be removed for cabinet installation. 2 auxiliary AC outlets.

**SPECIFICATIONS.** *Output:* 12 watts with 2% IM distortion. *Response:*  $\pm .5$  db, 20-50,000 cps. *Hum:* 80 db below rated output. *Inputs:* Two high impedance channels for radio, tape recorder, crystal phono, TV, etc.; Two magnetic phono channels for high- and low-level cartridges. *Controls:* Selector-Equalizer switch (Tape-TV; Radio; Phono Flat; RCA-AES; NAB; Cel. LP); Off-On-Volume; Bass, calibrated -15 db to +15 db; Treble, calibrated -15 db to +15 db. *Outputs:* 4, 8 and 16 ohms plus high impedance to tape recorder. Slide-switch off-on operation of loudness control and rumble filter. *Tubes:* 3—12AX7, 2—6V6GT; 5Y3GT rectifier. Handsome brown hammerloid finish. For 110-120 volts, 50-60 cycle AC. 11x7x7". Wt., 15 lbs.

93 SX 865. List, \$89.25. NET..... 58.31

#### Low-Cost LJ-3 Amplifier

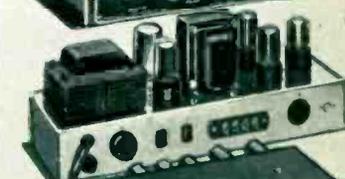
Value-packed, economically-priced 10 watt amplifier. Embodies many quality features including wide-range frequency response. Has amazing "liveness" of reproduction.

**FEATURES.** Four position equalized record compensator. Three separate inputs may be chosen by means of selector switch on front panel. Individual bass and treble controls. Two auxiliary AC outlets.

**SPECIFICATIONS.** *Output:* 10 watts with 2% harmonic and 3% IM distortion. *Response:*  $\pm 1$  db 20-20,000 cps. *Hum:* 80 db below rated output. *Inputs:* Two 2 megohm channels for radio, TV, etc.; high-level or low-level magnetic phono. *Controls:* Selector, Off-On-Volume, Bass, Treble. *Tubes:* 2—12AX7, 2—6V6GT; 5Y3GT rectifier. Brown hammerloid finish. Fuse protected. For 110-120 volts, 50-60 cycle AC. Size, 10x6x6". Shpg. wt., 11 lbs.

93 SX 867. List, \$64.10. NET..... 41.90

55PG



100BA



206PA



LJ-3



RC-1



5-PA

## Harman-Kardon High-Fidelity Tuners and Amplifiers



Festival D-1000

## Harman-Kardon "Festival" Deluxe Combination Chassis

**MODEL D-1000 DELUXE TUNER-PREAMPLIFIER-AMPLIFIER COMBINATION.** An exceptional opportunity to acquire three matched, high-fidelity components on a single chassis! Chassis is complete with 20-watt, ultra-linear Williamson-type amplifier (uses 2—5881 output tubes); built-in preamp with equalization for any type of cartridge; highly sensitive FM-AM tuner. Perfect for custom home music installations.

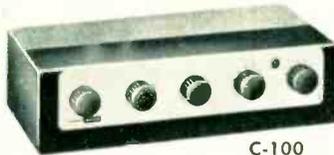
Other deluxe features include Armstrong FM circuit with Foster-Seeley discriminator; efficient AM system; Automatic Frequency Control for lock-in tuning; AFC-defeat combined with tuning knob for pin-point tuning; 6-position loudness contour-volume control assures rich, properly balanced tone at all volume levels; tape recorder output jack; flywheel tuning; built-in ceramic-ferrite loop-stick antenna. Decorator-styled copper escutcheon with black knobs. Distinctive, edge-lighted, slide rule dial of deep maroon with 2-color lettering. Presents a completely balanced, matched music reproduction system. With the simple addition of speaker and record changer, a complete high-fidelity, FM-AM-Phono entertainment center is yours!

**SPECIFICATIONS.** Output: 20 watts. Frequency Response:  $\pm 5$  db, 20-20,000 cps. Intermodulation Distortion: 5% at 10 watts; 2% at 20 watts. Damping Factor: 22. Feedback: 30 db in 3 separate loops. Total Hum Level: Over 75 db below 20 watts. Treble Range: +18 db to -18 db. Bass Range: +18 db to -18 db.

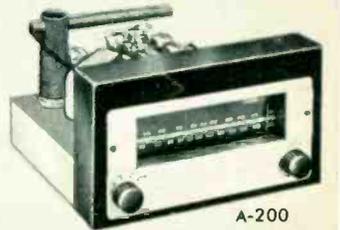
FM Sensitivity: 3 microvolts for 30 db quieting. IF Bandwidth: 200 kc at 6 db down. Discriminator Peak Separation: 400 kc. AM Sensitivity: 15 microvolts. Copper-plated chassis. Size: 7x13 $\frac{1}{2}$ x11 $\frac{1}{4}$ " Deep. For 110-120 v., 60 cyc. AC. Shpg. wt., 35 lbs. 99 SX 080. NET. 189.50



A-300



C-100



A-200

### Deluxe Compact Tuner-Amplifier Combination

A new, pace-setting tuner-amplifier combination for high-fidelity installation at money-saving cost. Both units (used singly or together) offer outstanding performance, eye-catching appearance and ultra-compactness. Modern copper and black styling and small size, makes them suitable for table, shelf or cabinet mounting in custom home music systems.

### New A-200 "Guide" FM-AM Tuner

Delivers astonishing performance at truly modest cost. Beautifully styled in brushed copper and black, this tuner enhances any home music installation. Low-noise FM front-end employs grounded-grid amplifier circuit. Automatic frequency control with front panel provision for AFC defeat—allows pin-point, highly selective tuning. Foster-Seeley discriminator. Built-in, efficient AM loopstick antenna. Fly-wheel tuning. Edge-lighted slide rule dial. The handsome panel adds a note of distinction to any interior motif and permits simple cabinet installation. Makes it possible for anyone to enjoy high-quality FM-AM reception at budget-minded cost.

**SPECIFICATIONS.** Sensitivity: FM, 5  $\mu$ v for 30 db quieting; AM, 25  $\mu$ v. Selectivity: FM, 200 kc bandwidth 6 db down; AM, 8 kc bandwidth 6 db down. Frequency Range: FM, 88 to 108 mc; AM, 530 to 1650 kc. FM Drift:  $\pm 15$  kc maximum. Image Rejection: 30 db minimum. Distortion: Less than 1% at rated output. Frequency Response: FM,  $\pm 5$  db, 20-20,000 cps; AM,  $\pm 3$  db, 20-5,000 cps. Hum Level: -65 db.

Tubes: 2—12AT7, 1—6BE6, 1—6BA6, 2—6AU6, 1—6AL5; selenium rectifier. Size: 5 $\frac{1}{4}$ " H, 9 $\frac{1}{2}$ " W, 8" Deep. For operation from 110-120 volts, 60 cyc. AC. Shpg. wt., 9 lbs. 99 SX 079. NET. 69.50

### A-300 "Theme" FM-AM Tuner

Companion piece for a perfect match to the Model C-100 amplifier (at right). Can be stacked with it in total space only 7 $\frac{3}{4}$ " high, 12 $\frac{1}{2}$ " wide and 8 $\frac{3}{4}$ " deep! When installed in cabinet with the C-100, requires space only 8 $\frac{1}{2}$ " high, 12 $\frac{1}{2}$ " wide and 7 $\frac{1}{4}$ " deep. Deluxe features include: Armstrong FM circuit with Foster-Seeley discriminator; dual-bar tuning eye for FM and AM; AFC defeat on function switch and AFC momentary on tuning control; fly-wheel tuning; cathode follower output; tape recorder output jack. Specifications: Sensitivity: FM, 2  $\mu$ v for 30 db quieting; AM, 15  $\mu$ v. Selectivity: FM, 180 kc bandwidth 6 db down; AM, 8 kc bandwidth 6 db down. Hum Level: -65 db. Distortion: .03% at 1 volt. Frequency Response: FM,  $\pm 5$  db, 20-20,000 cps; AM,  $\pm 3$  db, 20-5,000 cps. Tubes: 1—6BK7A, 1—12AT7, 1—6AB4, 1—6BE6, 1—6BA6, 1—6AL5, 3—6AU6, 1—6AL7, 1—12AU7; 6X4 rectifier. Built-in ceramic-ferrite loopstick antenna. Edge-lighted slide rule dial. 2-tone lettering. Size: 4" H, 12 $\frac{1}{2}$ " W, 7 $\frac{1}{4}$ " D. For 110-120 v., 60 cyc. AC. Shpg. wt., 14 lbs. 99 SX 077. NET. 115.00

### C-100 "Melody" Hi-Fi Amplifier

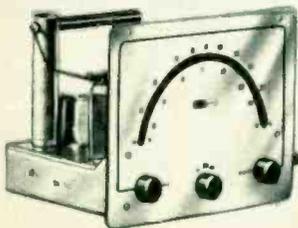
New, ultra-linear, Williamson-type 10-watt hi-fi amplifier. In easy reach of the limited budget, this precisely designed amplifier offers performance characteristics usually found in more expensive units. Same size as A-300 FM-AM tuner listed at left. Includes exclusive Harman-Kardon dynamic loudness contour control, record equalization, preamp for magnetic cartridges. With cabinet installation kit. Specifications: Output: 10 watts; peak, 16 watts. Frequency Response:  $\pm 5$  db, 20-20,000 cps. Intermodulation Distortion: 5% at 5 watts output; 2% at 10 watts output. Damping Factor: 16. Output Impedances: 8 and 16 ohms. Hum Level: -70 db. Controls: Record Compensation (I.P.-RIAA-EUR-Tuner-AUX 1-AUX 2). Contour, Loudness, Bass, Treble. Contour Range: 6 steps, 0 to 50 db Fletcher-Munson correction. Tubes: 2—12AX7, 1—12AU7, 2—6CM6; 5Y3GT rectifier. Size: 12 $\frac{1}{2}$ " W, 3 $\frac{1}{4}$ " H, 7 $\frac{1}{4}$ " Deep. Installed in cabinet with A-300 tuner, requires space 8 $\frac{1}{2}$ " H, 12 $\frac{1}{2}$ " W, 8 $\frac{3}{4}$ " Deep. For operation from 110-120 v., 60 cyc. AC. Shpg. wt., 11 lbs. 99 SX 078. NET. 74.50

### A-100 "Century" FM-AM Tuner for Moderate Cost Custom Installations

Very popular FM-AM tuner offers excellent reception at low cost. A-100 offers excellent FM-AM reception at a price to suit the moderate budget. Features include: Automatic frequency control (AFC) for simple, accurate tuning and high stability; AFC can be switched off from front panel. Foster-Seeley discriminator circuit and grounded-grid triode front-end for excellent linearity and very favorable signal-to-noise ratio.

FM Sensitivity: 8 microvolts for 30 db quieting. AM Sensitivity: 100 microvolts with built-in antenna. Frequency Response:  $\pm 0.5$  db from 20 to 20,000 cps. Audio Distortion: Less than 1% at rated output. Hum Level: 65 db below rated output. Rated Audio Output: 1 volt. Controls: Volume, Function Selector, and Tuning/AFC. Highly efficient, built-in loopstick antenna for AM reception; also includes terminals to permit use of outdoor antennas for AM and FM. Input for crystal phono. Precision fly-wheel tuning.

Tubes: 2—12AT7, 6BE6, 6BA6, 2—6AU6, 6AL5; selenium rectifier. Illuminated dial with "shaft-of-light" lucite pointer. Decorator-styled, brushed copper panel. Auxiliary AC outlet. Size: 8x11x7" deep. For 110-120 volts, 60 cycle AC. Shpg. wt., 10 lbs. 99 SX 081. NET. 59.50



A-100

## National "Criterion" FM-AM Tuner with "Mutamatic" Tuning

This custom-styled tuner, although moderately priced, offers outstanding hi-fi reproduction, new unusual circuit features, plus ultra-modern styling. Up to the minute in every detail—it's even ready for stereophonic reception! Two gain controls and separate tuning condensers are provided, 1 for FM, 1 for AM. With separate speaker and amplifier systems, both can be enjoyed independently or for listening to binaural FM-AM broadcasts. "Mutamatic" FM tuning completely eliminates all annoying noise and hiss between stations. Stations rise out of velvety silence for perfect tuning. Cathode follower output permits use of long lead lengths between tuner and amplifier. Another unique new feature permits simple plug-in installation of "Horizon 5" preamp (below) on front panel! Housed in strikingly smart, thoroughly functional case—can be used alone or installed in cabinet.

**SPECIFICATIONS. FM Section. Sensitivity:** 6  $\mu$ v for 20 db quieting. 4-section tuning capacitor for optimum selectivity. **Image Rejection:** Over 60 db. **IF Bandpass:** Flat within  $\pm 1$  db over band of 200 kc. **Distortion:** Less than 0.5% for all levels of modulation up to 125%. **Output:** Cathode follower output: 2 volts, 600 ohms. **Hum and Noise:** -60 db. **AM Section. Sensitivity:** 10  $\mu$ v for 10 db signal-to-noise ratio. **IF Bandpass:** Flat  $\pm 1$  db over 14.5 kc range. At 20 kc, -60 db. **Harmonic Distortion:** Less than 1%. **Binaural Operation:** Individual output jacks for simultaneous operation. Tape recorder output jack. **Size:** 16 1/2 x 7 1/4 x 11 1/2" deep. Forest green panel. Pigskin-white case. Lucite knobs. **Less preamp—with cabinet.** For 110-120 v., 60 cyc. AC. Shpg. wt., 32 lbs.

98 SX 679. NET. . . . . 169.95

As above, less cabinet.

98 SX 678. NET. . . . . 164.95

## National's New "Horizon" Line of High-Fidelity Components



Criterion  
(with "Horizon 5" preamp installed)



Horizon 20



Horizon 5



Horizon 10

### "Horizon 20" Amplifier

New, 20-watt basic hi-fi amplifier with "Unity Coupling." Provides excellent fidelity; permits high power output. For critical music lovers who demand the best. Employs push-pull output stage in which the coupling between output tubes is unity, independent of the output transformer. Permits use of highly efficient class AB<sub>1</sub> operation without impulse distortion. Transformer supplies only the impedance matching between tubes and load—results in reduced leakage inductance and increased power bandwidth. For use with the finest high-fidelity equipment.

**SPECIFICATIONS. Frequency Response:**  $\pm 15$  db, 20-20,000 cps;  $\pm 1$  db, 10-60,000 cps. **Harmonic Distortion:** Less than 3% at rated output of 20 watts; 6% at 25 watts. **IM:** Not more than 1% at 20 watts output. **Hum and Noise:** -80 db. **Sensitivity:** 1.6 volts for 20 watts output. **Imp.:** 8 and 16 ohms. **Other Features:** Input level control, rumble filter (effective below 30 cps—may be easily disconnected) plugs and wiring for use with Horizon 5 preamp. **Size:** 14 1/2 x 4 1/2 x 11" deep. For 110-120 v., 60 cyc. AC. Shpg. wt., 32 lbs.

98 SX 677. NET. . . . . 84.95

### "Horizon 5" Preamp-Control Unit

"Plug-in" type preamplifier. Designed to flush mount in front panel recess of, and obtain operating power from, the Criterion tuner or Horizon 20 amplifier. Provides extended frequency response, high output and low distortion. Tone controls assure extreme range without sacrifice of smoothness or accuracy of calibration in flat position. **Controls:** Input Selector-Record Equalizer (NARTB, RIAA, LP, AES, Noisy 78, FFRR, Foreign). Bass, Treble, Loudness Volume, Loudness On-Off. Three source adjustment controls accessible from bottom; TV level set. Tape level set. Switch for G.E. or Pickering magnetic cartridges.

**SPECIFICATIONS. Frequency Response:**  $\pm 25$  db, 20-20,000 cps;  $\pm 1$  db, 20-100,000 cps. **Harmonic Distortion:** Less than 2% at 1.5 volts; less than .6% at 10 volts. **IM:** Less than .3% at 1.5 volts; less than 1.5% at 10 volts. **Hum and Noise:** -70 db on TV-tuner inputs; -50 db on 10  $\mu$ v phono input. **Output Impedance:** Approximately 3000 ohms. Up to 50 ft. of cable may be used between tuner/preamp and amplifier. **Size:** 2 1/2 x 10 1/4 x 6" deep. Finished in attractive forest green. Shpg. wt., 3 lbs.

98 S 675. NET. . . . . 49.95

### "Horizon 10" Amplifier with Preamp

Complete 10-watt amplifier-preamp combination for achieving brilliant high-fidelity performance. Utilizing the same unity-coupled, push-pull output stage as the Horizon 20, this moderately-priced amplifier is comparable in power and reproduction to much more expensive units. Features high power-handling capacity, wide response and unusually clean, distortion-free output. An excellent opportunity for budget-minded hi-fi enthusiasts to bring equipment up to date or to start a custom home music system with this exceptionally fine amplifier-preamp. **Controls:** Bass-On-Off, Treble, Loudness (with built-in loudness compensation) and 5-position input selector-record equalizer (Tape, Tuner, Phono with equalization for RIAA, AES, Foreign) for complete flexibility.

**SPECIFICATIONS. Frequency Response:**  $\pm 2$  db, 20-20,000 cps. **Distortion:** Less than .5% harmonic distortion at full rated output. **IM:** 2% at 10 watts. **Hum and Noise Level:** -70 db on TV and Tuner inputs; -50 db on Phono input. **Imp.:** 8 and 16 ohms. **Size:** 14 1/2 x 4 x 12 1/4" deep. For 110-120 v., 50-60 cyc., AC. Wt., 27 lbs.

98 SX 676. NET. . . . . 79.95

## General Electric Amplifier and Preamplifier

### A1-300 10-Watt Basic Amplifier

Product of the famous G.E. laboratories. Designed for use in conjunction with the Model A1-200 remote-control preamplifier, at night. May also be used with other preamp-control units or tuners. Narrow chassis construction for easy mounting.

**SPECIFICATIONS. Frequency Response:**  $\pm 2$  db, 30-15,000 cps. **Harmonic Distortion:** Less than 1% at 10 watts. **IM:** Less than 3% at 10 watts. **Hum and Noise:** 70 db below 10 watts. **Sensitivity:** 2 volts for 10 watts output; provision for increasing sensitivity to 0.3 volt. **Imp.:** 4, 8 and 16 ohms. **Size:** 5 1/2 x 12 1/4 x 4 1/2" deep. Blue, perforated metal cover. For 105-120 volts, 60 cycles AC. Shpg. wt., 12 lbs.

93 SX 995. List, \$79.55. NET. . . . . 46.79

### A1-200 Preamplifier

The versatile Model A1-200 all-triode preamplifier serves as an excellent control unit for the A1-300, at left, or any other basic high-fidelity amplifier. Self-powered. Employs record compensator for clean, accurate playback of all records. **3 Inputs:** 1—magnetic phono, 1—radio tuner, 1—auxiliary for TV, crystal phono, tape recorder, etc. **Controls:** Selector (Noisy 78, Eur 78, AES, Flat, LP, Radio, and Auxiliary), Treble (-14 to +15 db at 15,000 cps), Bass (-15 to +13 db at 50 cps), AC-Loudness. **Rated Output:** 2 volts. **Output Impedance:** 4000 ohms; permits long lead length to amplifier. **Size:** 3 1/2 x 12 1/4 x 8 1/2" deep. For 105-120 volts, 50-60 cycles AC. Shpg. wt., 7 lbs.

93 SX 996. List, \$96.55. NET. . . . . 56.79



A1-300

A1-200

**H. H. Scott Amplifiers**  
**Featuring Dynaural Noise Suppression**



210-C



214-C System

232-A



120



99-A



121-A



265-A



114-A

**DYNAMIC NOISE SUPPRESSION.** Scott's expert-acclaimed system for virtually eliminating record scratch and hiss, and turntable rumble—without any sacrifice in audio fidelity! The Dynaural Noise Suppressor filters out noise during low-level passages and even between individual notes. Consequently the listener hears only realistic reproduction with a remarkable absence of background noise. All units with controls listed below either include or are ready for installation of this outstanding noise suppression system.

**NEW TYPE 210-C 23-WATT AMPLIFIER.** Has Dynaural Noise Suppressor. 8-position record compensator. Loudness control. Bass and treble controls. 5-position input selector; inputs for tuner, tape, TV, magnetic phono and constant-amplitude phono. DC-operated preamp circuits. *Response:* 10-35,000 cps. *Harmonic Distortion:* 0.5%. *Intermodulation (1st order):* 0.1%. *Hum:* —80 db. *Speaker Outputs:* 1 to 24 ohms. *Tubes:* 6AL5, 4—12AU7, 2—12AX7, 2—616G, 5V4G rectifier. Maroon, crackle-finish case. 14½x4x13". For 105-125 v., 50-60 cycle AC. Shpg. wt., 22 lbs.  
 93 SX 831. List, \$287.50. NET **169.05**

**TYPE 214-C MUSIC SYSTEM.** Consists of 120 Equalizer-Preamplifier and 232-A basic amplifier.  
**TYPE 120 EQUALIZER-PREAMP.** Handsomely styled cabinet. 8-position compensator. Inputs for magnetic phono, tuner, TV, and constant-amplitude phono. Socket takes 114-A Dynaural Noise Suppressor (listed below). Bass and treble controls. Loudness control. DC-operated heaters for negligible hum. 3 tubes; takes power from 232-A Amplifier. Size: 3¼" high, 11½" wide, 8¼" deep.

**TYPE 232-A BASIC AMPLIFIER.** Controlled by 120. *Rated Output:* 32 watts. Delivers 64 watts instantaneous peak output. *Response:* 12-80,000 cps. *Harmonic Distortion:* 0.5%. *Intermodulation (1st order):* 0.1%. Hum balance adjustment; also input level adjustment. Terminals match speakers from 1 to 24 ohms. *Tubes:* 2—12AU7, 2—1614; 5U4G rectifier. Size: 6¼" high, 14½" wide, 7½" deep.

System (consisting of above units) supplied with 6-ft. interconnecting cable. For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 31 lbs.  
 93 SX 832. List, \$288.25. NET **169.49**

**TYPE 120-CP EQUALIZER-PREAMP.** Same as 120 (above) but hand-tooled leather-covered case and built-in power supply to permit use with other amplifiers. Also, separate level adjustment for each input. For 105-125 volts, 50-60 cycle AC. Shpg. wt., 7½ lbs.  
 93 S 837. List, \$166.25. NET **97.75**

**TYPE 120-CP1** As above, but plain metal case and escutcheon. Shpg. wt., 7½ lbs.  
 93 S 838. List, \$161.25. NET **94.81**

**TYPE 232-A BASIC AMPLIFIER.** Described above. 0.5 volt input for 28 watts output. For 105-125 volts, 50-60 cycle AC. Shpg. wt., 24 lbs.  
 93 SX 833. List, \$170.00. NET **99.96**

**TYPE 99-A 12-WATT AMPLIFIER.** Compact and versatile. Separate turnover and rolloff controls provide 9 record compensation curves. Has loudness control. Socket takes 114-A Dynaural Noise Suppressor. Rumble filter. Inputs for magnetic and constant-amplitude cartridges; also tuner, tape recorder and TV inputs. Bass and treble controls. *Harmonic Distortion:* Less than 0.8%. *Hum:* —80 db. *Speaker Outputs:* 4, 8, 16 and 500 ohms. *Tubes:* 2—12AX7, 12AU7, 2—6V6GT; 5Y3GT rectifier. Maroon case. 3¼x13¼x9¾". For 105-125 v., 50-60 cycle AC. Shpg. wt., 15 lbs.  
 93 SX 994. List, \$166.00. NET **97.95**

**TYPE 121-A EQUALIZER-PREAMPLIFIER.** Offers audio connoisseurs the ultimate in versatility. Includes Dynaural Noise Suppressor. Continuously variable turnover and rolloff controls. Loudness control. Bass and treble controls. 8 inputs: 5—high-level for tuner, tape, etc; mike; magnetic phono; constant-amplitude phono. 3-position high-frequency cut-off filter. Leather-covered case. 4¾x13¼x9¾". 6 tubes plus rectifier. For 105-120 volts, 50-60 cycle AC. Shpg. wt., 13 lbs.  
 93 SX 989. List, \$270.00. NET **159.50**

**TYPE 121-A1.** As above, but plain metal case and escutcheon for panel mounting. 13 lbs.  
 93 SX 834. List, \$263.00. NET **154.60**

**NEW TYPE 265-A 65-WATT BASIC AMPLIFIER.** Has extremely high power handling capacity and incorporates new, unusual features. "Snubber" circuit protects speakers from overload damage. Adjustable damping control perfectly matches amplifier to speaker system. *Output:* Rated, 65 watts; instantaneous peak, 130 watts. *Harmonic Distortion:* 0.5%. *Intermodulation (1st order):* 0.1%. *Speaker Output:* 1 to 24 ohms. —1614's in output stage. 18¼x9x8¼". For 105-125 volts, 50-60 cycle AC. Shpg. wt., 45 lbs.  
 93 SX 835. List, \$333.35. NET **196.00**

**TYPE 114-A DYNRAURAL NOISE SUPPRESSOR.** Virtually eliminates record scratch and hiss, and turntable rumble, but does not affect fidelity. Plugs into 120 (214-C system). 120-CP, 120-CP1 and 99-A above. 4x6½x7". Shpg. wt., 4 lbs.  
 93 S 988. List, \$83.25. NET **48.95**

Escutcheons for panel mounting: For 210-C, No. 93 S 836 at 2.45; for 120, No. 93 S 842 at 2.20; for 99-A, No. 93 S 839 at 2.20; for 114-A, No. 93 S 841 at 1.96. 20-ft. extension cable for 214-C system, No. 93 S 843 at 12.25.

## Selected Top-Quality High-Fidelity Amplifier and Tuner Custom Components



A-116

C-108-H

### McIntosh Amplifiers

**MODEL C-108-H AUDIO COMPENSATOR.** An outstanding achievement in equalizer-pre-amp design. Serves as control unit for either the McIntosh A-116 or 50W-2 amplifier, or may be used with D-101 power supply to serve as control unit for other quality amplifiers. Features 5 turnover and 5 rolloff slide switches. *Turnover:* 1300, 950, 750, 580, 400, and 280 cps. *Rolloff:* flat, 5, 10, 15, 20, and 25 db. Slide-switches may be used in literally hundreds of combinations to match absolutely any recording curve. *Other superb features:* 5-position rumble filter; 5-position aural compensator to compensate for varying response of ear at different power levels. *Other Controls:* 5-position Input Selector, Bass, Treble, Off-On-Volume, High-impedance output for tape recording, 5 Inputs: 2—tuner, tape, crystal mike, etc.; 1—low-impedance mike; 1—high-level magnetic phono; 1—low-level magnetic phono. *Tubes:* 3—12AX7. Gold-finish panel. Fits cabinet, below. *Size:* 4½x11x7½" deep. Takes power from A-116 or 50W-2 amplifier. Shpg. wt., 7½ lbs.

93 SX 897. NET **88.50**

**MAHOGANY CABINET.** For C-108-H. *Size:* 4½x11½x7½". Shpg. wt., 1½ lbs.

93 SX 898. NET **8.00**

**MODEL D-101 POWER SUPPLY.** Supplies power for C-108-H when using C-108-H with amplifiers other than McIntosh A-116 or 50W-2. 5x6½x4½". For 105-125 volts, 60 cycle AC. Shpg. wt., 5 lbs.

93 S 896. NET **19.50**

**MODEL A-116 30-WATT BASIC AMPLIFIER.** The A-116 offers superb peak power handling capacity as well as exceedingly pure, extended response. For use with McIntosh C-108-H, or other high-quality preamp, or FM-AM tuners. Only ½ volt input required for full 30 watts output. *Response:* ±1 db, 10-100,000 cps at 15 watts; ±0.1 db, 20-30,000 cps at 30 watts. *Harmonic Distortion:* Less than 0.5%, 20-20,000 cps at 30 watts. *Intermodulation:* Less than 1% for instantaneous peak power below 60 watts. *Hum and Noise:* 85 db below 30 watts. *Two Inputs:* 0.5 volt, ¼ meg; 2.5 volts, ½ meg. *Output Impedance:* 4, 8, 16 and 600 ohms. *Damping Factor:* 12 or better for 4, 8 and 16 ohm outputs; 16 for 600 ohms. *Tubes:* 12AX7 voltage amplifier, 12AU7 (or 12BH7) phase inverter, 12BH7 driver, 2—6BG6 output; 5U4G rectifier. Gray hammettone. 8½x12x8". For 105-125 v., 60 cycle AC. Shpg. wt., 36 lbs.

93 SX 895. NET **143.50**

**MODEL 50W-2 50-WATT BASIC AMPLIFIER** For use with C-108-H, other high-quality preamp, or FM-AM tuner. *Response:* ±0.1 db from 20-20,000 cps and ±3 db from 10-100,000 at 50 watts. *Harmonic Distortion:* Less than 1% for 50 watts output. *Speaker Output Impedance:* 4, 8, 16, 32 and 600 ohms. Power supply and amplifier on separate chassis. *Tubes:* 12AX7, 2—6J5, 2—6L6G (or 2—5881); 2—5U4G rectifiers. Each chassis, 8½x6½x5½". For 105-125 v., 60 cycle AC. 60 lbs.

97 SX 759. NET **249.50**



RJ-43-M

### Browning Tuners

**MODEL RJ-43M FM-AM TUNER.** New deluxe-quality FM-AM tuner. Designed for use in the finest custom hi-fi systems. Has only two panel controls—Tuning and Bandswitch. Bandswitch positions: Off-AM-FM (with AFC)—FM (without AFC). Cathode-follower output permits long lead lengths. *FM Section:* Armstrong circuit for very clean response. Deemphasis network for flat response from 20-20,000 cps within 0.5 db. All-triode FM front-end gives excellent signal-to-noise ratio; sensitivity of 2 microvolts for 20 db quieting. Drift-compensated oscillator. *AM Section:* Triple-tuned IF transformers provide improved bandwidth. Response, 6 db down at 6800 cps. Highly effective 10 kc whistle filter provides 40 db attenuation at whistle frequency without affecting response. Sensitivity, 1.5 microvolts for useful audio output. Includes separate output jack to feed tape recorder. *Tubes:* 2—12AT7, 6J6, 4—6AU6, 2—6AL5, 6BA6, 6BE6, 6BD6, 12AU7, 5Y3 rectifier and 6AL7 tuning eye. *Size:* 7x14½x11½" deep. Handsome mahogany-finish wood panel. For 110-120 v., 50-60 cycle AC. Shpg. wt., 24 lbs.

93 SX 819. NET **179.50**

**MODEL RJ-43B.** As above, but blonde-finish wood panel.

93 SX 820. NET **179.50**

**MODEL RV-32M FM TUNER.** New highly sensitive FM tuner with many outstanding features. Armstrong discriminator circuit. Has only 3 controls: Tuning, Volume, and AFC Off-On. Employs extremely sensitive cascode RF amplifier; a 2 microvolt signal provides 20 db quieting. Excellent reception in both strong-signal and "fringe" areas. Automatic frequency control assures drift-free operation and makes tuning extremely simple. AFC may be switched "off." Temperature-compensated oscillator. "Magic eye" indicator. Steep, "flat top" IF curve for very wide bandpass and high selectivity. High-frequency deemphasis and extremely linear discriminator operation assure flat, virtually distortionless response. Cathode-follower permits long lead lengths to amplifier; also output jack for tape recording. *Tubes:* 5—6AU6, 2—12AT7, 6J6, 6AL5, 6AL7 "magic eye" and 5Y3GT rectifier. Mahogany-finish wood panel. *Size:* 6½x11x9" deep. For 105-120 volts, 60 cycle AC. Shpg. wt., 14 lbs.

93 SX 821. NET **129.50**

**MODEL RV-32B.** As above, but blonde-finish wood panel.

93 SX 822. NET **129.50**

**MODEL RJ-49M FM-AM TUNER.** Essentially same as RJ-43M above, but has independent FM and AM circuits, independent FM and AM dials, and dual outputs—permits reception of binaral broadcasts. 7x14½x11½". For 110-120 volts, 60 cycle AC. Shpg. wt., 21 lbs.

93 SX 823. NET **229.50**

**MODEL RJ-49B.** As above, but blonde-finish wood panel.

93 SX 824. NET **229.50**



22-A

### New Brook Model 22-A Amplifier

This all-triode amplifier includes all time-proven Brook features—and its ultra-compact design makes installation easy. Includes Brook's Transient Peak Circuit to boost power capacity on peaks; high-level notes are reproduced with realism. Bass-compensated volume control assures outstanding bass reproduction, even when listening at extremely low volume levels. A six-position Record Playback Characteristic Control compensates for the various recording characteristics. *Power Output:* 10 watts. *Frequency Response:* ±1 db from 20-20,000 cps. *Harmonic Distortion:* Less than 1% at 10 watts. *Intermodulation Distortion:* Less than 2% at 10 watts. *Outputs:* 2, 4, 8 and 16 ohms. *Inputs:* 4—for FM, AM, TV or tape recorder; 1—for magnetic cartridges; Channel Selector, Record Playback Characteristic, Bass, Treble, Volume, Power Switch, and Pilot Light. *Tubes:* 6S17, 2—12AU7, 3—6C4, 2—2A3; 5U4G rectifier. *Size:* 4½x13½x13½" deep. Removable lucite escutcheon. For operation from 110-120 volts, 50-60 cycle AC. Shpg. wt., 25 lbs.

98 SX 707. List. \$216.65. NET. **129.99**



### New Brociner Mark 12 Amplifier

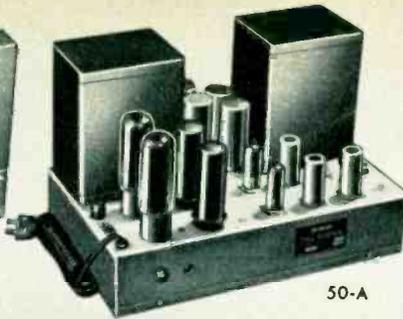
The new Brociner Mark 12 hi-fi amplifier utilizes latest printed-circuit design to achieve unusual performance and versatility at very moderate cost. Separate turnover and rolloff controls provide 24 record compensation curves to assure extremely accurate reproduction of all records. Supplied with booklet of recommended control settings for over 60 makes of records. Highly effective bass and treble controls; 16 db bass boost and attenuate at 50 cps; 16 db treble boost and attenuate at 10,000 cps. Input switch for selection of either radio, TV, tape recorder, or phono input. Phono input accommodates magnetic, capacitance, crystal, or ceramic phono cartridges. Output jack (independent of volume control) for high-impedance tape recorder. *Frequency Response:* ±1 db from 20-20,000 cps. *Rated Output:* 12 watts. *Harmonic Distortion:* Less than 1% at rated output. *Hum Level:* -70 db. *Speaker Output Impedances:* 4, 8 and 16 ohms. *Tubes:* 3—12AX7, 2—6AQ5; 6X4 rectifier. Housed in handsome, compact, iridescent maroon and gold case, only 4½x10½x8" deep; front panel is removable to permit simplified cabinet installation. Has pilot light. Fused. For 110-120 volts, 60 cycle AC. Shpg. wt., 12 lbs.

93 SX 956. NET **98.25**

ALLIED can supply all Brociner hi-fi components. Write for latest prices.



50-R



50-A

**FISHER HIGH-FIDELITY AUDIO COMPONENTS**



50-CM

**Fisher Series 50 Deluxe Music System Ensemble**

The Series 50 Music System Ensemble is a logical choice for those who wish absolute assurance of the very finest in high-fidelity reproduction. Consists of the 50-R Tuner, 50-A Amplifier, and the 50-CM Master Audio Control—each a masterpiece of workmanship

and electronic design. These three units deliver magnificent performance when used as a team in the Series 50 Ensemble, and meet the most exacting requirements when installed individually as companion units to other hi-fi components.

**Model 50-R FM-AM Tuner**

This beautifully engineered tuner is universally acclaimed for its extreme sensitivity, remarkably clean audio response, and drift-free operation. Incorporates every feature required for the ultimate in FM-AM reception. Ideal for use with Fisher or other top-quality hi-fi components. Up to 10 volts output with less than 0.8% distortion. Cathode-follower output; may be used up to 200 feet from amplifier or control unit. Separate shock-mounted front-ends for FM and AM. Variable automatic frequency control on FM; may be switched off for manual tuning.

**FM Specs:** Armstrong discriminator with dual limiters. Response from 20-20,000 cps.  $\pm 1$  db. Cascade RF stage for extreme sensitivity; 2 microvolts for 30 db quieting on 72-ohm antenna input and 4 microvolts for 30 db quieting on 300-ohm antenna input. **AM Specs:** Two IF positions; sharp IF for minimum interference on long-distance reception and broad IF for full-fidelity. Tuned RF stage; sensitivity of less than 1  $\mu$ v for 1 v. output. 10 kc whistle filter.

Two auxiliary inputs for crystal phono and TV. Controls: Off-On, Volume, Selector (AM Broad, AM Sharp, FM-AFC, FM, Phono, TV) and Tuning. Two AC outlets. 12 tubes plus tuning eye and rect. Brown panel.  $8\frac{1}{2} \times 14\frac{3}{4} \times 9\frac{1}{4}$ " deep. With indoor AM loop and FM dipole. For 105-125 v., 50-60 cycles AC. Shpg. wt., 19 lbs.

98 SX 630. NET ..... 164.50

**Model 50-A Amplifier**

The Fisher Model 50-A basic amplifier is the "heart" of the Series 50 Music System Ensemble; also an outstanding amplifier for use with other custom components. Has unusual reserve power handling capacity, virtually flat response to beyond the limits of audibility, extremely high efficiency, and excellent transient response. Harmonic distortion, intermodulation distortion, and hum level are completely negligible. The 50-A is one of the very finest units ever offered for high-fidelity reproduction of sound.

**Frequency Response:**  $\pm 0.5$  db, 15-60,000 cps at 40 watts. **Harmonic Distortion:** .05% at 5 watts; .08% at 10 watts; 0.3% at 40 watts; 1% at 50 watts. **Intermodulation Distortion:** 0.4% at 10 watts; 0.8% at 40 watts; 2% at 45 watts. **Hum and Noise:** Better than 92 db below full output. **Sensitivity:** Less than 1 volt for full output. **Output Impedance:** 8, 16 ohms. **Damping Factor:** 31. Cathode-follower driver stage; well-regulated bias and high-voltage supplies; input level and bias controls. Output transformer uses grain-oriented steel and has interleaved windings.

**Tubes:** 3—12AU7, 2—6CL6, 2—1614 (triode-connected); 2—5AW4 rectifiers. Transformers housed in sealed steel cases. Etched aluminum chassis.  $8\frac{3}{4} \times 14\frac{1}{2} \times 9$ " high. For operation from 105-125 v., 50-60 cycles AC. Shpg. wt., 41 lbs.

98 SX 628. NET ..... 159.50

**Model 50-CM Master Audio Control**

This extremely versatile preamp-equalizer is the control center of the Fisher Music System Ensemble; also ideal control center for other deluxe systems. Hum and distortion are virtually non-existent. Up to 25 combinations of compensation for accurate reproduction of all records. Cathode-follower input stage and cathode-follower outputs provide independence from load conditions and lead lengths.

**Inputs:** 3—TV tuner, radio tuner, tape playback; 1—magnetic phono; 1—mike. **Outputs:** 1—amplifier; 1—tape recorder. **Panel Controls:** Volume-Loudness; Volume-Loudness switch; Input Selector; 5-pos. Low-Frequency Compensation; 5-pos. High-Frequency Compensation; Bass ( $\pm 16$  db); Treble ( $\pm 16$  db); Off-On. Each input has level control. **Output Level:** 15 v. **Harmonic Distortion:** 0.4% at 15 v. **Intermodulation:** 1.6% at 15 volts. **Hum:** 90 db below 2 v.

**Tubes:** 2—12AX7, 1—12AU7, 2 selenium rectifiers. Mahogany-finish case.  $15\frac{3}{4} \times 4\frac{1}{2} \times 6\frac{1}{4}$ " deep. For 105-125 volts, 60 cycle AC. Shpg. wt., 9 lbs.

98 SX 626. NET ..... 97.50

MODEL 50-CB. As above, but in blonde-finish case.

98 SX 629. NET ..... 97.50

MODEL 50-CH. Same as above units, but less case.  $14\frac{1}{4} \times 3\frac{1}{2} \times 6\frac{1}{4}$ ". 7 lbs.

98 SX 627. NET ..... 89.50

**Series 70 Tuner and Amplifier Values**

**Model 70-RT FM-AM Tuner**

Performance of the Model 70-RT FM-AM tuner surpasses the most critical requirements of music lovers and audio perfectionists. Has full set of controls—serves as control unit for 70-A (at right), 50-A (above), or other deluxe amplifier. Offers unusual control versatility, extreme sensitivity and virtually flawless response. Has 4-position record compensator, preamp for magnetic cartridges, tone controls, and loudness control. Cathode-follower output permits using up to 200 feet of cable to amplifier. Tape recorder output jack.

**FM Specs:** Armstrong detector; 2 IF stages; cascade RF stage. Sensitivity for 20 db quieting: 72-ohm antenna input, 1.5 microvolts; 300-ohm antenna input, 3 microvolts. Variable automatic frequency control. **AM Specs:** 2 IF stages with broad and sharp selectivity positions; broad position for full-fidelity reception; sharp position for minimum interference during long-distance reception. Tuned RF stage. Sensitivity: 1 microvolt for 1 v. output. Whistle filter.

**Panel Controls:** Off-On-Bass, Loudness Off-On and Volume-Loudness (concentric). Selector (AM Broad, AM Sharp, FM with AFC, FM without AFC, AES, Ortho, NARTB, LP, and TV), Treble, Tuning, 2 **Inputs:** 1—magnetic phono; 1—TV, tape recorder, etc. 13 tubes plus tuning eye and rectifier.  $8\frac{1}{2} \times 14\frac{3}{4} \times 9\frac{1}{4}$ ". With indoor AM and FM antennas. For 105-125 volts, 60 cycle AC. Shpg. wt., 19 lbs.

98 SX 633. NET ..... 184.50

**Model 70-A Amplifier**

This 25-watt basic amplifier offers famous Fisher quality at very moderate cost. Has no controls; an outstanding companion unit for the Model 70-RT tuner (at left), the Master Audio Control (above), as well as other quality tuners or preamps with full sets of controls. Has high power handling capacity and delivers extremely clean, ultra-wide response. Distortion at 25 watts output is less than  $\frac{1}{2}$ %. Peak power capacity of 50 watts assures authentic reproduction of even the loudest symphonic passages. An excellent value and a notably fine choice for the most critical music lovers.

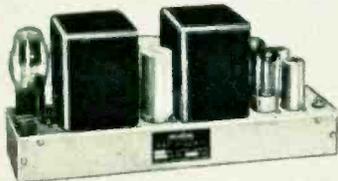
Features grain-oriented, interleaved winding output transformer and four separate feedback loops for extremely low distortion, unusual linearity and excellent transient response. Hum and noise are virtually unmeasurable. **Rated Output:** 25 watts. **Frequency Response:**  $\pm 1$  db from 15 to 35,000 cps at 25 watts output. **Harmonic Distortion:** Less than 0.15% at 20 watts. **Intermodulation Distortion:** Less than 0.5% at 20 watts; less than 0.2% at 10 watts. **Hum and Noise:** Better than 95 db below 25 watts. **Damping Factor:** 26. **Speaker Output Impedances:** 8 and 16 ohms.

**Tubes:** 12AT7, 12AU7, 2—5881; 5V4G rectifier. Power and output transformers are housed in sealed, drawn-steel cases. Silver-anodized chassis. Size:  $6\frac{1}{2} \times 14\frac{3}{4} \times 4\frac{1}{2}$ " deep. For 105-125 volts, 50-60 cycle AC. Shpg. wt., 22 lbs.

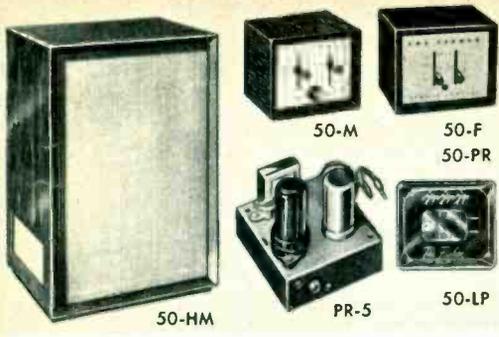
98 SX 634. NET ..... 99.50



70-RT



70-A



### Fisher Accessories and Cartridges

#### Series 50 Horn-Type Enclosures

Deluxe horn-type speaker enclosure for high-quality custom music systems. Accommodates any 12" or 15" single, coaxial, or triaxial-type speaker or virtually any multiple-speaker system. Delivers extremely smooth, clean, extended bass without any need for corner placement; outstanding response to below 30 cps. Substantially extends bass range of any speaker. Air loading is approximately four times greater than that of infinite baffle enclosure; reduces speaker distortion and resonant peaks and boosts power handling capacity. Special, completely non-resonant design prevents bass "boominess." Size: 37" high, 25" wide, 20 1/8" deep. Shpg. wt., 90 lbs.

- 81 DX 710. Model 50-HM. Dark mahogany. NET ..... 114.50
- 81 DX 711. Model 50-HB. Korina blonde. NET ..... 119.50

#### Model 50-M Two-Channel Mixer

Mixes two signal sources for simultaneous feeding into hi-fi system. Permits superimposing voice from microphone on recorded music, radio programs, etc., also permits dubbing voice on music when making tape recordings. Two inputs; controls for smooth, noiseless level adjustment of sound from either input. No insertion loss. Inputs are high impedance. Cathode-follower output. Has 12AX7 tube. 4 7/8 x 5 3/4 x 5". For 105-125 volts, 60 cycle AC. Shpg. wt., 3 1/4 lbs.

- 98 S 625. NET ..... 19.95

#### Model 50-PR Preamp-Equalizer

Unusually versatile, self-powered preamp-equalizer for all magnetic cartridges. Excellent for commercial phonos and amplifiers not having built-in preamps or with less versatile preamps. 4 Turnover and 4 Roll-Off positions provide 16 combinations for extremely accurate record compensation. Turnover positions: AES, NARTB, LP and 800 cps. Roll-Off positions: Flat, 8, 12 and 16 db. Has hum balance control. Cathode-follower output. With 6SC7 dual-triode tube. AC switch. Handsome plastic cabinet with brass panel. Size, 4 7/8 x 5 3/4 x 5". For 105-125 volts, 60 cycles AC. 3 1/4 lbs.

- 98 S 635. NET ..... 22.95

#### Model 50-F Hi-Lo Filter

Sharp cut-off filter for suppression of record scratch, record distortion, FM hiss, turn-table rumble, etc. Easily connected to any tuner, amplifier, radio-phono or preamp. 4-position low-frequency and high-frequency cut-off controls provide 16 possible combinations. Low-frequency positions: 0, 30, 70 and 120 cps. High-frequency positions: 20, 10, 6 and 3 kc. Cathode-follower output. 12AX7 tube. AC switch. Plastic cabinet. 4 7/8 x 5 3/4 x 5". For 102-125 v., 60 cycle AC. Wt., 3 1/4 lbs.

- 98 S 631. NET ..... 29.95

#### Model PR-5 Preamplifier

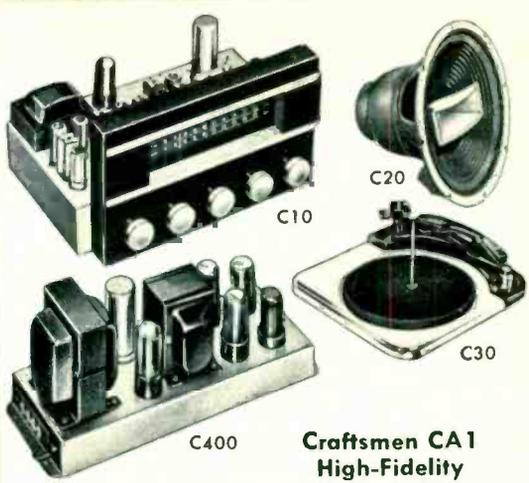
Permits using magnetic cartridges with amplifiers, consoles and other phono equipment not already equipped with the necessary preamp. Equalized for new Orthophonic curve. Compact size permits installation in any out-of-the-way place; installation is further simplified by low-impedance output which permits using long interconnecting cable. With 6SC7 tube, shielded 20" cable and pin plug. 3 1/2 x 3 3/4 x 3 3/4". For 105-125 volts, 60 cycle AC. Shpg. wt., 1 1/4 lbs.

- 65 R 474. NET ..... 12.32

#### Series 50 Moving Coil Magnetic Cartridges

Many exceptionally fine features assure superior reproduction and minimum record wear. High compliance improves low-frequency response and virtually eliminates tracking error. Extremely low mass for minimum groove wear. Diamond stylus. Output, 3 mv; 30 mv output with MT-1 transformer below. Require MT-1 transformer to boost output when used with other than Fisher 50-CM, 50-PR-2 and 70-RT. Standard mounting dimensions; fit all pickup arms. Shpg. wt., 4 oz.

- 65 RC 025. Model 50-LP. For microgroove.
- 65 RC 026. Model 50-ST. For standard. NET EACH. .... 37.50
- MODEL MT-1 TRANSFORMER. Boosts output of above cartridges. With phono jack and 18" cable. Shpg. wt., 1 1/2 lbs.
- 65 R 027. NET ..... 8.75



### Craftsman CA1 High-Fidelity Music System

A complete system of perfectly matched high-fidelity components—just make a few simple connections and its ready to deliver rich, full-range record reproduction and deluxe reception of FM-AM broadcasts. This very moderately priced system includes the famous Craftsman C10 FM-AM tuner, the Craftsman C400 basic hi-fi amplifier, the C30 record changer equipped with G.E.'s RPX-050 triple-play cartridge, and the C20 coaxial speaker. No need for a soldering iron; no technical knowledge required.

**C10 Tuner:** See complete description below. **C400 Basic Amplifier:** See complete description below. **C30 Record Changer:** Specially built by Webcor for the Craftsman CA1 System. Automatically plays 7", 10", or 12" records at 33 1/3, 45 or 78 rpm. Features 4-pole shaded-pole motor, low-resonance magnesium pickup arm, and very accurate indexing mechanism. G.E. RPX 050 triple-play cartridge installed in pickup arm. Beautifully finished in black and chrome. Minimum mounting space. 15x15"; height, 6 1/2" above and 3" below top of mounting board.

**C20 Coaxial Speaker:** Precision-built to Craftsman specs. Very wide, unusually smooth response. Employs 12" bass cone, tweeter and 2000-cycle crossover network. Rated, 25 watts. Imp., 16 ohms. System supplied complete with 16x16" changer mounting board, all connecting cables, hardware, instructions, and drawings of typical custom cabinets. For 110-120 volts, 60 cycle AC. Shpg. wt., 60 lbs.

- 98 SX 617. CA1 System. List. \$459.50. NET ..... 275.00

- C20 SPEAKER ONLY. Described above. Wt., 12 lbs.
- 98 SX 618. List. \$82.50. NET ..... 49.50

#### Craftsman C10 FM-AM Tuner

The famous C10 FM-AM tuner—tried and proven in thousands of custom installations. Delivers highly sensitive FM-AM reception. Very effective automatic frequency control circuit and easy-action flywheel dial assure effortless tuning. Excellent companion unit for the C400 (below) or other quality amplifier. Has bass and treble tone controls; preamp for magnetic cartridges. Tuned RF stage for FM and AM plus triode converters provide high sensitivity and excellent signal-to-noise ratio. Sensitivity: FM, 5 microvolts for 30 db quieting; AM, 5 microvolts for 1.5 volts output at detector. Cathode-follower output from detector or audio stage. Two volts output with less than 2% distortion. Whistle filter. 11 tubes plus rectifier. Size, 7x13 1/4 x 9 1/4". Black escutcheon with brass trim; chrome-plated chassis. For 105-125 volts, 50-60 cycle AC. Shpg. wt., 16 lbs.

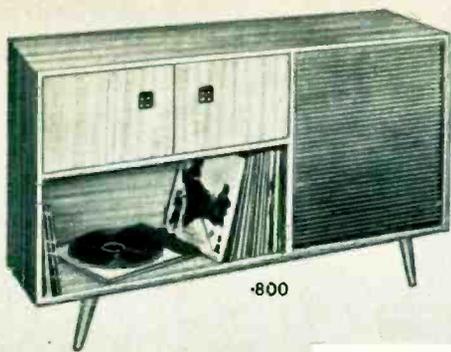
- 97 SX 855. List. \$219.00. NET ..... 131.50

#### Craftsman C400 10-Watt Amplifier

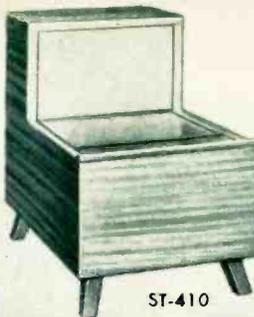
An exceptionally popular 10-watt basic amplifier. Has no controls; may be installed in any convenient out-of-the-way place. Excellent for use with C10 or other tuner. 13 1/2 db output-to-input inverse feedback loop cuts distortion to a minimum. Direct-coupled, split-load triode phase inverter; excellent low-frequency response. **Rated Output:** 10 watts. **Response:** ±1 db, 10-30,000 cps at 0.5 watt; ±1 db, 15-20,000 cps at 10 watts. **Harmonic Distortion:** Less than 1% at 10 watts. **Hum:** —70 db. **Speaker Outputs:** 4, 8 and 16 ohms. **Tubes:** 6J5, 6SN7, 2-6V6GT, 5Y3GT rectifier. Chrome-plated chassis, only 5 1/4 x 14 x 4 1/2" deep. For 105-120 volts, 50-60 cycle AC. Shpg. wt., 12 lbs.

- 97 S 966. List. \$71.65. NET ..... 42.90

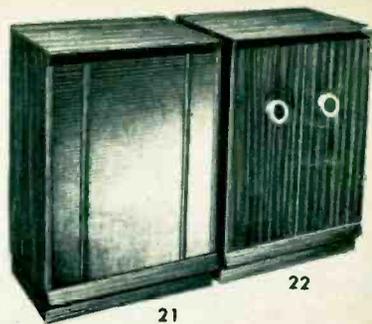
For listings of other Craftsman high-fidelity tuners and amplifiers, turn to inside back cover.



800

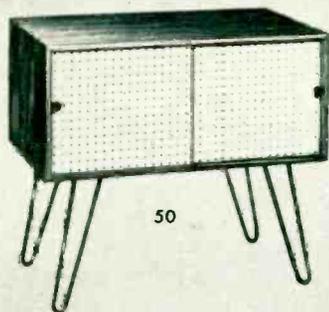


ST-410

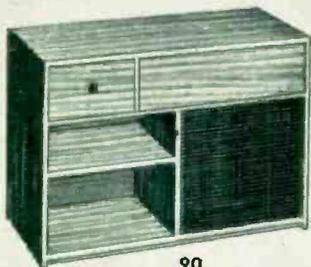


22

21



50



90



F-101

### Custom Cabinets for High-Fidelity Installations

A complete line of custom cabinets for housing record changer, tuner, amplifier or speaker—any of the custom components listed in the catalog. Enhance the beauty of any decorating motif, traditional or modern. Combine attractive styling and functional design with sturdy construction and fine veneers. Units and finishes shown with ALLIED's stock number are shipped from stock uncut. If cutouts are desired, order as

**CABINART 800.** Modern-styled cabinet for FM-AM-Phono combinations. Offers simplicity of line, attractive functional design and expert craftsmanship. Matched doors provide easy access to tuner and changer. Sliding record changer drawer. Acoustically designed speaker enclosure enhances the performance of any 12" speaker. Manufactured of top quality materials, selected for excellence of grain, natural beauty and related acoustic qualities. Solid construction throughout; electrically bonded with special glues. Handsome birch veneers. Overall size: 53" W, 32½" H, 18" Deep. Inside dimensions: Tuner compartment, 16" W, 10¼" H, 16½" D; Changer compartment, same. Shpg. wt., 110 lbs.

95 DX 450. *Cordovan Mahogany on Birch.*  
95 DX 451. *Blonde Birch.*  
NET EACH ..... 150.00

**CABINART 21.** Equipment cabinet for record changer, tuner and amplifier. Adds a tone of elegance and beauty to any room interior. Matches Model 22 speaker enclosure (listed below) or can be used with any other speaker enclosure. Matched doors make tuner and changer compartments readily accessible. Overall size: 35" H, 23¼" W, 17½" Deep. Inside dimensions: Record changer (pull-out drawer on bottom): 11¼" H, 22" W, 17" Deep; Tuner-Amplifier, 18½" H, 22" W, 16" Deep. Six-coat lacquer finish, hand-rubbed to a high gloss. Shpg. wt., 80 lbs.

95 DX 452. *French Mahogany.*  
95 DX 453. *Korina Blonde.*  
95 DX 454. *Honey Walnut.*  
NET EACH ..... 117.00

**CABINART 22.** Companion piece to the Model 21 above, this speaker cabinet provides exceptional tonal quality. Clean, distinctive design offers ample room for almost any type of 15" or 12" speaker. (Cutout for 15" speaker; supplied with 12" adapter). Acoustically tuned enclosure. Baffle area, 6½ cubic feet. Shpg. wt., 75 lbs.

95 DX 455. *French Mahogany.*  
95 DX 456. *Korina Blonde.*  
95 DX 457. *Honey Walnut.*  
NET EACH ..... 69.00

**CABINART 50.** Equipment cabinet for tuner, amplifier and record changer. Ideally suited to the modern decor. Sliding front panels of white, perforated masonite. Slide drawer for phono; panel for tuner-amplifier. With 16" wrought iron legs. Cabinet size: 16" H, 35½" W, 16" Deep. Inside dimensions: Tuner compartment, 14½" H, 16½" W, 15" Deep; Phono, same. Shpg. wt., 55 lbs.

Unfinished Birch.  
95 DX 458. NET ..... 48.00  
*French Mahogany.*  
95 DX 459. NET ..... 72.00  
*Korina Blonde.*  
95 DX 460. NET ..... 72.00

*special with full details. Does not apply to unfinished cabinets. (No charge for cutouts on Cabinnart units—\$2.95 per cutout on River Edge units). 30 day delivery. Cabinets are shipped from factories in Brooklyn, N. Y., or River Edge, N. J. Prices are net, f.a.b. Chicago, Brooklyn or River Edge, whichever is nearer. Write for full literature and special order blanks on these and other cabinets.*

**RIVER EDGE ST-410** Step-table equipment cabinet. Overall size: 26½" H, 18¾" W, 32" Deep. Compartments: Changer, 10" H, 17" W, 16" Deep; Tuner, 10" H, 17" W, 10½" Deep; Amplifier (hidden), 9¼" H, 17" W, 8" Deep; Pre-amplifier, 8" H, 17" W, 9½" Deep. Lustrous, hand-rubbed veneers. Panel will accommodate both tuner and amplifier escutcheons. Shpg. wt., 60 lbs.

*Cordovan Mahogany.*  
95 DX 347. NET ..... 84.00  
*Blonde Mahogany.*  
95 DX 348. NET ..... 92.40

**RIVER EDGE ST-410-RJ.** Similar to above, less pre-amplifier compartment. Has 8" R-J speaker baffle built into this space. Provides extended bass response while eliminating cabinet resonances. Speaker port is covered with acoustically correct grille fabric. Forms an unusually compact and handsome furniture piece, styled to suit any interior decor. Shpg. wt., 60 lbs.

*Cordovan Mahogany.*  
95 DX 338. NET ..... 101.50  
*Blonde Mahogany.*  
95 DX 339. NET ..... 111.65

**CABINART 90.** Bookcase cabinet that provides a handsome setting for a custom high fidelity music system in any room interior. Functional, modern design offers ample room for housing record changer, tuner, amplifier and speaker—plus a music library and record storage space. Baffle area, 5 cubic feet—cut for 12" speaker. Changer mounts on ball-bearing slides with pull-out drawer. Overall size: 35¼" H, 48" W, 16" Deep. Tuner compartment: 11" H, 29" W, 15" Deep. Solid construction throughout; ¾" lumber used. Hand rubbed finishes. Shpg. wt., 90 lbs.

*Cordovan Mahogany.*  
95 DX 462. NET ..... 125.00  
*Natural Birch.*  
95 DX 463. NET ..... 125.00  
*Unfinished Birch.*  
95 DX 461. NET ..... 96.00

**RIVER EDGE F-101.** New lift-top, equipment-speaker cabinet. Accommodates record changer, tuner and amplifier. Has 5 cubic-foot bass reflex enclosure cut for 12" speakers. Forms a compact, highly attractive unit for custom-quality high fidelity installations in any style of room interior. Heavy, protective lacquer coating is hand rubbed to a beautiful, glossy finish. Carefully designed bass reflex enclosure assures excellent fidelity with no internal sound reflections. Overall size: 34" high, 30" wide, 16" deep. Changer compartment: 10" high, 17" wide, 15" deep. Tuner-Amplifier compartment: 11" high, 15" wide, 10½" deep. In lustrous, highly polished mahogany finish. Shpg. wt., 85 lbs.

95 DX 349. NET ..... 84.00

# Electro-Voice Research-Engineered High-Fidelity Speakers

## New 3-Way Speakers

Employ three coaxially mounted sections for a superb standard of performance throughout the audio spectrum. TRX triaxial speakers deliver rich, vibrant bass, full-bodied mid-range response and ultra-clean, crystal-clear treble. Outstanding features include concentric mounting of all elements for efficient, wide-angle dispersion; adjustable balance control, half-section m-derived X-36 crossover network. Edgewise-wound voice coil design provides 18% more efficiency and lower transient distortion. Heavy magnet structures. Excellent for use in assembling custom high fidelity installations or for modernization of existing systems.

**MODEL 15TRX.** Employs three coaxially mounted sections for a superb standard of performance throughout the audio spectrum. Consists of Radax-type 15" speaker with the famous "Whizzer" high-frequency propagator; coaxially mounted T-35 "Super Sonax" very-high-frequency tweeter; the X-36 half-section, m-derived crossover network; and the AT-37 H-F level control. 2 1/2" aluminum voice coil and extra-large 5 1/2 lb. Alnico V magnet for excellent damping; bass is remarkably clean and distinct. "Whizzer" high-frequency propagator is mechanically coupled at apex of 15" cone; enriches mid-range response.

Frequencies above 3500 cps are distributed to "Super Sonax" tweeter by the X-36 crossover network. AT-37 level control adjusts tweeter output. Frequency response,  $\pm 5$  db, 30-15,000 cps. (in Regency enclosure). Cone resonance, 40 cps. RETMA sensitivity rating, 51 db. Capacity, 30 watts. Depth behind mounting panel, 9 1/4". Imped., 16 ohms. Shpg. wt., 49 lbs.  
**81 DX 235. List, \$225.00. NET... 132.30**

**MODEL 12TRX.** 12" speaker. Has same superior design features of Model 15TRX above. Use of Radax-type speaker insures phenomenal bass response; mid-range characteristic provides vivid realism and "presence"; highest audible frequencies are faithfully reproduced by the T-35 Super-Sonax Very High-Frequency driver. AT-37 H-F control compensates for absorptive room furnishings—allows matching to room acoustics. Half-section m-derived X-36 crossover network. Frequency response,  $\pm 5$  db, 30-15,000 cps. (in Aristocrat enclosure). Cone resonance, 40 cps. Magnet weight, 3 1/2 lbs. Power handling capacity, 25 watts. RETMA sensitivity rating, 49 db. Depth behind mounting panel, 8". Impedance, 16 ohms. Shpg. wt., 32 lbs.  
**81 DX 236. List, \$190.00. NET... 111.72**

**MODEL 12TRX-B.** New, integrated-design 12" speaker at moderate cost. With Radax principle, the low mechanical first crossover at 2000 cps permits specially designed bass cone to generate full, distortion-free low frequencies. Mid-frequency propagator is decoupled above 2000 cps—for efficient, widely dispersed treble tones. At 3500 cps, built-in electrical crossover feeds only the 2 higher octaves to sensitive T-35B VHF driver, reproducing beyond the range of audibility. Assures the feeling of "presence." Includes brilliance control. Furnished completely wired with 5-ft. cable for convenient mounting. RETMA sensitivity rating, 46 db. Power handling, 20 watts; 30 watts on peaks. Response (in Aristocrat enclosure),  $\pm 5$  db, 35-15,000 cps. Cone resonance, 50 cps. Imp., 16 ohms. 6 1/2" depth. Shpg. wt., 13 1/2 lbs.  
**81 DX 239. List, \$99.50. NET... 58.51**

## Radax Speakers

Radax principle provides highly efficient and economical method of using two coaxially mounted cones operating from a single voice coil. Built-in mechanical crossover from low-frequency cone to high-frequency propagator permits design of each cone for optimum response. Assure extremely clean, wide-range reproduction. Sturdy frames; moisture-proofed speaker cones.

**MODEL SP15.** The Deluxe 15" Radax speaker employs a special 125 square inch bass cone with 2 1/2" aluminum voice coil. Provides augmented bass response, realistic mid-range reproduction and silky-smooth treble reproduction. An excellent choice for custom home music systems. Heavy 5 1/4 pound Alnico V magnet—for efficient, extended low-frequency reproduction and excellent distortion-damping factors. Resonance of bass cone in free space is 40 cps. Seamless molded type bass cone is directly coupled to "Whizzer" HF radiator. Insures 100° dispersion and extends treble two full octaves. Response, 30-13,000 cps, flat  $\pm 5$  db. Rated, 30 watts, 16 ohms. Crossover, 3000 cps. Requires 1 3/4" diameter baffle opening; 9" depth behind mounting panel. RETMA sensitivity rating, 50 db. Shpg. wt., 41 lbs.  
**81 DX 280. List, \$130.00. NET... 76.44**

**MODEL SP-12.** A very popular, highly rated 12" speaker. Clean wide-range performance at moderate cost. Perfect for high fidelity installations or for modernization of older systems. Radax principle provides an economical, efficient method of using two cones with single voice coil. The built-in mechanical crossover permits design of each cone for optimum performance. Bass cone resonates in free space at 43 cps. Incorporates "Whizzer" high-frequency wide-dispersion radiator for extended treble response, 100° solid angle dispersion. 3-lb. magnet provides exceptional efficiency. Frequency response,  $\pm 5$  db, 30-13,000 cps. Crossover, 4000 cps. 2" aluminum voice coil. Sensitivity, 48 db. Rated, 25 watts. Impedance, 16 ohms. 11" baffle opening, 7 1/2" depth behind mtg. panel. Shpg. wt., 25 lbs.  
**81 DX 279. List, \$95.00. NET... 55.86**

**MODEL SP12-B.** 12" speaker, similar to above, but uses a smaller, 1-lb. magnet. Considered a "best buy" by many authoritative high fidelity publications, the SP-12-B ranks high on the list of desirable hi-fi components. Rated at 15-20 watts. Resonance, 50 cps. Response,  $\pm 6$  db, 30-13,000 cps. 16 ohms impedance. Crossover, 4500 cps. RETMA sensitivity rating, 45 db. 11" baffle opening, 5 1/4" depth behind mounting panel. Shpg. wt., 10 lbs.  
**81 DX 278. List, \$49.50. NET... 29.11**

**MODEL SP8-B.** 8" version of above. Excellent for limited space hi-fi applications. Employs same Radax-type construction features—concentric mounting of all elements for extremely smooth reproduction. Low cone resonance of 65 cps and "Whizzer" high frequency propagator provide good overall balance and wide dispersion angle. 1-lb. Alnico V magnet. Power handling capacity, 15-20 watts. Response,  $\pm 6$  db, 35-13,000 cps. Crossover, 6000 cps. 16 ohms impedance. RETMA sensitivity rating, 44 db. Dimensions: 7" baffle opening, 4 1/2" depth behind mounting panel. Shpg. wt., 8 lbs.  
**81 D 277. List, \$47.50. NET... 27.93**

## Electro-Voice Low-Frequency Woofers

For original equipment or replacement. Provide highly efficient, extended low-frequency response. Re-designed units now feature greater power handling capacity. All woofers in listing are rated at 20-30 watts except Model 12BW, 15-20 watts. Compliance of outer cone rolls and inner spider carefully calculated for maximum extended bass range response. Cones are specially treated for moisture and fungus protection. Heavy Alnico V magnets. "K" types are recommended for Klipsch type "K" systems only (have 3.2 ohms DC

resistance). All models have 16 ohm impedance. First two digits of type number indicate cone size in inches.

Stock No.	Type	Reson. Freq.	Shpg. Wt.	List	NET EACH
81 DX 397	12BW	47	10 lbs.	\$ 49.50	29.11
81 DX 285	12W	40	25 lbs.	95.00	55.86
81 DX 431	12WK	41	25 lbs.		
81 DX 286	15W	30	41 lbs.	130.00	76.44
81 DX 428	15WK	32	41 lbs.		
81 DX 287	18W	27-30	43 lbs.	150.00	88.20
81 DX 433	18WK	22-24	43 lbs.		



15TRX



12TRX



SP12-B



SP8-B

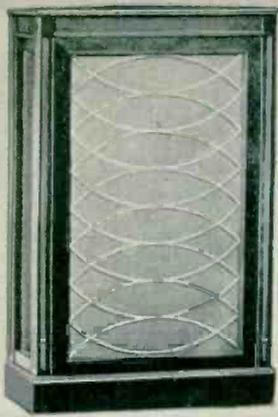


18WK

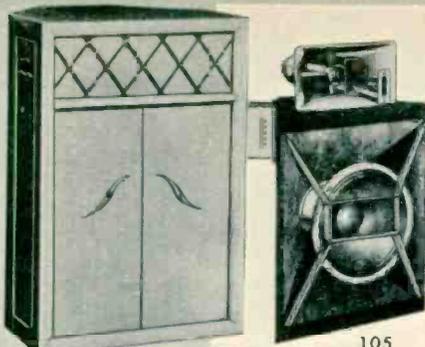


12W

**Custom-Crafted Enclosures**



Potrician



Georgian

105  
106

**GEORGIAN 109.** Complete Klipsch-licensed folded horn enclosure. Consists of the Model 107 cabinet shell and the Model 106 basic Klipsch "K" type folded horn. Less speaker components; designed for use with Model 15WK 15" woofer. Ready for installation of complete 4-way system such as Model 105 Package listed on p. 25. Walls of room form extension of horn. Size: 53" H, 34" W, 26" D. Shpg. wt., 215 lbs.

Mahogany. List, \$483.00.  
81 DX 752. NET ..... 284.00  
Korina Blonde.

81 DX 753. List, \$516.33. NET 303.60

**REGENCY.** Klipsch-licensed folded horn enclosure, superlatively styled in low-boy motif. Brushed brass grille. For 15" speakers or 2- or 3-way systems. Has integral "built-in corner." Can be used in corner or against wall of room. Provides one full octave of added bass response and increases power-handling capacity of speaker by proper loading. Size: 28 3/4" H, 33 1/2" W, 19" D. Shpg. wt., 88 lbs.

Mahogany.  
81 DX 422. List, \$200.00. NET 117.60  
Korina Blonde.

81 DX 423. List, \$215.00. NET 126.42

**ARISTOCRAT.** Beautifully styled, Klipsch-licensed speaker enclosure for 12" speakers or 2- and 3-way systems. Unusually smooth reproduction down to 35 cps. Brushed brass grille. Gives one full octave of added bass. Enhances the performance of any 12" speaker; excellent for E-V 12" speakers on page 23. Hand-rubbed finish. Size: 29 3/4" H, 19" W, 16 3/4" D. Wt., 38 lbs.

Mahogany.  
81 DX 295. List, \$110.00. NET 64.68  
Korina Blonde.

81 DX 296. List, \$120.00. NET 70.56

**BARONET.** Klipsch-licensed folded horn corner enclosure for 8" speakers. Conservatively styled with graceful sloping front. Hand-rubbed hardwood veneers. Extends bass response to 35 cps (with E-V SP8B speaker) in only 1 1/2 cubic foot housing. Plastic grille, brushed brass hardware. Size: 22 1/4" H, 14 1/4" W, 13 3/4" D. Wt., 24 lbs.

Mahogany.  
81 DX 418. List, \$65.00. NET 38.22  
Korina Blonde.

81 DX 419. List, \$69.00. NET 40.57

**PICCOLINO.** New, compact housing for Model T35 or T35B driver, X36 cross-over network and AT37 level control (described on opposite page). An attractive addition to any installation. With above components provides smooth high frequency response for full musical enjoyment. Lumite grille cloth. Size: 6 1/2" H, 8" W, 5 3/4" D. Shpg. wt., 6 lbs.

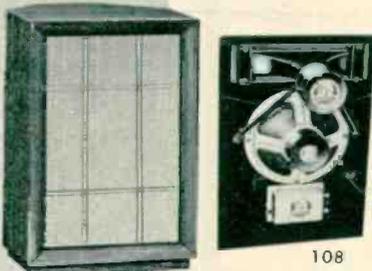
81 D 545. Mahogany.  
81 D 546. Korina Blonde.

List, \$15.00. NET EACH ..... 8.82

**Peerage Equipment Cabinet**  
Finely designed cabinet for tuner, amplifier and record changer. Excellent companion unit for Aristocrat cabinet. Easy-tilting front panel for most popular hi-fi tuners. Controls are presented at a 65° angle for convenient dial reading and accessibility. The amplifier mounts on a removable back panel. The changer drawer, directly below tuner panel, includes a standard motor board; ball bearing slides for smooth operation. In mahogany or Korina blonde wood veneers, hand-rubbed to a mirror-smooth finish. Size: 29 3/4" high, 20 1/2" wide, 18 3/4" deep. Shpg. wt., 61 lbs.  
81 DX 420. Mahogany. List, \$160.00. NET ..... 94.08  
81 DX 421. Korina Blonde. List, \$170.00. NET ..... 99.96



Regency



Aristocrat

108



114B



Skylark



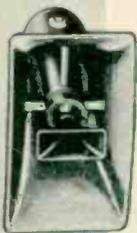
Baronet



Peerage



Piccolino



848HF



T35



T25A



K2635



T35B



8HD



X36

### Complete Speaker Systems in Enclosures or on Mounting Boards

#### Klipsch Enclosures

E-V speaker enclosures utilize the famous Klipsch horn loading principle. Horn loading is the recognized scientific method of achieving smooth, efficient, distortion-free bass. Proper horn loading allows the voice coil to operate in optimum flux area, thus reducing transient distortion—increases power capacity of any speaker. Full, extended range is now possible in a cabinet suitable for any living room. Detailed specs are available for all E-V systems.

#### Patrician 4-Way Speaker System

Chosen by the *Saturday Review of Literature* "Home Book of Recorded Music and Sound Reproduction" as the finest speaker system at any price! Features Klipsch type "K" indirect-radiator design.

Complete 4-way system that divides the reproduced spectrum between separate drivers, each specifically designed to reproduce its own band with optimum distortion-free fidelity. Components, perfectly matched, include: 18WK 18" L-F driver (16 to 200 cps); 12W 12" L-F driver (200 to 600 cps); T25A treble driver with a (600 to 3500 cps) 611D HF-diffraction horn; T35 super-tweeter (2500-20,000 cps.); two AT37 H-F level controls; X2635 4-way crossover (200, 600 and 3500 cps). Distinguished custom-crafted corner cabinet, made of selected woods with beautiful inlays. All components installed and wired. Size: 60" H, 41" W, 30" D. Shpg. wt., 400 lbs.

81 DX 413. Mahogany. List, \$1212.50. NET **712.95**

#### "Aristocrat I" System

An integrated, high quality assembly of unusual range and cleanliness. Excellent for custom installations; suits any interior decor. Consists of 12BW Woofer, T10A Tweeter, 811D Horn, X825 ¼-section Crossover Network, 12" Woofer has resonant frequency of 47 cps, and power capacity of 15-20 watts. All components mounted in the Klipsch-licensed Aristocrat corner enclosure. 29½x19x16½". Wt. 56 lbs.

81 DX 405. Mahogany. List, \$299.00. NET **175.81**  
81 DX 406. Korina Blonde. List, \$309.00. NET **181.69**

MODEL 108 SYSTEM WITH MOUNTING BOARD. Aristocrat I system, less cabinet. Fits readily in most existing cabinets, in a wall, door or bookcase. 27x18x12½" deep. Shpg. wt., 39 lbs.

81 DX 425. List, \$184.00. NET **108.19**

#### "Aristocrat II" System

As above, but consists of 12W Woofer (3-lb. magnet); T25A Tweeter, 811D Horn; full half-section X8 Crossover. Shpg. wt., 70 lbs.

81 DX 407. Mahogany. List, \$392.00. NET **230.50**

81 DX 408. Korina Blonde. List, \$402.00. NET **236.38**

MODEL 111 SYSTEM WITH MOUNTING BOARD. Aristocrat II system, less cabinet. 27x18x13½" deep. Shpg. wt., 55 lbs.

81 DX 426. List, \$277.00. NET **162.88**

#### "Aristocrat III" System

As above but with addition of Model T35 Super Sonax VHF Driver. Model X36 full ½ section network and Model AT37 VHF level control. Shpg. wt., 74 lbs.

81 DX 439. Mahogany. List, \$467.00. NET **274.60**

81 DX 442. Korina Blonde. List, \$477.00. NET **280.48**

MODEL 111A SYSTEM WITH MOUNTING BOARD. Aristocrat III system, less cabinet. 27x18x13½" deep. Shpg. wt., 68 lbs.

81 DX 443. List, \$352.00. NET **206.98**

For speaker enclosure only, see page 24.

#### Regency II 2-Way System

Complete 2-way music system in beautiful enclosure for corner or wall use. Employs Klipsch folded corner horn with "built-in" corner. Frequency response, 30-12,000 cps, ±5 db. Usable range, to 16,000 cps. Includes 15W Woofer, T25A Tweeter, 811D Horn and X8 Crossover Network. All components are mounted in the Regency cabinet. Impedance, 16 ohms. Size: 28½" high, 33½" wide, 19" deep. Shpg. wt., 135 lbs.

81 DX 411. Mahogany. List, \$517.00. NET **304.00**

81 DX 412. Korina Blonde. List, \$532.00. NET **312.82**

MODEL 114A SYSTEM WITH MOUNTING BOARD. Regency II system, less cabinet. 26½x32½x13½" deep. Wt., 95 lbs.

81 DX 427. List, \$312.00. NET **183.46**

#### Regency III 3-Way System

As above, but with addition of Model T35 Super Sonax VHF Driver. Model X36 full ½ section network and Model AT37 VHF level control. Shpg. wt., 140 lbs.

81 DX 496. Mahogany. List, \$592.00. NET **348.10**

81 DX 497. Korina Blonde. List, \$607.00. NET **356.92**

MODEL 114B SYSTEM WITH MOUNTING BOARD. Regency III system, less cabinet. 26½x32½x13½" deep. Shpg. wt., 107 lbs.

81 DX 498. List, \$387.00. NET **227.56**

For enclosure only, see page 24.

#### Georgian 4-Way System

Completely assembled, superb Georgian 4-way speaker system. Includes: Model 109 Georgian cabinet (with 106 folded horn); 15WK 15" woofer designed specifically for Klipsch enclosures (resonance, 32 cps—5¼ lb. magnet); 2-way 848HF mid-range driver and horn; T35 "Super Sonax" tweeter; X336 crossover network; two AT37 level controls. Power-handling capacity, 35 watts; 70-watts peak. Impedance, 16 ohms. Size: 53" H, 34" W, 26" Deep. Shpg. wt., 290 lbs.

Mahogany. 81 DX 402. List, \$825.00. NET **485.10**

Korina Blonde. 81 DX 403. List, \$858.33. NET **504.70**

MODEL 105 PACKAGE. Consists of 15WK L-F woofer, 2-way 848HF mid-range assembly, T35 VHF driver, X336 crossover network, two AT37 level controls and 8574 cable harness. Wt., 97 lbs.

81 DX 750. List, \$342.00. NET **201.10**

MODEL 106 KLIPSCH "K" TYPE LOW-FREQUENCY HORN. Basic Klipsch folded horn without trim or outer decorative housing. For use with the 15WK woofer. When used with 105 package, forms complete 4-way speaker system. With plans for cabinet construction, "built-ins," etc. Painted with flat matte black prime coat. Can be painted in other colors (will not take a furniture finish). Size: 38½" H, 32¼" W, 22¾" D, 88 lbs.

81 DX 751. List, \$150.00. NET **88.20**

For cabinet and horn, see page 24

#### Skylark 3-Way System

New, complete 3-way speaker system in an unusually compact design. Attractive, functional styling makes it perfect for bookcase or table use. Vented with two tapered low frequency ports to properly load SP8C 8" coaxial driver for excellent bass and mid-range reproduction. (Similar to SP8B, but specifically designed for use with this system). X36 crossover network feeds T35B VHF driver from 3500 cps to beyond audible range. Impedance, 16 ohms. Power handling capacity, 20 watts. Size: 14" H, 33" W, 10¾" Deep. 11¾" high with legs removed. 30 lbs.

Mahogany. 81 DX 547. List, \$149.50. NET **87.91**

Korina Blonde. 81 DX 548. List, \$154.50. NET **90.85**

#### High Frequency Components

MODEL T35 "SUPER-SONAX" VERY HIGH FREQUENCY TWEETER. For clean, extended high frequency response—3500 cps to beyond range of audibility. Adds at least one more octave of highs. Features wide angle (180°) dispersion horn; cutoff, 1500 cps. Uses molded phenolic impregnated linen diaphragm. Use with X36 crossover and AT37 level control. For systems rated at 20 watts or over. Crossover, 3500 cps. Impedance, 16 ohms. Horn size: 4½" long x 1¼" wide. Pot size; 2½" dia. 3¼" deep overall. Shpg. wt., 2 lbs.

81 D 434. List, \$55.00. NET **32.34**

MODEL T35B VHF DRIVER. Same as T35 above but for systems with speakers rated under 20 watts. Dispersion, 180°; cutoff, 1500 cps. Imped., 16 ohms. X36 crossover network required. Pot size, 1¼" dia.; 3" depth overall. Wt., 2 lbs.

81 D 432. List, \$35.00. NET **20.58**

MODEL AT37 LEVEL CONTROL. 16-ohm L-pad, for adjustment of mid-range and tweeter output. Shpg. wt., 6 oz.

81 D 437. List, \$6.00. NET **3.53**

MODEL T10A HIGH-FREQUENCY DRIVER. For ultra-clean, wide range response. Used with 811D or 611D HF diffraction horn and appropriate crossover network. Response, ±5 db, 400-13,000 cps. Rated, 20 watts. Impedance, 16 ohms. ½-lb. Alnico V magnet, 3¾" dia., 3" deep. Throat, 7/8". Shpg. wt., 5 lbs.

81 D 424. List, \$67.50. NET **39.69**

MODEL T25A HIGH FREQUENCY DRIVER. Highly efficient, clean reproduction. Uses phenolic impregnated linen diaphragm for added strength. Use with 8HD or 6HD horn and appropriate crossover network. Response, ±5 db, 400-13,000 cps. Rated, 20-30 watts. Impedance, 16 ohms. 1 pound Alnico V magnet, 3¾" dia. 4¼" deep. Throat dia., 7/8". Wt., 8 lbs.

81 D 288. List, \$95.00. NET **55.86**

MODEL 848HF MID-RANGE DRIVER AND HORN. Two-way coaxial compression-type mid-bass and treble driver assembly with acoustically designed horn. Frequency response, 300-10,000 cps. Outer fiberglass horn with 58" path-length; smaller metal horn has acoustical 1000 cps crossover. Impedance, 16 ohms. Size, 10½" H, 20½" W, 20" D. Shpg. wt., 15 lbs.

81 DX 274. List, \$80.00. NET **47.04**

DIFFRACTION HORNS. Famous Hoodwin horn design for superior high frequency dispersion. 120° dispersion angle covers entire listening area. Made of resonant-free fiberglass. New design increases efficiency 3 db over cell-type horns.

MODEL 8HD DIFFRACTION HORN. For use with T10A or T25A drivers. 600 cycle cut-off, 800 cycle crossover frequency. Size: 14¼" wide, 3¾" high, 7½" deep. With mounting hardware. Shpg. wt., 4 lbs.

81 DX 429. List, \$27.00. NET **15.88**

MODEL 6HD DIFFRACTION HORN. Popular horn for T10A and T25A drivers. Utilizes 400 cps cutoff, 600 cps crossover. Size: 19¼" wide, 3½" high, 12" deep. With mtg. hardware. Shpg. wt., 5 lbs.

81 DX 491. List, \$35.00. NET **20.58**

#### Crossover Networks

All use high-Q air coils. Low insertion loss; phase rotation, 270° (135° in X825). Attenuation, 12 db per octave in ½-section; 6 db per octave in ¼-section crossover. 16 ohms impedance in and out. Half-sections, except X825, ¼-section; X2635, ¼ and ½-sections.

No.	Type	Crossover	Lbs.	List	NET
81 D 415	X825	800	3	\$30.00	17.64
81 D 293	X8	800	5	50.00	29.40
81 D 416	X6	600	7	60.00	35.28
81 D 289	X336	300-3500	9	65.00	38.22
81 D 436	X36	3500	2	14.00	8.23
81 D 404	X2635	200-600-3500	11	120.00	70.56



## University High-Fidelity Speakers and Components

### New Triaxial High-Fidelity Speakers

**MODEL 315.** Sensational new high-fidelity 15" speaker. Highly efficient 3-way triaxially mounted system. Emphasis has been placed on balance and presence. Speaker has been balanced so carefully that no "balance" control is necessary. Reproduces with rich, full-bodied clarity. Designed around the sensational C15W woofer. Mid-range is reproduced by patented University Diffusicone device through 1000 cps mechanical crossover network. Brilliant, crisp highs provided from a compression type heavy-duty driver unit and wide-angle tweeter through a 5000 cps electrical crossover network. Heavy die-cast all-aluminum speaker super-structure assures rigid assembly. Frequency response, 30-16,000 cps. Impedance, 8 ohms. Power handling capacity, 50 watts. 15½" diameter x 12" deep. Shpg. wt., 34 lbs.  
**95 DX 187.** List, \$220.00. NET **129.36**

**MODEL 312.** Brilliant new 12" triaxially mounted high-fidelity 3-way speaker system. Features University "W" magnet and duraluminum voice coil in woofer section; provides rich, highly-efficient bass response. Mechanical cross-over at 1000 cps to mid-range "Diffusicone" unit. Built-in L/C type electrical dividing network at 5000 cps to the new HF-206 super tweeter. Response, 40-17,500 cps, 25 watts capacity, 8 ohms impedance. With high-frequency balance control with 36" cables. Size, 12½" dia x 8" Shpg. wt., 12 lbs.  
**95 DX 188.** List, \$96.00. NET **56.45**

**MODEL 308.** Unique new 8" triaxially mounted 3-way high-fidelity speaker system. Ideal where space is at a premium and quality reproduction is desired. Special diaphragm and voice coil assembly, operating with University "W" magnet, provide exceptional bass response. Mid-range clarity achieved through "Diffusicone" device and 1000 cps mechanical cross-over. Brilliant highs from compression driver unit wide angle tweeter through 5000 cps electrical cross-over. Frequency response, 50-15,000 cps. Impedance, 8 ohms. Power handling capacity, 25 watts. 8½" diameter x 6¼" deep. Shpg. wt., 6 lbs.  
**95 DX 189.** List, \$60.00. NET **35.28**

### Low-Cost Hi-Fi Speakers

**MODEL 6201.** 12" coaxial speaker. Power rating, 25 watts. Consists of low-frequency cone, cobra-horn and driver type tweeter. 2000 cps electrical cross-over. High-frequency control. Response, 45-15,000 cps. 2" voice coil on woofer wound on duraluminum support. Impedance, 8 ohms. With cable for mounting control on front panel of speaker cabinet. Depth, 8¼". Wt., 7 lbs.  
**95 DX 176.** List, \$75.00. NET **44.10**

**MODEL 6200.** 12" speaker. Features a 3" duraluminum dome at the apex of a specially treated one-piece molded cone. Response, 45-10,000 cps. Impedance, 8 ohms. Power-handling capacity, 30 watts. Shpg. wt., 5 lbs.  
**95 DX 180.** List, \$35.00. NET **20.58**

**DIFFUSICONE 12.** 12" high-fidelity speaker. Smooth, wide-angle response achieved through dual coaxial horn loading. High- and low-frequencies are radiated along separate paths by inner and outer horns. Uniform radial field pattern. Power handling capacity 30 watts. Frequency response, 45-13,000 cps. 2" voice coil. Impedance, 8 ohms. 24-oz. Alnico V magnet. Depth, 4¼". Shpg. wt., 6 lbs.  
**95 DX 182.** List, \$45.00. NET **26.46**

**DIFFUSICONE 8.** 8" economy-priced high-fidelity speaker. Excellent where space is at a premium. Features same design as the Diffusicone 12, above. Excellent frequency response, 70-13,000 cps. Power handling capacity, 25 watts. Impedance, 8 ohms. Depth, 3¼". Shpg. wt., 5 lbs.  
**95 D 183.** List, \$35.00. NET **20.58**

### Build a 2- or 3-way System with These Components Tweeters for Extended Frequency

**MODEL HF-206 SUPER TWEETER.** Die-cast aluminum wide angle horn. Compression driver handles 25-50 watts of program material. Requires N-2B crossover. Response, 3500-17,500 cps. 8 ohm impedance. Requires 2½x4¼" opening in cabinet. Size, 6x6½x3¼" Shpg. wt., 3 lbs.  
**95 D 190.** List, \$45.00. NET **26.46**

**MODEL 4401.** 2000 CYCLE SINGLE TWEETER. Requires Model N-1 filter or N-2B crossover. Handles up to 25 watts of program material. Matches 6-16 ohm impedances. 4½x2½x5". Wt., 2 lbs.  
**95 D 167.** List, \$25.00. NET **14.70**

**MODEL 4402.** 2000 CPS DUAL TWEETER. Matches 4-16 ohms. Handles 50 watts program material. Response, 2000-15,000 cps. Requires N-2B network or N-1 filter. 9½x2½x5". Wt., 4 lbs.  
**95 D 168.** List, \$40.00. NET **23.52**

**MODEL 4408.** 600 CYCLE TWEETER. Response, 600-15,000 cps. Requires N-2A crossover. Handles 20 watts of program material. 5¼x7¼x11½". Shpg. wt., 5 lbs.  
**95 D 172.** List, \$30.00. NET **17.64**

**MODEL 4409.** 600 CYCLE TWEETER. Larger than 4408. Response, 600-15,000 cps. Handles 40 watts of program material. Requires N-2A crossover. 5¼x7¼x10½". Shpg. wt., 5 lbs.  
**95 D 173.** List, \$40.00. NET **23.52**

### 'Woofers' for Good Clean Bass Response

**MODEL C15W.** 15" WOOFER. For use with 600 to 2000 cycle crossovers. Impedances, 4-8 and 10-16 ohms. Power capacity 50 watts. Response, 30-3,000 cps. 6-pound Alnico V magnet. Depth, 10½". Use N-1 network below. Shpg. wt., 24 lbs.  
**95 DX 185.** List, \$125.00. NET **73.50**

**MODEL C12W.** 12" WOOFER. New, adjustable response feature limits high response to 700, 2000, 5000 or 6000 cps. Low response, 40 cps. Impedance, 8 ohms. Power handling capacity, 30 watts. Binding post connections. Shpg. wt., 8 lbs.  
**95 DX 191.** List, \$55.00. NET **32.34**

**MODEL C8W.** 8" WOOFER. Ideal for small compact assemblies. Requires Model N-1 filter or N-2B network. Response, 50-5000 cps. Power handling capacity, 25 watts. Shpg. wt., 4 lbs.  
**95 DX 192.** List, \$22.50. NET **13.23**

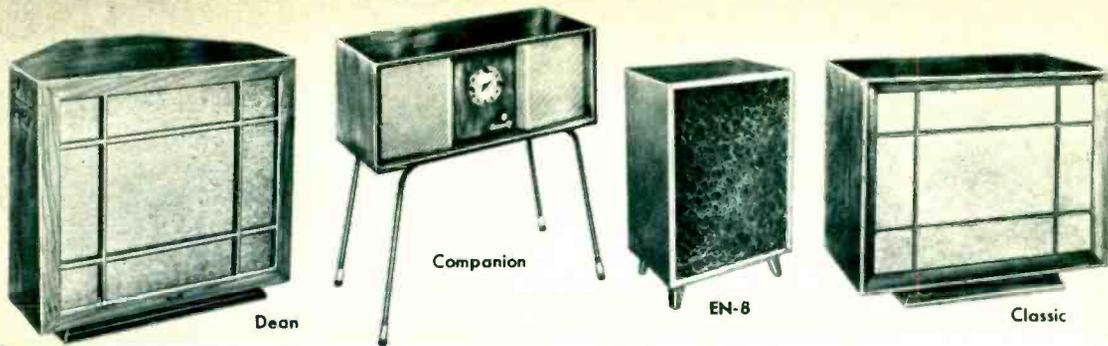
### Adjustable Crossover Networks

**MODEL N-1 ADJUSTABLE HIGH-PASS FILTER.** Crossovers at 1250, 2500 or 5000 cps at 16 ohms; 2500, 5000 or 10,000 cps at 8 ohms; 5000 or 10,000 cps at 4 ohms. High frequency control. Size, 3½x3¼x3". Shpg. wt., 3 lbs.  
**95 D 193.** List, \$15.00. NET **8.82**

**MODELS N-2A AND N-2B L/C TYPE DIVIDING NETWORKS.** May be used singly as 6 db cut-off 2-way network, as 12 db network in pairs, singly as 12 db low or high pass filters and as a 3-way network together. Screw terminal connections for matching, 4, 8 or 16 ohms. \*Crossover frequency not available on 4 ohm tap. Overall size, 3¼x3¼x3". Shpg. wt., 3 lbs.  
**MODEL N-2A.** Crossovers of 350° or 700 cps.  
**95 D 194.** List, \$30.00. NET **17.64**

**MODEL N-2B.** Crossovers of 1250°, 2500 or 5000 cps.  
**95 D 195.** List, \$20.00. NET **11.76**

**MODEL N-3 3-WAY L/C NETWORK.** Crossovers of 350 or 5000 cps. Impedance, 8 ohms. Brilliance and presence controls with panel for cabinet mounting. Size, 7x5x3". Shpg. wt., 5 lbs.  
**95 D 196.** List, \$40.00. NET **23.52**



## New University Speaker Systems and Cabinets

### 3-way Speaker Systems and Cabinets

MODEL "DEAN" 3-WAY SPEAKER SYSTEM. Deluxe cornerless-corner system. Newly designed compression type folded front-loaded horn performs independently of walls and floors. By utilizing the C15W woofer, exceptionally clean, mellow bass frequencies from 30 to 350 cps are achieved. The Cobreflex-2 with T-30 driver unit reproduces mid-range frequencies from 350 to 5000 cps clearly and true to life. The new HF-206 tweeter provides brilliant treble response in the 5000 to 17,500 cps region. N-3 network, crossing over at 350 and 5000 cps, completes this ultra-modern system. Has "Brilliance" and "Presence" controls. Impedance, 8 ohms. Power capacity, 50 watts. Cherry mahogany finish. Size, 36 1/4" H., 36" W and 22" D. Shpg. wt., 170 lbs.

95 DX 139. NET	387.10
MODEL "DEAN" 3-WAY SPEAKER SYSTEM. Same as above, but blonde.	
95 DX 140. NET	387.10
MODEL "DEAN" CABINET ONLY. Cherry mahogany. Wt., 130 lbs.	
95 DX 141. NET	226.87
MODEL "DEAN" CABINET ONLY. Blonde. Wt., 130 lbs.	
95 DX 142. NET	226.87
MODEL "CLASSIC" 3-WAY SPEAKER SYSTEM. Consists of same components and specifications as Model "Dean", but in deluxe console type cabinet. Cherry mahogany finish. Size, 34 1/2"x40 1/2"x24 1/4". Shpg. wt., 210 lbs.	
95 DX 143. NET	387.10
MODEL "CLASSIC" 3-WAY SPEAKER SYSTEM. Blonde. Wt., 210 lbs.	
95 DX 144. NET	387.10
MODEL "CLASSIC" CABINET ONLY. Cherry. Wt., 170 lbs.	
95 DX 147. NET	226.87
MODEL "CLASSIC" CABINET ONLY. Blonde. Wt., 170 lbs.	
95 DX 148. NET	226.87

### Systems and Cabinets for Limited-Space Applications

MODEL "COMPANION" 3-WAY SPEAKER SYSTEM. Small, compact 3-way speaker system. Designed for limited space applications. Rich, full-bodied response to 15,000 cps. Power handling capacity, 25 watts. Continuously variable "Balance" control. Automatic electric clock for remote off-on control of associated hi-fi equipment at any desired time. Impedance, 8 ohms. Cherry mahogany finish. Less wrought iron legs. Size, 9 1/2"x24"x10". Shpg. wt., 27 lbs.

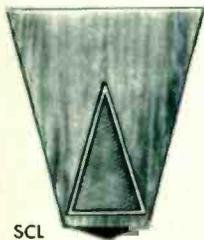
81 DX 586. NET	97.51
MODEL "COMPANION" 3-WAY SPEAKER SYSTEM. Blonde finish. Shpg. wt., 27 lbs.	
81 DX 587. NET	97.51
WROUGHT IRON LEGS FOR "COMPANION". Set of 4 sturdy legs. Shpg. wt., 2 lbs.	
81 DX 588. NET	5.88

MODEL EN-8 SPEAKER ENCLOSURE. An attractive speaker cabinet for any 8" speaker. Small and compact. Ideal for applications where space is at a premium. Beautiful spiral-design grille and choice of finish—blends with any decor.

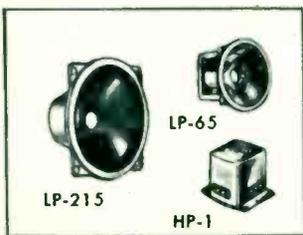
Designed by people who know speaker enclosures best—speaker engineers. Basically a bass reflex cabinet with a horn flare, the mouth of the horn lies at the bottom of cabinet, using floor as an extension of horn thereby aiding bass frequency efficiency. Does not need a wall or corner to supplement its acoustical ability.

An excellent enclosure for the Diffusicon-8 or Model 308 triaxial or other high-quality 8" speaker. Cherry mahogany finish. Size, 25 3/4"x18"x12". Wt., 28 lbs.

95 DX 197. NET	47.04
MODEL EN-8, BLONDE. As above, but blonde.	
95 DX 198. NET	47.04



SCL



LP-215

LP-65

HP-1



Audette



MB-1X

## Kingdom-Lorenz Speaker Systems and Components

### Two-Way Speaker Components

LP-215 8" WOOFER. May be used as either woofer or extended-range speaker. Delivers clean, distinct bass. Excellent damping. Free cone resonance of only 75 cps. Usable frequency response to 13,500 cps. Power capacity, 8 watts. Matches 4 to 8 ohm imp. Wt., 7 lbs.

81 D 002. NET	22.50
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LP-65 TWEETER. Response to 16,000. Employs transparent plastic cone. Solid-backed frame prevents interaction with woofer. Impedance, 4 to 8 ohm. Dia., 2 1/4". Wt., 2 lbs.

81 D 003. NET	8.50
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HP-1 HIGH-PASS FILTER. Crossover frequency, 5000 cps. Effect increases at rate of 3 db per octave starting at 2000 cps. At 12,000 cps tweeter comes into full use. Wt., 3 lbs.

81 D 004. NET	4.95
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MODEL KAL 2-WAY AUDETTE SPEAKER SYSTEM. Shelf-sized 2-way speaker system in two-tone leatherette. Economically priced. Excellent in pairs for binaural systems. Consists of: LP-215 woofer; LP-65 tweeter; and HP-1 high-pass filter. Outstanding reproduction in the frequency range of 45-16,000 cps. Power handling capacity 10 watts. 8 ohms. 11x23 1/4"x10". Wt., 22 lbs.

81 DX 008. NET	49.50
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MODEL SCL "SOUND CORNER." A new concept in 2-way high-fidelity speaker system design. Unit hangs in corner of room, walls serve as sides of the enclosure. Occupies no floor space. Attractive modern appearance; delivers rich, extended hi-fi reproduction with excellent "presence." Consists of: LP-215 woofer; LP-65 tweeter; and HP-1 high-pass filter. Frequency response, 31-16,000 cps. With 2 mounting eyelets. 8 ohms. 8 watts. Size, 31x27 1/2"x11 1/4". Blonde finish. Shpg. wt., 20 lbs.

81 DX 007. NET	59.50
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MODELS MB-IX, LB-IX TWO-WAY SYSTEMS. Solves hi-fi installation problem where space or budget are limiting factors. Occupies minimum space and priced surprisingly low—yet it offers performance normally associated with larger, more costly systems. Delivers extended, unusually smooth bass and treble and real two-way system "presence." Imported from Western Germany. Consists of: LP-215 8" Woofer; LP-65 Tweeter and HP-1 High-Pass Filter. Enclosure is acoustically matched to speaker components. 4-8 ohms. 8 watts. 13x16x19". Shpg. wt., 28 lbs.

81 DX 005. MODEL MB-IX. Mahogany-finish enclosure.	
81 DX 006. MODEL LB-IX. Blonde-finish enclosure.	
NET EACH	69.50

WROUGHT IRON LEGS FOR ABOVE. Wt., 6 lbs.

81 DX 009. NET	6.95
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206AX



122AX



Co-Spiral



214



216



800X



103LX

### General Electric Speakers

**MODEL A1-400 12".** An advanced-design coaxial speaker. Widely used in moderate-cost custom hi-fi installations. Remarkably smooth, extended response and wide dispersion. Unique slotted baffle plate serves as tweeter baffle and effectively minimizes interference between tweeter and woofer units; plate can be installed outside of speaker cabinet to serve as grille. Has pressure equalizer located at apex of tweeter cone; provides improved transient response for high-frequency peaks free of harshness or unnatural coloring. Response,  $\pm 5$  db from 40-15,000 cps. 1800 cps crossover network.  $2\frac{3}{4}$ " tweeter cone and 12" woofer cone. Heavy-duty Alnico V ring magnets; 14.5 oz. woofer magnet and 6.8 oz. tweeter magnet. Capacity, 25 watts. Imp., 8 ohms.  $6\frac{1}{4}$ " deep. Shpg. wt., 9 lbs.  
81 DX 517. NET..... 41.11

**MODEL S-1201-A 12".** Improved version of outstandingly popular S1201D. This 12" speaker has been highly recommended by nationally known consumer research organizations. Ideal for moderate-cost hi-fi installations; for modernization of radios, phonographs and television receivers; and as external speaker for improved playback fidelity on tape recorders. Provides very clean, smooth frequency response over the range of 50-13,000 cps. Employs extra-heavy Alnico V magnet for efficient performance and distinct bass. Non-warping aluminum-base voice coil. "All-Weld" frame maintains optimum flux density. Capacity, 25 watts. Resonance, 70 cps. Voice coil diameter,  $1\frac{1}{4}$ "; 14.5 oz. magnet. Plastic magnet cover. Shpg. wt., 6 lbs.  
81 DX 513. List, \$33.95. NET..... 19.95

**MODEL S-1203-A.** 12" speaker. Same as S1201A, but 9 oz. magnet and metal magnet cover. Shpg. wt., 5 lbs.  
81 DX 513. List, \$23.60. NET..... 13.94

**NEW MODEL 850-D 8".** Low-cost, wide-range speaker. Excellent for replacement use in radios, TV sets, etc. to improve tonal quality. Also fine choice for limited-space hi-fi systems or for use as hi-fi system extension speaker. Response, 70-11,000 cps. Curvilinear cone. Aluminum-base voice coil. 6.8 oz. magnet. Capacity, 15 watts. Impedance, 8 ohms. Shpg. wt., 2 lbs.  
81 D 518. List, \$16.55. NET..... 9.74



### New General Electric A1-406 Enclosure

Combines rich, simple styling and advanced acoustical design. Delivers exceptional performance whether used in corner or placed against wall. Ideal for use with G.E. A1-400; also delivers excellent results with G.E. S1201A, S1203A, or other 12" speakers. Features "distributed port" design to achieve highly effective damping and loading; delivers very smooth, authentic bass. Beautiful, hand-rubbed mahogany veneer; 1" acoustic lining. Size:  $3\frac{1}{4}$ " high,  $25\frac{3}{4}$ " wide,  $18\frac{1}{4}$ " deep. With bolts for mounting speaker. Shpg. wt., 55 lbs.  
81 DX 725. NET..... 58.75

**MODEL A1-406 (BLONDE OAK).** As above, but with blonde oak finish.  
81 DX 726. NET..... 58.75

### Stephens Tru-Sonic High-Fidelity Speakers

**MODEL 206AX 15".** This deluxe 15" coaxial speaker supersedes the famous Model 106AX. Latest engineering advances and precision construction assure superb fidelity. The 206AX meets the most exacting requirements of fine custom music systems.

A 15" low-frequency cone reproduces the lower register from 30-1200 cps with remarkable realism. A  $7\frac{1}{2}$  lb. Alnico V magnet provides extreme flux density for superior damping and unusually high efficiency. Cone resonance of only 35 cps further contributes to low-frequency performance. A separate, coaxially mounted high-frequency driver, with a new acoustic chamber, and an exponential multi-cellular horn, deliver even, wide-angle dispersion from 1200 to 18,000 cps. Has built-in high-pass filter with crossover point at 1200 cps. An aluminum die-cast frame is employed for extreme rigidity.

Voice coil diameter: Low frequency, 2"; high frequency,  $1\frac{1}{2}$ ". Power handling capacity, 20 watts. Impedance, 16 ohms. Depth, 10". Shpg. wt., 31 lbs.  
81 DX 685. List, \$166.00. NET..... 122.01

**NEW MODEL 122AX 12".** The new 122AX 12" coaxial speaker delivers an extremely high standard of sound reproduction at unusually moderate cost. Features excellent bass and treble response, wide-angle dispersion, and high efficiency. Many deluxe features make the 122AX a notably fine choice for the custom high-fidelity system.

Heavy-duty  $1\frac{1}{2}$  lb. Alnico V magnet and 2" voice coil provide very high efficiency and clean, distinct bass reproduction down to 40 cps. Coaxially mounted tweeter with dural diaphragm and 1" voice coil assure smooth, crisp treble to 18,000 cps. Tweeter has double exponential horn for wide-angle coverage plus proper high-frequency loading. Built-in, 5000-cycle, high-pass filter. Heavy aluminum die-cast frame maintains precise alignment of voice coils.

Impedance: 12 ohms; matches 8 or 16-ohm output taps of amplifier. Cone resonance, 55 cps. Capacity, 20 watts. Depth,  $5\frac{1}{4}$ ". Shpg. wt., 12 lbs.

81 DX 702. List, \$72.00. NET..... 52.92

### Speaker System Components

**MODEL 214 ULTRA-HIGH FREQUENCY TWEETER.** Range, 5000-22,000 cps. Multi-cellular horn provides extremely wide dispersion. Rated, 20 watts above 5000 cps.  $1\frac{1}{2}$ " dia. voice coil, 14 oz. Alnico V magnet. 16 ohms.  $3\frac{1}{4}$ "x $6\frac{1}{2}$ "x $9\frac{1}{2}$ " D, 9 lbs.  
81 D 626. List, \$44.00. NET..... 32.34

**MODEL 5000X HIGH PASS FILTER.** For use with 214, above. Shpg. wt., 2 lbs.  
81 D 627. List, \$16.00. NET..... 11.76

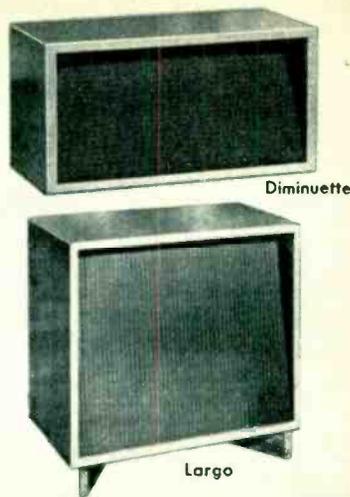
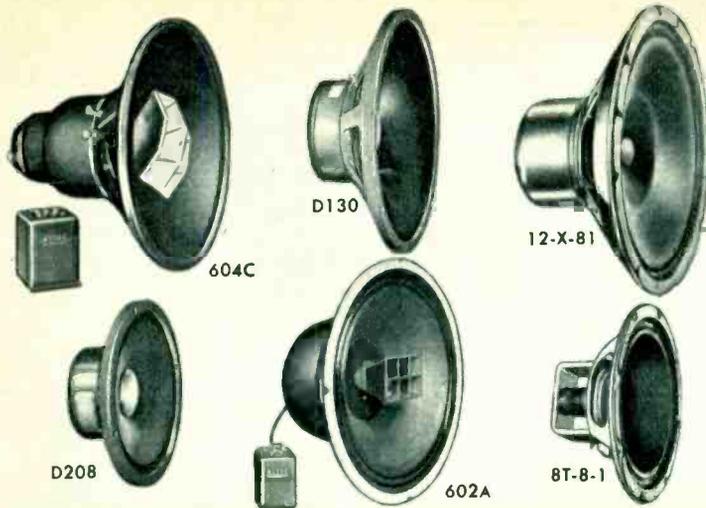
**MODEL 216 HIGH-FREQUENCY DRIVER.** Range, 800-18,000 cps. Rated, 20 watts.  $1\frac{1}{2}$  lb. Alnico V magnet. 16 ohms. Requires 814H horn.  $3\frac{3}{4}$ " deep,  $8\frac{1}{2}$  lbs.  
81 D 619. List, \$84.00. NET..... 61.74

**MODEL 814H 1X4 HORN.** 800 cps cutoff. For use with 216 driver. Size,  $4x1\frac{1}{2}x10\frac{1}{4}$ " deep. Shpg. wt., 7 lbs.  
81 DX 701. List, \$28.00. NET..... 20.58

**MODEL 800X CROSSOVER NETWORK.** 800-cycle crossover. Input and output imp., 16 ohms.  $4x6\frac{1}{2}x4\frac{3}{4}$ " deep, 5 lbs.  
81 D 668. List, \$39.00. NET..... 28.67

**WOOFERS.** Response down to 30 cps. Imp., all except 120LX, 16 ohms; 120LX, 12 ohms. Alnico V magnets. \*15" dia.;  $4\frac{1}{2}$  lb. magnet; resonance, 35 cps. †15" dia.; for Klipsch corner baffles only;  $4\frac{1}{2}$  lb. magnet; resonance, 33 cps. †15" dia.;  $2\frac{1}{2}$  lb. magnet; resonance, 41 cps. ‡12" dia.;  $1\frac{1}{2}$  lb. magnet; resonance, 57 cps.

No.	Model	Lbs.	List	NET
81 DX 665*	103LX	29	\$90.00	66.15
81 DX 649†	103LX-2	29	90.00	66.15
81 DX 618‡	105LX	27	74.00	54.39
81 DX 700‡	120LX	12	39.00	28.67



### Altec-Lansing Speakers

**MODEL 604C 15".** One of the most efficient 15" coaxial speakers ever offered. Ideal for hi-fi and deluxe PA use. Extremely smooth response from 30-22,000 cps. 15" cone reproduces low frequencies. 6-cell coaxially mounted tweeter reproduces high frequencies; 60° horizontal and 40° vertical distribution. Improved crossover network has adjustable high-frequency control. Crossover frequency, 1600 cps. Very high power handling capacity—does not distort at high levels. Power capacity, 35 watts. Resonance, 30 cps. Impedance, 16 ohms. Depth, 11 1/4". Shpg. wt., 45 lbs.

95 DX 057. NET 156.00

**MODEL 602A 15".** Moderate cost, 15" coaxial speaker. Excellent response from 30-22,000 cps. 15" low-frequency cone and coaxially mounted tweeter. Delivers full-bodied, brilliant tone—it's an outstanding unit for the home music system. Highly efficient crossover network; crossover frequency, 3000 cps. High-frequency level control. Very even, wide-angle high-frequency dispersion is achieved with 2x3 sectionalized horn. Capacity, 20 watts. Resonance, 45 cps. Impedance, 8 ohms. Depth, 7 1/4". Shpg. wt., 25 lbs.

95 DX 084. NET 114.00

**MODEL 601A 12".** Same features as the 602A listed above, in a 12" model. Capacity, 20 watts. Resonance, 55 cps. Impedance, 8 ohms. Shpg. wt., 17 lbs.

95 DX 085. NET 99.00

**MODEL 603B 15".** Dia-Cone construction—high-frequency, aluminum alloy diaphragm and a low-frequency, 15" cone, mechanically coupled and driven by 3" voice-coil. Multicellular horn for wide-angle high-frequency dispersion. 25 watts, 8 ohms. Resonance, 49 cps. Shpg. wt., 25 lbs.

95 DX 053. NET 66.00

**MODEL 600B 12".** 12" speaker with Alnico V magnet and Dia-Cone construction described above. Handles 20 watts with full efficiency. Impedance, 8 ohms. Resonance, 60 cps. Shpg. wt., 15 lbs.

95 DX 054. NET 42.00

**MODEL 400B 8".** Outperforms many speakers of larger size. Large Alnico V magnet for clean, distinct bass. Utilizes Dia-Cone principle; metal diaphragm for extended treble response. 12 watts, 8 ohms. Resonance, 94 cps. Shpg. wt., 6 lbs.

95 D 058. NET 21.60

#### Model 606A Corner Enclosures

The 606A corner enclosure fully utilizes the fine performance characteristics of Altec-Lansing 15" speakers. Mahogany finish. Size: 36 1/2" high, 36" wide, 23 1/2" deep. Shpg. wt., 115 lbs.

95 DX 086. NET 125.00

**MODEL 606A (LIMED OAK).** As above, but blonde finish.

95 DX 095. NET 132.00

### Jim Lansing Speakers

**MODEL D130 15".** This heavy-duty, precision-built speaker has an outstanding reputation for wide-range, faithful reproduction. Excellent for moderate-cost, high-fidelity music systems. Heavy Alnico V magnet, carefully designed magnet structure, and edge-wound ribbon voice coil assure extremely high efficiency, remarkably distinct bass reproduction, plus high power handling capacity. Top-quality 15" low-frequency cone. High frequencies are reproduced with exceptional crispness and clarity by mechanically coupled aluminum diaphragm at apex of low-frequency cone; very smooth, wide-angle treble dispersion. Frequency response, ±5 db from 30-17,000 cps. Power handling capacity, 25 watts. Voice coil diameter, 4". Voice coil impedance, 16 ohms. Magnet weight, 3 1/2 lbs. Cone resonance, 37 cps. Depth, 5 1/4". Shpg. wt., 17 lbs.

82 DX 125. NET 76.00

**MODEL D131, 12".** 12" version of the D130 speaker described above. Incorporates essentially the same design characteristics to assure high efficiency and very clean, wide-range frequency response. Frequency response, ±5 db from 30-15,000 cps. Power handling capacity, 20 watts. Voice coil diameter, 4". Impedance, 16 ohms. Magnet weight, 3 1/2 lbs. Resonance, 56 cps. Depth, 5". Shpg. wt., 16 lbs.

82 DX 129. NET 72.00

**MODEL D208 8".** An excellent speaker for use in hi-fi systems where space or cost is a limiting factor. Features same deluxe features as Models D130 and D131 above. Exceptional high efficiency. Unusually good response; ±5 db, 40-13,000 cps. Power handling capacity, 12 watts. Voice coil diameter, 2". Voice coil impedance, 8 ohms. Magnet weight, 15 oz. Depth, 2 1/4". Shpg. wt., 5 lbs.

82 D 126. NET 25.92

**MODEL D208 8".** An excellent speaker for use in hi-fi systems where space or cost is a limiting factor. Features same deluxe features as Models D130 and D131 above. Exceptional high efficiency. Unusually good response; ±5 db, 40-13,000 cps. Power handling capacity, 12 watts. Voice coil diameter, 2". Voice coil impedance, 8 ohms. Magnet weight, 15 oz. Depth, 2 1/4". Shpg. wt., 5 lbs.

82 D 126. NET 25.92

### Permoflux Speaker Systems

**"DIMINUETTE" MODEL DM-1M.** Very popular, ultra-compact speaker system. Consists of three expertly engineered speakers in modified bass-reflex enclosure. Compact size eliminates installation problems—can be installed in bookcase, on table, on cabinet, etc. Achieves exceptional tonal balance and "presence." Bass and middle-range frequencies are reproduced with unusual clarity and crispness by two 6" Permoflux Royal speakers; treble reproduced by cone-type super-tweeter. Impedance: 4-8 ohms. Capacity, 12 watts. Modern, handsomely styled wood cabinet with mahogany finish. Size: 11 1/2" high, 23 1/2" wide, 12" deep. Shpg. wt., 25 lbs.

95 DX 098. NET 48.51

**MODEL DM-1B.** Same as above, but with blonde finish.

95 DX 099. NET 48.51

### Permoflux Speakers

**SUPER ROYAL MODELS.** Specifically designed for hi-fi use. Aluminum diaphragm at apex of cone for extended treble response. Highly efficient magnet structure with latest design Alnico V ring magnet. "Super-soft" cone suspension. 8 ohms.

**MODEL 15-X-81 15".** Woofer or full-range speaker. Response, 30-11,000 cps. Resonance, 40 cps. Capacity, 25 watts. Magnet wt., 14.5 oz. Depth, 8 1/4". Wt., 9 lbs.

81 DX 247. List, \$108.00. NET 63.50

**MODEL 12-X-81 12".** Full-range speaker. Response, 35-14,000 cps. Resonance, 55 cps. Capacity, 15 watts. Magnet weight, 14.5 oz. Depth, 6 1/4". Wt., 6 lbs.

81 DX 246. List, \$72.50. NET 42.63

**MODEL 8-V-81 8".** Serves as full-range unit, or as mid-range unit in 3-way system. Response, 45-14,000 cps. Resonance, 65 cps. Capacity, 15 watts. Magnet wt., 10.3 oz. Depth, 5". Shpg. wt., 5 lbs.

81 D 245. List, \$49.75. NET 29.25

**ROYAL MODELS.** For low-cost hi-fi use; also radios, TV sets and phonos. Cone has "super-soft" suspension and stiffened throat for excellent bass and treble. 8 ohms.

**MODEL 12UP-8-1 12".** Response, 45-12,000 cps. Resonance, 62 cps. Capacity, 12 watts. Magnet wt., 6.8 oz. Depth, 6 1/2". With dust cover. Shpg. wt., 5 lbs.

81 DX 227. List, \$35.00. NET 20.58

**MODEL 8UP-8-1 8".** Response, 50-12,000 cps. Resonance, 70 cps. Capacity, 10 watts. Magnet wt., 6.8 oz. Depth, 4 1/2". With dust cover. Shpg. wt., 4 lbs.

81 D 226. List, \$30.00. NET 17.64

**MODEL 8T-8-1 8".** Response, 50-12,000 cps. Resonance, 70 cps. Capacity, 8 watts. Magnet wt., 4.64 oz. Depth, 4". Less dust cover. Shpg. wt., 3 lbs.

81 D 224. List, \$22.50. NET 13.23

**"LARGO" MODEL 8WH-2.** Newly developed two-way speaker system. Achieves exceptionally fine bass, mid-range and treble response at very moderate cost. Compact size and snarri, contemporary styling. System consists of Permoflux Super Royal 8" speaker, Permoflux super-tweeter, high-pass filter, and horn-loaded non-resonant enclosure. Enclosure combines smooth, peak-free performance of horn with high-efficiency of bass resonator. Has HF balance control. Frequency response, 35-16,000 cps. Power capacity, 15 watts. Impedance, 8 ohms. Handsome mahogany finish. Size: 23" high, 24" wide, 14" deep. Shpg. wt., 45 lbs.

95 DX 093. NET 97.75

**MODEL 8WH-2B.** Same as above, but with blonde finish.

95 DX 094. NET 97.75

## Quality High-Fidelity Speakers and Enclosures

### Quam Hi-Fi Speakers and Tweeters

These excellent extended-range speakers and tweeters meet the need for moderately priced music systems. Noted for their mellow, resonant-free bass response; clean, rich mid-range reproduction and crisp, clear high-frequency response.

#### Extended Range Speakers

All have curvilinear cones and 10 oz. Alnico V magnets. 1" voice coils have impedance of 8 ohms. Many other quality features make these speakers outstanding values for limited-budget music systems. See page 31 for speaker enclosures and kits.

TYPE 8A10X. 8" PM speaker. Frequency response, 65-12,000 cps.  $\pm 5$  db. Power handling capacity, 10 watts. Depth  $3\frac{1}{4}$ ". Shpg. wt.,  $3\frac{1}{2}$  lbs.

81 D 343. List. \$18.60. NET ..... 10.94

TYPE 10A10X. 10" PM speaker. Frequency response, 55-12,000 cps.  $\pm 5$  db. Power handling capacity, 12 watts. Depth  $5\frac{1}{4}$ ". Shpg. wt.,  $3\frac{1}{2}$  lbs.

81 D 344. List. \$24.00. NET ..... 14.11

TYPE 12A10X. 12" PM speaker. Frequency response, 50-12,000 cps.  $\pm 5$  db. Power capacity, 15 watts. Depth  $5\frac{1}{4}$ ". Wt.,  $4\frac{3}{4}$  lbs.

81 DX 345. List. \$26.00. NET ..... 15.29

#### Coaxial Speakers and Tweeters

MODEL 12A6CO. 12" SPEAKER. Consists of 12" low frequency unit and  $3\frac{1}{2}$ " high frequency tweeter. Power handling capacity, 14 watts. Response: 50-15,000 cps.  $\pm 5$  db. 6.8 oz. Alnico V magnet. Voice coil impedance, 6-8 ohms.  $6\frac{1}{16}$ " depth behind mounting panel. Shpg. wt., 10 lbs.

81 DX 318. List. \$30.00. NET ..... 17.64

MODEL 15A10CO. 15" SPEAKER. Has 15" woofer for faithful reproduction of the bass frequencies. High-frequency unit has 5" diameter cone. An ideal low-cost unit for binaural systems. Although moderate in cost, it is highly efficient over the entire range of 25-15,000 cps.  $\pm 5$  db. Has 10 oz. Alnico V magnet. Voice coil impedance, 6-8 ohms. Shpg. wt., 15 lbs.

81 DX 319. List. \$47.50. NET ..... 27.93

MODEL 5A15T. 5" TWEETER. Identical tweeter as used in Model 15A10CO speaker. Suggested for use with 15" speakers to extend their present range. Response, 2000-15,000 cps.  $\pm 6$  db. Voice coil impedance, 14 ohms. Power capacity, 10 watts to input of system. 1.47 oz. Alnico V magnet.  $2\frac{3}{16}$ " deep;  $4\frac{1}{16}$ " mtg. ctrs. Shpg. wt., 1 lb.

81 D 342. List. \$6.50. NET ..... 3.82

MODEL 3A15T.  $3\frac{1}{2}$ " TWEETER. Same tweeter as Model 12A6CO above. Response, 2000-12,000 cps.  $\pm 6$  db. Voice coil impedance, 14 ohms. Has heavy-duty 1.47 oz. magnet (Alnico V). Power capacity, 10 watts to input of system. Unit is  $3\frac{1}{2}$ " square; depth  $2\frac{1}{16}$ ". Suited for extending range of present 12" speaker. Shpg. wt.,  $\frac{3}{4}$  lb.

81 D 341. List. \$5.75. NET ..... 3.38

### Low-Cost R-J Speaker Enclosures

#### Floor Type Enclosures

Offer extended-range reproduction and occupy minimum floor space. Pre-cut for 12" or 15" speakers. Hand-rubbed finishes; top-quality veneers.

FOR 12" SPEAKERS. HWD (including legs): 24x20x16". Wt., 36 lbs.

MODEL F-12-U. Unfinished. 95 DX 398. NET ..... 43.35

MODEL F-12-M. Mahogany. 95 DX 392. NET ..... 49.95

MODEL F-12-B. Korina Blonde. 95 DX 394. NET ..... 54.50

FOR 15" SPEAKERS. Same size as above. Shpg. wt., 36 lbs.

MODEL F-15-U. Unfinished. 95 DX 399. NET ..... 43.35

MODEL F-15-M. Mahogany. 95 DX 393. NET ..... 49.95

MODEL F-15-B. Korina Blonde. 95 DX 395. NET ..... 54.50

#### Shelf Type Enclosures

Small, compact speaker enclosures designed for book-shelf installation. Provide maximum bass response in a minimum of space. Excellent for the apartment size system.

FOR 8" SPEAKERS. Single shelf type requires absolute minimum of shelf space. Fine, quality furniture construction throughout. Unit is smoothly sanded, ready for finishing. Speaker cut-out accommodates all standard 8" speakers, easily installed without the use of special tools. Only 11x10x23 $\frac{1}{2}$ ". Shpg. wt., 20 lbs.

MODEL S-8-U. Unfinished. 95 DX 390. NET ..... 24.50

FOR 12" SPEAKERS. Double shelf model. (Not illustrated). Same cubic air space as the floor model, yet can be installed in book-shelf. Unit is sanded, ready for finishing in any matching finish. Provides clean bass response without cabinet resonances. Size, 24x21x10". Wt., 31 lbs.

MODEL S-12-U. Unfinished. 95 DX 391. NET ..... 29.50

### Wharfedale Cloth Suspension Speakers

Built by Wharfedale Wireless Works, under the direction of G. A. Briggs, world-renowned sound engineer. Despite their modest price, all are fitted with cast chassis resulting in greater rigidity, less resonance, better air loading. All models except the 8" Bronze have cloth suspension cones which improve transient response by adding dissipation to the edges of the cone. Cloth suspension—a felt "buffer" between the speaker cone and frame—imparts greater compliance to the cone, and results in an improved damping factor and in remarkably level response.

MODEL SUPER 5 TWEETER. Highly efficient 5" tweeter features bakelized cone for wide diffusion. Range: 3000-20,000 cps. 15 ohms. 10 watts. Wt., 5 lbs.

82 D 139. NET ..... 21.07

MODEL "8" BRONZE 8" SPEAKER. Quality performance—due to high flux and open, die-cast chassis. 15 ohms. Wt., 6 lbs.

82 D 140. NET ..... 14.75

MODEL SUPER 8/CS/AL 8" SPEAKER. May be used as speaker, or as tweeter in 2-way systems. 10 ohms. 50-15,000 cps. Wt., 6 lbs.

82 D 135. NET ..... 21.07

MODEL W10/CS8. As above, but 10". Response, 30-18,000 cps. 15 ohms. Wt., 12 lbs.

82 D 141. NET ..... 39.20

MODEL SUPER 12/CS/AL 12" SPEAKER. Unusually clean reproduction. Features an aluminum voice coil which provides excellent high-frequency response. Range, 30-18,000 cps. 15 ohms. Wt., 23 lbs.

82 DX 136. NET ..... 74.63

MODEL W12/CS 12" WOOFER. Response to 25 cps. 10 watts. Cone resonance, 40/50 cps. 15 ohms. Wt., 15 lbs.

82 DX 137. NET ..... 41.89

MODEL W15/CS 15" WOOFER. Power handling capacity, 20 watts. 15 ohms impedance. Exceptionally fine bass response down to 25 cps. Cone resonance, 25/30 cps. Shpg. wt., 21 lbs.

82 DX 138. NET ..... 74.63

CROSSOVER NETWORKS. Used to divide the bass and treble between loudspeakers at low impedance and thus eliminate distortion of the treble by modulation from the bass. All units are 7-16 ohms impedance. Maximum power-handling capacity, 30 watts. \*For 3-way speaker systems.

Stock No.	Crossover Frequency	Wt. Lbs.	NET EACH
82 D 142	1000 cps	6	15.09
82 D 143	3000 cps	6	13.82
82 D 144	*500,800 cps	7	34.30

Attenuation of the 1000 and 3000 cps units is 6 to 9 db per octave. Attenuation of the 3-speaker unit, 12 db per octave. All units have screw-type terminals.



Quam  
12A6CO



Quam  
5A15T

Wharfedale  
12/CS/AL

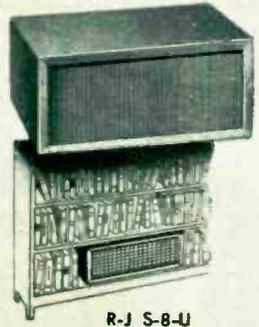


Crossover

Wharfedale  
8/CS/AL



R-J F-12-M



R-J S-8-U

# Cabinet Enclosures and Cabinets—Klipsch-Licensed Enclosures

Available in Assembled or Kit Form

**EQUIPMENT CABINET.** For record changer, amplifier and tuner. Matches Model 27 below—twins of quiet dignity and commanding presence. Constructed of selected Birch plywood, handsomely finished in Mahogany or Blonde. Pull-out record changer drawer has ball-bearing slides; decorative hardware. Blank board for changer; blank panel for amplifier and tuner. Inside Dimensions: Record changer compartment, 11 $\frac{1}{4}$ " H x 22" W x 17" D; tuner-amplifier compartment, 18 $\frac{1}{2}$ " H x 22" W x 16" D. Size, 35 $\frac{1}{2}$ " H x 23 $\frac{1}{2}$ " W x 18" D. Wt., 72 lbs.

- MODEL 28. Mahogany. NET..... 72.00  
 95 DX 370. NET..... 72.00  
 MODEL 28. Blonde. NET..... 72.00  
 95 DX 371. NET..... 72.00

**SPEAKER ENCLOSURE.** Bass-reflex type speaker enclosure; pre-cut for 15" speaker. Companion piece to the Model 28 above. Constructed of the same high-quality selected birch plywood. Has adapter panel cut for 12" speaker. Baffle volume, 6 cubic ft. Acoustic insulation. Plastic grille. 35 $\frac{1}{2}$  x 23 $\frac{1}{2}$  x 18". Shpg. wt., 58 lbs.

- MODEL 27. Mahogany. NET..... 48.00  
 95 DX 372. NET..... 48.00  
 MODEL 27. Blonde. NET..... 48.00  
 95 DX 373. NET..... 48.00

**SPEAKER AND EQUIPMENT CABINETS—COMPLETELY ASSEMBLED OR IN KIT FORM.** A complete selection of quality matching cabinets—unfinished—in kit form or completely assembled. Constructed of high grade,  $\frac{3}{4}$ " white pine plywood. Kits are completely pre-cut, including plastic wood, sandpaper, glue, hardware and instructions. Speaker enclosures also include plastic grille cloth and acoustic insulation. All assembled cabinets are smoothly sanded.

**MODEL 70 ASSEMBLED EQUIPMENT CABINET.** Tuner compartment I.D., 20" H x 21 $\frac{1}{4}$ " W x 15 $\frac{1}{4}$ " D. Phono compartment, I.D., 11 $\frac{1}{2}$ " H x 21 $\frac{1}{4}$ " W x 15 $\frac{1}{4}$ " D. Size, 33 $\frac{1}{2}$ " H x 23" W x 16" D. Shpg. wt., 35 lbs.

- 95 DX 367. NET..... 36.00  
 MODEL 80. EQUIPMENT CABINET KIT. Same as Model 70, but in kit form. NET..... 27.00  
 95 DX 386. Complete Kit. NET..... 27.00

**MODEL 7112 ASSEMBLED SPEAKER CABINET.** Pre-cut for 12" speaker. Bass-reflex type. Baffle volume, 6 cubic feet. Removable panels for easy, inexpensive equipment changes. 33 $\frac{1}{2}$ " H x 23" W x 16" D. Shpg. wt., 40 lbs.

- 95 DX 368. NET..... 24.00  
 MODEL 8112 SPEAKER ENCLOSURE KIT. All necessary parts to assemble this high quality bass-reflex speaker enclosure. Same as Model 7112, but in kit form. Shpg. wt., 40 lbs.

95 DX 387. Complete Kit. NET..... 18.00  
**MODEL 7115 ASSEMBLED SPEAKER CABINET.** Pre-cut for 15" speaker. Bass-reflex type. 6 cubic feet of baffle volume. Size, 33 $\frac{1}{2}$ " H x 23" W x 16" D. Wt., 40 lbs.

- 95 DX 369. NET..... 24.00  
 MODEL 8115 SPEAKER ENCLOSURE KIT. All parts (pre-cut wood parts, glue, grille, and easy-to-follow instructions) for complete assembly. Same as Model 7115 above, but kit form. Baffle volume, 6 cubic ft. Shpg. wt., 40 lbs.

95 DX 388. Complete Kit. NET..... 18.00  
**CORNER SPEAKER ENCLOSURE KITS.** Folded horn design extends bass a full octave. White pine plywood. Includes pre-cut baffle, grille cloth, hardware, glue, plastic wood, acoustic insulation, and easy-to-follow assembly and finishing instructions. Provides proper horn loading of a speaker that will greatly improve transient response and power handling capacity. An excellent enclosure for the low-cost music system.

- MODEL 63. For 15" speakers. Overall size, 32x36x17". Shpg. wt., 28 lbs. NET..... 23.95  
 95 DX 384. Complete Kit. NET..... 23.95  
 MODEL 61. For 12" speakers. Overall size, 32x32x16". Shpg. wt., 26 lbs. NET..... 19.95  
 95 DX 385. Complete Kit. NET..... 19.95

## Cabinet-Klipsch Enclosures

Just as deep bass organ tones require large pipes, so the reproduction of deep bass requires a large speaker enclosure. By using mirror images formed by room walls at a corner, the Rebel-Klipsch enclosure is effectively many times larger than it looks. Rebel extends the bass response down to 30 cps. It effectively reduces distortion and hangover and extends the bass range. Styling has been the result of intensive study to achieve conservative and attractive lines.

### New Rebel KR-3 Enclosure

Surpassed in performance only by the original "Klipschorn." Designed for loudspeakers up to and including 15" in diameter, coaxial or separate, 2- or 3-way systems. Overall dimensions: Height, 37"; width, 25 $\frac{1}{2}$ "; depth, 22". Utility model in unfinished Birch. Same acoustical qualities, but less speaker grille and side grilles. Shpg. wts: Finished models, 60 lbs. Utility model, 55 lbs.

- MODEL KR-3. Utility, unfinished. NET..... 84.00  
 95 DX 467. NET..... 84.00  
 MODEL KR-3. French Mahogany. NET..... 126.00  
 95 DX 464. NET..... 126.00  
 MODEL KR-3. Korina Blonde. NET..... 126.00  
 95 DX 465. NET..... 126.00  
 MODEL KR-3. Honey Walnut. NET..... 126.00  
 95 DX 466. NET..... 126.00

### Rebel KR-4 Enclosures

Ideally suited for "apartment-size" music installations where it is desirable to save valuable space without compromising quality. Reproduction surpasses that of bass reflex enclosures. Matches Model 21 equipment cabinet on page 22. Similar in appearance to Model 22, but no side grilles. Beautiful plastic grille cloth; hand rubbed finishes.

**SPECIFICATIONS:** Model KR-4-15: For 15" speakers. Size: Height, 32"; width, 24"; depth, 16 $\frac{1}{2}$ ". Shpg. wt., 50 lbs. Model KR-4-12: For 12" speakers. Size: Height, 32"; width, 21"; depth, 14 $\frac{1}{2}$ ". Shpg. wt., 40 lbs.

- MODEL KR-4-15. French Mahogany. NET..... 87.00  
 95 DX 376. NET..... 87.00  
 MODEL KR-4-15. Korina Blonde. NET..... 87.00  
 95 DX 377. NET..... 87.00  
 MODEL KR-4-15. Honey Walnut. NET..... 87.00  
 95 DX 381. NET..... 87.00  
 MODEL KR-4-12. French Mahogany. NET..... 69.00  
 95 DX 374. NET..... 69.00  
 MODEL KR-4-12. Korina Blonde. NET..... 69.00  
 95 DX 375. NET..... 69.00  
 MODEL KR-4-12. Honey Walnut. NET..... 69.00  
 95 DX 389. NET..... 69.00

**BUILD-YOUR-OWN KLIPSCH.** Distinctive new Klipsch-designed true corner horn enclosures in kit form. Easy 12" or 15" speaker installation with dual port arrangement for two speakers in varying combinations. Highest grade Birch ready for finishing. Complete with pre-cut baffle, glue, hardware, plastic grille cloth, etc. Identical acoustically to Model KR-4, except no top or side moldings.

- MODEL K-15. Shpg. wt., 35 lbs. NET..... 42.00  
 95 DX 379. NET..... 42.00  
 MODEL K-12. Shpg. wt., 32 lbs. NET..... 36.00  
 95 DX 378. NET..... 36.00

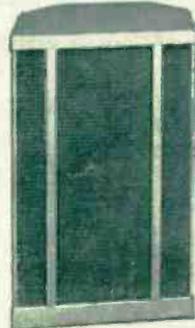
### New Rebel KR-5 Enclosures

New, small version of the Cabinet-Klipsch corner horn enclosures. With handle for carrying, and wall mounting brackets. With 12" cutouts and 8" plate. For 8" or 12" speakers. 16 $\frac{1}{2}$  x 14 x 21". Wt., 30 lbs.

- 95 DX 468. French Mahog. NET..... 48.00  
 95 DX 469. Korina Blonde. NET..... 48.00  
 95 DX 470. Honey Walnut. NET..... 48.00  
 95 DX 471. Leatherette. NET..... 48.00  
 UTILITY MODEL. No grille or molding. Unfinished birch. Same acoustically as above. NET..... 33.00  
 95 DX 473. For 8" speakers. NET..... 33.00  
 95 DX 472. For 12" speakers. NET..... 33.00



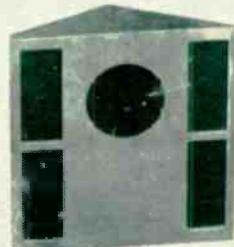
Rebel KR-3



Rebel KR-4



Rebel KR-5

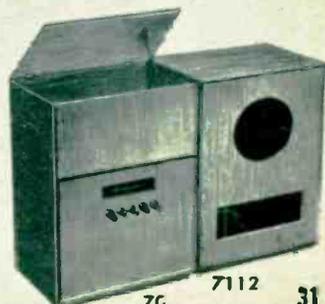


63



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27

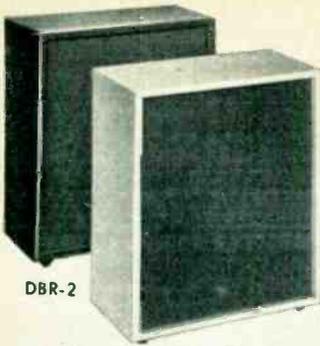


7C

7112

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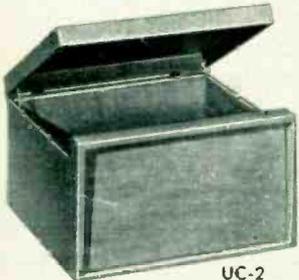
## Speaker Enclosures, Cabinets & Accessories, FM Boosters



DBR-2



UC-1



UC-2



REGENCY  
DB-98-A



E-V 3005



Ornamental Grille



Mesh Grille



Standard

Heavy-Duty

### Argos Matching Enclosures & Cabinets

**MODEL DBR-2 SPEAKER ENCLOSURE.** A handsomely designed multi-use cabinet permitting a wide range of speaker choices. May be used with 12" or 15" woofer and a tweeter, 12" or 15" coaxial speaker, or as straight bass reflex or infinite baffle with either a 12" or 15" speaker. Made of 1/2" five-ply wood covered with richly grained, mahogany-finish plastic-coated material. Smart two-tone woven plastic grille cloth, 4.3 cubic ft. capacity, interior acoustically padded. HWD, 29x24x15". With adapter plate and hardware. Shpg. wt., 38 lbs.

95 DX 425. List, \$58.00. NET ..... 34.10

As above, with blonde finish.

95 DX 426. List, \$58.00. NET ..... 34.10

**MODEL AD-1 SPEAKER ENCLOSURE.** Compact, highly attractive cabinet which delivers remarkably fine reproductive quality in a small unit. For 8" or 12" speaker mounting where space is limited. Same fine construction as DBR-2 described above. HWD, 23 1/4 x 19 1/2 x 13 1/2". Mahogany plastic finish. Shpg. wt., 27 lbs.

95 DX 427. List, \$35.80. NET ..... 21.07

As above, with blonde finish.

95 DX 428. List, \$35.80. NET ..... 21.07

**MODEL UC-1 EQUIPMENT CABINET.** Beautifully styled cabinet for housing tuner or amplifier. Made of 1/4" plywood, covered in richly embossed mahogany or blonde pyroxylin fabric, except front and back panels made of 1/2" hardboard. Front panel covered in smooth linen-finish fabric. Rubber feet to prevent marring surfaces. Outside HWD, 10 1/4 x 17 x 13 1/4" (including rubber feet). Inside HWD, 9 1/4 x 16 1/4 x 12 1/4". Shpg. wt., 8 lbs.

95 SX 363. MAHOGANY. List, \$24.00.

95 SX 364. BLONDE. List, \$24.00.  
NET EACH ..... 14.11

**MODEL UC-2 RECORD PLAYER CABINET.** Record player enclosure to match the UC-1 equipment cabinet described above. Houses any record changer listed in Catalog; also takes Garrard Model "T" or the Bogen B50-4. Same construction as Model UC-1 above, but 2" deeper. Shpg. wt., 15 lbs.

95 SX 365. MAHOGANY. List, \$26.50

95 SX 366. BLONDE. List, \$26.50  
NET EACH ..... 15.58

### FM Boosters For Improved Reception

**ELECTRO-VOICE MODEL 3005 TUNE-O-MATIC.** Provides wide-band preamplification of FM signals. Delivers uniform gain across the entire FM band without any need for manual tuning. May be placed in or behind set. Thermal relay permits FM booster to be turned "on" and "off" by the receiver without any circuit modification. Improves reception in low signal locations and in primary signal areas where indoor antennas are used. With Hi-Lo gain switch to limit gain when signals are too strong. Simple to install. Plugs in between receiver and electrical outlet. Increases signal level over ten times. Sturdy metal two-tone gray case, with rubber feet to prevent marring of polished surfaces. Complete with tubes, plug-in cord, and vertical mounting brackets. Size, 4x5 1/2 x 5 1/4". For 110-120 volts, 60 cycles AC. Shpg. wt., 3 lbs.

98 T 354. List, \$45.00. NET ..... 26.46

**REGENCY MODEL DB-98-A.** Highly stable, compact FM booster that extends reception by miles. Brings in stronger, clearer signals in poor reception areas or where adequate antenna cannot be installed. Ideal for hi-fi enthusiasts and music lovers. Uses push-pull 6J6 tube in balanced circuit for maximum gain. Provides 20 db gain. Large dial for easy tuning. Convenient 3-position switch marked FM, on, off. Housed in plastic cabinet only 4 1/2 x 6 x 4 1/2". For 110-120 volts, 60 cycles AC. Shpg. wt., 5 lbs.

97 T 234. List, \$29.95. NET ..... 17.61

**VEE-DX TYPE BBFM FM ANTENNA.** Single bay 8-element FM yagi. Wt., 7 lbs.

92 CX 070. NET ..... 26.93

**TYPE BBFM TWO-BAY.** For increased gain. With stacking harness. Wt., 15 lbs.

92 CX 071. NET ..... 56.35

### Speaker Grille & Acoustical Insulation

#### LUMITE PLASTIC GRILLE CLOTH

Top-quality woven Saran plastic. For speaker enclosures. Ideal for the craftsman who wishes to individualize his speaker enclosure, or modernize a grille cloth which is soiled or sagged out of shape. Provides new, smart decorative touch to any baffle. Requires no backing. Fireproof, stain- and fade-resistant. Wide, deep mesh—basket-weave type—permits high frequencies to pass readily. In 36" widths (min. order, one yard). Shpg. wt., per yard, 6 oz.

86 SX 075. Bronze (for mahogany).

86 SX 076. Ecru (for blonde finishes).

86 SX 073. Light maroon (for gray finishes).

NET PER YARD ..... 2.64

#### WALSCO ORNAMENTAL GRILLE

Heavy metal grille with a handsome "brushed brass" plated, gold finish effect. Adds beautiful decorative finish when used over grille cloth or flocked screening in custom-built radios, public-address speakers, high-fidelity systems, etc. Excellent for protection of speaker from accidental damage. Diamond pattern. 2 1/4 x 7/8". Aver. shpg. wt., 4 lbs.

86 SX 070. 12" x 18". NET ..... 1.76

86 SX 071. 18" x 24". NET ..... 3.23

86 SX 072. 24" x 36". NET ..... 6.14

#### ICA MESH GRILLE

Expanded aluminum mesh grille for use on custom-built radios, phonographs, speaker cases, etc. Excellent for high-fidelity installations where speaker is to be mounted in wall or cabinet. Wide mesh pattern allows unrestricted passage of high frequencies essential to high quality reproduction. Smart, gold finish. Of sufficient rigidity not to rattle even at high volume levels, yet easy to cut to desired size.

Type 3947. 12" x 18". Wt., 6 oz.

86 SX 063. NET ..... 2.12

Type 3948. 18" x 24". Wt., 10 oz.

86 SX 064. NET ..... 4.19

Type 3949. 24" x 36". Wt., 1 1/2 lb.

86 SX 069. NET ..... 8.42

#### Aerocor Acoustic Insulation

Fiberglas acoustic insulation made by Owens-Corning. For sound absorption in high-fidelity speaker enclosures. Also improves performance of high-quality public address speaker cabinets. Double thickness is recommended for best results. Fiberglas is completely acid-resistant, fire-proof, and corrosion-proof. Excellent for use as a lining of the record-changer compartment to eliminate motor noise, rumble, and the sound of the changing mechanism. In 36" width, 1/2" thick. In 5 or 10 yard lengths only. Shpg. wt., per 10 yards, 4 lbs.

86 SX 710. 5 yd. pkg., NET ..... 2.50

86 SX 711. 10 yd. pkg., NET ..... 3.80

#### Phono Drawer Slides

**STANDARD DRAWER SLIDES.** For deluxe installation of record changers in cabinets. Carefully designed, and constructed of heavy steel for long trouble-free service. Slides are 15" long with a normal travel extension of 11". Will firmly support phonograph assemblies up to a maximum weight of 50 pounds. Slide brackets have slotted holes to permit leveling slide after installation. High-quality ball-bearing action for smooth, easy operation. With rubber bumpers to reduce impact if drawer is carelessly handled. Drawer assembly removable by simply lifting front end after drawer is extended. Shpg. wt., 4 lbs.

86 R 195. NET ..... 2.90

**STANDARD DRAWER SLIDES.** As above, but 13" long. Shpg. wt., 4 lbs.

86 R 194. NET ..... 2.45

**HEAVY-DUTY DRAWER SLIDES.** Slide length, 18". Normal extension, 16". For extra-large changers. Shpg. wt., 5 lbs.

86 R 199. List, \$7.80. NET ..... 4.60

Lowest Prices—Highest Quality—Best Service



## Rek-O-Kut Portable Phonographs

Professional quality full range portable phonographs. In handsome, sturdy cases. Have transcription type turntables; play without "wow." Phono motor, 10 watt amplifier, speaker and enclosure comprise a matched system. Selector for choice of flat response, bass boost or attenuated bass or treble. For standard pressings, LP microgrooves and hi-fi transcriptions, 16" arm with G.E. dual-speed cartridge. Mike input for mixing live music or voice. Amplifier response: Within 1 db, 50-15,000 cps. Distortion: Less than 3% at 10 watts. Single-speaker models have 10" speaker mounted on detachable cover; cover serves as baffle. Twin-speaker (not illustrated) models have 2-10" speakers in separate 2-section carrying case; each half of case serves as baffle. Inputs for mike, radio and crystal phono. Size of single-speaker models: Turntable-amplifier-speaker case, 17x9 1/2x21 1/4". Size of twin-speaker models: Turntable-amplifier case, 17x9 1/2x21 1/4"; 2-section speaker case, 20 1/2x17 1/2x12".

### Rhythmster Models

Has variable speed turntable model CVS-12. Continuously variable from 25-100 rpm on 60 cycle current and 20-85 rpm on 50 cycle current. 12" turntable, 4-pole motor with internal rim drive. For 110-120 v., 50-60 cycles AC.

MODEL RP-43-VM. With one speaker, crystal pickup. Shpg. wt., 43 lbs.  
96 RX 428. NET. 279.95

MODEL RT-43-VM. With two speakers, magnetic pickup. Shpg. wt., 62 lbs.  
96 RX 691. NET. 319.95

### Recitalist Models

Equipped with the LP-743 3-speed turntable. Has fine, constant speed, 4-pole motor, 12" lathe-turned cast-aluminum turntable. Instant change of speeds without stopping turntable or removing disc. Polyphonic selector maintains proper balance between highs and lows at any volume. Can be used as high-quality public address system, or as hi-fi radio system with addition of an AM or FM tuner. Built into sturdy plywood case, covered with rich gray leatherette.

MODEL RT-43-M. Consists of 3-speed transcription turntable, preamplifier with 3 inputs (for high impedance microphone, radio, and phono-pickup), 16" pickup with magnetic cartridge, and dual 10" speakers. For 110-120 volts, 60 cycles AC. Shpg. wt., 62 lbs.  
96 RX 693. NET. 279.95

MODEL RP-43-M. Similar to RT-43-M described above, but with single 10" speaker mounted on detachable cover. Carrying wt., 38 lbs. Shpg. wt., 43 lbs.  
96 RX 429. NET. 239.95

See page 50 for Rek-O-Kut recording equipment. We can supply all Rek-O-Kut units. Write for quotations.



## Famous Rek-O-Kut Professional Quality Turntables

### New L-34 Dual-Speed Turntable

New, low-priced 33 1/3 and 45 rpm turntable. Designed to professional specifications. Ideal for hi-fi as well as commercial radio station use. Noise level 30 db below average recording level for minimum rumble. Quiet, vibration free, constant speed 4-pole induction motor. Idler disengaged in off position. Has precision-ground and hand-lapped shaft which turns on sturdy ball-thrust bearing. Lathe-turned cast aluminum turntable, lab-tested for perfect balance. Rigid pressed steel chassis with attractive gray hammertone finish. Size, 15" wide x 12" deep. Requires 1 1/4" above and 5" clearance below motor board. For operation on 110-120 volts, 60 cycles AC. Shpg. wt., 15 lbs.  
96 RX 686. NET. 49.95

### Model LP-743 3-Speed Turntable

12" professional quality turntable for 78, 45 and 33 1/3 rpm. Widely used in hi-fi music systems in which record collections require all 3 turntable speeds. Noise level is 30 db below average recording level. Laboratory-tested, lathe-turned and balanced cast aluminum turntable. Quiet, vibration-free, constant-speed induction motor. Precision ground and polished turntable shaft turns on ball-thrust bearing. Instantaneous speed change without stopping motor or removing disc. Has spindle adapter for 45 rpm records; spindle spiders not required. Gray hammertone-finish, pressed steel chassis. Size, 12x15", requires clearance of 1 1/4" above and 5" below motor panel. Less motor board. With detailed installation instructions. For operation from 110-120 volts, 60 cycles AC. Shpg. wt., 15 lbs.  
96 RX 148. NET. 59.50

### New Model B-12H 3-Speed Turntable

Professional quality 3-speed turntable. Meets all NARTB standards. Single knob selector, instantly selects speeds of 33 1/3, 45, or 78 rpm. Self-lubricating hysteresis motor. Internal rim drive through special neoprene idler. 45 rpm hub adapter built into turntable center—disappears into table when not in use. Cross-ribbed cast aluminum turntable, lathe turned and balanced. Turntable shaft of hardened and polished and hand-lapped to the bearing well for perfect fit. Noise level is 50 db below average recording level. Requires rectangular cutout 13 1/4x14 1/4" with clearance of 1" above and 6 1/2" below motor board for mounting. With special Corprene table mat to afford maximum record traction. For operation from 110-120 volts, 60 cycles AC. Shpg. wt., 17 lbs.  
96 RX 687. NET. 119.95

NEW MODEL B-12. As above, but with newly designed 4-pole induction motor. Noise level 40 db below average recording level. Shpg. wt., 17 lbs.  
96 RX 688. NET. 69.95

### Model G-2 Deluxe Turntable

16" transcription turntable for 33 1/3 and 78 rpm, 45 rpm with idler listed below. Rim-drive from synchronous hysteresis motor. Noise level 50 db below average recording level. Rises from zero to 78 rpm in 1/4 of a turn. From zero to 33 1/3 rpm in 1/4 turn. Meets NAB standard for speed variation and "wow" content. With Mastermatic speed shift. Size, length 16", width 20", 2 1/2" above, 6 1/2" below motor board. 15 3/4" turntable for 1/8" record overlap to permit cueing from rim of the disc. For 115 v., 60 cycles. Shpg. wt., 26 lbs.  
96 RX 689. NET. 179.95

G-2 STANDARD. As above, but equipped with 4-pole constant speed motor and manual shift. Shpg. wt., 26 lbs.  
96 RX 162. NET. 137.50

45 RPM IDLER. Model G-103A Idler for use with above models. Shpg. wt., 4 oz.  
96 R 113. NET. 8.00

### Model B-16H Turntable

3-speed 16" turntable for broadcast and recording studio use. Noise level is 50 db below average recording level. Hysteresis synchronous motor. Meets NARTB standards for low speed variation and "wow" content. Starting: From standing start— to 33 1/3 or 45 rpm in 1/4 turn; to 78 rpm in 1/4 turn. Has 45 rpm adapter built in hub of turntable. Turntable dia., 15 3/4". Self-locking speed shift. Size, 20x18 1/4"; 1 1/2" above and 6 1/2" below motor panel. For 110-120 v., 60 cycle AC. 30 lbs.  
96 RX 459. NET. 250.00

### Variable Speed Turntables

CVS-12. 12" cast aluminum turntable, adjustable from 25-100 rpm. Employs constant speed, 4-pole motor with internal rim drive. Size, 16x12"; requires 1 1/4" above and 5" below motor panel. For 110-120 volts, 60 cycles AC. Shpg. wt., 16 lbs.  
96 RX 308. NET. 84.95

MODELS P-43-VC & P-43-VM. Continuously variable speed units with 4:1 ratio. Will play without "wow" at speeds from 25 rpm to 100 rpm. Lever-action adjusts speed, which remains constant for play-back or continuous operation. Ideal for use in teaching code, typing, etc. Constant-speed, 4-pole motor with internal rim drive. 12" cast aluminum turntable. Have 16" pickups. Model P-43-VC has dual sapphire stylus crystal cartridge. Model P-43-VM has G. E. RPX-050 hi-fi cartridge with two sapphire styli; requires preamplifier (see pages 21 and 36). Noise level: 30 db below average recording level. Case size (closed), 16 1/2x16 1/2x8 1/2". For operation from 110-120 volts, 60 cycles AC. Shpg. wt., 19 lbs.

MODEL P-43-VC. 96 RX 307. NET. 124.95

MODEL P-43-VM. 96 RX 426. NET. 129.95



RC80



RC90



Stylus Pressure Gauge



Model T

**Famous Garrard Record Changers and 3-Speed Player**

**Model RC80 "Triumph" Changer**

Latest version of an outstanding changer. Precision-built unit plays 33 1/3, 45 and 78 rpm records in all sizes (7", 10" or 12"). Uses automatic spindle (see listing below) for 45 rpm records. Jewel-mounted tone arm. Top-of-base adjustment for needle pressure. Records are gently handled by pusher-type platform. R-C network across AC switch prevents "popping" in speaker when motor stops. Automatically shuts-off after last record is played, regardless of type or size. In "off" position, idler is disengaged—prevents "flats" on idler wheel. Has constant speed 4-pole, shaded-pole motor. Heavily weighted turntable for smooth, flywheel action. Minimum mounting space: 15 1/4" W, 13 1/4" D, 3 1/2" below top of mounting board, 5 3/4" above. Complete with 2 plug-in heads and hardware for all magnetic or crystal cartridges. 6 ft. AC line cord and plug, 4 ft. output cable with phono plug. Less cartridges and preamp (for magnetic cartridges). For 100-130 or 200-250 v., 60 cycles AC. Wt., 18 lbs.

96 RX 724. NET..... 48.51

96 R 723. 45 RPM SPINDLE. For above changers. Wt., 10 oz. NET..... 3.43

**Model RC90 Changer**

Deluxe changer with numerous advanced features. Automatically plays 7", 10" and 12" records at 33 1/3, 45 or 78 rpm. New manual feature for playing records without change cycle. Added magnetic 3-speed compensator for exact rpm adjustment. Ultra-fast change cycle, regardless of speed. New, powerful, 4-pole, shaded pole motor; stops after last record is played. New professional-type finger-lift on arm. Uses special spindle (not supplied) for playing 45 rpm records. Muting switch and network suppress noises and "pop" in speaker during change cycle. In "off" position, idler is disengaged—prevents idler wheel "flats." Heavily weighted turntable for "wow-free" operation. Min. mounting space required: 15 1/2" W, 13 3/4" D, 5 3/4" above and 4" below top of mounting board. With two plug-in heads (magnetic or crystal cartridges), 6 ft. AC line cord and plug, and 4 ft. cable with phono plug. Less cartridges, preamp. For 100-130 or 200-250 v., 60 cycles AC. Wt., 18 lbs.

96 RX 720. NET..... 68.11

**Garrard Model T "Crest" Manual Player**

Manual player with same motor, drive mechanism, turntable, and pickup arm used in the famous RC80. Plays 33 1/3, 45 and 78 rpm records. Special adapter for playing 45 rpm records. Starts when pickup is lifted and shuts off at end of record; R-C network across AC switch prevents "popping" in speaker when motor stops. Knob at rear of pickup for easy adjustment of stylus pressure. Takes same cartridges as RC80. Minimum mounting space: 13 1/2 x 12 3/4; 3 1/4" above and 3 1/2" below top of mounting board. With 2 plug-in heads, 6 ft. AC line cord and plug, and 4 ft. output cable with phono plug. Less cartridges and preamp. For operation from 110-130 or 200-250 v., 60 cycles AC. Shpg. wt., 13 lbs.

96 RX 630. NET..... 31.85

GARRARD STYLUS PRESSURE GAUGE. Accurately measures weight exerted by a stylus upon a record. Can be used with any pickup arm. Moving parts completely sealed for protection. Calibrated with large, easy-to-read markings in one gram intervals to 15 grams. Red and ivory plastic case. Wt., 5 oz.

96 R 504. NET..... 2.45

**Webcor Series 1121 Record Changers**



1121

See inside front cover for new Webcor Hi-Fi Series 1126 and 1127 Diskchangers. Models available for every use, in colors to suit all decorating schemes.

Latest Webcor features. Replace Series 121 Diskchangers. All models jam-proof. Play 7", 10" or 12" records at 33 1/3, 45 or 78 rpm. New "roto-dyne" motor assures accurate turntable speed and speed selection. New balanced pickup for minimum side thrust on needle. Needle set-down clutch mechanism for proper indexing. Pickup comes to rest after last record has been played. In "Off" position, motor spindle is disengaged from idler. 13 3/4 x 12 x 8 1/4". For 105-120 v., 60 cycles AC. Shpg. wt., 14 lbs.

MODEL 1121-1. With turnover ceramic cartridge and osmium-tip styl.

96 RX 771. Burgundy and beige finish.  
96 RX 772. Ebony and beige finish.  
List. \$49.50. NET EACH..... 38.81

MODEL 1121-270. Same as above, but with G.E. RPX triple-play cartridge and 4-pole, shaded-pole motor. Requires preamp.

96 RX 773. Burgundy and beige finish.  
96 RX 774. Ebony and beige finish.  
List. \$51.75. NET EACH..... 40.57

96 RX 776. Ebony and chrome finish.  
List. \$57.00. NET EACH..... 44.69

45 RPM SPINDLE. For Model 1121 changers. Eliminates use of spindlers. 8 oz.

96 R 549. List. \$3.75. NET..... 2.94

**Garrard Phono Accessories**

WOOD BASES. Sturdy, attractive wood bases for table-top use. For Models RC80 and RC90 changers, or Model "T" manual player. Dark mahogany finish. Quality veneers. Shpg. wt., 6 lbs.

For Models RC80 and RC90 changers.  
96 RX 595. NET..... 5.83  
For Model "T" manual player.  
96 RX 631. NET..... 5.14

MOUNTING BOARDS. Sturdy, unfinished wood mounting boards for cabinet installation of Model RC80 or RC90 changers and Model "T" manual player. Size: 18x16". Shpg. wt., 3 lbs.

96 RX 597. For RC80 and RC90 changers.  
96 RX 632. For Model "T" manual player.  
NET EACH..... 2.45

EXTRA PLUG-IN-HEAD. Used as replacement or extra plug-in-head for RC80, RC90 changers and Model "T" manual player. Has professional-type finger-lift for ease of lifting arm. Designed with knock-out for dual-stylus GE cartridges if desired. Will also accommodate turnover crystal cartridges. Standard 1/2" mounting centers. Shpg. wt., 6 oz.

56 R 341. NET EACH..... 1.47

DISC-O-FOAM TURNTABLE MAT. New, foam rubber turntable mat for use on any standard record changer or turntable. Helps reduce turntable rumble by insulating motor from cartridge. Helps suppress feedback by damping mechanical vibrations. Acts as dust-free cover for flock-coated turntables—helps to keep records clean. Protects records during change cycle. Heavy felt backing, metal center hole grommet and adapter for 45 rpm spindles, 1/4" thick x 9/16" diameter. Shpg. wt., 1 lb.

96 R 729. NET..... 2.89

**Webcor Accessories**

METAL BASES. Attractively finished bases for Model 1126 changers. Colors will fit into any decorating motif. Ideal for table top use. Keeps mechanism free from dust. Shpg. wt., 3 lbs.

96 RX 522. Burgundy finish.  
96 RX 523. Russet finish.  
NET EACH..... 6.86

METAL BASES. As above. Attractively finished table-top bases for Model 1121 changers. Shpg. wt., 3 lbs.

96 RX 517. Burgundy finish.  
96 RX 775. Ebony finish.  
NET EACH..... 5.68

MOUNTING BOARDS. For mounting Webcor changers in cabinets and custom installations. Greatly simplifies changer installation. Heavy plywood with cutout and countersunk mounting holes. Size, 16x16 3/4". Shpg. wt., 3 lbs.

96 RX 516. For Series 1126 changers.  
96 RX 515. For Series 1121 changers.  
NET EACH..... 1.96

METAL SPIDERS. Snap into center of 45 rpm records. Permits use of 45 rpm records on players with small spindles. In packages of 10. Shpg. wt., per pkg., 6 oz.

96 R 471. NET PER PKG..... 46c

See Pages 36 to 38 for Magnetic Cartridges and Preamps



920



951  
956



935HF  
936HF

**Popular V-M Automatic Record Changers**

**Model 920 Changer-Player**

Handsomely styled, 100% automatic, 3-speed changer-player with every popular V-M feature—and at an unbeatable low price. Complete, one-piece styling on molded plastic base—ready for immediate use. No installation problems—plugs into any AC outlet and standard amplifier, radio, or TV set equipped with a phono jack. Blends into any furnishing scheme or installation.

Features positive intermix of ten 12" and 10" records of same speed. Setdown selection is fully automatic on all size records—7", 10" and 12". Will also play manually where changer action is not desired. Mechanism is completely jamproof—all moving parts including tone arm can be held at any time without damage to the cycling mechanism. Simple, centralized one-knob control—easily accessible.

Tri-O-Matic spindle protects records—lowers records instead of dropping them to turntable. Siesta switch provides automatic shutoff after last record is played, regardless of size; tone arm comes to rest, motor stops and associated amplifier turns off.

Lightweight, gold-finish, perfectly balanced tone arm equipped with dual-needle turn-over crystal cartridge. Gives faithful sound reproduction with long stylus life. Changer capacity: twelve 10" or ten 12", 33 1/2 or 78 rpm discs; twelve 7", 33 1/2 or 45 rpm discs. Size, 12x10x7 1/4". Supplied with 6 ft. AC cord and plug and 4 ft. shielded phono cable and plug. With complete operating instructions. U.L. Approved. For operation from 105-120 volts, 60 cycles AC. Shpg. wt., 10 lbs.

96 RX 347. NET ..... 29.95

**"HF" Series High-Fidelity Changer Models**

Specifically designed for hi-fi systems. Cast-aluminum, resonance-free pickup easily adjusted for proper needle pressure. Wow and rumble are virtually eliminated by heavy-duty turntable, improved motor mounting and new drive system. Has constant-speed, 4-pole shaded-pole motor. Muting switch silences amplifier during change cycle. Plug-in heads for G.E., Pickering or Clarkstan magnetic cartridges. (Magnetic cartridges require preamp.) Records are lowered gently; not dropped. Will intermix any ten 12" and 10" records of same speed. Plays twelve 10" or ten 12" (33 1/2 or 78 rpm); fourteen 7" (33 1/2 or 45 rpm). 45 rpm records are handled by special spindle (supplied); spidars not required. Pickup comes to rest after last record is played. Also operates manually. Styled in gold and burgundy. With 2 plug-in heads; 1 gold and 1 burgundy. U.L. Approved. For 105-125 v., 60 cycles AC.

MODEL 935HF CHANGER. Size: 13 1/2x13 1/4"; requires 5" clearance above mounting board and 3 1/2" clearance below. Less cartridges. AC cord and output cable. Shpg. wt., 12 1/2 lbs.

96 RX 577. List. \$59.95. NET ..... 38.97

MODEL 936HF CHANGER ON METAL BASE. As above, but with gold-finished metal base. 6 ft. AC cord and 4 ft. output cable with plugs. Size: 13 1/2x13 1/4x8 1/4". Shpg. wt., 18 1/4 lbs.

96 RX 578. List. \$69.95. NET ..... 45.47

**Popular Tri-O-Matic Models**

Play all records—100% automatic operation. Combination "feeler" arm and button automatically adjust the pickup for proper set-down, regardless of record size. Completely jamproof—pickup can be held at any time without damaging mechanism. Pickup comes to rest and motor shuts off after last record is played (on all sizes of records). Play twelve 10" or ten 12" at 33 1/2 and 78 rpm; twelve 7" at 33 1/2 or 45 rpm; 10" and 12" records of same speed can be intermixed. Models 951 and 951GE are less cables and plugs; mounting space: 13 1/4" W x 12" D; 5" above and 3 1/2" below plate. Models 956 and 956GE are complete with streamlined metal mounting bases, complete with protective rubber feet, cables and plugs—ready to use. Size: 956 and 956GE 13 1/4" W x 12" D x 8 3/4" H. For operation from 105-125 volts, 60 cycles AC.

**Without Base**

MODEL 951. Ideal replacement unit for obsolete changers. With turn-over crystal cartridge and dual needles. 11 lbs.

96 RX 361. List. \$46.50. NET ..... 30.22

MODEL 951GE. Same as above, but with GE triple-play cartridge, four-pole motor and muting switch. Requires preamplifier. Shpg. wt., 13 lbs.

96 RX 363. List. \$51.50. NET ..... 33.47

**Complete With Base**

MODEL 956. For table-top use. With turn-over crystal cartridge and dual needles. Shpg. wt., 14 1/4 lbs.

96 RX 362. List. \$49.95. NET ..... 32.66

MODEL 956GE. Same as above, but with GE triple-play reluctance cartridge, four-pole motor and muting switch. Requires preamp. Shpg. wt., 16 1/2 lbs.

96 RX 364. List. \$54.95. NET ..... 35.91

**Accessories for V-M Record Changers**

**METAL BASES.** Attractive, streamlined metal bases with non-mar type rubber cushion feet. In deep maroon finish.

96 RX 574. For Model 935HF changer. 3 1/2x13 1/4x13 1/2". Shpg. wt., 6 lbs. NET ..... 7.25

96 R 008. For Models 951 and 951GE changers. 3 1/2x13 1/4x11 1/4". Wt., 3 lbs. NET ..... 3.75

**MOUNTING BOARDS.** Pre-cut unfinished mounting boards for easy installation of changers in cabinets.

96 RX 579. For Model 935HF changer. Size, 15 7/8x15 7/8". Shpg. wt., 3 lbs. NET ..... 1.79

96 RX 576. For Models 951 and 951GE changers. Size: 15 7/8x15 7/8". Wt., 3 lbs. NET ..... 1.46

**45 RPM SPINDLE.** For playing 45 rpm records with Tri-O-Matic changers without using spindle spacers. Also fits 950 and 955 series. Shpg. wt., 8 oz.

96 R 329. List. \$2.95. NET ..... 1.88

**FIBER SPIDERS.** For use with 45 rpm records. Used with changers or manual players with standard spindles. Wt., 3 oz.

96 R 244. NET PER PKG. OF 12 ..... 25c

**Carrying Cases for Portable Phono Equipment**

Fig. A—Argos PC-2 Carrying Case

Sturdy, attractive carrying case for Garrard and Webcor changers. Constructed of heavy plywood, covered in two-tone brown and tan leatherette. Brass finished steel snap-clasps. Convenient, long-life molded plastic handle. Has large, rubber mounting feet for furniture protection. Maximum clearance above mounting board, 6 5/8", 16 1/2" wide, 14 1/2" deep. Outside case dimensions, 17" W x 9 3/4" H x 15 1/4" deep. Shpg. wt., 16 lbs.

PC-2 FOR GARRARD CHANGERS. As above except mounting board cut out for Garrard Models RC80 and RC90 changers. 93 SX 636. NET ..... 12.56

PC-2 FOR WEBCOR MODEL 1126 CHANGER. As above except mounting board cut out for Webcor Model 1126 changers. 93 SX 637. NET ..... 12.56

Fig. B—Amplifier, Speaker, Phono Case

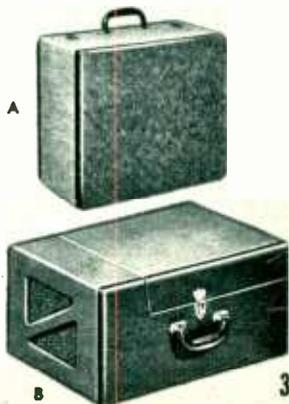
Rugged carrying case designed for an amplifier, speaker and phono motor. In two-tone brown simulated alligator leather. Large, rubber mounting feet. Ventilation provided by 4-vent holes. Blank sloping panel and blank mounting board. For all speakers to 8". Size: 19 1/4x15 1/4x9 5/8". Clearance; 6" above mtg. board, 2" below. Mtg. board, 15x14". Wt., 18 lbs.

93 SX 611. NET ..... 12.95

**RECORD PLAYER CARRYING CASE**

Not illustrated. Sturdy plywood with brown leatherette covering. Steel snap clasps. Leather handle. Blank mounting board—can be cut for any changer. Inside 16 3/4x9 1/2 x13" deep. Depth below board, 5 3/4"; ht. above, 3 3/4". Shpg. wt., 11 lbs.

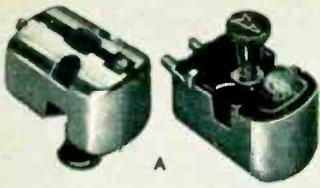
93 SX 605. NET ..... 7.50



# General Electric High-Fidelity Phono Components

## Variable-Reluctance Cartridges with "Baton" Styli

Moderately priced G.E. single-play and triple-play magnetic cartridges are performance-proven in thousands of custom high-fidelity systems. Incorporate every feature vital to full-range, beautifully balanced record reproduction. Frequency response, 30-15,000 cps. "Baton" styli with "double-twist" design and damping blocks virtually eliminate mechanical noise; low mass of stylus assembly reduces record wear to minimum. Output, 10 millivolts. Stylus pressure, 6-8 grams. .001 tips are for microgroove records; .003 tips are for standard 78 rpm records. "S" indicates sapphire tip; "D" indicates diamond tip. Styli easily replaceable. \*\*"Golden Treasure" types: gold-plated case and diamond styli, except RPX-052, which has sapphire and diamond styli. All require preamp (see below). Shpg. wt., 4 oz. **Diamond Styli:** Since diamond styli are extremely resistant to abrasion, they maintain proper tip shape at least 20 times longer than sapphire styli. For long-run economy and maximum protection of precious record grooves—use diamond styli.



**Fig. A—Triple-Play Types**  
Have knob for selecting MG or Std. tip.

No.	Type	Stylus Tips	List	NET
65 R 298	RPX-050	S-.001 S-.003	\$13.95	8.20
65 RC 279	RPX-052*	D-.001 S-.003	38.95	22.90
99 RC 839	RPX-053*	D-.001 D-.003	57.90	34.05

**Fig. B—Single-Play Types**

No.	Type	Stylus Tip	List	NET
65 R 280	RPX-041	S-.001	\$ 9.95	5.85
65 R 293	RPX-040	S-.003	9.95	5.85
99 RC 840	RPX-061*	D-.001	33.95	19.96
99 RC 841	RPX-063*	D-.003	33.95	19.96

**"Baton" Replacement Styli for G.E. Cartridges**  
Famous "Baton" styli. Used in above cartridges; may be used in early G.E. variable reluctance cartridges to improve performance and reduce record wear. Shpg. wt., 2 oz.

### Fig. C—Dual-Tipped Styli

Stock No.	Type	Stylus	Radius
99 R 836	RPJ-007	Sapphire	.001", .0025"
65 R 299	RPJ-010	Sapphire	.001", .003"

List Each, \$5.95. NET EACH ..... 3.50

### Fig. D—Single-Tipped Styli

Stock No.	Type	Stylus	Radius
65 R 281	RPJ-005	Sapphire	.001"
65 R 261	RPJ-006	Sapphire	.0025"
65 R 295	RPJ-001	Sapphire	.003"

List Each, \$3.50. NET EACH ..... 2.06

99 RC 838	RPJ-013	Diamond	.001"
		Sapphire	.003"

List Each, \$31.00. NET EACH ..... 18.23

99 RC 815	RPJ-004	Diamond	.001"
99 RC 817	RPJ-002	Diamond	.0025"
99 RC 816	RPJ-003	Diamond	.003"

List Each, \$27.50. NET EACH ..... 16.17

99 RC 837	RPJ-011	Diamond	.001", .0025"
65 RC 260	RPJ-012	Diamond	.001", .003"

List Each, \$49.95. NET EACH ..... 29.37

**RPX-009 REPLACEMENT PARTS KIT.** For triple-play cartridge. Includes washers, spring and knobs. Shpg. wt., 4 oz.  
65 R 282. NET ..... 28 c

**WHEN TO REPLACE STYLI.** Flat spots on a stylus indicate record-damaging cutting edges; these flat spots can be detected with a stylus inspection microscope. Loss in treble, increased record scratch, and high-frequency distortion also indicate worn styli. Replace worn styli promptly.

### Fig. E—"Baton" High-Fidelity Pickup Arms

**A1-500 12" PICKUP ARM.** Deluxe, precision-balanced arm for up to 12" records. Takes G.E. single- or triple-play cartridges. "Slide-in" design for fast, easy cartridge change. Virtually resonance-free. Ball-bearing lateral and vertical action. Adjustable from 4-14 grams; calibrated scale. Head tilts for convenient stylus inspection. Height adjustable to 2". Length, 10 7/8". Shpg. wt., 1 1/2 lbs.  
99 R 843. NET ..... 31.95

**A1-501 16" PICKUP ARM.** For up to 16" records. Takes G.E. single- or triple-play cartridges. Extremely high tracking accuracy. "Slide-in" design for fast, easy cartridge change. Virtually resonance-free. Ball-bearing lateral and vertical action. Adjustable from 4 to 14 grams; calibrated scale. Head tilts for convenient stylus inspection. Adjustable to 2" high. Length, 14 1/4". Shpg. wt., 2 lbs.  
99 R 844. NET ..... 35.50

### Record Compensator and Preamplifier

**Fig. F. A1-900 RECORD COMPENSATOR.** For G.E. cartridges, above. Compensates for characteristics of disc being played. Five positions: (1) LP; (2) AES; (3) Flat; (4) Good—for early 78 rpm's with noticeable amount of high frequency distortion; (5) Poor—for early 78 rpm shellacs with high noise level. 2 1/2x2x2". With cable and plug. Shpg. wt., 10 oz.  
99 R 842. List, \$14.95. NET ..... 8.79

**Fig. G. UPX-003A PREAMP.** An excellent preamplifier for quick, easy modernization of phono equipment. Permits using G.E. magnetic cartridges with any radio or phono amplifier not having built-in preamp. With 14" shielded cable and plug. 6SC7 tube and selenium rectifier; instructions. 3 1/2x3 3/4x 3 3/4". For 110-120 volts. 60 cycle AC. Shpg. wt., 2 1/4 lbs.  
65 R 278. List, \$17.95. NET ..... 10.55

### Components for Installing G.E. Cartridges in Webcor Changers

Webcor (Webster-Chicago) changers equipped with crystal cartridges can easily be modified to take G.E. high-fidelity magnetic cartridges by using the components listed below. A preamplifier is always required for magnetic cartridges; to assure proper tonal balance from all makes of records, a record compensator is also desirable—the G.E. UPX-003A preamplifier and A1-900 record compensator above, serve as an excellent pair for use with magnetic cartridges.

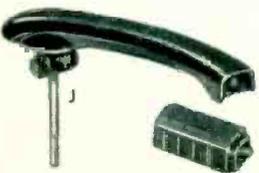
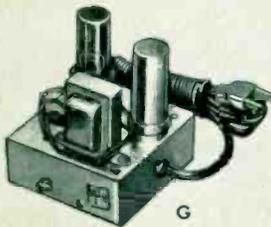
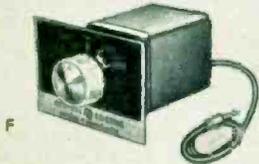
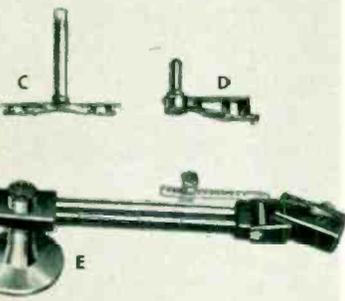
**Fig. H. UPX-009 PICKUP ARM & TRIPLE-PLAY CARTRIDGE.** With G.E. triple-play cartridge. Twist selector knob and it's ready for standard or microgroove records. Replaces crystal cartridge pickup arms on the following Webcor changers: Models 100-1, 101-1, 106-1, 246-1, 256-1, 346-1 and 356-1. With dual-tipped sapphire stylus and instructions. Wt., 3/4 lbs.  
65 R 264. List, \$15.55. NET ..... 9.14

**Fig. J. 22X084-3 PICKUP ARM.** Plastic arm with hinge and pivot shaft. For Webcor Models 114-1, 121-1, 126-1 and 127-1 (use Type 22X084-2 pickup arm below, for all other Webcor changers). Takes Webcor plug-in heads. With installation instructions. Shpg. wt., 8 oz.  
96 R 783. NET ..... 2.64

**Fig. I. UPX-111 TRIPLE-PLAY CARTRIDGE & HEAD.** Consists of G.E. RPX-050 triple-play cartridge (listed above) installed in Webcor plug-in head. Twist of stylus selector knob at top of head turns either end of dual stylus into playing position for std. or MG records. Fits Webcor plug-in type arm. With dual-tipped (.001" and .003") sapphire stylus. Requires preamplifier. Shpg. wt., 8 oz.  
65 R 263. List, \$15.95. NET ..... 9.38

**22X084-2 PICKUP ARM.** As above, but for all other Webcor changers.  
96 R 221. NET ..... 2.64

**Fig. K. PLUG-IN HEADS.** Fit above pickup arms. Lightweight, plastic. For use with G.E. microgroove or standard single-play cartridges or triple-play cartridges. Available in choice of gray or burgundy. Less cartridges. Shpg. wt., 5 oz.  
96 R 470. Type 1900. Gray.  
96 R 469. Type 1900R. Burgundy.  
NET EACH ..... 59 c



# Pickering High-Fidelity Phono Components

## "Dynamic Coupling" Miniature Magnetic Cartridges

Pickering's new "Dynamic Coupling" miniature magnetic cartridges are designed for use in the very finest custom high-fidelity systems. Frequency response extending to the extreme limits of audibility and virtually distortionless output assure an unsurpassed standard of record reproduction. Response, 20-20,000 cps. Exclusive "Dynamic Coupling" provides superior tracking accuracy; reduces intermodulation distortion to an extremely low level and assures faithful reproduction of even loudest passages. High output (30 millivolts) permits operating amplifier at reduced volume control settings; cuts down hum pickup and tube noise. Exceptional compliance and low mass reduce record and stylus wear to a minimum and provide outstanding frequency range and transient response; unusually crisp, clear reproduction throughout the audio range, plus superb reproduction of all percussion instruments. Stylus pressure, 4-8 grams. With brackets for easy mounting in plug-in heads of record changer, or in pickup arm, such as Model 190D listed below. .0027" styli for standard records; .001" styli for microgroove records. Require preamplifier.

**Fig. A—Single-Unit Types**  
Individual "Dynamic Coupling" miniature cartridges. Types for standard records are gold plated; microgroove type is silver plated. Shpg. wt., 4 oz.

No.	Type	Stylus	List	NET
65 R 258	S220	Sapphire .0027"	\$21.00	12.60
99 RC 833	D220	Diamond .0027"	46.00	27.60
99 RC 834	D240	Diamond .001"	62.50	37.50

**Fig. B—Twin-Unit Turnover Types**  
Two "Dynamic Coupling" miniature cartridges mounted "back-to-back." Just flip lever to select proper cartridge for standard or microgroove records. "S" indicates sapphire; "D" indicates diamond. 5 oz.

No.	Type	Styli	List	NET
99 RC 846	260DS	D-.001" S-.0027"	\$80.00	48.00
99 RC 832	260DD	D-.001" D-.0027"	100.00	60.00

**Fig. C—Series 120, 140 and 150 Magnetic Cartridges**

These deluxe-quality magnetic cartridges have for years been acclaimed by discriminating music lovers and professional users. Have "Dynamic Coupling." Response, 20-20,000 cps. 50 millivolt output. With clips for mounting in Garrard plug-in heads (see clips for Webcor mounting, at right, below), or in pickup arm such as 190D below. .0027" styli for standard records; .001" for microgroove. Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Stylus	List	NET EACH
65 R 285	S-120M	Sapphire.0027"	\$16.50	9.90
99 RC 806	D-120M	Diamond.0027"	41.50	24.90
99 RC 807	D-140S	Diamond.001"	60.00	36.00
65 RC 288	S-140S	Sapphire.001"	25.00	15.00
65 R 283	R-150*	Less Stylus	16.50	9.90

\*Response to 10,000 cps. For standard records. Takes Type S-30 stylus, at right.

## Pickup Arm, Record Compensator and Preamplifiers

**Fig. D. NEW 190D PICKUP ARM.** Outstanding design features assure superb record reproduction. Extremely well balanced. Resonance-free. Unusually high tracking accuracy; minimum distortion; minimum record-stylus wear. Safety feature prevents stylus from contacting turntable mat or center pin. Tracking force adjustment. Height adjustment for turntables from 1/2" to 2" high. Levelling screws. Magnetic arm rest. Plug-in cartridge holder. Length, 14 1/2". Shpg. wt., 2 lbs.  
99 RX 830. List, \$52.50. NET. . . . 31.50

**Fig. E. 132E RECORD COMPENSATOR.** Brings out the full beauty of recorded music. Provides rich, properly balanced reproduction by compensating for recording characteristics used by the various record manufacturers. 6 positions: European 78; London 33 and Old LP; Old Capitol and AES; New AES (RIA); Maximum Treble and Bass; Noisy Records. With 20" cable, pin plug, and jack; ready for easy plug-in installation between magnetic cartridge and preamp. For panel mounting. 1 1/4 x 1 7/8 x 3 1/8" deep. Shpg. wt. 1 lb.  
99 R 808. List, \$20.00. NET. . . . 12.00

**Fig. F. 230H PREAMPLIFIER.** Equalized preamplifier; for use with Pickering magnetic cartridges. Excellent companion unit for the 132E Record Compensator described at left, below. Meets most critical specifications for hi-fi music systems and professional applications. Very low intermodulation distortion; only 0.2% at normal output. High-impedance output. Output Level, 2 volts. Less tubes; requires 6AU6, 6C4 and 6X4. Size, 8 1/2 x 4 1/2 x 5 1/4". For 110-120 v., 60 cycle AC. Shpg. wt., 5 lbs.  
99 R 809. List, \$40.00. NET. . . . 24.00

**Fig. G. 410 AUDIO INPUT SYSTEM.** Expertly engineered preamp for centralized control of hi-fi systems. 3 Inputs: 1—any magnetic cartridge; 2—for tuner, TV, tape recorder playback, etc. 3-position record compensator (LP, AES and 78 rpm) and 5-position, step-type bass and treble tone controls provide excellent control of response characteristics. Cathode-follower output stage permits using up to 100-ft. of cable to amplifier. With 4 tubes and rectifier, 3x13 1/2 x 6 1/4". For 110-120 v., 60 cycle AC. Shpg. wt., 7 lbs.  
99 R 831. List, 165.00. NET. . . . 99.00

## Audax High-Fidelity Components

**Fig. I. AUDAX MAGNETIC CARTRIDGES.** Turnover type. One side of cartridge has stylus for microgroove records; other side has stylus for standard records. Response, 20-20,000 cps. Fit Audax No. 12 Arm; require adapters (below) for use in Garrard and Webcor plug-in heads. Types D-L-6 and L-6: For professional and broadcast studio use. Type HI-Q7: Similar to D-L-6, but extra-high output. Type R-2: For home, school, public address use, etc. "S" indicates sapphire stylus; "D" indicates diamond. Wt., 5 oz.

Stock No.	Mfr's Type	Styli	List	NET EACH
65 RC 445	D-L-6	D-.001" S-.003"	\$69.50	40.88
65 RC 476	L-6	S-.001" S-.003"	34.50	20.29
65 RC 479	HI-Q7	D-.001" S-.003"	69.50	40.88
65 RC 475	R-2	S-.001" S-.001"	24.50	14.41

65 R 446. Garrard Adapter. 4 oz.  
65 R 447. Webcor Adapter. 4 oz.  
List Each, \$4.50. NET EACH. . . . 2.65

**REPLACEMENT STYLI.** Shpg. wt., 2 oz.

No.	Stylus	List	NET
65 RC 472	Diamond, .001"	\$35.00	\$20.58
65 RC 473	Diamond, .003"	25.00	14.70
65 R 493	Sapphire, .001"	3.50	2.06
65 R 494	Sapphire, .003"	3.50	2.06

**Fig. H. NO. 12 ARM.** For Audax cartridges. High tracking accuracy minimizes record and stylus wear. Shpg. wt., 2 lbs.  
65 R 495. List, \$23.00. NET. . . . 13.52

**Fig. J. UNIVERSAL ADAPTER.** Adapts Audax No. 12 Arm for use with magnetic cartridges other than Audax. Shpg. wt. 4 oz.  
65 R 441. List, \$8.00. NET. . . . 4.70

**Fig. K. "MICROPOISE" BALANCE.** Provides an extremely accurate method for determining stylus pressure. End of pickup arm is placed on one end of balance arm; weights (supplied) are placed on other end of balance arm. Movement of balance arm indicates if pressure is correct, too high, or too low. Shpg. wt., 6 oz.  
65 R 442. List, \$8.00. NET. . . . 4.70



# Transcription Arms, High-Fidelity Cartridges and Accessories

## Fairchild Products

**Fig. A. 280 12" TRANSCRIPTION ARM.** New professional-type arm for home music systems. Minimum tracking error. Stylus pressure adjustment. For standard cartridges. 3" height range. Gray finish. 6 lbs. 65 R 066. NET.....29.50

**281 16" TRANSCRIPTION ARM.** Same as above arm, but for up to 16" records. Shpg. wt., 6 lbs. 65 R 067. NET.....29.50

**Fig. B. MOVING COIL CARTRIDGES.** High compliance professional types. Moving coil only 1/4" diam. Virtually hum-free. Impedance, 70 ohms. Output, 3 mv; with input transformer (below) 30 mv. 1/2" mtg. ctrs. With diamond stylus. Require preamplifier. Shpg. wt., 4 oz.

Stock No.	Type	Stylus	NET EACH
65 RC 061	215A	.001"	37.50
65 RC 062	215B	.0025"	
65 RC 063	215C	.003"	

**826A INPUT TRANSFORMER.** Provides additional 20 db gain for Fairchild cartridges. Plugs in. With phono jack. 30" cable. Shpg. wt., 1 1/2 lbs. 65 R 064. NET.....8.75

## Fig. C—Ferranti Arm and Cartridges

New, lightweight ribbon pickup for 12" records. Ideal for home music systems. Designed by D. T. Williamson, designer of Williamson amplifier. Excellent tracking characteristics with extremely low mass. Minimum arm resonance. Uses matching transformer for 15 mv. output. Arm uses plug-in Ferranti magnetic cartridges. Cartridge response; ±1 db. 20-20,000 cps. Tracks at 3 grams. Choice of cartridges (see below). Requires preamp.

**FW10 PICKUP ARM WITH MATCHING TRANSFORMER.** Must be used with FW11 or FW125 below. Shpg. wt., 2 lbs. 99 RC 890. NET.....39.45

**FW11 MAGNETIC CARTRIDGE.** For MG. In plug-in head. With .001" diamond stylus. Shpg. wt., 2 oz. 99 RC 891. NET.....37.50

**FW125 MAGNETIC CARTRIDGE.** For std. discs. In plug-in head. With .0025" diamond stylus. Shpg. wt., 2 oz. 99 RC 892. NET.....37.50

**Fig. D—Electro-Voice Ceramic Cartridges** Ultra-linear, wide range ceramic cartridge. Interchangeable with most existing crystal cartridges. Response, ±2.5 db from 20-15,000 cps. Unaffected by heat and humidity. High compliance, 0.5 v. output. No preamp needed. Under 2% distortion. Replaceable stylus. 1/2" mtg. ctrs. 2 oz.

No.	Type	Stylus Supplied	NET
65 R 426	84S	Sapphire, .001"	9.41
65 RC 427	84D	Diamond, .001"	22.64
65 R 428	82S	Sapphire, .003"	9.41

**MODEL 504 ADAPTER.** Reduces output of above cartridges when used with amplifiers having magnetic inputs. Wt., 3 oz. 65 R 429. NET.....3.53

## Fig. E—Gray 108B Pickup Arm

Viscous-damped professional transcription arm for records (33 1/2, 45 and 78 rpm) up to 16" in diameter. Uses liquid suspension principle for adjustable damping and elimination of arm resonances. Arm cannot drop to damage records. Takes magnetic plug-in cartridges. Tracks at 5 gr. Shpg. wt., 2 lbs. 99 RX 850. NET.....56.00

**Fig. F—Stylus Inspection Microscope** Excellent pocket-size stylus inspection microscope from Japan. For visual inspection of stylus tips to detect wear before they become dangerous to prized and expensive records. Approximately 50-power magnification. Metal. Overall size, 3 3/4 x 1/2" diam. Shpg. wt., 8 oz. 65 RC 440. NET.....3.00

## Livingston Transcription Arms

**Fig. G. UNIVERSAL MODEL.** Professional-quality tone arm—for use with any cartridge; plays recordings up to 17". Adjustable stylus pressure, 6 to 30 grams; extra adjustable counterweight for MG cartridges. Precision instrument ball bearings completely enclosed for maximum protection. Excellent tracking characteristics and low arm resonance. Adjustable height for perfect mounting. Length, 14". Gray finish. With hardware, counterweight; less cartridge. Shpg. wt., 2 lbs. 65 R 070. NET.....18.75

**Fig. H. LIVINGSTON BINAURAL PICKUP ARM.** For playback of binaural recordings. May be used for conventional records. For magnetic or crystal cartridges. Less cartridges. Shpg. wt., 2 1/2 lbs. 65 R 072. NET.....35.00

## Fig. I—Cook Binaural Conversion Unit

Clip-on bracket provides an inexpensive method of converting any conventional pickup arm to accept second cartridge necessary for the reproduction of binaural recordings. Bracket accepts all standard recordings. Also tracks regular monaural microgroove recordings. With installation instructions. Shpg. wt., 6 oz. 65 R 098. NET.....5.95

## Clarkston Phono Products

**Fig. J. MODEL 212 16" TRANSCRIPTION ARM.** Professional arm for standard and microgroove records. Plays records up to 17". Takes cartridges below or any 3/4" wide or less. "Quick-change" slide-in cartridge holder with thumbscrew. Spring loaded contacts—no soldering required. Adjustable stylus pressure from 5 grams up. Height adjustable from 1 1/4"-2 3/4" above base plate. Cast aluminum gray wrinkle finish. Shpg. wt., 2 lbs. 65 R 450. NET.....22.05

**Model 212G.** As above. Slotted for G.E. "triple-play" cartridges. Wt., 2 lbs. 65 R 458. NET.....22.05

**Model 213 12" TONE ARM.** Similar to Model 212, but plays records up to 12". Shpg. wt., 2 lbs. 65 R 457. NET.....21.56

**Model 213G.** Same as Model 213, but slotted to accommodate G.E. "triple-play" cartridges. Shpg. wt., 2 lbs. 65 R 459. NET.....21.56

**Fig. K. NEEDLE PRESSURE GAUGE.** Gram scale reads to 28.4. Ounce scale to 4. Shpg. wt., 5 oz. 85 R 029. List, \$2.50. NET.....1.47

**Fig. L STROBOSCOPIC CARD.** Use with any 50 or 60 cycle light for checking all turntable speeds: 33 1/2, 45 and 78 rpm. Diameter, 6". Shpg. wt., 2 oz. 69 R 511. NET.....15c

## Record Accessories

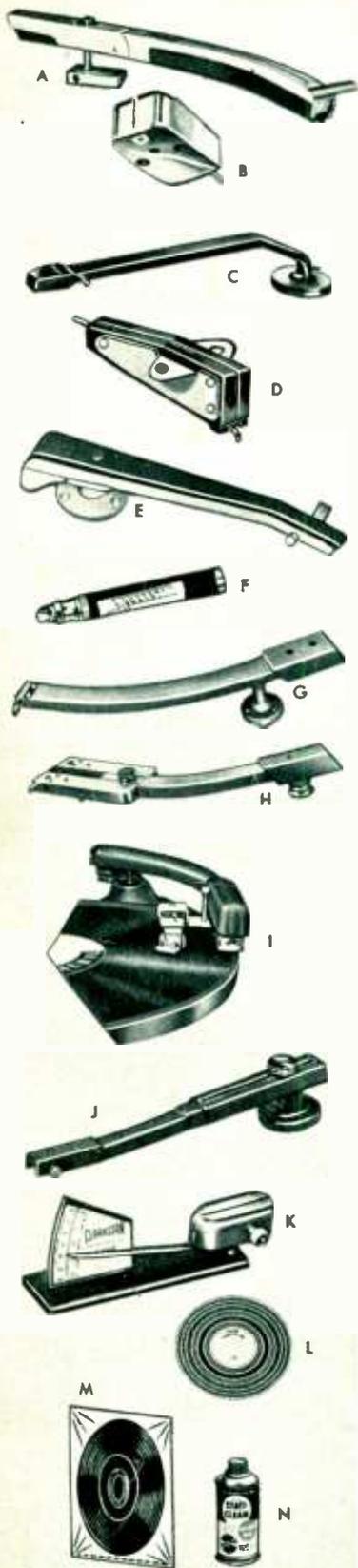
**Fig. M. DISC COVERS.** Protective sleeves for 10" and 12" records. A "must" item for record users. Made of polyethylene plastic. Prevents scratching of delicate record grooves, seals out dust, prevents finger stains. On long-playing records, sleeve fits into original record jacket. Wt., 6 oz. 65 R 515. Pkg. of 15. 10" sleeves. 65 R 516. Pkg. of 12. 12" sleeves. NET 88c

**Fig. N. STATI-CLEAN.** New anti-static record spray. Keeps LP records static free. Cannot collect dust. Restore fidelity lost due to dust particles clinging to record grooves. 6 oz. Aerosol can. Shpg. wt., 7 oz. 65 R 525. NET.....88c

## Audio Cables

**18" CABLE.** (Not illustrated.) For interconnecting hi-fi components. Thin, shielded 2-conductor cable with male pin plugs on each end. Ferrule over shield press fitted. Cannot pull out. Shpg. wt., 2 oz. 99 S 855. NET.....60c

**36" CABLE.** Not illustrated. As above, but 3 feet long. Wt., 3 oz. 99 S 856. NET.....75c





## High-Fidelity Records, Test Records and Turntables

### Cook "Sounds of Our Times" Records

Famous "Sounds of Our Times" high-fidelity records—a must for the hi-fi record collector. 10" monaural microgroove 33 1/2 rpm. No volume compression or expansion. All recording equipment is within 2 db from 20 to 25,000 cycles. Recorded by world-famous artists. A new achievement in faithful, realistic sound.

- 1011. THE STORY OF THE MUSIC BOX.
  - 1024. MEXICAN MUSIC OF TODAY.
  - 1025. KILTS ON PARADE, BAGPIPES.
  - 1026. INSIDE VIENNA. 4-piece ensemble.
  - 1027. FIESTA FLAMENCA. Carlos Montoya.
  - 1028. THE GUITAR. Carlos Montoya.
  - 1030. THE HARP. Soloist Edward Vito.
  - 1032. ZITHER-CIMBALOM. Exotic music.
  - 1035. GREAT BARREL-HOUSE PIANO.
  - 1037. FAMOUS EUROPEAN PIANOS.
  - 1038. PIANO-ROMANTIC FABRIC. S. Sorin
  - 1039. BEETHOVAN-PIANOFORTE. L. Hambro
  - 1041. SPEED THE PARTING GUEST.
  - 1050. PIPE ORGAN IN THE MOSQUE I
  - '051. PIPE ORGAN IN THE MOSQUE II
  - 1052. PIPE ORGAN IN THE MOSQUE III
  - 1053. PIPE ORGAN IN THE MOSQUE IV
  - 1054. ORGAN AT SYMPHONY HALL—Vol. I
  - 1055. ORGAN AT SYMPHONY HALL—Vol. II
  - 1056. THE MORELIA CATHEDRAL ORGAN.
  - 1067. BEETHOVEN SYMPHONY No. 5.
  - 1068. MODERN ORCHESTRAL TEXTURES.
  - 1070. RAIL DYNAMICS. N. Y. Central.
  - 1086. DRUMS OF RODRIGUEZ. Jazz rhythms.
  - 1089. RED CAMP UPRIGHT. Piano. Red Camp.
  - 1092. HUFSTADER SINGERS. Choral.
  - 1181. LIZZY MILES. Queen of Rue Royale.
- Any record above. Shpg. wt., 8 oz.  
65 R 600. Specify record No. EACH **4.00**

- 2064. MASTERPIECES FROM THE THEATER. Carmen. Euryanthe. La Gazza Ladra. et c.
  - 2065. MOZART SYMPHONY NO. 40 IN G MINOR. Willis Page conducting the Orchestral Society of Boston.
  - 2066. MASTERPIECES OF THE DANCE. Dance of Buffoons. Danse Macabre, etc.
- Any record above. Shpg. wt., 8 oz.  
65 R 620. Specify record no. EACH **4.80**
- 1094. SEVEN LAST WORDS. 12" disc. Dubois. Boston Choral and organ. 12 oz.
- 65 R 640. NET **5.95**

### Professional-Quality Phono Turntables

#### Presto 3-Speed Turntable

MODEL T-15. A transcription turntable for professional performance at low cost. Another famous Presto Company product. Operates at 33 1/2, 45 and 78 rpm; handles all records up to 12" in diameter—plus 16" transcriptions.

Features instantaneous speed selection of any one of three speeds without adapters. Precision idler wheel and bearings provide superior speed regulation, with minimum "wow" and flutter. Heavy cast aluminum turntable is accurately machined and dynamically balanced. Turntable shaft is hardened, ground and polished. 4-pole type motor. Rubber pad on turntable prevents record slippage.

When used with a quality pickup, gives performance equal to that of many higher-priced units. Finished in blue Hammer-tone. Turntable diameter, 11 1/4"; overall size, 11 1/4 x 13 1/2". Requires 2 1/2" above and 4" below motorboard. For 110-120 volts. 60 cycles AC. Shpg. wt., 15 lbs.

96 RX 002. NET **53.50**

#### Bogen 3-Speed Turntable

MODEL B50-41C. Excellent manual player of transcription quality. Features variable speeds from 29 to 86 rpm, with notches for 33 1/2 rpm, 45 rpm and 78 rpm. Takes all records up to 16" in diameter.

Turntable is balanced and weighted (3 1/4 pounds), 12" in diameter, covered with molded rubber padding for greater record protection. Motor is 4-pole, heavy-duty type. High starting torque. Special bearings with large oil reservoir. Velocity trip, automatic start and stop. Less than 1% fluctuation over line voltage variations from 95 to 125 volts. Wow is less than 1/2 of 1%. Pickup arm is die-cast metal on ball-bearings, drilled for GE RPX-050 cartridge. Adjustable tracking pressures of 4 to 6 grams for LP and 12 to 39 grams for standard 78 records.

Minimum mounting space required: 15" wide, 1 1/4" deep, 2 1/4" above and 1 1/4" below mounting board. For 110-120 v., 50-60 cycle AC. Shpg. wt., 15 lbs.

96 RX 696. NET **40.40**

### Audiophile High-Fidelity Records

A new series of extremely wide-range, high-fidelity recordings. All records are 12". Microgroove recorded, all are played with an LP stylus. Recorded by well-known artists and groups.

#### 78 RPM MICROGROOVE

- AP-1. DIXIELAND JAZZ. Vol. 1.
- AP-6. DIXIELAND JAZZ. Vol. 2.
- AP-7. CHAMBER MUSIC. Vol. 1.
- AP-8. CHAMBER MUSIC. Vol. 2.
- AP-9. PIPE ORGAN.
- AP-10. EASY LISTENING. Vol. 1.
- AP-11. TRADITIONAL JAZZ. Vol. 1.
- AP-12. TRADITIONAL JAZZ. Vol. 2.
- AP-13. EASY LISTENING. Vol. 2.
- AP-18. TRADITIONAL JAZZ. Vol. 3.

#### 33 1/2 RPM MICROGROOVE

- AP-2. PIPE ORGAN.
  - AP-14. WOODWIND CONCERT.
  - AP-15. WOODWIND MASTERWORKS.
  - AP-16. WOODWIND HIGHLIGHTS.
  - AP-17. WOODWIND ENCORE.
- Any record above. Shpg. wt., 12 oz.  
65 R 671. Specify record No. EACH **5.95**

### Audio Test Record Selection

#### COOK TEST RECORDS

SERIES 10, 78 RPM. For checking frequency response of audio playback equipment. "V" groove permits playing entire record with either .001" or .003" stylus. Accurately calibrated from 35-20,000 cps. 8 oz.

65 R 085. NET **4.00**

SERIES 10-LP. As above, but 33 1/2 rpm.

65 R 086. NET **4.80**

SERIES 20, 78 RPM. Wide-band thermal (white) noise test record. "V" groove.

65 R 087. NET **4.00**

SERIES 50NA. For checking IM distortion in cartridges, amplifiers and speakers. No instruments needed. Simply play record—and listen. If the distortion exceeds 2%, code letter "N" is heard. Under 2%, "A" is heard. 33 1/2 and 78 rpm. Wt., 8 oz.

65 R 096. NET EACH **4.80**

### Livingston Hi-Fi Records

New hi-fi microgroove records by Livingston Electronics, manufacturers of hi-fi audio equipment, under labels of "Livingston" and "Audio Collector." Pressed on the finest high-quality vinyl for long, noise-free playback. 10" discs.

- 1061. VIENNA STRING SYMPHONY.
- 1062. JUST FOR KICKS. By Erskine Butterfield. piano.
- 1081. THE BARBARA CARROLL TRIO.
- 1083. MIGHTIEST LITTLE BAND IN THE LAND. Lenny Herman Orchestra.
- 1093. VOICES FROM VIENNA.

Any record above. Shpg. wt., 8 oz.  
65 R 670. Specify record No.  
NET EACH **4.00**

ALLIED will stock all new Cook, Audiophile and Livingston records as they are released. We also stock binaural records as released. Many of the records listed are available in binaural. Write for latest list and prices.

#### CLARKSTAN TEST RECORDS

STEADY-STATE FREQUENCY RECORDS. Spot frequencies throughout range of 50 to 10,000 cps for checking frequency response of 33 1/2 or 78 rpm playback equipment.

TYPE 2001S-2002S. 12" Vinylite (2 sides). 33 1/2 rpm. One side NARTB, other side flat recording. Shpg. wt., 12 oz.

69 R 223. NET **3.82**

TYPE 2000S. 12" Vinylite (1 side). Recorded at 78 rpm. Flat recording. Shpg. wt., 12 oz.

69 R 230. NET **3.82**

MG AUDIO SWEEP FREQUENCY RECORD 102M. 12" Vinylite (1 side) 33 1/2 rpm. For rapid sweep testing. Used with oscilloscope. Sweeps 70-10,000 cps 20 times/sec. NARTB curve. Wt., 12 oz.

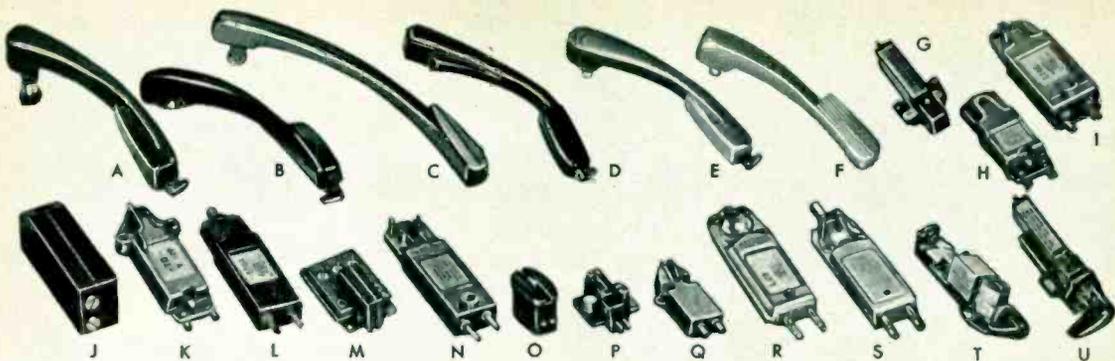
69 R 231. NET **6.47**



Presto T-15



Bogen B50-41C



## A Complete Selection of Astatic Pickups and Replacement Cartridges

### Pickups with Turnover Crystal Cartridges

The pickups listed below employ turnover crystal cartridges. A convenient lever extends from end of pickup; a simple turn of the lever provides quick, positive selection of the proper stylus for standard or microgroove records. All are for records up to 12" in diameter, except Model 400-CAC-D (for records to 16" in diameter).

**Fig. A. MODEL 7D.** Lightweight, curved cast-aluminum arm. Minimum tracking error and balanced groove side-wall pressure. Uses AC-D-1 cartridge for very smooth response. Stylus pressure, 6 grams. With .001" sapphire-tip and .003" osmium-tip styli. Shpg. wt., 1 1/4 lbs.  
65 R 220. List, \$15.90. NET ..... 9.35

**Fig. B. MODEL 8D.** Exact replacement for Webster-Chicago changer arms. With improved dual-needle cartridge. Replaces pickups in W/C Models 246, 255, 256, 262, 264, 346, 355, 356, 357, 362, and 364. With styli. Shpg. wt., 12 oz.  
65 R 221. List, \$11.50. NET ..... 6.76

**Fig. E. MODEL 7-CAC-D.** Well-balanced, cast aluminum arm. Has "Twin CAC" cartridge (described at right) with .001" sapphire and .003" osmium styli. Shpg. wt., 1 1/4 lbs.  
65 R 218. List, \$16.40. NET ..... 9.64

**Fig. C. MODEL 400-CAC-D.** Transcription arm for records up to 16". New base mount assures excellent tracking. Has "Twin CAC" cartridge with replaceable .001" sapphire and .003" osmium styli (described at right, below). Brown finish. Shpg. wt., 1 1/4 lbs.  
65 R 219. List, \$25.50. NET ..... 14.99

**Fig. D. MODEL 9D.** Low-cost replacement pickup for the following V-M record changer models: 950, 951, 955 and 956. Has "Twin CAC" cartridge (described at right, below) with .001" sapphire-tip and .003" osmium-tip styli. Shpg. wt., 1 lb.  
65 R 217. List, \$11.50. NET ..... 6.76

### Other High-Quality Pickups

**Fig. F. MODEL P PICKUPS.** These modern well-designed pickups feature the Type P anti-friction, swivel-base arm. Spring counter-balance. For records up to 12" in diameter. With styli, except \*less styli. Model P-GC employs new ceramic cartridge. Model P-CAC has Type CAC-J crystal cartridge, internally equalized for improved frequency response. See cartridge listings at left, below, for descriptions of cartridges. Av. shpg. wt., 1 lb.

No.	Model	Cart.	List	NET
65 R 550	P-29*	L-29	\$8.00	4.70
65 R 551	P-12*	L-12	6.00	3.53
65 R 552	P-GC	GC-J	10.75	6.32
65 R 553	P-CAC	CAC-J	10.75	6.32
65 R 554	P-LT-4AG	LT-4AG	9.50	5.59

### Turnover Crystal Cartridges

**Fig. S. MODEL LQD-1J.** Stylus pressure: MG, 6 gm., std., 8 gm. Output, 1 v. Response: MG, 50-7,000; std., roll-off at 3,500. With bracket and 2 sapphire styli, 4 oz.  
65 R 236. List, \$9.50. NET ..... 5.59

**Fig. T. "TWIN CAC."** Consists of 2 cartridge-stylus assemblies. Output, .8 v. Response, to 11,000 cps. Stylus pressure, 10 gm. Supplied with .001" sapphire and .003" osmium styli. Shpg. wt., 6 oz.  
65 R 216. List, \$10.50. NET ..... 6.17

**Fig. U. MODEL ACD-2J.** Easily installed. Features smooth response, tiny size and light weight. Stylus pressure, 6 grams. Output, 1 v. Response, 50-60,000. With bracket and 2 sapphire styli. Shpg. wt., 4 oz.  
65 R 240. List, \$10.00. NET ..... 5.88

**MODEL ACD-1J.** Cartridge as above, less turnover mechanism. Shpg. wt., 3 oz.  
65 R 239. List, \$9.50. NET ..... 5.59

**MODEL 14L3-D.** (Not illustrated.) With .001" and .003" osmium-tip styli. Needles easily removed for replacement. Stylus pressure, 10 grams. Response, 50-4000 cps. Output, 2.4 v. Shpg. wt., 3 oz.  
65 R 556. List, \$8.50. NET ..... 5.00

**MODEL 15L3-D.** As above, but employs crystal for 3.5 v. output. Wt., 3 oz.  
65 R 558. List, \$8.50. NET ..... 5.00

### Astatic Crystal Cartridges for Standard Records

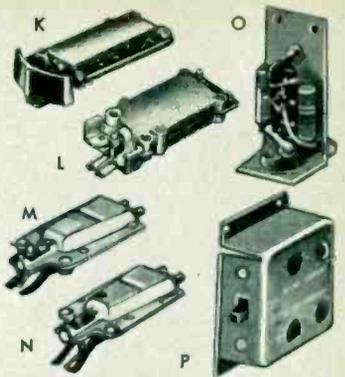
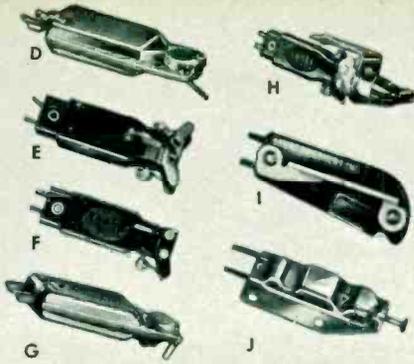
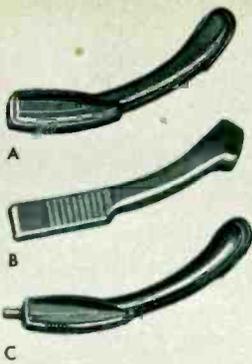
High quality units for all popular record players. GC-78-J and 402-M are temperature- and humidity-proof ceramic types with replaceable styli. 402-M replaces Admiral Part No. A1372. †None indicates no stylus supplied; have screw-type chuck for any standard-shank replaceable stylus. \*For RCA replacement. ‡Universal replacement cartridge; attach condenser harness (supplied) for 1.2 volt output. Average shpg. wt., 3 oz.

Stock No.	Model	Fig.	List Price	NET	Stylus Tip†	Pressure	Output	Range, cps.
65 R 237	AC-78-J	G	\$6.50	3.82	Sapphire	6 gm.	1.0 v.	50-10,000
65 R 156	L-26-A	H	5.00	2.94	None	2 3/4 oz.	1.4 v.	50-4,500
65 R 153	L-40-A	H	5.00	2.94	None	1 1/4 oz.	0.6 v.	50-4,500
65 R 157	M-22	I	5.55	3.26	None	2 3/4 oz.	2.9 v.	50-6,500
65 R 158	B-2	J	5.55	3.26	None	2 3/4 oz.	2.5 v.	50-4,000
65 R 167*	401-A	K	5.00	2.94	None	2 3/4 oz.	1.4 v.	50-4,500
65 R 163	L-70-A	L	5.55	3.26	None	1 1/4 oz.	1.0 v.	50-4,000
65 R 165	L-72-A	L	6.65	3.91	None	1 1/4 oz.	3.5 v.	50-4,000
65 R 231	L-82-A	L	5.55	3.26	None	1 1/2 oz.	3.5 v.	50-5,000
65 R 238	L-92-A	L	6.00	3.53	None	1 oz.	2.25 v.	50-7,000
65 R 149	402-M	M	6.90	4.06	Pr. Metal	12 gm.	0.7 v.	50-10,000
65 R 232	GC-78-J	P	7.40	4.35	Sapphire	12 gm.	0.7 v.	50-10,000
65 R 198	CAC-78-J	Q	7.50	4.41	Sapphire	10 gm.	1.35 v.	30-11,000
65 R 226	L-12	R	5.00	2.94	None	1 oz.	4.0 v.	50-5,000
65 R 227‡	L-12U	R	5.50	3.23	None	1 oz.	4.0 v.	50-5,000

### Astatic Microgroove and Microgroove-Standard Cartridges

All are Rochelle salts crystal type, except \*ceramic type, unaffected by heat and humidity. †MG indicates microgroove records only; .001" stylus tip. "All" indicates both standard and MG records; .002" tip. Fit arms with standard 1/2" mounting

Stock No.	Model	Fig.	List Price	NET	Record	Stylus Tip	Min. Pressure	Output V	Range in cps
65 R 241†	AC-J	G	\$6.50	3.82	MG	Sapphire	5 gm.	1.0	50-10,000
65 R 242	AC-AG-J	G	6.50	3.82	All	Sapphire	6 gm.	1.0	50-10,000
65 R 233	U-J	O	8.90	5.23	MG	Sapphire	5 gm.	0.5	30-10,000
65 R 234*†	GC-J	P	7.40	4.35	MG	Sapphire	6 gm.	0.55	50-10,000
65 R 243*†	GC-AG-J	P	7.40	4.35	All	Sapphire	8 gm.	0.7	50-10,000
65 R 245‡	CAC-J	Q	7.50	4.41	MG	Sapphire	6 gm.	1.0	30-11,000
65 R 246	LT-4AG	N	7.00	4.12	All	Pr. Metal	8 gm.	2.0	50-5,000
65 R 134	CAC-AG-J	Q	7.50	4.41	All	Sapphire	10 gm.	1.35	30-11,000
65 R 229	L-29	R	6.00	3.53	All	None‡	10 gm.	3.0	50-5,000
65 R 555	14L3-AG	N	7.00	4.12	All	Osmium	10 gm.	2.4	50-4,000
65 R 557	15L3-AG	N	7.00	4.12	All	Osmium	10 gm.	3.5	50-5,000
65 R 559	16L3	N	6.00	3.53	All	None‡	16 gm.	4.0	50-5,000



## Shure Pickups and Phono Cartridges

Crystal Pickups for Standard and Microgroove Records

Fig. A. GLIDER MODEL 99DV. Lightweight dual-voltage crystal pickup for standard 78 rpm records. Replaces Models 93A and 96A pickups. Curved and balanced to provide optimum tracking. Furnished with plug-in condenser; output is 2 v. with condenser, and 4 v. without. Employs new Shure W78 cartridge (see below). Response, to 6000 cycles. Needle pressure, 1 1/2 oz. Uses any conventional-shank phono needle. With instructions; less stylus. Shpg. wt., 1 1/2 lbs.

65 R 589. List, \$8.50. NET 5.00

Fig. B. MODEL 92H STANDARD PICKUP. For 78 rpm records. With W42H cartridge. Response, to 5,000 cycles. Supplied less needle (see page 43). Shpg. wt., 9 oz.

65 R 316. List, \$5.50. NET 3.23

Fig. C. MODEL 901D PICKUP WITH TURN-OVER CARTRIDGE. For standard and MG records of up to 12". With Shure W22AB turnover crystal "vertical drive" cartridge; high needle point compliance, low mass. Lightweight, die-cast aluminum arm is curved and balanced to minimize tracking error. With .001" sapphire and .0027" osmium needle. Response, to 10,000 cycles. Pressure, 7 grams. Shpg. wt., 1 lb.

65 R 311. List, \$16.25. NET 9.55

### Shure Replacement Cartridges

High-quality cartridges for all popular record players. \*.001" osmium needle. †All-purpose .002" sapphire needle. ‡.002" osmium needle. \*.001" sapphire and .0027" osmium needle. ††.001" and .0027" osmium needles. All others less needle. W60HS is

"Humi-Seal" type, ideal for tropical areas. All crystal type except WC31AR, WC24, WC24-T and WC36B, which are ceramic (high resistance to heat and humidity). W21F supplied with .453" mount for Oak changers. Av. shpg. wt., 3 oz.

### For Standard Records

Fig. D. MODEL W78. New, dual-voltage, dual-weight cartridge. Replaces W42B, W42BH, W42H, W56A, W57A, W58A and W59A cartridges and over 100 mfrs. types. With plug-in condenser; output with condenser, 2 v.; without, 4 v. Includes accessory weight. Weighs 25 grams with wt.; 12 grams without. Needle pressure, 1 oz. Response, to 6000 cycles. Less stylus.

65 R 590. List, \$5.55. NET 3.26

Fig. G. MODEL W68. New, muted-stylus cartridge. Dual weight. Replaces W60A, W60B and W61B cartridges. With .003" osmium needle. Output, 1.6 v. Response, to 4,500 cycles. Pressure, 1 oz.

65 R 591. List, \$7.50. NET 4.41

Fig. J. MODEL W70. Exact replacement for Webster-Racine CX cartridges. High output. Flange, clip or bracket mtg. For MG and standard. Output, 3.5 v. Response to 5000 cps. Less stylus. Pressure, 16 grams. With pin jacks.

65 R 592. List, \$4.95. NET 2.91

Fig. G. MODEL W56N. Playback-cutter type (with stylus) for most Wilcox-Gay recorders. Pressure, 1 oz. Output, 4.3 v. Response, to 10,000 cyc.

65 R 349. List, \$8.50. NET 5.00

Fig. G. MODEL W60HS. With .0027" osmium stylus. Pressure, 1 oz. Output, 1.8 v. Resp. to 4,500 cyc.

65 R 363. List, \$8.50. NET 5.00

### For Microgroove Records

Stock No.	Model	Fig.	List	NET	Pressure	Output V.	Response to
65 R 331*	W21F	F	7.75	4.56	6 gm.	1.5	10,000 cps
65 R 364*	W53MG	D	8.50	5.00	6 gm.	1.3	8,500 cps
65 R 332*	W31AR	I	6.50	3.82	7 gm.	2.1	7,500 cps
65 R 333*	WC31AR	I	6.50	3.82	7 gm.	.87	7,500 cps

### For Standard and Microgroove—Dual-Stylus Turnover Type

65 R 342**	W22AB	E	9.50	5.59	8 gm.	1.2 & 1.4	10,000 cps
65 R 321	WC24	E	8.75	5.14	8 gm.	.6	8,500 cps
65 R 320††	WC24-T	H	9.25	5.44	8 gm.	.6	7,000 cps
65 R 338††	W22AB-T	H	10.00	5.88	8 gm.	1.2 & 1.4	10,000 cps

### For Standard and Microgroove—Single-Stylus Type

65 R 345†	W26A	F	8.50	5.00	8 gm.	.87 & 1.0	8,000 cps
65 R 346‡	W26B	F	7.50	4.41	8 gm.	.87 & 1.0	8,000 cps
65 R 348‡	W66B	G	7.00	4.12	8 gm.	2.0 & 2.3	4,500 cps
65 R 334‡	W36B	I	6.50	3.82	9 gm.	2.3 & 2.5	7,000 cps
65 R 335‡	WC36B	I	6.50	3.82	9 gm.	.87 & .92	7,000 cps

37 R 041. PHONOGRAPH PICKUP CARTRIDGE REPLACEMENT MANUAL. Lists over 1,500 phono-graphs, radio-phono combinations and radio-TV-phono combinations. In alphabetical order by manufacturer with Shure replacement cartridge number. Send for one with your next order. NO CHARGE.

For complete listing of needles for above cartridges, see page 43.

## RCA Phono Components

### Replacement Cartridges

Fig. K. TYPE 9890 MAGIC TONE CELL CRYSTAL CARTRIDGE. For cartridge replacement in 69 RCA models, including: 60L, 70VS, U8, U9, U10, VA21, 0-50, U-50, QU56C, R60, QU68, R93F, R100, V100, V101, R103S, V105 and Radiola 560P. Has replaceable sapphire-tip stylus. Output, 1 1/2 volts. With hardware and full installation instructions. Shpg. wt., 5 oz.

65 R 269. List, \$7.80. NET 4.59

Fig. L. TYPE 70338-A SILENT SAPPHIRE CARTRIDGE. Crystal cartridge for standard 78 rpm records. For modernization of old RCA and many other radio-phonos. Interchangeable with 70 different crystal cartridges. Has replaceable sapphire-tip needle; "bumpers" protect needle. Minimum needle chatter and surface noise. Output, 1 1/2 volts. With mounting hardware and instructions. Wt., 5 oz.

65 R 270. List, \$7.25. NET 4.26

Fig. M. TYPE 77779 CRYSTAL CARTRIDGE. For cartridge replacement in RCA models: 6T84, 6T86, 6T87, 9T89, A91, and A108. With stylus. Shpg. wt., 5 oz.

65 R 255. List, \$9.20. NET 5.41

Fig. N. TYPE 74067 CRYSTAL CARTRIDGE. For cartridge replacement in RCA models: 9Y, 9JYM, 9EY3, 9EYM3, 9Y7, 9EY35, 9EY36, 9Y51, 9W101, 9W102, 9W103, 9W105, 9TW333, 9TW390, 45J, and 45EY. With stylus. Shpg. wt., 5 oz.

65 R 253. List, \$6.40. NET 3.76

TYPE 75575 CRYSTAL CARTRIDGE. (Not illustrated.) For cartridge replacement in RCA models: 2T81, 6T86 and 9Y510. With stylus. Shpg. wt., 5 oz.

65 R 254. List, \$6.40. NET 3.76

TYPE 38610 CRYSTAL CARTRIDGE. (Not illustrated.) Exact replacement in RCA models: V135, V140, V175, V209, V210, VHR212, and Radiola 566P. Permanent stylus. With leads. Shpg. wt., 4 oz.

65 R 268. List, \$6.15. NET 3.62

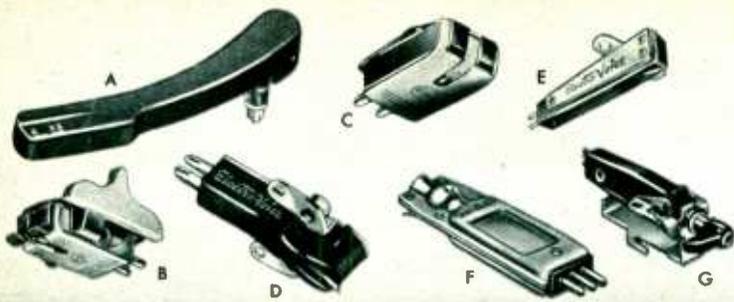
### RCA Phono Switches

Fig. O. TYPE 240X1 RADIO-PHONO SWITCH. For operation of record players through radio receivers without phono inputs. Permits instant change-over from radio to phonograph. Does not introduce hum or affect tone. Neat back-of-cabinet mounting. Supplied complete with 15" length of shielded cable, phono plug, jack and instructions. Shpg. wt., 6 oz.

69 R 505. List, \$2.50. NET 1.47

Fig. P. TYPE 202W1 RECORD PLAYER SELECTOR SWITCH. Simplifies using two record players with one radio or amplifier. Excellent for radio-phono combinations to which an external 45 rpm player has been added. Provides easy change-over from one player to the other. In metal case for convenient back-of-cabinet mounting. Has jack for each record player, cable with plug to fit 3-pin type phono input, and adapter plug to fit standard phono input. Shpg. wt., 6 oz.

69 R 506. List, \$5.65. NET 3.33



### Electro-Voice Pickup Arm and Cartridges

**Fig. A. MODEL 2300 PICKUP ARM.** For std. and MG. Low vertical and lateral friction. Pressure adj. from 5 to 15 gr. Takes all but turn-over cartridges. 7" long. Less cartridge. Shpg. wt., 1/2 lb.  
65 R 325. List, \$5.00. NET.....2.94

**Fig. B. MODEL 16-TT "TWILT" CARTRIDGE.** Crystal. For all records. Twin-tipped (.001" sapphire, .003" osmium) stylus. Tracks at 6 gr. Output, 1 v. 1/2" mtg. ctrs. With stylus and tilt mechanism. Shpg. wt. 4 oz.  
65 R 432. List, \$10.00. NET.....5.88

**MODEL 16.** Same as above, but less "twilt" mechanism.  
65 R 560. List, \$9.00. NET.....5.29

**Fig. C. MODEL 12 CRYSTAL CARTRIDGE.** Replaces 80% of all 78 rpm cartridges. Output, 2 v. Pressure, 5 1/2 gr. 1/2" mtg. ctrs. 1 3/8" mtg. for RCA or W.E. side mtg. With .003" osmium stylus. Shpg. wt., 4 oz.  
65 R 431. List, \$7.50. NET.....4.41

**Fig. C. MODEL 14 CRYSTAL CARTRIDGE.** For microgroove. Wide-range, uniform output. Response, 30 to 10,000 cps. Tracks at 6 grams. Output, 1 v. With .001" osmium stylus. 1/2" mtg. ctrs. Shpg. wt., 3 oz.  
65 R 431. List, \$7.50. NET.....4.41

**MODEL 14-S.** Same as Model 14 above, but has sapphire stylus.  
65 R 562. List, \$8.50. NET.....5.00

**Fig. D. MODEL 44 CERAMIC CARTRIDGE.** For MG. Moisture resistant. Tracks at 6 gr. Output, 0.8 v. 1/2" and 3/4" mtg. ctrs. With .001" osmium stylus. Wt., 3 oz.  
65 R 324. List, \$6.50. NET.....3.82

**MODEL 44-S.** Same as Model 44 above, but has sapphire stylus.  
65 R 563. List, \$7.50. NET.....4.41

**Fig. D. MODEL 34 CRYSTAL CARTRIDGE.** For 45 and 33 1/3 rpm players. Output, 1.2 v. 1/2" and 3/4" mtg. ctrs. With .001" osmium stylus. Shpg. wt., 3 oz.  
65 R 434. List, \$6.50. NET.....3.82

**MODEL 34-S.** Same as Model 34 above, but has sapphire stylus.  
65 R 564. List, \$7.50. NET.....4.41

**Fig. E. MODEL 43 CERAMIC CARTRIDGE.** For microgroove or standard; has all-purpose .002" osmium stylus. Moisture- and heat-resistant. Tracks at 8 grams. Output, .8 and 1 volt. 1/2" mtg. ctrs. Wt., 3 oz.  
65 R 565. List, \$6.50. NET.....3.82

**MODEL 43-S.** Same as Model 43 above, but has sapphire stylus.  
65 R 566. List, \$7.50. NET.....4.41

**Fig. E. MODEL 33 CRYSTAL CARTRIDGE.** With .002" all-purpose osmium stylus. For all records. Response to 10,000 cps. Tracks well. Average output, 1.4 volt. 1/2" mtg. centers. Shpg. wt., 3 oz.  
65 R 433. List, \$6.50. NET.....3.82

**MODEL 33-S.** Same as Model 33 above, but has sapphire stylus.  
65 R 567. List, \$7.50. NET.....4.41

**Fig. F. MODEL 60 DUO-VOLT CARTRIDGE.** Crystal. For standard records. Has terminals for 2 or 4 v. output. Response to 6,000 cps. Uses any .003" standard-shank stylus. 1/2" mounting centers. Aluminum case. Less stylus. Shpg. wt., 3 oz.  
65 R 422. List, \$4.95. NET.....2.91

**Fig. G. MODEL 46-T CERAMIC CARTRIDGE.** Turnover type. Uses ceramic element for moisture and heat protection. Response to 8,000 cps. Output, 0.8 volt, ample for most turnover replacements. With mtg. hdwe., .003" osmium and .001" sapphire styli. Shpg. wt., 3 oz.  
65 R 425. List, \$10.00. NET.....5.88

**MODEL 46.** Same as above, but less turnover mechanism.  
65 R 568. List, \$9.00. NET.....5.29

**Fig. G. MODEL 96-T TURNOVER CARTRIDGE.** Response to 10,000 cps. Output, 1 volt. Minimum needle pressure, 8 grams. With .003" osmium std. and .001" sapphire MG needles. Shpg. wt., 3 oz.  
65 R 424. List, \$10.00. NET.....5.88

**MODEL 96.** Same as above, but less turnover mechanism. For installation in existing turnover mechanism.  
65 R 569. List, \$9.00. NET.....5.29

### Sonotone "Titone" Ceramic Cartridges

Exact replacement ceramic cartridges for many popular extended-range phonographs. Also excellent replacements for crystal cartridges having similar output voltages. Ceramic element offers unusual dependability; unaffected by high temperature and humidity. Very uniform, wide-range output.

**MODEL 7590-2M "PLAYAL" CARTRIDGE.** With .002" truncated-cone osmium stylus. For all standard and microgroove records. Fits most pickup arms. Output, 1.0 volt. Tracking pressure, 9 grams. Has 1/2" mtg. centers. Shpg. wt., 2 oz.  
65 R 535. List, \$7.50. NET.....4.41

**MODEL 9980-S TURNOVER CARTRIDGE.** Only stylus assembly rotates; cartridge remains stationary. With 2 sapphire styli; .001" for microgroove records and .003" for standard records. Stylus and stylus-selection lever easily replaceable without removing cartridge from arm. Output, 1.0 volt. Tracking pressure, 9 grams. 1/2" mtg. centers. Shpg. wt., 2 oz.  
65 R 536. List, \$9.50. NET.....5.59



#### Sonotone Replacement Stylus

**MODEL 7552-2M STYLUS.** .002" truncated-cone replacement stylus for Sonotone Model 7590-2M "Playal" cartridge. Osmium tip. Shpg. wt., 1 oz.  
65 R 537. List, \$1.50. NET.....88c

**MODEL 9987-S TURNOVER STYLUS AND LEVER ASSEMBLY.** Replacement dual-stylus and stylus-selection lever for Model 9980-S turnover cartridge. .001" and .003" sapphire tips. Shpg. wt., 1 oz.  
65 R 538. List, \$3.50. NET.....2.06

**MODEL 9987-SD TURNOVER STYLUS AND LEVER ASSEMBLY.** As above, but has .001" diamond tip and .003" sapphire tip.  
65 RC 539. List, \$28.00. NET.....16.46



### Values in Quality Albums for All Record Sizes

**Fig. H. STANDARD.** Sturdy 12-pocket album. Wine color fabrikooid cover. With index. Opens flat. Shpg. wt., 1 1/4 lbs.  
96 R 850. 10" Size. EACH.....68c  
Lots of 12, EACH.....57c

**Fig. I. 96 RX 851.** 12" Size. EACH.....85c  
Lots of 12, EACH.....71c

**Fig. J. CORK-GRAINED.** Solidly made binder, finished in matching cork-grain material. Stiff back covered with brown swirl cloth; has gold-stamped design. Holds 12 records. Opens flat. Shpg. wt., 2 lbs.  
96 R 852. 10" Size. EACH.....90c  
Lots of 12, EACH.....76c

**96 RX 853.** 12" Size. EACH.....1.06  
Lots of 12, EACH.....90c

**Fig. J. PADDED COVER.** Deluxe album. Luxuriously styled. Covers are padded and bound with durable rich brown swirl design material. Gold stamped back. Holds 12 records. Shpg. wt., 4 lbs.  
96 R 865. 10" Size. EACH.....1.28  
Lots of 12, EACH.....1.13

**96 RX 866.** 12" Size. EACH.....1.49  
Lots of 12, EACH.....1.26

**Fig. K. SPANISH-GRAINED.** Beautiful maroon leatherette cover. Records are held in 12 heavy Kraft-paper envelopes in binder. Gold stamped back. With index. Shpg. wt., 2 lbs.  
96 R 856. 10" Size. EACH.....90c  
Lots of 12, EACH.....76c

**96 RX 857.** 12" Size. EACH.....1.06  
Lots of 12, EACH.....90c

**Fig. L. FOR 7" RECORDS.** Holds 12 records in individual flaps. Covers are bound in attractive simulated leather with gold stamping. With index. Shpg. wt., 1 lb.  
96 R 845. Red.....43c  
96 R 846. Brown. EACH.....43c  
Lots of 12, EACH.....36c

**Fig. M. PEERLESS TYPE LP1.** Holds 6 LP records in their original containers by patented self-sealing adhesive hinge strips. Deluxe padded cover, bound in durable leather-grained fabric. Wood back; gold stamping. Shpg. wt., 3 lbs.  
96 RX 814. Maroon. 12" Size. EACH 2.08  
Lots of 12, EACH.....1.75

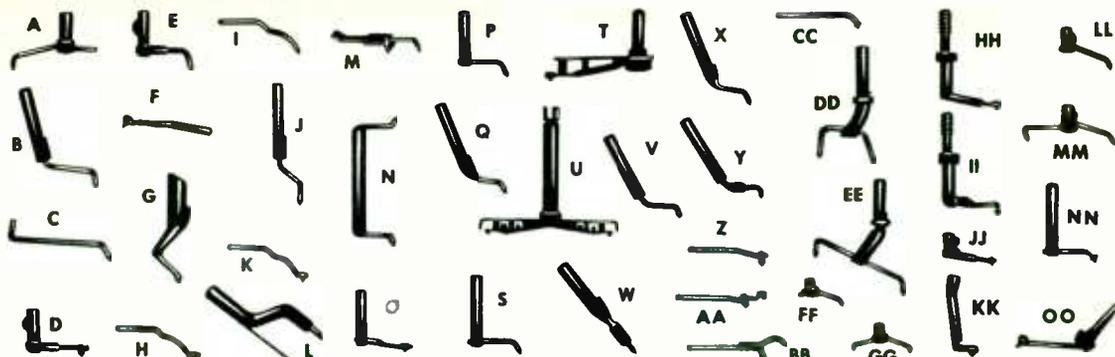
**96 R 818.** Maroon. 10" Size. EACH 1.74  
Lots of 12, EACH.....1.47

#### New EP and LP Storage Boxes

(Not illustrated.) Handsome, low-cost storage boxes. For twelve 7" (EP) or ten 10" or 12" (LP) records in their original jackets. Red, green, lacquered finish; gold-embossed backs. Look like albums. Index. Av. shpg. wt., 1 lb.  
96 R 884. 7" Size. EACH.....83c  
Lots of 12, EACH.....75c

**96 R 885.** 10" Size. EACH.....1.25  
Lots of 12, EACH.....1.11

**96 RX 886.** 12" Size. EACH.....1.66  
Lots of 12, EACH.....1.50



### Jensen Exact Replacement Phonograph Needles

\*Sapphire tip. †Diamond tip. ‡Two diamond tips. \*\*.001" diamond and .003" sapphire tip. All others have osmium tips. †Cutter-

playback needle for Wilcox-Gay recorders. Tip radius: Standard, .003"; microgroove (MG), .001"; all-purpose, .002".

#### For Astatic Cartridges

Stock No.	Type No.	Fig.	For Cartridge Numbers	Tip	EACH
65 R 675	A-70	E	14L3-78M, 15L3-78M, 14L3D, 15L3D	Std.	.88
65 R 676	A-70LP	E	14L3M, 15L3M, 14L3D, 15L3D	All-par.	.88
65 R 677	A-70Z	E	14L3 AG-M, 15L3-AG-M	MG	14.70
65 RC 697	A-73LPD†	B	LT-3D, LT-4, LT-4D	MG	1.47
65 R 757	A-74*	C	GC-7B, J	Std.	1.47
65 R 756	A-74LP*	C	GC-J, GC-1J	MG	1.47
65 R 758	A-74Z*	C	GC-AG-J	All-par.	1.47
65 R 752	A-75*	A	AC-7B, ACD series, 10L3, 11L3	Std.	1.47
65 R 751	A-75LP*	A	AC, ACD series, 10L3, 11L3	MG	1.47
65 RC 696	A-75LPD†	A	AC ACD series, 10L3-11L3	MG	14.70
65 R 753	A-75Z*	A	AC-AG-J	All-par.	1.47
65 R 761	A-78LP*	F	U-J	MG	1.47
65 R 700	A-80	E	QT, LQD, CAC	Std.	.88
65 R 701	A-80LP	E	CQ, CAC, LQD, OT	MG	.88
65 R 703	A-81*	D	QT, LQD, CAC	Std.	1.47
65 R 704	A-81LP*	D	QT, CQ, CAC, LQD	MG	1.47
65 RC 698	A-81LPD†	D	Same as above.	MG	14.70
65 R 760	A-81Z*	D	CQ-AG-J, CAC-AG-J	All-par.	1.47
65 R 763	A-82Z*	G	Nylon I-J	Std.	1.47
65 R 780	A-83	B	LT-3D, LT-4D, LT-4D1, MD	Std.	.88
65 R 754	A-83LP	B	LT-3D, LT-4, LT-4D, LT-4D1	MG	.88
65 R 755	A-83Z	B	LT-4-AG, LT-5-AG	All-par.	.88
65 R 705	A-84	C	GC-7B-M, 40ZM, MG-7B-M	Std.	.88
65 R 759	A-84Z	C	GC-AG-M, MG-AG-M	All-par.	.88
65 R 707	A-86	B	LT-1-M, LT-2-M, LT-3-M	Std.	.88
65 R 708	A-86LP	B	LT-3Z	MG	.88

#### For Shure Cartridges

Stock No.	Type No.	Fig.	For Cartridge Numbers	Tip	NET
65 R 710	JPS-30*	H	P30, P57, P70, P72, P76, P77, P79, P85, P88, P89, P94, PN30, W22A, W23A, W26B, W60A, W66B, Admiral 409A13	Std.	1.47
65 R 709	JP-30	I	Same as above.	Std.	.88
65 R 712	JP-30LP*	H	P73, P72V, P76V, W21F	MG	1.47
65 R 782	JP-32	M	WC33B, WC24, PC5, PC40	Std.	.88
65 R 711	JP-30LP	I	P73, P72V, P76V, W21F	MG	.88
65 RC 699	JP-30LPD†	H	P73, P72V, P76V, W21F	MG	14.70
65 R 774	J15LP	X	W53MG, P93MG, P95MG	MG	.88
65 R 765	JPS-31Z	K	P71, P81, P37, P81AD, W26A, W26B, W66B, Admiral 409A13	All-par.	1.47
65 R 713	JP-312	I	P71, P81, P37, W26B, W66B	All-par.	.88
65 R 775	JP-32LP	M	W31AR, WC31AR, WC24, PC40	All-par.	.88
65 R 776	JP-32Z	M	W36B, WC36B, PC10	All-par.	.88
65 R 783	WC-652†	L	W56N, W56R, W65N	All-par.	1.47

#### For Electro-Voice Cartridges

Stock No.	Type No.	Fig.	For Cartridge Numbers	Tip	NET
65 R 729	E-90*	Z	10, 30, 40, 12, 32, 42, 36, 46, 96	Std.	1.47
65 R 730	E-90LP*	Z	Same as above.	MG	1.47
65 R 731	E-91*	AA	16-TT, 22-TT	Twin	2.06
65 R 732	E-93	BB	16-TT, 22-TT	Twin	1.47
65 R 733	E-95	CC	Same as E-90	Std.	.88
65 R 734	E-95LP	CC	Same as E-90	MG	.88
65 R 735	E-96Z	CC	Series 33, 43, Admiral 409A13-1	All-par.	.88

#### Jensen Conventional-Shank Phono Needles

Fig. PP. "CONCERT" J-10. For standard records. Flexible shank. Durosium tip. Wt., 2 oz. **65 R 659, NET .49c**

Fig. QQ. "CLASSIC" NYLON. High-quality nylon needles with Durosium tips. Made to rigid specifications. Spring-action, high-compliance design. Wt., 2 oz. **TYPE NY-151. For 33 1/2 and 45 rpm microgroove records. 65 R 689, NET .73c**

**TYPE NY-152. .002" all-purpose tip for 33 1/2 and 45 rpm microgroove records and 78 rpm standard records. 65 R 690, NET .73c**

**TYPE NY-153. For standard. 65 R 691, NET .73c**

Fig. QQ. "ROYAL" NYLON. Same as "Classic" nylon needles at left, but have sapphire tips. **TYPE NY-251. For 33 1/2 and 45 rpm microgroove records. 65 R 692, NET .122**

**TYPE NY-252. .002" all-purpose tip for MG and standard. 65 R 693, NET .122**

**TYPE NY-253. For standard. 65 R 694, NET .122**

Fig. RR. **TYPE J-152. Low-cost, all-purpose Durosium tip needle. For MG and standard. 2 oz. 65 R 798, NET .73c**

**TYPE J-15LP. (Not illustrated.) Low-cost, Durosium-tip needle for 33 1/2 and 45 rpm MG. 2 oz. 65 R 695, NET .73c**

#### For Webster-Chicago Cartridges

Stock No.	Type No.	Fig.	For Cartridge Numbers	Tip	EACH
65 R 736	NE-215	DD	21P247, 21P402, 21P403	Twin	1.96
65 R 737	NE-368	EE	Z1P-404	Twin	1.96

#### For General Electric Cartridges

Stock No.	Type No.	Fig.	For Cartridge Numbers	Tip	EACH
65 R 777	G-10*	T	RPX-040, -041, -042, -046, -051, -063	Std.	2.06
65 R 778	G-10LP*	T	RPX-047, -050, -051, -052, -053	Twin	2.06
65 R 779	G-11*	U	RPX-047, -050, -051, -052, -053	Twin	3.50

#### For General Electric Cartridges

Stock No.	Type No.	Fig.	For Cartridge Numbers	Tip	EACH
65 R 715	W-05	N	F-14, F14-1, F14-2, F14-3, F14-4	Twin	1.47
65 R 716	W-14*	O	A-1, A-7, A-8	Std.	1.47
65 R 717	W-15*	O	A-1, thru A-8	MG	1.47
65 R 718	W-16	P	A1M, A1M-1, A5M, A6M, A7M	Std.	.88
65 R 719	W-17	P	A1M, A1M-1, A2M, A5M, A6M, A7M	Std.	.88
65 R 720	W-30	Y	Q-1	Std.	.88
65 R 721	W-41Z	Q	A-9, F-13, Q-3	All-par	.88
65 R 722	W-42	W	C-9	All-par	.88
65 R 678	W-44	P	F-20	Std.	.88
65 R 679	W-44LP	P	F-20	MG	.88
65 R 723	W-49	V	Q-2	Std.	.88
65 R 724	W-72	S	F-16, F-16-1, F-16-2	Std.	.88
65 R 725	W-73	S	F-16, F-16-1, F-16-2	MG	.88
65 R 784	W-81	NN	F-15, F-15-1, F-18, F-19	Std.	.88
65 R 785	W-82	NN	F-15, F-15-1, F-18, F-19	MG	.88
65 R 728	W-15LP	J	F-7, F-7-1, F-7-2, Q-2, F-13	Std.	.88
65 R 709	JP-30	I	F-10, F-11, F-11-1	Std.	.88
65 R 711	JP-30LP	I	F-11, F-11-1	Std.	.88

#### For Magnavox Cartridges

Stock No.	Type No.	Fig.	For Cartridge Numbers	Tip	EACH
65 R 738	M-02	FF	560101	Std.	.88
65 R 739	M-46	GG	560133, 560151	Twin	1.47
65 RC 655	M-46D†	GG	560133	Twin	29.40
65 RC 656	M-46SD**	GG	560133	Twin	17.64

#### For RCA Cartridges

Stock No.	Type No.	Fig.	For Cartridge Numbers	Tip	EACH
65 R 740	M-70*	HH	70338, 70339, 72551	Std.	2.32
65 R 741	M-71	II	Same as above.	Twin	1.18
65 R 858	M-70LP*	HH	74067	MG	1.94
65 RC 657	M-70LPD†	HH	74067	MG	14.70
65 R 743	M-71LP	II	74067	MG	.88
65 R 795	M-74*	OO	75475	Std.	1.47
65 R 796	M-74LP*	OO	75475, 74625, 75575, 76318	Std.	1.47
65 RC 658	M-74LPD†	OO	Same as above.	MG	14.70

#### For Philco Cartridges

Stock No.	Type No.	Fig.	For Cartridge Numbers	Tip	EACH
65 R 744	M-60LP*	JJ	45-1609, 45-1612	MG	.88
65 R 745	PH-10*	KK	Dynamic Reproducer, 76-1622	Std.	1.32
65 R 746	PH-11	LL	45-1609, 45-1612	MG	.88
65 R 747	PH-12	MM	76-4649	Twin	1.47

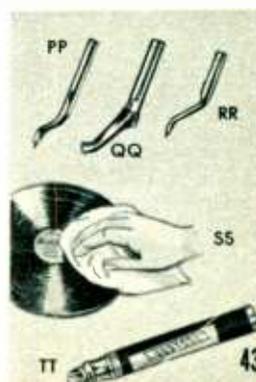
Any of the above needles with sapphire tip can also be supplied with diamond tip. When ordering give type number of needle and specify "diamond tip." Single tip, NET, 14.70; twin tip, NET, 29.40.

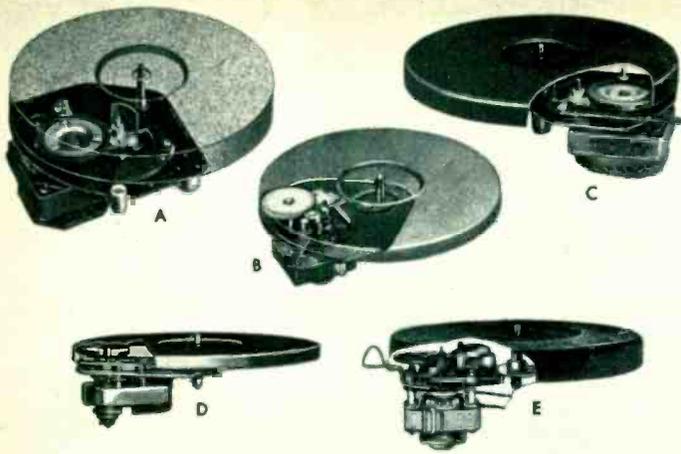
#### Fig. SS—Jensen "Silcloth"

Anti-static record-wiping cloth. Removes, and prevents records from attracting noise-producing lint and grit. Anti-static effect of one wiping lasts through repeated playings. In plastic pouch. Shpg. wt., 4 oz. **65 R 531, NET .73c**

#### Fig. TT—Stylus Microscope

Pocket-size stylus inspection microscope. For checking phono needle tips to detect signs of wear. Approximately 50-power magnification. Has groove for convenient centering of needle in microscope field. Metal barrel. Size, 3 3/4 x 4 1/2" dia. Imported from Japan. Shpg. wt., 8 oz. **65 RC 440, NET .700**





## Phonograph Motors for All Requirements

### General Industries Phonograph Motors

**Fig. A. MODEL D55 3-SPEED DELUXE.** Rim-drive 4-pole motor with 10" turntable. Recommended for high-fidelity systems. Provides an absolute minimum of stray field radiation—ideal for use with all types of pickups. Speeds of 33½, 45 and 78 rpm are accomplished by vertical movement of idler wheel to appropriate diameter of motor shaft for desired speed. Moving shift lever to "Off" position disengages idler wheel from motor shaft. With switch. Features constant speed, precision construction, oil-less motor and turntable bearings, dynamically balanced rotor. Complete with speed indicator dial, 10" turntable, 45 rpm record adapter, off-on switch. Size, less turntable: 6¼" long, 6¾" wide, 4¾" high, 2½" deep (below base plate). For 110-120 volts, 60 cycles, AC. Shpg. wt., 6½ lbs.

85 R 275. List. \$24.50. NET ..... 14.70

**MODEL 55 THREE-SPEED.** Two-pole, three-speed motor. Rim-drive. Idler wheel disengages from motor shaft. Oil-less bearings, dynamically-balanced rotor. Speed changed by simple external lever movement. With 8" turntable, mounting plate, dial, 45 rpm record adapter. Size: 4¾" long, 4¾" wide, 3¾" high, 2½" deep (below base plate). For operation from 110-120 v., 60 cycles, AC. Shpg. wt., 4 lbs.

85 R 276. List. \$10.95. NET ..... 6.57

**Fig. B. MODEL TR 3-SPEED 2-POLE.** Rim-drive 2-pole motor with 9" turntable. Speeds of 33½, 45 and 78 rpm are obtained by means of separate driver running on oil-impregnated bearings and mounted on a turret plate. A simple lever brings the desired driver into contact with the idler wheel. The 2 drivers not in contact with idler wheel remain stationary. Advanced electrical and mechanical design results in minimum stray fields and maximum performance. Ingenious locking device holds turret plate firmly in driving position at any speed. Motor is constant-speed, induction type. Mounting plates, spindle adapter for 45 rpm records and speed indicator dial are included. Size: 3½" long, 2¼" wide, 3¾" high, 2¾" deep (below base plate). For 110-120 volts, 60 cycle AC. Shpg. wt., 4 lbs.

96 R 367. List. \$12.10. NET ..... 7.26

**Fig. C. MODEL DR. 78—33½ RPM.** Rim-drive, dual-speed unit with 10" turntable. Heavy-duty, 4-pole motor with simple and positive speed-shifting mechanism. External push-pull lever changes speed instantly. At slow speed the idler wheel engages small diameter of motor shaft; at higher speed it engages larger diameter. Designed to comply with U.L. requirements. For replacement use or construction of new phonograph units. Operates at uniform speed under widely varying loads. Fan cooling permits installation in partially closed cabinets. Size: 6" long, 5¾" wide, 4¾" high, 2½" deep (below base plate). With turntable and mounting plate. For 110-120 v., 60 cycle AC. Shpg. wt., 6½ lbs.

85 R 241. List. \$21.75. NET ..... 13.05

**MODEL LC. ECONOMY 78 RPM.** Low-priced phono-motor for 78 rpm records. 2-pole, rim-drive motor suitable for portables and table models. Constant speed under varying loads. Furnished with 8" turntable and mounting plate. For 110-120 volts, 60 cycle AC. 3½" long, 2" wide, 3¾" high, 1¾" deep (below base plate). Shpg. wt., 4 lbs.

96 R 368. List. \$6.50. NET ..... 3.90

### Alliance Phonograph Motors

**Fig. D. MODEL MP9 SINGLE SPEED 78 RPM.** For playing all standard-speed 78 rpm records. A friction-drive motor with 9" turntable. Excellent regulation assures uniform speed at all times. Rubber-shock-mounted motor and idler plate virtually eliminate vibration. Forced ventilation by means of fan action maintains cool temperature in any installation. Ideal unit for portable and table model players where size and carrying weight are important factors. Self-starting, dynamically balanced motor handles all records up to 12" size without loss of speed—holds "wow" to minimum. Base plate maintains correct turntable height regardless of mounting board thickness. Depth below base plate, 2¼". For operation from 105-125 volts, 60 cycles AC. Shpg. wt., 3 lbs.

85 R 410. List. \$6.80. NET ..... 4.00

**Fig. E. MODEL JPT8 3-SPEED MOTOR.** For 33½, 45 and 78 rpm records. Combines all speeds in one complete unit. Features quiet operation, freedom from mechanical vibration and compact size. Designed to hold wow and rumble to a minimum. Ideal as replacement unit or for installation in new phonograph equipment where low cost and light weight are required. Friction drive type with 8" turntable. Selector lever engages proper idler for desired speed. Turntable shaft has 1½" spindle adapter for accommodating RCA 45 rpm records with large center hole; removable for records with standard center hole. Dynamically balanced rotor. Motor is rubber-shock-mounted; designed to meet Underwriters' Laboratories requirements. Mounts in cutout hole approximately 4¼x5¼", 2½" deep below base plate. For operation from 105-125 volts, 60 cycles AC. Shpg. wt., 3½ lbs.

85 R 440. List. \$10.95. NET ..... 6.44



### Bell "Cub Corder" Portable Tape Recorder

Versatile, new portable recorder. Excellent for remote broadcast pickups such as "man-on-the-street" interviews, etc. Operates from self-contained batteries. Unique features include microphone with built-in monitor playback level; a miniature transmitter for playback thru any radio without connections to set; wet cell battery that can be recharged by plugging into cigarette lighter outlet of car. 3 speeds: 7½", 3¼", 1¼". Tape: Type "A", 5" reel, maximum size. Less than 1% wow and flutter. Response: 200-6000 cps at 7½" speed. Input: High imp. mike. Tubes: 354, 2—CK512-AX, 1A5G. On-off control on mike. With ceramic microphone, charging cable and battery syringe, batteries, 5" reel of tape and take-up reel. Handsome briefcase-type carrier. Size, 5½x13½x12". Carrying wt., 13 lbs. Shpg. wt., 19 lbs.

96 RX 524. NET ..... 225.00

**WILLARD 4-VOLT WET BATTERY.** Rechargeable. Shpg. wt., 5 lbs.

98 J 021. NET ..... 13.80

**BURGESS XX45 "B" BATTERY.** 1 lb.

80 J 544. NET ..... 2.12



### Record Storage Equipment

#### Lyric Record Carrying Cases

High-quality, very attractive record carrying cases for safe, convenient record storage. Extra-strong, all-metal construction. All have carrying handle, tab index and dividers. Models 43, 44 and 46 have rubber feet and built-in, sponge-rubber cushions. Shpg. wts.: Model 47, 2 lbs.; Model 44, 5 lbs.; Model 43, 6 lbs.; Model 48, 5 lbs.; Model 46, 7 lbs.

No.	Model Records	Color	EA.
96 R 899	47 35 7"	Red	1.93
96 R 897	44 50-7"	Two-tone green	2.94
96 R 894	43 50-10"	Two-tone brown	4.55
96 R 887	48 50-10"	Beige, wood-grain	3.23
96 RX 898	46 35-12"	Two-tone brown	4.90

#### Lyric Record Holder

**DELUXE MODEL.** Holds up to fifty 10" or 12" records. Steel base. Separators covered with soft felt. Records fit securely in place. Each space numbered for quick location of record. Copper-plated end-pieces. Length, 12". With index disc and stickers. 5 lbs.

96 R 835. List. \$3.95. NET ..... 2.58

**BANTAM DELUXE MODEL.** Record holder as above, but for 7" records. Wt., 3½ lbs.

96 R 832. List. \$2.75. NET ..... 1.79

**BANTAM JUNIOR MODEL.** For 7" and children's records. Holds 50 discs. Welded steel wire separators, covered in rich yellow felt. Indexed. Less end-pieces. 3½ lbs.

96 R 833. List. \$2.25. NET ..... 1.47

## Knight Tape Recorder Super-Values

### KNIGHT PUSH-BUTTON RECORDER

automatic keyboard

record . . . playback . . .  
erase . . . fast forward  
and rewind . . . all by  
PUSH BUTTON



### KNIGHT PORTABLE HI-FI TAPE RECORDER & P.A. COMBINATION

includes 8-watt  
Hi-Fi amplifier  
and two built-  
in speakers

Portable  
Accessory  
Speakers



## Amazing Quality and Versatility at Low Cost

Records Simultaneously While Using P.A.

The new Knight combination tape recorder and PA system offers never-before versatility at an astonishingly low price—it's an undisputed value champion! Operates as recorder and PA system, separately or simultaneously. Serves as high-quality recorder for the home, for schools, churches, election campaigns, etc.

**DELUXE FEATURES.** Push-pull 8-watt amplifier and two built-in, high-quality 5x7" oval speakers for tape playback and PA. Separate accessory speakers (listed below) may be used to augment sound coverage for PA use. Three jacks for external speakers or headphones; one jack cuts out built-in speakers. Incorporates simultaneous PA-recording feature to permit recording during PA use. Dual-track, two-speed (3.75 and 7.5 ips) recording mechanism. Ultra-convenient "piano-keyboard" controls for instant selection of fast forward, playback, stop, record and fast rewind. Two Inputs: 1—for recording from mike; 1—for radio, TV, piano, etc. Provision for remote control chairside operation. Two "easy-view" neon-type recording level indicators show "Normal" and "Over-load" recording levels. Large, sweep-hand indicator for easy location of any portion of recorded material.

**SPECIFICATIONS.** Response: At 7.5" speed,  $\pm 3$  db from 65-10,000 cps; at 3.75" speed,  $\pm 3$  db from 75-7500 cps. *Recording Time (1200-ft. reel):* 7.5" speed, one-half hour continuously and one hour overall; 3.75" speed, one hour continuously and two hours overall. *Wow:* Less than 0.5%. *Hum:* -50 db. *Noise:* -58 db.

Beautiful two-tone, luggage-type, fabric-covered case; maroon with gray trim. Tubes: 12AV7, 12AX7, 2-6AQ5; 5Y3GT rect. With crystal mike and 5-ft. cable, 600-ft. reel of type "A" tape and 5" take-up reel. Size, 9 $\frac{1}{2}$ x17 $\frac{1}{2}$ x14 $\frac{1}{4}$ ". For 110-120 volts, 60 cycle AC. Shpg. wt., 32 lbs.  
96 RX 635. NET ..... 129.50

**ACCESSORY SPEAKERS.** Two extended-range 12" speakers in 2-section case; each half serves as separate baffle. With two 25-ft. cables and plugs. Size, 20x9x16". Shpg. wt., 21 lbs.  
96 RX 637. NET ..... 43.00

96 R 638. FOOT-OPERATED REMOTE CONTROL. For Knight recorders. 18-ft. cable and plug. Wt., 3 lbs. NET ..... 9.97

## Our Supreme Value Tape Recorder

Featuring Push-Button Finger-Tip Control

Acclaimed "best buy" by recording fans. Ultra-compact—automatic push-button control—exceptional frequency response—beautiful styling—and all for only \$97.45!

**EASY-TO-USE.** Anyone can use this recorder and get perfect results. It's easy to record, easy to playback. Five "piano-keyboard" push-buttons permit instant selection of fast forward, playback, stop, record, and fast reverse. Other controls: Tone On-Off-Volume, and Speed Selector. Takes up to 7" reels. The 2-speed dual-track recording mechanism provides a wide range of recording times. At 3.75" per second: 7" reel will record continuously for one hour—plus an additional hour on second half of tape width. At 7.5" per second: one-half hour continuously; one hour overall. 7" reel winds in 3 minutes. Two "Easy-View" neon indicators show "Normal" and "Over-load" recording levels. Provision for ultra-convenient chairside remote control.

**SPECIFICATIONS.** Frequency response is flat,  $\pm 3$  db, from 75-8500 cps at 7.5" speed—and 80-6000 cps at 3.75" speed. "Wow" is less than 0.5%. Record "Lock" button prevents accidental erasure. Records from microphone, radio, FM tuner or phonograph (see patch cord listing below). Plays back through built-in amplifier and high-quality, built-in 5x7" oval speaker. Audio output, 2 watts. Output jack for 3.2-ohm PM external speaker or headphones.

Extremely compact and lightweight—carrying weight is only 23 lbs. l housed in attractive two-tone, luggage-type fabric-covered case. Tubes: 6SJ7, 12AX7, 6AQ5; 6X4 rectifier. With crystal microphone and 7-ft. cord, 600 ft. reel of type "A" (inside-coated) tape and 5" take-up reel. Size, 14x12x9". For 110-120 volts, 60 cycles AC, U.L. Approved. Shpg. wt., 29 lbs.  
96 RX 675. NET ..... 97.45

**PATCH CORD.** For recording from radio or phonograph. Has plug on one end and clips on other end. Clips to speaker leads.  
96 R 486. NET ..... 1.95

**CHAIRSIDE CONTROL.** For remote starting and stopping of Knight recorders. Provides chairside control. Three-position switch: Off. Motor (start-stop). B+. Switch prevents recording of motor acceleration or deceleration "wow." 18-ft. cable and plug to fit recorder. 2x3x3". Shpg. wt., 3 lbs.  
96 R 636. NET ..... 6.64



ONLY  
\$99.50

### New Model CT-1 Recorder

A sensational tape recorder value. The new Pentron Model CT-1 offers excellent recording and playback fidelity, ultra-convenient "Monomatic" control, highly dependable performance, and neat, up-to-the-minute styling—at a "trimmed-down" price in easy reach of any recording enthusiast!

Separate, dual-track record-playback and erase heads. Operates at 3.75" and 7.5" per second. "Monomatic" single-knob control for instant selection of recording, playback, fast forward and rewind. **Recording Time:** 7.5" speed, ½ hour continuously and 1 hour overall; 3.75" speed, 1 hour and 2 hours. **Response:** 7.5" speed, 50-8000 cps; 3.75" speed, 50-5000 cps. **Signal-to-Noise Ratio:** 42 db. **Flutter:** Less than 0.5%. **Output:** 3 watts; built-in 4x6" oval PM speaker. Neon bulb recording level indicator. Tone control for adjustment of playback response. Input jack for microphone, or recording directly from radio, TV or phono. Output jack for external PM speaker. Volume control with off-on switch.

Two-tone blue, fabric-covered portable case, 8½x15¼x13¼". With mike, 5" reel of tape and 7" take-up reel. U.I.L. Approved. For 105-125 v., 60 cycle AC. Shpg. wt., 30 lbs.

96 RX 617. List. \$129.50. NET. 99.50  
SINGLE-TRACK MODEL. As above, but with full-width, single-track head.  
96 RX 618. List. \$139.50. NET. 106.50

### Pentron Portable Tape Recorders

#### New Model TR-4 Recorder

New, moderately priced portable recorder. Features famous 9T-3M mechanism, improved record-playback and erase heads, automatic equalization and beautiful styling. Offers 2-speed, dual-track operation. Push-button speed change. **Speeds:** 3.75" and 7.5" per second. **Recording Times:** ½ hour continuously and 1 hour overall, at 7.5" speed; 1 hour and 2 hours at 3.75". **Response:** 50 to 5000 cps, 3.75" speed; to 9500 cps at 7.5". **Flutter:** Less than 0.5%. **Signal-to-Noise Ratio:** 50 db. **Output:** 5 watts. 6" PM speaker. "Editing key" permits adding or deleting while playing. "Magic Eye" level indicator. Two input jacks for mike, radio-TV-phono. Output jacks for external speaker, external amplifier or monitor phones. Two-tone brown case, 10x15x15¼". Supplied with mike, 5" reel of tape and 7" take-up reel. For operation from 105-125 volts, 60 cycle AC. Shpg. wt., 30 lbs.

96 RX 623. List. \$189.50. NET. 139.50

SINGLE-TRACK MODEL. As above, but with full-width, single-track head.

96 RX 624. List. \$199.50. NET. 147.00

#### Model HT-225 3-Speaker Recorder

Advanced-design recorder featuring two 6" speakers and 4" tweeter for improved playback quality. Speakers are built into case. Tweeter is built into removable cover; supplied with 20 ft. of cable for remote placement. Provides wide-angle dispersion. Tweeter handles frequencies above 1000 cps only; has individual volume control.

**Speeds:** 3.75 and 7.5 ips, with automatic equalization, 20-to-1 fast forward and rewind. **Recording Times:** With 7" reel, ¼ hr. continuously, 1 hr. overall—at 7.5" speed; 1 and 2 hours at 3.75". **Response:** At 3.75" 50-5500 cps.; at 7.5", to 8000 cps. **Flutter:** Less than 0.5%. **Signal-to-Noise:** 50 db. **Output:** 5 watts. Dual-track operation.

Push-button speed change. "Magic eye" recording level indicator. Push-button "editing key." Quality crystal mike. Separate record and erase heads. Two input jacks; for mike, radio-phono-TV. Provision for external speaker. In two-tone brown case, 15¼x15x11". With mike, 5" reel tape and 7" takeup reel. For 105-125 volts, 60 cycle AC. Shpg. wt., 35 lbs.

96 RX 620. List. \$225.00. NET. 168.75

#### Accessories for Pentron Recorders

MODEL X-302 REEL EXTENSION KIT. Converts TR-4, HT-225, PMD-1 and PMC recorders, and 9T-3M mechanism for use with 10½" NARTB reels. Shpg. wt., 2 lbs.

96 R 585. NET. 22.50

MODEL FP-5 FOOT PEDAL. For starting and stopping recorder. For TR-4, HT-225, PMD-1 and PMC recorders, and 9T-3M mechanism. 6-ft. cable. 2½ lbs.

96 R 583. NET. 13.13

### Pentron Tape Recording Components for Custom Installation

Fig. A—Model 9T-3M Basic Recording Mechanism

Enjoy the excellent fidelity and unusual versatility of tape recording by adding this mechanism and either the HFP-1 or PRE-7 preamp to your hi-fi system. This carefully engineered mechanism is designed specifically for custom installation. Operates at 3.75" or 7.5" per second. Separate dual-track bias and erase heads, 4-pole, shaded-pole motor assures extremely low hum, flutter and wow. Min. mtg. space: 9½x8x5¼" deep. Takes up to 7" reels. Less take-up reel and tape. For 110-120 v., 60 cycles AC. Shpg. wt., 13 lbs.

96 RX 587. List. \$77.75. NET. 59.75

Fig. B—Model HFP-1 Deluxe Preamp

Deluxe companion unit for 9T-3M. Provides preamplification, record-erase bias, plus necessary audio output to feed audio amplifier in hi-fi system, radio, TV, etc. Features: very wide, clean response; excellent signal-to-noise ratio; equalization switch; illuminated VU meter recording level indicator; highly efficient bias erase oscillator. **Response:** ±3 db, 50-12,000 cps. **Signal-to-noise ratio:** 47 db. **Two Inputs:** 1—mike; 1—radio tuner, TV, crystal or ceramic phono. Mounting space: 9½x4¼x 5½" deep. For 110-120 volts, 60 cycle AC. Shpg. wt., 12 lbs.

96 RX 621. List. \$77.75. NET. 59.75

Fig. C—Model PRE-7 Preamp

Very moderately priced companion unit for 9T-3M. Provides preamplification, record-erase bias, plus necessary audio output to feed amplifier in hi-fi system, radio, TV, etc. **Response:** 7.5" speed, ±3 db from 50-5000 cps; 3.75" speed, ±3 db from 50-5000 cps. **Signal-to-noise ratio:** 40 db. Bias erase oscillator provides very effective erasure of previous recordings. Has "magic eye" recording level indicator. **Two Inputs:** 1—mike; 1—radio tuner, TV, crystal or ceramic phono. Mounting space: 10½x4¼x 6" deep. For 110-120 volts, 60 cycle AC. Shpg. wt., 10 lbs.

96 R 588. List. \$51.75. NET. 39.75

#### Model PMD-1 Basic Recorder

(Not illustrated.) Complete basic recorder in brown portable case. Consists of 9T-3M mechanism and HFP-1 preamp—ready for playback through hi-fi amplifier, radio, TV, etc. With 5" reel of tape and 7" take-up reel. 12½x15¼x10". For 110-120 volts 60 cycle AC. Shpg. wt., 29 lbs.

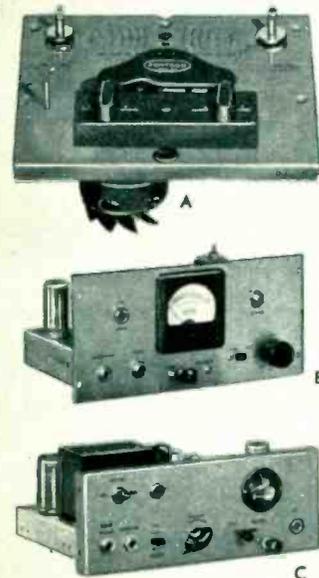
96 RX 622. List. \$174.50. NET. 134.50

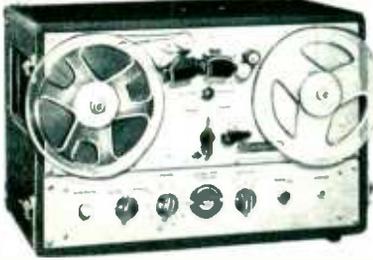
#### Model PMC Basic Recorder

(Not illustrated.) Complete basic recorder in brown portable case. Consists of 9T-3M mechanism and PRE-7 standard preamp—ready for playback through hi-fi amplifier, radio, TV, etc. With 5" reel of tape and 7" take-up reel. 12½x15¼x10". For 110-120 v., 60 cycles AC. Shpg. wt., 27 lbs.

96 RX 589. List. \$148.75. NET. 114.50

For Complete Listings of Tape and Accessories, See Page 49





**New M-30 Portable**

This new version of the famous Magne-cordette tape recorder is one of the finest values ever offered recording enthusiasts. Records with unusual fidelity and incorporates Magne-cord's precision construction—yet it's priced remarkably low!

Operates at 3.75" and 7.5" per second. Has separate, half-track erase and record-playback heads. Built-in preamp-equalizer; ready for playback through high-fidelity system, radio or TV. *Response:* 7.5" speed,  $\pm 2$  db from 50 to 10,000 cps; 3.75" speed,  $\pm 2$  db from 50 to 5,000 cps. *Noise:* -50 db. *Flutter:* Less than 0.3%. *Two Inputs:* 1—high-impedance mike; 1—radio tuner, TV, or crystal phono. Two high impedance outputs; .05 volt and 1 volt, 4 pole shaded motor. "Magic eye" recording level indicator; equalization switch; headphone jack for monitoring during recording or playback. Takes up to 7" reels.

Rugged portable case, 11 $\frac{1}{4}$ "x17 $\frac{1}{4}$ "x13 $\frac{1}{8}$ ". With 7" take-up reel. For 110-120 volts, 60 cycle AC. Shpg. wt., 44 lbs.

**96 RX 613. NET . . . . . 299.00**

**MODEL M-33.** Same as above, but includes ceramic microphone, audio output stage and 6x9" oval speaker. Shpg. wt., 16 lbs.

**96 RX 615. NET . . . . . 329.00**

**10 $\frac{1}{2}$ " ADAPTER KIT.** Quickly adapts above units for use with 10 $\frac{1}{2}$ " reels, 2 lbs.

**96 R 419. NET . . . . . 39.00**



**PT6 Mechanism & Amplifier**

**Fig. A. MODEL PT6-AH TAPE MECHANISM.** Widely acclaimed tape recording mechanism for all professional and home uses. Has separate erase and record-reproduce heads. Recording Speeds: 15" and 7 $\frac{1}{2}$ " per second. Rewind Time: 40 seconds for a 7" (1200 ft.) reel. High-speed forward for easy cueing. *Response:*  $\pm 2$  db, 50-15,000 cps at 15" and 50-7,500 cps at 7 $\frac{1}{2}$ ". *Flutter:* less than 0.3%. 12A17 bias oscillator. Hysteresis synchronous drive motor. Shaded pole rewind motor. Gray hammerloid panel, 7x17". With black leatherette-covered wood case, 18x17x8" deep. For 110-120 volts, 60 cycle AC. Shpg. wt., 46 lbs.

**96 RX 605. NET . . . . . 319.00**

**Fig. B. MODEL PT6-J PORTABLE TAPE AMPLIFIER.** For superb professional results with mechanism described above. Serves as recording and playback amplifier. May also be used as PA amplifier or remote broadcast amplifier. Has 600-ohm, balanced, zero level output and 10 watts audio with 4 and 16 ohm external speaker output. Has low impedance microphone and bridging inputs. Built-in 5" monitor speaker with separate volume control. Also has built-in VU volume indicating level meter. Built in equalizer for 7 $\frac{1}{2}$ " and 15" speeds. With portable case, cables and instructions, 18x14x8" deep. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 32 lbs.

**96 R 253. NET . . . . . 260.00**



**Model M80-AC Recorder**

The M80-AC portable tape recorder is one of the finest instruments ever offered for the recording of sound. Incorporates a multitude of superb features that provide amazing record and playback authenticity, exceptional operating simplicity, plus year-in, year-out dependability. Has full-track heads and operates at 15" and 7.5" per second. Record and playback amplifiers employ direct coupled cascade input stages to assure negligible tube noise and hum.

*Response:* 15",  $\pm 2$  db from 30-15,000 cps; 7.5",  $\pm 4$  db from 30-15,000 cps. *Signal-to-Noise Ratio:* 58 db. *Starting Time:* To full speed in less than 1/10 second. *Stopping Time:* At 15", tape moves less than 2 inches after Stop button is pressed. Has automatic tape lifter; lifts tape from heads during rewind and fast forward. Ultra-convenient, lever-controlled slot-loading mechanism; positions tape for loading, record-playback or editing. Inputs for low-impedance microphone (50 or 250 ohms) and 600-ohm balanced or unbalanced line. VU meter indicates recording level, playback level or bias.

In two cases; 16x20x12" and 6x20x15 $\frac{1}{2}$ ". Supplied with 10 $\frac{1}{2}$ " reel and operating manual. For operation from 110-120 volts, 60 cycles AC. Shpg. wt., 134 lbs.

**96 RX 626. NET . . . . . 1265.00**

**ALLIED stocks all Magne-cord recorders and accessories. Write for literature and specs**

**Ampex Professional Tape Recorders**

**Fig. A—New Model 600 Recorder**

A tremendous advancement in tape recorder design! The new Model 600 offers world famous Ampex precision and fidelity but it's ultra-compact, weighs only 26 pounds, and it's priced extraordinarily low! This easily portable, highly versatile, professional recorder is a first rate choice for broadcast and TV stations, recording studios, conservatories, musicians, and high-fidelity enthusiasts. Designed for playback through any audio amplifier—in hi-fi system, radio, TV, etc.

Separate full-track heads for recording, playback and erase; operates at 7.5" per second; makes full-range, highly authentic recordings. Has separate recording and playback preamps. Takes up to 7 inch reels. *Response:*  $\pm 4$  db from 50-15,000 cps. *Signal-to-Noise Ratio:* 55 db. *Starting Time:* Full speed in less than 1 second. *Stopping Time:* Less than 1 second. *Playback Accuracy:*  $\pm 3.6$  seconds in a 30 minute recording. *Flutter and Wow:* Less than 0.25%.

*Two Inputs:* 1—for high impedance mike; 1—for broadcast line, radio, TV, phono, etc. Separate amplifiers and gain controls for each input permit mixing. *Output:* High-impedance for hi-fi amplifier, radio, TV, etc. Professional recording level meter; jack for headphone monitoring. Handsome portable case, 8x13 $\frac{1}{4}$ "x16 $\frac{1}{2}$ ". With 7" take up reel and operating manual. For 110-120 volts, 60 cycle AC. Shpg. wt., 31 lbs.

**96 RX 770. NET . . . . . 545.00**

**Fig. B—Model 350-P Recorder**

This expert-acclaimed, portable-type professional recorder incorporates the very latest mechanical and electronic refinements. Meets the most critical requirements of broadcast and TV stations, recording studios, educational institutions and hi fi enthusiasts. Separate, full-track record, erase and playback heads. Speeds: 15" and 7.5" per second; 2-speed, hysteresis-synchronous drive motor. Speed easily changed with Motor Speed and Equalization switches. Bridge circuit virtually eliminates inherent tape noise.

*Response:* 15",  $\pm 2$  db from 30-15,000 cps; 7.5",  $\pm 4$  db from 30-15,000 cps. *Signal-to-Noise Ratio:* 60 db. *Starting Time:* Full speed in less than 1/10 second. *Stopping Time:* At 15", tape moves less than 2 inches after pressing Stop button. "Feathertouch" push button controls for Stop, Start, Fast Forward and Rewind. Reel Size Switch provides proper tape tensions for NARTB 10 $\frac{1}{2}$ " reels or RETMA 5" and 7" reels. Takes low-impedance microphone (50 or 250 ohms) or bridges 600-ohm,  $\pm 4$  VU balanced or unbalanced line. Output for 600 ohm  $\pm 4$  VU balanced or unbalanced line or high-impedance input of audio amplifier. Four-inch VU meter for level comparison, monitoring and reading bias and erase current.

In two cases, Sizes, 18x20x15" and 19x21x12". With 10 $\frac{1}{2}$ " reel and detailed operating manual. For 110-120 volts, 60 cycle AC. Shpg. wt., 155 lbs.

**96 RX 765. NET . . . . . 1293.00**



**ALLIED can supply the complete line of Ampex professional tape recorders. Write for prices and literature containing full specifications.**



## Bell Tape Recording Equipment

### Model RT-75 3-Speed Tape Recorder

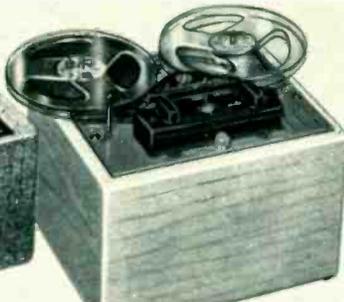
Features new speed control lever for 7.5, 3.75 and 1.875/second. Fast speed provides best fidelity, 50-9000 cps.  $\pm 3$  db. 3.75"/second for general recording usage; at parties, for home movies, etc. 1.875"/second speed for speech recordings. Dual track head permits recording on both halves of tape width. Maximum recording times (for 1200 ft. reel): 1, 2 and 4 hours—at 7.5", 3.750" and 1.875" speeds. Has powerful 6x9" PM speaker; neon bulb recording level indicator; pilot lights to indicate "on" and "record." Tone and volume controls, push button record switch with interlock to prevent accidental erasing; crystal and dynamic mike inputs plus a 3rd for radio, TV or phono. Outputs for: 3.2 ohm external speaker, 500 ohm monitor and high impedance for external amplifier 3.5 watts output. Tubes: 12AT7, 12AX7, 6C4, 6V6GT; 6X5GT rectifier. With mike, 600 feet type A tape and 5" take-up reel. Size: 16 $\frac{1}{2}$ x15x9 $\frac{1}{4}$ ". For 110-120 v., 60 cycles AC. Shpg. wt., 40 lbs.  
96 RX 633. List \$224.95. NET... 146.95

### Model 750 Tape Player Mechanism

New tape player unit for use with any good quality, 78 RPM single-play turntable or record changer with removable spindle. Adapts phonographs and music systems for playing tape recordings. Tape speed is 7.5"/second for response of 50-10,000 cps. Has rapid forward and rewind provisions. Will play any pre-recorded, dual track tape. Takes up to 5" reels. Can be connected directly to the magnetic input of any high-fidelity amplifier. Low-gain amplifiers require Model 2246 preamplifier (below). Supplied with 4 ft. shielded cable and pin plug, 4" reel of pre-recorded tape, 4" take-up reel, adapter spindle and instruction manual. Size: 10x10x4". Shpg. wt., 3 lbs.  
96 R 634..... 29.35

MODEL 375. As above, but 3 $\frac{3}{4}$ "/second.  
96 R 639..... 29.35

MODEL 2246 PREAMP. For using above players with low-gain amplifiers. 3 $\frac{3}{4}$ x3 $\frac{3}{4}$ x3 $\frac{3}{4}$ ". For 110-120 v., 60 cycle AC. 2 lbs.  
96 R 642..... 11.71



## Tape Player Units

### Pentron Model CP-X Tape Player

New, 2-speed tape player. Plugs into phono input jack on any amplifier, radio or TV. Built-in pre-amp delivers 1 volt output. 3' output cord with standard pin plug. Response: at 7.5"/sec., 50-8000 cps  $\pm 3$  db.; at 3.75"/sec., 50-5000 cps  $\pm 3$  db. Fast forward and rewind. -42 db signal to noise ratio. Flutter less than 1/2% at 7.5" speed. Wood case (no lid) attractively covered in blue leatherette. For 110-120 v., 50-60 cycle AC. Size: 6 $\frac{1}{2}$ x13 $\frac{1}{2}$ x11 $\frac{1}{2}$ ". Shpg. wt., 18 lbs.  
96 RX 629. List. \$87.50. NET... 65.50

### Audiosphere "BI-FI" Player

Binaural and monaural tape player. Has twin channel preamplifiers. Delivers .3 volts. Can be used with two conventional amplifiers, a binaural amplifier, or any one or two phono inputs on radios, TV sets, and tuners. Operates at 3.75 or 7.5 inches per second. Selector switch for playing binaural tape, two channel or mixed monaural, as well as dual track monaural tapes. For 110-120 v., 60 cycle AC. Size: 11 $\frac{1}{4}$ x10 $\frac{1}{2}$ x7". Shpg. wt., 22 lbs.  
65 RX 665. Mahogany. NET  
65 RX 666. Blonde. EACH..... 99.50

### Audiosphere Pre-Recorded Tape Library

Monaural and binaural tapes recorded by the 97-piece May Festival orchestra under the direction of Vittorio Gui, except 706 and 707. 7" reels, recorded at 7.5"/second. Shpg. wt., 8 oz.

701. Schubert: <i>Unfinished Symphony</i> ; Sibelius: <i>Finlandia</i> .	
702. Wagner: <i>Tannhauser Overture</i> ; <i>Flying Dutchman Overture</i> .	
703. Mussorgsky: <i>Night on Bald Mt.</i> ; Borodin: <i>Polovetsian Dances</i> ; Sibelius: <i>Valse Triste</i> .	
704. Debussy: <i>Afternoon of a Faun</i> ; Schumann: <i>Manfred Overture</i> ; Glinka: <i>Kamarsinskaya</i> .	
705. Rossini: <i>William Tell Overture</i> ; Brahms: <i>Academic Festival Overture</i> ; Massenet: <i>Under the Linden Trees</i> .	
706. Strauss: <i>Voices from Vienna (Vol. I)</i> .	Prize-winning
707. Strauss: <i>Voices from Vienna (Vol. II)</i> .	Young Viennese Choir.
65 R 660. Monaural tapes.	NET
65 R 661. Binaural tapes. Specify tape No. wanted.	EACH..... 10.00



## Tape Recording Accessories

Fig. A. TAPE CARRYING CASE. Holds twelve 7" reels of tape. Sturdily constructed of wood with simulated leather maroon and gray covering. Has securely fastened carrying handle and protective feet. Measures only 8 $\frac{1}{2}$ x8 $\frac{1}{2}$ x8 $\frac{1}{4}$ ". Shpg. wt., 3 $\frac{1}{4}$  lbs.  
96 RX 580. List. \$7.95. NET..... 5.95

Fig. B. TRIPLET 327-TC 3" VU METER. Helps visually determine the correct recording level when using portable tape recorders. Minimizes distortion, when due to incorrect levels, for more professional results. Extremely compact—only 3x3x1 $\frac{1}{8}$ " deep. In sturdy black bakelite case with 18" cord, plug and jack. Wt., 2 lbs.  
66 F 077. NET..... 18.62

Fig. C. JIFFY RECORDING TAPE SPLICER. For holding recording tape in alignment for cutting and splicing. Shpg. wt., 5 oz.  
96 R 379. NET..... 1.50

Fig. D. SHURE 815 TAPE RECORDING HEAD. Record-playback-erase. Upper track recording. Low impedance coil. Replaces Shure TR5 and TR5H. Shpg. wt., 4 oz.  
65 R 366. List. \$13.50. NET..... 7.94

SHURE TR5B TAPE RECORDING HEAD. Same as Model 815 except with Cinch plug attached and 14-inch insulated leads. Replaces Shure TR5D. Wt., 10 oz.  
65 R 586. List. \$15.00. NET..... 8.82

SHURE TR5K TAPE RECORDING HEAD. Record-playback-erase. Upper track recording. High impedance coil. Cinch plug. Wt., 8 oz.  
65 R 587. List. \$14.50. NET..... 8.53

Fig. E. SHURE 816 TAPE RECORDING HEAD. Record-playback. Upper track recording. High impedance coil. Replaces Shure model TR6C. Shpg. wt., 4 oz.  
65 R 588. List. \$10.50. NET..... 6.17

Fig. F. CANNON RECORDER CONNECTOR. For connecting recorders (disc, tape or wire) to Bell Telephone "beep" warning signal device for legal recording of telephone conversations. Female; 7 contacts; 1/2" cable clamp. Shpg. wt., 4 oz.  
40 H 725. Type SK-M7-21-C. NET 2.78

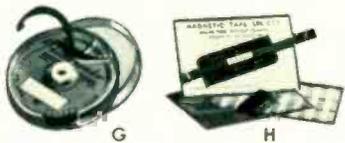


Fig. G. COUSINO U-300 TAPE VENDOR. Repeater for playing tape-recorded messages continuously. Fits standard recorders. No rewinding. Plays 15 min. at 3 $\frac{3}{4}$ " per sec. Complete with tape. Clockwise rotation. 1 $\frac{1}{2}$  lbs.  
96 R 717. List. \$18.50. NET..... 14.80

96 R 714. As above. Counter-clockwise rotation. NET..... 14.80

Fig. H. TAPE SPLICER KIT. Adhesive backing for attaching to recorder. With plastic splicer, blade, splicing tape. 6 oz.  
96 R 718. List. \$1.50. NET..... 1.20

SPICING TAPE REFILLS. 24 pre-cut pieces for above. 2 oz.  
96 R 719. NET..... 20c



**Fig. A—Plastic Base Recording Tape**  
Minnesota Mining and Mfg. Co. 1/4" plastic base tape. For low noise level and uniform output. Red oxide base. Supplied on plastic reel, except 96 R 313, aluminum NAB reel, and 96 R 303, hub only. \*Type 111A† on professional reel with 2 1/4" hub (Fig. B). "A" types have coating in; "B" types, out. Av. shgp. wt., 8 oz.

TYPE 111A				
Stock No.	Reel Size	List Each	1-11 Each	12 or More, Ea.
96 R 227	3"	\$1.00	.67	.60
96 R 343	4"	1.75	1.17	1.05
96 R 226	5"	3.50	2.33	2.10
96 R 192	7"	5.50	3.67	3.30
96 R 327	7**	6.00	4.00	3.60
96 R 303	10 1/2"	10.00	6.67	6.00
96 R 313	10 1/2"	12.85	8.57	7.71

TYPE 111B				
Stock No.	Reel Size	List Each	1-11 Each	12 or More, Ea.
96 R 229	3"	\$1.00	.67	.60
96 R 344	4"	1.75	1.17	1.05
96 R 228	5"	3.50	2.33	2.10
96 R 189	7"	5.50	3.67	3.30

**TYPE 120A HIGH OUTPUT TAPE.** 8 to 12 db higher output. Av. shgp. wt., 12 oz.

Stock No.	Reel Size	List Each	1-11 Each	12 or More, Ea.
96 R 558	7"	\$6.50	4.34	3.90
96 R 556	Hub	12.00	8.00	7.20
96 R 557	10 1/2"	14.85	9.90	8.91

**Fig. A. TYPE 101A PAPER BASE TAPE.** Low-cost, good quality paper base recording tape. Red oxide coating facing in. Wound on plastic reels. Av. shgp. wt., 8 oz.

Stock No.	Reel Size	List Each	1-11 Each	12 or More, Ea.
96 R 224	3"	\$0.75	.50	.45
96 R 339	4"	1.50	1.00	.90
96 R 223	5"	2.25	1.50	1.35
96 R 191	7"	3.50	2.33	2.10

**Empty Plastic Reels**

Non-warping reels. In index box. \*Has 2 1/4" hub. Av. shgp. wt., 4 oz.

Stock No.	Reel Size	List Each	1-11 Each	12 or More, Ea.
96 R 237	3"	\$0.25	17c	15c
96 R 349	4"	.55	37c	33c
96 R 236	5"	.65	44c	39c
96 R 194	7"	.75	50c	45c
96 R 328	7**	1.25	83c	75c

**Fig. C. ONE-REEL MAILING BOXES.** Wt., 3 oz.

Stock No.	Reel Size	List Each	1-11 Each	12 or More, Ea.
96 R 324	5"	15c	10c	9c
96 R 323	7"	20c	13c	12c
96 R 322	10 1/2"	30c	20c	18c

**SCOTCH NO. 43 LEADER AND TIMING TAPE**  
Marked in one second intervals for 3.75", 7.5" and 15" per second speeds. 1/4" x 150 ft. Shgp. wt., 3 oz.  
96 R 348. List. 60c. NET ..... 40c  
**SCOTCH NO. 41 SPLICING TAPE.** Plastic base. 150" long. Shgp. wt., 3 oz.  
96 R 232. NET ..... 35c



**Fig. D—Plastic Base Recording Tape**  
High quality 1/4" recording tape. Excellent response and low noise level. Red oxide coating facing in (type "A") and †NARTB fiberglass. Av. shgp. wt., 8 oz.

Stock No.	Mfr's Type	Reel Size	List Each	NET EACH
96 R 562	151	3"	\$0.85	.50
96 R 561	351	4"	1.60	.94
96 R 560	651	5"	3.50	2.06
96 R 356	1251	7"	5.50	3.23
96 R 357	2551 R	10 1/2**	12.85	7.56
96 R 685	2551 F	10 1/2*†	12.85	7.56

**Fig. D—New Colored Audiotape**  
New colored base recording tape of same high quality as colorless base (above). Ideal for spotting specific selections on one reel; material to be saved, etc. Red oxide coating. Plastic reels. Shgp. wt., 8 oz.

**GREEN PLASTIC TAPE**

Stock No.	Mfr's Type	Reel Size	List Each	NET EACH
96 R 736	651	5"	\$3.50	2.06
96 R 737	1251	7"	5.50	3.23

**BLUE PLASTIC TAPE**

Stock No.	Mfr's Type	Reel Size	List Each	NET EACH
96 R 738	651	5"	3.50	2.06
96 R 739	1251	7"	5.50	3.23

**Fig. D—Audiotape Colored Plastic Reels**

Empty colored plastic tape reels available in green, blue, yellow, and red as well as standard clear plastic. All are available in either 5", 600 ft. capacity; or 7", 1200 ft. capacity. Colored reels can be used to provide a simple and positive means of identification to simplify filing and storage. In boxes. Av. shgp. wt., 4 oz.

Stock No.	Type	Color	Size	List	NET
96 R 740	5PB	Red	5"	\$0.55	.32
96 R 741	7PB	Red	7"	.70	.41
96 R 742	5PB	Yellow	5"	.55	.32
96 R 743	7PB	Yellow	7"	.70	.41
96 R 744	5PB	Green	5"	.55	.32
96 R 745	7PB	Green	7"	.70	.41
96 R 746	5PB	Blue	5"	.55	.32
96 R 747	7PB	Blue	7"	.70	.41
96 R 748	5PB	Clear	5"	.55	.32
96 R 749	7PB	Clear	7"	.70	.41

**Knight Quality Plastic Tape**

This fine plastic-base tape meets even the most critical professional requirements—yet it costs a lot less per reel! Manufactured to rigid specifications to assure exceptionally clean reproduction. Features wide frequency response, low distortion, and uniformity of output. Has 1/4" plastic base with thickness controlled to very close tolerance. First-quality red-oxide coating securely bonded and mirror-polished for exceptionally clear high frequency response and minimum wear on recording head, 1200-ft. reels splice free. Type "A" (inside coated). Transparent plastic reels. Shgp. wts.: 600-ft. reel, 1/2 lb.; 1200-ft. reel, 1 lb.  
96 R 698, 5"-600-ft. reel.  
1 to 4, EACH... 1.37. 5 or More, EACH... 1.24  
96 R 699, 7"-1200-ft. reel.  
1 to 4, EACH... 2.10. 5 or More, EACH... 1.89



**Fig. G—Plastic Base Recording Tape**  
Micropolished 1/4" plastic base tape. High tensile strength plus flexibility assures excellent head contact. Red oxide base with coating facing in (type A). On plastic reel, except types SPN-12P and SPN-24P. \*Professional tape on plastic hub; †professional tape on aluminum reel. Av. wt., 8 oz.

Stock No.	Mfr's Type	Reel Size	List Each	NET EACH
96 R 960	SPN-1	3"	\$1.00	.59
96 R 961	SPN-3	4"	1.75	1.03
96 R 962	SPN-6	5"	3.50	2.06
96 R 963	SPN-12	7"	5.50	3.23
96 R 965	SPN-12P*	7"	6.00	3.53
96 R 966	SPN-24P*	10 1/2**	10.00	5.88
96 R 967	SPN-24P†	10 1/2**	12.85	7.56

**LIFETIME TAPE.** New, mylar base recording tape. Micropolished and unconditionally guaranteed not to break, curl, flake or crack when used under normal conditions of recording and playback. On plastic reels, except type L-24. \*Professional tape on plastic hub; †professional tape on aluminum reel. Bonded coating. Av. wt., 8 oz.

Stock No.	Mfr's Type	Reel Size	List	NET EACH
96 R 968	L-6	5"	\$ 5.25	3.09
96 R 969	L-12	7"	9.75	5.73
96 R 970	L-24*	10 1/2**	16.95	9.97
96 R 971	L-24†	10 1/2**	19.80	11.64

**Fig. H—Reeves Tape Chest**  
Five 1250-ft. (7") reels of plastic base tape in storage chest. Tape has red oxide coating facing in (Type A). Plastic reels. Size: 8x7 1/2x7 1/2". Shgp. wt., 8 lbs.  
96 R 964. List. \$27.50. NET ..... 16.17

**Audiotape Recording Accessories**

**Fig. E. TYPE 30AL IDENTIFICATION LABELS.** Easy-to-apply, self-adhesive labels for quick identification of recorded tape reels. Size: 1/2" wide by 2" long. Shgp. wt., 4 oz.  
96 R 564. Package of 30. NET ..... 17c  
**Fig. F. TYPE 400 HEAD DEMAGNETIZER.** For removing magnetism accumulated in recording head. For 110-115 volts. 60 cycle AC. Shgp. wt., 1 lb.  
96 R 563. List. \$12.00. NET ..... 7.06  
**TYPE 10R 10 1/2" ALUMINUM REEL.** Wt., 8 oz.  
96 R 358. List \$4.00. NET ..... 2.35





**Bell RC-47A Disc Recorder**

Portable recorder; cuts and plays records at 78 and 33 1/3 rpm. Spring supplied to convert 33 1/2 speed to 45 rpm. Cuts discs up to 10" diameter at 160 lines per inch (std. groove). Has magnetic cutting head; Crystal phono pickup (dual styli). Three inputs: Microphone, Radio-Phono, and Direct External Recording. Controls permit recording from microphone and radio-phonos simultaneously. One central control provides for instant selection of all functions. May be used as a public address system. Has visual recording level indicator, and headphone monitoring jack. Supplied with built-in amplifier, 6" PM speaker, Hi-Z crystal microphone with 6-ft. shielded, rubber covered cable and shielded plug. External speaker jack. Unit is entirely self-contained in a two-piece portable case. Requires short-shank cutting needle. Size, 18x10x16"; 105-125 volts, 60 cycles AC. Shpg. wt., 41 lbs.

96 RX 507. List. \$175.00. NET 116.67



**Knight Radio-Phono-Recorder**

A low-cost, portable disc recorder and radio. Records: (1) from the radio; (2) from crystal mike supplied; (3) from an external phonograph. Records and plays at 78 and 33 1/3 rpm. Built-in Alnico V PM speaker, plus provision for external speaker. Superhet receiver covers standard broadcast band. Featherweight ceramic pickup for playback of standard or microgroove records; plays discs up to 12" in diameter. Crystal cutter cuts std. grooves in discs up to 10" in dia. Other features include: Tone control; loop antenna; inverse feedback circuit; twin neon recording level indicators; special shavings collector; hinged front cover. Also used as low power PA system. Housed in wood case with attractive brown leatherette covering. 16 3/4 x 9 7/8 x 18 3/8". Supplied complete with cutting and all-purpose .002" playback needles, microphone, 8 ft. cord and plug. For 105-125 volts, 60 cycles AC. Shpg. wt., 42 lbs.

96 RX 326. NET 98.75



**G. I. Recorder-Phono Assembly**

MODEL GI-R851-LP. For cutting and playing records at 78 and 33 1/3 rpm. Spring supplied for easy conversion of 33 1/2 speed to 45 rpm. Crystal cutter cuts discs up to 10" in diameter at 160 lines per inch (std. groove). Plays records up to 12". Has handy dial—for quick selection of speeds. Pickup arm provides proper needle pressure for both standard and microgroove records. Dynamically balanced, rim-drive, 4-pole motor. Convenient depth-of-cut adjustment. Size: Base plate, 15" W, 11 1/2" D; height, 6 5/8", 2 3/4" above, 3 7/8" below plate. Requires high-gain amplifier or radio with 3 watts or more output. With playback stylus, less cutting needle (requires short shank type). For 110-120 volts, 60 cycle AC. Shpg. wt., 17 lbs.

96 RX 106. List. \$56.50. NET 33.90

Same as above, but with 8 ohm magnetic cutting head. Shpg. wt., 18 lbs.  
96 RX 703. List. \$58.50. NET 35.10



**Professional Recording Equipment**

**Rek-O-Kut Recording Mechanism**

MODEL M-12 OVERHEAD CUTTING MECHANISM. Professional cutting unit that cuts up to 13 1/4" discs. 8-ohm magnetic cutter flat, 10 7000 cps. No double cutting. Cutter hits automatically when feednut reaches end of lead screw. Cuts 108 lines per inch. Aluminum housing. Can be mounted on any 12" recording turntable. Less turntable and motor. Shpg. wt., 19 lbs.

96 RX 165. NET 99.95

MICRO-GROOVE LEADSCREW, 240 lines per inch, for Model M-12, above. Wt., 1 lb.

96 R 107. NET 27.95

MODEL TR-12H. DUAL-SPEED RECORDING TURNTABLE, 33 1/3 and 78 rpm, 12" aluminum turntable. Base tapped for M-12 cutting unit. With hysteresis synchronous motor. Less cutter unit. Wt., 21 lbs.

96 RX 506. NET 129.95

45-RPM IDLER. Adapter for TR-12H above. Shpg. wt., 4 oz.

96 R 111. NET 8.00

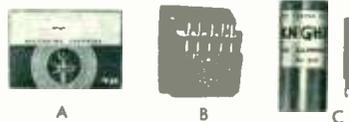
For Rek-O-Cut playback equipment, see page 33.

**Rek-O-Kut Deluxe "Challenger"**

Cuts standard records at 33 1/3 and 78 rpm, from 6" to 13 1/4" masters. G.E. RPN-050 variable reluctance cartridge plays back discs up to 16"; broadcast transcriptions, standard commercial pressings and microgroove recordings. Uses R8A amplifier (response: ±1 db, 30-20,000 cps.), 2-stage inverse feedback, 13.5 watts output; distortion below 3%. Hum and noise, 64 db below recording level. Outputs are: 4, 8, 15, and 500 ohms, 3 inputs; 2 mike, 1 for phono or radio. Provision for monitoring. Separate continuously variable treble and bass controls. With convenient recording level meter.

Uses M-12 cutting mechanism (see left) hysteresis synchronous motor, 12" precision machined turntable. Two double-duty neoprene idlers for internal rim drive, 10" PM speaker in case cover. Gain: mike, 120 db; phono, 90 db; radio, 80 db. Case is of sturdy plywood covered with rich gray leatherette. Built to withstand rough usage. Power drum, 100 watts. For 105-125 v., 60 cycle AC. Size, 19x17x8 3/4". With tubes, less microphone. Shpg. wt., 80 lbs.

96 RX 425. NET 459.95



**Disc Cutting Needles**

Fig. A, AUDIOPPOINTS. \*For non-professional and Presto Model K recorders. †For professional recorders. ‡For Presto 110 cutting head. 65 RC 960 has 87° included angle; 65 RC 961, 70°. All .003" except Type 20 .001". Shpg. wt., per package of 3, 3 oz.

Stock No.	Type	Description
65 RC 960*	14	Sapphire, short duralshank
65 RC 967*	20	As above, for microgroove
65 RC 961†	14	Sapphire, long duralshank
65 RC 966†	20	As above, for microgroove

3 or More, EACH 4.41 NET EACH 4.90

65 RC 962*	202	Sapphire, short brass shank
65 RC 963†	202	Sapphire, long brass shank

3 or More, EACH 3.53 NET EACH 3.92

65 R 964*	34	Stellite, short brass shank
65 R 965†	34	Stellite, long brass shank

12 for 14.16 NET EACH 1.31

65 RC 860; 20 Sapphire, long duralshank

6 for 25.20 NET EACH 6.00

**Fig. B—Knight Steel Cutting Needles**

Uniform grade, short flat shank, .003". Average cutting life, 20 minutes. Assures fine quality recorded sound through quieter cutting. Shpg. wt., 3 oz.  
65 R 803. Pkg. of 5, NET 59c

**Fig. C—Knight Sapphire Cutting Needle**

Precision ground and highly polished. Short flat-shank, .003". Average cutting life, 5 hours. Provides longer life and easier thread control. Shpg. wt., 2 oz.  
65 RC 800. NET EACH 3.53



### Magnetic Telephone Pickups

**Fig. A. ELECTRODUCER TELEPHONE PICKUP.** May be used with any recorder—disc, wire or tape—on all types of phones. Response, 100-6500 cycles. No electrical connection to telephone needed. Connects to high impedance mike input of any recorder or amplifier. Made of heavy chip-board. Coil is removable. Size,  $9\frac{1}{2} \times 6\frac{1}{2} \times 1\frac{1}{2}$ " . With 12-ft. cable. Shpg. wt., 1 1/4 lbs.  
99 S 482. List, \$12.50. NET ..... 7.35

**Fig. B. ELECTRO-SCRIBER PHONE PICKUP.** Induction pickup for recording conversations from standard rectangular-base cradle phones. Telephone fits into recess of rubber base; no electrical connections necessary. Output goes to microphone input of disc, wire or tape recorder. With 8-ft. cable and 3-prong Jones plug. Wt., 1 1/4 lbs.  
99 S 489. List, \$12.50. NET ..... 7.35

As above, but for push-button rectangular-base cradle phones. Shpg. wt., 1 1/4 lbs.  
99 S 490. List, \$14.50. NET ..... 8.53

**Fig. C. KORD-O-COIL MAGNETIC PICKUP.** Induction pickup for recording telephone conversations. For cradle type phone only. No connection to telephone necessary. Connects to hi-impedance mike input of any disc, wire, or tape recorder.  $5\frac{1}{2}$ " wide,  $\frac{3}{8}$ " high,  $9\frac{1}{4}$ " deep. Leatherette finish. With 6-ft. cord, less plug. Wt., 1 1/4 lbs.  
99 S 486. List, \$10.00. NET ..... 5.88

**Fig. D. PERMOFLUX MODEL M53-A TELEPHONE PICKUP.** For attaching to receiver of telephone. Picks up both sides of a phone conversation. Can be used with either cradle or old type telephones. Output of pickup feeds mike input of any recorder or amplifier. No electrical connection to phone is necessary. 6 ft. shielded cable included. Shpg. wt., 8oz.  
81 S 244. List, \$17.50. NET EACH ..... 10.29

**Fig. E. MAGNETIC RECORDING INDUSTRIES MODEL VM938 TELEPHONE PICKUP.** Small size pickup coil for recording telephone conversations. No electrical connection to telephone needed. Fits any telephone. Wt., 1 1/4 lbs.  
99 S 478. NET ..... 4.50



### Wire Recording Accessories

**Fig. F. WEBSTER-CHICAGO 2904 WIRE RECORDING HEAD.** Record-playback-erase. Less cartridge cap and mtg. screw. Wt., 11 oz.  
96 R 049. List, \$7.50. NET ..... 5.88

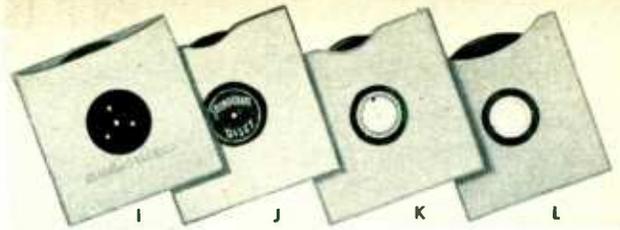
**Fig. G. ECHO RECORDING WIRE.** .0036" stainless steel wire on die-cast spools. Plastic leaders.

Stock No.	Spool Size	Shpg. Wt.	EACH	10 or More, Ea.
96 R 145	1/4 hour	6 oz.	1.54	1.23
96 R 146	1/2 hour	6 oz.	2.31	1.85
96 R 147	1 hour	8 oz.	3.84	3.07

**Fig. H. WEBSTER-CHICAGO RECORDING WIRE.** Stainless steel. With nylon leaders. Metal spools. Av. shpg. wt., 1/2 lb.

Stock No.	Type	Spool Size	EACH	10 or More, Ea.
96 R 061	W-173	1/4 hour	2.94	2.35
96 R 062	W-174	1/2 hour	3.92	3.14
96 R 063	W-175	1 hour	5.88	4.70

EMPTY METAL SPOOL. Holds 1-hour wire supply. Shpg. wt., 8 oz.  
96 R 044. 10 or more, EACH, 30c. NET EACH ..... 38c



### Quality Recording Discs for All Purposes

The wide selection of recording blanks below covers all the needs of recording studios, broadcast stations, schools, sales demonstrations, home, etc.

Fig. I—AudiDisc Professional Recording Blanks

Smooth-coated on both sides of aluminum base. Red Label discs for highest quality work; Yellow Label for general purpose work in studios and schools. Blue Label for home recording. \*Large center hole for 45 rpm recordings.

Stock No.	Size	Label	Base Thickness	NET EACH	Std. Pkg.	Lbs., Pkg.	NET PER PKG.
69 R 085	7" *	Red	.050"	.83	25	5	18.87
69 R 069	8"	Red	.040"	.66	25	5	14.70
69 R 070	10"	Red	.040"	.91	25	8 1/2	20.10
69 R 071	12"	Red	.050"	1.51	25	13 1/2	35.82
69 RX 072	16"	Red	.050"	2.75	25	25	61.99
69 R 089	8"	Yellow	.040"	.55	25	5	12.25
69 R 090	10"	Yellow	.040"	.73	25	8 1/2	18.41
69 R 091	12"	Yellow	.050"	1.22	25	13 1/2	26.44
69 RX 092	16"	Yellow	.050"	2.17	25	25	48.76
69 R 065	6 1/2"	Blue	.027"	.29	50	6 1/2	13.23
69 R 066	8"	Blue	.027"	.40	50	7 1/2	19.13
69 R 067	10"	Blue	.027"	.59	50	10 1/2	26.44

Fig. J—Reeves Soundcraft Recording Discs

THE BROADCASTER. For extremely critical recordings. Finest quality physical and sound properties. Made with scrupulous care. Double-face.

Stock No.	Size	Std. Pkg. of 5	Lbs.	Std. Pkg. of 25	Lbs.
69 R 260	10"	5.05	1 1/2	22.78	7
69 R 261	12"	7.84	3	35.28	13
69 RX 262	16"	14.36	6	64.68	25

THE PLAYBACK. Standard broadcast-quality disc for all professional applications in radio stations, recording studios, etc. Double-face.

Stock No.	Size	Std. Pkg. of 5	Lbs.	Std. Pkg. of 25	Lbs.
69 R 263	6 1/2"	2.60	1	11.76	3
69 R 264	8"	3.28	1 1/4	14.70	5
69 R 265	10"	4.56	1 1/2	20.58	7
69 R 266	12"	7.35	3	33.07	13
69 RX 267	16"	13.57	6	61.00	25

THE AUDITION. For good-quality recording in the school, home, etc. Paper-labeled for convenience. Double-face disc.

Stock No.	Size	Std. Pkg. of 5	Lbs.	Std. Pkg. of 25	Lbs.
69 R 268	6 1/2"	2.30	1	10.29	3
69 R 269	8"	2.79	1 1/4	12.49	5
69 R 270	10"	3.58	1 1/2	16.17	7
69 R 271	12"	5.88	3	26.46	13
69 RX 272	16"	10.63	6	47.77	25

Fig. K—Recordisc Semi-Professional & Home-Type

For home, semi-professional and school use. Aluminum base (except taper bond base), cellulose nitrate coated. Red Label is semi-professional grade. "GM" Label is wide range.

Stock No.	Size	Label	Base Thickness	NET EACH	Std. Pkg.	Lbs., Pkg.	NET PER PKG.
69 R 110	6 1/2"	Orange	↑	25c	6	1/2	.90
69 R 111	8"	Orange	↑	35c	6	3/4	1.26
69 R 140	6 1/2"	Red	.021"	27c	5	1/2	1.20
69 R 141	8"	Red	.021"	33c	5	3/4	1.50
66 R 142	10"	Red	.021"	53c	5	1	2.40
69 R 143	12"	Red	.021"	67c	5	2 1/2	3.00
69 R 190	8"	"GM"	.021"	53c	5	1	2.40
69 R 191	10"	"GM"	.021"	67c	5	1 1/2	3.00
69 R 192	12"	"GM"	.021"	82c	5	2 1/2	3.75
69 R 195	6 1/2"	Purple	.012"	20c	5	1/2	.90
69 R 196	8"	Purple	.012"	27c	5	3/4	1.20
69 R 197	10"	Purple	.012"	40c	5	1	1.80

Fig. L—Knight Aluminum Base Discs

Low cost discs with smooth nitrate coating on both surfaces. Comparable to professional-type discs. For all general purpose recording.

No.	Size	Base	Wt., Oz.	NET EACH
69 R 180	6 1/2"	.021"	8	24c
69 R 181	8"	.021"	10	30c
69 R 182	10"	.021"	12	48c

### Astatic Recording Heads

Feature high needle stiffness, wide frequency range and excellent power sensitivity. Use short-shank needles. 24" leads. \*Crystal type with flange bracket for replacement in Knight, Wilcox-Gay and G.I. recorders. †Magnetic type with 8 ohms impedance. ‡Magnetic, with 500 ohms impedance. Shpg. wt., 1 lb.

Stock No.	Mfr's Type	Fig.	RMS Volts	Upper Freq.	Size	NET EACH
65 R 125	*N26	M	150	6000	1 1/2 x 3/4 x 3/4"	7.53
65 R 128	†M41	N	3	7000	1 1/2 x 1 1/2 x 3/4"	
65 R 129	‡M41	N	30	7000	1 1/2 x 1 1/2 x 3/4"	

RECORD LABELS. Gummed record labels with spaces for title, artist, date, etc. Wt., per pkg., 2 oz.  
65 R 520. Package of 50. NET 35c. 4 Packages for ..... 1.26





### Special Values in Knight Quality Phonographs

**Fig. A—Knight Extended-Range Portable**

A great value in design, features and performance, this new Knight extended-range portable phono compares favorably with phonographs selling at twice this remarkably low price. Carefully engineered plus features include: four tubes; push-pull amplifier output stage; V-M changer; plays 7", 10" and 12" records in 78, 45 and 33½ rpm speeds automatically; inter-mixes 10" and 12" records of the same speed; automatically shuts off after last record is played; special "45" rpm spindle—no spiders are needed to play large center-hole records. Resonance-free, aluminum diecast tone arm contains ceramic "flip-under" cartridge (with humidity and moisture-resistant) with two sapphire needles. .001" and .003" for microgroove and standard records; two 6", extended-range speakers and one small "tweeter" for distortionless reproduction of high frequencies; separate bass and treble controls. Overall response, 50-15,000 cps. Laminated-wood cabinet, with rugged, attractive luggage-type tan covering. Size, 9x 15½x20". U.L. Approved. For 110-120 volts, 60 cycle AC. Shpg. wt., 30 lbs.  
96 RX 538, NET.....66.00

**Fig. D—Single-Play Portable Phono**

Popular 3-speed phonograph for playing records singly. Advanced design assures long-life and excellent record reproduction. Dependable performance and unusually fine appearance. Perfect as extra phonograph for socials, den, school or resort. Plays all types of records—7", 10" and 12"—at all three speeds—33½, 45 and 78 rpm. Amplifier and 4x6" Alnico V speaker are matched for clear, lifelike reproduction. Has dependable rim-drive, constant-speed motor and simple speed-change control. Holds "wow" to a minimum. Turntable is well balanced, smoothly flocked. Lightweight tone arm has turnover cartridge for microgroove and standard records. Supplied with spindle adapter for convenient playing of 45 rpm recordings; spindle spiders are not required. Continuous tone control; also has volume control. Sturdy, all-wood portable case. Covering is brown leatherette with beige trim. Size, 16½x10x 14½". Complete with .001" and .003" needles. U.L. Approved. For 105-125 volts, 60 cycle AC. Shpg. wt., 13 lbs.  
96 RX 568, NET.....34.50

**Fig. B—Knight Portable Changer-Phono**

A quality portable phonograph, complete with built-in amplifier and speaker, 3-speed V-M changer, and carrying case. Features new automatic shut-off switch—after last record plays *entire* unit shuts off, including amplifier; requires a minimum of attention. Automatically plays twelve 7" or 10" records, or ten 12" records. Any ten 12" or 10" records of the same speed can be intermixed. Records are gently "flat-dropped" on the heavily flocked turntable. Tone arm set-down adjustment is automatic—regardless of size of record. Includes V.M. "45" spindle—plays 45 rpm records without spiders. Speaker is a 4x6" PM dynamic for wide-range tone reproduction. Smooth-operating changer mechanism. Amplifier has reserve power for smooth reproduction at high volume. Centralized volume and tone control. Dependable, accurate, constant-speed motor for wow-free operation. Dual-needle turnover type cartridge for both standard and microgroove. All-wood case; attractive brown and beige leatherette. 14½x9x17". U.L. Approved. For 110-120 volts, 60 cycle AC. Wt., 26 lbs.  
96 RX 567, NET.....59.95

**Fig. E—Economy Single-Play Phono**

New portable player for 7", 10" and 12" records at 16, 33½, 45 and 78 rpm speeds. Features amazing room-filling power, excellent tonal reproduction and extremely compact design. Unusually light in weight (only 7¼ lbs.), yet it offers full, clear-toned performance. Highly suitable for use as a spare record player in dens, recreation rooms, guest rooms, etc. With turnover cartridge and two precious-metal styli—.003" for standard 78 rpm, .001" for 16, 33½ or 45 rpm microgroove records. Separate tone and volume controls. 4" Alnico V PM speaker is matched to case; insures balanced tonal quality. Dependable drive mechanism has neutral position to prevent "flats" from forming on drive discs when player is not in use. Rugged case is covered in attractive rose and gray leatherette. scuff and water-resistant to stand up under rough usage. With carrying handle on side of case. Size, only 10¼x9¼x6½". An unbeatable value! Underwriters' Approved. For 110-120 volts, 60 cycle AC. Shpg. wt., 8½ lbs.  
96 RX 731, NET.....22.95

**Fig. C—Table Model Changer-Phono**

A beautifully performing 3-speed phonograph for playing all records automatically—33½, 45 or 78 rpm. An excellent record player for recreation rooms, classrooms, dens, etc. Complete with built-in amplifier and speaker. Features new automatic shut-off switch—after last record plays, *entire* unit shuts off, including the amplifier; requires only a minimum of attention. Takes twelve 7" or 10"—or ten 12" records. 10" and 12" records (of the same speed) may be intermixed. There's no setdown adjustment to make when switching from records of one size to another. Tone arm automatically comes down on the lead-in groove of the record. Jamproof mechanism. Quality 4x6" Alnico V speaker for superior tone. Has volume control and continuously adjustable tone control. Dependable, constant-speed motor, rim-drive type. Latest type dual-needle turn-over cartridge for both standard and microgroove records. Maroon-finish metal base; heavily flocked turntable. Size, 13x8½x12". U.L. Approved. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 15 lbs.  
96 RX 366, NET.....42.50

**Fig. F—Knight Low-Cost Phono**

Amazingly small and lightweight single-play record player. Plays 7", 10" and 12" records in 16, 33½, 45 and 78 rpm speeds. Features strikingly smart, "jewel box" styling—glossy, satin-red case contrasts with golden tone arm and speaker grid. Weighs only 7 lbs., measures just 10¼x 8¼x6¼"! A compact, convenient portable phonograph for providing a world of musical pleasure at a truly economical price. Adds a handsome touch to any room. Simply plug in and its ready to operate. Top quality 4" PM speaker provides mellow-toned performance, balanced to an excellent resonance match with the case. Amplifier delivers startling power and excellent tonal reproduction. Employs .002" precious-metal needle, free floating tone arm and simple, accurate speed selector control. Includes spindle disc for playing large center-hole 45 rpm records. With convenient carrying handle on back. Case is covered in durable Styron plastic for rugged strength and long wearing quality. U.L. Approved. For 110-120 v., 60 cyc. AC. Shpg. wt., 8½ lbs.  
96 RX 732, NET.....18.95



## Exceptional Buys in Powerful Knight Portable Radios

### Super-Thin Personal Portable

The Knight battery-operated personal portable combines amazing "powerhouse" performance and ultra-smart styling—yet it's only 2 1/4" thick and hardly more than a handfull! An ideal portable—take it anywhere and enjoy clear, life-like standard broadcast reception. Provides dependable performance even in out-of-the-way areas. Advanced type superhet circuit uses 4 low-drain tubes for approximately 100 hours of battery life. New "Ferrite" loopstick antenna assures strong, crystal-clear reception. High-quality PM speaker delivers excellent tonal quality and plenty of volume. Automatic volume control prevents "blasting" and "fading." Easy-to-use thumb-wheel controls.

Tubes: 1R5, 1U4, 1U5 and 3V4. Rugged, beautifully finished maroon plastic case with gold colored handle and speaker grille. Only 6x9x2 1/4" deep. With tubes; less batteries. Shpg. wt., 4 lbs.  
**94 S 400. NET ..... 14.95**

**BATTERY KIT.** Consists of 2 "A" batteries and 1 "B" battery. Shpg. wt., 1 1/4 lbs.  
**80 J 651. NET ..... 2.07**

### Versatile 3-Way Portable

Beautifully styled, low-cost 3-way portable radio. Ideal for picnics, sports events and outings. Plays anywhere—operates from AC, DC or long-life batteries. Extremely compact and easy to carry—measures 9 1/4 x 7 1/4 x 3 1/4". Covers standard broadcast band.

Uses latest superhet circuit with 4 low-drain tubes. Employs newest super-sensitive "Ferrite" iron-core antenna for strong, clear long-distance reception. Uses powerful 4" PM dynamic speaker for excellent tonal reproduction. Thumbwheel type volume and tuning controls provide convenient tuning and add to attractive design. Re-cessed dials have large, easy-to-read number calibrations. Automatic volume control prevents "blasting" and "fading." Tubes: 1R5, 1U4, 1U5, 3V4; selenium rectifier. Rugged plastic case, available in rich maroon or gray. An excellent value at this low price. U.L. Approved. For 105-125 v., DC or 60 cyc. AC. Less batteries (see below). Shpg. wt., 6 lbs.  
**94 S 401. Maroon. .... 23.75**  
**94 S 402. Gray. NET EACH ..... 23.75**

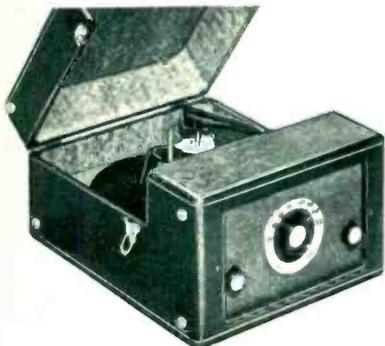
**BATTERY KIT FOR ABOVE.** Wt., 2 lbs.  
**80 J 648. NET ..... 3.06**

### 2-Band 3-Way Portable

Outstanding value in a deluxe, low-cost 2-band portable. Covers standard AM broadcast band plus popular shortwave band (5.8-18.3 mc). Shortwave band enables listener to hear foreign broadcasts. Amateurs, aircraft, ship-to-shore, etc. "Tailor-made" for all indoor and outdoor use—at home or "abroad." Superhet circuit provides excellent selectivity and sensitivity.

AVC prevents "blasting" and fading. Features include: 3-gang tuning condenser with precision tuning ratio, continuously variable tone control, smooth band change switch, powerful Alnico V PM dynamic speaker for unusually clear, full sound reproduction. Efficient built-in loop broadcast band antenna plus nickel-plated 34" telescopic whip antenna for shortwave. Tubes: 1L6, 1U5, 3V4, 2—1U4; selenium rectifier. Compact luggage-type tan case with handsome brass front panel and clear plastic dial. Size: 14x10x6 1/2". U.L. Approved. Operates from batteries and 110-120 v., DC or 60 cyc. AC. Less batteries. Shpg. wt., 9 1/2 lbs.  
**94 SX 426. NET ..... 51.95**

**BURGESS 6A60 BATTERY PACK.** 3 lbs.  
**80 J 584. NET ..... 4.38**



### Knight 3-Speed Radio-Phonograph

A splendid, complete portable entertainment "center"—with a powerful superhet radio and a smooth-operating changer. Compact and light weight—yet it's packed with Knight super-value features. Modern superhet circuit uses four tubes and rectifier. Tunes all standard broadcasts. Contains reliable built-in loop antenna for top reception. Automatic volume control prevents fading and "blasting." Variable tone control; quality Alnico V 5" PM speaker. Changer automatically plays twelve 10" or ten 12" records (33 1/3 or 78 rpm); or twelve 7" (33 1/3 or 45 rpm). Set-down selection is completely automatic for all sizes of records. 10" and 12" records of the same speed can be played inter-mixed. Constant-speed, dependable motor for wow-free operation. With turnover cartridge. .001" and .003" needles for playing both standard and microgroove records. In attractive, russet-tan leatherette case. Size: 17 1/4 x 8 3/4 x 14 1/2". U.L. Approved. For 105-125 volts, 60 cycle AC. Shpg. wt., 25 lbs.  
**94 SX 475. NET ..... 60.75**



### Ultra-Modern, Dual-Purpose Deluxe Phonograph

Ultra-modern, dual-purpose deluxe table model phonograph. With the wrought iron or brass legs listed below, it converts into a highly attractive console for chairside music enjoyment. Without legs, it can be used as a deluxe table model phonograph. Plays all records, (78, 45 and 33 1/3 rpm) in all sizes. (7", 10" or 12"), automatically. After the last record is played, changer and amplifier automatically shut off. Muting switch assures silent change cycle. Precision-balanced pickup arm uses latest heat and moisture-proof ceramic cartridge. With twin sapphire needles, .003" and .001". Loudness control automatically compensates for hearing characteristics at high and low volume levels. 5-watt push-pull amplifier insures ample output and rich reproduction of sound. Three extended-range speakers, two 5" and one 6". Angular mounting of speakers insures balanced, room-filling sound dispersion. Auxiliary input for connecting

### Knight Deluxe Table Model Phono

convertible to console



external AM-FM tuners, etc. Also includes auxiliary output with 4, 8, 16 and 500 ohm impedances for addition of external speakers. With speaker outlet jack and plug. Unit includes high-fidelity LP demonstration record. Tubes: 12AX7, 2—6V6; 6X5 rectifier. Size: 23" W, 10 1/2" H, 20" D. U.L. Approved. For 110-120 volts, 60 cycle AC. Shpg. wt., 48 lbs.  
**96 RX 760. Mahogany. NET ..... 99.95**

**BRASS LEGS.** For converting above to console type. Makes attractive furniture piece. Shpg. wt., 4 lbs.  
**96 RX 762. NET ..... 6.25**

**DELUXE TABLE MODEL PHONO IN BLONDE CABINET.** Shpg. wt., 48 lbs.  
**96 RX 761. NET ..... 99.95**

**WROUGHT IRON LEGS.** For above. 4 lbs.  
**96 RX 763. NET ..... 4.40**



## Top Values in Modern Table Model AM, AM-FM and Clock Radios

### Knight AC-DC Superhet

Here's an excellent feature-packed, low-priced table model receiver that combines ultra-modern styling with a modern superhet circuit. Tunes from 535 to 1620 kc for full coverage of all standard broadcast programs. Contains a powerful built-in loop antenna to assure good reception without the use of an outside antenna or ground. The automatic volume control circuit provides uniform volume level at all times, without blasting or fading. Conveniently located large size, easy-to-read tuning knob for quick station selection.

The Alnico "V" PM dynamic speaker delivers full, rich tonal quality. RCA and Hazeltine licensed circuit uses the following tubes: 12BE6, 12BA6, 12AV6, 50C5, 35W4 is rectifier. This top-value receiver is presented in a rich, smartly designed cabinet with attractive gold grille. Size, 8 $\frac{1}{2}$ x5 $\frac{1}{2}$ x4 $\frac{1}{2}$ ". For operation from 105-125 volts, 50-60 cycles AC, or DC. Available in either rich walnut or smart ivory finish. Shpg. wt., 5 lbs.

94 S 420, Walnut, EACH..... 16.75  
94 S 421, Ivory, EACH..... 17.75

### Knight Deluxe AC-DC Superhet

This new Knight AC-DC radio combines ultra-smart styling with amazing performance. Offers full coverage of the AM broadcast band from 540 to 1620 kc. Luxury styled durable plastic cabinet. An ideal receiver for any room in the house. Polished brass-finished metal dial scale and trim. With built-in "Airmagnet" antenna—no outside antenna required. Large Alnico PM speaker for full-bodied lifelike tone. Unique airplane dial tuning. Extra large dial for easy tuning and rapid station identification. Up-to-the-minute circuit includes automatic volume control to provide uniform volume level. Powerful five-tube circuit plus rectifier gives true big-set performance. Tubes used: 12A6U converter, 12BF6 oscillator, 12BA6 IF amplifier, 12AV6 diode detector-1st audio, 35C5 audio output; rectifier is 35W4. Overall measurements: 10 $\frac{1}{2}$ x6 $\frac{1}{2}$ x5 $\frac{1}{4}$ ". U.L. Approved. For operation from 110-120 volts, 50-60 cycle AC or DC. Available in either mahogany or white finish. Shpg. wt., 7 lbs.

94 SX 422, Mahogany, NET..... 22.95  
94 SX 423, White, NET..... 25.30

### Deluxe Knight Clock-Radio

New, ultra-modern clock-radio with beautifully styled genuine mahogany veneer cabinet. Ideal for any room of the house. Wood cabinet assures mellow tone quality. Features Telechron self-starting electric clock with "see-in-the-dark" radium-coated dial face. Turns radio or appliances on or off at pre-set times. Retire at night—radio shuts off after you are asleep. Will awaken you to your favorite morning program. If radio fails to awaken you—a reliable buzzer-alarm will. Radio is modern superhet type with latest "Magna-Loop" built-in "stick" antenna. Covers the AM broadcast band—540 to 1650 kc. Automatic volume control prevents "blasting." Powerful, quality 5" PM speaker for faithful reproduction of full audio output.

Tubes: 12BE6 converter, 12BA6 IF amplifier, 12A6T6 detector-1st audio, 50C5 audio output. Rectifier is 35W4. Available in blonde or mahogany finish. Size, 13 $\frac{3}{4}$ x6 $\frac{1}{2}$ x5 $\frac{3}{4}$ ". For operation from 105-125 volts, 60 cycles, AC. Shpg. wt., 7 lbs.

94 SX 445, Mahogany.....  
94 SX 446, Blonde, NET EACH..... 30.75



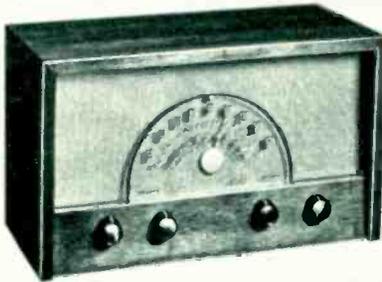
### Dewold FM-AM Receiver

MODEL H801. An unusually fine value in high quality radio, the Dewold "Symphony" receiver brings thrilling reception of full FM and AM broadcast bands. It's a beautifully engineered table model superhet—in a smartly styled plastic cabinet that will harmonize with all bonie furnishings. Chassis is complete with two built-in antennas for FM and AM reception. Also has provision for outside antenna. Low noise level improves distant reception.

Designed for outstanding reception on the 88-108 mc FM band and the 530-1700 kc AM band. Uses latest type RCA and Hazeltine licensed superhet circuit. Has RF stage in FM section for increased sensitivity. Ratio detector for FM. Large PM dynamic speaker reproduces full audio output with amazing fidelity. High ratio vernier tuning control and illuminated slide rule dial make it easy to select stations. AVC circuit prevents "blasting" and "fading."

Has tone control for adjusting tone balance. Gives treble or bass emphasis to suit individual taste. Seven-tube circuit plus rectifier. Uses: 2-6BJ6, 1-12AT7, 1-6BH6, 1-12AL5, 1-12AT6, 1-35L6; rectifier is a 35Z5. Walnut cabinet, 11 $\frac{1}{4}$ x8x7 $\frac{1}{4}$ ". For 105-125 volts, 60 cycle AC, or DC. U.L. Approved. Shpg. wt., 10 lbs.

94 SX 440, NET EACH..... 43.45



### Knight Quality FM-AM Radio

An excellent, new, ultra-modern receiver for reception of static-free FM programs and AM standard broadcasts. Beautifully styled, heavy wood cabinet will harmonize with any decorating motif. Covers 88-108 mc FM band plus the 535-1620 kc AM broadcast band. With efficient built-in AM antenna; provision for attachment of external FM antenna. Uses AM condenser tuning plus permeability tuning for FM. Latest type, highly efficient superhet circuit. Features large 5" PM dynamic speaker for faithful sound rendition. Has tone control for full adjustment of tone balance. Automatic volume control circuit provides uniform volume level at all times, without blasting or fading. High sensitivity brings in distant stations.

Convenient FM-AM selector switch permits rapid changeover from FM to AM broadcast band. Each band clearly calibrated on giant transparent plastic dial. Uses six-tube circuit plus selenium rectifier. Tubes: 1-12BE6, 2-12BA6, 1-12AU6, 1-19T8 and 1-50C5. Housed in heavy wood cabinet, 14 $\frac{1}{4}$ x8x7". Available in either lustrous mahogany or modern blonde finish. U.L. Approved. For 110-120 volts, 50-60 cycle AC, or DC. Shpg. wt., 10 lbs.

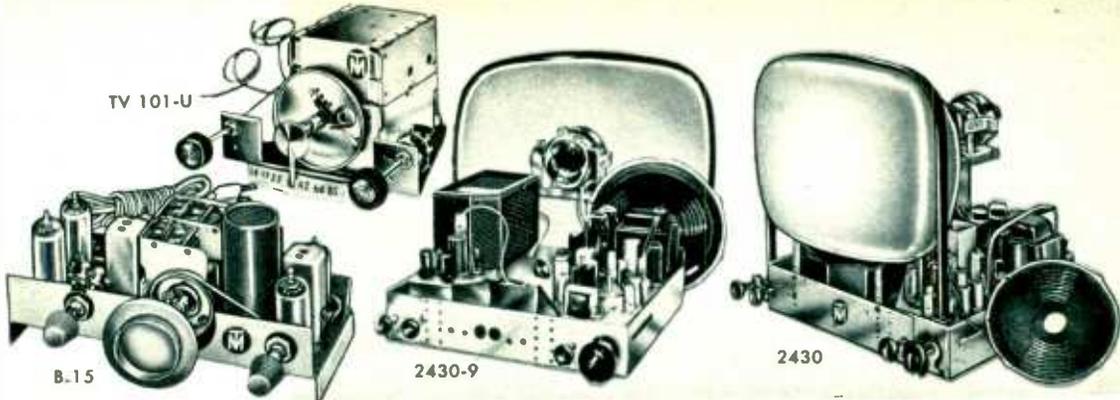
94 SX 424, Mahogany, NET..... 53.26  
94 SX 425, Blonde, NET..... 55.93



### Low-Cost Knight Clock Radio

New Knight clock-radio offers wonderful appearance, accurate time-keeping, clear-toned radio entertainment, plus automatic appliance control—all at remarkably low cost. Incorporates a genuine Telechron self-starting sweep second electric clock—famous for precision quality. The radio employs an ultra-modern superheterodyne circuit. Has automatic volume control to prevent "blasting" and "fading." With sensitive built-in antenna; strong Alnico PM speaker for rich, faithful tone. Covers the standard AM broadcast band from 540 to 1620 kc. Convenience outlet on rear of receiver to automatically turn any electrical appliance rated up to 1100 watts on and off with radio. Radio turns on automatically at any preset time. Sleep switch can be set to provide up to sixty minutes of music before shutting off. Alarm knob permits use as a "musical awakener." This fine combination is housed in an attractively designed modern cabinet of solid wood construction. Available in either mahogany or blonde finish to match any decorating scheme. Tubes used: 12BE6, 12BA6, 12AT6, 50C5; rectifier is 35W4. Size: 9 $\frac{1}{2}$ x6x7". For 110-120 volt 60 cycle AC. Shpg. wt., 7 $\frac{3}{4}$  lbs.

94 S 447, Mahogany.....  
94 S 448, Blonde, NET EACH..... 24.95



## Tech-Master Television Chassis and Accessories

### Model B-15 AM Tuner

Compact AM superhet tuner for addition of standard AM radio to TV sets. Especially designed for use as AM tuner with 630 type TV chassis (including Tech-Master 2430-9, 2430 and C-30). Uses TV audio output stage or its own 2-watt output stage.

**EASILY INSTALLED.** Fits under picture tube on 630 type and similar TV chassis; simple 2-point suspension mounting. Three holes required in panel of TV cabinet to accommodate dial and control shafts. 1st audio may be fed into phono input of TV; easily wired into audio stage of TV sets not having phono input (instructions supplied for wiring into 630 type chassis). May be used independently of TV audio by connecting directly to any PM speaker and output transformer.

**MODERN CIRCUIT.** High-sensitivity 4-tube circuit employs quadruple-tuned IF stage. Automatic volume control prevents blasting. Ferrite-core built-in antenna. Input for crystal phono. Isolated chassis for safety. Controls: Off-On-Volume, Tuning. Tubes: 12BE6, 12BA6, 12AV6, 50C5; 35W4 rectifier. Size (HxWxD): 4 3/4 x 3 7/8". With tubes and instructions. For 105-125 v. DC, or 50-60 cycles AC. Shpg. wt., 2 1/2 lbs. 98 S 027. NET . . . . . 19.95

### Model TV101-U UHF Selector Unit

New. UHF converter offering full 70 channel coverage. Designed specifically for "built-in" installation with Tech-Master 2430, 2431, 2430-9, C-30 and other 630-type TV chassis. No cabinet changes required other than panel cutout. Switch permits quick selection of UHF or VHF.

**QUICK, SIMPLE INSTALLATION.** TV101 U fits in front chassis recess common to 630-type chassis. Only two internal connections and the antenna lead connections. Supplied complete with mounting hardware, knobs, dial, escutcheon and instructions.

**MODERN DESIGN.** Three high-Q cavity resonators and cascode RF stage assure extreme sensitivity, unusually high selectivity and minimum noise. Tunes UHF channels 14 to 83; 465 to 900 mc. Output on VHF channel 5 or 6. Balanced 300 ohm input and output. Uses 6AF4 oscillator, 6BQ7A RF and 1N82 crystal diode mixer. Overall gain of 8 db. Shpg. wt., 4 lbs. 98 SX 552. NET . . . . . 36.95

### Accessories for Tech-Master TV Chassis

**SAFETY MASK-ESCUTCHEONS.** Plastic. Combine function of safety glass, mask and escutcheon in one easy-to-mount unit. Described on page 219. Av. wt., 3 lbs. 97 SX 913. For 21EP4A. NET . . . . . 8.25  
97 SX 912. For 24AP4. NET . . . . . 13.50  
98 SX 592. For 24CP4. NET . . . . . 14.25  
98 SX 593. For 27AP4. NET . . . . . 15.00

**PLASTIC SLEEVE AND RIM.** Required for insulation of metal-backed tubes. Wt., 2 lbs. 40 SX 250. For 24AP4. NET . . . . . 7.28  
40 SX 260. For 27AP4. NET . . . . . 8.36

See page 65 for TV picture tubes.

### Latest "Gold Medal" Series TV Chassis

#### Model 2430-9 TV Chassis

Newest model in Tech-Master's line of custom TV chassis. 22 kv hi-voltage supply. Use with 24CP4 or 27EP4 tubes.

**UP-TO-THE-MINUTE CIRCUIT DESIGN.** Famous cascode turret-type tuner for utmost sensitivity. 5 microvolts at antenna terminals provides 20 v. peak to peak at kinescope grid. Split sound and picture IF system. 4 stages of video IF and 2 stages of video amplification plus 3 audio IF's—assure outstanding picture and sound reproduction, even in extreme fringe areas. Ferrite, high-efficiency, cosine, 90° yoke provides sharp focus across entire face of tube with no pin-cushion effect. Has phono input jack with front panel control and audio take-off jack for optional use with external amplifier.

**FEATURES:** Full 4 mc bandwidth, adjacent channel trap, noise saturation circuit, horizontal and vertical blanking of retrace lines. Front panel controls: AGC area switch, brightness, horizontal and vertical hold, volume-on/off, contrast-phono selector, channel selector and fine tuning. Rear panel controls: vertical centering, focus, height, vertical linearity, horizontal drive, peaking, linearity and AGC level control.

Supplied with all tubes and rectifiers. Quality 12" speaker. Less picture tube and brackets. Chassis designed for vertical mounting on side of cabinet. Width requirements: 40" for 27" tube and 36" for 24" rectangular tube. Chassis size: 19 3/4 x 16 1/4". Beautifully finished in gleaming nickel plate. For operation from 110-120 v. 60 cycle AC. Shpg. wt., 70 lbs. 98 SX 551. NET . . . . . 262.50

**MODEL 2430-9 UHF.** Same as above chassis, but has model TV101-U UHF converter (described at left) installed. Full coverage of all UHF and VHF channels from 2 to 83. Shpg. wt., 70 lbs. 98 SX 553. NET . . . . . 299.50

### Model C-30 Standard TV Chassis

An amazing value in a custom, big-picture TV chassis. The Model C-30 includes deluxe features required for full picture clarity and high sensitivity. 16 kilovolt high voltage supply—takes 17", 21" rectangular and 24" round picture tubes of the magnetic or low-voltage electrostatic focus types.

Deluxe features: 12-channel turret tuner provides 5 microvolt sensitivity—easily adaptable to UHF with tuner strips; 4-stage video IF with full 4 mc bandwidth; 3-stage audio IF; blanking circuit eliminates vertical retrace lines. AGC circuit minimizes airplane "flutter." Has phono input with front panel switch. With all tubes, rectifiers, 12" speaker; less picture tube and bracket. Size (HxWxD): with 17HP4, 18 3/4 x 21 3/4 x 20 1/2"; with 21EP4A, 23 x 22 x 24 1/2"; with 24BP4, 30 x 25 x 23 3/4". Chassis size: 21 3/4 x 16 1/4" including controls. For 110-120 volts, 60 cycles AC. Shpg. wt., 55 lbs. 98 SX 026. NET . . . . . 149.50

**MODEL C-30 UHF.** Same as above chassis, but has model TV101-U UHF converter (described at left) installed. Full coverage of all UHF and VHF channels from 2 to 83. Shpg. wt., 55 lbs. 98 SX 559. NET . . . . . 209.95  
40 SX 202. Universal picture tube mounting assembly for above. Wt., 2 lbs. NET . . . . . 4.95

VHF television chassis are supplied with complete instructions for installation of UHF series Q tuner strips. See page 202 for listing of series Q tuner strip sets. Write for River Edge TV Cabinet catalog.

#### 2430 Deluxe TV Chassis

Enjoy advanced, big-picture television with this deluxe chassis featuring latest engineering developments. For 17", 21" and 24" picture tubes.

**ADVANCED TV ENGINEERING.** Cascode turret-type tuner for extreme sensitivity of 5 microvolts for 20 v. peak-to-peak at kinescope grid. Covers new UHF channels by simple interchange of tuner strips. 4 stage video IF system. Ferrite core HV transformer for excellent horizontal linearity and retrace. Horizontal and vertical blanking. Syncro-strip intercarrier design.

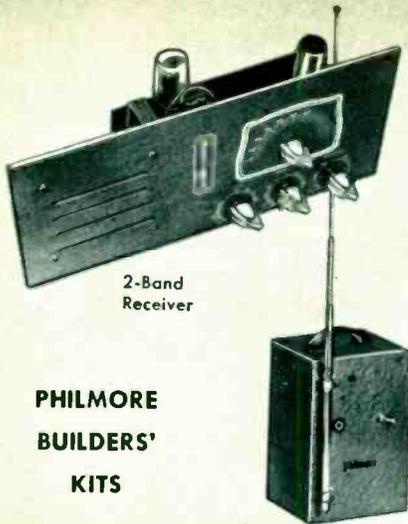
**EXTRA CIRCUIT FEATURES.** Full 4 mc bandwidth for maximum picture detail. Keyed AGC assures stable contrast and minimizes airplane "flutter." Phono input, plus switch to cut out picture tube. Audio take-off jack for external amplifier.

Supplied with all tubes, rectifiers, universal picture tube mounting bracket, and 12" PM speaker. Less picture tube. Size (HxWxD): with 17BP4A, 18 3/4 x 21 3/4 x 20 1/2"; with 21EP4A, 23 x 22 x 24 1/2"; with 24AP4, 30 x 25 x 23 3/4". For 110-120 volts, 60 cycles AC. Wt., 70 lbs. 97 SX 961. NET . . . . . 189.50

**MODEL 2430 UHF.** Same as above chassis, but has model TV101-U UHF converter (described at left) installed. Full coverage of all UHF and VHF channels from 2 to 83. Shpg. wt., 70 lbs. 98 SX 554. NET . . . . . 249.50

**MODEL 2431.** Same as model 2430 but with a push-pull audio output stage. Less audio take-off. Wt., 70 lbs. 97 SX 962. NET . . . . . 199.95

**MODEL 2431 UHF.** Same as above chassis, but has model TV101-U UHF converter (described at left) installed. Full coverage of all UHF and VHF channels from 2 to 83. Shpg. wt., 70 lbs. 98 SX 558. NET . . . . . 259.59



2-Band Receiver

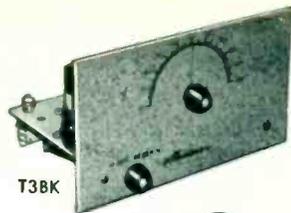
**PHILMORE BUILDERS' KITS**



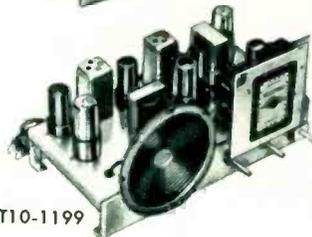
1-Tube Receiver



Radio Control Kit



T3BK



T10-1199

**Meissner Builders' Kits**

**T3BK AC-DC Trainer Receiver Kit**

Sensitive, regenerative-type AC-DC receiver. Covers standard broadcast band, 540 to 1500 kc, with plug-in coil supplied. Provides real "DX" coverage with short-wave coils listed below. Regenerative detector and pentode audio stage. Uses 1-6BJ6 and 2-50B5. Controls: On-Off-Regeneration and Tuning. Size: 7 3/4 x 4 1/2 x 4 1/2". With punched chassis, tubes, all parts and clear, easy-to-follow instructions. Less headphoners, wire and solder. For operation from 105-125 volts DC or 50-60 cycle AC. Shpg. wt., 2 1/2 lbs.

83 S 527. NET. 12.35

**Accessories**

Extra plug-in coils. \*Long wave; all others, short wave. Shpg. wt., 3 oz. each.

No.	Type	Range	NET
83 S 528	18-3500	170-540 kc*	1.76
83 S 530	18-3502	1.4-4.5 mc	.88
83 S 531	18-3503	3.2-8.2 mc	.88
83 S 532	18-3504	8-18 mc	.88
83 S 533	18-3505	15-34 mc	.88

DUAL HEADSET, American Bell 2000-ohm dual headset for above, 12 oz.

59 J 110. NET. 1.67  
83 C 100. Antenna kit. 1 lb. NET... 81c

**T10-1199 2-Band Superhet Kit**

A low-cost two-band receiver with high sensitivity and selectivity. Covers standard broadcast band plus 6-18 mc band for world-wide shortwave reception. Tuned RF stage—untuned mixer on both bands. Peaking circuit. Has combination on-off switch and volume control. 5" Alnico PM speaker delivers excellent tonal quality. Automatic volume control circuit minimizes fading. Tubes: 1-12SK7 RF amp., 1-12SA7 osc. conv., 1-12SK7 IF amp., 1-12SQ7 det.-AVC-1st audio, 1-35L6GT beam power output. Has 1-35Z5GT rectifier. Complete instructions with punched chassis, tubes, and all parts. Less wire and solder. 12x6x7 1/2" deep. For operation from 105-125 v. 50-60 cycle AC, or DC. Shpg. wt., 8 lbs.

83 S 455. NET. 29.40

**Meissner "How to Build" Manual**

Latest edition. Crammed with wealth of information for students, experimenters, servicemen and Amateurs. Covers all Meissner kits; basic radio theory; design and construction of AM and FM circuits, converters, audio amplifiers, power supplies, transmitters, VTVM, audio oscillator, oscilloscope, square wave generator, phono oscillator, etc. Also TV test pattern analysis. Fully illustrated with charts, formulas, schematic and pictorial diagrams, etc. 8 1/2 x 11". 160 pages.

37 K 034. Postpaid in U.S.A. 1.50

**Model 7001C 2-Band Receiver Kit**

High-quality, easy-to-build receiver. Covers entire broadcast band, plus 6-18 mc short wave band for thrilling foreign broadcasts, Ham and aircraft messages, etc. Regenerative circuit provides high sensitivity. Schematic and pictorial diagrams are clear and easy to follow. With 4" PM speaker. Tubes required: 50L6, 12SJ7, 35Z5 rectifier. Complete with all parts and hardware; less tubes, hookup wire, solder and antenna. 12 1/2" W, 5 3/4" H, 4 3/4" D. For 105-125 v., DC, or 50-60 cycle AC. Wt., 4 lbs.

83 S 032. NET. 11.76

83 C 100. Antenna Kit. 1 lb. NET... 81c

**Model 7001B 1-Tube Receiver Kit**

For beginners who want a simple building project. Tunes standard broadcast band from 535-1650 kc. Regenerative circuit assures good sensitivity. Uses: 1-12SJ7 tube; 1-35Z5 rectifier. With all parts and hardware; less tubes, wire and solder. 6 3/4 x 5 3/4 x 4". For 105-125 volts DC, or 50-60 cycle AC. Shpg. wt., 2 lbs.

83 S 031. NET. 7.35

DUAL HEADSET, 2000-ohm, 12 oz.

59 J 110. NET. 1.67

**Model RC-333TR Radio Control Kit**

Complete, easy-to-build radio control kit at very moderate cost. For control of model airplanes, boats, autos, etc. Consists of transmitter, receiver and pulse-type escapement. Highly dependable performance. **Transmitter:** Operates on 27.2 mc; crystal-controlled. Power output of 2.75 watts provides wide range of control. 3-section antenna telescopes from 34 to 90 inches. Coils are factory-wound. In metal case; has compartment for batteries, 6x6x3 3/4". **Receiver:** Subminiature. Parts mount on bakelite strip. Size, only 2 1/4 x 1 1/4 x 1 1/4". Weights only 3 1/2 ounces. Employs thyratron tube in highly sensitive super-regenerative circuit. FCC permit required for operation of radio control equipment. Permit is easily obtained—no examination. Kit is supplied complete with all parts, tubes, and transmitting crystal. Simple, step-by-step instructions include pictorial and schematic diagrams. Less batteries (below), wire and solder. Shpg. wt., 3 1/2 lbs.

83 SX 561. NET. 36.85

TRANSMITTER BATTERY KIT, Shpg. wt., 7 1/2 lbs.

80 J 653. NET. 6.06

RECEIVER BATTERY KIT, Shpg. wt., 12 oz.

80 J 654. NET. 1.67

**"Popular Mechanics" Diagrams**

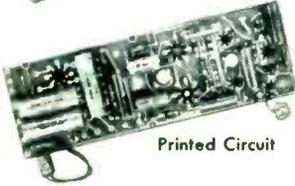
The leading radio sets and electronic devices published in *Popular Mechanics* magazine are clearly described on 17x22" blueprints. Up-to-date listing below includes newest circuits featured in 1954 issues of the magazine. Each piece of equipment diagrammed has withstood the acid test of successful construction and operation by thousands of *Popular Mechanics* readers, assuring excellent, easy-to-achieve performance in every case. Each blueprint includes all essential construction data and a complete matched list of parts. Information is presented in an unusually easy-to-understand manner.

- 38 K 236. R316. "Pop Corn Can" RF Signal Generator.
- 38 K 244. R337. 2-Tube "Pockette" Set.
- 38 K 254. R345. 2-Meter Transceiver.
- 38 K 259. R350. 50-Watt 10-Meter Xmitter.
- 38 K 271. R368. 50 Watt 5-Band Xmitter.
- 38 K 267. R360. Signal Booster for Short-wave Receivers.
- 38 K 272. R366. Crystal Set and Battery-Operated Amplifier.
- 38 K 274. R367. 3-Way Portable Receiver.
- 38 K 275. R368. 1-Tube AC-DC Loudspeaker Set.
- 38 K 276. R369. 3-Tube Pockette Receiver.
- 38 K 278. R371. Low-Cost, 3-Station Intercom System.
- 38 K 285. R378. 2-Tube Super Battery Set.
- 38 K 287. R380. Inexpensive Signal Tracer for Radio Servicing.
- 38 K 289. R382. 2-Tube Mini-Pal Portable.
- 38 K 292. R388. AC-Operated All-Wave Progressive Receiver (No. 2).
- 38 K 293. R389. Capacity-Operated Electronic Switch.
- 38 K 294. R391. Uranium Survey Meter with Audio Amplifier.
- 38 K 060. R394. "Handle-talkie" Pocket Receiver for Experimenters.

Postpaid in U.S.A. 3 for 1.00. EACH

- 38 K 061. R396. 3 Germanium Diode Crystal Receiver.
- 38 K 062. R398. Super-Fidelity Amplifier.
- 38 K 084. R400. Battery-Operated Progressive Receiver (No. 1).
- 38 K 067. R404. CW Xmitter for Novice Band.
- 38 K 069. R407. 4 1/2 Watt Versatile Amplifier.
- 38 K 077. R408. 1952 "Little Giant" Radio-Intercom System.
- 38 K 078. R411. Pre-Amp for Radio-Phonos.
- 38 K 079. R412. Tiny AC-DC Superhet.
- 38 K 080. R416. 20-watt Super Fidelity Audio Amplifier.
- 38 K 081. R417. 1953 "Little Giant" Hi-Fi Superhet Tuner.
- 38 K 082. R419. Applause Meter.
- 38 K 085. R421. Multi-purpose Battery-Operated Audio Amplifier.
- 38 K 086. R422. "Seven Seas Scout" Receiver.
- 38 K 087. R423. 1-Tube Loudspeaker Set.
- 38 K 088. R424. Super-Fidelity Phono.
- 38 K 089. R425. 1954 "Little Giant" Multi-Station Intercom.

40c



Printed Circuit

### UTC Linear Standard Hi-Fi Basic Amplifier Kit

MODEL MF. Unique, new 20-watt high-fidelity basic amplifier kit from this famous maker of audio components. Laboratory-developed after intensive research, to provide critical users with the utmost fidelity in music reproduction. Extremely simple to assemble.

Has printed circuit panel as large as the chassis with virtually all components pre-assembled and wired. Additional wiring involves only connection of 17 leads to screw terminals. Excellent for high-fidelity builders assembling their own systems or for modernization of systems. No controls—mounts in any out-of-the-way place. Smooth frequency response over entire audio range with minimum transient distortion. Multiple-loop feedback and network stabilization circuit; completely eliminate parasitic oscillation and assure extremely low distortion.

Rated Output, 20 watts. Intermodulation Distortion, .07% at 1 watt, 1% at 20 watts. Frequency response, +0, -1 db, 20-20,000 cps. Hum & Noise, 80 db below rated output. Feedback, 36 db. Speaker Outputs, 4, 8 and 16 ohms. Tubes: 1—12AX7, 2—6AU6, 2—5881; 1—5V4G rectifier. Size (with cover), 5 1/4 x 8 x 1 1/4". Air-vented cover finished in handsome baked gray enamel. Complete with tubes and comprehensive instruction manual. For 110-120 volts, 50-60 cycle AC. Shpg. wt., 26 lbs.

83 SX 099. List. \$180.00. NET. 108.00

### Kit Builders' Accessories

#### Drake Model 5 Soldering Iron

Lightweight, highly efficient 40-watt soldering iron. Highest grade nichrome heating element. Comfortable handle, 1/2" dia., pencil-type tip, 10" long. For 110-120 v., AC or DC. Shpg. wt., 3/4 lb.

46 N 505. NET. 1.15

#### Krauter 6" Needle-Nose Pliers

Rugged, precision-made needle-nose pliers. Simplifies work on crowded portion of chassis. Perfectly aligned side-cutters. Shpg. wt., 1/2 lb.

46 N 401. NET. 2.50

#### Xcelite Type R146 6" Screwdriver

High-quality 6" screwdriver with chrome-vanadium steel shaft and plastic handle, 1/4" dia. shaft. Overall length, 10". Shpg. wt., 6 oz.

45 N 796. NET. 63c

#### Kester Rosin-Core Solder

Handy tin of solder. Compounded of highest-grade tin and lead. Plastic rosin filled. Flows easily; makes perfect connections with minimum effort. Non-corrosive. Shpg. wt., 3 oz.

46 N 900. NET. 17c

#### Belden Type 8941 Hook-Up Wire

25-ft. roll. Tinned. No. 20 solid-copper conductor. Heavy cellulose-acetate black insulation. Shpg. wt., 6 oz.

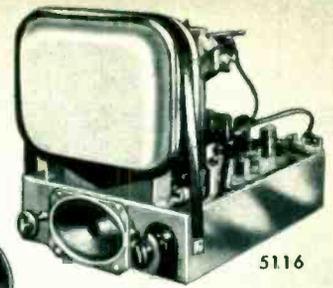
48 T 330. NET. 38c



630D24



TM-15P



5116



TM-15A

### Tech-Master TV Receiver and Hi-Fi Amplifier Kits

#### Type 630D24 Super Deluxe TV Kit

Tech-Master's "Super Deluxe" TV kit. Features an up-to-the-minute circuit employing a high-gain cascade turret tuner. Outstanding TV reception at a cost less than that of comparable commercial sets.

Engineered for amazingly easy construction. All major components are mounted on chassis ready for wiring. Easy to assemble—anyone with some knowledge of radio can build this kit. Pictorial diagrams guide each wiring step. No special tools required. For all kinescopes having up to 70° deflection. Based upon the time-tested RCA 630 circuit. Sensitivity of 5 to 10 microvolts; excellent for fringe area operation. 16 KV hi-voltage power supply provides outstanding picture brilliance. Keyed AGC circuit, 2-stage video amplifier, 4-stage pic IF, and full 4 mc bandwidth. Separate IF's for picture and sound. 12-channel cascade turret tuner; Series "Q" Standard Coil UHF strips (see page 202) may be inserted in place of unused VHF strips, for UHF reception.

With 26 tubes, 3 rectifiers, all parts and instructions. Size with 17BP4A picture tube mounted (HxWxD): 18 1/4 x 21 1/4 x 20 1/2"; with 21EP4A, 23 x 22 x 24 1/2"; with 24AP4, 30 x 25 x 23 1/2". Less picture tube, mask, wire and solder. For operation from 110-120 v., 60 cycles AC. Shpg. wt., 62 lbs.

83 SX 093. NET. 159.50

See page 65 for TV picture tubes. For picture tube masks, see page 219.

#### TM-15A 20-Watt Hi-Fi Amplifier Kit

An outstanding amplifier for the most discriminating hi-fi enthusiasts. Provides top-notch reproduction at moderate cost. Employs Williamson-type circuit for extremely wide response with negligible distortion. High-quality parts include an output transformer designed especially for use in Williamson-type circuits. Ideal for use with the finest hi-fi equipment available. All sockets, terminal strips and connectors are mounted—ready to wire.

**SPECIFICATIONS:** Rated Output: 20 watts. Response: ±1 db, 8-100,000 cps at 5 watts; ±1 db, 10-70,000 cps at 10 watts. Intermodulation and Harmonic Distortion: Both less than 0.25% at 10 watts and 0.45% at 15 watts. Hum and Noise: 70 db below 20 watts. Inverse Feedback: 20 db. Has no controls; high-impedance input for tuner or preamp. (See TM-15P at right.) Speaker Outputs: 4, 8 and 16 ohms. Tubes: 2—6SN7's, 2—5881; 5V4G rectifier.

Supplied complete with all tubes, parts, chassis, instructions. Less only hook-up wire and solder. Overall size: 9x12x6 1/2". For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 27 lbs.

83 SX 096. NET. 48.95

#### Model 5116 AC-DC TV Kit

An excellent, low-cost television receiver kit. Built to the same high standards of its predecessors (the 630TK and the "Blue Ribbon" kits), this kit gives you a 16-tube chassis whose excellent performance is equal to more expensive, commercially built sets. Delivers very sharp, steady picture and rich, high-quality audio. Anyone with some knowledge of radio can quickly and easily build this kit.

Takes 14" rectangular tube when operating from DC; takes either a 14" or 17" rectangular tube when using AC. Two-knob control for simple, easy tuning. New "hold" circuits keep picture steady. Easily adaptable for UHF; Series "G" UHF tuner strips (see page 202) may be inserted in place of unused VHF strips. Beam power audio output stage and 4x6" PM oval speaker delivers excellent tonal quality. Isolated chassis is shock-proof. Pre-aligned and tested IF; further alignment unnecessary.

Uses: 6AG5, 6SR7, 3—6CB6, 6J6, 6AL5, 6T8, 6AU6, 12A7, 12SN7, 25BQ6, 2—25L6, 25W4; 1X2 and selenium rectifier. With all parts, mounting brackets and tubes; less picture tube, mask, wire and solder. Size with 17BP4 picture tube (HWD): 17 1/4 x 15 1/4 x 20 1/4"; with 14BP4 picture tube, 16 1/2 x 14 x 19 1/4". For 110-120 volts, 40-60 cycle AC-DC. Wt., 30 lbs.

83 SX 090. NET. 99.95

#### TM-15P Preamplifier-Equalizer Kit

Extremely versatile preamplifier-equalizer. For control of Tech-Master TM-15A, at left, and other quality hi-fi amplifiers. Provides accurate equalization for proper response from standard and microgroove records. All sockets, terminals and connectors are mounted—ready to wire. Cathode-follower output.

**SPECIFICATIONS:** Four inputs: Magnetic cartridges; crystal cartridges; FM-AM-TV tuners; auxiliary input for tape recorder and wire recorder playback, etc. Controls: Four-position Input Selector Switch, Bass, Treble, Turnover-Kolloff, Gain and master power switch for associated amplifier and other equipment. Compensation for 78 rpm: Turnovers at 300 and 500 cps. Compensation for 33 1/3 and 45 rpm: Turnover at 400 cps; rolloff of 12 db at 10,000 cps. Bass Control: 15 db boost and attenuate at 20 cps. Treble: 15 db boost and attenuate at 20,000 cps. Cathode-follower output.

Takes power from TM-15A. Requires 125 v. DC at 6 ma and 6.3 v. at 0.6 amp when used with other amplifiers. Tubes: 12AX7 and 12AU7. With tubes, chassis, cabinet, and instructions. Less wire and solder. Size: 10 1/4 x 4 1/4". Shpg. wt., 4 lbs.

83 S 097. NET. 19.55

**FAMOUS KNIGHT**  
EASY-TO-ASSEMBLE, HIGH-QUALITY  
**BUILD-YOUR-OWN KITS**



**Modern Circuit Design—Quality Components**

For over a quarter of a century, Knight kits have been noted for their up-to-date design and outstanding performance. The 1955 Knight kits on these pages reflect the experience of leading kit design specialists. Circuits have been carefully engineered and laboratory tested for high operating efficiency. Quality components—all brand new—are used throughout. Design principles applied by experts assure ideal mechanical layout and ease of construction. A Knight kit gives you the most for your money.



**EASY TO ASSEMBLE.** Anyone can build a Knight kit. All panels are drilled, screen-printed and calibrated; chassis are formed and punched. No holes to drill, no dials to mark. Every part is included—from tubes to hardware. The only tools needed are a screwdriver, soldering iron and a pair of pliers. Complete, easy-to-follow instructions are supplied.

**Complete, Easy-to-Follow Instructions**

Every Knight kit is supplied with full instructions. Easy-to-read booklets include pictorial and schematic diagrams, detailed assembly instructions, parts list, etc.

Kits may be built from the pictorial diagrams alone—no wiring experience or knowledge of schematic symbols is necessary.

**Knight "Ocean Hopper" Receiver Kit**

Broadcast, Long Wave and Short Wave Reception



**A World of Fine Entertainment**

An easy-to-put-together, top-performing receiver kit truly worthy of its name! Employs a highly sensitive, regenerative-type circuit for excellent performance with only 2 tubes. Provides excellent headphone reception; may be used with any 3-4 ohm PM speaker on strong broadcast band stations. The "Ocean Hopper" is supplied with plug-in coil for covering full standard broadcast band; covers long wave and entire short wave band with coils listed below. A great little receiver for listening to thrilling foreign broadcasts, police, Amateurs and aircraft. All controls are mounted on the front panel: Main Tuning, Bandspread, Antenna Tuning, and Off-On-Regeneration. Tubes: 12AT6 detector and 50C5 audio output; 35W4 rectifier. Gray panel and clearly marked lucite main tuning knob. Size, 6x9½x5". With all parts and instructions; less extra coils, headphones, speaker, wire and solder. For 110-120 v., DC or 50-60 cycle AC. Shpg. wt., 5 lbs.

- 83 S 740. NET.....12.75
- HEADSET. 2000 ohms. Shpg. wt., 12 oz.
- 59 J 110. NET.....1.67
- ANTENNA KIT. With 50 feet of wire, insulators, etc., Shpg. wt., 1½ lbs.
- 83 C 100. NET.....81c
- PLUG-IN COILS. Additional coils for greater frequency coverage with the "Ocean Hopper." Shpg. wt., each, 3 oz.
- 83 S 741. LW. 155-470 kc. NET.....86c
- 83 S 742. SW. 1.65-4.1 mc.
- 83 S 743. SW. 2.9-7.3 mc. } NET
- 83 S 745. SW. 7-17.5 mc. } EACH.....74c
- 83 S 744. SW. 15.5-35 mc.



Under-Chassis View

BUY KNIGHT KITS FOR QUALITY AND VALUE

## Popular Knight 10-In-1 Radio Lab Kit

It's Easy to Build all this Electronic Equipment

- Sensitive Broadcast Receiver
- Amplifier for Use with Phono or Mike
- Wireless Phono Oscillator
- Home "Broadcast Station"
- Code Practice Oscillator
- Capacity-Operated Relay
- Signal Tracer for Repair Work
- Electronic Timer
- Electronic Switch
- Photo Relay

Beginners! Here's an instructive, fascinating kit specially designed for those just getting started in radio and electronics. The "10-In-1" kit enables you to build 10 circuits that really work! Low voltages; safe to build and operate. The only tools needed are a soldering iron, screwdriver and pliers. Perfect for self-teaching of circuit fundamentals.

The 10 circuits provide many hours of fun as well as practical applications. The "wireless" phono oscillator permits you to play records thru your radio from anywhere in the house; the capacity operated relay serves as a burglar alarm; the code practice oscillator enables you to "send" code thru your headphones or radio; the photo relay operates electrical appliances when actuated by light; etc.

Complete kit includes: 12SF5, 35L6GT tubes and 35Z5GT rectifier; mike; power transformer; relay; condensers; resistors; mounting board; hardware; and easy-to-understand, 12-page instruction manual with schematic and pictorial diagrams for each circuit. Less headphone, phototube, phototube socket, wire and solder. For 110-120 v., 50-60 cycle AC. 10 lbs.

83 S 265. NET..... 14.25

HEADPHONE. Single, 1000-ohm. Shpg. wt., 8 oz.

59 J 112. NET..... 96c

PHOTOTUBE. Shpg. wt., 5 oz.

77 P 003. NET..... 2.00

4-PRONG TUBE SOCKET. For phototube. Bakelite. Shpg. wt., 2 oz.

40 H 024. NET..... 7c

## Special Value Knight 6-In-1 Radio Lab Kit

Build These Projects:

- Standard Broadcast Receiver
- Wireless "Home Broadcaster"
- Code Practice Oscillator
- Code Practice Oscillator for Headset Use
- Signal Tracer
- Single Sine Wave Generator

Here's a smaller version of the famous "10-In-1" Radio Lab Kit, described above. 6 useful circuits. Features special design for quick, easy change from one circuit to the next. After basic wiring is completed, circuits can be changed without any soldering. Code practice oscillator permits "sending" code thru your radio for group code instruction or for practice use with headphone; single sine wave generator (1700 cps) is excellent for checking audio circuits. Includes 6SN7 tube, selenium rectifier, power transformer, all parts, mtg. board and complete instructions. Less headphone (also serves as mike), wire and solder. For 110-120 v., 50-60 cycles AC. Shpg. wt., 6 lbs.

83 S 770. NET..... 8.25

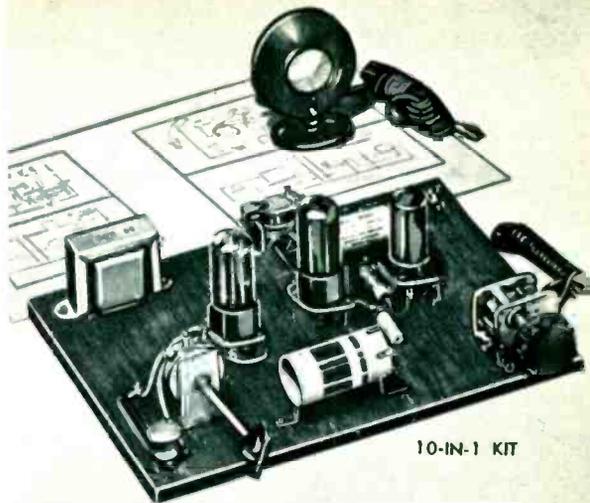
HEADPHONE. Single, 1000-ohm headphone. 8 oz.

59 J 112. NET..... 96c

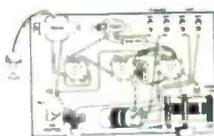
ANTENNA KIT. For use with receiver circuits of either kit listed above. Shpg. wt., 1½ lbs.

83 C 100. NET..... 81c

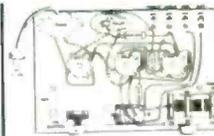
See Pages 90-92 for Listings  
of New Knight Test Instrument Kits



10-IN-1 KIT



Code Practice  
Oscillator

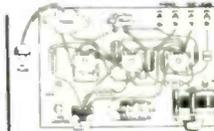


Wireless  
Broadcaster

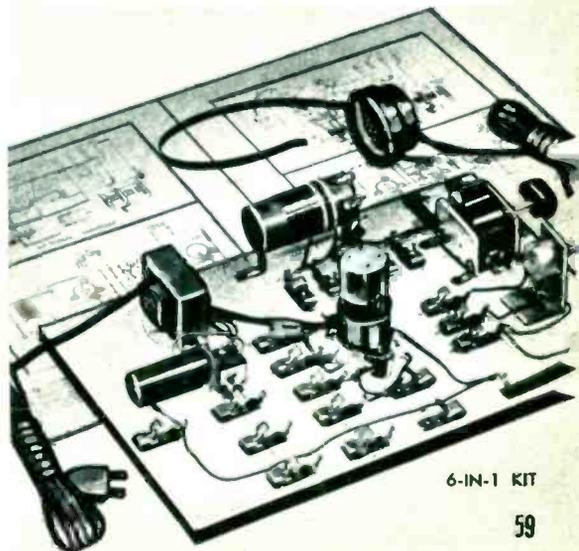
Build Instructive, Fascinating,  
Projects Like These With the  
10-IN-1 and 6-IN-1 Lab Kits



Broadcast  
Receiver



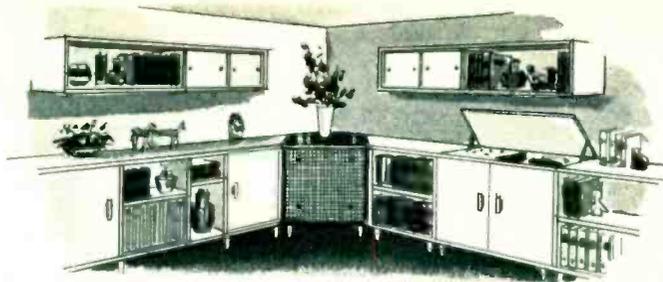
Signal  
Tracer



6-IN-1 KIT

**KNIGHT CUSTOM QUALITY  
10-WATT AND 5-WATT  
HIGH-FIDELITY  
AMPLIFIER KITS**

**Real Hi-Fi Performance  
at Build-It-Yourself  
Low Prices**



**10-Watt Kit**



**5-Watt Kit**

**Knight 10-Watt High-Fidelity Amplifier Kit**

- Ideal for low cost, home music systems
- Response,  $\pm 1$  db, 30-20,000 cps
- Separate bass and treble tone controls
- Fine fidelity, very low distortion

The Knight 10-watt high-fidelity amplifier kit provides wide response and smooth reproduction at exceptionally low cost. It offers many fine features not ordinarily found in a price range this low. Excellent for use as the vital, basic component in an economical, high-fidelity home music system. Features high gain; .5 volt drives amplifier to full 10 watts output. Construction of this fine unit is greatly simplified by a comprehensive manual, complete with schematic diagrams and ample illustrations. With no previous experience, almost anyone can assemble the amplifier from the pictorial diagrams alone!

**SPECIFICATIONS.** *Frequency Response:*  $\pm 1$  db, 30-20,000 cps at 10 watts. *Harmonic Distortion:* Less than 0.5% at 10 watts. *Intermodulation Distortion:* Less than 1.5% at full rated output. *On-Off-Volume control;* separate bass and treble controls. With input for crystal phono or tuner. Chassis is punched for preamp kit below (for use with magnetic cartridges). Matches 8 ohm speakers. *Tubes:* 2—6SN7GT, 2—6V6GT; 5Y3GT rectifier. Kit is complete with tubes, all parts, punched gray Hammerloid chassis. Less only wire, solder and preamp parts. With simplified instruction manual. *Size:* 7x13x6" deep. For 110-120 v., 50-60 cycle AC. Shpg. wt., 14 lbs.

83 SX 234. NET..... 23.95

**EQUALIZED PREAMP KIT.** Includes 6SL7 tube and all parts (no chassis; wired into amplifier chassis). Wt., 1 lb.

83 S 235. NET..... 2.95

**Knight 5-Watt High-Fidelity Amplifier Kit**

- Low-priced, true hi-fi kit
- Built-in magnetic cartridge preamp
- Push-pull audio output stage
- $\pm 1$  db, 40-15,000 cps

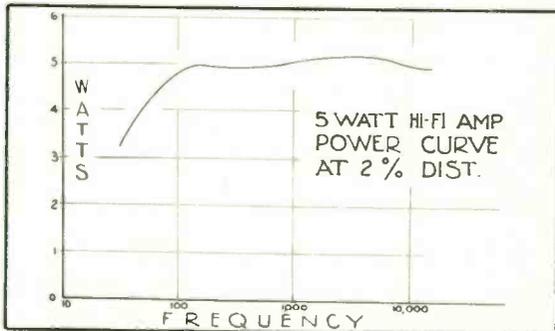
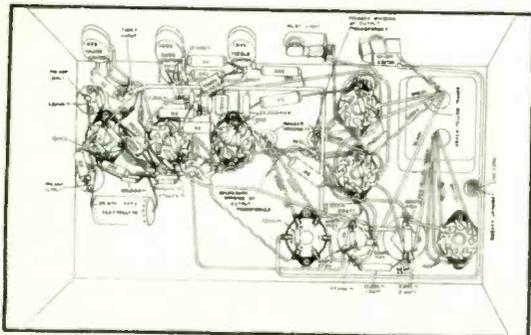
New Knight 5-watt high-fidelity amplifier kit features extremely compact construction. Excellent for chairside phonographs, bookshelf installation, etc., in custom home music systems. Start your high-fidelity installation now with this lowest-priced amplifier-preamp kit! "Plus" features include: True boost and attenuate circuits for fullest control over bass and treble; push-pull audio output stage; heavy feedback circuit; built-in preamp for GE and Pickering cartridges. Attractive formed metal cabinet is available (below) for use in table-top, bookshelf or "open" installations.

**SPECIFICATIONS.** *Output:* 5 watts. *Distortion:* Less than 2% at full rated output. *Frequency Response:*  $\pm 1$  db, 40-15,000 cps at 2½ watts output. *Hum and Noise Level (main amplifier):* -70 db. *Output Impedances:* 4 and 8 ohms. *Tubes:* 2—6V6GT, 1—6U8 (dual purpose—tone control and voltage amplifier), 1—12AX7 preamp (equalized for A&S record characteristic curve); 5Y3GT rectifier. *Controls:* On-Off-Volume; separate bass and treble. Matches hi-fi speakers of 4 to 8 ohms impedance. *Size:* 3x13x9½" deep. Size in metal cabinet: 3¼x13¼x10" deep. Attractive gray Hammerloid finish. With tubes, all parts, instruction manual, schematic and pictorial diagrams. Less cabinet; see below. For 110-120 v., 50-60 cycle AC. Shpg. wt., 9 lbs. Available November 15, 1954.

83 SX 795. NET..... 18.75

**METAL CABINET FOR ABOVE.** Pre-formed metal cabinet in attractive green crackle finish. Gives neat, fully finished appearance, ample ventilation. *Size:* 3¼x14x10" deep. Shpg. wt., 6 lbs.

83 SX 796. NET..... 3.50



## High-Quality Knight Portable Phono Kit

- Dual 6" speakers for room-filling sound
- Latest dual-stylus ceramic cartridge
- Acoustically tuned speaker enclosure
- Completely portable—use it in any room
- Famous name record changer

Precisely engineered, complete portable phonograph kit for playing all three record sizes (7", 10" and 12"), in all three speeds, 33 $\frac{1}{3}$ , 45 and 78 rpm. Compact and lightweight—yet it's packed with Knight super-value features for years of dependable, trouble-free performance. Faithful reproduction and room-filling sound are assured by the use of two quality 6" PM speakers. Speaker enclosure is acoustically tuned for fullest response. Amplifier employs feedback circuit for crisp, clear output. Famous-name, smooth operating changer. Set-down operation is completely automatic for all sizes of records. Constant-speed, dependable motor for wow-free operation. *Compare these features with those of other phonographs selling for much more!*

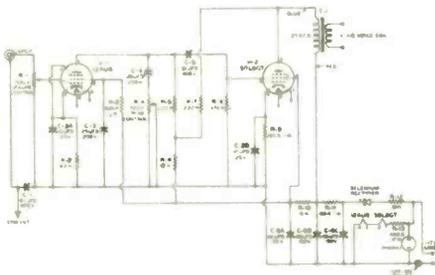
Quality ceramic cartridge of latest design for superb fidelity. Employs two *sapphire* styli—.001" tip for long-playing, microgroove records, .003" tip for standard 78 rpm records. The dual 6" speaker system gives astonishingly wide sound dispersion in any room. Complete, easy-to-follow drawings and pictorial diagrams permit extremely rapid completion—assembly can be completed in hours! Take pride in building this phonograph yourself and enjoy years of listening pleasure.

Ruggedly built case includes carrying handle and lid latches for easy portability. Attractive fabrioid cover features lined oak texture and green trim. Size: 10 $\frac{1}{2}$ "x 20 $\frac{1}{2}$ "x 17" deep. Complete with case, all parts, changer, tubes, speakers and instructions. Less only wire and solder. For 110-120 v., 60 cycles AC. Shpg. wt., 29 lbs. 83 SX 785. NET.....59.50

### Knight Phono Amplifier Kit

Here's a new low-cost, unusually compact phono amplifier that delivers excellent tonal quality. Presents unusual specifications in a moderately priced package. Compact chassis fits most portable phono cabinets: attractive styling allows use outside of case. Works equally well with crystal or ceramic cartridges. Provides full output with less than .25 volt input. Delivers 1-watt output at less than 3% distortion, and 1 $\frac{1}{2}$ -watt output before clipping. 2-watt peaks. Employs pentode voltage amplifier, unique in this type of circuit, to permit over 8 db of inverse feedback. This negative feedback accounts for low distortion and hum levels. Tone control permits adjustment of high frequency response and balance. AC power takeoff at rear for phono motor. Matches any 3 to 4-ohm speaker. Tubes: 1—12AU6, 1—50L6; selenium rectifier. Size: 4 $\frac{1}{2}$ "x 7"x 4" deep. Gray Hammerloid finish. With tubes, all parts and easy-to-follow instructions; less wire and solder. For 110-120 v. DC, or 60 cycles AC. Shpg. wt., 3 lbs. 83 S 790. NET.....8.50

See Pages 301-304 for Complete Index.



Portable Case



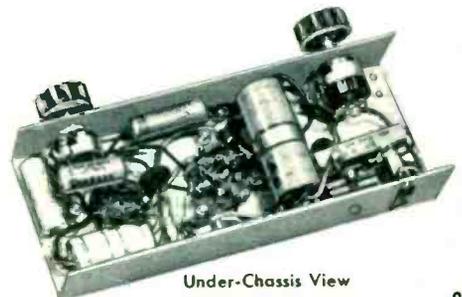
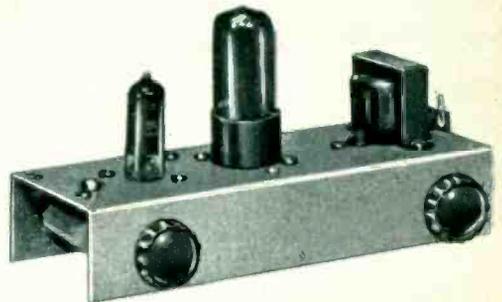
Automatic Changer



Amplifier



Dual Speakers



Under-Chassis View

**An Ideal Kit For Beginners**



**Popular Knight Crystal Set Kit**

Designed for Excellent Local Reception

- Fixed-type Germanium Crystal
- Variable Condenser
- Low Cost

Thousands of beginners have launched an exciting start in radio by building the Knight crystal set kit. Delivers loud and clear headphone reception of local broadcast stations. Use a good antenna, such as the antenna kit below, and you'll be delighted with the results! Incorporates features that put it in a class all by itself. A fixed-type germanium crystal diode detector assures high sensitivity and simple operation—crystal does not require adjustment; always gives peak performance. Employs specially designed "Hi-Q" coil; provides very high efficiency as well as excellent selectivity. A variable condenser, of the same type as used in regular radio sets, provides smooth, effortless tuning. Easy-to-understand instruction pamphlet includes pictorial and schematic diagrams—anyone can easily build the Knight crystal set. With all parts, including coil form, coil wire, crystal, condenser and 4x6½" base-board. Less only antenna, headphones, hookup wire and solder. Shpg. wt., 1 lb.

83 S 261. NET.....2.45

HEADPHONES. Dual 2000-ohm headset. Wt., 12 oz.

59 J 110. NET.....1.67

ANTENNA KIT. Includes 50 feet of antenna wire. 25-ft. lead-in, insulators, etc. Shpg. wt., 1½ lbs.

83 C 100. NET.....81c



**Knight 2-Tube Battery "DX-er" Kit**

Low-cost receiver kit. Uses plug-in coils for coverage from 550 kc to 31.5 mc—broadcast band and short-wave. Low-drain, miniature tubes—battery life exceeds 300 hours! Two tubes; 1S5 detector and 1S5 audio. For headphone use only. Controls: Main tuning, band-spread and sensitivity. With all parts, tubes, and 2 broadcast band coils. Instructions include schematic and pictorial diagrams. Less batteries (requires two "B" batteries and one "A" battery), headphones, short-wave coils, antenna, wire and solder. 5x5x5½". Shpg. wt., 5 lbs.

83 S 309. NET.....11.75

HEADPHONES. Dual 2000-ohm headset. Wt., 12 oz.

59 J 110. NET.....1.67

"B" BATTERY. Type M30 45-volt "B" battery. Two required. Shpg. wt., each, 2 lbs.

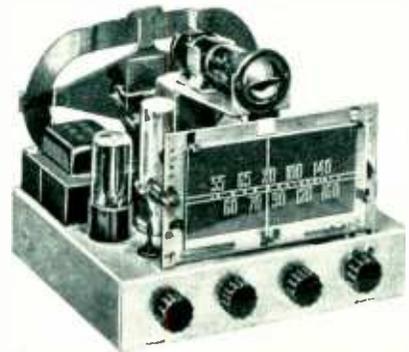
80 J 546. NET EACH.....1.93

"A" BATTERY. Type 4F 1½-volt "A" battery. One required. Shpg. wt., 1½ lbs.

53 J 003. NET.....89c

SHORTWAVE COILS. Set of four plug-in coils. Covers 1.3 to 31.5 mc. Shpg. wt., 2 lbs.

60 H 680. NET.....2.45



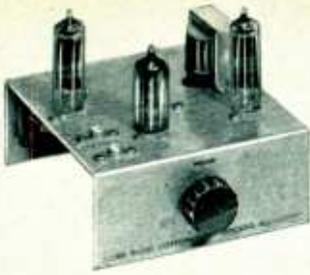
**Knight Hi-Fi AM Tuner Kit**

An easy-to-build, superheterodyne tuner for high-fidelity AM reception. Features wide-bandpass IF circuit—utilizes full bandwidth of AM signals. "Magic Eye" indicator for simple, highly accurate tuning. Has loop antenna for excellent reception of local stations; may also be used with outdoor antenna.

Includes 3-position function selector switch and 2 high-level inputs to permit convenient use with other music system components. Switch selects AM reception or either of the 2 inputs. Inputs accommodate crystal or ceramic phono, FM tuner, etc. Also Off-On-Volume control and tone control. Output may be fed into phono or tuner input of any amplifier. Tubes: 6SA7 converter, 6SK7 IF amplifier, 6SQ7 detector-AVC-audio; 6E5 "magic eye" tuning indicator and 5Y3GT rectifier.

Detailed instruction manual includes both schematic and pictorial diagrams. Can easily be built from pictorial diagram alone—no technical knowledge is required for assembly. Complete with tubes, hardware, punched chassis, dial, all parts, etc. Less only hookup wire and solder. Size, 8x8x6¼". For 110-120 volts, 50-60 cycles AC. Shpg. wt., 8 lbs.

83 SX 232. NET.....28.45



## Practical and Instructive Knight "Build-Your-Own" Kits

### Wireless Broadcaster Kit

Here's an improved version of the Knight wireless broadcaster. For "broadcasting" with phonograph or microphone to any standard radio set, up to 50 feet away—without any connection to set. May be used with crystal cartridge, magnetic cartridge, or mike (crystal or high-impedance dynamic). Now includes separate Class A Heising modulator and inverse feedback to reduce distortion to a minimum. Broadcasts unusually clear, well-modulated signal. High-gain stage with equalizer permits using magnetic cartridge without need for external preamp; equalizer may be disconnected to permit use with mike. Tubes: 12AX7 and 2—50C5; also selenium rectifier. With tubes, chassis, all parts, instructions and diagrams.  $4\frac{1}{2} \times 5 \times 6$ ". For 110-120 volts DC or 50-60 cycles AC. Shpg. wt., 3 lbs. Available Nov. 15, 1954.

83 S 705. NET.....9.95

**KNIGHT CRYSTAL MIKE.** Quality mike for above. 5-ft. cable. 1 lb.  
99 S 556. NET.....3.95

### Phono Oscillator Kit

The ever-popular Knight economy-model phono oscillator. It's low in price, but delivers first-rate performance. Use it with any crystal phono for "broadcasting" recorded music to any standard radio set up to 50 feet away. Requires no direct connection to radio set. Operates on any frequency between 600 and 800 kc. Oscillator may be located in any part of the house. Carefully designed circuit delivers excellent, full-bodied tonal quality. Has controls for adjustment of modulation level and selection of clear frequency on radio set. Uses 50L6GT modulated oscillator and 35Z5GT rectifier. Kit is supplied complete with all parts and easy-to-follow assembly instructions. Instructions include schematic and pictorial diagrams—can quickly and easily be wired from pictorial diagram alone. With tubes, and punched chassis. Less only wire and solder. Size,  $4\frac{1}{4} \times 4\frac{1}{4} \times 4\frac{1}{2}$ ". For operation from 110-120 volts DC or 50-60 cycles AC. Shpg. wt., 1 lb.

83 S 760. NET.....5.95

### Battery Charger Kit

Here's a battery charger kit at unusually low cost. Charges 6-volt storage batteries. Bridge-type circuit with efficient, trouble-free selenium dry-disc rectifiers. Charging rate tapers from 4 to 2 amperes. Pilot light indicates correct connection of cables to battery; lights if cables are connected correctly. Primary of transformer is fused. Complete with rectifiers, transformer, punched chassis, AC cord and plug, and DC leads with battery clips. Instructions include schematic and pictorial diagrams.  $3\frac{5}{8} \times 6\frac{1}{8} \times 5$ ". For 110-120 volts, 60 cycles AC. Shpg. wt., 6 lbs.

83 S 780. NET.....8.45

**2-VOLT ADAPTER KIT.** Permits using above for charging 2-volt storage batteries. 6 oz.

83 S 781. NET.....1.19

**"A" SUPPLY ADAPTER KIT.** Filters output of charger to permit use as 6.3-volt, 4-amp DC filament supply. Wt., 6 oz.

83 S 782. NET.....1.49

### Knight Photoelectric Relay Kit



Highly dependable photoelectric cell kit. Serves as "heart" of burglar alarm systems, lighting control systems, door openers, etc. Controls low-voltage (24 v. or less) bell, chime, light, motor, or similar devices. Relay contacts rated at 2 amps. Complete with black-crackle metal case, photocell, 50L-6GT tube, relay, wire and solder. Instructions include schematic and pictorial diagrams.  $5\frac{3}{4} \times 5\frac{1}{4} \times 2$ ". For 110-120 volts DC or 50-60 cycles AC. Shpg. wt.,  $2\frac{1}{2}$  lbs.

83 P 710. NET.....10.66

**LIGHT SOURCE KIT.** Light source for use with above kit. Covers distances up to 10 feet. With bulb. Size,  $4\frac{3}{4} \times 2\frac{1}{2}$ ". Shpg. wt.,  $2\frac{1}{2}$  lbs. Not illustrated.

83 P 715. NET.....6.43

**REPLACEMENT PROJECTION BULB.** For light source, above. Shpg. wt., 5 oz.

77 P 024. NET.....1.35

### Popular Knight Builders' Diagrams

Easy-to-follow instructions on assembly, adjustment and operation of Knight kits. Include schematic and pictorial diagrams, construction hints and parts list. \*Available Nov. 15, 1954.

38 K 058. Vacuum Tube Voltmeter.

38 K 165. Tube Tester.

38 K 166. \*AM Signal Generator.

38 K 167. \*5" Oscilloscope.

38 K 168. Volt-Ohm-Milliammeter.

38 K 169. \*Audio Generator.

38 K 170. \*Signal Tracer.

38 K 059. 10-Watt Hi-Fi Amplifier.

38 K 171. \*5-Watt Hi-Fi Amplifier.

38 K 172. AC-DC Phono Amplifier.

38 K 053. Hi-Fi AM Tuner.

38 K 173. Portable Phonograph.

38 K 160. 3-Way Portable Radio.

38 K 161. "Ocean Hopper" Receiver.

38 K 048. "DX-er" Receiver.

38 K 050. Crystal Set.

38 K 044. "10-in-One" Kit.

38 K 164. "6-in-One" Kit.

38 K 176. "Ranger" Superhet Radio.

38 K 163. Battery Charger.

38 K 177. Photo Relay.

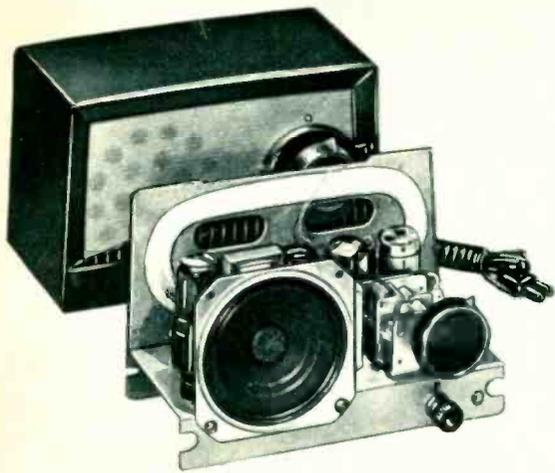
38 K 178. \*Wireless Broadcaster.

38 K 179. Phono Oscillator.

38 K 180. \*Variable Frequency Oscillator.

EACH, Postpaid in U.S.A. ....10c

**Famous Knight Top Quality  
Build-Your-Own Kits**



**ANYONE CAN BUILD  
THIS POWERFUL  
TRUE-TONED AC-DC  
RADIO RECEIVER  
AT LOW COST**

**Knight "Ranger II" AC-DC Superhet Radio Kit**

Here's a remarkably fine table radio in kit form. Careful engineering assures that it will be easy to construct in your home workshop or on your kitchen table. Can be assembled by the novice with no previous radio experience. The clear, step-by-step instructions and generous-sized diagrams make construction easy and fun. An excellent aid to understanding radio. No special tools or instruments required. The entire job can be done with a soldering iron, screwdriver, and pliers.

Covers a range from 540 to 1680 kc receiving the entire broadcast band and exciting police calls. Fine quality Alnico V speaker and acoustically designed cabinet for clear, full tone. Sensitive superheterodyne circuit includes automatic volume control to reduce blasting and fading. Cadmium-plated steel chassis. All metal parts are die-stamped to assure perfect fit. Ball bearing tuning condenser for smooth operation. Smart brown plastic case, with handsome gold mesh grille insert. Very attractive in any room. Size, 6x9x5".

The new Knight "Ranger II" is supplied with the following tubes: 12SA7GT—mixer; 12SK7GT—IF amplifier; 12SQ7GT—detector-AVC-audio; 50L6GT—audio output. Rectifier is a 35Z5GT. Efficient pre-formed loop antenna for maximum sensitivity. Construction of this quality radio will reward the builder with years of dependable service and the pride of having made it himself. Complete with tubes, cabinet, speaker, all parts, hardware, and complete easy-to-follow instructions. Less only wire and solder. For operation from 105-125 volts DC, or 50-60 cycles AC. Shpg. wt., 8 lbs.

83 S 735. NET.....16.75

See page 57 for listing of kit-builders' selected tools, solder, and hook-up wire. Other Knight "Build-Your-Own" kits listed on pages 58 to 63.

**Knight 3-Way Portable Radio Kit**

A top-performing 3-way portable AM receiver—at unusually low cost. Covers full standard broadcast band, from 535 kc to 1650 kc. Delivers excellent reception whether operating from AC, DC, or self-contained batteries. Anyone can build it, even without previous experience. Large, detailed diagrams make assembly remarkably easy—instructions are simple to follow.

Sensitive superhet circuit is specially designed for use with the new type long-life batteries (listed below). Large chassis eliminates crowding of parts. 5" Alnico V speaker for clear, full tone. Highly efficient ferrite loop-stick antenna for extra-sensitive reception. Tubes: 1R5 converter, 1U4 IF amplifier, 1U5 detector-AVC-audio, and 3V4 audio output.

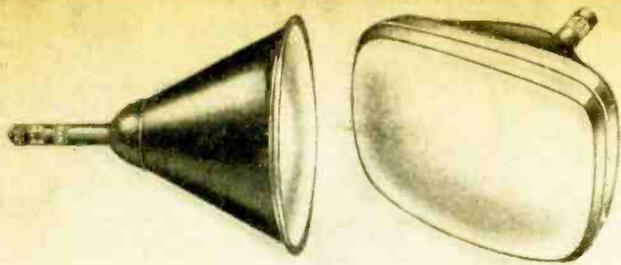
Handsome wood cabinet, covered with mahogany and gray leatherette; contrasting gold trim. Leather carrying handle. Size, 7½x10¼x5¼". Complete with tubes, all parts—down to the smallest piece of hardware, and the clear, easy-to-follow instruction manual. Less only wire, solder, and batteries. For 105-125 v. DC, 50-60 cycles AC, or batteries. Shpg. wt., 6 lbs.

83 S 730. NET.....18.75

BATTERY KIT FOR ABOVE. Consists of 2 1½ v. "A" batteries and 1 67½ v. "B" battery. Shpg. wt., 1¼ lbs.

80 J 651. NET.....2.28





# TV PICTURE TUBES



All tubes have magnetic focus and deflection, except electrostatic focus and deflection, and electrostatic focus and magnetic deflection. All tubes larger than 8BP4 are black face type. Number prefix indicates size of tube. †Frosted, non-glare face. \*Have new cylindrical glass plate to minimize reflections. ‡Has new "Zero Focus" gun. \*\*Aluminized. Mfrs: DUM, Dumont; RCA, Radio Corporation of America; RAY, Raytheon; NAP, North American

Phillips; SEC, Sheldon Electric; RAU, Rauland. Prices include Excise Tax. Shipped by express only. All tubes are fully guaranteed. When ordering, give the complete stock number, which consists of the Department No. and the Manufacturer's Tube Type. The Department number represents the exact location of the tube in our stocks—speeds up your shipment. Give Stock Number thus: AX3-16AP4A.

Stock No.		Mfr.	List	NET EACH
Dept.	Type			
AX3	3KP4†	RCA	\$23.50	17.50
AX5	3NP4	NAP		22.00
AX3	5TP4†	RCA	60.00	45.00
AX3	7DP4†	RCA	31.50	26.20
AX3	7JP4†	RCA	26.00	19.50
AX4	7JP4†	RAY	26.00	19.50
AX4	8BP4†	RAY	30.50	23.00
AX3	10BP4A	RCA	28.00	15.00
AX4	10BP4A	RCA	28.00	15.00
AX3	10FP4A	RAY	35.00	26.00
AX4	10FP4A	RAY	35.00	26.00
AX3	12KP4A	RCA	39.50	29.50
AX4	12KP4A	RAY	39.50	29.50
AX3	12LP4A	RCA	32.00	18.10
AX4	12LP4A	RAY	32.00	18.10
AX5	B-1034	DUM	31.75	23.75
AX4	14BP4	RAY	35.00	19.70
AX3	14CP4	RCA	35.00	19.70
AX4	14CP4	RAY	35.00	19.70
AX3	14EP4	RCA	35.00	19.70
..... 15DP4 Replaced by B-1014P4				
AX5	B-1014P4	DUM	35.50	26.50
AX3	16AP4A	RCA	46.00	31.00
AX4	16AP4A	RAY	42.00	31.00
AX3	16DP4A	RCA	39.00	29.25
AX4	16DP4A	RAY	40.00	29.25
AX5	16FP4	DUM	33.00	24.75
AX3	16GP4	RCA	46.00	31.00
AX4	16GP4	RAY	42.00	31.00
AX3	16GP4B§	RCA	46.00	31.00
AX4	16GP4B§	RAY	42.00	31.00
AX5	16HP4A	SEC	36.65	27.50
AX5	16JP4A	SEC	33.00	24.75
AX3	16KP4	RCA	37.00	23.00
AX4	16KP4	RAY	37.00	23.00
AX4	16KP4A**	RAY	43.00	32.25
AX3	16LP4A	RCA	40.00	30.00
AX3	16RP4	RCA	37.00	23.00
AX4	16RP4	RAY	37.00	23.00
AX3	16TP4	RCA	37.00	23.00
AX4	16TP4	RAY	37.00	23.00
AX3	16WP4A	RCA	40.00	30.00
AX4	16ZP4	RAY	40.00	30.00
AX4	17AP4	RAY	35.00	26.00
AX4	17AVP4†	RAY	38.00	25.00
AX3	17BP4A	RCA	36.00	22.65
AX4	17BP4A	RAY	36.00	22.65
AX4	17BP4B**	RAY	35.00	26.00
AX3	17CP4§	RCA	42.00	31.00
AX4	17CP4§	RAY	42.00	31.00
AX3	17GP4§	RCA	51.00	38.00
AX4	17GP4§	RAY	51.00	38.00

Stock No.		Mfr.	List	NET EACH
Dept.	Type			
AX3	17HP4†	RCA	\$36.00	23.85
AX4	17HP4†§§	RAY	36.00	23.85
AX3	17JP4	RCA	39.00	23.85
AX4	17JP4	RAY	36.00	23.85
AX3	17LP4†*	RCA	36.00	23.85
AX4	17LP4†*	RAY	36.00	23.85
AX3	17QP4*	RCA	36.00	22.65
AX4	17QP4*	RAY	36.00	22.65
AX3	17TP4†	RCA	42.00	31.00
AX3	19AP4A	RCA	59.00	39.60
AX4	19AP4A	RAY	53.00	39.60
AX3	19AP4B§	RCA	59.00	39.60
AX4	19AP4B§	RAY	53.00	39.60
AX3	20CP4	RCA	51.50	28.15
AX4	20CP4	RAY	51.50	28.15
AX4	20CP4A	RAY	51.50	28.15
AX5	20CP4D**	SEC	46.65	35.00
AX4	20DP4A	RAY	51.50	28.15
AX3	20MP4	RCA	54.00	40.50
AX3	21AP4§	RCA	61.00	45.50
AX4	21AP4§	RAY	61.00	45.50
AX3	21EP4	RCA	55.00	32.30
AX3	21EP4A*	RCA	54.00	32.30
AX4	21EP4A**	RAY	43.00	32.25
AX5	21EP4B**	SEC	45.45	34.10
AX3	21FP4A†*	RCA	56.00	33.70
AX4	21FP4A†*	RAY	45.00	33.75
AX5	21FP4C**	SEC	47.60	35.75
AX5	21KP4A†*	DUM	51.25	38.50
AX3	21MP4†	RCA	64.00	48.00
AX4	21MP4†	RAY	64.00	48.00
AX5	21WP4A**	SEC	44.90	33.70
AX3	21YP4†	RCA	51.75	33.00
AX4	21YP4†	RAY	54.00	33.00
AX4	21YP4A**	RAY	54.00	33.00
AX3	21ZP4A	RCA	50.00	33.00
AX4	21ZP4A	RAY	54.00	33.00
AX3	21ZP4B**	RCA	54.00	35.75
AX4	21ZP4B**	RAY	54.00	35.75
AX5	24AP4	RAU	120.00	90.00
AX4	24CP4	RAY	82.75	62.00
AX3	24CP4A**	RCA	84.25	63.25
AX4	24CP4A**	RAY	84.25	63.25
AX4	24DP4†	RAY	82.75	62.00
AX4	24DP4A†**	RAY	84.25	63.25
AX5	24VP4A**	SEC	66.00	49.50
AX5	27AP4	RAU	133.50	102.50
AX4	27EP4**	RAY	126.50	95.00
AX3	27MP4§	RCA	143.00	107.00
AX4	27RP4**	RAY	126.50	95.00
<b>New RCA Color Tube:</b>				
AX3	15GP22†	RCA	265.00	235.00

## NEW SHELDON HI-PO TV TUBES



Type 667 Rectifier. New B-plus booster tube for providing higher voltage. Replaces standard 5U4G tube. Same as 5U4G, but provides greater low voltage supply by 25 to 35 volts. Excellent for use in areas where line voltage is below normal; "peps up" old TV receivers; increases height and width of picture. 3 oz.

Type 6578 Double Triode. Replaces 6SN7GT; provides higher output. Shpg. wt., 3 oz.

Tube Type	List Price	NET EACH	
		In Quantities of:	
		1 to 5	6 to 49
567	\$2.70	1.51	1.43
6578	4.20	2.35	2.22

On 50 or more, deduct additional 10%

## RCA TUBE LITERATURE, SERVICE AIDS AND PROMOTION DISPLAYS

- 37 K 575. RC16. TUBE MANUAL. Latest edition. No charge with order for 15 tubes. NET..... 60¢
- 37 A 059. 1275-F. TUBE CHARACTERISTICS BOOKLET. 24 pages. No charge with tube order. NET..... 10¢
- 38 A 485. 1F9940. COLOR-CODE PENCIL. Revolving barrel gives values. No charge with order for 30 tubes. Wt., 6 oz. NET..... 1.76
- 80 AX 983. 3F89. SPINNING MOTION SIGN. 15" dia. With bulbs. 6' chain. motor. For 110 v. A.C. No charge with order for 75 tubes. Wt., 10 lbs. NET..... 8.50
- 38 A 379. TVS-1030. TV SERVICING. 45 pages. No charge with order for 3 tubes. NET..... 35¢
- 38 A 380. TVS-1031. TV SERVICING SUPPLEMENT. No charge with tube order. NET..... 15¢



38 A 377. 3F927. CARRYING STRAP. For carrying up to 24" CRT cartons. No charge with order for 30 tubes. 1 lb. NET..... 2.00

On all RCA sales aids purchases, 1 kinescope equals 35 receiving tubes.



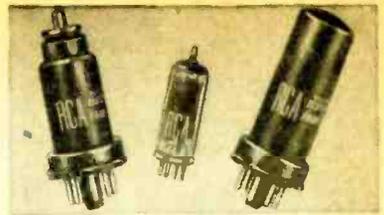
# RCA Receiving Tubes

The Great Name in Electronic Tubes. RCA Radiotrons—in the famous red and black safety cartons—are universally known as the quality line of perfect tubes. See page 65 for RCA sales aids and technical literature—available without cost through your purchase of RCA tubes. As new tubes are released, we will stock them. *Tubes may be assorted for quantity prices. In lots of 50 and over deduct an additional 10% from the 6 to 49 lot prices.*

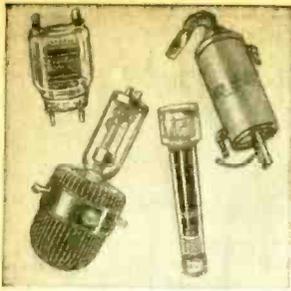
Tube Type	List Price	NET EACH In Quantities of:		Tube Type	List Price	NET EACH In Quantities of:		Tube Type	List Price	NET EACH In Quantities of:	
		1 to 5	6 to 49			1 to 5	6 to 49			1 to 5	6 to 49
OA2	\$1.75	1.26	1.26	3A3	\$2.90	1.62	1.53	6BH6	\$2.30	1.29	1.22
OA3	2.65	1.32	1.32	3A8GT	5.00	2.79	2.65	6BJ6	1.95	1.09	1.03
OA4G	2.90	1.45	1.45	3B7/1291	5.70	3.18	3.02	6BJ7	2.45	1.37	1.30
OB2	1.95	1.39	1.39	3C6/XXB	3.75	2.10	1.99	6BK5	2.60	1.45	1.38
OC3/VR90	3.35	1.70	1.70	3D6/1299	4.80	2.68	2.54	6BK7A	3.35	1.87	1.77
OC3	2.65	1.32	1.32	3LF4	3.00	1.68	1.59	6BL7GT	3.40	1.90	1.80
OD3	2.65	1.32	1.32	3Q4	2.15	1.20	1.14	6BN6	3.35	1.87	1.77
OY4	5.00	2.79	2.65	3Q5GT	2.80	1.56	1.48	6BQ6GT	3.55	1.98	1.88
OZ4	1.65	.92	.87	3S4	2.10	1.17	1.11	6BQ7A	3.25	1.82	1.72
OZ4G	1.65	.92	.87	3V4	2.10	1.17	1.11	6BX7GT	3.60	2.01	1.91
1A3	2.50	1.40	1.32	6AZ4	1.55	.87	.82	6BY6G	3.05	1.70	1.61
1A4P	4.05	2.26	2.14	6T4	5.00	2.79	2.65	6BY6	1.85	1.03	.98
1A6GT	2.05	1.15	1.09	6U4G	1.55	.87	.82	6BZ7	3.45	1.93	1.83
1A6	3.60	2.01	1.91	6V4G	2.55	1.43	1.35	6C4	1.45	.81	.77
1A7GT	2.45	1.37	1.30	6W4GT	1.75	.98	.93	6C5	1.95	1.09	1.03
1AC5	3.00	1.68	1.59	6X4G	2.00	1.12	1.06	6C5GT	2.10	1.17	1.11
1AD5	3.00	1.68	1.59	6Y3G	1.35	.75	.71	6C6	2.50	1.40	1.32
1AG4	2.85	1.59	1.51	6Y3GT	1.20	.67	.64	6C8G	3.90	2.18	2.06
1AH4	2.85	1.59	1.51	6Y4G	1.70	.95	.90	6CB6	1.95	1.09	1.03
1AJ5	2.70	1.51	1.43	6Y4GT	1.55	.87	.82	6CD6G	4.70	2.63	2.49
1AK4	6.00	3.35	3.18	6Z3	2.00	1.12	1.06	6CF6	2.15	1.20	1.14
1AK5	6.00	3.35	3.18	6Z4	3.30	1.84	1.75	6CL6	3.10	1.73	1.64
1AX2	2.75	1.54	1.46	6A3	3.90	2.18	2.06	6CS6	2.05	1.15	1.09
1B3GT	2.45	1.37	1.30	6A6	2.85	1.59	1.51	6CU6	4.60	2.57	2.43
1B4P	4.05	2.26	2.14	6A7	2.75	1.54	1.46	6D6	2.50	1.40	1.32
1B6/25S	3.60	2.01	1.91	6A8	2.70	1.51	1.43	6D8G	3.50	1.96	1.85
1B7GT	3.50	1.96	1.85	6A8G	2.75	1.54	1.46	6DC8	2.35	1.31	1.24
1C5GT	2.60	1.38	1.32	6A8GT	2.75	1.54	1.46	6E5	2.15	1.20	1.14
1C6	3.50	1.96	1.85	6AB4	1.80	1.01	.95	6F5	2.20	1.23	1.16
1D5GP	4.05	2.26	2.14	6AB5/6N5	3.15	1.76	1.67	6F6GT	1.85	1.03	.98
1D8GT	4.05	2.26	2.14	6AB7	3.60	2.01	1.91	6F6	2.45	1.37	1.30
1E8	3.00	1.68	1.59	6AC5GT	3.00	1.68	1.59	6F6G	2.00	1.12	1.06
1F4	2.80	1.56	1.48	6AC7	3.10	1.73	1.64	6F6GT	2.00	1.12	1.06
1F6G	2.80	1.56	1.48	6AD7G	3.90	2.18	2.06	6F7	3.90	2.18	2.06
1F6	4.05	2.26	2.14	6AF4	3.45	1.93	1.83	6F8G	3.90	2.18	2.06
1F7G	4.05	2.26	2.14	6AF6G	3.15	1.76	1.67	6F8G	2.75	1.54	1.46
1G4GT	2.60	1.45	1.38	6AG5	2.00	1.12	1.06	6H6	1.30	1.01	.95
1G5G	3.25	1.82	1.72	6AG7	3.50	1.96	1.85	6H6GT	2.10	1.17	1.11
1G6GT	3.00	1.68	1.59	6AH4GT	2.60	1.45	1.38	6J5	1.50	.84	.79
1H4G	2.35	1.31	1.24	6AH6	3.90	2.18	2.06	6J5GT	1.80	1.01	.95
1H6GT	1.95	1.09	1.03	6AH6V	3.90	2.18	2.06	6J6	2.35	1.31	1.24
1H6G	3.50	1.96	1.85	6AJ4	6.00	3.35	3.18	6J7	2.30	1.29	1.22
1J6G	3.35	1.87	1.77	6AK5	4.20	2.35	2.22	6J7G	2.50	1.40	1.32
1J6GT	3.50	1.96	1.85	6AK6	2.35	1.31	1.24	6J7GT	2.55	1.43	1.35
1L4	2.15	1.20	1.14	6AL5	1.50	.84	.79	6J8G	3.70	2.07	1.96
1L6	2.75	1.54	1.46	6AL7GT	4.00	2.23	2.12	6K5GT	2.45	1.37	1.30
1LA4	2.80	1.56	1.48	6AM4	4.80	2.68	2.54	6K6GT	1.65	.92	.87
1LA6	2.65	1.48	1.40	6AM8	2.90	1.62	1.53	6K7	2.10	1.17	1.11
1LB4	2.80	1.56	1.48	6AN4	3.90	2.18	2.06	6K7G	2.40	1.34	1.27
1LC5	2.65	1.48	1.40	6AN8	2.85	1.59	1.51	6K7GT	2.35	1.31	1.24
1LC6	2.65	1.48	1.40	6AQ5	1.80	1.01	.95	6K8	3.05	1.70	1.61
1LD5	2.65	1.48	1.40	6AQ6	1.65	.92	.87	6K8G	3.40	1.90	1.80
1LE3	2.65	1.48	1.40	6AQ7GT	3.15	1.76	1.67	6K8GT	2.75	1.54	1.46
1LG5	2.65	1.48	1.40	6AR5	1.80	1.01	.95	6L5G	2.85	1.59	1.51
1LH4	2.65	1.48	1.40	6AS5	1.95	1.09	1.03	6L6	4.35	2.43	2.30
1LN5	2.65	1.48	1.40	6AS7G	7.10	4.87	4.87	6L6G	3.10	1.73	1.64
1N5GT	2.40	1.34	1.27	6AS8	3.00	1.68	1.59	6L6GA	3.35	1.87	1.77
1P6GT	2.90	1.62	1.53	6AT6	1.45	.81	.77	6L7	2.90	1.62	1.53
1Q5GT	3.05	1.70	1.61	6AU4GT	2.70	1.51	1.43	6L7G	3.40	1.90	1.80
1R4	2.85	1.59	1.51	6AU5GT	3.25	1.82	1.72	6N7	2.95	1.65	1.56
1R5	2.25	1.26	1.19	6AU6	1.65	.92	.87	6N7GT	2.85	1.59	1.51
1S4	2.45	1.37	1.30	6AV5GT	3.20	1.79	1.69	6P5GT	2.45	1.37	1.30
1S5	1.85	1.03	.98	6AV6	1.45	.81	.77	6Q7	2.40	1.34	1.27
1T4	2.10	1.17	1.11	6AX4GT	2.35	1.31	1.24	6Q7G	2.10	1.17	1.11
1T6GT	2.80	1.56	1.48	6AX5GT	1.85	1.03	.98	6Q7GT	2.10	1.17	1.11
1T6	3.00	1.68	1.59	6B4G	3.20	1.79	1.69	6R7	2.80	1.56	1.48
1U4	2.05	1.15	1.09	6B5	3.50	1.96	1.85	6R7G	2.75	1.54	1.46
1U5	1.80	1.01	.95	6B6G	2.45	1.37	1.30	6R7GT	2.75	1.54	1.46
1V	2.55	1.43	1.35	6B7	3.50	1.96	1.85	6R8	3.35	1.87	1.77
1V2	1.50	.84	.79	6B8	3.35	1.87	1.77	6S4	1.75	.98	.93
1V6	3.15	1.76	1.67	6B8G	3.60	2.01	1.90	6S7	3.25	1.82	1.72
1X2A	2.65	1.48	1.40	6BA6	1.80	1.01	.95	6S7G	3.50	1.96	1.85
1X2B	2.65	1.48	1.40	6BA7	2.50	1.40	1.32	6S8GT	2.65	1.48	1.40
2A3	4.15	2.32	2.20	6BC4	4.15	2.32	2.20	6SA7	2.10	1.17	1.11
2A4G	4.80	2.40	2.20	6BC5	1.95	1.09	1.03	6SA7GT	2.10	1.17	1.11
2A5	2.30	1.29	1.22	6BC7	2.75	1.54	1.46	6SB7Y	2.90	1.62	1.53
2A6	2.80	1.56	1.48	6BD4A	14.25	9.75	9.75	6SC7	2.15	1.20	1.14
2A7	2.80	1.56	1.48	6BD5GT	3.60	2.01	1.91	6SD7GT	3.35	1.87	1.77
2B7	3.50	1.96	1.85	6BD6	2.00	1.12	1.06	6SF5	1.85	1.03	.98
2E5	2.85	1.59	1.51	6BE6	1.85	1.03	.98	6SF5GT	1.95	1.09	1.03
2V3G	5.25	2.93	2.93	6BF5	2.20	1.23	1.16	6SF7	2.30	1.29	1.22
2X2A	4.35	2.43	2.30	6BF6	1.55	.87	.82	6SG7	2.30	1.29	1.22
3A2	2.90	1.62	1.53	6BG6G	5.20	2.90	2.75	6SH7	2.35	1.31	1.24

# Guaranteed for 12 Full Months

We will replace any tube that does not give efficient performance for 12 months from date of purchase. This does not apply to burned-out or broken tubes. Average shpg. wt., per tube, 4 oz.; per 10 tubes, 2 1/4 lbs. Tubes may be assorted for money-saving quantity prices. In lots of 50 and over deduct an additional 10% from the 6 to 49 lot price.



Tubo Type	List Price	NET EACH In Quantities of:		Tubo Type	List Price	NET EACH In Quantities of:		Tubo Type	List Price	NET EACH In Quantities of:	
		1 to 5	6 to 49			1 to 5	6 to 49			1 to 5	6 to 49
6SH7GT	\$2.50	1.40	1.32	12AT6	\$1.45	.81	.77	25AX4GT	\$2.75	1.54	1.46
6SJ7	1.80	1.01	.95	12AT7	2.60	1.45	1.38	25BQ6GT	3.65	2.04	1.93
6SJ7GT	1.65	.92	.87	12AU6	1.65	.92	.87	25C5	2.05	1.15	1.09
6SK7	1.80	1.01	.95	12AU7	2.20	1.23	1.16	25CD6G	6.60	3.69	3.49
6SK7GT	2.00	1.12	1.06	12AV6	1.45	.81	.77	25L6	3.90	2.18	2.06
6SL7GT	2.40	1.34	1.27	12AV7	3.00	1.68	1.59	25L6GT	1.85	1.03	.98
6SN7GT	2.15	1.20	1.14	12AW6	2.40	1.34	1.27	25W4GT	2.05	1.15	1.09
6SN7GTA	2.35	1.31	1.24	12AX4GT	2.40	1.34	1.27	25Y5	3.10	1.73	1.64
6SQ7	1.55	.87	.82	12AX7	2.30	1.29	1.22	25Z5	1.80	1.01	.95
6SQ7GT	1.75	.98	.93	12AY7	4.20	3.00	3.00	25Z6	2.60	1.45	1.38
6SR7	1.85	1.03	.98	12AZ7	2.55	1.43	1.35	25Z6GT	1.80	1.01	.95
6SS7	2.40	1.34	1.27	12B4	2.30	1.29	1.22	26	2.05	1.15	1.09
6ST7	2.70	1.51	1.43	12BA6	1.80	1.01	.95	27	1.75	.98	.93
6SV7	3.60	2.01	1.91	12BA7	2.50	1.40	1.32	30	2.30	1.29	1.22
6SZ7	2.45	1.37	1.30	12BD6	2.00	1.12	1.06	31	2.85	1.59	1.51
6T4	3.80	2.12	2.01	12BE6	1.85	1.03	.98	32	3.80	2.12	2.01
6TTG	3.50	1.96	1.85	12BF6	1.55	.87	.82	32L7GT	3.35	1.87	1.77
6T8	3.05	1.70	1.61	12BH7-	2.55	1.43	1.35	33	3.50	1.96	1.85
6U5/6G5	2.25	1.26	1.19	12BY7	2.65	1.48	1.40	34	3.60	2.01	1.91
6UG6T	2.45	1.37	1.30	12BZ7	2.60	1.45	1.38	35/61	2.40	1.34	1.27
6U7G	2.40	1.34	1.27	12C8	3.60	2.01	1.91	35A5	2.20	1.23	1.16
6U8	2.85	1.59	1.51	12F5GT	1.90	1.06	1.01	35B5	2.10	1.17	1.11
6V3A	3.90	2.18	2.06	12H6	2.00	1.12	1.06	35C5	1.85	1.03	.98
6V6	3.30	1.84	1.75	12J5GT	1.80	1.01	.95	35L6GT	1.85	1.03	.98
6V6GT	1.80	1.01	.95	12J7GT	2.55	1.43	1.35	35W4	1.20	.67	.64
6V8	3.75	2.10	1.99	12K7GT	2.35	1.31	1.24	35Y4	1.80	1.01	.95
6W4GT	1.70	.95	.90	12K8	3.15	1.76	1.67	35Z3	1.80	1.01	.95
6W6GT	2.25	1.26	1.19	12K8GT	2.90	1.62	1.53	35Z4GT	1.45	.81	.77
6W7G	2.80	1.56	1.48	12Q7GT	2.10	1.17	1.11	35Z5GT	1.25	.70	.66
6X4	1.35	.75	.71	12S8GT	2.75	1.54	1.46	36	2.85	1.59	1.51
6X5	3.10	1.73	1.64	12SA7	2.10	1.17	1.11	37	1.85	1.03	.98
6X5GT	1.40	.78	.74	12SA7GT	2.10	1.17	1.11	38	2.30	1.29	1.22
6X8	2.70	1.51	1.43	12SC7	2.50	1.40	1.32	39/44	2.80	1.56	1.48
6Y6G	2.35	1.31	1.24	12SF5	1.95	1.09	1.03	41	1.90	1.06	1.01
6Z7G	4.05	2.26	2.14	12SF5GT	2.10	1.17	1.11	42	1.90	1.06	1.01
6ZY5G	2.35	1.31	1.24	12SF7	2.40	1.34	1.27	43	2.05	1.15	1.09
7A4/XXL	2.00	1.12	1.06	12SG7	2.35	1.31	1.24	45	2.10	1.17	1.11
7A5	2.50	1.40	1.32	12SH7	2.50	1.40	1.32	45Z3	1.80	1.01	.95
7A6	2.10	1.17	1.11	12SJ7	2.00	1.12	1.06	45Z5GT	1.80	1.01	.95
7A7	2.20	1.23	1.16	12SJ7GT	2.00	1.12	1.06	46	2.90	1.62	1.53
7A8	2.10	1.17	1.11	12SK7	2.00	1.12	1.06	47	2.90	1.62	1.53
7AD7	4.60	2.57	2.43	12SK7GT	2.00	1.12	1.06	49	2.80	1.56	1.48
7AF7	2.40	1.34	1.27	12SL7GT	2.65	1.48	1.40	50	5.25	2.93	2.78
7AG7	2.45	1.37	1.30	12SN7GT	2.15	1.20	1.14	50A5	2.20	1.23	1.16
7AH7	2.45	1.37	1.30	12SQ7	1.75	.98	.93	50B5	1.85	1.03	.98
7B4	2.00	1.12	1.06	12SQ7GT	1.75	.98	.93	50C5	1.85	1.03	.98
7B5	1.85	1.03	.98	12SR7	2.00	1.12	1.06	50C6G	3.30	1.84	1.75
7B6	2.00	1.12	1.06	12V6GT	1.80	1.01	.95	50CD6G	6.60	3.69	3.49
7B7	2.00	1.12	1.06	12X4	1.35	.75	.71	50L6GT	1.85	1.03	.98
7B8	2.25	1.26	1.19	12Z3	2.65	1.48	1.40	50X6	2.20	1.23	1.16
7C4	3.60	2.01	1.91	14A4	2.75	1.54	1.46	50Y6GT	2.15	1.20	1.14
7C5	2.15	1.20	1.14	14A5	3.90	2.18	2.06	50Y7GT	2.10	1.17	1.11
7C6	1.85	1.03	.98	14A7	2.20	1.23	1.16	53	2.80	1.56	1.48
7C7	2.15	1.20	1.14	14AF7/XXD	2.40	1.34	1.27	55	2.30	1.29	1.22
7E5/1201	2.90	1.62	1.53	14B6	2.20	1.23	1.16	56	1.85	1.03	.98
7E6	2.90	1.62	1.53	14B8	2.20	1.23	1.16	57	2.10	1.17	1.11
7E7	3.20	1.79	1.69	14C5	3.00	1.68	1.59	58	2.10	1.17	1.11
7F7	2.45	1.37	1.30	14C7	2.40	1.34	1.27	59	3.80	2.12	2.01
7F8	3.25	1.82	1.72	14E6	2.90	1.62	1.53	70L7GT	6.60	3.69	3.49
7G7/1232	3.00	1.68	1.59	14E7	3.35	1.87	1.77	71A	2.35	1.31	1.24
7H7	2.20	1.23	1.16	14F7	2.45	1.37	1.30	75	2.00	1.12	1.06
7J7	3.50	1.96	1.85	14F8	3.25	1.82	1.72	76	1.70	.95	.90
7K7	3.15	1.76	1.67	14H7	2.40	1.34	1.27	77	2.15	1.20	1.14
7L7	3.00	1.68	1.59	14J7	3.40	1.90	1.80	78	2.15	1.20	1.14
7N7	2.35	1.31	1.24	14N7	2.75	1.54	1.46	79	2.90	1.62	1.53
7Q7	2.60	1.45	1.38	14Q7	2.60	1.45	1.38	80	1.55	.87	.82
7R7	3.35	1.87	1.77	14R7	3.35	1.87	1.77	81	4.80	2.68	2.54
7S7	3.40	1.90	1.80	14S7	3.40	1.90	1.80	82	2.80	1.56	1.48
7V7	3.35	1.87	1.77	14W7	3.50	1.96	1.85	83	2.65	1.48	1.40
7W7	3.35	1.87	1.77	14X7	2.75	1.54	1.46	83V-	3.40	1.90	1.80
7X6	2.25	1.26	1.19	14Y4	2.45	1.37	1.30	84/62A	1.80	1.01	.95
7X7/XXFM	3.30	1.84	1.75	19	3.50	1.96	1.85	85	2.30	1.29	1.22
7Y4	1.80	1.01	.95	19BG6G	6.00	3.35	3.18	89	2.30	1.29	1.22
7Z4	1.80	1.01	.95	19C8	3.35	1.87	1.77	V99	3.35	1.87	1.77
10Y	3.90	2.18	2.06	19J6	2.45	1.37	1.30	X99	3.35	1.87	1.77
12A6	2.30	1.63	1.63	19T8	3.10	1.73	1.64	117L7/M7GT	6.60	3.69	3.49
12A6GT	2.90	1.62	1.53	19X8	3.10	1.73	1.64	117N7GT	4.80	2.68	2.54
12A7	3.90	2.18	2.06	22	3.35	1.87	1.77	117P7GT	4.80	2.68	2.54
12A8GT	2.75	1.54	1.46	24A	2.70	1.51	1.43	11Z3	1.65	.92	.87
12AH7GT	3.05	1.70	1.61	25A8	3.40	1.90	1.80	11Z4GT	2.90	1.62	1.53
12AL5	1.60	.89	.85	25A6G	2.85	1.59	1.51	11Z6GT	2.95	1.65	1.56
12AQ5	1.85	1.03	.98	25A7GT	6.60	3.69	3.49	6073	....	3.40	3.40
12AS5	2.15	1.20	1.14	25AV5GT	2.90	1.62	1.53	6074	....	3.85	3.85



# Special Purpose Tubes for

Immediate Delivery From Stock. The listing on this and the following pages is a complete selection of tubes for broadcast, industrial and research use. Included are power tubes, rectifiers, cathode-ray, photo-electric and miniature tube types. Over 700 types of special-purpose tubes are listed, representing the products of leading manufacturers in the electron tube industry. Each tube will provide maximum efficiency and dependable service. As new tubes are released, ALLIED will stock them. ALLIED supplies all tubes at the lowest current prices from the largest distributor stocks in the country. Depend on ALLIED for fast shipment.

Dept.	Stock No.	Tube Type	Mfr.	NET EACH	Dept.	Stock No.	Tube Type	Mfr.	NET EACH	Dept.	Stock No.	Tube Type	Mfr.	NET EACH
E2		BH	RAY	4.50	E3	3K200001A	EIM		2,975.00	E1	6V6GT	RCA		1.25
E3		OA5	SYL	5.05	E3	3K200001F	EIM		2,975.00	E3	6V6GT	SYL		1.08
E2		OZ4A/CK1003	RAY	1.00	E3	3K200001K	EIM		2,975.00	E2	6X4 W	RAY		1.80
E2		1AD4	RAY	2.05	E1	3RP1	RCA		16.45	E2	6X5 WGT	RAY		1.89
E2		1AG5	RAY	1.90	E2	3X2500A3	AMP		198.00	E3	7AK7	SYL		7.75
E3		EL C1B	ELEC	9.60	E3	3X2500A3	EIM		198.00	E1	7CP4	RCA		40.00
E3		1B35A	SYL	7.95	E3	3X2500F3	EIM		198.00	E3	GL 7C29	GE		130.00
E3		1B85	VIC	7.50	E3	3X3000A1	EIM		198.00	E3	GL 7D21	GE		320.00
E3		EL 1C	ELEC	7.60	E1	4-65A	RCA		20.00	E3	7JP1	SYL		23.50
E1		1C21	RCA	3.85	E3	4-65A	EIM		20.00	E1	7TP4	RCA		54.00
E3		1D21/SN4	SYL	5.65	E1	4-125A/4D21	RCA		30.25	E1	7VP1	RCA		25.00
E3		EL C1J	ELEC	9.60	E3	4-125A	EIM		30.25	E1	8D21	RCA		1300.00
E3		EL C1K	ELEC	10.40	E3	4-125A/6155	AMP		23.00	E1	9C22	RCA		1300.00
E1		1P21	RCA	50.00	E1	4-250A/3D22	RCA		41.25	E3	105P4	RCA		64.50
E1		1P22	RCA	14.75	E3	4-250A	EIM		41.25	E1	UX CV11	UEA		14.00
E1		1P28	RCA	22.00	E3	4-250A/6156	AMP		35.00	E1	125A7Y	RCA		1.30
E1		1P29	RCA	2.95	E3	4-400A	EIM		60.50	E3	EL C16J	ELEC		57.90
E1		1P37	RCA	2.85	E3	4-1000A	EIM		132.00	E3	EL C16J/A	ELEC		63.70
E1		1P39	RCA	1.75	E3	WL 4B24/3C	WES		8.90	....	FG 17 Sea type 5557			
E1		1P40	RCA	2.60	E3	4B32	CHA		12.00	E3	KY 21A	EIM		13.25
E1		1P41	RCA	2.80	E3	4C35	SYL		33.05	E3	RX 21A	EIM		9.00
E1		1P42	RCA	11.00	E3	4C35	AMP		28.75	E3	PJ 22	GE		2.50
E3		E 1T	AMP	16.50	E2	RK 4D32	RAY		27.50	E3	CE 23A	CE		5.50
E3		CE 1VC	CE	4.20	E1	4E27/8001	RCA		24.50	E3	CE 25C	CE		5.50
E3		1Z2	CHA	4.53	E1	4E27A/5-125B	RCA		35.75	E3	25T	EIM		9.00
E1		2AP1A	RCA	10.85	E3	4E27A	EIM		35.75	E1	26A7GT	RCA		6.55
E3		2AS15	THER	7.50	E3	4PR60A	EIM		90.00	E3	FG 27A	GE		26.00
E1		2BP1	RCA	11.00	E3	4X150A	AMP		48.00	E3	28D7	SYL		2.75
E1		2BP11	RCA	12.50	E3	4X150A	RCA		48.00	E3	CE 29R	CE		2.80
E1		2C39A	RCA	25.00	E1	4X150A	RCA		48.00	E3	CE 30C	CE		2.60
E3		2C39B	EIM	25.00	E3	4X150A	EIM		48.00	E3	35T	EIM		10.50
E1		2C43	RCA	21.50	E1	4X300A	RCA		121.00	E3	TZ 40	TAY		4.50
E3		2C53	.....	15.00	E3	4X300A	EIM		121.00	E3	EFF 60	AMP		8.75
E3		CE 2D	CE	3.65	E1	5ABP1	RCA		31.00	E2	RK 61	RAY		3.30
E1		2D21	RCA	2.00	E1	5ABP7	RCA		35.00	E3	KT 66	EMIT		3.50
E3		2D21	AMP	2.00	E1	5ABP11	RCA		35.25	E3	75TL	EIM		13.25
E1		2D21 W	RCA	3.15	E1	5AUP24	RCA		93.00	E3	75N	AMP		10.00
E3		2D21 W	CHA	3.15	E1	5BP1A	RCA		23.80	E3	75NB3	AMP		10.00
E1		2E24	RCA	4.65	E1	5CP1A	RCA		27.00	E3	FG 81A	GE		18.00
E2		2E26	RAY	3.85	E1	5CP7A	RCA		31.40	E3	90NB	AMP		20.00
E1		2E26	RCA	3.85	E1	5CP11A	RCA		31.40	E3	HF 100	AMP		17.50
E2		2E30	RAY	2.60	E2	5C22	AMP		53.45	E3	100TH	EIM		18.25
E3		2E30	HYT	2.60	E3	5C22	SYL		50.30	E3	FG 105	AMP		49.50
E2		2E31	RAY	2.12	E1	5FP4A	RCA		41.75	E3	WL 105	WES		48.00
E2		2E32	RAY	2.12	E1	5R4GY	RCA		1.89	E3	HY 114B	HYT		2.25
E2		2E36	RAY	2.17	E3	5R4GY	GE		2.20	E2	RX 120	RAY		29.00
E1		2F21	RCA	144.00	E1	5UP1	RCA		19.65	E1	172	RCA		65.00
E2		2G21	RAY	2.20	E1	5UP7	RCA		25.40	E3	WL 172	WES		65.00
E2		2G22	RAY	2.20	E1	5ZP16	RCA		100.00	E3	FG 172	GE		74.00
E3		GL 2H21	GE	100.00	E1	6AB7Y	RCA		1.95	E3	HF 200	AMP		30.00
E2		RK 2K25	RAY	41.00	E1	6AC7W	RCA		3.75	E3	T 200	TAY		25.00
E2		RK 2K26	RAY	56.50	E1	6AG7Y	RCA		2.00	E3	CE 201A	CE		8.00
E1		2K26	RCA	78.50	E3	6AJ5	SYL		3.50	E1	CE 203	CE		11.60
E2		RK 2K28	RAY	67.85	E2	6AK5 W	RCA		3.38	E3	CE 206	RCA		13.75
E1		3A4	RCA	1.20	E2	6AL5 W	RAY		1.55	E1	203A	RCA		6.00
E1		3A5	RCA	1.30	E2	6AN5	RAY		3.65	E1	211	RAY		13.75
E1		3AP1A	RCA	19.50	E3	6AR6	TUNG		5.75	E1	RX 212	RCA		35.75
E3		EL 3B	ELEC	8.60	E2	6AS6	RCA		3.43	E2	CE 213A	CE		7.50
E3		3B4	HYT	2.75	E2	6AS6	RAY		3.25	E3	242C	AMP		15.00
E3		WL 3B22/1C	WES	7.52	E3	EL 6B	ELEC		11.05	E3	GL 242C	GE		15.50
E2		RK 3B24 W	RAY	11.25	E3	6B7W	SYL		4.45	E3	249B	AMP		9.00
E3		GL 3B24 W	GE	11.75	E3	EL C6C	ELEC		43.20	E3	249C	AMP		9.00
E1		3B25	RCA	5.90	E2	EL C6C	RAY		8.03	E3	2495	TAY		7.00
E1		RK 3B26	RAY	18.00	E2	6C4W	SYL		2.85	E3	A 250TH	AMP		33.00
E1		3B28	RCA	9.45	E3	6D4	RCA		6.40	E3	250TH	EIM		33.00
E1		3B28	AMP	8.50	E1	EL C6J	ELEC		29.30	E3	HF 300	AMP		35.00
E2		RK 3B29	RAY	12.60	E3	EL C6J/A	ELEC		30.30	E3	304TH	EIM		60.50
E1		3BP1A	RCA	16.50	E1	6J4	RCA		8.05	E3	304TL	EIM		60.50
E3		EL 3C	ELEC	8.90	E2	6JSWGT	RAY		4.85	E3	SA 309	SYL		6.10
E1		3C23	RCA	12.50	E2	6J6 W	RAY		3.05	E3	315A	AMP		38.60
E3		GL 3C23	GE	12.50	E3	6L6 WGA	RAY		8.60	E3	GL 393A	GE		13.25
E1		3C45	RCA	17.80	E3	6L6 WGA/5932	SYL		1.30	E3	WL 414	WES		135.00
E3		3D21A	HYT	11.90	E1	6SA7Y	RCA		1.25	E3	GL 441	GE		4.50
E1		3D22	RCA	16.40	E1	6SJ7Y	RCA		1.25	E3	A 450TH	AMP		77.00
E1		3E29	RCA	20.25	E1	6SJ7 WGT	SYL		2.45	E3	450TH	EIM		77.00
E3		EL C3J	ELEC	12.10	E3	6SK7 W	RCA		3.44	E3	450TL	AMP		77.00
E3		EL C3J/A	ELEC	15.10	E1	6SN7GT	RCA		1.40	E3	WL 481B	WES		8.25
E1		3JP1	RCA	20.50	E2	6SN7 WGT	RAY		2.45	E3	502	AMP		150.00
E1		3KP1	RCA	16.70	E3	6SU7GT	TUNG		4.25	E3	GL 502A	GE		1.85
E1		3KP11	RCA	18.60										

# Industry & Broadcast Use

Easy to Order—Specify Department and Tube Type. This tabular presentation enables you to locate the tube types you want, quickly and easily. When ordering, give the full Stock Number, which consists of the Department Number and the Manufacturer's Type Number. The Department Number represents exact location of the tube in ALLIED stockrooms—speeds up your shipment. Give stock Number thus: E3-1B85. The chart at right shows the full names of the manufacturers whose tubes are listed on these pages. For technical literature, see page 70. You can depend on ALLIED for prompt shipment of all special purpose tubes.

AMP	Amperex Elect. Corp.
CE	Continental Electric
CHA	Chatham Electronics
EIM	Eitel McCullough
ELEC	Electronics, Inc.
EMIT	Emitron
GE	General Electric
HYT	Hytron Corp.
NAT	Natl. Electronics, Inc.
RCA	Radio Corp. America
RAY	Raytheon Mfg. Co.
SYL	Sylvania Electric
TAY	Taylor Co.
THER	Thermosen, Inc.
TUNG	Tungsol
UE	United Electronics
VIC	Victoreen Instrument
WES	Westinghouse

Stock No.				Stock No.				Stock No.			
Dept.	Tube Type	Mfr.	NET EACH	Dept.	Tube Type	Mfr.	NET EACH	Dept.	Tube Type	Mfr.	NET EACH
E1	502A	RCA	1.85	E1	829B	RCA	16.25	E2	CK 1022	RAY	15.00
E2	CK 502AX	RAY	2.10	E1	830B	RCA	11.50	E2	CK 1026	RAY	3.35
E2	CK 503AX	RAY	2.05	E1	832A	RCA	12.90	E2	CK 1032	RAY	3.35
E3	504R	AMP	175.00	E3	832A	AMP	12.90	E2	CK 1034	RAY	7.50
E2	CK 506AX	RAY	1.50	EX1	833A	RCA	49.50	E2	CK 1035	RAY	7.50
E2	CK 510AX	RAY	2.55	EX3	833A	AMP	49.50	E2	CK 1036	RAY	7.50
E2	CK 511X	RAY	2.38	E1	836	RCA	9.00	E2	CK 1037	RAY	7.50
E2	CK 512AX	RAY	2.15	E1	837	RCA	5.80	E2	CK 1038	RAY	7.50
E2	CK 526AX	RAY	1.90	E1	838	RCA	13.75	E2	CK 1039	RAY	7.50
E2	CK 531DX	RAY	2.55	E1	843	RCA	2.60	E3	R 1130B	SYL	16.55
E2	CK 532DX	RAY	2.55	E1	845	RCA	13.75	E3	R 1131C	SYL	16.55
E2	CK 533AX	RAY	2.40	E3	845	AMP	13.75	E3	1229	SYL	6.40
E2	CK 534AX	RAY	2.45	EX3	849A	RCA	135.00	E3	1236A	SYL	9.60
E2	CK 536AX	RAY	1.58	EX1	857B	AMP	218.50	E3	1247	SYL	6.00
E2	CK 538DX	See type Ck549DX		EX3	857B	AMP	215.00	E3	1265	SYL	3.10
E2	CK 539DX	RAY	2.35	E1	860	RCA	34.50	E3	HY 1269	HYT	5.50
E2	CK 542DX	RAY	2.55	E1	864	RCA	5.00	E3	1273	SYL	1.50
E2	CK 546DX	RAY	2.55	E1	865	RCA	11.50	E3	1280	SYL	1.50
E2	CK 548DX	RAY	2.55	E1	866A	GE	2.45	E1	GL 1367	See type 5662	
E2	CK 549DX	RAY	2.05	E3	GL 866A	RCA	2.10	E1	1612	RCA	3.00
EX1	575A	RCA	21.00	E3	866AX	AMP	2.10	E1	1614	RCA	2.55
E1	575A	AMP	21.00	E2	RK 866A/866	RAY	2.10	E1	1616	RCA	8.65
E1	579B	RCA	15.00	E3	866JR	TAY	1.65	E1	1619	RCA	2.50
E3	WL 579B	WES	15.00	E1	868	RCA	2.85	E1	1620	RCA	6.25
E3	RO 585	WES	19.00	E3	GL 868/PJ23	GE	2.50	E1	1621	RCA	1.95
E3	592			EX3	869B	AMP	132.00	E1	1622	RCA	2.50
E3	NL 604	EIM	30.25	E1	872A	RCA	8.20	E1	1624	RCA	4.00
E3	KU 610	NAT	8.90	E3	872A	AMP	8.20	E1	1623	RCA	2.65
E3	NL 615	WES	22.00	E2	884	RCA	1.85	E1	1626	RCA	1.85
E3	NL 615	NAT	7.50	E2	884	RAY	1.85	E1	1629	RCA	1.40
EX3	WL 616	WES	225.00	E1	885	RCA	2.00	E1	1633	RCA	1.95
E3	NL 617	NAT	11.60	EX3	889A	AMP	210.00	E1	1635	RCA	2.00
E3	NL 623	NAT	11.60	EX1	889RA	RCA	295.00	E1	1654	RCA	5.95
E3	KU 627	WES	22.00	EX3	889RA	AMP	295.00	EX1	1850A	RCA	565.00
E3	KU 628	WES	34.00	EX3	GL 889A	GE	210.00	E1	1946	RCA	10.90
E1	629	RCA	13.00	EX3	891	AMP	230.00	E1	1947	RCA	13.15
E3	WL 632B	WES	29.00	EX1	891R	RCA	385.00	E1	1949	RCA	11.30
E3	NL 633	NAT	11.05	EX3	891R	AMP	380.00	E1	1950	RCA	7.80
E3	NL 649/5834	NAT	7.50	EX1	892	RCA	237.00	EX3	2000T	EIM	275.00
E3	NL 653/5835	NAT	10.75	EX3	892	AMP	230.00	E1	2050	RCA	1.85
E1	672A	RCA	35.00	EX3	WL 892	WES	237.00	E2	2050	RAY	1.85
E3	WL 672A	WES	35.00	EX1	892R	RCA	385.00	E2	2051	RAY	1.90
EX1	673	RCA	21.00	EX3	892R	AMP	380.00	E3	ZB 3200	AMP	350.00
EX3	KU 676	WES	55.00	EX3	GL 895	GE	950.00	E3	R 4330	SYL	14.40
E1	677	RCA	55.00	EX3	GL 895R	GE	1300.00	E3	5514	HYT	4.95
E3	678	AMP	47.00	E1	902A	RCA	12.50	E3	5516	HYT	7.95
EX3	WL 678	WES	47.00	E1	917	RCA	4.65	E2	CK 5517	RAY	3.40
E3	NL 710/6011	NAT	12.10	E1	918	RCA	3.10	EX3	GL 5518	GE	523.00
E3	NL 714	NAT	8.50	E1	919	RCA	4.65	EX1	5527	RCA	150.00
E2	RK 715C	RAY	63.00	E1	920	RCA	4.15	EX3	GL 5544	GE	27.00
E3	NL 716	NAT	9.60	E1	921	RCA	2.65	E3	5545	AMP	35.00
E3	Z 729	EMIT	2.99	E1	922	RCA	2.60	E3	GL 5545	GE	35.00
E3	NL 760	NAT	29.30	E1	923	RCA	2.35	EX3	GL 5549	GE	370.00
E1	801A	RCA	5.60	E3	GL 923	GE	2.05	E1	5550	RCA	45.00
E1	802	RCA	5.15	E1	924	RCA	3.30	E3	5550	AMP	45.00
E1	803	RCA	24.30	E1	924	RCA	2.85	E1	5551	RCA	72.00
E1	804	RCA	17.50	E1	925	RCA	2.85	EX3	WL 5551A/652	WES	72.00
E1	805	RCA	13.50	E1	926	RCA	2.95	EX3	5551/652	AMP	72.00
E3	805	AMP	13.50	E1	927	RCA	2.70	E3	WL 5551/652	WES	72.00
E1	807	RCA	2.50	E1	928	RCA	3.35	EX1	5552	RCA	110.00
E2	RK 807	RAY	2.50	E1	929	RCA	1.50	EX3	WL 5552A		
E3	807	AMP	2.40	E1	930	RCA	2.45	EX3	651	WES	110.00
E3	807W	See type 5933/807W		E1	931A	RCA	8.60	EX3	5552	AMP	110.00
E1	807Y	RAY	4.90	E1	934	RCA	3.40	EX3	WL 5552		
E1	809	RCA	4.20	E1	935	RCA	7.80	EX3	651	WES	110.00
E1	810	RCA	16.25	E1	954	RCA	6.95	EX3	5553		
E3	810	AMP	16.25	E1	955	RCA	3.95	EX3	655	AMP	239.00
E1	811A	RCA	5.00	E1	956	RCA	7.00	EX3	WL 5553		
E2	RK 811A	RAY	5.00	E1	957	RCA	4.90	EX3	655	WES	239.00
E1	812A	RCA	5.00	E1	958A	RCA	7.50	EX3	5555		
E2	RK 812A	RAY	5.00	E1	959	RCA	8.00	EX3	6555		
E2	813	RCA	18.00	E1	991	RCA	.87	EX3	6538	AMP	333.50
E3	813	AMP	18.00	EX3	1000T	EIM	137.50	E1	5556	RCA	13.50
E1	814	RCA	14.25	E2	CK 1005	RAY	1.00	E1	5557	RCA	8.50
E1	818	RCA	8.65	E2	CK 1006	RAY	5.85	E3	5557		
E1	816	RCA	1.65	E2	CK 1007	RAY	1.10		/NL-715	NAT	8.50
E3	GL 816	GE	1.65	E2	CK 1012	RAY	3.10				
E1	828	RCA	15.00	E2	CK 1013	See type 5517					
E3	828	AMP	13.75	E2	CK 1010	RAY	12.00				
				E2	CK 1021	RAY	11.50				

LISTINGS OF SPECIAL PURPOSE TUBES  
CONTINUED ON THE FOLLOWING PAGE

# Special Purpose Tubes

TUBE LISTINGS CONTINUED FROM PAGES 68 AND 69

Dept.	Stock No.	Tube Type	Mfr.	NET EACH	Dept.	Stock No.	Tube Type	Mfr.	NET EACH	Dept.	Stock No.	Tube Type	Mfr.	NET EACH
E3		5557			E1		5786	RCA	87.50	E1		6161	RCA	115.00
E3		/FG17	AMP	8.50	E2		CK 5787	RAY	7.50	EX1		6166	RCA	905.00
E1		GL 5557			E2		CK 5787 WA	RAY	11.85	E1		6173	RAY	12.10
E3		/FG17	GE	8.50	E1		5794	RCA	12.40	E2		CK 6174	RCA	3.40
E3		5558	RCA	14.00	E1		5814	RCA	3.85	EX1		6181	RCA	835.00
E3		WL 5558			E3		GL 5814A	GE	3.25	E1		6197	RCA	2.55
E1		/32	WES	14.00	E2		CK 5814A	RAY	3.25	EX1		6198	RCA	345.00
E1		5559	RCA	19.50	E1		5819	RCA	55.00	E1		6199	RCA	55.00
EX3		5559	AMP	16.00	EX1		5820	RCA	1200.00	E3		GL 6201	GE	4.15
E3		GL 5559			EX1		5822	RCA	130.00	E3		GL 6202	GE	3.17
		/FG57	GE	22.00	E1		5823	RCA	1.32	E3		GL 6203	GE	3.97
E1		5560	RCA	28.00	E3		GL 5824	GE	3.35	E1		6211	RCA	2.55
E3		GL 5560			EX1		5825	RCA	13.00	E2		CK 6213	RAY	7.50
		/FG95	GE	28.00	EX1		5826	RCA	1300.00	E1		6217	RCA	70.00
E3		WL 5561			E2		CK 5829	RAY	4.80	E2		CK 6247	RAY	14.65
		/104	WES	37.90	E2		CK 5829 WA	RAY	12.40	E3		6252		
E1		5563	RCA	47.00	E1		5840	RCA	8.85			/AX9910	AMP	24.99
E1		5581	RCA	2.25	E2		CK 5851	RAY	8.70	E1		6263	RCA	20.00
E1		5582	RCA	4.30	E3		5866			E1		6264	RCA	20.00
E1		5583	RCA	3.70			/AX9900	AMP	20.00	E3		6268		
E1		5588	RCA	120.00	E3		5867					/AX9911	AMP	28.75
E2		CK 5608A	RAY	3.15			/AX9901	AMP	30.00	E3		6279		
E3		GL 5610	GE	2.25	E3		5868					/AX9912	AMP	53.45
E1		5618	RCA	4.12			/AX9902	AMP	50.00	E1		6323	RCA	7.95
E2		CK 5642	RAY	1.35	E3		5869			E1		6328	RCA	8.90
E2		5651	RCA	2.24			/AGR9950	AMP	25.00	EX3		6333	AMP	230.00
E2		CK 5651	RAY	2.30	EX3		5870			E1		6342	RCA	69.00
E1		5654	RCA	3.15			/AGR9951	AMP	100.00	E3		6360	AMP	3.00
E2		CK 5654	RAY	3.15	E2		CK 5875	RAY	2.10	E1		6405		
E2		CK 5656	RAY	20.55	E1		5876	RCA	13.55			/1640	RCA	7.15
E3		GL 5662	GE	3.20	E1		5879	RCA	1.75	E1		6417	RCA	1.93
E3		GL 5663	GE	1.90	E3		5881	TUNG	2.95	EX3		6445	AMP	375.00
E3		WL 5664	WES	9.43	E2		CK 5886	RAY	4.50	EX3		6446	AMP	255.00
E3		GL 5670	GE	4.85	EX3		WL 5891	WES	1300.00	EX3		6447	AMP	400.00
E2		CK 5670	RAY	4.85	E1		5893	RCA	19.40	EX1		6474		
E2		CK 5672	RAY	1.60	E3		5894	AMP	24.95			/1854	RCA	1900.00
E1		8673	RCA	13.55	E3		GL 5896	GE	7.28	E3		6508	AMP	80.00
E2		CK 5676	RAY	1.90	E3		GL 5899	GE	7.80	E1		8000	RCA	14.50
E2		CK 5677	RAY	3.70	E1		5913	RCA	1.20	E1		8003	RCA	8.55
E2		CK 5678	RAY	1.60	E3		5920	AMP	3.00	E1		8008	RCA	8.20
E3		5679	SYL	1.35	E3		5923			E3		8008	AMP	8.25
E3		WL 5683	WES	9.43			/AX9904	AMP	150.00	E1		8013-A	RCA	10.30
E3		WL 5684	WES	15.04	E3		5924			E3		GL 8020	GE	24.00
E3		5689					/AX9904R	AMP	210.00	E1		8025A	RCA	12.35
		/C&J	AMP	31.90	E3		5933			E1		9001	RCA	3.95
E2		CK 5686	RAY	3.30	E1		/807 W	SYL	12.85	E1		9002	RCA	2.80
E3		5687	TUNG	5.00	E1		5963	RCA	1.40	E2		9002	RAY	2.50
E3		GL 5687	GE	4.90	E1		5964	RCA	1.50	E1		9003	RCA	3.75
E1		5690	RCA	9.38	E1		5965	RCA	2.55	E2		9003	RAY	3.40
E1		5691	RCA	8.45	E2		CK 5973	RAY	3.75	E1		9004	RAY	2.80
E1		5692	RCA	8.15	E2		RK 5976	RAY	68.00	E1		9005	RCA	4.05
E3		WL 5692	WES	9.75	E2		CK 5995	RAY	7.50	E1		9006	RCA	1.90
E1		5693	RCA	6.40	E3		GL 6005	GE	3.55					
E2		CK 5694	RAY	3.75	E3		6007/5913	AMP	1.50					
E1		5696	RCA	1.90	E3		6008							
E2		CK 5702	RAY	5.85			/5911	AMP	1.50					
E2		CK 5702 WA	RAY	9.30	E1		6012	RCA	5.55					
E2		CK 5703	RAY	2.20	EX3		GL 6019	GE	620.00					
E2		CK 5703 WA	RAY	8.75	E1		6026	RAY	2.95					
E1		5718	RCA	5.95	E2		CK 6029	RAY	4.50					
E1		5719	RCA	5.85	EX3		GL 6039	GE	620.00					
E3		GL 5720			E3		GL 6072	GE	4.55					
		/FG33	GE	23.00	E1		6073	RCA	3.40					
E3		5722	SYL	6.40	E1		6074	RCA	3.85					
E2		CK 5723	RAY	3.25	E3		6075							
E1		5726	RCA	1.45			/AX9907	AMP	225.00					
E3		GL 5726	GE	1.45	E3		6076							
E2		CK 5726	RAY	1.45			/A9907R	AMP	275.00					
E3		GL 5727	GE	2.70	E3		6079							
E1		5734	RCA	18.00			/AX9908	AMP	60.00					
EX3		5736	AMP	160.00	E1		6080	RCA	6.00					
EX3		WL 5736	WES	160.00	E1		6082	RCA	5.30					
E2		CK 5744	RAY	2.70	E3		6083							
E2		CK 5744 WA	RAY	8.75			/AX9909	AMP	13.50					
E3		GL 5749	GE	2.00	E3		GL 6087	AMP	5.25					
E3		CK 5749	RAY	2.00	E2		CK 6088	RAY	2.60					
E3		GL 5750	GE	2.50	E3		X 6090	SYL	2.30					
E1		5751	RCA	3.35	E1		6101	RCA	8.00					
E3		GL 5751	GE	3.35	E1		CK 6111	RAY	9.00					
E2		CK 5751	RAY	3.35	E2		CK 6112	RAY	9.40					
EX1		5762			E3		GL 6134	GE	5.45					
		/7C24	RCA	195.00	E3		GL 6135	GE	1.90					
E1		5763	RCA	1.93	E3		GL 6136	GE	2.20					
E2		CK 5763	RAY	1.75	E3		GL 6137	GE	2.20					
EX1		5771	RCA	543.00	E1		6146	RCA	4.90					
E2		CK 5783	RAY	5.60	E2		CK 6146	RAY	4.15					
E2		5783 WA	RAY	7.90	E2		CK 6147	RAY	9.60					
E2		CK 5784	RAY	7.50	E2		CK 6152	RAY	8.70					
E2		CK 5784 WA	RAY	11.85	E1		6159	RCA	4.90					
E2		CK 5785	RAY	2.35										

## SPECIAL PURPOSE TUBE LITERATURE

### RCA PUBLICATIONS

**37 A 046, ID-1020, INTERCHANGEABILITY DIRECTORY.** Guide to selection of proper RCA tube types for replacement of non-receiving tubes. Listing 1600 type designations, this directory covers vacuum power tubes, vacuum and gas rectifiers, thyratrons, ignitrons, etc. **No charge.**

**37 K 163, Type TT3, AIR-COOLED TRANSMITTING TUBE MANUAL.** 192-page manual containing valuable information on air-cooled transmitting tubes. Chapters include: General Vacuum-Tube Considerations, Generic Tube Types, Transmitting Tube Installation and Application, Technical Description by Tube Types, Transmitting Tube Ratings, etc. Profusely illustrated with line drawings, useful formulas, circuits, graphs, etc. Paper bound. 5 1/2 x 8 1/2". **No charge** with tube order. Wt., 8 oz. **NET**..... 35¢

**37 A 159, Type 3F801R, USER PRICE SCHEDULE.** **No charge.**

**37 A 162, Type CRPS-102A, CATHODE-RAY TUBES, PHOTOTUBES & SPECIAL TUBES.** **No charge.**

**37 A 165, Type SRB-1002, SPECIAL RED TUBE BULLETIN.** Full data on 5691, 5692 and 5693 Red Tubes. **No charge.**

**37 A 576, Type PG-101-A, POWER AND GAS TUBE BULLETIN.** Data on transmitting, industrial, RF heating, and other special tubes. **No charge.**

**37 A 157, HAM-103A.** Latest ratings and technical data on all popular RCA Amateur tubes. **No charge.**

# Transistors and Diodes

## RCA CRYSTAL DIODES



New germanium crystal diodes for use as low power rectifiers. Very small in size, have great resistance to shock and vibration, and are not affected by moisture. In addition, they have low shunt capacitance and are extremely efficient in applications where low voltage AC signals must be rectified. Point-contact types, hermetically sealed in glass. Average shpg. wt., 2 oz.

- 1N34-A. General-purpose type for low-power rectification in circuits such as clipping, isolating, and metering. Peak inverse voltage, 60 v. Max. average current, 50 ma. 5 E 870. NET.....1.00
- 1N38-A. Germanium point-contact. Large signal type for electronic computers and clamping circuits. Peak inverse voltage, 100 volts. Maximum average current, 50 ma. Length, 1 1/4", .025" diameter. 2 E 874. NET.....2.55
- 1N64-A. Germanium point-contact. High back resistance type. For clipping circuits; high-impedance, high-voltage probes; DC restorer circuits and high-impedance detector circuits. Peak inverse voltage, 50 v. Maximum average current, 50 ma. 5 E 875. NET.....1.45
- 1N66-A. Large-signal type, for use in circuits such as electronic computers, DC restorers, and high voltage probes. Peak inverse voltage, 150 v. Max. average current, 50 ma. 5 E 871. NET.....4.70
- 1N68-A. Similar to 1N55-A. Peak inverse voltage, 100 v. Max. average current, 50 ma. 5 E 873. NET.....1.80
- 1N66-A. High-conduction type, for use in discriminator circuits in FM receivers. Peak inverse voltage, 40 v. Max. av. current, 60 ma. 5 E 872. NET.....1.45

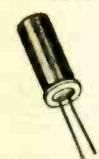
## IRC SELENIUM DIODES



Especially designed diode for low current circuits where very high back resistance and low forward resistance is required. Widely used in hearing aids, computers and similar circuits. Hermetically sealed by metalized glass-to-metal bond for protection against high humidity, dust, fumes, etc. Peak inverse, 36 volts. Shpg. wt., 2 oz.

- Type 6GA1-2B. Min. forward current at 2 v. D.C., 5 ma; 4000 ohms. Max. inverse at 20 v., 20 microamps; 1 meg. Size, 0.450"x0.145". 4 A 650. NET......98
- Type 9GA1-2B. Same as above type but size, 0.500"x0.210". 4 A 652. NET......88
- Type 6GA1-3C. Min. forward and max. inverse, 1 ma and 10 microamps; resistance, 2000 ohms and 2 megs. Size, 0.450"x0.145". 4 A 651. NET.....1.32
- Type 9GA1-3C. Same as type 6GA1-3C but size, 0.55"x0.210". 4 A 653. NET.....1.20

## NATIONAL SILICON DIODES



Newest semiconductor devices. Silicon diodes employing p-n junction structure developed by Bell Telephone Labs. Characteristics: Excellent stability; extremely low reverse current; moderate-to-heavy forward conduction; sharply defined low-impedance breakdown region in reverse direction which occurs at a particular applied voltage termed "Zener". Rugged internal design. Applications: High temperature operation, function generators, diode-capacitor "memory" units; magnetic amplifiers, constant voltage source, etc. Maximum temperature range, -50°C to +100°C. Size, 1/4"x1/2", 2 oz.

- Type 1N137-A. Reverse voltage (working), 30 V; forward current, steady state dc, 30 mA, instantaneous peak, 150 ma; power dissipation, 125 mW. 7 E C 337. NET EACH.....6.50
- Type 1N138-A. Reverse voltage (working), 18 V; forward current, steady state dc, 30 mA, instantaneous peak, 250 ma; power dissipation, 125 mW. 7 E C 338. NET EACH.....6.50

## LATEST TRANSISTOR BOOKS

- TRANSISTORS. By L. E. Garner, Jr. (Coyne). Contains valuable data on transistor action, characteristics, circuits, latest experiments, etc. Illustrated, 105 pages. 5 1/2"x8 1/4". 38 K 608. Postpaid In U.S.A.....1.50
- FUNDAMENTALS OF TRANSISTORS. By L. Krugman. Explains use of transistors for replacement of vacuum tubes, basic transistor operation, characteristics, etc. Illustrated, 160 pages. 5 1/2"x8 1/4". 37 K 474. Postpaid In U.S.A.....2.65

## JUNCTION AND POINT-CONTACT TRANSISTORS

Recently developed point-contact and junction transistors. Primarily voltage amplifiers, but have many other applications. Extremely rugged and compact, they offer distinct advantages over vacuum tubes: consume 1/1000 as much power for the same amount of work (no filament supply); have much longer life—estimated at 70,000 to 90,000 hours or approximately ten years. As new transistors are released by manufacturers ALLIED will stock them.

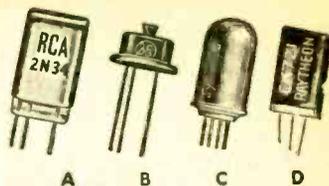


Fig. A—RCA TRANSISTORS

- Type 2N32 Point-Contact. Designed for large-signal applications such as switching circuits. Maximum ratings: collector dissipation, 50 mw; voltage, -40 v.; current, -8 ma. Size of case, 1/2"x1/4". Shpg. wt., 2 oz. 5 E C 850. NET.....15.40
- Type 2N33 Point-Contact. Designed for oscillator applications up to 50 mc. Maximum ratings: collector dissipation, 30 mw; voltage, -8.5 v.; current, -7 ma. Size of case, 1/2"x1/4". Shpg. wt., 2 oz. 5 E C 851. NET.....18.40
- Type 2N34 Junction P-N-P. Designed for low-frequency, low-power amplifier applications. Maximum ratings: collector dissipation, 550 mw; voltage, -25 v.; current, -8 ma. Size of case, 1 1/4"x1/2". Shpg. wt., 2 oz. 5 E C 852. NET.....10.75

Fig. B—GE TRANSISTORS

- Type 2N43 Junction P-N-P. Recommended for high-gain, low-to-medium power application. Maximum ratings: collector dissipation, 150 mw; collector voltage, -45 v.; current, -50 ma. Size, 0.282"x0.328". 2 oz. 7 E C 443. NET.....14.25
- Type 2N44 Junction P-N-P. For intermediate-gain, low-to-medium power applications. Maximum ratings: collector dissipation, 150 mw; collector voltage, -45 v.; current, -50 ma. Size, 0.282"x0.328". Shpg. wt., 2 oz. 7 E C 444. NET.....9.51
- Type 2N45 Junction P-N-P. For medium-gain, low-to-medium power applications. Maximum ratings: collector dissipation, 150 mw; collector voltage, -45 v.; current, -50 ma. Size, 0.282"x0.328". Shpg. wt., 2 oz. 7 E C 445. NET.....7.14

Fig. C—SYLVANIA TRANSISTORS

- Type 3N21 Point Contact Tetrode. Designed primarily for use in switching and small signal applications. Maximum ratings: collector dissipation, 100 mw; voltage, -60 v.; emitter voltage, -50 v.; emitter output, 30 mw. 315"x.565". 2 oz. 7 E 388. NET.....25.20
- Type 2N68 PNP Junction Output Transistor. Medium gain, hi-power for moderate frequency applications. Collector to base voltage, -25 v. Collector current at 0 output, -320 ma. Power gain, about 10 db. Power output in push-pull Class B amplifier, 3 watts. 1 1/2"x1". 2 oz. 7 E C 623. NET.....21.55

Fig. D—RAYTHEON TRANSISTORS

- CK-721 Junction P-N-P. Plastic and glass case. 1/2"x1/4" dia. Maximum ratings: collector voltage, -20 volts; collector current, -5 ma; collector dissipation, 30 mw; emitter current, 5 ma. Average power (grounded emitter), 2.8 mw. Av. power gain, 38 db; av. noise factor 22 db. Shpg. wt., 2 oz. 5 E C 821. NET.....7.90
  - CK-722 Junction P-N-P. Plastic and glass case. 1/2"x1/4" dia. Especially suitable for oscillator power amplifier and Class B output applications. Maximum ratings: collector voltage, -20 volts; collector current, -5 ma; collector dissipation (at 30° C), 30 mw; emitter current, 5 ma. Shpg. wt., 2 oz. 5 E C 822. NET.....4.50
  - CK-723 Junction P-N-P. Maximum ratings: collector voltage, -20 v.; current, -8 ma; collector dissipation (at 30°), 30 mw; emitter current, 8 ma. 29x.24x.50". Shpg. wt., 2 oz. 5 E C 823. NET.....6.00
  - CK-725 Junction P-N-P. For audio or low RF applications. Maximum ratings: collector voltage, -22 v.; current, -10 ma; dissipation, 33 mw. 29x.24x.50". Shpg. wt., 2 oz. 5 E C 825. NET.....9.50
  - CK-727 Junction P-N-P. For low level audio applications where low noise is factor. Maximum ratings: collector voltage, -6 v.; current, -10 ma; dissipation, 30 mw. 29x.24x.50". Shpg. wt., 2 oz. 5 E C 827. NET.....11.25
- HERMETICALLY SEALED**
- 2N63 Junction P-N-P. For audio or low RF applications. Maximum ratings: collector voltage, -22 v.; current, -10 ma; dissipation, 33 mw; noise factor, 25 db. 420"x.230"x.475". Shpg. wt., 2 oz. 5 E C 863. NET.....11.15
  - 2N64 Junction P-N-P. For use in audio or low RF applications. Maximum ratings: collector voltage, -22 v.; current, -10 ma; dissipation (at 30°), 33 mw; noise factor, 22 db. 420"x.230"x.475". Shpg. wt., 2 oz. 5 E C 864. NET.....14.25
  - 2N65 Junction P-N-P. For use in audio or low RF applications. Maximum ratings: collector voltage, -22 v.; current, -10 ma; dissipation (at 30° C), 33 mw; noise factor, 20 db. 420"x.230"x.475". Shpg. wt., 2 oz. 5 E C 865. NET.....20.50

## RAYTHEON DIODES

Color-coded cases. Low shunt capacity. All germanium, except silicon types. Letter P following type number indicates plug-in type. \*Hermetically sealed. Shpg. wt., 2 oz.

## AMPEREX GERMANIUM DIODES

Shunt capacity, 1.0 mmf. High stability in operation. Maximum ratings, peak rectified current, 150 ma; av. rectified current, 50 ma; surge current for 1 sec., 500 ma. 1/4"x1/2". 2 oz. Write for special prices in lots of 100 or more.

No.	Type	DC Peak Inverse	EACH	5-24, EA.	26-99, EA.
5E 805	1N34A	75 V.	.80	.72	.65
5E 806	1N38A	120 V.	1.80	1.62	1.46
5E 807	1N54	75 V.	1.10	.99	.89
5E 808	1N58A	120 V.	1.30	1.17	1.05



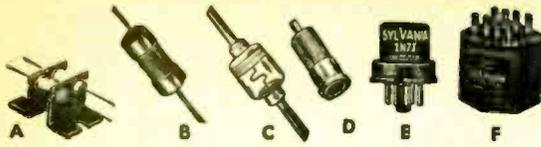
## AMPEREX VACUUM CAPACITORS

For use in Industrial RF applications. Vacuum-type construction provides extremely high stability in critical bypass, coupling and neutralizing circuits. Used as plate tank capacitor, high-voltage coupling and bypass capacitors at high frequencies and high-voltage neutralizing. VC-25 rated at 30 kV maximum. VC-50 and VC-100 at 32 kV maximum. Size, 2 1/2"x1/2". Av. shpg. wt., 10 oz.

No.	Type	Mmf	NET
42 H 075	VC 25	25	24.50
42 H 076	VC 50	50	28.50
42 H 077	VC 100	100	33.00

No.	Type	Description	NET
5E 725	CK705	General Purpose Diode	.85
5E 810	CK705A	General Purpose Diode	.70
5E 811	CK705AP*	General Purpose Diode	.70
5E 829	CK705P	General Purpose Diode	.65
5E 812	CK706A	Video Detector	.40
5E 726	CK707*	50V DC Restorer	1.60
5E 813	CK707P*	50V DC Restorer	2.00
5E 727	CK708*	100V DC Restorer	2.00
5E 814	CK708P*	100V DC Restorer	2.00
5E 780	CK709	Bridge Rectifier	4.50
5E 781	CK710	UHF Mixer Diode	.97
5E 830	CK711	4 Matched Diodes	16.50
5E 784	CK713*	Computer Diode	.95
5E 831	CK713A	Computer Diode	.95
5E 815	CK713AP*	Computer Diode	.95
5E 832	CK715	Frequency Multiplier	.65
5E 833	CK730	UHF Mixer	.95
5E 834	CK732	UHF Converter (Plug In)	1.05
5E 835	CK739	Junction Diode	2.00
5E 836	CK740	Junction Diode	2.00
5E 837	CK741	Junction Diode	2.80
5E 838	CK742	Junction Diode	2.60
5E 839	CK745	Junction Diode	2.80
5E 840	CK747	Junction Diode	1.90
5E 841	CK735*	Junction Diode	5.50
5E 842	CK736*	Junction Diode	5.50
5E 843	CK738*	Junction Diode	5.50
5E 844	CK746*	Junction Diode	3.15
5E 785	IN66*	General Purpose Diode	.65
5E 786	IN67*	High Back-Resistance	2.00
5E 816	IN67P*	50V DC Restorer	2.00
5E 828	IN68	100V DC Restorer	2.00

# Crystal Diodes



## SYLVANIA CRYSTAL DIODES

These compact, highly efficient crystal diodes have hundreds of applications. Silicon types are used in radar, industry, and microwave instruments such as test probes, power indicators, etc. Germanium types are used for low-power rectification of frequencies up to 200 mc, and as detectors in TV receivers, etc. See Germanium Diode books listed below for typical applications. Average shpg. wt., 2 oz.

**Fig. A. 1N36. DUAL DIODE.** This Duo-Diode consists of two electrically matched 1N34 germanium diodes assembled in a convenient bracket for mounting. Excellent characteristics. Ideally suited for full-wave rectification applications. Overall size,  $1\frac{1}{2} \times \frac{1}{2} \times \frac{1}{4}$ ". Shpg. wt., 4 oz. **2.20**

**Fig. E. Type 1N42. VARISTOR.** Consists of four electronically matched 1N38's mounted in a metal octal tube shell. Resistances are balanced within  $\pm 2.5\%$  in forward direction at 1.5 volts, and are balanced within 3 ohms. Overall size,  $2\frac{1}{2}$ " high, 1" diameter. Wt., 4 oz. **17.25**

**Fig. B. 1N34. SINGLE DIODE.** General-purpose diode. Average anode current rating, 50 ma. maximum. Low shunt capacity of 1 mmf. Low forward resistance. Overall size,  $\frac{1}{4}$ " long,  $\frac{3}{8}$ " diameter,  $1\frac{1}{4}$ " leads. Shpg. wt., 2 oz. **80c**

Stock No.	Mfr's Type	Fig.	Description	Anode Max. ma	Continuous Reverse W.V.	NET EACH
7 E 241	1N38	B	100 Back Volt Diode	50	100	1.75
7 E 235	1N39	B	200 Back Volt Diode	50	200	3.95
7 E 284	1N40	E	Varistor—Plug-In	22.5	25	12.25
7 E 285	1N41	F	Varistor—Lug Type	22.5	25	11.50
7 E 287	1N54	B	High Back-Resistance	50	35	1.05
7 E 288	1N55	B	150-Volt Diode	50	100	2.20
7 E 289	1N56	B	High-Conc. Diode	60	40	1.05
7 E 291	1N57	B	100-Volt Diode	50	100	1.30
7 E 292	1N60	B	Video Detector Diode	50	25	4.45
7 E 243	1N71	E	Low Impedance Varistor	60	40	7.20
7 E 436	1N105	.....	Video Detector Diode	150	25	.45

## Fig. C—"SEALED IN GLASS" DIODES

Germanium crystal diodes hermetically sealed in moisture-proof glass cartridges. Electrically identical to corresponding ceramic types, but smaller and lighter in weight. 1 mmf shunt capacity. Size,  $\frac{3}{8} \times \frac{1}{4}$ ". Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Description	Anode Max. ma	Continuous Reverse W.V.	NET EACH
7 E 236	1N34A	General Purpose Diode	50	60	.90
7 E 426	1N38A	100-Volt Diode	50	100	2.00
7 E 427	1N54A	High Back-Resistance	50	50	1.45
7 E 428	1N55A	150-Volt Diode	50	150	4.70
7 E 429	1N56A	High Conduction Diode	60	40	1.45
7 E 237	1N58A	100-Volt Diode	50	100	1.45

## Fig. D—MICROWAVE SILICON DIODES

Point contact crystal rectifiers designed for use as non-linear circuit elements in microwave applications. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Description	Test Conditions		NET EACH
			Frequency In Mc	Conversion Loss In db	
7 E 272	1N21A	Converter	3060	7.5	2.20
7 E 274	1N21	Converter	3060	6.5	3.25
7 E 275	1N21C	Converter	3060	5.5	10.80
7 E 278	1N23A	Converter	9375	8.0	2.20
7 E 279	1N23B	Converter	9375	6.5	2.90
7 E 281	1N26	Converter	23,948	8.5	10.80
7 E 282	1N31	Video Detector	10,000	...	7.20
7 E 438	1N76	Video Detector	9,375	...	4.90
7 E 439	1N78	Converter	16,000	7.5	10.80
7 E 440	1N82	Converter	1,000	...	.90

## GERMANIUM DIODE BOOKS

**40 USES FOR GERMANIUM DIODES.** By Technical Staff of Sylvania Electric Products, Inc. Written by engineers who helped develop the crystal diode. Has workable circuits and data for 40 important uses of diodes and suggests numerous others. Includes 42 schematic diagrams. 46 pages. Size, 6x9". **25c**

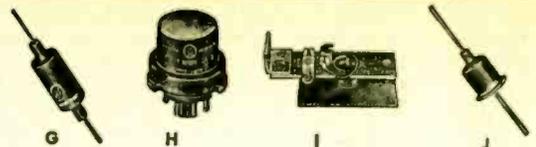
**37 K 044. Postpaid in U.S.A. .... 25c**

**ELECTRONIC SHORTCUTS FOR HOBBYISTS.** Prepared by Sylvania engineers. Tells how to build 24 devices using germanium diodes. Includes: Interval Timer, Charger for Small Dry Batteries, Replacing Tubes with Germanium Diodes, etc. With illustrations. Also Germanium Diode Rating and Characteristics chart. Has 40 pages. Size, 6x9". **25c**

**37 K 074. Postpaid in U.S.A. .... 25c**

**SYLVANIA CRYSTAL DIODE BOOK.** Another in the series of Diode Books. Shows 40 proven "circuit kinks" with the germanium diode. Describes and illustrates with schematic diagrams its use in crystal voltmeters, radio, TV devices and experimental applications. Has 35 pages. 6x9". **25c**

**37 K 091. Postpaid in U.S.A. .... 25c**



## GE CRYSTAL DIODES

GE crystal diodes. Complete line of general purpose and special types for use in electronic and electrical power circuits requiring detection, rectification or amplification. Features welded joint between platinum whisker and crystal for high strength and rigidity. Withstand shock and vibration. Free from microphonic effects. Low shunt capacitance. Exceptionally stable in operation. 1N73 and 1N74 are plug-in type in 6H6 tube shell. They are comprised of four specially selected diodes perfectly balanced. 1N73 diodes are within .1 volt of each other. 1N74 diodes are within .2 volt of each other. Wt., 2 oz.

## GENERAL PURPOSE DIODES

Stock No.	Mfr's Type	Fig.	Peak Inv. Voltage	Av. Rect. Current (ma)	Peak Rect. Current (ma)	NET EACH
7 E 250	1N48	G	85	50	150	.66
7 E 247	1N51	G	50	25	100	.51
7 E 248	1N52	G	85	50	150	1.40
7 E 249	1N63	G	125	50	150	3.07
7 E 464	1N65	G	85	50	150	.67
7 E 470	1N75	G	125	50	150	2.67

## TV DIODE

7 E 246	1N64	G	20	Min. DC in 44 mc rect., 100 ma.		.47
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## JAN DIODE (CERAMIC CASE)

7 E 465	1N69	G	75	40	125	.90
7 E 466	1N70	G	125	30	90	2.40
7 E 471	1N81	G	50	30	90	1.95

## UHF DIODES

7 E 467	1N72	G	5	25	75	.86
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## MATCHED PAIRS

7 E 472	1N48	G	85	50	150	2.47
7 E 473	1N52	G	85	50	150	4.41
7 E 474	1N63	G	85	50	150	7.62

## QUADS DIODES

7 E 477	1N73	H	75	22.5	60	16.20
7 E 478	1N74	H	75	22.5	60	12.36

## DIFFUSED JUNCTION RECTIFIERS

Diffused junction rectifiers. Very low forward resistance and correspondingly high reverse leakage resistance, gives these rectifiers an efficiency of about 99%! Applications include signal corps switchboards, computers, magnetic amplifiers, experimental circuits, etc. Feature long life—hermetically sealed construction. Extremely small size. Leads attached for soldering (on types 1N91, 1N92 and 1N93). 1N153 and 1N158 are attached to mounting brackets. Versatile. Ratings for ambient temperatures to 65° C. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Peak Inv. Voltage	Av. Rect. Current (ma)	Peak Rect. Current (ma)	NET EACH
7 E 491	1N91	J	100	150	470	1.61
7 E 492	1N92	J	200	75	310	2.85
7 E 493	1N93	J	300	100	250	3.81
7 E 476	1N153	I	300	500	1570	4.77
7 E 495	1N158	I	380	500	1570	7.14

## HUGHES AIRCRAFT GERMANIUM DIODES

Point-contact germanium diodes. Fusion-sealed in one piece glass envelope. Impervious to external contaminating elements.



Flexible diamet. leads may be spot-welded, iron or dip soldered as close as  $\frac{1}{4}$ " to diode body. Germanium crystal is permanently bonded to one lead—cat whisker welded to other lead. Highly resistant to shock and vibration. Each diode tested to ensure stability. Diode body dimensions, .265 x .130" maximum. Shunt capacitance, .5 mmf maximum. Ambient operating temperature range, -78° C. to +90° C. All specifications below are at 25° C. 1N126 formerly JAN type 1N69A. 1N127 formerly JAN type 1N70A. 1N128 formerly JAN type 1N81A. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Description	Peak Inv. Voltage	Max. Inv. Voltage	Max. Inv. Current (ma)	NET EACH
7 E 575	1N55B	High Peak Diode	190	150	.5 @ 150 V	2.34
7 E 576	1N67A	1 Meg Type	100	80	.005 @ 5 V	1.74
7 E 577	1N68A	High Peak Diode	130	100	.625 @ 100 V	1.68
7 E 578	1N68	500K Type	100	80	.008 @ 5 V	1.35
7 E 579	1N90	General Purpose	75	60	.5 @ -50 V	.81
7 E 580	1N95	General Purpose	75	60	.5 @ -50 V	1.14
7 E 581	1N96	General Purpose	75	60	.5 @ -50 V	1.47
7 E 582	1N97	500K Type	100	80	.008 @ 5 V	1.74
7 E 583	1N98	500K Type	100	80	.008 @ 5 V	2.16
7 E 584	1N99	1 Meg Type	100	80	.005 @ 5 V	2.25
7 E 585	1N100	1 Meg Type	100	80	.005 @ 5 V	2.67
7 E 586	1N116	500K Type	75	60	.1 @ -50 V	1.05
7 E 587	1N117	500K Type	75	60	.1 @ -50 V	1.35
7 E 588	1N118	500K Type	75	60	.1 @ -50 V	1.86
7 E 589	1N126	JAN Type	75	60	.025 @ 10 V	.96
7 E 590	1N127	JAN Type	125	100	.025 @ 10 V	2.16
7 E 591	1N128	JAN Type	50	40	.01 @ 10 V	1.74
7 E 592	1N191	Computer Type	...	...	...	2.25
7 E 593	1N192	Computer Type	...	...	...	2.10

# Rectifiers and Ballasts



## SARKES TARZIAN SELENIUM RECTIFIERS

"Centre-Kooled" selenium rectifiers—premium quality at low cost. Widely used as replacements in radio and AC-DC sets, intercoms, bias supplies, amplifiers, etc. Also excellent for original equipment. Supply plate, filament and bias voltages directly from power line or from transformer. Max. rms input volts, 130. Conservatively rated to deliver highly dependable and efficient performance. "Centre-Kooled" design assures cool, stable operation. Max. inverse peak volts, 380. Approximate internal drop, 5 volts. \*Has locking lug. Av. shpg. wt., 5 oz.

Stock No.	Mfr's Type	DC MA	Size	NET EACH	6 or more EACH
4 A 631	50	50	1 1/2 x 1 1/2 x 1 1/2"	.58	.52
4 A 616	65	65	1 x 1 1/2 x 1 1/2"	.65	.59
4 A 617	75	75	1 x 1 1/2 x 1 1/2"	.84	.76
4 A 618	100	100	1 1/4 x 1 1/4 x 1 1/4"	.94	.85
4 A 619	*100A	100	1 1/2 x 1 1/2 x 1 1/2"	.90	.81
4 A 620	150	150	1 1/2 x 1 1/2 x 1 1/2"	1.04	.94
4 A 621	200	200	1 1/2 x 1 1/2 x 1 1/2"	1.47	1.32
4 A 622	350	350	1 1/2 x 1 1/2 x 1 1/2"	1.47	1.32
4 A 623	500	500	1 1/2 x 1 1/2 x 1 1/2"	1.47	1.32
4 A 624	*350A	350	1 1/2 x 1 1/2 x 2 1/2"	1.81	1.62
4 A 627	400	400	2 x 2 x 1 1/2"	1.91	1.72
4 A 625	500	500	2 x 2 x 1 1/2"	2.09	1.88

## SARKES TARZIAN FULL-WAVE POWER RECTIFIERS



Single-phase, full-wave selenium rectifier stacks for general-purpose and industrial use. Applications: Electro-plating, motor control, DC filament supplies, battery charging, DC relay supplies. DC supplies for telephone equipment, etc. \*Centre-tapped. †Bridge-connected. Av. shpg. wt., 10 oz.

Stock No.	Mfr's Type	Max. Amps.	Max. AC Input V.	DCV Output	Size	NET EACH
4 A 700	*D-10	2	13	6-10	3 1/2 x 3 1/2"	2.99
4 A 701	*D-12	2	13	6-10	4 2/2 x 4"	4.41
4 A 702	*D-14	2	13	6-10	5 2/2 x 6"	5.49
4 A 703	†D-17	2	26	6-20	3 3/2 x 3 3/2"	5.44
4 A 704	†D-18	4	26	6-20	4 3/2 x 4 1/2"	7.30
4 A 705	†D-19	6	26	6-20	4 3/2 x 4"	7.84
4 A 706	†D-20	8	26	6-20	5 3/2 x 6"	9.46
4 A 707	†D-21	12	26	6-20	5 2 1/2 x 6"	10.05
4 A 708	†D-24	2	52	20-40	3 4/2 x 3 3/2"	3.90
4 A 709	†D-25	4	52	20-40	4 4/2 x 4"	13.67

## JFD TV, ADJUSTABLE AND STEP-DOWN BALLASTS



TV Ballasts. Quality plug-in ballasts for AC-DC TV sets. Perforated shells for maximum dissipation and radiation of heat. Large insulating surfaces and heavy resistance elements. Provide highly dependable service. Shpg. wt., 1 1/2 lbs.

No.	Type	For	No.	Type	For	EACH
9 E 860	17A470303	Molotors	9 E 862	397022	Emerson	2.35
9 E 861	17A485459	Molotors	9 E 863	397023	Emerson	2.35

Adjustable Types. For virtually all replacement needs. 8-prong. 6 oz.

9 E 885. Replaces ballasts beginning with K, L, M, BK, BL, BM having numbers 6-42, ending with A, B, C, D, F, G, or H. NET .132

9 E 886. Replaces ballasts beginning with K, L, M, BK, BL, BM, having numbers 45 through 105 and ending with A, B, C, D, F, G, H, S-1, 2 or 3. NET .132

49 E 535. Type 464 Step-Down Ballast. Reduces 220 v. to 110 v. For 4-5 tube AC-DC radios using 15 amp tubes. Plugs into power outlet; line cord of set plugs into ballast. 5 oz. NET .191

## CLAROSTAT UNIVERSAL RESISTOR TUBES



Clarostat resistor tubes for voltage-reducing purposes. Replace all AC-DC tubes beginning with letters BK, BL, K, L and M; and corresponding numbers and letters given below. Order tubes according to letter and numeral designation of tube being replaced. For example, to replace a BK-23-A tube, or an M-55-D tube, the Clarostat 23-55-A would be used, etc. Shpg. wt., 1 tube, 6 oz.; additional tubes, 2 oz. each.

Stock No.	Mfr's Type	Tube Numbers From:	Ending In Letter:	NET EA.
9 E 853	23-55-A	23 to 55	A, B, C, D	.132
9 E 855	23-55-F	23 to 55	F, G, H	
9 E 856	60-92-A	60 to 92	A, B, C, D	

## MINI-SPRING TUBE HOLD-DOWNS



These highly dependable tube hold-downs keep tubes securely in place. Particularly valuable for use with equipment in which tubes are upside-down or horizontal; also excellent for portable radios, mobile gear and other equipment subject to vibration and shock. Two-way support keeps tube perpendicular to chassis; maintains downward axial force as well as sideways support. Permanently resilient springs. For use with 7- or 9-pin miniature tubes. Mount on wafer or molded tube socket, with nut and bolt, or rivet. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Height	For Tubes:	Per Pkg. of 3
41 H 121	20A	2 1/2"	6A05, 6X4, 35B5, 35W4, 50B5, etc.	26¢
41 H 122	21A	1 7/8"	1R5, 6AG5, 6AT6, 6BE6, 6C4, etc.	26¢
41 H 123	23A	1 1/2"	6AJ5, 6AK5, 6AL5, 6AS6, 6N4, etc.	26¢
41 H 124	24C	1 1/8"	12A7, 12AU7, etc.	26¢

## FEDERAL MINIATURE SELENIUM RECTIFIERS



Top-quality Federal selenium rectifiers at unusually low prices. These carefully engineered units are ideal for replacement use and original equipment—for AC-DC radios, TV sets, bias supplies, amplifiers, etc. Provide highly dependable, long-life service. All except Type 1017 are rated as follows: Max. rms input volts, 130; max. peak inverse volts, 380; internal drop, 7 volts. Type 1017 (bridge-connected): Max. rms input volts, 25; max. peak inverse volts, 35. Rectifiers with letter A in type no. have locking lug. \*Ultra-compact tubular rectifier; enclosed in paper tube. Have 1 1/2" leads. Av. shpg. wt., 5 oz.

Stock No.	Mfr's Type	DC MA	Size	NET EACH	NET EA. (6 or more)
4 A 662	1159	20	*1/4" dia. x 1/4"	.72	.65
4 A 606	1002	65	1 x 1 1/2"	.65	.59
4 A 602	1003	75	1 x 1 1/2"	.84	.76
4 A 600	1004A	100	1 1/2 x 1 1/2"	.94	.85
4 A 661	1101A	100	1 x 1 1/2"	.87	.79
4 A 603	1005A	150	1 1/2 x 1 1/2"	1.04	.94
4 A 601	1006A	200	1 1/2 x 1 1/2 x 1 1/2"	1.47	1.32
4 A 607	1028A	250	1 1/2 x 1 1/2 x 1 1/2"	1.47	1.32
4 A 663	1090A	300	1 1/2 x 1 1/2 x 1 1/2"	1.47	1.32
4 A 612	1023	350	1 1/2 x 1 1/2 x 2 1/2"	1.91	1.72
4 A 615	1130	400	2 x 2 x 1 1/2"	1.91	1.72
4 A 611	1179	500	2 x 2 x 2 1/2"	2.09	1.88
4 A 660	1017	600	1 1/2 x 1 1/2 x 1 1/2"	1.53	1.38

Type 1013 Battery Charger Rectifier. For charging small 2 and 6-volt batteries, such as used in electronic photoflash equipment and self-charging portable radios. Max. rms input volts, 18. Max. DC, 450 ma. Size, 1 1/2 x 1 1/2 x 1 1/2". Shpg. wt., 4 oz. 65c

4 A 604. NET .132

Type 1018 Battery Charger Rectifier. For trickle charging of 6-volt auto batteries. Also suitable for DC filament supplies. Max. rms input volts, 26. Max. DC, 1800 ma. 4 1/2 x 1 1/2 x 1 1/2". Wt., 6 oz. 2.26

4 A 664. NET .132

Federal Miniature Selenium Rectifier Handbook. Valuable handbook for radio-TV servicemen and experimenters. Includes full specifications and circuit applications. 80 pages. 8 1/2 x 4 1/2". 50c

37 K 106. Postpaid in U.S.A. .50c

## FEDERAL EXTRA-SMALL UNIVERSAL SELENIUMS

Extremely compact, universal replacement, selenium rectifiers. Eliminate installation problems where space is limited. Maximum rms input volts, 130. Maximum peak inverse volts, 380. Internal drop, 7 volts. All have locking lug. Av. shpg. wt., 4 oz.

Stock No.	Mfr's Type	DC MA	Size	NET EACH	6 or more EACH
4 A 684	1263A	65	1 1/2 x 1 1/2 x 1 1/2"	.60	.54
4 A 680	1236A	300	1 1/2 x 1 1/2 x 1 1/2"	1.47	1.32
4 A 681	1238A	350	1 1/2 x 1 1/2 x 1 1/2"	1.72	1.55
4 A 682	1241A	400	2 x 2 x 1 1/2"	1.91	1.72
4 A 683	1237A	500	2 x 2 x 1 1/2"	2.09	1.87

## MALLORY SELENIUM RECTIFIERS

High-grade units for radio and TV sets. Replacing rectifier tubes in AC-DC sets, 3-way portables, etc. Operate directly from 105-125 volts. May be used to supply plate, filament or bias requirements directly from power line or through transformers. Polarity clearly marked. Conservatively rated to provide long life and good voltage regulation. Voltage drop, 5-7 volts; max. rms input volts, 130; max. peak inverse volts, 380. \*Has locking lug. Av. wt., 5 oz.



Stock No.	Mfr's Type	DC MA	Size	NET EACH
4 A 632	6S65	65	1 x 1 1/2"	.88
4 A 633	6S75	75	1 x 1 1/2"	1.09
4 A 634	6S100	100	1 1/2 x 1 1/2"	1.21
4 A 645	*6S100A	100	1 x 1 1/2"	1.12
4 A 636	6S150	150	1 1/2 x 1 1/2"	1.32
4 A 639	6S200	200	1 1/2 x 1 1/2 x 1 1/2"	1.85
4 A 638	6S250	250	1 1/2 x 1 1/2 x 1 1/2"	1.85
4 A 639	6S300	300	1 1/2 x 1 1/2 x 1 1/2"	1.94
4 A 640	6S350	350	1 1/2 x 1 1/2 x 1 1/2"	2.41
4 A 641	6S450	450	2 x 2 x 1 1/2"	2.53

## MALLORY GRID BIAS CELLS

Fig. A. Used to bias class A audio tubes, and as source of initial bias for RF, IF and AVC stages. Eliminate need for bypass condensers. Should not be used where DC may flow thru or be drawn from the cell. Accuracy, ±10%. Temp. range, 0° F to 140° F. Size, 1 1/2 x 1/2". Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Volts	Description	NET EACH
9 M 948	BC-3	1 1/2		30¢
9 M 944	BC-4	1 1/2	With mtg. stud	38¢
9 M 949	BC-5	1 1/2		30¢
9 M 945	BC-6	1 1/2	With mtg. stud	38¢

## Fig. B—BIAS CELL CLIPS

Stock No.	Mfr's Type	Used With	Capacity	NET EACH
9 M 952	CB-15	BC-3 or BC-5	2-cell	23c
9 M 953	CB-16		4-cell	
9 M 954	CB-17		1-cell	

# RCA Test Instruments



## FOR ALL RADIO-TV SERVICING APPLICATIONS

### WR-49A RF SIGNAL GENERATOR

New RF signal generator provides continuous coverage from 85 kc to 30 mc, in six ranges, on fundamentals. Excellent, low-cost, generator for aligning AM and FM receivers of all types. Can be used as marker generator in alignment of TV receivers. Dial calibration accurate within 1%. Built-in 400 cycle oscillator for internal modulation or external use. Continuously variable percentage of modulation. Copper plated steel cabinet with internal shielding minimizes leakage. High and low RF output connectors. DC blocking condensers provide circuit isolation and protect equipment. Full length shielded cable minimizes radiation; permits troubleshooting sensitive RF circuits. Attenuator for positive control of RF level. Approximate range: 2000 to 1. Cathode-follower output stage isolates oscillator from effects of load assuring high stability. RF output voltages at least 0.05 v. rms and 0.01 v. rms at high and low connectors respectively. With cable. Blue-gray case, 7 1/2 x 10 1/2 x 6 1/2". For 105-125 v. 50-60 cycle AC. Shpg. wt., 10 lbs. 84 FX 094. NET.....59.50

### WR-59C TV SWEEP GENERATOR

Frequency-modulated sweep generator. Permits accurate measurement of TV receiver bandwidths when used with a TV marker generator and a scope. Continuous IF coverage from 50 kc to 50 mc. Pre-set switch positions for TV channels 2-13. Sweep width, 12 mc, continuously variable. Output flat within ±1 db. Fundamental oscillator output on TV channels; filtered beat-frequency fundamental output on IF/VF range. Output, 1 volt to 5 microvolts. Dual-piston attenuator with 20,000 to 1 ratio. Blanking circuit provides zero-reference line on scope screen. 60-cycle horizontal sweep, phase-controlled, also provided for use with scope. Balanced RF output, plus separate IF-VF output in attractive blue-gray case with buffed satin-aluminum panel. 10x 13 1/2 x 7 1/2". Supplied with cables and instructions. For 105-125 volts, 50-60 cycle AC. Shpg. wt., 30 lbs. 84 FX 074. NET.....274.50

### MODEL WO-88A OSCILLOSCOPE

Now at reduced cost—5" scope featuring a direct-coupled, push-pull vertical amplifier to provide flat response within 3 db from 0-500,000 cps—excellent reproduction of square waves and sync pulses. Sensitivity: vertical with WG-218 probe, 25 rms millivolts/inch; vertical with WG-216B probe, 0.25 rms volts/inch. Impedance: vertical with WG-218 probe, 1 meg and 75 mmf; vertical with WG-216B probe, 10 megs and 9.5 mmf; horizontal, 2.2 meg cps. Sweep: variable from 15-30,000 cps. Trace expansion is approximately twice screen diameter for detailed waveform observation. Frequency compensated step attenuator. Green graph screen is calibrated for peak-to-peak voltage. Excellent shielding throughout. Housed in blue hammeroid case. Size, 13 1/2 x 9 1/2 x 16 1/2" deep. Supplied complete with WG-218 AC probe. WG-216B low-capacitance probe, ground lead, alligator clip and instructions. For operation from 105-125 volts, 50-60 cycles AC. Shpg. wt., 32 lbs. 84 FX 089. NET.....149.50

### MODEL WO-56A TV FM-AM OSCILLOSCOPE

Big 7" screen. DC or AC input. Frequency-compensated, voltage-calibrated attenuators. Vertical response flat, within 2 db, to 500 kc (within 6 db to 1 mc, useful beyond 2 mc). Input impedance: one megohm, 75 mmf with WG-218 direct probe, 9.5 mmf with WG-216B low-capacity probe. Sensitivity: 10.6 rms mv/inch or 300 mv. p-to-p using WG-218; 106 rms mv/inch or 300 mv. p-to-p using WG-216B. Sweep: variable, 3—30,000 cps with fast retrace and preset fixed positions for TV-vertical (30 cps) and TV-horizontal (1875 cps). Has peak-to-peak calibrating voltage source and line-frequency sweep with phase control. Blue-gray case, 13 1/4 x 9 x 16 1/4". With WG-218 and WG-216B probes and instructions. For operation from 105-125 v., 50-60 cyc. AC. Shpg. wt., 38 lbs. 84 FX 085. NET.....274.50

WG-291 Demodulator Probe. For use with WO-56A and WG-5A oscilloscopes. For measurement of modulating wave peak voltage in amplitude modulated RF carriers to 250 mc. Audio frequency range, 30-5000 cps. Shpg. wt., 12 oz. 84 F 090. NET.....7.95

### WR-89A MARKER-GENERATOR

For alignment of TV, communications, and other electronic equipment operating between 19 and 260 mc. Built-in crystal oscillator gives 96 check points at 2.5 mc intervals. Accuracy, .01%. Output, 0.1 v. rms. Single piston-type capacitor provides 60 db attenuation. Separate crystal oscillator at 4.5 mc for aligning TV sound IF amplifiers and FM detectors. Dial drive ratio 11.6 to 1. Scale length of 144". Auxiliary V.O tunable from 100 to 150 kc for modulating main VFO. Simultaneous modulation at 4.5 mc and 600 cps for discriminator alignment. Provides bar patterns for checking vertical and horizontal linearity of TV receivers. Blue-gray case, 10x13 1/2 x 7 1/2". With 2 crystals, tubes, cable and instructions. For operation from 105-125 v. 50-60 cycle AC. Shpg. wt., 18 lbs. 84 FX 093. NET.....242.50

### MODEL WV-87A MASTER VOLTOHMYST

Deluxe VTVM. Reads peak-to-peak to 4200 volts. Response: 30 cps—3 mc. Has zero-center for FM discriminator alignment. Full 7 1/4" meter. Highly stable ±.2% meter movement. Reads DC current to 15 amps. Measures DC voltage to 1500 in 7 ranges with 11 meg input resistance. Reads AC rms to 1500 volts; AC input impedances from 0.83 meg and 85 mmf to 1.5 meg and 75 mmf. DC resistance to 1000 meg in 7 ranges. Uses ±1% multiplier and shunt resistors. Accuracy, ±3% of full scale for DC; ±5% of full scale for AC. Blue-gray case, 10x13 1/2 x 7 1/2". With WG-218 AC direct probe. WG-222 DC/direct probe, ohms probe, current cables and ground cable. Use with WG-264 probe (right, above), to extend RF range to 250 mc. For operation from 105-125 volts, 50-60 cycles AC. Wt., 16 lbs. 84 FX 088. NET.....112.50

### MODEL WV-97A SENIOR VOLTOHMYST

Improved VTVM. Response, 30 cps to 3 mc. Easy-to-read 4 1/4" meter with 200 microamp movement. Zero-center scale for FM discriminator alignment. Seven non-skip ranges on all functions. Reads AC rms to 1500 volts; AC peak-to-peak, to 4200 volts. AC input impedance of .83 meg and 70 mmf to 1.5 megs and 60 mmf. Measures resistance of 0.1 ohm to 1000 megs. Input resistance on DC: 11 megohms. Blue-gray case, 7 1/2 x 5 1/2 x 4 1/2" D. With tubes, WG-222 DC/direct probe, WG-218 direct AC probe, battery and leads. For 105-125 volts, 60 cycle AC. Shpg. wt., 7 lbs. 84 F 075. NET.....67.50

WG-264 Demodulator Crystal Diode Probe. Extends the RF range of Master, Senior and Junior VoltOhmysts to 250 mc. 12 oz. 84 F 084. NET.....7.75

### MODEL WV-77A JR. VOLTOHMYST

Latest version of the famous 195A—a quality test unit at low cost. Has zero-center scale for FM discriminator alignment. Polarity-reversing switch. Measures AC even in presence of DC. Easy-to-read 4 1/4" meter. Negative feedback bridge circuit. Uses precision 1% resistors. Ranges: DC and AC volts, 0-12, 60-300-1200 (11 megs input impedance on DC, .2 meg and 75 mmf to 2.0 megs and 50 mmf on AC); resistance, 0-1000 megs in 5 ranges. Response, ±1 db, 30 cps to 3 mc; with WG-264 probe (see 84 F 084 listed above), response range is 100 kc to 250 mc. Supplied complete with tubes, battery, WG-218 AC probe and WG-222 DC/direct probe, leads and instructions. Size: 8x5 1/2 x 4 1/2". For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 6 lbs. 84 F 087. NET.....47.50

WG-222 DC/Direct Probe. "Slip-on" probe with built-in 1-meg isolating resistor. Measures DC or resistance without changing probes. Shpg. wt., 1 lb. 84 F 091. NET.....3.50

### HIGH-VOLTAGE PROBES

For adapting VOM's and VTVM's to read up to 50,000 v. DC. Low-loss polystyrene body, with 9" leakage path and grounded arc-over protection baffle. With shielded cable and separate ground lead. Less multiplier resistor. 12 1/2" long. Shpg. wt., 1 1/4 lbs.

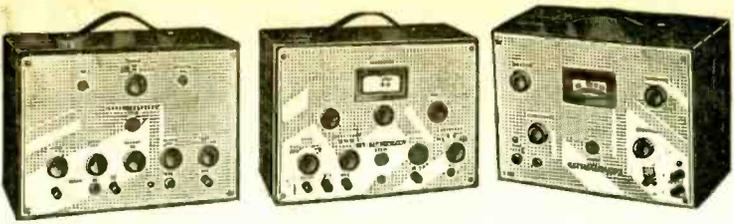
WG-290. With phone tips (Fig. A). 84 F 076. NET EACH.....7.15

WG-289. With coax connector (Fig. B). 84 F 077. NET EACH.....7.15

Special RCA HV Probs Guide. Lists testers by manufacturer and model number, showing correct multiplier to be used with each meter. 37 F 097. .... No charge

MULTIPLIER RESISTORS. For use in WG-290 or WG-289 probes, listed above. 84 F 079. WG-206, 1090 megohms. 84 F 080. WG-207, 991 megohms. 84 F 081. WG-208, 400 megohms. 84 F 082. WG-209, 480 megohms. 84 F 083. WG-210, 900 megohms. NET EACH.....2.80

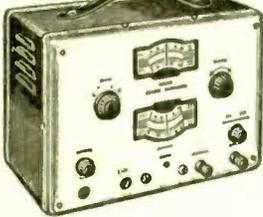
# RCA and GE Test Equipment



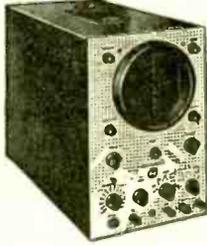
WR-61A

WR-36A

WR-86A



WA-44A



WO-78A



WV-37A

## RCA TEST EQUIPMENT

### WR-61A COLOR-BAR GENERATOR

Compact, lightweight color-bar generator. For checking overall operation of color TV receivers, and for adjusting color phasing and matrixing. Produces 10 bars of different colors, simultaneously, corresponding to all major axes. Provides picture-carrier, color-subcarrier and sound-carrier frequencies on channel 3; crystal controlled for extreme accuracy. Luminance signals at edges of color bars for checking registration of luminance and chrominance signals. Push-button controlled brightness signal produces horizontal area of increased brightness to permit checking for shift of hue in bright areas of picture. Adjustable subcarrier amplitude. Delivers signals of positive or negative polarity. Built-in rectifier provides demodulated signal for measurement of sync and subcarrier amplitudes with VTVM.  $9\frac{1}{2} \times 13\frac{1}{2} \times 7\frac{1}{2}$ ". For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 18 lbs. **247.50**  
84 FX 031, NET.....

### WR-36A DOT-BAR GENERATOR

This dot-bar generator is an essential instrument for color TV adjustment; also valuable for black-and-white receivers. Provides a pattern of optimum-size, white rectangular dots for making all convergence adjustments on color TV receivers. Also offers a choice of horizontal bars, vertical bars, or cross-hatch pattern for linearity adjustment of color as well as black-and-white receivers. Number of bars is adjustable; 8 to 15 horizontal bars and 11 to 13 vertical bars. Delivers modulated RF and video output. Frequency of RF output continuously adjustable for any channel from 2 to 6; amplitude is also adjustable. Positive or negative video output is approximately 5 volts for feeding video amplifier of color or black-and-white receivers. Internal 60-cycle or external sync.  $9\frac{1}{2} \times 13\frac{1}{2} \times 7\frac{1}{2}$ ". For 105-125 volts, 50-60 cycle AC. Shpg. wt., 18 lbs. **147.50**  
84 FX 097, NET.....

### MODEL WR-86A SWEEP GENERATOR

A highly dependable, smooth performing UHF sweep generator. For servicemen, labs and production lines. Excellent for alignment of UHF TV sets (color and black-and-white) and all other types of UHF receiving equipment. Very flat output voltage; varies 0.1 db or less per deflection voltages. Frequency range, continuously adjustable from 300 to 950 mc. Sweep width, 10% of frequency to 750 mc; 75 mc from 750-950 mc. Employs electro-mechanical sweep of rugged, time-tested design. Uses highly stable Colpitts oscillator with quarter-wave tuned line. Phased blanking provides circuit-reference base line. Phased horizontal deflection voltage for scope. Output (300ohms), at least 0.6 volt. Output may be attenuated up to 60 db. Exceptionally well shielded—entire oscillator housed in silver-plated compartment; pi filters on both sides of power line; attenuator operates inside silver-plated shield. Excellent impedance match to 50-ohm unbalanced and 300-ohm balanced circuits; matches 50-ohm circuits directly and 300-ohm circuits with balun network. With 4-ft. output cable and balun. Blue-gray case,  $9\frac{1}{2} \times 13\frac{1}{2} \times 7\frac{1}{2}$ ". For 105-125 v., 50-60 cycle AC. Shpg. wt., 19 lbs. **275.00**  
84 FX 027, NET.....

### WA-44A AUDIO SIGNAL GENERATOR

Highly versatile audio signal generator. Ideal for measuring intermodulation, response, input and output impedances, resonant frequency of speakers, etc. Four ranges: 11-110 and 110-1100 cps; 1.1-11 and 11-100 kc. Also has separate 60-cycle, variable-amplitude output. Cathode-follower output. Built-in blocking capacitor permits direct connection to plate with up to 275 volts of DC present. "Hi" and "Lo" outputs: 0.25 and 0-15 volts (rms). Voltage regulation and amplified AGC. Frequency stability, 3%. Response, +1 db (1100 cps reference). Total harmonic distortion, 2% (max.) from 30 cps to 15 kc. Hum level, 0.1% or less. Size,  $7 \times 10\frac{1}{2} \times 6$ ". For 105-125 v., 50-60 cycle AC. Shpg. wt., 12 lbs. **87.50**  
84 FX 095, NET.....

### WO-78A 5" OSCILLOSCOPE

Up-to-the-minute scope for checking color and black-and-white TV receivers. Features: Dual-bandwidth; wideband response, flat within -1 db from 3 cps to 4.5 mc to assure accurate reproduction of the 3.58 mc sync burst and 3.58 mc oscillator signals in color TV receivers, built-in voltage calibrators; constant sync amplitude; trace expansion of 3 times screen diameter. Vertical sensitivity (wide-band), 0.035 volts rms per inch; vertical sensitivity (narrow-band), 0.0035 volts rms per inch. Narrow-band response, flat within -3 db from 3 cps to 500 kc. Horizontal response, flat within -6 db from 3 cps to 1.0 mc. Horizontal sensitivity, 0.07 volt per inch. 14-position vertical attenuator. Vertical input 9.5 mmf and 10 meg with probe supplied. With 5ABP1 "flat-face" CRT.  $13\frac{1}{2} \times 9\frac{1}{2} \times 19\frac{1}{4}$ ". For 105-125 v., 50-60 cycle AC. Shpg. wt., 58 lbs. **425.00**  
84 FX 096, NET.....

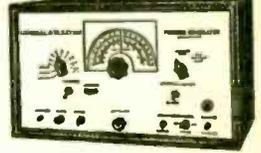
### WG-295A VIDEO MULTIMARKER

(Not illustrated.) Accurate, convenient marker for use with sweep generator in color TV servicing. For checking response of video amplifier (color or black-and-white), alignment of chrominance bandpass filter, and alignment of I and Q filters, 5 simultaneous absorption-type markers; 0.5 mc (for Q filter); 1.5 mc (for I filter); 2.5 mc (for bandpass filter); 3.58 mc (color subcarrier); 4.5 mc (sound-trap). Markers identified by touching metal buttons on side of unit. Connects between sweep generator and output cable.  $5\frac{1}{2} \times 4\frac{1}{2} \times 2\frac{1}{2}$ ". Shpg. wt., 1 lb. **24.95**  
84 F 070, NET.....

### WV-37A BATTERY TESTER

Accurate radio battery tester. For testing portable radio batteries under actual load conditions. An extremely practical unit for all service shops and sales counters. Built-in load circuits eliminate time-consuming load set-ups. Nine pre-fixed positions to accommodate virtually all portable radio batteries from 1.5 to 90 volts. 8 blank test positions for new types. Ruggedly built for long service. Full  $4\frac{1}{2} \times$  easy-to-read meter. Double meter scale has "Replace—Usable—Good" legend; also indicates percentage of rated battery voltage. Complete with red and black plastic test prods and leads. Size:  $9\frac{1}{2} \times 6\frac{1}{2} \times 1\frac{1}{2}$ ". Shpg. wt., 5 lbs. **24.95**  
84 F 092, NET.....

ST-4A



ST-5A

## G.E. TEST INSTRUMENTS

### MODEL ST-4A SWEEP GENERATOR

Highly accurate and stable unit for TV production and servicing. Covers high and low TV bands. Range: 4-110 mc and 170-220 mc. Sweep width; linear from 500 kc to greater than 0.1 mc. Output: 4-110 mc range, greater than 0.1 volt; 170-220 mc range, 0.5 volts—extra high output provided for high television channels. Attenuation: maximum output to 20 microvolts. Phase control range: 360 degrees. Unit is double-shielded and filtered to minimize leakage. Panel slotted to permit standard rack-mounting. Single-ended output. For operation from 105-125 volts or 210-250 volts, 50-60 cycles AC. In gray case.  $10\frac{1}{2} \times 19\frac{1}{2} \times 10$ ". Shpg. wt., 35 lbs. **395.00**  
84 FX 832, NET.....

**ST-8A Output Adapter**, Converts single-ended output of ST-4A to balanced output for matching 300-ohm load. Shpg. wt., 5 oz. **16.90**  
84 F 833, NET.....

### MODEL ST-5A MARKER GENERATOR

For TV development, production line testing and alignment. Use with scope and sweep generator such as G.E. ST-2A and G.E. ST-4A. 15-position switch selects any one of 12 crystal-controlled TV channel frequencies, plus 3 tunable IF ranges from 20-50 mc. Supplied with 4.5 mc crystal for sideband marker—also operates at 1.5 mc to provide simultaneous markers at 1.5 mc intervals from picture carrier. 4.5 mc crystal may be used independently for intercarrier alignment. 1 to 5 markers are available simultaneously along with series of IF markers. Includes switch for removal of all markers except picture carrier. Accuracy: Crystal channels, 0.02%; IF marker, 0.5%. Dial can be read to within 0.1 mc. Less crystals for TV channels—available separately at \$15.00 each; specify channels required when ordering. Rugged, handsome gray panel. Size,  $10\frac{1}{2} \times 9\frac{1}{2} \times 10$ ". Front panel is slotted to permit standard 19" relay rack mounting. For operation from 105-125 and 210-250 volts, 50-60 cycles AC. Shpg. wt., 42 lbs. **439.50**  
84 FX 829, NET.....

### MODEL ST-2A 5" OSCILLOSCOPE

A general-purpose, precision lab scope. Includes high-gain AC vertical amplifier, direct-coupled vertical amplifier, wide-band compensated attenuator and Z-axis input. Can be used on input frequencies to 3 mc. 60-cycle calibrating voltmeter attenuator for vertical amplifier attenuates as much as 1000-to-1 without frequency discrimination. AC Input: Impedance, 1 meg and 36 mmf; with probe (listed below), 1 meg and 10 mmf. Frequency response, +3 and -50% from 20 cps to 1 mc (gradual drop to 3 mc); with probe, +0 and -20% from 20-5000 cps. Sensitivity, .015 rms volt per inch; with probe, 0.20 rms volt per inch. Direct-Coupled Amplifier Input: Impedance, 1 meg and 80 mmf. Frequency response, +0 and -20% from 0-500 kc. Sensitivity, 2 DC volts per inch. Sweep: 10-100,000 cps; choice of external, internal or power line sync. With SUP1 cathode-ray tube, less probe (see below). Gray steel case. Size,  $15\frac{1}{2} \times 10\frac{1}{2} \times 7$ ". For 105-125 volts, 50-60 cycle AC. Shpg. wt., 46 lbs. **327.50**  
84 FX 827, NET.....  
Type 103J29 Low Capacity Probs. For use with ST-2A above. Sbgp. wt., 1 lb. **9.95**  
84 F 828, NET.....



# Hickok Test Equipment



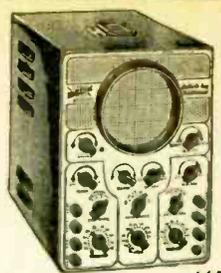
650C



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670



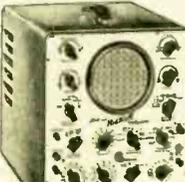
665



695



697



640



225

## MODEL 650C VIDEO GENERATOR

White dot pattern generator for efficient television trouble-shooting. Quickly locates and accurately identifies trouble in any TV receiver. Provides white dot pattern—a "must" for color TV. It will check focus and dynamic convergence, individual beam centering, adjustment of the yoke, adjustment of linearity and aspect ratio, etc. Video amplifier of the 650C employs low-impedance cathode follower output stage for excellent isolation; electrolytic output coupling condenser for maximum low-frequency response. RF output on channels 2 to 13 (on fundamentals), is metered and calibrated from 1 to 10,000 microvolts. Provides crystal-controlled pulses of 60, 900, 15,750 cycles and 315 kc for use singly or in any combination either direct or to modulate the RF output. Amplitude is sufficient to light up pix tube and give full raster deflection. Has a built-in video amplifier, 5 cycles to 4 mc, with variable gain from 0 to 10, with high input impedance, low output impedance and metered peak-to-peak voltage output. Produces vertical or horizontal bars (or both) for linearity adjustment. Also reads AC line voltage. Attenuator leakage less than 1 microvolt. Test leads included. Blue hammer-text steel case, 13x16 1/4 x 7". For 105-125 v. 60 cycle AC. Shpg. wt., 40 lbs.

84 FX 159. NET **318.90**

**Conversion Kit.** Not illustrated. For converting Model 650 video generators to white dot generators. Kit assembly is completely wired; can be added to Model 650 in a matter of minutes. Provides all the features of the Model 650C above, for servicing and adjustment of color as well as black-and-white TV receivers. Shpg. wt., 2 lbs.

84 F 155. NET **5.00**

## MODEL 695 VHF-FM SIGNAL GENERATOR

Crystal-controlled sweep generator for TV-FM servicing. Triple shielding and 0-50 mc heterodyned output permit thorough check of IF's and assures a strong signal necessary for stage-by-stage alignment. Permits signal attenuation from 300,000 to 3 microvolts. Three RF oscillators provide complete VHF coverage (channels 2-13) on fundamentals. .15 volt output. Fundamental output of .5 volt on all channels. Blanking of oscillator gives reference base line. Continuously variable tuning. Meters variable DC bias voltage, 0-12 volts, 170° of phasing. Sweep width: 0-15 mc; \* 3 mc depending on frequency. Linear sweep. Amplitude constant within 1 db per mc. 100 db attenuation. 5 volt to 5 microvolts. Output impedance: 90 ohms. Self-calibrated. Movable hair line. Supplied complete with all tubes, leads, and instructions. Size: 16 1/4 x 13 1/4 x 8". For 105-125 volts, 60 cycle AC. Shpg. wt., 31 lbs.

84 FX 165. NET **265.00**

## MODEL 697 UHF SWEEP GENERATOR

New sweep generator for UHF TV servicing. Continuously variable tuning. Fundamental output on channels 14-83. RF output, 0.5 volts. All electronic linear sweep; amplitude variation less than 1 db per mc. Sweep width: 0-25 mc at low end of band; 0-75 at high end. Variable DC bias voltage 0-12 volts, with calibrated output. Blanking of oscillator gives reference base line. 100 db attenuation with unique precision piston attenuator. Triple shielding reduces RF leakage, 170° of Phasing. Output impedance: 50 ohms. Complete with tubes, leads and instructions. For 105-125 v. 60 cycle AC. 16 1/4 x 13 1/4 x 10". Shpg. wt., 31 lbs.

84 FX 167. NET **300.00**

## MODEL 690 VHF-UHF CALIBRATOR

New marker generator—supplies dual markers with any sweep generator. Unique dial feature incorporates light beam reflected on glass dial. Makes it possible to greatly magnify screen and get marker settings within .05% accuracy. No parallax in dial; no interpolating, counting beats, etc., 25 volts RF output. Ranges: 4.25-11 mc, 19-50 mc, 50-90 mc, 155-225 mc. 3rd harmonic output on UHF channels 14-47; 4th harmonic on 48-83. Tuning eye indicator, phone jack for headphones. Supplied with 2.5 mc crystal (provision for 2 others), tubes, leads, and instructions. For 105-125 v. 60 cycle AC. Size: 16 1/4 x 13 1/4 x 8". Shpg. wt., 31 lbs.

84 FX 166. NET **237.00**

**Model 691 Heterodyne Marker Adder.** Not illustrated. Specifically designed as a companion unit to 690 Marker and 695 Sweep Generator. When used in conjunction with these two instruments, provides the utmost in TV alignment techniques. Takes guesswork out of alignment; eliminates any possible errors introduced by overloading due to markers. Outputs of sweep generator and marker generator are heterodyned and applied to scope in such a manner that marker pulses bypass receiver under alignment. Output marker voltage up to 3 volts. Variable attenuation of marker from 0-60 db. Variable attenuation of response curve, from 0-20 db. Impedance, 90 ohms in portable steel case, 8 1/4" H, 11 1/4" W, 7" D. For 105-125 volts, 60 cycles AC. Shpg. wt., 15 lbs.

84 F 156. NET **79.50**

## MODEL 670 OSCILLOSCOPE

A very sensitive and stable 5" scope. Direct-coupled, push-pull amplifiers for both vertical and horizontal deflection. Vertical amplifier has linear response beyond 2 mc. Horizontal amplifier response from 0 to 100 kc. High sensitivity—vertical amplifier, 15 millivolts rms per inch; horizontal amplifier, 70 millivolts rms per inch. Input impedance: vertical amplifier, 2.2 megohms and 30 mmf; horizontal amplifier, 1 megohm and 35 mmf. Recurrent linear sweep from 3 to 50,000 cps and fixed sweeps at 30 and 7.875 cps. In steel case, 13x10x18" deep. Supplied complete with SUP1 CRT, tubes and instructions. For 105-125 volts, 50-60 cycles AC. Shpg. wt., 35 lbs.

84 FX 160. NET **244.00**

## MODEL 640 OSCILLOSCOPE

Professional 5" scope; conforms to laboratory standards. Versatile design provides outstanding accuracy for TV tests. Features DC amplifiers to 4.5 mc and 17 millivolt sensitivity. Sawtooth voltages available from front panel. Excellent square wave response to over 100 kc. DC amplifiers give zero tilt on low frequency (1 cycle) square wave. Both driven and recurrent sweep. 3-range frequency compensated attenuator network. Return trace eliminator. Provision for external sweep and Z-axis modulation. Built-in peak-to-peak calibrating voltages of 100, 10, 1, 0.1. Shielded, shock-mounted portable steel case, 13 1/2" H, 13" W, 17 1/2" D. With test leads. For 105-125 v., 50-60 cyc. Wt., 30 lbs.

84 FX 179. NET **355.00**

## MODEL 665 OSCILLOSCOPE

A high-quality 5" oscilloscope priced well within the reach of every serviceman. Handles any TV servicing job accurately. Drift-free, compact, and resistant to humidity. CRT shock-mounted. Sturdily built for long years of hard use. Completely safety-fused. Frequency range: 0.5 cycles to 700 kc, down 3 db. Less than 1% tilt; less than 2% overshoot. Square wave response flat at 40 cps to 100 kc. Accelerating potential 1775 volts (high intensity). Vertical amplifier has push-pull sensitivity of .020 rms volts/inch; horizontal amplifier, .030 rms volts/inch. Vertical input impedance: 2.2 megohms and 15 mmf; horizontal, 1 megohm and 52 mmf. External connections for plates available. Sweep oscillator range: 18 cps to 50 kc. Supplied complete with 7 tubes and SUP1 CRT. Power consumption 35 watts. Size: 13x16 1/4 x 9 1/2". For 105-125 volts, 60 cycle AC. Shpg. wt., 30 lbs.

84 FX 164. NET **129.50**

**Model 34 Demodulator Probe.** Not illustrated. For use with oscilloscopes. Extends RF range to 500 mc. With leads. 1 1/2 lbs.

84 F 138. NET **9.80**

**Model TVP-1 Probe.** Not illustrated. New probe for increasing usefulness of scopes. Enables technician to accurately duplicate mfr's pattern. Low input impedance reduces loading effect. Phenolic, black and chrome. 4-ft. heavy duty cord with spade connectors. Handling wt., 6 oz. Shpg. wt., 2 lbs.

84 F 162. NET **12.60**

**Model 175 Scope Voltage Calibrator.** Not illustrated. New calibrator for quick, accurate peak-to-peak measurements on any oscilloscope. Small, compact and extremely simple to use. Ranges: Volts peak-to-peak; 0.1, 1.0, 10.0, 100.0. Calibrates scope peak-to-peak at any desired voltage. Wave shapes may be measured in peak-to-peak volts without disconnecting the calibrator from scope by means of a convenient switching arrangement. Readings accurate to ±5% at 115 volts. Size: 6" L, 3 3/4" W, 2" D. For 115 volts, 50-60 cycles AC. Wt., 5 lbs.

84 F 157. NET **13.94**

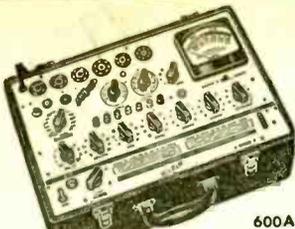
## MODEL 225 VTVM

New, giant-sized VTVM, precision-built for long, dependable service life. Designed expressly for radio-TV service technicians. Provides practical design, exceptional value and simplicity of operation. Large 5" meter for fast, easy readings at all convenient distances. Accurate, peak-to-peak scales. Built-in audio tone for quick continuity checks. Also includes efficient Hickok dual-purpose, single unit AC-DC probe.

Functions: DC Voltmeter: Plus DC volts and Minus DC volts; 0-1.5, 3, 12, 30, 120, 300, 1200. Input Resistance: 10 megohms. Ohmmeter: Center scale; 10 ohms. Readability: 0.2 ohms to 100 megohms. AC Voltmeter: 7 ranges AC rms; 0-1.5, 3, 12, 30, 120, 300, 1200. 7 ranges AC peak-to-peak: 0-4, 8, 32, 80, 320, 800, 3200. Frequency characteristics: 40 cps to 3.5 mc. Complete with probe, leads and instructions. In blue hammer-text portable steel case. Size: 13 1/4" H, 16 1/2" W, 7" D. For operation from 105-125 volts, 50-60 cycles. Carrying wt., 15 lbs. Shpg. wt., 23 lbs.

84 FX 158. NET **89.50**

# Hickok & Jackson Test Equipment



600A



533AP



539A



209A

## HICKOK TEST INSTRUMENTS

### MODEL 600A TUBE TESTER

Especially designed for speedy, accurate TV servicing, also lab and industrial applications. Has these outstanding features: easily portable; tests for gas content; reads directly in micromhos; applies separate voltage to each element; easily detects hard-to-locate weak tubes. Easy-to-read triple-scale 5" lucite-case meter has ranges of 0-3000-6000-15,000 micromhos and REPLACE—7—GOOD legend to indicate condition of tube. Replaceable roll chart gives adjustment setup data at a glance. Leatherette-covered case with detachable cover. Size: 16½x7½x11¼". For operation from 110-120 volts, 50-60 cycles AC. Shpg. wt., 21 lbs.

84 FX 185. NET. 164.00

**MODEL 605A.** As above, but with built-in VOM. Multimeter ranges: DC and AC v., 0-20-100-1000 (20,000 ohms/v., DC and 1,000 ohms/v., AC); DC current 0-2-20-200 ma; resistance, 0-100 megohms in 3 ranges; capacitance, .0001-5-50 mfd; inductance, 0-70 henries. 5" lucite-case meter. Shpg. wt., 22 lbs.

84 FX 189. NET. 189.50

### MODEL 215 VTVM

5" meter. Reads RMS and peak-to-peak AC v. (7 ranges each), and DC v. (7 ranges): 0-1.5-3-12-30-120-300-1200, for both positive and negative measurements. Peak-to-peak, 3200 v. Resistance, 0 to 1000 megohms in 7 ranges. Has zero center scale. Input imp. with dual-purpose AC-DC probe: DC, 10 megohms; AC, 30 megohms and 150 mmf. Probe has AC to DC switch. Case: 8½x5½x4½". With AC-DC probe, leads, instructions. For 105-125 v., 50-60 cycles. Wt., 7 lbs. (Not illustrated.)

84 F 181. NET. 67.50

**Model PR30 Probe.** For use with above to extend range to 30,000 volts DC. 4-ft. cable and connector. Shpg. wt., 2 lbs.

84 F 177. NET. 11.90

### MODEL 533AP TUBE TESTER

Highly dependable and accurate portable tube tester—specially designed for radio-TV servicing. Reads mutual conductance in micromhos—tests tubes under simulated operating conditions. Tests latest tubes including miniature and subminiature types. Dynamic mutual conductance. Ranges: 0-3000, 6000, 15,000 micromhos. Accurately tests and detects weak tubes. Has test feature to forecast tube life. Large, easy-to-read, 5" meter with accurately calibrated dual-scale. Tests for gassy tubes. For on-location or shop-bench servicing. Rugged, portable carrying case, covered in durable black leatherette. For operation from 110-125 v., 50-60 cycle AC. Size, 16½x18½x7½". Shpg. wt., 30 lbs.

84 FX 187. NET. 185.80

**Model 533AC.** As above, but in counter-type blue enameled steel case. Size 17½x18½x6". Shpg. wt., 30 lbs.

84 FX 186. NET. 185.80

### MODEL 209A VTVM

VTVM and capacitance tester, for checking TV and other high-frequency circuits. Highly accurate readings even with wide line voltage fluctuation. Zero-center DC scale. Response: 40 cycles to 200 mc. 42 ranges: AC-DC v., 0-3-12-30-120-300-1200; DC current, 0-3-12-30-120-300-1200 ma; resistance, 1 ohm to 10,000 meg in 8 ranges; capacity, 0-10,000 mmf and 0-1000 mfd (7 ranges); inductance, 50 mh to 100 henries; db., -20 to +25 in 3 ranges; AC peak-to-peak v., 0-3-12-30-120-300. Input imp.: DC, 12 megs; AC, 12 megs and 6 mmf, 9" meter. Blue case, 16½x13½x7". With HF probe, leads. For 105-125 v., 50-60 cycle AC. Shpg. wt., 26 lbs. (Not illustrated.)

84 FX 136. NET. 132.50

**Model PR30A Probe.** Extends range of VTVM above to 30,000 volts DC. Wt., 1½ lbs.

84 F 149. NET. 11.90

### MODEL 539A TUBE TESTER

Professional lab model. Provides outstanding accuracy and dependability. Measures mutual conductance in micromhos—under simulated operating conditions. Tests airline ruggedized tubes, bearing aid tubes, miniature and sub-miniature types—in addition to all common types. Features include: Choice of 3 AC signals (0.25, 0.5 and 2.5 volts) for accurate check of high-gain tubes; vernier adjustment and 2-range meter for accurate grid bias setting; built-in optional self-bias; AC meter for line voltage check; provision for use of external plate milliammeter. Separate voltmeter measures grid bias. Tests for gassy tubes and has test feature helpful in forecasting future tube life. Sturdy case covered with durable leatherette. Size, 16½x18½x7½". For operation from 110-125 volts, 50-60 cycles AC. Shpg. wt., 39 lbs.

84 FX 180. NET. 287.00

**Cathode Ray Tube Tester Adapter.** For use with Hickok tube testers. Permits checking of TV picture tubes. Adapter consists of cable, plug and special dual socket. Makes test without any need for removing picture tube from TV set. With instructions. Shpg. wt., 1 lb.

84 F 184. NET. 9.90

### MODEL 450 VOM

Compact, shock-resistant case, with large 5" meter. 20,000 ohms/volt on DC; 5000 ohms/volt on AC. Ranges: AC, DC and Output volts: 2.5, 10, 50, 250, 1000 and 5000 (AC and DC only). DC current, 0-30 microamperes, and 2.5, 10, 50, 250 and 1000 milliamperes, and 0-10 amps. Ohms: 0-1000-10,000 and 1 and 100 megohms, with 5, 50, 5000 and 500,000 ohms center scale readings, respectively. Decibels: -30 to +55 in 5 ranges. 8½x5½x2½". With batteries and test leads. Shpg. wt., 5 lbs. (Not illustrated.)

84 F 182. NET. 46.50



715

### MODEL 715 TUBE TESTER

Employs dynamic test method for testing all tubes under actual load conditions—applies separate voltages to each tube element. Each tube element is fully tested for possible shorts and leaks. Includes provision for CRT testing. Improved switching system has provisions for handling future tube types—provides spare circuits together with switch and socket positions for future use. Easy-to-read 4" square meter has REAL AC-GOOD scale. High voltage power supply delivers more than 200 volts to some tube types. Uses push buttons and rotary switches for element and voltage selection. Tests over 700 types of tubes, including television amplifiers and rectifiers. Built-in roll chart. Finished in gray hammett with harmonized ivory knobs. Case size: 9½x13x5½". For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 15 lbs.

84 FX 478. NET. 77.91



711

### NEW MODEL 711 SIGNAL GENERATOR

New UHF television signal generator. Ideal for all channel UHF alignment of tuners, converters and tuning strips. Operates on fundamental frequencies for all channels, 14 through 83. Calibration accuracy, +1% of indicated center frequency. Vernier tuning scale accurate, 0.1% of indicated center frequency. Large, easy-to-read 8" dial. UHF channel frequency calibrated opposite channel number scale for quickly checking the transmission frequency of any channel. Sweep signal with center frequency of 43.5 mc from any generator must be applied to input. Local oscillator calibration appears on center scale marked "Oscillator Frequency." Input imp., 93 ohms. Output imp., 300 ohms. Frequency coverage, 465 mc to 905 mc. Finished in gray hammett. Size, 10½x13x8¾". For 110-120 v., 50-60 cyc. AC. Shpg. wt., 17 lbs.

84 FX 480. NET. 126.91

## JACKSON TEST INSTRUMENTS

CRO-2

### MODEL CRO-2 OSCILLOSCOPE

Improved, highly sensitive 5" scope, suitable for VHF-UHF-color TV servicing. Wide band amplifier flat within 1 db from 20 cps thru 4.5 mc. 2 vertical sensitivity ranges with bandwidth of 20 cps thru 100 kc; .018, .18, 1.8 rms volts per inch. Wide band position of 20 cps thru 4.5 mc has sensitivity ranges of 25, 25, 25 rms v./inch. Horiz. deflection sensitivity: push-pull amplifiers, 0.40 rms v./inch. Horiz. input imp.: 1.1 megs. Sweeps: 20 cps thru 50 kc. 4 input control positions. New amplifier-timer combination for blanking return traces—provides sharper images. Gray steel cabinet. Size: 13x10½x15½". D. For 110-120 v., 60 cyc. AC. Shpg. wt., 32 lbs.

84 FX 475. NET. 220.50

### NEW MODEL 90 TRACE-O-METER

(Not illust.) Rapid wire tracer for multi-conductor cables. Traces up to 9 conductors or pairs at one time in electrical or intercom cable. Identifies each pair or conductor and indicates whether ok, open or shorted. Shows voltage in "hot" wires on neon tester, from 60 to 600 v. AC, or 80 to 600 v. DC. Consists of battery-powered tester and 9 numbered, replaceable test blocks. May be used on up to 3,000 ft. of No. 22 wire or 50,000 ft. of No. 10 wire. Case, 7x7x2½". Tester, 3¼x6¼x2½". Test blocks, 1x1¼x¼". With 4" test leads, clips, battery and blocks. Wt., 4 lbs.

84 F 481. NET. 39.15

### MODEL 648-B DYNAMIC TUBE TESTER

(Not illustrated.) Indicates actual line voltage from 100 to 125 v. 4-inch meter has GOOD-BAD scale. Built-in roller tube chart. Gray steel case, 15½x10½x4½". For 100-125 v., 50-60 cycles AC. Shpg. wt., 18 lbs.

84 FX 463. NET. 102.41

**Model 648-P.** As above, but in attractive portable wood case. Size, 16½x13½x6". Shpg. wt., 23 lbs.

84 FX 464. NET. 107.31

### MODEL 710 SELENIUM TESTER

(Not illustrated.) The 710 accurately tests all selenium rectifiers rated from 20-650 ma. "Line Adjust" control gives positive readings. Variable voltage range from 25-300 volts AC. Good—Replace meter dial indicates open, shorted, or erratic rectifiers. Extremely simple to operate—just choose correct range, connect rectifier to test set, and press switch. Size: 7½x4¼". For 110 to 125 volts, 50-60 cycle AC. Shpg. wt., 5 lbs.

84 F 458. NET. 28.91

# Triplett Test Equipment



630



630-A



650



666-R

631



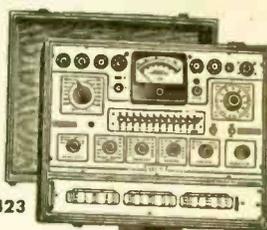
630-T



625-NA



3413-A



3423

## HIGH-QUALITY TEST INSTRUMENTS

### MODEL 630 VOM

Accurate VOM for TV, radio, etc. Has 5 1/2" meter with 4 1/2" scale. Meter is flush with panel. Uses 1% resistors, each scaled in its own molded compartment. "Unit construction"—all resistors, shunts, rectifier, and batteries are housed in molded base integral with the switch. Provides direct connections without cabling, thus greatly reducing chance of shorts. Ranges: DC and AC volts, 0-3-12-60-300-1200-6000; DC at 20,000 ohms per volt, AC at 5000 ohms per volt; DC current, 0-60 microamps, 0-1-12-120 ma, and 0-12 amps; resistance, 0-1000-10,000 ohms and 0-1-100 megs; db, —30 to +70 in 7 ranges; output v., 0-3-12-60-300-1200-6000. Flush-mounted knob controls 20-position switch which selects both circuit and range. Black plastic case. Size, 7 1/4 x 5 1/2 x 3 1/2". With batteries and 50" leads. Wt., 6 lbs. 84 F 568. NET.....38.71

### MODEL 630-T VOM

This highly dependable, ruggedly built VOM is designed specifically for telephone and industrial maintenance applications. Includes important features for maximum safety and operating convenience. Special neck straps to hold instrument in easy-to-read position and free lineman's hands. Special banana jack test lead connectors assure maximum safety. Flush-mounted range selector switch selects both circuit and range. Ranges: DC volts, 0-0.3-1-12-60-300-600 at 20,000 ohms/volt; DC ma, 0-0.6-1-2-12-120; AC volts, 0-3-12-60-300-600 at 3000 ohms/volt; resistance, 0-1000-10,000-100,000 ohms and 0-1-10 megohms. Accuracy: DC, 2%; AC, 5%. With hand and neck straps, test leads and batteries. Black plastic case. Size, 3 1/4 x 5 1/2 x 1 1/2". Shpg. wt., 6 lbs. 84 F 543. NET.....51.45

### ACCESSORIES FOR 630, 630-A, 630-T AND 631

- High-Voltage Probe. For 630, 630-A or 631. Extends DC range to 30 KV. Shpg. wt., 8 oz. 84 F 544. NET.....14.21
- Model 639 Case. Leather carrying case for 630, 630-A or 631. Shpg. wt., 1 1/2 lbs. 84 F 569. NET.....8.33
- Model 639-P Case. Same as 639, but with sponge-rubber padding. Shpg. wt., 1 1/4 lbs. 84 F 562. NET.....8.33
- Model 639-N Case. Neolite carrying case. For 630, 630-A, 630-T, or 631. Shpg. wt. 1 1/2 lbs. 84 F 599. NET.....8.33

### MODEL 3413-A TUBE TESTER

Triplett slide-lever switches are numbered to correspond with RETMA tube pin numbers, and connected to bring out each active tube element. Simple up or down motion of the lever instantly makes connection. Tests all modern tubes (including the 9-pin novel type), ballast tubes, etc. Shows shorts, open circuits and condition of all tube elements, connections, taps, etc. Also provides continuity test for checking electrical appliances, motors, etc. Overize 6" Red Dot lifetime guaranteed meter with highly legible 3-color scale gives quick, accurate BAD-?—GOOD tests. Line voltage indication on center of meter dial permits observation and adjustment for line fluctuations. Checks emission, shorted and open elements. Built-in, illuminated Speed-Roll chart; new tube data easily added to chart. Counter-writable case, handle and removable cover. 15 1/2" x 11 1/2" x 6 1/2". For 110-120 v., 50-60 cycles. Shpg. wt., 28 lbs. 84 FX 591. NET.....77.91

Type T-2247-BV Adapter. Checks TV picture tubes with 3413-A or 3423. Wt., 1 lb. 84 F 539. NET.....4.41

### MODEL 630-A VOM

Here's the VOM for those applications requiring top accuracy. Overall accuracy: 1 1/2% on ohms and 0-1200 DC volts; 4% on 6000 DC volts and all AC ranges. Features mirror scale to eliminate errors in reading due to parallax; uses 1/2% resistors. Unit construction provides direct connections between components. Resistors, shunts, rectifier, battery—all are housed in a molded base integral with the selector switch. Ranges: DC and AC volts 0-3-12-60-300-1200-6000 (DC at 20,000 ohms per volt, AC at 5000 ohms per volt); DC current, 0-60 microamps, 0-1-12-120 milliamperes, and 0-1-12 megohms; db, —30 to +70 in 7 ranges; output volts, 0-3-12-60-300-1200-6000. 5 1/2" meter with 4 1/2" scale. Black plastic case. 7 1/2 x 5 1/2 x 3 1/2". With batteries. 50" leads. Shpg. wt., 6 lbs. 84 F 574. NET.....48.51

### MODEL 631 VTVM-VOM

New, battery-operated, 34-range VTVM-VOM. Versatile, accurate, and easy to operate. Single switch selects all ranges; also switch to select VTVM or VOM operation. 5 1/2" Red Dot meter with 50 microampere movement. Zero center scale for discriminator alignment. Push-button permits checking B+ for VTVM without removing batteries. VTVM ranges: 0-1.2-6-30-120 DC volts; 11 megohms input impedance. VOM ranges: DC volts, 0-3-12-60-300-1200 at 20,000 ohms/volt; AC volts, and audio output volts, 0-3-12-60-300-1200 at 5000 ohms/volt; DC microamperes, 0-60; DC amperes, 0-1-12-12; DB, —30 to +56; ohms, 0-1500-15,000; megohms, 0-1.5-150. Black plastic case, 3 7/8 x 5 1/2 x 1 1/2". With 1R5 tube batteries and 48" leads with alligator clips. Shpg. wt., 5 lbs. 84 F 546. NET.....58.31

### MODEL 3423 TUBE TESTER

Highly accurate and exceptionally versatile tube tester. Employs unique, advanced circuit for testing by proportional mutual conductance method. A built-in oscillator applies a 4 kc signal to grid of tube under test—closely simulates actual tube operating conditions. Tests all types of receiving tubes, hearing aid tubes, low-power transmitting tubes, rectifiers, voltage regulators, including subminiatures, acorns and ballasts. Special circuits for testing thyratrons and "magic eye" tubes. Reads mutual conductance directly in microhmohms; also GOOD-?—BAD scale. Variable AC voltage available for emission tests on diodes. Also checks pilot lamps and continuity of motors, resistance elements, etc. Checks for shorts and leakage between a tube elements. Indicates gassy and noisy tubes. Single lever switch for checking tube value and gas. Sockets for all present-day types. Six plate voltages for tube tests. Three-position lever switches and removable rear chart permit easy modification for future tube types. Attractive, portable case, 14 1/2" x 18 1/2" x 6 1/2". For 110-120 volts, 50-60 cycles AC. Shpg. wt., 24 lbs. 84 FX 541. NET.....195.51

### MODEL 650 VTVM

A highly sensitive and accurate VTVM. Single selector switch for all ranges. Peak-to-peak and RF measurements made with one probe. Meter shorted in off position. Ranges: DC volts, 0-1-5-10-50-100-500-1000 (constant 11 megohm input—reads to 50 KV with hi-v. probe listed below); AC volts, 0-1-5-10-50-100-500 (1.4 megohms, 13 mmf @ 100 kc); peak-to-peak volts, 0-2.8-14-28-140-280-700; resistance, 0-1000 megohms in six ranges; zero center scale for discriminator alignment. Accuracy: DC volts and ohms = 3%; AC volts = 5% (of full scale). Response = db, 15 ops to 110 mc. Meter scale, 4 1/2". Black plastic case, 7 1/2 x 5 1/2 x 3 1/2". With 2 alligator clips, AC-RF probe, ohms-DC probe and battery. For 110-120 volts, 60 cycle AC. Shpg. wt., 8 lbs. 84 F 558. NET.....87.71

Model 669 Leather Carrying Case. 1 1/2 lbs. 84 F 559. NET.....9.31  
Stand. Holds above model at 45° angle. 84 F 573. NET.....49¢  
High-Voltage Probe. Extends DC range to 50,000 v. Shpg. wt., 8 oz. 84 F 564. NET.....14.21

### MODEL 666-R VOM

Pocket-size VOM. Only 2 controls—range switch and the ohms adjust control. 1000 ohm-per-volt sensitivity on AC and DC volt ranges. Red Dot 3" 0-200 microammeter movement. Ranges: DC and AC volts, 0-10-50-250-1000-5000; DC ma, 0-10-100; DC amps, 0-1; ohms, 0-3000-300,000; megs., 0-3. Black plastic case, 5 1/2 x 3 1/2 x 2 1/2". With batteries, 50" test leads with banana plugs and alligator clips. Shpg. wt., 4 lbs. 84 F 557. NET.....25.97

Model 666-HH VOM. Low-cost, accurate VOM. 400 microampere, 3" Red Dot. Scale is 2 1/2" long at top arc. Ranges: AC-DC volts, 0-10-50-250-1000-5000 at 1000 ohms per volt; DC ma, 0-10-100-500; ohms, 0-2000-400,000. With battery and 50" leads. Plastic case, 5 1/2 x 3 1/2 x 2 1/2". Shpg. wt., 4 lbs. 84 F 555. NET.....24.01

Model 669 Case. Long-wearing cowhide case for Model 666R or 666-HH. Leather handle. Shpg. wt., 1 lb. 84 F 560. NET.....5.39

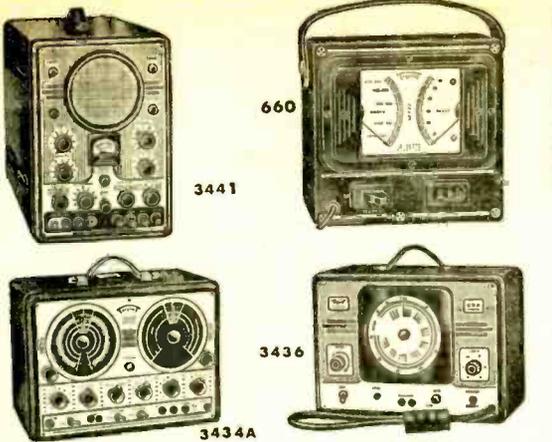
Model 669-RL Case. Camera-type leather case for Model 666-R or 666-HH. VOM may be used without removal from case. Shpg. wt., 1 lb. 84 F 547. NET.....5.88

### MODEL 625-NA VOM

Popular, wide-range tester, for TV, FM, etc. Features dual DC sensitivity: 20,000 ohms per volt and 10,000 ohms per volt. Long mirror scale (5" at top arc) provides maximum reading accuracy by eliminating chance of error due to parallax. Reads as low as 1.25 volts DC and 2.5 volts AC, full scale. Six-inch Red Dot 50 microamp meter. 39 ranges: DC volts, 0-1.25-5-25-125-500-2500 at 20,000 ohms/volt and 0-2.5-10-50-250-1000-5000 at 10,000 ohms/volt; DC current, 0-50 microamps, 0-1-10-100-1000 ma, and 0-10 amps; resistance, 0-2000-200,000 ohms, 0-40 megs. AC volts, 0-2.5-10-50-250-1000-5000 at 10,000 ohms/volt. Six db ranges. —30 to +69. Black plastic case, 5 1/2 x 2 1/2 x 6". With batteries, and 50" test leads. Shpg. wt., 84 F 575. NET.....48.51

Model 629 Case. Leather case with handle for 625-NA VOM. Shpg. wt., 1 lb. 84 F 561. NET.....6.37

# Modern Test Equipment



## TRIPLET TEST EQUIPMENT

### MODEL 3441 TV-FM OSCILLOSCOPE

Wide-range 5" oscilloscope for TV-FM use. Features push-pull vertical and horizontal output amplifiers. Has 4 megacycle bandwidth. Vertical sensitivity: 10 rms mv/inch maximum. Input impedance of vertical selector combined in same control for simplicity of operation. Has phone jack on panel connected to output of vertical amplifier for audio check of waveform under observation; for audio circuit tracing. Supplies variable saw-tooth output from 10 to 60,000 cycles; can be attenuated from 0 to 70 volts peak-to-peak. With SUP1 cathode ray tube. Complete with all tubes, one coaxial cable and instructions. Size: 15 1/2"x16 1/2"x11 1/2". For 105-115 volt 50-60 cycle AC. Shpg. wt., 42 lbs. **244.51**  
84 FX 530. NET

Model 9999 Crystal Probe. For use with model 3441 or 3440 oscilloscopes. For demodulating or signal tracing. Shpg. wt., 8 oz. **9.31**  
84 F 545. NET

### MODEL 660 LOAD-CHECK

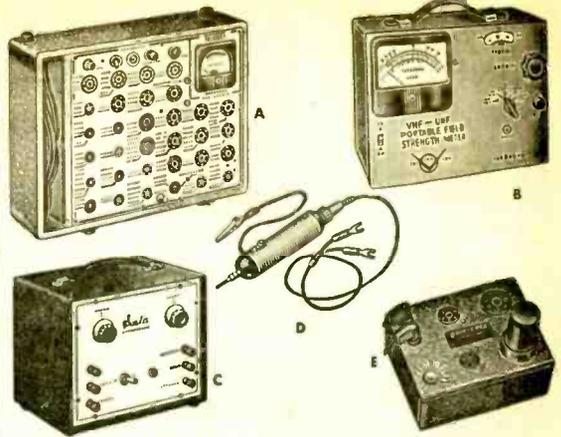
Wattmeter-voltmeter. A valuable time-saver in servicing radio and TV sets, appliances, and many other types of electronic equipment. Quickly detects overloads and underloads caused by open or shorted tubes, components and wiring. Tests by power consumption measurement method. Power consumption of radios, TV sets, etc., is normally indicated on rear of chassis; the Load-Check shows if power drawn from line exceeds or is less than the proper value. Power cord of unit under test plugs into convenient receptacle on Load-Check. Watt scale gives instant indication when trouble is isolated; no need to lay down tools to check with test leads. Two 3" meters provide simultaneous wattage and voltage readings on 3x2 1/2" scales. Ranges: 0-500-1000 AC-DC watts; 0-150 AC-DC volts. Housed in sturdy, black plastic case. Size, 6x5 1/2"x2 1/2". Shpg. wt., 4 lbs. **28.91**  
84 F 537. NET

### MODEL 3434A TV-FM SWEEP AND MARKER GENERATOR

For TV and FM receiver servicing. Combines three test instruments in one: sweep generator, marker generator and horizontal bar generator. Continuous tuning to 243 mc, covering all present TV, FM and IF ranges. Regulated power supply for greater oscillator stability. Sweep center frequency: 0-60, 60-120 and 120-243 mc. Sweep width: 0.1 to 12 mc, continuously variable. Marker frequencies: 3.5-4.9, 19.5-29.3, 29-48.6 (fundamentals); 48.6-243 mc on harmonics. Crystal frequency: to 20 mc on fundamentals; harmonics to 243 mc (crystals not supplied). Modulation: 600 cycles on both crystal and marker frequencies. Crystal and variable marker permits simultaneous presentation of two markers. High output of 1 to 1.5 volts for stage-by-stage alignment. 4 1/4" marker and sweep dials. Smooth action dial drive with vernier scale for precise initial and reset accuracy. Marker dial is illuminated and mirror-scaled. Line filter prevents leakage to line through power supply. Steel case has black suede baked enamel finish. Heavy etched aluminum panel. 15 1/2"x11 1/2"x8 1/4". With two coaxial cables, ground straps, test leads and instructions. For 105-115 v. 50-60 cycle AC. Shpg. wt., 27 lbs. **234.71**  
84 FX 534. NET

### MODEL 3436 UHF MARKER GENERATOR

All-purpose UHF signal generator. Provides fundamental output on TV channels 14 to 83. Range: 470 to 900 mc. Large, 13" dial with uniform frequency graduations provides easily readable scale. Extremely accurate, hand-drawn scale is calibrated in both frequency and TV channel. Output is .5 volt rms maximum; controlled with piston-type attenuator. Has 150 ohm, 300 ohm and ground jack on shielded output cable. Triple-shielded against RF leakage. Voltage-regulated oscillator power supply provides extreme stability despite line voltage fluctuation. Switch for preheating oscillator filament before plate voltage is applied. Adjustable modulation of RF signal at approximately 1000 cycles. Audio output from 0 to 20 volts. For use in adjusting UHF TV receiver frequency converters for linearity adjustment. Panel is heavy etched aluminum with red and black easy-to-read characters. Steel case is suede finished in black baked enamel. Leather handle for portable use. Complete with operating instructions and leads. A highly dependable test instrument for the TV service bench. Size: 15 1/2"x11 1/2"x8 1/4". For 105-125 volts 50-60 cycle AC. Shpg. wt., 27 lbs. **166.11**  
84 FX 542. NET



## MODERN TEST EQUIPMENT

### Fig. A—ANKO MODEL T-32A "TELETTEST" TUBE CHECKER

Revolutionary design tube tester. Cuts service time in half. No roll charts, no dials, no switches. Consists of 32 permanently connected sockets to accommodate almost every tube used in TV receivers—including picture tubes. Simple to operate. A single, 3" meter gives positive indication of "good" or "bad" tubes. Tubes are checked under dynamic, heavily loaded condition. Picture tube adapter cord is included; permits checking picture tubes without removal from TV receiver. Also includes checking circuit for rejuvenating many weak tubes to "almost new" condition. Meter also indicates condition of selenium rectifiers (150 ma and greater) and germanium diodes. Tests for interelectrode shorts. Data furnished on new tubes. Rugged, leatherette-covered case. 15x11 1/2"x6". Weighs only 11 lbs. For 105-125 volts, 60 cycles AC. Shpg. wt., 13 lbs. **144.55**  
84 FX 007. NET

### Fig. B—RADION UHF-VHF FIELD STRENGTH METER

Model FSM 6000. Battery-operated, portable. UHF-VHF field strength meter. Ideally suited for orientation of antennas. Offers continuous tuning. One knob control. Range 50 mc to 220 mc and 260 mc to 940 mc. 1F center frequency 20 Mc. Selector switch is provided to permit checking filament and B+ battery supply. High selectivity allows both sound and video portion of carrier to be measured individually. Has built-in phone jack to monitor voice carrier of TV or FM stations. Non-corrosive duraluminum case. Input impedance is 300 ohms. Power requirements: 3-45 volt B batteries, 2-1 1/2 volt No. 6 A batteries. (ALLIED stock numbers 80 J 546 at 1.93 ea. and 80 J 638 at 66c ea.) 11 1/2"x10x8". Less batteries. Shpg. wt., 9 lbs. **97.50**  
84 FX 012. NET

Model UPA-1 UHF Probe Antenna. Loop-type UHF antenna complete with 3 ft. handle and connecting cable for FSM 5000 above. Shpg. wt., 3 lbs. **6.95**  
84 FX 013. NET

Model CC-1 Carrying Case. Heavy-duty canvas case for FSM 5000. Has canvas handle and snap type closure. Shpg. wt., 1 1/2 lbs. **7.50**  
84 F 014. NET

### Fig. C—SCALA TEST EQUIPMENT

Model SM1-63 Super-Marker Injector. Mixer-amplifier unit. Mixes small sample of sweep voltage with small sample of marker voltage (from external sweep-marker generator). Injects a large, stable pip into scope being used for alignment of TV receiver. Marker pip is always same size—from base line to top of curve. Use with standard marker and sweep generator and scope. Metal case has black wrinkle finish. Size, 10x8 7/8". For 110-120 volts, 60 cycle AC. Wt., 13 lbs. **67.50**  
84 FX 600. NET

Model SM1-53X Duo-Marker Injector. (Not illustrated.) New mixer-amplifier. Same physical and electrical characteristics as above but with built-in crystal-controlled oscillator to provide 2 markers on response curve. Gives marker frequency, and marker frequency plus or minus the crystal frequency. Supplied with 4.5 mc crystal, cables and instructions. Can be used with 3.579 kc crystal for TV color adjustment. For 110-120 volts, 60 cycle AC. Shpg. wt., 13 lbs. **79.50**  
84 FX 605. NET

### Fig. D—SCALA TEST PROBES

Model BZ-1 Signal Tracing Probe. Low C, Hi-Z demodulator. Non-resonant to 225 mc; useful to 1000 mc. With cables. Wt., 8 oz. **9.75**  
84 F 601. NET

Model BZ-2 Low Capacity Probe. Traces through Hi-Z circuits without distortion from circuit loading. Shpg. wt., 8 oz. **9.75**  
84 F 602. NET

Model BZ-3 Voltage Divider Probe. To check waveforms and voltages at plates of horizontal output and damper tubes. Wt., 8 oz. **9.75**  
84 F 603. NET

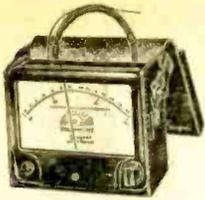
Model BZ-4 Voltage Doubler Probe. Virtually doubles deflection on scope screen compared with half-wave probes. Dual low C Hi-Z demodulators useful to 150 mc. Shpg. wt., 8 oz. **10.75**  
84 F 604. NET

### Fig. E—HAMMOND INDUSTRIES QUIK-CHEX TESTER

Battery-operated, portable checker. Checks open or intermittent tube filaments. Accommodates octal, local, seven and nine pin miniature tubes. Checks fuses and pilot lamps. Indicating light also checks continuity of deniers for shorts or leakage. Can be used for checking continuity of antenna lead in lines on folded dipole installations. Uses include checking generators, motors and electrical appliances. Size: 4 1/2"x3 1/4"x2 1/4". Uses stock number 80 J 911 battery at \$2.77 and 42N240 test leads at \$1.32. Less leads and battery. With instructions. Shpg. wt., 1 lb. **4.95**  
84 F 016. NET



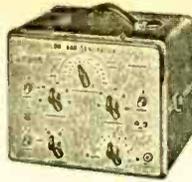
# Test Equipment



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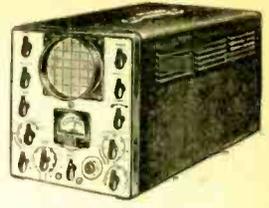
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430



434



454

## NEW SIMPSON QUALITY TEST INSTRUMENTS

### MODERN SERVICE UNITS

#### Model 388 Therm-O-Meter

New meter for obtaining accurate temperature readings. Has 1 scale on large 7" meter. Temperature range, -50° F. to +1000° F. 15-ft. thermocouple lead is simply placed in area or solution to be tested. Ideal for lab technicians, engineers, servicemen. Used for refrigerators, air conditioners, etc. With test leads, batteries. Bakelite case, 7 $\frac{1}{16}$ x6x2 $\frac{1}{16}$ ". Shpg. wt., 6 lbs.

84 F 738. NET.....58.31

#### Model 355 Midgetester

Unusually small, compact volt-ohm-meter—easily fits into shirt pocket. Ranges: AC-DC volts at 10,000 ohms per volt, 0-3-12-60-300-1200 V. Resistance: 0 to 10 megohms in 4 ranges. Styrene case, 1x4 $\frac{1}{2}$ x2 $\frac{3}{16}$ ". With batteries, test leads. 1 $\frac{1}{2}$  lbs.

84 F 734. NET.....29.35

### LATEST COLOR TV TEST UNITS

#### Model 430 Color Bar Generator

New Simpson Model 430 color bar generator brings you 16 color signals: Red, Green, Blue, White, R-Y, G-Y, B-Y, I, Q, -R, -G, -B, -(R-Y), -(B-Y), -I, -Q. Independent saturation and hue controls. RF output can be modulated with above-listed NTSC signals. Video output for signal injection directly into video system. Size, 8 $\frac{3}{8}$ x11 $\frac{3}{8}$ x9 $\frac{1}{4}$ ". For 110-120 volts, 50-60 cycles AC. Shpg. wt., 15 lbs.

84 FX 736. NET.....387.10

#### Model 434 White Dot Generator

Provides linearity adjustment of black and white TV sets and convergence adjustments on color TV sets. Vertical and horizontal synchronization for correct aspect ratio. Positive or negative video output. 300-ohm RF output. In grey case, 8x11x8 $\frac{1}{2}$ ". For 110-120 v., 50-60 cyc. AC. 15 lbs.

84 FX 739. NET.....144.55

#### Model 454 Chromoscope

New scope for color as well as black and white TV servicing. Features: Flat to 5 mc; sensitivity of 0.02 v./inch; fast sweep to 50 kc; reads peak-to-peak voltages; flat decimal step-type attenuator; 5 probes; 100-page instruction booklet (over 150 photos). Grey case, 14 $\frac{1}{2}$ x9 $\frac{1}{2}$ x16 $\frac{3}{4}$ ". For 110-120 v., 50-60 cyc. AC. Shpg. wt., 33 lbs.

84 FX 733. NET.....387.10

## MALLORY TEST EQUIPMENT



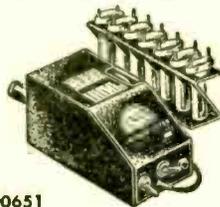
**Model CRT1 Capacitor-Resistor Checker.** Ranges: Resistance from 0.1 ohm to 50 meg; capacity, 10 mfd to 5000 mfd; power factor, 0 to 50%; paper, mica and ceramic leakage, 2-18 microamps; electrolytic leakage, 0.1 to 10 ma; insulation resistance to more than 2000 megs. Choke coils, speaker coils, etc., may be checked against known standards. Capacitors to 450 WVDC may be checked at rated voltage. Capacitors are automatically discharged at end of leakage test by shorting-type switch. 6 $\frac{1}{2}$ x5 $\frac{1}{2}$ x10 $\frac{1}{2}$ ". For 105-120 v., 60 cycles AC. Shpg. wt., 8 lbs.

84 F 010. NET.....66.15



**Model 12VT1D Vibrator Checker.** For testing 6 and 12 v. vibrators. "GOOD-BAD" meter scale. Tests interrupter-type vibrators under operating conditions; panel has socket for 6X5 or OZ4 (takes 6X4 or 12X4 with socket adapter). Self-rectifying types tested by removing rectifier tube. Requires DC voltage source adjustable from 5 to 12 v. output at 4 amps. 10 $\frac{1}{2}$ x6 $\frac{1}{2}$ x5 $\frac{1}{2}$ ". 8 lbs.

80 F 115. NET.....34.25



90651



EC



TS-3AK

## SPECIAL PURPOSE TEST INSTRUMENTS

### MILLEN GRID DIP METER

**Model 90651.** Accurate, highly versatile and calibrated RF oscillator unit. Has 2" G.E. meter. Used as: (1) Grid Dip Oscillator; (2) Oscillating Detector; (3) Signal Generator; (4) Absorption Wavemeter. Specific uses include: receiver alignment; determination of transmitter tuned circuit frequency; finding parasitic oscillations; retuning wave traps; determination of inductance and capacity. Most commonly used as an oscillating frequency meter for determining resonant frequencies of de-energized tuned circuits. Built-in power supply plus connections for battery operation. With 7-polystyrene-encased plug-in coils covering 1.7-300 mc. Polystyrene case assures permanence of calibration; prevents mechanical damage to probes. To extend range, use coils below. Calibrated 270° dial. Black metal case, 7x3 $\frac{3}{4}$ x3 $\frac{3}{4}$ ". For 105-125 v., 50-60 cycles AC. Shpg. wt., 3 $\frac{1}{2}$  lbs.

84 F 962. NET.....61.50

### GRID DIP METER ACCESSORIES

No. 46721. Extension Probe. Use with coils from 220 kc to 75 mc. 6 oz.

84 F 996. NET.....1.95

### LOW-FREQUENCY COILS

Stock No.	Mfr's Type	Range KC	NET EACH
84 F 966	46702	925-2000	6.72
84 F 967	46703	500-1050	
84 F 968	46704	325-600	
84 F 972	46705	220-350	

### FEILER TEST EQUIPMENT

**Model TS-3AK "Stethoscope" Kit.** Universal signal tracer kit. Easy to use—touch the shielded probe to any part of set. RF, IF or audio. Signal is heard in 3" speaker. With jack for connecting VOM for visual indication and probe with 3-ft. shielded cable. Free from power supply hum. Headphone jack for extra-sensitive tracing. Includes all parts: jacks, switches, speaker, steel case, tubes, wire and solder. With instruction manual and operating guide. Size, 8x1 $\frac{1}{2}$ x6". For 105-125 volts, 50-60 cyc. AC. Shpg. wt., 18 lbs.

83 FX 229. NET.....24.95

**Model TS-3A "Stethoscope" Tracer.** As above, but completely wired and assembled ready for use. Shpg. wt., 18 lbs.

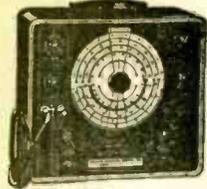
84 FX 977. NET.....37.95

### LEE VERSATILE TV "SERVISET"

**Model EC TV Serviset.** Versatile, compact test instrument. Consists of test prod, test lead, headphone and extension leads. Test prod functions: RF AF signal tracer; Neon AC and DC voltage indicator (0-60-550-20,000 v.); DC polarity indicator; Substitution tester for resistors and condensers; low and high resistance continuity and leakage indicator; Spotlight for tracing leads. Functions are selected by plugging test lead and headphone into appropriate jacks on prod. Prod size, 6 $\frac{1}{2}$ x1 $\frac{1}{4}$ " dia. With battery, leads, headphone, carrying roll and manual. Shpg. wt., 1 $\frac{1}{4}$  lbs.

84 F 378. NET.....24.95

# "Precision" Test Equipment



MODEL E-200-C



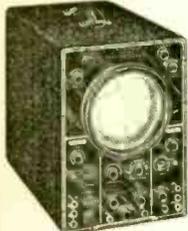
MODEL E-400



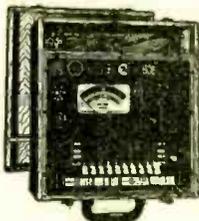
MODEL ES-500A



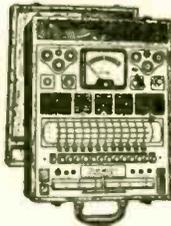
MODEL ES-520



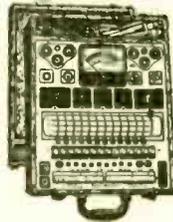
MODEL ES-570



MODEL 612-P



MODEL 10-12-P



MODEL 10-54-P

## PRECISION APPARATUS CO. TEST INSTRUMENTS

### E-200-C SIGNAL-MARKER GENERATOR

For efficient servicing of AM, FM, and TV receivers; an excellent marker generator for TV alignment. Covers 88 kc to 240 mc on eight bands (88 kc to 60 mc on fundamentals). Accuracy of 1%. Uses highly stable electron-coupled oscillator circuit. Output: Unmodulated RF, 400-cycle modulated RF, externally modulated RF, and 400-cycle sine wave audio output. Has 0-100% modulation control. Full vision, non-glare 6 1/2" direct reading dial with 0-100 vernier scale. Supplies 0-50 volts AVC-AGC voltage for alignment by constant bias procedure. Each range is individually hand-calibrated to assure high accuracy. Supplied complete with coaxial cable, dual LOW-HIGH cable connectors, all tubes, and latest edition of valuable 92-page book, "Servicing by Signal Substitution." Housed in black ripple heavy gauge portable steel case. Employs electrostatically shielded power transformer for minimum leakage. Size: 12x10 1/2x6". For 105-120 volts, 50-60 cycles. Shpg. wt., 17 lbs. 84 FX 409. NET. **76.93**

### MODEL E-400 SWEEP GENERATOR

Sweep signal generator for television and FM servicing. Frequency range is 2-480 mc; to 240 mc on fundamentals; read directly on panel dial. Has narrow and wide-band sweep—frequency widths: 0-1 mc and 0-15 mc. Permits easy band width setting for both FM and TV; has built-in base-line reference. High and low output terminals. Highly stable variable frequency oscillator beats with either one of 2 fixed frequency oscillators designed to provide wide-range coverage. Has built-in multiple crystal marker-calibrator. Supplied with 2 crystals (2 mc and 4.5 mc). Special socket accommodates 4 crystals. Full vision, 6 1/2-inch dial. Dual RF attenuators provide continuously variable output level control of test signals. Separate output terminal provides synchronized narrow and wide-band sweep. Phasing control. With coaxial output cable and interconnecting cables. Portable case. 10 1/2x12x6". For 105-125 v., 50-60 cycles AC. Wt., 24 lbs. 84 FX 438. NET. **136.95**

### MODEL ES-500A 5" OSCILLOSCOPE

An outstanding scope—built to the highest test instrument standards. Features push-pull horizontal and vertical amplifiers, internal phaseable beam blanking, 1-volt peak-to-peak voltage calibrator, amplitude controlled positive-negative sync selection (locking circuit), and vertical pattern reversal switch. Uses 5CP1A CR tube. Vertical deflection sensitivity through amplifier, 0.2 rms volt/inch; horizontal, 15 rms volts/inch. Response of both amplifiers, 10 cycles to 1 mc. Direct input impedance (horizontal and vertical plates), 3.3 megohms and 15-20 mmf. Input of amplifiers: vertical, 2 megohms; horizontal, 1/2 megohm. Has 3-step, frequency-compensated vertical input attenuator, to cathode follower, plus continuously variable vernier control. Sweep, 10 cps to 30 kc. Has Z-axis modulation input for blanking, timing, etc.; phasing control for line sweep operations. Audio monitoring phone jacks. Size, 8 1/4x14 1/2x18". For operation from 110-120 volts, 50-60 cycles AC. Shpg. wt., 44 lbs. 84 FX 449. NET. **170.23**

### NEW MODEL ES-520 OSCILLOSCOPE

Economically priced, reliable, general-purpose oscilloscope. Push-pull vertical and horizontal drive, 20 mv/inch vertical sensitivity, 5-step vertical input with frequency-compensated attenuator. Built-in, 1-volt (peak-to-peak) regulated voltage calibrator. Vertical frequency response: 3 db or better at 500 kc, 50 mv/inch horizontal sensitivity. Horizontal frequency response, 3 db or better at 200 kc. Multi-vibrator internal linear sweep, 10 cps to 30 kc. Negative or positive sweep sync selection. Internal 60 cycle sine-sweep phasing. Beam modulation input terminal. Etched, heavy-gauge aluminum panel. Black, ripple-finished cabinet. Size: 8 1/4x14 1/2x16 1/2". With 50P1 CRT and instructions. For 110-120 v., 50-60 cycle AC. Shpg. wt., 30 lbs. 84 FX 493. NET. **124.95**

### NEW MODEL ES-570 7" OSCILLOSCOPE

High-quality, 7" oscilloscope for numerous applications in lab or service shop. Push-pull DC amplifiers. Vertical sensitivity: narrow band, 5 mv/inch; wide band, 100 mv/inch. Vertical response: 3 db or better at 500 kc, narrow band; 3 db or better at 5 mc, wide band. Frequency-compensated, cathode-follower, step-attenuator input. Press-to-calibrate, 1-volt peak-to-peak source. Horizontal sensitivity: 100 mv/inch, 3 db or better, DC to 1 mc. Linear sweep, 10 cps to 50 kc. Synchronized 30 and 7875 cps sweep for TV sync analysis. Internal negative or positive sync—60 or 120 cps. Beam modulation input terminal. 60 cps phasing and blanking controls. Black ripple cabinet. 10 1/2x14 1/2x18 1/2". For 110-120 v., 50-60 cycle AC. Shpg. wt., 55 lbs. 84 FX 494. NET. **269.50**

Series SP-5 Probe Set. Four valuable probes for any of the Precision Scopes. Consists of high-impedance, low-capacity probe; crystal probe; isolating probe; and shielded direct probe. Also includes coax cable with quick-change connector to accommodate above probes and plug for connection to scopes. Clip-on tips permit freedom of both hands. In vinyl carrying roll. Shpg. wt., 3 lbs. 84 F 491. NET. **23.03**

### MODEL 612-P CATHODE CONDUCTION TUBE TESTER

Standard RETMA emission circuit. Tests all modern radio and TV tubes. Individual testing of multi-section tubes. Panel switch selects filament voltages from 0.75 to 117. Free-point lever element selection handles all multiple basis terminations. 4 1/2" meter accurate within 2%. Checks for shorts between elements. Noise and condenser test pin jacks. "Under load" test for A, B and C radio batteries. Etched aluminum panel. Easy-to-read roll chart has provision for adding test data. Hardwood case, 12x13x6". For 110-120 volts, 50-60 cycle AC. Shpg. wt., 19 lbs. 84 FX 433. NET. **77.91**

Model 612-MCP. Same as 612-P, but has open-style, portable metal case. 10 1/2x12x6". Shpg. wt., 17 lbs. 84 FX 444. NET. **75.21**

### MODEL 10-12 ELECTRONIC TUBE AND BATTERY TESTER

High-quality tester. Tests all 4, 5, 6, 7, loctal, octal, 7 and 9-pin miniatures, sub-miniatures, and acorns. Provides 17 filament voltages to 117 volts. Free-point element selection by a master lever element selector. Provides direct facilities for radio battery, ballast, noise, pilot bulb and condenser testing, neon continuity checks, and tests for shorts between tube elements. 4 1/2" meter has 2% accuracy. Double window high-speed roller tube chart provides for adding setting data as new tube types are released. For 110-120 volts, 50-60 cycles. Housed in an attractive hardwood portable case with removable cover and carrying handle. Size, 13 1/4x17 1/4x6 1/4". Shpg. wt., 23 lbs. 105.35

Model 10-12P. Portable model. 84 FX 426. NET. **105.35**

Model 10-12C. Counter model. Chrome-trimmed black finish case, 17x17 1/2x1 1/2". Shpg. wt., 32 lbs. 84 FX 430. NET. **110.00**

### MODEL 10-54-P TUBE, BATTERY AND 35 RANGE AC-DC TESTER

Electronic Test Master. Combination tube and battery tester and 20,000 ohms/v. DC and 1000 ohms/v. AC circuit tester. Tests all modern tubes, including novel, acorn, miniature, sub-miniature, etc. Direct testing of batteries, pilot bulbs and condensers. Set Tester ranges: AC, DC and output v., 0-6-12-60-300-1200-6000. DC current, 0-60-120 microamps, 0-1-2-12-120-1200 ma. and 0-12 amps. Resistance, 0-6000-600,000 ohms and 0-6-60 megohms. Six output ranges from -20 to +70 db. 4 1/2" 50 microamp meter with ±2% full scale accuracy. Portable case, 13 1/4x17 1/4x6 1/4". With heavy duty test leads and ohmmeter batteries. All circuits isolated from power line to minimize leakage. For operation from 105-125 v., 50-60 cycles AC. Wt., 25 lbs. 84 FX 422. NET. **136.71**

Model PTA Cathode Ray Tube Adapter. Will test all types of picture tubes when used with any Precision Apparatus tube tester. Picture tube need not be removed from set or carton for testing. Shpg. wt., 1 lb. 84 F 492. NET. **6.61**

### CR-30 CATHODE RAY TUBE TESTER

(Not illustrated.) Shows exact condition of television linepipes. Measures actual beam current in the electron gun, not just total cathode emission. Tests any size tube. Uncovers defect or failure at any CR tube element by absolute free-point 14-lever selection system. Tests both electrostatic and electromagnetic types. No need to remove picture tube from TV receiver; also tests CR tubes still in factory carton. Shows shorts, leakage and indicates tube condition on a 4 1/2" meter. With voltage regulated, bridge-type VTVM. Has metered line voltage adjustment, speed roll-chart, test cable. Hardwood portable case, 6 1/4x13 1/4x17 1/4". 110-120 v., 60 cycles. Wt., 22 lbs. 84 FX 448. NET. **102.65**

# Modern Test Equipment



85



858-P



120



EV-10A-MCP



EV-20

## PRECISION APPARATUS TEST INSTRUMENTS

### SERIES 85 MULTI-RANGE TESTER

A high-sensitivity AM-FM television servicing and laboratory volt-ohm-milliammeter. Features a 4 1/4" size, 50 microampere meter with extra large size scales and numerals carefully arranged for easy reading. Meter accuracy, 2% full scale. Series 85 Multi-Range Tester has 34 ranges; full rotary selective. All ranges are read with test leads connected to the same terminals, except 6000 volt range has separate, well-insulated high-voltage terminals. Ranges: AC, DC, and output volts, 0.3-12-60-300-1200 and 6000, with 1000 ohms/volt sensitivity on AC and output volts, 0-120 microamps, 0-1.2-12-120 milliamperes and 0-1.2-12 amperes; four resistance ranges, all self-contained; 0-6000-600,000 ohms, 6 megs and 60 megs; six ranges for measurements in decibels, -26 to +70. Uses 1% wire-wound and film-type precision resistors. In molded black bakelite case with durable plastic carrying handle. Anodized, deep-etched, heavy-gauge aluminum panel, resistant to moisture and wear. With batteries and test leads. Size, 5 1/2 x 7 1/2 x 3" deep. Shpg. wt., 5 lbs.

84 F 428, NET.....39.15

Model LC-1. Leather Carrying Case. Especially designed for the Model 85 Tester described above. Has compartment for tools and test leads. Shpg. wt., 2 lbs.

84 F 441, NET.....9.31

Model LC-3 Case. For Model 120 at right. 84 F 496, NET.....9.31

### MODEL 858-P 54-RANGE TESTER

Features push-button operation. Has 4 3/4" 50-microamp meter. AC, DC and output volts, 0.3-6-12-60-300-600-1200-6000 at 20,000 or 1000 ohms/volt DC and 1000 ohms/volt AC; DC current, 0-60-120 microamps, 0-1.2-12-120-600 ma. and 0-1.2-12 amps; ohms, 0-6000-60,000-600,000 and 0-6-60-600 megs; db, -26 to +70 in 8 ranges. Recessed 6000 volt jacks. Portable case. Size, 9x10x4 1/4". With batteries, test leads. Wt., 8 lbs.

84 F 405, NET.....60.27

Model TV-2 HV Probe. For Models 85 and 858-P. Extends DC range to 30,000 v. Wt., 2 lbs.

84 F 446, NET.....14.45

### MODEL 120 MULTI-RANGE TESTER

High sensitivity professional VOM. Out-ranges meters of similar type and size. Ranges: AC, DC, and output volts, 0-1.2-3-12-60-300-600-1200-6000 with 5000 ohms/v on AC and o.p.v., 20,000 ohms/v on DC; DC current, 0-60-300 ma., 0-1.2-12-120-600 ma., 0-12 amps; resistance, 0-200-2000-200,000 ohms, 0-2-20 megs; db ranges, -20 to +77. 5 1/4" meter. With batteries and test leads. 5 1/2 x 7 1/2 x 3". Wt., 5 lbs.

84 F 490, NET.....39.15

Model TV-2B HV Probe. For Model 120. Extends DC range to 30,000 v. Wt., 2 lbs.

84 F 495, NET.....14.45

### EV-10A-MCP VTVM-MEGOHMMETER

Combination VTVM-VOM. High input impedance on VTVM scales; 1000 ohms/volt sensitivity on VOM scales. May be used as portable unit to read AC and DC. Ranges: AC, DC and output volts, 0.3-12-60-120-300-600-1200-6000; DC current, 0-300 microamps, 0-1.2-6-30-60-1200 ma and 0-12 amps; resistance, 0-2000-200,000 ohms, 0-2-20-200-2000 megohms; 8 db ranges, -20 to 77; RF peak volts, 0.3-12-60-120, with RF-10-A probe (see below). Steel case, 12x10 1/2 x 7". With leads and batteries. For 105-125 v., 50-60 cycle AC. 17 lbs.

84 FX 400, NET.....97.75

Model EV-10A(P) VTVM. Same as above but in wood case. 12x13x6". 18 lbs.

84 FX 417, NET.....100.45

### EV-20 ALL-PURPOSE VTVM

Portable AC-DC, zero-center VTVM. 4 3/4" meter. Reads to 2,000 megs in 6 ranges; AC, DC volts, 0.3-12-30-120-300-1200 volts; DC current; 0-300 microamps, 0-1.2-3-12-30-120-1200 ma., 0-12 amps. Six decibel ranges, -20 to +63 db. Reads RF volts directly with RF-10-A probe; 0.3-12-30-120 v. Size, 6 1/2 x 10 1/2 x 5". With leads and batteries. For 110-120 volts, 50-60 cycles AC. Shpg. wt., 11 lbs.

84 FX 443, NET.....68.35

TV-4 Hi-V Probe. For EV-10A and EV-20. Extends DC v. range to 60,000 v. 2 lbs.

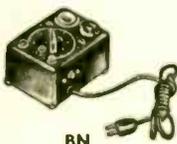
84 F 445, NET.....14.45

RF-10A RF Probe. For EV-10A, EV-20. 2 lbs.

84 F 419, NET.....14.11



BF-60



BN



KT-1



TO-4



251-A

## POPULAR TEST INSTRUMENTS

### CORNELL-DUBILIER BF-60 CAPACITOR-RESISTOR BRIDGE

Built to meet precision requirements of industrial and electronic labs. Accurately measures the important characteristics of capacitors and resistors. It checks for opens, shorts, intermittents, capacity and power factor of electrolytics as well as insulation resistance of papers, micas and ceramics. Capacity ranges are: 10 mmf—0.05 mfd., .001—.5 mfd., .1—50 mfd., 20—1000 mfd. Resistance ranges: 100—50,000 ohms and 10,000 ohms to 5 megohms. Supplies polarizing voltages for leakage tests from 25 to 450 volts DC. Power factor range, 0—50% at 60 cycles. Balance or null condition is indicated by a 6E5 eye. Uses a 6W4GT rectifier. Portable case, hammered-enamel finish. 5 1/2 x 7 1/2 x 10". For 110-125 volts, 50-60 cycle AC. Wt., 10 lbs.

84 FX 457, NET.....42.85

### CORNELL-DUBILIER CAPACITOR TESTERS

Model BN Bridge. Highly popular. When type capacitor bridge for accurately measuring capacity of paper, mica, electrolytic and air capacitors from 10 mmf to 50 mfd. Also a highly effective unit for detecting open and short circuits. Ideal for use as a continuity meter, checking circuits, coils, transformers, etc. Indicates power factor of capacitors. Has directly calibrated reading scale. Uses "magic eye" bridge balance for accurate measurements—no headphones or external meters required. Accuracy independent of line voltage. In bakelite case. 3 1/2 x 5 3/8". With leads. For 110 v., 60 cycles AC. Wt., 4 lbs.

84 F 450, NET.....24.95

Decade Boxes. Provide accurate standards over a wide range of capacity. Rated at 600 volts DC and 220 volts AC. They may be used singly or in groups of two or more decades. With calibration chart giving exact capacity values for all scale markings. Shpg. wt., 4 lbs.

No.	Type	Range, Mfd	Steps	Tol.	NET
84 F 452	CDA-5	.0001-.011	.0001	±5%	11.12
84 F 453	CDB-5	.01-1.1	.01	±5%	11.12
84 F 455	CDB-3	.01-1.1	.01	±3%	13.23
84 F 454	CDB-3	1.0-10	1.0	±5%	13.23
84 F 456	CDC-3	1.0-10	1.0	±3%	21.56

## SPRAGUE TEST INSTRUMENTS

Model TO-4 Tel-Ohmlike. New all-purpose, bridge-type test analyzer. For Universal bridge measurements of capacitance and resistance. "Magic eye" tube for easy balancing. Open, shorted and intermittent capacitors and resistors can be quickly located. Push-button type switches simplify range selection. Resistance range: 2.5 ohms to 25 megohms in three steps. Capacitance range: 1 mmf to 2,000 mfd in five steps. In dark gray case with carrying handle. Easy-to-read 3" meter. Size: 8 1/4 x 14 1/2 x 6". For operation from 110-120 volts, 50-60 cycles AC. Shpg. wt., 17 lbs.

84 FX 004, NET.....72.03

KT-1 Kwik-Test Capacitor Checker. A new, revolutionary type of capacitor tester that enables you to test condensers quickly while they are wired in a set. It is not necessary to remove them from the circuit. The KT-1 will check coupling, bypass, blocking and filter condensers from 30 mmf to 2000 mfd for shorts, opens or intermittent condition. It will do this even if the condenser under test is wired in parallel with a resistor. A "must" instrument for technicians who service TV and radio receivers. Saves hours of time and will pay for itself on the first few jobs. Gray wrinkle-finished case, 5 1/2 x 8 3/4 x 5". For 115 volts, 50-60 cycle AC. Shpg. wt., 8 lbs.

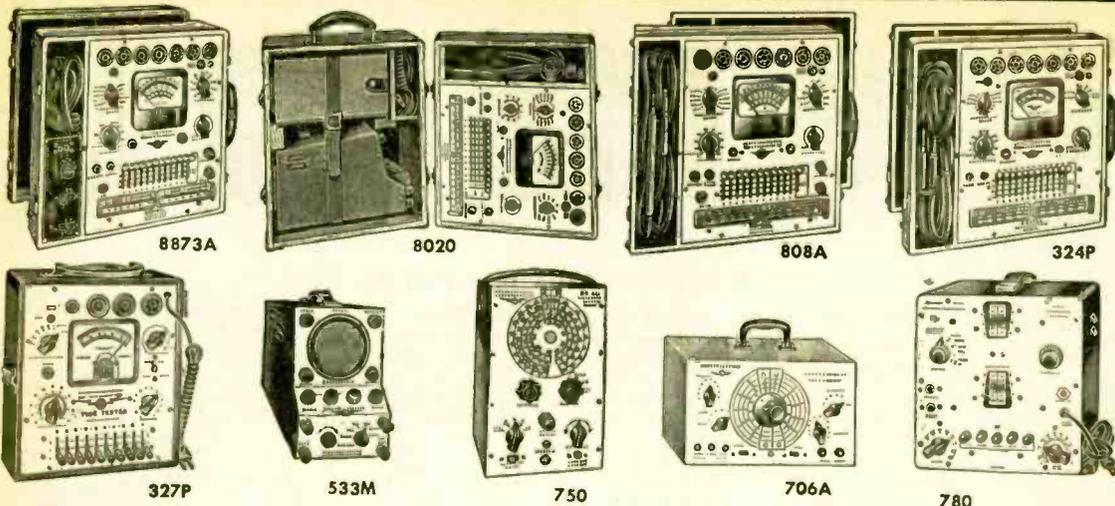
84 FX 005, NET.....33.81

### PRECISION 251-A SIGNAL TRACER

Signal tracer with VTVM. Dynamically checks signals stage-by-stage in RF, IF, and audio sections using station signals. Amplifier response = 1 db 20-20,000 cycles AF; RF to 300 mc. Probe input capacity only 2 mmf. Gain of 12,000 gives the VTVM a full scale sensitivity of 5 microvolts. 3" PM speaker and 4" meter may be used simultaneously or individually as output indicators. A handy, versatile instrument for the television service bench. Saves hours of time locating circuit at fault. Tubes: 6SJ7, 6K6, 6SN7; in probe, 6AT6 (or 6AQ6); 6X5 rectifier. With tubes, probe. Size: 12 1/2 x 9 x 6 1/4". For 110-120 volt, 50-60 cycle AC. Shpg. wt., 12 lbs.

84 FX 196, NET.....55.86

# Radio City Test Equipment



**MODEL 8873A SERVISHOP**  
This new, extremely versatile Servishop combines a tube tester, VTVM and FM-AM signal generator—all in one convenient portable case. Consists of the Model 808A Tube Tester-VTVM and the Model 730 AM-FM Signalizer. Tests all modern tubes, including miniature, sub-miniature and novel base types; also checks and reactivates picture tubes. The 17-range VTVM measures AC and DC volts to 1000, resistance to 1000 megohms, db from -20 to +62. Signal generator provides all required fixed frequencies for aligning AM and FM broadcast bands and IF's; also provides 400-cycle audio tone. With tubes, batteries, HVMP-1 hi-voltage probe and leads. In oak carrying case, 16 1/2 x 12 3/4 x 5 1/4". For 105-125 volts, 60 cycle AC. Shpg. wt., 19 lbs.  
84 FX 364. NET. **137.15**

**MODEL 730 "SIGNALIGNER" SIGNAL GENERATOR**  
(Not illustrated.) AM-FM signal generator. Fixed-frequency design provides exact frequencies needed—speeding up alignment of 1500 kc and 550 kc for broadcast band alignment; 456 and 465 kc for AM IF alignment; 88 mc and 108 mc for FM band alignment; 10.7 mc and 9.1 mc for FM IF alignment; FM section is frequency-modulated for use with ratio detectors; deviation is plus and minus 500 kc. For AM, AM modulation is provided at 400 cycles; 400 cycles also is available separately. Calibrated to be accurate within 1%; trimmers permit recalibration (to obtain 460 kc for IF's, for example). Attenuator provides very smooth control of output. Size, 7 1/2 x 12 1/2 x 5 1/4". Complete with tubes and shielded output cable. For 105-125 volts, 50-60 cycle AC, or DC. Shpg. wt., 4 lbs.  
84 FX 332. NET. **32.29**

**MODEL 8020 FM-TV SERVISHOP**  
Here's a complete "service shop" in a single portable case. Consists of: Model 750 TV Signal Generator, Model 533M Midgescope, Model 808A Tube Tester-VTVM and the Model HVMP-1 Probe. Checks, tests and aligns TV (UHF and VHF) and FM receivers from antenna to picture tube. Signal generator uses an inductor for 0.5% accuracy over range of 9-900 mc. Provides horizontal or vertical bars, or crosshatch pattern, on all channels. 37 scope features high sensitivity and wide response. Tube tester checks all modern tubes, including picture tubes. VTVM has 17 ranges; probe supplied extends DC volts range to 30,000. Oak case, 17 1/4 x 12 1/2 x 5 1/4". With tubes and leads. For 105-125 volts, 50-60 cycle AC. Shpg. wt., 45 lbs.  
84 FX 365. NET. **303.80**

**MODEL 8023 AM-FM-TV SERVISHOP**  
(Not illustrated.) An instrument with a wide range of features. Handles virtually all jobs in the service shop and in the home. Consists of Model 730 AM-FM Signal Generator, Model 808A Tube Tester-VTVM, Model 533M Midgescope—and the Model HVMP-1 High Voltage Probe. For testing and aligning all circuits in AM, FM and TV receivers (UHF as well as VHF). All in one convenient portable case. With tubes, batteries and leads. Size, 17 1/4 x 12 1/2 x 5 1/4". For 105-125 volts, 50-60 cycle AC. Shpg. wt., 45 lbs.  
84 FX 366. NET. **334.18**

**MODEL 808A DO-ALL TUBE TESTER-VTVM**  
Consists of the 324 Tube Tester and a CRT tester-reactivator, plus a VTVM. Checks all modern tubes including miniatures, sub-miniatures and magnetically deflected TV picture tubes. Easy-to-read 4 1/2" meter. Has new fast-operating double Rollindex, 20-range VTVM uses a balanced bridge type push-pull circuit. Input impedance of 25 megohms for minimum current drain. Has zero center scale for discriminator alignment. Ranges: AC and DC volts, 0.5-25-100-250-1000; resistance, 0.2 ohm to 1000 megohms in 5 ranges; db, -20 to +62 in 5 ranges. Accuracy: AC, +5%; DC, +1%. Also checks capacitors for shorts and leakage. Oak carrying case, 12 1/2 x 12 1/2 x 4 3/4". With test leads, isolation probe and batteries. For 105-125 volts, 60 cycle AC. Shpg. wt., 12 1/2 lbs.  
84 FX 333. NET. **97.95**

Model HVMP-1, High-voltage multiplier probe. Extends DC range of VTVM in Model 808A above, to 30,000 volts.  
84 F 334. NET. **8.77**

**MODEL 324C TUBE TESTER**  
New tube and battery checker. Tests all TV and radio tubes. Sockets for standard 4, 5, 6, 7, octal, local, miniature, sub-miniature and hearing-aid types. Also checks transmitting tubes, gaseous rectifiers, tuning indicator tubes, ballasts and pilot lamps. Large-scale 4 1/2" meter gives easy-to-read indications. Has new, fast-operating double Rollindex. CRT tester checks all magnetically deflected picture tubes right in the receiver or carton. Locates and isolates shorts. CRT tester also can be used to reactivate picture tubes after brightness has fallen off. Battery tester will test all popular portable battery types under load. Gives a true indication of battery condition. The 324C adds a professional touch to any service bench or store counter. Supplied in open style metal case. Complete with adapter cable for CRT's. Size: 13 1/4 x 12 1/4 x 4". For 105-125 volts 60 cycle AC. Shpg. wt., 11 lbs.  
84 FX 367. NET. **68.55**

**Model 324P Portable Type.** Same as model 324C above, but housed in portable carrying case with removable, slip-hinge cover. Size: 16 1/4 x 14 1/2 x 5". With battery test leads. Shpg. wt., 13 lbs.  
84 FX 368. NET. **77.91**

**MODEL 533M MIDGESCOPE**  
A compact, lightweight 3" oscilloscope combining high sensitivity and wide-band response—at low cost. Can be used for on-the-spot servicing as well as in the shop. Has push-pull deflection for undistorted response. Ideal for TV use. Full vertical and horizontal expansion of trace. Cathode ray tube is tilted to provide better viewing angle. CRT has protective bezel and graph screen. Sensitivity: vertical amplifier, .020 rms volts-per-inch; horizontal, .6 rms volts-per-inch. Input impedance: Vertical, .5 meg shunted by 5 mmf; horizontal, .5 meg shunted by 70 mmf. Frequency response, within 2 db, 20 cps to 180 kc. All controls on brushed aluminum front panel. Lightweight metal case, 11 1/4 x 12 1/2 x 5 1/4".  
Tubes: 12A7, 12AU7, 12AX7, 6J6, 117Z6; 3MP1 cathode ray tube. With all tubes. For operation from 105-125 volts, 60 cycle AC. Shpg. wt., 9 lbs.  
84 F 335. NET. **97.51**

**MODEL 750 UHF-VHF DO-ALL SIGNAL-PATTERN GENERATOR**  
New, combination signal, marker and pattern generator. Covers all UHF-VHF channels for FM and TV receiver servicing. A completely versatile unit in a single convenient case. Checks and aligns front ends, sound IF's and picture traps, linearity, sync circuits, sweep circuits, focus and deflection. Use of inductor and special anti-backlash drive assures accuracy of 0.5%. All VHF frequencies are covered on fundamental. Ranges: 9-11, 21-47, 54-220, 465-690 and 650-900 mc. RF's and IF's are clearly calibrated on large etched dial. Provides steady horizontal or vertical bars or crosshatch pattern on all channels. Internal modulation: 360 cps and 141.75 kc. Also provides unmodulated carrier signal. 4 1/2" dial. Complete with leads and instructions. Size, 10 1/4 x 6 1/2 x 5 1/4". For 105-125 volts, 60 cycle AC. Shpg. wt., 10 lbs.  
84 F 338. NET. **77.91**

**Model 740A VHF Signal Generator.** Similar to the 750 above, but range is 9-220 mc, all on fundamentals. Also provides 540 cycle audio signal. Size, 10x6x6". Shpg. wt., 9 lbs.  
84 F 336. NET. **68.11**

**MODEL 327P TUBE TESTER**  
Tests all tubes currently used in radio and TV receivers. Will check transmitting, hearing aid, ballast and gaseous rectifier types. It will check both black and white and color CR tubes with adapter cables PTA-1 and PTA-2 (listed below). Black and white tubes can be reactivated with this tester. New data permits rapid insertion of new information as available. Oak carrying case. For 105-125 v., 50-60 cycle AC. 9 1/2 x 11 1/2 x 5 1/4". Wt., 11 lbs.  
84 FX 339. NET. **50.91**  
84F627. PTA-1. For B-W. NET. 3.87  
84F628. PTA-2. For color. NET. 9.75

**MODEL 706A WIDE-RANGE SIGNAL GENERATOR**  
High quality performance, construction and appearance. Special electron-coupled circuit design, permeability adjusted coils, and air trimmer capacitors assure stability and consistency of calibration. Accuracy within 1% of calibration adjustment. Ladder-type step attenuator consisting of a multiplier and fine attenuator control. Planetary drive for vernier tuning without back-lash. Covers 150 kc to 220 mc in eight ranges. Six fundamental ranges through 53 mc. 400 cycle audio at 50 ohms for external use. For 105-125 v., 50-60 cycle AC. Size, 15x9x7". Wt., 14 lbs.  
84 FX 331. NET. **66.15**

**MODEL 780 SWEEP GENERATOR**  
New all electronic sweep generator for black and white and color TV as well as AM and FM. Specifications: Voltage, 0.15 volt, minimum peak-to-peak, terminated in 73 ohms; attenuator, individual push button type, shielded low-leakage steps 0-db, 3-db, 5-db, 10-db, 20-db, 40-db individually, or total 78 db. AGC for constant output; Horizontal scope output, 60 cps front panel control, 180° of phasing; Sweep in one direction only, forward. Range, 3.4 mc to 900 mc calibrated on dial, fundamentals to 200 mc in 4 bands. With cables. For 105-125 v., 50-60 cycle AC. 9 1/4 x 9 1/4 x 12 1/2". Wt., 16 1/2 lbs.  
84 FX 626. NET. **185.71**

# Modern Test Equipment



655



657



463



480



123

## RADIO CITY TEST EQUIPMENT

### MODEL 655 DO-ALL VTVM

Peak-to-peak type VTVM provides accurate measurements of complex wave-forms.  $4\frac{1}{2}$ " meter reads peak-to-peak and rms waveshapes in video, sync and deflection circuits. Industrial uses include servicing vibrator-type power supplies and AC generators. 7 ranges on all functions. DC volts, 0-1.5-5-15-50-150-500-1500. Input resistance (including 1 megohm in DC probe) 11 megohms. Sensitivity on 1.5 volt range: 7.3 mgv./volt. Accuracy on DC ranges  $\pm 3\%$  of full scale reading. AC voltage ranges: peak-to-peak 0-4.2-14-42-140-420-1400-4200; rms, 0-1.5-5-15-50-150-500-1500. Accuracy on AC ranges  $\pm 5\%$  of full scale reading. Response: 30 cps to 3 mc for 1.5, 5, 15, 50, 150 and 500 volt ranges (voltage source having low impedance output). Resistance ranges: 0-1000-10,000 ohms, 0-0.1-1-10-100-1000 megohms. Center scale: 10, 100, 1000, 10,000 ohms and 0.1, 1, 10 megohms. Balanced bridge-type circuit and peak-to-peak rectification eliminate circuit loading, waveform distortion and frequency error. Complete with test leads and full operating instructions. Size:  $10\frac{1}{2} \times 6\frac{1}{2}$ ". Shpg. wt., 8 lbs. 84 F 324. NET. 58.31

Model HVMP-2 High Voltage Multiplier Probe. For use with Model 655 VTVM (above). Extends DC volts range to 30,000 volts. Shpg. wt., 1 lb. 84 F 622. NET. 8.77

### MODEL 657 DO-ALL VTVM

New peak-to-peak and rms VTVM. Features unusually large  $8\frac{1}{2}$ " meter. Function and range settings in use are individually illuminated. Reads DC voltage 0 to 6000 in 8 ranges. Positive or negative. 11 megohm input impedance 7 zero-center DC voltage ranges, 0 to 750 v. AC peak-to-peak 0 to 4200 v. in 7 ranges. Input impedance, 1 megohm shunted by 30 mmf. AC rms voltage 0 to 1500 v. in 7 ranges. AC high voltage 0 to 6000 v. Input impedance approximately 5 megohms. Ohmmeter reads 0 to 10,000 megohms in 8 ranges. Center scale is  $1/100$  of full scale. Capacity readings to 1000 mfd in 6 ranges. Full scale accuracy: DC 3%; AC 5%. Size:  $9\frac{1}{2} \times 9\frac{1}{2} \times 6\frac{1}{4}$ ". For 105-125 v. 50-60 cycle AC. Shpg. wt., 11 lbs. 84 FX 623. NET. 97.85

### MODEL 463 VOM

New, 20,000 ohms-per-volt VOM. 1% tolerance on voltage multipliers. Ranges: DC volts, 0-5-50-250-1000, at 20,000 ohms per volt; AC volts, 0-10-100-500-1000 at 1000 ohms per volt; DC current, 0-1-10-100 milliamperes, 0-1 amp; resistance 0-10,000-100,000, 0-1-10 megohms; db, -10 to +55. Meter accuracy is within 2% of full scale reading on all ranges. Housed in newly-designed, all molded case. Sturdy bakelite withstands hard usage. Size:  $7\frac{1}{2} \times 4\frac{1}{2} \times 2\frac{1}{2}$ ". Complete with batteries—ready to operate. Shpg. wt., 2 lbs. 84 F 624. NET. 26.41

### MODEL 480 MULTITESTER

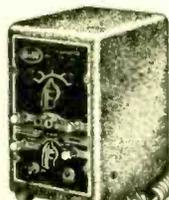
New, moderately priced, 1000 ohm per volt, multitester. Features 3" square meter with 800 microampere D'Arsonval movement. Ruggedly constructed for long, dependable service. Housed in newly designed all molded bakelite case and panel. For the shop, lab, and serviceman's kit. DC voltage ranges: 0-5-50-250-500-1000 volts. AC readings at 0-10, 100, 500 and 1000 volts. Output voltage readings over same ranges as AC. Milliammeter reads 0-1-10-100 ma and 0-1 ampere. Ohmmeter has 4 resistance ranges: 0-10,000-100,000 ohms, 0-1 megohm and 0-10 megohms external. Decibel meter reads from -10 to +55 db. Size:  $7 \times 4\frac{1}{4} \times 2\frac{3}{4}$ ". Complete with battery and instructions. Shpg. wt.,  $1\frac{1}{2}$  lbs. 84 F 621. NET. 14.55

### MODEL 123 "FLYBACKER"

A revolutionary new type of test unit. Permits accurate and speedy trouble shooting in the horizontal deflection circuits of any TV receiver. Instantly shows up a single shorted turn in a flyback transformer or yoke. Leads to these units do not have to be unsoldered for testing. Checks both low and high impedance yokes. May also be used for testing windings of transformers, chokes, relays, solenoids, etc. Readily checks windings for opens or shorts. Large illuminated meter has "Good-Replace" scales. Gray steel case,  $6\frac{1}{2} \times 9\frac{1}{4} \times 4\frac{1}{4}$ ". For 105-125 volts, 60 cycle AC. Shpg. wt., 8 lbs. 84 F 620. NET. 38.95



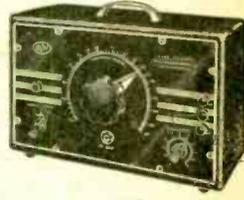
600



404



400



200

## BARKER & WILLIAMSON TEST INSTRUMENTS

### MODEL 600 DIP METER

New, highly sensitive, calibrated dip meter. Invaluable for servicemen, Amateurs, experimenters and laboratories. Covers 1.75 to 260 mc. Can be used as: (1) grid dip meter; (2) absorption wavemeter; (3) auxiliary signal generator. Specific uses include: indicating circuit Q; measurement of inductance, capacity, antenna frequency; pre-tuning wave traps; tuning beam antennas; adjusting tuned feeders; alignment of receivers; determination of transmitter circuit frequency; alignment of TV filter and peaking coils. Uses sensitive 500-microamp meter with adjustable control for pronounced dips. Wedge-like shape allows you to make measurements in confined places. Sturdy plug-in coils for each of the 5 ranges are sheathed with colored vinyl sleeves for added protection to the coil windings and as a means of identification. For 110-120 volts, 60 cycles AC. Size,  $3\frac{1}{2} \times 3\frac{1}{2}$ ". Supplied complete with 5 plug-in coils. Shpg. wt., 3 lbs. 84 F 487. NET. 39.75

### MODEL 300 FREQUENCY METER

Invaluable to research labs, broadcast stations and anyone working with audio. Measures any waveform with peak ratio of less than 8 to 1. Range: 20 to 30,000 cps. Sensitivity: Minimum .25 volt input. Calibration accuracy: when referenced against 60 cycles, all other frequencies fall within 5%. Controls: Frequency Range, "Calibrate" and Input Level. For 105-125 volts, 50-60 cycles AC. Size:  $13\frac{1}{2} \times 9\frac{1}{2} \times 7\frac{1}{2}$ ". Wt., 15 lbs. (Not illus.) 84 FX 484. NET. 126.00

### MODEL 404 LINEAR DETECTOR

For use with distortion meter to measure distortion or noise in amplitude modulated carriers of balanced and unbalanced audio circuits. May be used with BW Model 400, at right. Meets FCC proof-of-performance requirements. May be used to check carrier on any frequency from 400 kc to 30 mc, 20 to 30 RF v. required for proper operation of carrier rectifier. Single-ended input impedance is approx. 10,000 ohms; as bridging transformer, input impedance is approx. 6000 ohms, and insertion loss 1 db. Response essentially flat, 20-50,000 cps. With bridging transformer, vacuum tube detector, 40 db pad adjustable in 10 db steps, and function switch. With hardware for attachment to BW Model 400. Size,  $5\frac{1}{2} \times 4\frac{1}{2} \times 7\frac{1}{2}$ ". For 105-125 volts, 50-60 cycles AC. Shpg. wt., 7 lbs. 84 FX 486. NET. 85.00

### MODEL 250 SINE WAVE CLIPPER

Takes sine wave from any audio oscillator and produces output closely resembling a square wave. Provides all the advantages of using square waves in checking audio equipment. Permits closer, more accurate study of such factors as frequency response, phase shift, etc. Yet it costs far less than a square wave generator! Ideal for audio research work, servicing audio amplifiers, etc. Has front-panel input and output terminals, output volume control, and 4-position wave-shape selector switch. Requires no power. Size:  $5\frac{1}{2} \times 4\frac{1}{2} \times 2$ ". Shpg. wt., 3 lbs (Not illustrated.) 84 F 485. NET. 10.00

### MODEL 400 DISTORTION METER

For a wide range of audio measurement applications. Ideal for measuring low-level audio voltages, their noise and harmonic content, and amplifier gain. Wien bridge selective filter provides single frequency suppression circuit from 30 to 15,000 cps. Ranges: Distortion meter—30 to 15,000 cps on fundamentals, to 45,000 cps on harmonics; voltmeter and db meter—30 to 45,000 cps. Sensitivity: noise and distortion, 0.3 v. minimum input; voltmeter, 0.3, 0.1, 0.03, .01 and 0.003 v. for full scale readings. Calibration: Distortion,  $\pm 5$  db; voltage,  $\pm 5\%$  of full scale at 1000 cps. Size,  $13\frac{1}{2} \times 9\frac{1}{2} \times 4\frac{1}{2}$ ". For 105-125 v., 50-60 cycles AC. Shpg. wt., 17 lbs. 84 FX 483. NET. 168.00

### MODEL 200 AUDIO OSCILLATOR

RC type, broadcast-quality audio oscillator for making frequency response, distortion, and other audio measurements. A stable, accurate source of frequencies from 30-30,000 cycles. Ranges: 30-300, 300-3000, 3000-30,000 cps. No zero reset or line calibration needed. Output: 10 volts into 500 ohm load. Less than 1% rms harmonics from 30-15,000 cps, with 500 ohm load; on open circuit (10,000 ohms up) approximately 1% on all frequencies from 50-15,000 cps. Response: Better than  $\pm 1$  db from 30-15,000 cps. Stability, better than 1%. Calibration accuracy, 3% of scale reading, volts, 50-60 cycles AC. Complete with tubes. Shpg. wt., 17 lbs. 84 FX 482. NET. 138.00

# Eico Test Equipment and Kits

## LOW-COST QUALITY EQUIPMENT

Eico test instruments have gained widespread acceptance among electronics men and manufacturers. Production-line checks and trouble-shooting of TV sets are achieved at very low cost with these popular Eico units. At the same time, these instruments offer excellent design, rugged construction, ease of operation and complete dependability. Laboratory styled, Eico units look distinctively professional and perform that way. They're outstanding values!



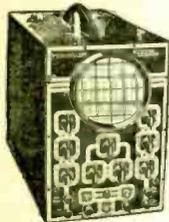
315-K



320-K



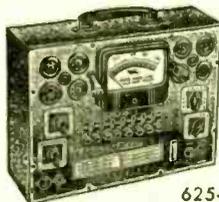
322-K



425-K



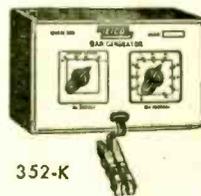
470-K



625-K



630-K



352-K

**MODEL 315-K DELUXE RF SIGNAL GENERATOR.** For AM, FM and TV servicing. 1% accuracy. Range, 75 kc to 150 mc in 7 calibrated bands. Big, 9" illuminated dial. Vernier tuning. Attenuation controls are shielded; also have line filter. Provision for external modulation. Internal 400 cps sine wave audio generator with attenuator for RF modulation and external audio testing. Uses: 7F7 and 6C4. Also has VR150 voltage regulator and 6X5 rectifier. Steel case. 12x13x7". Complete with all parts, tubes, instructions and operating manual. Less solder. For 105-130 volts, 60 cycles AC. Shpg. wt., 20 lbs.

83 FX 162. Complete kit. NET.....39.95

Model 315. As above, but factory-wired and tested.

84 FX 395. NET.....59.95

**MODEL 320-K RF SIGNAL GENERATOR.** Well-designed circuit employs a stable Hartley oscillator. Covers 150 kc to 34 mc on fundamentals—to 102 mc on harmonics. 400 cps modulation. Has 9" dial calibrated in 7 bands. Complete with tubes, portable case, etched panel, all parts, knobs, wire, shielded cable, instructions, diagrams, and operating manual. Less solder. 10x8x4 1/4". For 110-120 v., 60 cycles AC. Wt., 10 lbs.

83 F 154. Complete kit. NET.....19.95

Model 320. As above but factory-wired and tested.

84 F 394. NET.....29.95

**MODEL 322-K RF-AF SIGNAL GENERATOR.** An accurate 150 kc to 34 mc generator. Individual calibration for each of 5 bands. Switch selects pure RF, modulated RF or pure AF. Shielded RF and AF attenuators. 400-cycle output. With 6SN7; 6X5 rectifier. Steel case, 10x8x4 1/4". Instructions. Less solder. For 110-120 v., 60 cycle AC. Shpg. wt., 10 lbs.

83 F 168. Complete kit. NET.....23.95

Model 322. As above but factory-wired and tested.

84 F 396. NET.....34.95

**MODEL 360-K SWEEP GENERATOR.** Covers 500 kc-228 mc. Variable sweep, 0-30 mc. Crystal marker oscillator with variable amplitude. Provision for injection of external marker. Phase control. 8 1/2" vernier tuning dial. Center of each TV channel is marked on front panel. Uses 1-6C4, 2-6J5, 1-7193; 6X5GT rectifier. With tubes, all parts, wire, instructions. Less 5 mc crystal and solder. 10x8x6 1/4". 110-120 v., 60 cycle. Shpg. wt., 12 lbs. (Not illustrated.)

83 FX 159. Complete kit. NET.....34.95

Model 360. As above, but factory-wired and tested.

84 FX 342. NET.....49.95

**MODEL 625-K TUBE TESTER.** An excellent, versatile tube tester with outstanding features. Tests all radio and TV set tubes. Short and open test for each element. Full-vision, bakelite-cased meter. Easy to read Replace-Weak-Good scale. An overload bulb indicates transformer overload and also serves as fuse. Rugged steel case. Illuminated, "speed-roll" chart—speeds location and setting up. Lever-action switches for individual testing of every tube element. Knock-out for addition of new socket. Handsome three-color panel. Has large, 4 1/2" meter. Less solder. For 110-120 v., 60 cycles AC. Size, 12 1/2 x 9 1/2 x 4 1/4". Shpg. wt., 12 lbs.

83 FX 161. Complete kit. NET.....34.95

Model 625. As above but factory-wired and tested.

84 FX 397. NET.....49.95

**MODEL CRA PICTURE TUBE ADAPTER.** (Not illus.) Adapts 625-K and 625 Tube Testers for checking all sizes of TV picture tubes. Measures cathode emission. Tests for filament continuity, shorts between elements. With standard 12-pin socket, octal connector and 4-ft. cable for testing tube without removal from set. 2 lbs.

84 F 348. NET.....4.50

**MODEL 425-K 5" OSCILLOSCOPE KIT.** Designed for AM, FM and TV alignment. Push-pull deflection. Sensitivity, .05 to .1 rms volt/inch. Range, 5 cps to 500 kc. Wide-range multi-vibrator sweep circuit, 15-75,000 cps. Provision for external sync., Z-modulation and direct input to CR tube plates. Calibrating voltage terminal on panel. Graph screen. Uses: 3-6SN7, 2-6J5, 5BP1 cathode ray tube, 2-5Y3GT. Complete with tubes, portable case, etched panel, all parts and knobs, wire, complete assembly instructions, diagrams and operating manual. Less solder. Size: 8 1/2 x 17 x 13". For 110-120 volts, 60 cycle AC. Wt., 30 lbs.

83 FX 155. Complete kit. NET.....44.95

Model 425. As above but factory-wired and tested.

84 FX 392. NET.....79.95

**MODEL 470-K 7" OSCILLOSCOPE KIT.** Push-pull amplifiers and cathode follower inputs to both vertical and horizontal sections. Wide-range sweep frequency generator (15 cps to 100 kc). Intensity modulation, external sync inputs, saw-tooth and line frequency outputs—all on front panel. Internal voltage calibrator for peak-to-peak voltage measurement. Frequency response: Vertical amplifier, flat within ±2 db from 10 cps to 1 mc with sensitivity of .01 volt rms/inch; horizontal amplifier, ±2 db from 10 cps to 500 kc with sensitivity of .3 volt rms/inch. Input impedance: Vertical, 3 megs and 35 mmf; horizontal, 1 meg and 40 mmf. Graph screen, 15x15x10". With all tubes including CRT, all parts, instructions, diagrams. Less solder. For 110-120 v., 60 c. AC. Wt., 35 lbs.

83 FX 174. Complete kit. NET.....79.95

Model 470. As above, but factory-wired and tested.

84 FX 343. NET.....129.50

**SCOPE TV PROBES.** For signal and waveform tracing, alignment applications, etc. Fully shielded. Rugged terminal board mounting of parts. Swivel action, shock-mounted construction. Wt., 5 oz.

83 F 180. Model PSD-K. Demodulator Probe Kit. NET.....3.75

84 F 653. Model PSD. As above but factory wired. NET.....5.75

83 F 181. Model PD-K. Direct Probe Kit. NET.....2.75

84 F 654. Model PD. As above but factory wired. NET.....3.95

83 F 182. Model PLC-K. Low Capacity Probe Kit. NET.....3.75

84 F 655. Model PLC. As above but factory wired. NET.....5.75

**MODEL 630-K CATHODE RAY TUBE CHECKER KIT.** For checking any TV picture tube having either electrostatic or magnetic deflection and focus. Dependable indicator of shorted or open elements in the electron gun. Bridge measurement of peak beam current proportional to screen brightness using neon lamp as balance indicator. Balancing control calibrated directly in terms of tube condition. Test sockets and 2 1/2 ft. cable for either duodecal or diheptal base tubes. Octal socket on panel for adapters. Tests tubes in TV cabinet or in cartons. Less solder. For 105-125 v. 50-60 cycle AC. 9 1/2 x 6 1/2 x 3". Shpg. wt., 6 lbs.

83 F 177. Complete kit. NET.....17.95

Model 630. Same as above, but factory-wired and tested.

84 F 650. NET.....24.95

**MODEL 352-K BAR GENERATOR KIT.** For adjusting vertical and horizontal linearity. Produces 16-23 vertical and 13-22 horizontal bars when connected to antenna terminals (number of bars is adjustable). Video carrier oscillator tunable over channels 2-6. 3-way antenna clip. Less solder. 7 1/2 x 5 x 4 1/2". For 105-125 v., 50-60 cycle AC. Shpg. wt., 7 lbs.

83 F 178. Complete kit. NET.....14.95

Model 352. Same as above, but factory-wired and tested.

84 F 651. NET.....19.95

# Eico Test Equipment and Kits



221-K



214-K



232-K



249-K



556-K



145-K



147-K



565-K



536-K



511-K

**MODEL 221-K VACUUM-TUBE VOLTMETER KIT.** An easy-to-build, sensitive VTVM for making measurements in high-resistance circuits. 20 ranges, with DC input resistance of 25 megohms.  $4\frac{1}{2}$ " meter is protected against burnout. Includes zero center for alignment of FM and TV discriminators. Dual-triode balanced bridge, 1% multiplier resistors. Ranges: AC-DC volts, 0.5-10-100-500-1000; extends to 30,000 volts and 200 mc with HVP-2 and PRF-25 probes; resistance, 0-1000 ohms 0-1-10-100-1000 megohms; db -20 to +55. With tubes, test leads, wire, battery, instructions, diagrams and operating manual. Less solder. Size:  $6\frac{1}{2} \times 9 \times 5$ ". For 110-130 volts, 50-60 cycle AC. Shpg. wt., 10 lbs.

83 F 152. Complete kit. NET.....25.95

Model 221. As above but factory-wired and tested.  
84 FX 389. NET.....39.95

**MODEL 214-K DELUXE VACUUM-TUBE VOLTMETER KIT.** All the versatility and performance-proven features of Model 221, plus the extra convenience and legibility of its big  $7\frac{1}{2}$ " meter. Reliable "can't-burn-out" circuit.  $13\frac{1}{4} \times 9 \times 6$ ". Wt., 11 lbs.

83 FX 170. Complete kit. NET.....34.95

Model 214. As above but factory wired.  
84 FX 344. NET.....54.95

**MODEL 232-K VACUUM-TUBE VOLTMETER KIT.** Revolutionary new engineering design. Professional peak-to-peak VTVM with laboratory precision features and low price. Exclusive "Uni-Probe" is a terrific time-saver. Only one probe performs all functions. Half turn of tip selects DC or AC/OHMS. Ranges: Measures directly p-p voltage of complex and sine waves, 0.4-14-42-140-420-1400-4200 volts p-p; DC/rms sine voltages, 0-1.5-5-15-50-150-500-1500 volts; Resistance, 0 to 1000 megs in 7 ranges.  $4\frac{1}{2}$ " meter. Size,  $7 \times 4 \times 5$ ". For 110-130 v., 50-60 cycle AC. Wt., 7 lbs.

83 F 186. Complete kit. NET.....29.95

Model 232. As above but factory wired.  
84 F 659. NET.....49.95

**MODEL 249-K DELUXE VACUUM-TUBE VOLTMETER KIT.** Same outstanding features and ranges as Model 232 above, but with large,  $7\frac{1}{2}$ " meter for extra convenience and readability. Makes an ideal bench VTVM. Size,  $8\frac{1}{2} \times 13 \times 5$ ". Shpg. wt., 9 lbs.

83 F 187. Complete kit. NET.....39.95

Model 249. As above, but factory wired.  
84 F 660. NET.....59.95

**PROBE KITS.** For VTVM kits. Average shpg. wt., 1 lb.  
83 F 188. Model PTP-25-K. Peak-to-peak Probe Kit. NET.....4.95

84 F 661. Model PTP-25. As above but factory wired. NET...6.95

83 F 189. Model PRF-25-K. RF Probe Kit. NET.....3.75

84 F 662. Model PRF-25. As above but factory wired. NET...4.95

**MODEL HVP-2. HIGH VOLTAGE PROBE.** For adapting VTVM units to read up to 30,000 volts.  
84 F 663. Factory wired. NET.....4.95

**MODEL 556-K STANDARD MULTIMETER WITH  $4\frac{1}{2}$ " METER KIT.** Has 400-micro-amp movement, 38 full-scale ranges: DC, AC and output volts, 0-1.5-10-50-100-500-5000 (at 1000 ohms per volt); AC and DC current, 0-1-10 ma and 0-0.1-1 amp; resistance, 0-500-100,000 ohms and 0-1 megohm. Six db ranges, -20 to +69. Accuracy, DC  $\pm 3\%$ , AC  $\pm 5\%$ . With case, wire, battery and instructions. Less leads and solder.  $6\frac{1}{4} \times 5\frac{1}{4} \times 3$ ". Wt., 4 lbs.

83 F 173. Complete kit. NET.....16.90

Model 556. As above, but factory-wired and tested.  
84 F 347. NET.....23.50

**MODEL 145-K MULTI-SIGNAL TRACER KIT.** For tracing IF, RF, video and audio circuits. Built-in 4" PM speaker. Front-panel jacks for VTVM—for visual signal tracing. Germanium crystal diode probe. Response to over 200 mc. Complete with tubes, all parts, steel case, speaker, wire and instructions. Less solder. For 110-130 volts, 60 cycle AC.  $10 \times 8 \times 4\frac{1}{4}$ ". Shpg. wt., 9 lbs.

83 F 158. Complete kit. NET.....19.95

Model 145. As above but factory-wired and tested.  
84 F 385. NET.....28.95

**MODEL 147-K SIGNAL TRACER KIT.** Versatile transformer-operated instrument. High-gain RF channel with internal wide-frequency range demodulator permits direct observation of actual transmitted signal. Low gain audio channel for all audio-circuit investigation. Both visual and aural monitoring of all RF and AF channels. One probe for RF, AF and noise tracing. Complete with probe, 5 tubes, and instructions. For operation from 105-125 volts, 50-60 cycles. Size,  $9 \times 10 \times 5$ ". Shpg. wt., 10 lbs.

83 F 190. Complete kit. NET.....24.95

Model 147. As above but factory wired.  
84 F 664. NET.....39.95

**MODEL 565-K 20,000 OHMS-PER-VOLT MULTIMETER KIT.** Has 31 ranges: DC, AC and output volts, 0-2.5-10-50-250-1000-5000 (DC at 20,000 ohms per volt, AC at 1000 ohms per volt); DC current, 0-100 microamps, 0-10-100-500 ma, and 0-10 amps; resistance, 0-2000-200,000 ohms and 0-20 megohms. Five db ranges, -12 to +55.  $4\frac{1}{2}$ " meter.  $6\frac{1}{4} \times 5\frac{1}{4} \times 3$ ". With batteries, wire and instructions. Less leads, solder. Shpg. wt., 4 lbs.

83 F 172. Complete kit. NET.....24.95

Model 565. As above, but factory-wired and tested.  
84 F 346. NET.....29.95

**MODEL 555-K 20,000 OHMS-PER-VOLT MULTIMETER KIT.** Same as Model 565-K above, but with 1% resistors. Wt., 4 lbs.

83 F 167. Complete kit. NET.....29.95

Model 555. As above, but factory-wired and tested.  
84 F 391. NET.....34.95

**MODEL 536-K STANDARD MULTIMETER KIT.** 31 ranges. 3" meter. Ranges: AC and DC volts: 0-1.5-10-50-100-500-5000 at 1000 ohms/volt; resistance, 0-500, 0-100,000 ohms, 0-1 meg; AC and DC current, 0-1-10 ma and 0-0.1-1 amps; 6 decibel ranges, -20 to +69 db. Ideal low-cost unit for servicemen. With bakelite case, wire, battery and instructions. Less leads and solder. Size:  $6\frac{1}{4} \times 3\frac{1}{4} \times 2$ ". Shpg. wt., 3 lbs.

83 F 171. Complete kit. NET.....12.90

Model 536. As above, but factory-wired and tested.  
84 F 345. NET.....14.90

**MODEL 526-K STANDARD MULTIMETER KIT.** Same as Model 536-K above, but with 1% resistors. Shpg. wt., 3 lbs.

83 F 166. Complete kit. NET.....13.90

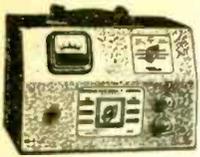
Model 526. As above, but factory-wired and tested.  
84 F 390. NET.....16.90

**MODEL 511-K VOLT-OHM-MILLIAMMETER KIT.** 3" meter. Ranges: DC volts, 0-5-50-250-500-2500; AC and output v., 0-10-100-500-1000; DC current, 0-1-10-100 ma, 0-1-10 amps; resistance, 0-500-100,000 ohms, 0-1 meg; decibels, -8 to +55. With parts, instructions. Less leads, solder.  $8 \times 4\frac{1}{2} \times 3$ ". Shpg. wt.,  $3\frac{1}{2}$  lbs.

83 F 153. Complete kit. NET.....14.95

Model 511. As above, but factory-wired and tested.  
84 F 393. NET.....17.95

# Eico Test Equipment and Kits



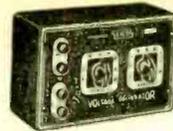
1040K



1050K



377K



495K



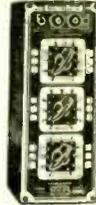
488K



950K



1100K



1180K



1171K



944K

## LOW-COST QUALITY TEST EQUIPMENT

**MODEL 1040-K BATTERY ELIMINATOR AND CHARGER KIT.** For all auto radio testing. Transformer has 105-125 volt primary and variable secondary output: 0-15 volts (continuously variable); continuous operation, 0-10 amps at 6 volts; intermittent operation, 20 amps maximum. Uses extra-heavy duty, 4-stack manganese-copper sulfide rectifiers arranged in full-wave bridge, 10,000 mfd condenser assures well-filtered output. Rugged, built-in meter measures current and voltage output. Has fused primary and automatic reset overload device for secondary. Steel cabinet, 10 $\frac{1}{2}$ x7 $\frac{1}{4}$ x8 $\frac{3}{4}$ ". With all parts, wire, and instructions. Has 2 $\frac{1}{8}$ " meter. Less solder. For 105-125 volts, 50-60 cycles. AC. 15 lbs.

83 FX 163. Complete kit. NET.....25.95

Model 1040. As above but factory-wired and tested.

84 F 386. NET.....34.95

**MODEL 1050-K 6-12 VOLT BATTERY ELIMINATOR KIT.** Used for auto radio servicing. Can also be used as battery charger. Provides DC output at 0-8 v. or 0-16 v. Continuous current rating: 10 amps at 6 v., 6 amps at 12 v. Intermittent current rating: 20 amps at 6 v., 12 amps at 12 v. Two meters: one is scaled at 0-20 v. and one at 0-20 amps. Provide simultaneous readings. Switch selects 6 v. or 12 v. operation. Double protection: fused primary, automatic reset overload relay for secondary. Blue-gray steel cabinet. Etched panel. 10 $\frac{1}{2}$ x7 $\frac{1}{4}$ x8 $\frac{3}{4}$ ". With instructions. Less solder. 105-125 v., 50-60 cycles. Wt., 15 lbs.

83 FX 175. Complete kit. NET.....29.95

Model 1050. As above, but factory-wired and tested.

84 F 341. NET.....38.95

**MODEL 950-K RESISTANCE-CAPACITANCE BRIDGE KIT.** Measures and tests all resistors, 0.5 ohm to 500 megs, and all condensers, 10 mmf to 5000 mfd. Comparator range also gives instant R-C-L comparison measurement with any external component as standard. 0-500 DC voltage source. Quickly tests for leakage, power factor. Magic eye indicator. Allows determination of capacitor power factor by means of calibrated potentiometer and magic eye. 6" easy-to-read dial scale. With steel case, 10x8x4 $\frac{1}{4}$ ", etched panel, all parts, wire, instructions. Less solder. For 110-120 volts, 60 cycle AC. Shpg. wt., 10 lbs.

83 F 164. Complete kit. NET.....19.95

Model 950. As above but factory-wired and tested.

84 F 387. NET.....29.95

**MODEL 377-K AUDIO GENERATOR KIT.** Provides sine and square waves for audio servicing. 1% resistors in oscillator circuit. Response,  $\pm 1.5$  db, from 60 cps to 150 kc. Wien bridge-type oscillator; cathode follower output. Sine waves, 20-200,000 cycles in 4 ranges; square waves, 60-50,000 cycles. Output, continuously variable, 0-10 volts. Distortion, 1% of rated output; hum, less than 0.4%. Large 6 $\frac{1}{2}$ " dial includes 0-100 reference scale. Tubes: 6SJ7, 2-6K6, 6SN7; 6X5 rectifier. 7 $\frac{1}{2}$ x11 $\frac{1}{2}$ x7 $\frac{3}{8}$ ". With tubes, wire, instructions and manual. Less solder. For 110-120 volts, 50-60 cycle AC. Wt., 20 lbs.

83 FX 169. Complete kit. NET.....31.95

Model 377. As above but factory-wired and tested.

84 FX 349. NET.....49.95

**MODEL 1100-K RESISTANCE SUBSTITUTION BOX KIT.** Engineered for versatile, practical use at moderate cost. Determines value of illegible resistors by substitution. Features resistance range from 15 ohms to 10 megs in decade multiples of 15, 22, 33, 47, 68 and 100 ohms. 36 RETMA 1-watt 10% resistors. 5-way jack-top binding posts for connecting any type test leads. Molded black bakelite case, with handsome 2-color etched aluminum panel. 3 $\frac{3}{4}$ x6 $\frac{1}{2}$ x3 $\frac{1}{4}$ ". Wt., 2 $\frac{1}{2}$  lbs.

83 F 179. Complete Kit. NET.....5.50

Model 1100. As above but factory wired.

84 F 652. NET.....9.95

**MODEL 495-K SCOPE VOLTAGE CALIBRATOR KIT.** Makes any scope a wide-range, accurate, peak-to-peak AC electronic voltmeter. Injects a calibrated, semi-square wave voltage on the scope screen for comparison with any waveform. Ranges are: .1, 1, 10 and 100 volts peak-to-peak. Continuously calibrated output from 0 to 100 volts. Uses 1% decade attenuator resistors. Switch permits transfer of signal under observation direct to scope. Calibrator can be permanently connected to scope. No need to constantly transfer leads from unknown signal source to calibrator. Regulated power supply. Size, 5x7 $\frac{1}{4}$ x4". For operation from 105-125 volts, 50-60 cycle. Shpg. wt., 4 lbs.

83 F 176. Complete kit. NET.....12.95

Model 495. As above but factory wired.

84 F 384. NET.....17.95

**MODEL 488-K ELECTRONIC SWITCH KIT.** Allows simultaneous observation of two patterns on the screen of a single scope. Amplitudes of two patterns are separately adjustable by individual gain controls in each input channel. Patterns may be superimposed or separated by desired amount with positioning control. Switching rates: Low range, less than 10 cps to 100 cps; mid-range, 50 cps to 400 cps; high range, 250 cps to 2000 cps, all continuously variable. 2 signal amplifiers. Frequency response, 0-30,000 cps, usable to 300,000 cps. With tubes, instructions. For 105-125 v., 50-60 cycles. Size, 6x8x6". Shpg. wt., 7 lbs.

83 F 185. Complete kit. NET.....23.95

Model 488. As above but factory wired.

84 F 658. NET.....39.95

**MODEL 1180-K DECADE CONDENSER BOX KIT.** For general design and development work. Useful in every laboratory as tuned circuit elements, bridge impedances, filter elements or components of any circuit where a wide-range variable capacitor is necessary. Provides very rapid experimental determination of proper capacitance values required in a circuit. Range: 100 mmf to .111 mf in steps of 100 mmf; voltage rating, 350 volts DC continuous. Silver mica dielectric capacitors are  $\pm 1\%$ . Zero capacitance approx. 7 mmf. Positive detent, ceramic wafer switches. Low-loss lucite terminal board. Size, 9x3 $\frac{1}{2}$ x3 $\frac{1}{4}$ ". Shpg. wt., 3 lbs.

83 F 183. Complete kit. NET.....14.95

Model 1180. As above but factory wired.

84 F 656. NET.....19.95

**MODEL 1171-K RESISTANCE DECADE BOX KIT.** Supplies resistance values from 0 to 99,999 ohms in 1 ohm steps with 5 decades, with  $\frac{1}{2}\%$  accuracy. Uses  $\frac{1}{2}\%$  1 watt resistors. Has 5 separate 10-position switches. Ideal low-cost unit for the experimenter and builder. Its versatility makes it highly desirable in designing new circuits. Comparator position and binding posts for instant substitution of actual equivalent component. Rugged, trouble-free construction. Steel case, 3 $\frac{1}{2}$ x12x3". With all parts, instructions. Less solder. Shpg. wt. 3 lbs.

83 F 165. Complete kit. NET.....19.95

Model 1171. As above but factory-wired and tested.

84 F 388. NET.....24.95

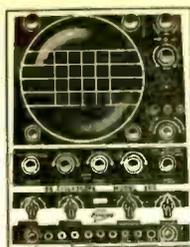
**MODEL 944-K FLYBACK TESTER KIT.** Valuable new test unit for the service technician. Can be used on the service bench or on-the-job in the field. Provides positive check of all types of flybacks and yokes in or out of the set—they need not be disconnected. Extremely sensitive, shows even 1 shorted turn. Separate calibration for air core and iron core flybacks for more accurate testing. Has large, easy-to-read 4 $\frac{1}{2}$ " meter. Also tests continuity of speakers, switches, etc. Satin finish etched panel. Size, 8 $\frac{1}{2}$ x5x5". For 105-125v., 50-60 cycles. Shpg. wt., 5 lbs.

83 F 184. Complete Kit. NET.....23.95

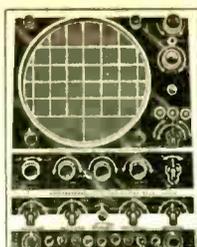
Model 944. As above but factory wired.

84 F 657. NET.....34.95

# Test Equipment and Kits



300-K



308-K



219



221Z



400



630-KA



PP2



10B



431-A



312

## PRECISE TEST INSTRUMENTS

### MODEL 300-K 7" SCOPE KIT

Expertly engineered 7" scope kit. High-quality components throughout. A lab type instrument at low cost. Vertical, flat  $\approx 1\frac{1}{2}$  db through 5 megacycles with sensitivity of 10 millivolts. Frequency-compensated vertical and horizontal stepping attenuators. Push-pull DC amplifiers; push-pull horizontal. Astigmatic focus control. Linear sweep from 1 cycle to 80 kc. Internal square wave calibrator with pot. Steel cabinet, 11x14x17". With all parts, wire, tubes and instructions; less solder. For 110-120 v., 60 cycle AC. Shpg. wt., 35 lbs. 83 FX 131. Complete kit. NET.....94.95

Model 300-W. As above, but factory-wired and tested. 84 FX 498. NET.....199.50

### MODEL 308-K 8 1/2" SCOPE KIT

Unusually fine, easily assembled, 8 1/2" scope kit at very moderate cost. Many deluxe features; excellent for practically any radio-TV servicing applications. 8 1/2" screen and magnifier positioner permit extremely accurate waveform analysis. Push-pull inputs for internally mixing 2 signals or observing push-pull waveforms. Exceptional vertical response;  $\approx 1.5$  db to 5 mc. Sensitivity, 10 mv/inch. Return trace eliminator. Linear sweep, 1 cycle to 80 kc. Square-wave calibrator with pot. External, internal negative or positive sync, or internal 60 or 120 cycle sync. Steel cabinet, 11x14x19". With all parts, wire, tubes and instructions; less solder. For 110-120 volts, 60 cycle AC. Shpg. wt., 36 lbs. 83 FX 132. NET.....129.50

Model 308-W. As above, but factory wired and tested. 84 FX 690. NET.....229.50

Model 960 Capacity Attenuator Probe. For Model 300 and 308 scopes. Permits measurements with 1/10 the capacity loading effect. Range, through 100 mc. Input capacity, 7 mmf. Shpg. wt., 1 1/2 lbs. 84 F 691. NET.....5.95

### MODEL 630-KA SIGNAL GENERATOR KIT

RF-AF-TV Signal generator and Marker. Reaches 110 mc on fundamentals; 330 mc on harmonics. Pre-assembled and calibrated RF heads; audio of 20-20,000 cycles; cathode follower output; variable percent modulation; external modulation; speech amplifier; crystal marker; RF and AF stand-by; Wien bridge AF osc.; Colpitts RF osc.; filtered line; separate RF section; vernier tuning on RF and AF; coax fittings. Steel cabinet with handle. Size 8x11x5". With tubes, all parts, wire and instructions; less solder. For 110-120 v., 60 cycles AC. Shpg. wt., 11 lbs. 83 F 130. Complete Kit. NET.....38.95

Model 630-W. As above, but factory-wired and tested. 84 F 497. NET.....53.95

## SERVICE INSTRUMENTS TEST EQUIPMENT

### MODEL 10B "SENSI-METER"

Highly valuable instrument for checking sensitivity of TV sets used in fringe and other poor-signal areas. Used with VTVM or 20,000 ohms/volt (or higher) VOM connected across video detector load. Attenuator control is turned until VTVM or VOM reads 1 volt; position of control then indicates TV set sensitivity in microvolts. Constant 300-ohm output. Size, 4x6x3". For 110-120 volts, 60 cycle AC. Shpg. wt., 15 lbs. 84 FX 698. NET.....126.91

### MODEL PP2 COMPARISON METER

Adapts oscilloscope for quick, easy, peak-to-peak measurement of waveform amplitudes—a valuable aid and great time-saver in TV and other electronic servicing. Injects measured substitute signal into scope; height of substitute signal is adjusted to same height as wave form to be measured. Two p-to-p ranges, 0-10 and 0-100 volts. May be permanently attached to input of scope; disconnects from circuit when switched off. Size, 4x6x3". For 110-120 volts, 60 cycle AC. Wt., 1 1/2 lbs. 84 F 699. NET.....8.57

## SYLVANIA TEST INSTRUMENTS

### TYPE 219 TUBE TESTER

Counter-type tube tester. Tests all tubes, including latest types. All tests show on illuminated 4 1/2" meter: emission-standtest, relative life, gas, heater-cathode leakage, shorts and open elements. Tests 4, 5, 6, 7, 8, and 9 pin tubes including octal, octal, miniature and sub-miniature types; tests hearing aid types, ruggedized and mobile transmitting tubes and panel lamps. Provision for additional sockets. Roll chart easily removed. 5 1/4x13x18 1/4". For 105-120 v. 50-60 cycles AC. Shpg. wt., 23 lbs. 84 FX 884. NET.....114.50

### TYPE 220 TUBE TESTER

Same as Type 219 above, but housed in lightweight, portable steel case. Cover easily removable for counter or bench use. Gray-crackle finish. Size, 6x11 1/4x17". Shpg. wt., 23 lbs. 84 FX 885. NET.....114.50

Type 228 CRT Adapter. For checking TV picture tube with Type 219 and Type 220 tube testers, above. Shpg. wt., 1 lb. 84 F 893. NET.....9.50

### TYPE 400 7" OSCILLOSCOPE

Sensitive, wide-band scope for TV servicing. Accurately displays TV pulses, washshapes or signals on the large 7" screen. Sensitivity; vertical, .01 rms volts per inch; horizontal, .5 rms volts per inch. Frequency response: vertical amplifier, flat within 3 db, 10 cps to 2 mc (useful to 4 mc); horizontal, flat within 3 db, 10 cps to 600 kc. Input impedances: vertical, 5 megs and 26 mmf; horizontal, 5 megs and 31 mmf. Linear sweep, 15 cps to 50 kc; sine wave, 60 cps. Panel jack for intensity modulation. Positive or negative sync. 7JPI CR tube. Size: 11 1/2x17 1/4". For 110-120 volts, 60 cycles AC. Shpg. wt., 50 lbs. 84 FX 886. NET.....249.50

### TYPE 221Z POLYMER

VTVM for all AM, FM and TV servicing. Flat response, 20 cps to 300 mc; useful to 500 mc. Has 4 1/2" meter. Ranges: AC, DC and RF volts, and DC ma. 0.3-10-30-100-300, and 0-1000 AC & DC volts only, and 0-1-10 DC amps; Ohms, 0-1000-10,000-100,000, and 0-1-10-1000 meg-ohms. Input: RF range, 2.3 megs shunted by 3 mmf; AC range, 2.7 megs shunted by 40 mmf (with unshielded lead), or 124 mmf (with shielded lead). DC accuracy is  $\pm 3\%$ . With test leads and RF probe. For operation from 105-125 volts, 50-60 cycles AC. Size: 10 1/4x15 1/4x1 1/4". Shpg. wt., 16 1/2 lbs. 84 FX 881. NET.....99.50

Type 225 High Voltage Probe. Extends DC range of above Polymer to 30,000 v. Has 2" safety barrier. Shpg. wt., 2 lbs. 84 F 887. NET.....12.50

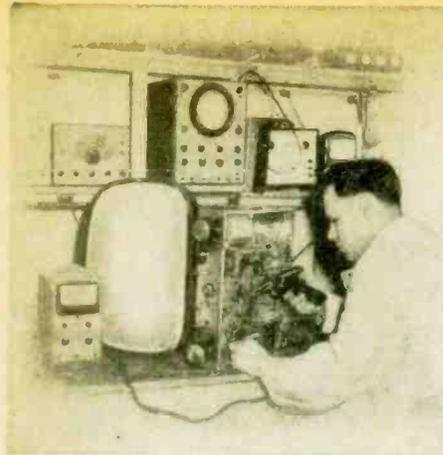
## CHICAGO INDUSTRIAL TEST EQUIPMENT

### MODEL 431A VOM

Uses sensitive 860 micro-ampere meter movement. All multipliers within 1% tolerance to assure high accuracy on each range. Copper-oxide rectifier for AC. Ranges: AC-DC volts, 0-15-30-150-300-1500-3000 (at 1000 ohm per volt); DC current, 0-1.5-150 ma and 0-7.5 amps; resistance, 0-10,000-100,000 ohms, 0-1 meg (center scale readings, 50, 600, and 6000 ohms). Gray Hammerloid aluminum case. Size: 6 1/4x3 1/4x2 1/4". With four penlight cells and leads. Shpg. wt., 3 1/2 lbs. 84 F 309. NET.....19.11

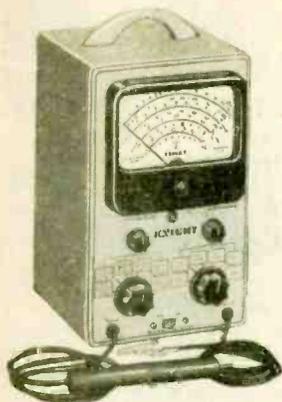
### MODEL 312 VOM

Pocket-size VOM. Has 2" hairspring repulsion-type meter. Reads: DC volts, 0-25-50-125-250; AC volts, 0-25-50-125-250; DC ma., 0-50; AC ma., 0-50; Resistance, 100,000 ohms full scale, with 1600 ohms half-scale reading; Capacitance, .05-15 mfd. Resistance ranges operate from 115 volts, AC or DC. Bakelite case, 3 1/4x2 1/4x1 1/4". With power cord, less test leads. Power cord may also be used for testing line voltage. For 110-120 v., 60 cycle AC. Shpg. wt., 1 1/4 lbs. 84 F 306. NET.....8.82



## Knight "Build-Your-Own" Test Instruments

Knight "Build-Your-Own" test instruments highlight exceptional accuracy and versatility, top dependability and handsome professional styling—you can't find greater value for your test instrument dollar! These outstanding kits are complete in every detail. You get premium-quality components, all tubes, case, punched and drilled chassis, wire, solder, etc. No surplus parts are used. Carefully prepared instructions, including pictorial and schematic diagrams, completely eliminate guesswork and make assembly the last word in simplicity. With only a screwdriver, soldering iron and pliers, you're all set to build a first-rate instrument worth many times the price.



### Knight VTVM Kit

- 35 Ranges
- High Accuracy
- Response to 2.5 mc
- AC Peak-to-Peak Scales
- Reversible Polarity

Highly accurate, extremely versatile VT-VM. Has 35 ranges; bridge-type circuit; uses precision 1% matched resistors. Input resistance: DC, 20 megs; AC, 1.5 megs. 4½" meter. Polarity reversing positions on function selector switch. Zero-center scale for FM discriminator alignment. Measures AC peak-to-peak volts, 0-8-28-84-280-840-2800. Measures AC rms volts, DC volts and DC ma, 0-3-10-30-100-300-1000. Ohms, 0-1000-10K-100K-1 meg-10 megs-1000 megs. Capacitance ranges: .005-.5, .05-5, 5-50, 5-500, and 50-5000 mfd. Chart for simple conversion of AC readings to decibels. Complete with tubes, handsome metal case, punched chassis, battery, all parts, wire and solder, test leads and instructions. 9x5½x5". For 110-120 volts, 60 cycle AC. Shpg. wt., 6½ lbs.

83 F 120. NET ..... 24.95

HI-V PROBE. Extends DC range of VTVM to 30,000 v. Shpg. wt., 1½ lbs.

83 F 121. NET ..... 6.95

HI-FREQUENCY PROBE. Extends AC range of VTVM to 200 mc. Wt., 1½ lbs.

83 F 122. NET ..... 5.95



PORTABLE MODEL

### New Knight Tube Tester Kit

- Spots Bad Tubes Quickly
- 4½-Inch Meter
- Rugged, All-Metal Case
- Easy-Action Roll Chart
- Obsolescence Protection
- 14 Heater Voltages

This new, expertly engineered tube tester is an unusually fine choice for the radio-TV serveshop, industrial maintenance lab, etc. It's priced remarkably low, yet it offers high accuracy, top versatility and time-saving convenience. Special circuit features and rugged design prevent obsolescence and provide positive assurance of years and years of highly valuable, thoroughly dependable service. Tests 4, 5, 6 and 7-pin large, regular and miniature types, octals, localts, 9-pin miniatures, and pilot lamps. Checks for emission, shorted elements, open elements and heater continuity.

Accurately measures tube performance by amount of cathode emission. Easy-to-read 4½" square meter with GOOD-REPLACE scale. Smooth operating, easy-to-read roll chart. Universal socket pin selectors permit testing tubes with new base arrangements without any need for wiring changes; any combination of pin connections can be selected. Roll chart is easily removable. Blank socket for future use. Has compensator to adjust for line voltage variations. Choice of 14 filament voltages from .75 to 117 volts. Single-unit, 10-lever function switch simplifies assembly. Rugged all-metal case.

Kit is complete with all parts, dark green case, gray panel, wire, solder and step-by-step instructions. Instructions include schematic and pictorial diagrams. Size, 5x14x10". For 110-120 volts, 50-60 cycle AC. Shpg. wt., 14 lbs.

83 FX 143. NET ..... 29.75

MODEL 142 PORTABLE TUBE TESTER. As above, but in fabrikoild-covered portable case. 6½x14½x10½". Shpg. wt., 15 lbs.

83 FX 142. NET ..... 34.75

TV PICTURE TUBE ADAPTER. Ready to use. Permits testing TV picture tubes with Knight tube tester. Wt., 1 lb.

83 F 141. NET ..... 3.75

514 798 501 Ca

Printed figures above show amount paid

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2120 14th ST., N.W.



Washington 9, D. C.

# CAPITOL RADIO WHOLESALERS INC

HObart 2-0800

Sold To

Ref.

*1 22705 Shurf. 6.90*

*July 14*

*7.04*

723-14

CHOC

897 42

## New Knight 5" Oscilloscope Kit

This new 5" oscilloscope is precisely engineered down to the finest detail to assure outstanding performance and versatility at unusually low cost. An array of important features, excellent circuit layout, plus first-quality components make the Knight scope a thoroughly reliable, smooth operating instrument. Wiring is quick and easy. Just follow the carefully prepared, step-by-step instructions—in a surprisingly short amount of time you'll have a top-notch oscilloscope, comparable in every respect to commercially wired units several times the price.

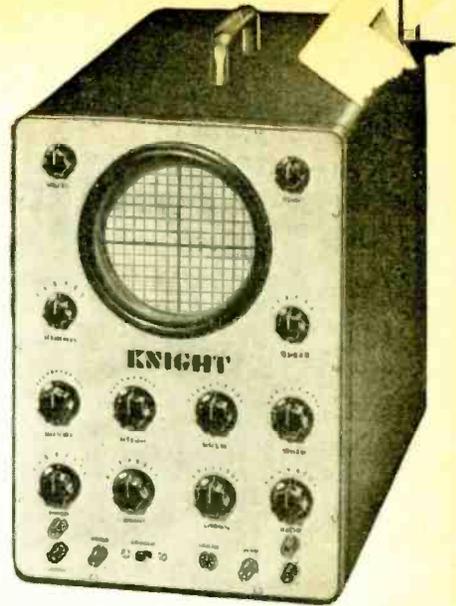
**MANY DELUXE FEATURES.** Has exceptionally wide response and high sensitivity. Excellent square wave response. Cathode-follower vertical and horizontal inputs assure minimum circuit loading. Voltage regulated power supply for vertical amplifier maintains steady trace regardless of line voltage fluctuations. 5UP1 cathode ray tube; interchangeable with other 5UP types for scope photography and other special lab applications. 2nd anode voltage of 1400 volts provides high-intensity trace. Push-pull vertical and horizontal amplifiers assure minimum distortion. Linear horizontal trace. Employs positive and negative locking to achieve excellent synchronization on complex waveforms. Always full-screen width; no loss in width even at lowest sweep frequencies.

**SPECIFICATIONS.** Vertical response:  $\pm 2$  db from 10 cps to 2 mc;  $\pm 6$  db from 2 cps to 4 mc. Vertical sensitivity: 25 rms millivolts/inch. Horizontal sweep range: 20 cps, 20 cps, 2 kc, 20 kc to 80 kc. Input impedance: 2 megohms and 18 mmf.

**OTHER IMPORTANT FEATURES.** 60-cycle phasing control. Frequency compensated input attenuator. Provision for intensity modulation and direct connection to deflection plates. One-volt peak-to-peak calibrating voltage on front panel. Removable graph screen. Internal astigmatism control for adjustment of symmetry. Blanking circuit eliminates retrace lines.

Complete with all tubes including CRT, all parts, punched chassis, handsome, professionally styled, dark green case with gray panel, pre-cut wire, and solder. Step-by-step instructions for quick, easy assembly; instructions include pictorial and schematic diagrams. Size: 14x10x16" deep. For 110-120 volts, 50-60 cycle AC. Shpg. wt., 40 lbs. Available January 3, 1955.

83 FX 144. NET.....64.50



- Very Wide Response
- High Sensitivity
- Cathode-Follower Inputs
- Push-Pull Amplifiers
- High-Intensity Trace

## New Knight RF Signal Generator Kit

New, easy-to-build, low-cost signal generator. An invaluable instrument for the servicershop, laboratory, production line, Amateur station, etc. Incorporates advanced-design, highly stable circuit. Provides modulated or unmodulated RF output on long wave, short wave, FM and TV frequencies. Excellent for use with VTVM for alignment of RF and IF sections of most radio and TV sets. Helps obtain peak performance from practically any tuned stage. Serves as TV marker generator when used with any sweep generator. Delivers audio output for troubleshooting audio stages of radios, public address and hi-fi amplifiers, intercoms, etc. Simple instructions assure quick, easy wiring—when it's finished you'll have a versatile, highly dependable instrument.

RF output: 160 kc to 110 mc on fundamentals. Delivers useful harmonic output to 330 mc. RF output is modulated at 400 cycles by built-in sine-wave audio oscillator; also has jack to permit modulation by external audio generator. Rated RF output: 100,000 microvolts or greater. Jack permits feeding output from built-in audio oscillator to other equipment. Maximum audio output: 10 volts. RF oscillator with widely approved, high-stability Colpitts circuit assures a high degree of accuracy and negligible drift. Large, clearly calibrated dial scale, large lucite pointer, and velvet-smooth vernier mechanism permit easy, highly accurate dial settings. Has step-type RF output attenuator; also continuous-type attenuator for fine adjustment of RF output. Tubes: 12AU7 twin-triode RF oscillator and modulator, 6C4 audio oscillator. AC power supply with selenium rectifier.

Complete with green case and gray panel, punched chassis, tubes, all parts, pre-wound coils, wire, solder, step-by-step instructions, schematic and pictorial diagrams. Size, 7x10x5". For 110-120 volts, 50-60 cycle AC. Shpg. wt., 10 lbs. Available Nov. 15, 1954.

83 F 145 NET.....19.75



- Covers 160 kc to 110 mc
- Harmonic Output to 330 mc
- High-Stability Oscillator
- High Accuracy
- Internal or External Modulation
- Pre-Wound Coils
- Velvet-Smooth Dial Mechanism

For complete listings of other Knight "Build-Your-Own" kits, including the "Ranger" Superhet, "Ocean Hopper" All-Wave Receiver, "10-in-One" and "6-in-One" Radio Lab kits, etc., see pages 58-64.

## New Knight Visual-Aural Signal Tracer Kit

- Isolates "Dead" Stages
- Has Built-in Wattmeter
- Measures Gain of Each Stage
- Low-priced—Easy-to-Build

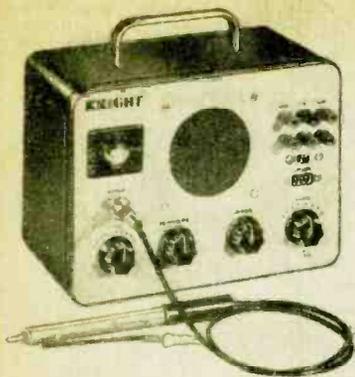
New signal tracer kit offers visual and audible signal tracing of RF, IF, video and audio circuits—at the price of an audio signal tracer alone. Reproduces signal at plate or grid connection of any stage.

**DELUXE FEATURES.** Higher usable gain than any similar test instrument. "Magic Eye" with calibrated attenuators gives positive indication of signal presence and permits stage by stage gain measurements. Built-in, quality 4" PM speaker for audible tracing.

**COMPLETE FLEXIBILITY.** RF probe supplied for checking RF, IF and video stages. Audio probe tip included for tracing audio circuits without rectification distortion. Noise test—applies DC to volume controls for amplification of noise characteristic. Has built-in wattmeter calibrated from 25 to 1000 watts for checking all types of radios, TV receivers and most appliances. Provision for external scope or VTVM.

Gray and green metal case, 7x10x5". With all parts, tubes, probes, pre-cut leads and step-by-step instructions. For 105-125 v., 50-60 cycles AC. Shpg. wt., 13 lbs.

83 F 135. Available December 1, 1954. NET.....24.50



## New Knight Audio Generator Kit

- Latest Design
- 600 Ohm Output
- Lower Distortion
- Range: 20 cps to 1 mc.

New, Knight audio generator kit features up-to-the-minute circuit design at a money-saving price. Provides an audio frequency source for checking audio circuits of amplifiers and other high-fidelity equipment. Also excellent for checking speaker response.

**SPECIFICATIONS.** Frequency range: 20 cps to 1 mc in 5 ranges. Output voltage: 10 volts to high impedance,  $\pm 1$  db to 200 kc. Generator impedance: 600 ohms. Distortion: Less than .25% from 100 cps through the audible range; less than 1% when driving 600 ohm load at maximum output. Step attenuated output continuously variable between steps.

**CIRCUIT.** Latest circuit as developed by U. S. Bureau of Standards. Uses 6BA6 Wien bridge-type stable oscillator, 6CL6 buffer-amplifier and 6CL6 cathode follower output. Rectifier is type 6X4. For operation from 105-125 v. 50-60 cycles AC.

Gray and green metal case, 8 $\frac{1}{2}$ x11x7 $\frac{1}{2}$ ". With all parts, tubes, pre-cut leads, solder and step-by-step instructions. Shpg. wt., 17 lbs.

83 FX 137. Available December 1, 1954. NET.....31.50



## New Knight VOM Kit

The new Knight 20,000 ohm/volt VOM kit is one of the most outstanding test instrument values ever offered! The versatility and performance obtained from this unbelievably low-priced VOM kit actually exceeds that of other VOM's selling at many times its price. A most useful test instrument for the experimenter, Amateur and radio-TV serviceman. For checking and servicing all types of electronic equipment.

**ENGINEERED FOR FIRST-RATE PERFORMANCE.** Features improved circuit design carefully engineered to provide a high order of sensitivity plus extreme versatility. Layout styling designed for simplicity of construction combined with rugged dependability to give years of trouble-free performance. Full-vision, bakelite-cased, 4 $\frac{1}{2}$ " meter with large, easy-to-read dial. Precision movement accurate within 2% of full scale deflection. 50 microampere meter sensitivity provides 20,000 ohm/volt input resistance on DC. This feature is usually found only in high-priced VOM'S. Front panel "zero adjust" control permits compensating for aging of ohmmeter batteries. Only one selector switch for simple selection of function and range required.

**19 RANGES.** 6 DC voltage ranges: 0-2.5-10-50-250-1000-5000 at 20,000 ohms/volt; 6 AC voltage ranges: 0-2.5-10-50-250-1000-5000 at 5000 ohms/volt; 3 resistance ranges: 0-2000-200,000 ohms and 0-200 meg-ohms. Center scale readings of 12, 1200 and 120,000 ohms. Also reads DC current in 4 ranges: 0-10-100 milliamperes and 0-1-10 amperes. Precision 1% multipliers are used for a high degree of accuracy. Multipliers are film-type—protected against effects of moisture.

Sturdy bakelite case: 6 $\frac{3}{4}$ x5 $\frac{1}{4}$ x3 $\frac{3}{4}$ ". With all parts, 4' test leads, batteries and easy-to-follow instructions. Shpg. wt., 5 lbs.

83 F 140. NET.....26.50



- 20,000 Ohms Per Volt Sensitivity
- 6 Voltage Ranges
- Precision Film Type Resistors
- Easy-To-Follow Instructions
- Pictorial and Schematic Diagrams
- Simple To Build

# Meters and Test Equipment

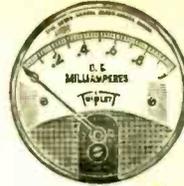
## NEW TRIPLETT "PL" PANEL METERS

### PLASTIC UNBREAKABLE FRONTS

Top-quality, highly accurate panel meters, featuring longer-than-ever scale lengths. No obstruction to light from any angle—plus longer scale—provides much greater readability. The clear streamlined plastic fronts are easy to clean. DC types: D'Arsonval movements. AC types: Double-iron repulsion movements. Accuracy, within 2% full scale. Alloy steel permanent magnets. Movements withstand severe vibration. Average shpg. wt., 1½ lbs.

### METER MOUNTING SIZES

Mfr's Type	*Round †Rectangular			
	Flange	Body Dia.	Depth	Scale
221-PL*	2 1/8"	2 1/8"	1"	2.197"
231-PL*	2 1/8"	2 1/8"	1"	1.92"
331-PL*	3 1/2"	2 3/4"	1"	3.11"
331-PL*	3 1/2"	2 3/4"	1"	2.65"
341-PL*	3 1/2"	2 3/4"	1"	3.11"
420-PL†	4 3/4x4 3/4"	2 3/4"	1 1/8"	3.6"
430-PL†				
440-PL†				



2 1/2" and 3 1/2" Round



4 1/2" Rectangular

### AC MILLIAMMETERS

Ma	231-PL 2 1/2" Rnd.	NET EACH	331-PL 3 1/2" Rnd.	NET EACH	430-PL 4 1/2" Rect.	NET EACH
0-100			66 F 863	8.82	66 F 854	9.31

### AC VOLTMETERS

Volts	231-PL 2 1/2" Rnd.	NET EACH	331-PL 3 1/2" Rnd.	NET EACH	430-PL 4 1/2" Rect.	NET EACH
0-50			66 F 859	8.82		
0-150	66 F 825	8.82	66 F 860	9.80	66 F 888	10.29
0-300			66 F 861	11.56	66 F 889	12.05

### AC AMMETERS

Amps	231-PL 2 1/2" Rnd.	NET EACH	331-PL 3 1/2" Rnd.	NET EACH	430-PL 4 1/2" Rect.	NET EACH
0.5			66 F 865		66 F 892	9.31
0.10	66 F 828	7.84	66 F 866	8.82	66 F 893	9.31
0.25			66 F 867			
0.30			66 F 868			
0-50	66 F 832	7.84	66 F 869		66 F 896	9.31

### VOLUME UNIT METERS ("A" SCALE)

Range	321-PL 3 1/2" Rnd.	NET EACH	420-PL 4 1/2" Rect.	NET EACH
-20 to 3	66 F 897	15.68	66 F 898	16.17

### THERMO AMMETERS (RF)

Range	341-PL Rnd. 3 1/2"	NET EACH	440-PL Rect. 4 1/2"	NET EACH
0-5	66 F 818	9.80	66 F 819	10.29

See pages 94 and 95 for listings of other Triplett meters

### DC MILLIAMMETERS

Ma	221-PL 2 1/2" Rnd.	NET EACH	321-PL 3 1/2" Rnd.	NET EACH	420-PL 4 1/2" Rect.	NET EACH
0-1			66 F 843		66 F 878	9.31
0-50	66 F 812	7.84	66 F 844	8.82	66 F 879	9.31
0-100	66 F 813	7.84	66 F 845			
0-200			66 F 846			
0-300			66 F 847			
0-500			66 F 848		66 F 883	9.31

### DC VOLTMETERS

#### 1000 OHMS PER VOLT—FILM-TYPE MULTIPLIER RESISTORS

Volts	221-PL 2 1/2" Rnd.	NET EACH	321-PL 3 1/2" Rnd.	NET EACH	420-PL 4 1/2" Rect.	NET EACH
0-50	66 F 804	7.84	66 F 834	8.82	66 F 872	9.31

### DC AMMETERS

Amps	221-PL 2 1/2" Rnd.	NET EACH	321-PL 3 1/2" Rnd.	NET EACH	420-PL 4 1/2" Rect.	NET EACH
0.5			66 F 855			
0-10			66 F 856	8.82	66 F 886	9.31
0-50	66 F 823	7.84	66 F 857		66 F 887	9.31

### DC MICROAMMETERS

Ma	221-PL 2 1/2" Rnd.	NET EACH	321-PL 3 1/2" Rnd.	NET EACH	420-PL 4 1/2" Rect.	NET EACH
0-50	66 F 807	10.78	66 F 836	11.76	66 F 874	12.25
0-100	66 F 808	10.29	66 F 837	11.27	66 F 875	11.76
0-200			66 F 838	9.80		

### 321-PL DB METER

66 F 811. Reads +6 to -10 db. Calibrated for 500-ohm line. NET EACH 12.64

## KIRBY TEST INSTRUMENTS



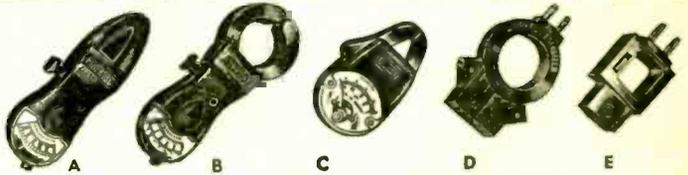
### MODEL 98 FLYBACK TESTER

New, high-quality flyback transformer tester for testing iron-core and air-core flybacks, vertical, power, filament and audio output transformers; also tests width coils and yokes. A numbered scale is provided to allow set up for any new developments in the flyback transformer field and to provide for extremely accurate comparison readings. An averaged direct reading "Good-Bad" scale is provided for rapid test without comparison. Housed in rugged metal case, 6 1/2"x8 1/2"x4". Complete with four 1-ft. test leads and clips. For 105-125 v., 50-60 cycle AC. Shpg. wt., 6 1/2 lbs. 84 F 648. NET 34.95

### MODEL SA-103 SCOPE PREAMPLIFIER



This excellent new oscilloscope preamplifier increases the utility of any scope. Provides a means of modernizing older types and extending usable range of newer scopes. Gives an additional voltage gain of 100 to any scope. Gain control variable from 0 to 100, calibrated so fixed amount of gain may be pre-selected. Ideal for measuring gain of amplifier stages, checking attenuator pads, etc. Allows viewing of low-level signals. Passes clean square wave from 30 cycles to 10 kc. Response, 30 cycles to 150 kc; Maximum Input, 3 volts; Maximum Output, 30 volts; Input Impedance, 2 megohm. With instructions. Rugged steel cabinet 8 3/4"x6 1/4"x5". For 105-125 v., 50-60 cycle AC. Shpg. wt., 8 lbs. 84 F 649. NET 49.95



## PYRAMID AMPROBES—"SNAP-AROUND" AC VOLT-AMMETERS

Amprobes safely and accurately measure high current without breaking circuit or insulation of conductors. Just press the trigger to open probe jaws, then close them around the conductor under test. Accurate meter instantly gives correct reading. Perfect for engineers, electricians, maintenance men, etc. Easily carried in pocket. One hand operation; trigger finger opens jaws, small finger selects range desired. Transformer core jaws are completely insulated. Dustproof D'Arsonval meter movements, precision balanced, 1% resistors. Accuracy, ±3% of full scale. Voltage is measured with new automatic-safety test leads. When leads are removed from meter, snap out sleeve, automatically insulates plugs. Specifications, all models below: 2.363" ac line length; 3000 v. AC break-down test; 50-70 cycle frequency. With top-grain cowhide leather case (and belt loop) and automatic voltage test leads.

**Fig. A. Model 300.** Features tapered probe jaws for hard-to-get-at wires in switch boxes, etc. Handles conductors up to 1" in dia., or bars to 1/2x1 1/2". Reads 0 to 300 amps in 6 ranges; 0 to 600 AC volts in 3 ranges. Size: 2 3/4x1 1/4x8" long. Shpg. wt., 2 lbs. 84 F 381. NET 49.50

**Fig. B. Model 600.** With exclusive, new doughnut-type transformer—eliminates error due to position of conductor within jaws. Takes conductors to 2". Reads 0 to 600 amps in 6 ranges; 0 to 600 AC volts in 3 ranges. Size: 2 3/4x1 1/4x8 1/2" long. Shpg. wt., 2 1/4 lbs. 84 F 383. NET 59.50

**Fig. C. Model 1200.** Similar to Model 600 but reads to 1200 amps in 6 ranges; 0 to 600 AC volts in 3 ranges. Also employs toroidal-wound transformer—conductor doesn't have to be centered for accurate readings. Size: 2 3/4x1 1/4x8 1/2" long. Shpg. wt., 2 1/4 lbs. 84 F 896. NET 67.50

**Fig. C. Amprobe Junior.** Economical and rugged snap-around meters that measure current instantly without shut-downs. Provide accurate reading on full size 1.8" calibrated scale. Employ D'Arsonval movement with Alnico V magnet. Accuracy, ±3% of full scale. For measuring current, trigger-operated jaws are snapped around conductor—for voltage, safety test leads are plugged into back of meter and clipped to load. Frequency, 60 cycles. Voltage breakdown test, 3000 volts AC. Size: 2 1/2" W, 4 1/4" H, 1 1/4" Thick. With leads. Shpg. wt., 1 lb.

Stock No.	Model	Amps	Volts
84 F 369	10	0-10	0-125-250
84 F 373	25	0-25	0-125-250
84 F 379	50	0-50	0-125-250
84 F 379	100	0-100	0-125-250
84 F 897	525	0-25	0-150-600
84 F 898	550	0-50	0-150-600
84 F 899	500	0-100	0-150-600

NET EACH 19.85

Model P-1 Leather Carrying Case. For any Amprobe above. Shpg. wt., 12 oz. 84 F 488. NET 2.85

**Fig. D. Model A-40 Energizer.** Amprobe accessory with 3 functions: serves as "split" plug to divide 2-cond. line cords at outlet; increases ammeter sensitivity by 10 times for precise readings on appliances, small motors; measures line voltage at outlet while appliance is connected to line. Capacity, 25 amps in neutral (1x) position; 10 amps at 10x pos. With pouch. Shpg. wt., 8 oz. 84 F 489. NET 3.75

**Fig. E. Model A-30 Sensitizer.** Same functions as above, but less voltage jacks. Capacity, 15 amps in neutral (1x) position; 3 amps at 10x position. With pouch. Shpg. wt., 6 oz. 84 F 382. NET 2.25

# Triplett Panel Meters

## Feature Accuracy and Ruggedness

High-quality panel meters. DC units employ D'Arsonval moving coil movement. AC meters have double iron repulsion type movements. Both are accurate to within 2% of full scale. Triple adjustable weights give precise balancing to pointer. Steel parts are rust-proofed. Molded zero adjusters. Cushioned ceramic bumpers protect pointer against overthrow. Balanced "U" frame construction. Bar type all metal bridges and rigid bearing supports provide protection from vibration in any direction. Pivots are special alloy steel. Uniformly hardened and polished to mirror finish. Bearings are highest quality jewels carefully graded to depth, radius and polish. Friction reduced to minimum. Permanent magnets fabricated of alnico, chrome and cobalt. High initial strength and unchanging permanency. Metal dial scales finished in white enamel with black, easy-to-read scales and characters. Strong, molded bakelite cases. Average shg. wt., 1 1/4 lbs. ALLIED can supply the entire line of Triplett meters. Write for free Triplett catalog No. 37 F 081. \*Indicates overall depth including terminals.



2 1/2" and 3" Rectangular



2 1/2" and 3 1/2" Round



4 1/2" Rectangular

## 2 1/2", 3", 3 1/2" and 4 1/2" METERS

### DC MILLIAMMETERS

Ma	221T		227T		NET EACH	327T		321T		NET EACH	420		NET EACH
	2 1/2" Rnd.	2 1/2" Rect.	3" Rnd.	3 1/2" Rnd.		3" Rect.	3 1/2" Rnd.	4 1/2" Rect.					
0-1	66 F 150	66 F 170	66 F 120	66 F 100	7.35	66 F 120	66 F 100	8.33	66 F 136	9.31	66 F 136	9.31	
0-1.5	66 F 151	66 F 171	66 F 121	66 F 101		66 F 121	66 F 101		66 F 137				
0-3	66 F 165	66 F 185	66 F 118	66 F 115		66 F 118	66 F 115		66 F 138				
0-5	66 F 152	66 F 172	66 F 122	66 F 102	7.35	66 F 122	66 F 102	8.33	66 F 139	9.31	66 F 139	9.31	
0-10	66 F 153	66 F 173	66 F 123	66 F 103		66 F 123	66 F 103		66 F 140				
0-15	66 F 154	66 F 174	66 F 124	66 F 104		66 F 124	66 F 104		66 F 141				
0-25	66 F 155	66 F 175	66 F 125	66 F 105	7.35	66 F 125	66 F 105	8.33	66 F 142	9.31	66 F 142	9.31	
0-50	66 F 156	66 F 176	66 F 126	66 F 106		66 F 126	66 F 106		66 F 143				
0-75	66 F 166	66 F 186	66 F 119	66 F 116		66 F 119	66 F 116		66 F 144				
0-100	66 F 157	66 F 177	66 F 127	66 F 107	7.35	66 F 127	66 F 107	8.33	66 F 145	9.31	66 F 145	9.31	
0-150	66 F 158	66 F 178	66 F 128	66 F 108		66 F 128	66 F 108		66 F 146				
0-200	66 F 159	66 F 179	66 F 129	66 F 109		66 F 129	66 F 109		66 F 147				
0-250	66 F 160	66 F 180	66 F 130	66 F 110	7.35	66 F 130	66 F 110	8.33	66 F 148	9.31	66 F 148	9.31	
0-300	66 F 161	66 F 181	66 F 131	66 F 111		66 F 131	66 F 111		66 F 149				
0-400	66 F 167	66 F 187	66 F 135	66 F 117		66 F 135	66 F 117		66 F 150				
0-500	66 F 162	66 F 182	66 F 132	66 F 112	7.35	66 F 132	66 F 112	8.33	66 F 151	9.31	66 F 151	9.31	
0-750	66 F 163	66 F 183	66 F 133	66 F 113		66 F 133	66 F 113		66 F 152				
0-1000	66 F 164	66 F 184	66 F 134	66 F 114		66 F 134	66 F 114		66 F 153				

### DC VOLTMETERS

#### 1000 OHMS PER VOLT—FILM-TYPE MULTIPLIER RESISTORS

Feature carbon film resistors. High sensitivity at moderate cost. Ideal for all applications where high humidity is not encountered. All 2 1/2" meters from 500 volts up have external resistors.

Volts	221T		227T		NET EACH	327T		321T		NET EACH	420		NET EACH
	2 1/2" Rnd.	2 1/2" Rect.	3" Rnd.	3 1/2" Rnd.		3" Rect.	3 1/2" Rnd.	4 1/2" Rect.					
0-10	66 F 903	66 F 923	66 F 943	66 F 963	7.35	66 F 943	66 F 963	8.33	66 F 983	9.31	66 F 983	9.31	
0-15	66 F 904	66 F 924	66 F 944	66 F 964		66 F 944	66 F 964		66 F 984				
0-25	66 F 905	66 F 925	66 F 945	66 F 965		66 F 945	66 F 965		66 F 985				
0-50	66 F 906	66 F 926	66 F 946	66 F 966	7.35	66 F 946	66 F 966	8.33	66 F 986	9.31	66 F 986	9.31	
0-100	66 F 907	66 F 927	66 F 947	66 F 967		66 F 947	66 F 967		66 F 987				
0-150	66 F 908	66 F 928	66 F 948	66 F 968		66 F 948	66 F 968		66 F 988				
0-200	66 F 909	66 F 929	66 F 949	66 F 969	7.35	66 F 949	66 F 969	8.33	66 F 989	9.31	66 F 989	9.31	
0-250	66 F 910	66 F 930	66 F 950	66 F 970		66 F 950	66 F 970		66 F 990				
0-300	66 F 911	66 F 931	66 F 951	66 F 971		66 F 951	66 F 971		66 F 991				
0-500	66 F 912	66 F 932	66 F 952	66 F 972	7.35	66 F 952	66 F 972	8.33	66 F 992	9.31	66 F 992	9.31	
0-750	66 F 913	66 F 933	66 F 953	66 F 973		66 F 953	66 F 973		66 F 993				
0-1000	66 F 914	66 F 934	66 F 954	66 F 974		66 F 954	66 F 974		66 F 994				
0-2000	66 F 915	66 F 935	66 F 955	66 F 975	7.35	66 F 955	66 F 975	8.33	66 F 995	9.31	66 F 995	9.31	
0-3000	66 F 916	66 F 936	66 F 956	66 F 976		66 F 956	66 F 976		66 F 996				
0-4000	66 F 917	66 F 937	66 F 957	66 F 977		66 F 957	66 F 977		66 F 997				
0-5000	66 F 918	66 F 938	66 F 958	66 F 978	7.35	66 F 958	66 F 978	8.33	66 F 998	9.31	66 F 998	9.31	
0-10000	66 F 919	66 F 939	66 F 959	66 F 979		66 F 959	66 F 979		66 F 999				
0-15000	66 F 920	66 F 940	66 F 960	66 F 980		66 F 960	66 F 980		66 F 1000				

### DC VOLTMETERS

#### 1000 OHMS PER VOLT—WIRE-WOUND MULTIPLIER RESISTORS

Have moisture-resistant, vacuum-sealed, wire-wound resistors for high accuracy under all operating conditions. \*Have external resistors.

Volts	221T		227T		NET EACH	327T		321T		NET EACH	420		NET EACH
	2 1/2" Rnd.	2 1/2" Rect.	3" Rnd.	3 1/2" Rnd.		3" Rect.	3 1/2" Rnd.	4 1/2" Rect.					
0-1	66 F 900	66 F 920	66 F 940	66 F 960	7.35	66 F 940	66 F 960	8.33	66 F 980	9.31	66 F 980	9.31	
0-3	66 F 739	66 F 750	66 F 762	66 F 782		66 F 762	66 F 782		66 F 770				
0-5	66 F 740	66 F 751	66 F 763	66 F 783		66 F 763	66 F 783		66 F 771				
0-10	66 F 741	66 F 752	66 F 764	66 F 784	7.35	66 F 764	66 F 784	8.33	66 F 794	9.31	66 F 794	9.31	
0-15	66 F 742	66 F 753	66 F 765	66 F 785		66 F 765	66 F 785		66 F 772				
0-25	66 F 743	66 F 754	66 F 766	66 F 786		66 F 766	66 F 786		66 F 773				
0-50	66 F 744	66 F 755	66 F 767	66 F 787	7.35	66 F 767	66 F 787	8.33	66 F 795	9.31	66 F 795	9.31	
0-100	66 F 745	66 F 756	66 F 768	66 F 788		66 F 768	66 F 788		66 F 774				
0-150	66 F 746	66 F 757	66 F 769	66 F 789		66 F 769	66 F 789		66 F 775				
0-200	66 F 747	66 F 758	66 F 770	66 F 790	7.35	66 F 770	66 F 790	8.33	66 F 796	9.31	66 F 796	9.31	
0-300	66 F 748	66 F 759	66 F 771	66 F 791		66 F 771	66 F 791		66 F 776				
0-500	66 F 749	66 F 760	66 F 772	66 F 792		66 F 772	66 F 792		66 F 777				

### DC AMMETERS

Ammeters are self-contained up to and including 50 amperes. Meters for 100 amperes (50 milli-volts) and higher have switchboard type shunts with five foot leads.

Amps	221T		227T		NET EACH	327T		321T		NET EACH	420		NET EACH
	2 1/2" Rnd.	2 1/2" Rect.	3" Rnd.	3 1/2" Rnd.		3" Rect.	3 1/2" Rnd.	4 1/2" Rect.					
0-1	66 F 510	66 F 525	66 F 450	66 F 440	7.35	66 F 450	66 F 440	8.33	66 F 460	9.31	66 F 460	9.31	
0-5	66 F 511	66 F 526	66 F 451	66 F 441		66 F 451	66 F 441		66 F 461				
0-10	66 F 512	66 F 527	66 F 452	66 F 442		66 F 452	66 F 442		66 F 462				
0-15	66 F 513	66 F 528	66 F 453	66 F 443	7.35	66 F 453	66 F 443	8.33	66 F 463	9.31	66 F 463	9.31	
0-25	66 F 514	66 F 529	66 F 454	66 F 444		66 F 454	66 F 444		66 F 464				
0-30	66 F 515	66 F 530	66 F 455	66 F 445		66 F 455	66 F 445		66 F 465				
30-0-30	66 F 516	66 F 531	66 F 456	66 F 446	7.35	66 F 456	66 F 446	8.33	66 F 466	9.31	66 F 466	9.31	
0-50	66 F 517	66 F 532	66 F 457	66 F 447		66 F 457	66 F 447		66 F 467				
0-100	66 F 518	66 F 533	66 F 458	66 F 448		66 F 458	66 F 448		66 F 468				
0-200	66 F 519	66 F 534	66 F 459	66 F 449	7.35	66 F 459	66 F 449	8.33	66 F 469	9.31	66 F 469	9.31	
0-300	66 F 520	66 F 535	66 F 460	66 F 450		66 F 460	66 F 450		66 F 470				
0-500	66 F 521	66 F 536	66 F 461	66 F 451		66 F 461	66 F 451		66 F 471				

### ROUND FLUSH MOUNTING

Mod.	Flange	Body Dia.	*Depth	Scale
221T	2 1/2"	2 1/2"	1 1/4"	1.76"
231S	2 1/2"	2 1/2"	1 1/4"	1.58"
321T	3"	3"	1 1/2"	2.49"
331S	3"	3"	1 1/2"	2.22"
361	3 1/2"	3 1/2"	1 3/4"	2.22"

### RECTANGULAR FLUSH MOUNTING

Mod.	Flange	Body Dia.	*Depth	Scale
227T	2 1/2"x2 1/2"	2 1/2"	1 1/4"	1.76"
237S	2 1/2"x2 1/2"	2 1/2"	1 1/4"	1.58"
327T	3"x3"	3"	1 1/2"	2.49"
327S	3"x3"	3"	1 1/2"	2.22"
430	4 1/2"x4 1/2"	4 1/2"	1 3/4"	4.06"
430	4 1/2"x4 1/2"	4 1/2"	1 3/4"	3.0"

### DC MILLIVOLTMETERS

MV	327T 3" Rect.	321T 3 1/2" Rnd.	NET EACH
0-50	66 F 078	66 F 088	8.33
0-100	66 F 079	66 F 089	

MV	420 4 1/2" Rect.	NET EACH
0-50	66 F 098	9.31
0-100	66 F 099	

### VOLUME UNIT METERS

Highly damped meters for power amplifiers and broadcast equipment. "A" scale; -20 to -3 vol. units. 0-100% scale for 600 ohm line. Steady state ref., 1 mw. Zero adjustment. Internal impedance, 3900 ohms. Bakelite case.

327T 3" Rect.	NET EACH	420 4 1/2" Rect.	NET EACH
66 F 075	15.19	66 F 071	16.17
66 F 076*	16.66	66 F 072*	17.64

\*Illuminated models.

### DECIBEL METERS (+6 to -10 db)

Power level indicators. For measuring sound or noise levels. Read up 6 and down 10 db. Zero db is 1.73 volts. Reference level is 6 milliwatts. Calibrated for 500 ohm line. Internal resistance 5000 ohms. \*Illuminated.

327T 3" Rect.	NET EACH	420 4 1/2" Rect.	NET EACH
66 F 263	12.15	66 F 265	13.13
66 F 264*	13.72	66 F 266*	14.70

### TYPE 361 WATTMETERS

Electrodynamometer type instrument for shop, field and laboratory. Can be used as appliance tester,

# Panel Meters and Rectifiers

## TRIPLET 2 1/2", 3", 3 1/2" and 4 1/2" PANEL METERS

See page 94 for additional listings of Triplet meters.

### DC MICROAMMETERS

Micro-Amps	2 1/2" Rnd.	2 3/4" Root.	NET EACH	3 1/2" Rnd.	3 3/4" Rnd.	NET EACH	4 1/2" Root.	NET EACH
0-20	66 F 054	66 F 015	13.23	66 F 059	66 F 049	14.21	66 F 065	15.19
0-50	66 F 055	66 F 016	10.29	66 F 060	66 F 050	11.27	66 F 066	12.25
0-100	66 F 056	66 F 017	9.80	66 F 061	66 F 051	10.78	66 F 067	11.76
0-200	66 F 057	66 F 018	8.33	66 F 062	66 F 052	9.31	66 F 068	10.29
0-500	66 F 058	66 F 019	7.84	66 F 063	66 F 053	8.82	66 F 069	9.80

### AC VOLTMETERS

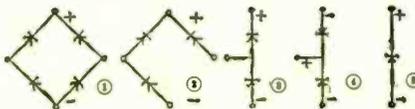
Volts	2 1/2" Rnd.	2 3/4" Root.	NET EACH	3 1/2" Rnd.	3 3/4" Rnd.	NET EACH	4 1/2" Root.	NET EACH
0-3	66 F 259	66 F 279	7.35	66 F 218	66 F 209	8.33	66 F 239	9.31
0-5	66 F 250	66 F 270		66 F 220	66 F 200		66 F 230	
0-10	66 F 251	66 F 271		66 F 221	66 F 201		66 F 231	
0-15	66 F 252	66 F 272		66 F 222	66 F 202		66 F 232	
0-25	66 F 253	66 F 273		66 F 223	66 F 203		66 F 233	
0-50	66 F 254	66 F 274	8.33	66 F 224	66 F 204	9.31	66 F 234	10.29
0-100	66 F 255	66 F 275	9.31	66 F 225	66 F 205	10.29	66 F 235	11.27
0-150	66 F 256	66 F 276	10.09	66 F 226	66 F 206	11.07	66 F 236	12.05
0-250	66 F 257	66 F 277	10.99	66 F 227	66 F 207	11.97	66 F 237	12.95
0-300	66 F 258	66 F 278	13.52	66 F 228	66 F 208	14.50	66 F 238	15.48

### AC MILLIAMMETERS

Ma	2 1/2" Rnd.	2 3/4" Root.	NET EACH	3 1/2" Rnd.	3 3/4" Rnd.	NET EACH	4 1/2" Root.	NET EACH
0-10	66 F 570	66 F 580	7.35	66 F 490	66 F 470	8.33	66 F 496	9.31
0-15	66 F 571	66 F 581		66 F 491	66 F 471		66 F 446	
0-25	66 F 572	66 F 582		66 F 488	66 F 476		66 F 447	
0-50	66 F 573	66 F 583		66 F 492	66 F 472		66 F 448	
0-100	66 F 574	66 F 584		66 F 493	66 F 473		66 F 449	
0-200	66 F 575	66 F 585	66 F 489	66 F 477	66 F 448			
0-250	66 F 576	66 F 586	66 F 494	66 F 474	66 F 449			
0-500	66 F 577	66 F 587	66 F 495	66 F 475	66 F 449			

### AC AMMETERS

Amps	2 1/2" Rnd.	2 3/4" Root.	NET EACH	3 1/2" Rnd.	3 3/4" Rnd.	NET EACH	4 1/2" Root.	NET EACH
0-1	66 F 340	66 F 350	7.35	66 F 320	66 F 300	8.33	66 F 330	9.31
0-2	66 F 341	66 F 351		66 F 321	66 F 301		66 F 331	
0-3	66 F 342	66 F 352		66 F 322	66 F 302		66 F 332	
0-5	66 F 343	66 F 353		66 F 323	66 F 303		66 F 333	
0-10	66 F 344	66 F 354		66 F 324	66 F 304		66 F 334	
0-15	66 F 347	66 F 357	66 F 328	66 F 308	66 F 338			
0-25	66 F 345	66 F 355	66 F 325	66 F 305	66 F 335			
0-30	66 F 348	66 F 358	66 F 329	66 F 309	66 F 339			
0-50	66 F 346	66 F 356	66 F 326	66 F 306	66 F 336			
0-75				66 F 327	66 F 307	9.60	66 F 337	10.58



Internal Circuit Diagrams

## CONANT INSTRUMENT RECTIFIERS

Instrument type copper-oxide rectifiers for meter and relay circuits, etc. Also for general replacement purposes. Easy to select correct replacement; body color indicates circuit type; appearance indicates series. Maximum AC input, all units, 5 volts. May be connected in series for higher voltage ratings; or in parallel for increased current capacity. Av. shpg. wt., 5 oz.

**Series 500.** For use in apparatus drawing up to 30 milliamperes. Reverse voltage: 2.25 DC. Frequency response: 0-1 mc. Cell diameter .500" with .166" center hole, .038" thick. Copper-oxide with pure silver contact face. Active area .15 sq. in. Terminal lugs, .010" No. 8 hard brass, nickel plated. 16x30 braided, tinned copper, 3' lead wires welded to terminals. Stack assembled between brass or aluminum end plates. Philips head, 6-32 mounting stud. Insulating washers of XP grade bakelite. Synthetic lacquer-enamel finish.

**Series 160.** Ideal for conventional circuits using meter movements drawing up to 5 milliamperes. Reverse voltage: 2.25 DC. Frequency response: 0-75 mc. Cell diameter .166", .038" thick. Copper-oxide with pure silver contact face. Active area .019 sq. in. Terminals .010" No. 8 hard brass, nickel plated. 7x35 tinned copper, thermoplastic insulated, 3' lead wires welded to terminals before assembly. Stack housed in molded phenolic case, 90 degree crossed holes for No. 2 mounting screw. Sealed in housing with polystyrene base, moisture-proof compound.

**Series 160C.** Same specifications as series 160 except stack is housed in formed and welded brass case. Occupies a minimum of space. Clip type mount. Synthetic lacquer-enamel finish.

Stock No.	Type	Series	Body Color	Internal Circuit	No. of Term	Forward DC MA	Av. Output DC MA	EACH
68 F 041	M	500	Yellow	1	4	60	30	2.06
68 F 035	HS	500	Brown	2	4	60	30	1.82
68 F 043	HS	500	Black	3	3	60	30	1.50
68 F 047	T	500	Red	4	3	60	30	1.50
68 F 042	H	500	Green	5	2	60	30	1.18
68 F 040	B	160	Yellow	1	4	10	5	2.06
68 F 036	BTH	160	Brown	2	4	10	5	1.82
68 F 044	BHS	160	Black	3	3	10	5	1.50
68 F 046	BT	160	Red	4	3	10	5	1.50
68 F 037	BH	160	Green	5	2	10	5	1.18
68 F 038	B-C	160-C	Yellow	1	4	10	5	2.06
68 F 039	BTH-C	160-C	Brown	2	4	10	5	1.82
68 F 045	BHS-C	160-C	Black	3	3	10	5	1.50
68 F 048	BT-C	160-C	Red	4	3	10	5	1.50
68 F 049	BH-C	160-C	Green	5	2	10	5	1.18

Instrument Rectifiers. By H. B. Conant. Revised edition containing graphs, curves, etc. 37 K 170. NET.



NF-2C



RF-2C

## EMICO PANEL METERS

Sturdy panel meters, with well-built magnetically-controlled movements incorporating high-quality Alnico magnets, thus affording a high torque without increasing the weight of the movement. Handsome black enamel finished steel cases. Markings are standard. Have screw terminal binding posts and lugs for soldered connections. Model NF-2C (round): Flange size, 2 1/4", overall depth, including terminal binding posts, 1 1/4". Model RF-2C (square): Flange size, 2 1/4", overall depth, 1 1/4". With mounting bracket. Both types mount in 2 1/4" round hole. 5% accuracy. Wt., 9 oz.

### DC MILLIAMMETERS

Model NF-2C			Model RF-2C		
No.	Ma	EACH	No.	Ma	EACH
67 F 609	0-1	3.53	67 F 614	0-1	3.58
67 F 600	0-10	1.81	67 F 615	0-10	1.91
67 F 601	0-20		67 F 616	0-20	
67 F 602	0-30		67 F 617	0-30	
67 F 603	0-50		67 F 618	0-50	
67 F 604	0-100	1.47	67 F 619	0-100	1.57
67 F 605	0-150		67 F 620	0-150	
67 F 606	0-200		67 F 621	0-200	
67 F 607	0-300		67 F 622	0-300	
67 F 608	0-500		67 F 623	0-500	

### DC VOLTMETERS

No.	Volts	EA.	No.	Volts	EA.
67 F 630	0-3		67 F 635	0-3	
67 F 631	3-0-3	1.47	67 F 636	3-0-3	1.57
67 F 632	0-10		67 F 637	0-10	

### DC AMMETERS

No.	Amps	EA.	No.	Amps	EA.
67 F 650	0-10		67 F 656	0-10	
67 F 651	3-0-3	1.47	67 F 657	3-0-3	1.57
67 F 652	20-0-20		67 F 658	20-0-20	
67 F 653	30-0-30		67 F 659	30-0-30	

### AC AMMETERS

No.	Amps	EA.	No.	Amps	EA.
67 F 646	0-5	2.50	67 F 648	0-5	2.60
67 F 647	0-10	2.50	67 F 649	0-10	2.60

### AC MILLIAMMETERS

Model NF-2C			Model RF-2C		
No.	Ma	EA.	No.	Ma	EA.
67 F 640	0-50	2.50	67 F 643	0-50	2.60

### AC VOLTMETERS

No.	Volts	EA.	No.	Volts	EA.
67 F 665	0-15	2.50	67 F 670	0-15	2.60
67 F 666	0-150	3.43	67 F 671	0-150	3.53
67 F 667	0-300	4.02	67 F 672	0-300	4.07

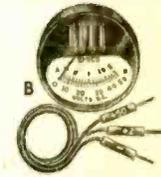


Fig. A—EMICO AC VOLTAGE TESTER

New, AC line voltage tester. Gives accurate voltage check at receptacle. Has 2-prong male plug to fit all conventional outlets. 90 degree swivel permits reading at angle. Range: 0-150 volts. 5 volt graduations between 50 and 150 volts. 2" meter has damped movement. 5% accuracy. Shpg. wt., 8 oz. 67 F 626. NET. 2.94

Fig. B—HEARING AID BATTERY TESTER

New, 2" DC voltmeter. Designed specifically to check hearing aid batteries: separate ranges for "A" and "B" type assure reliable, accurate readings. "A" scale reads 0 to 2 volts in 0.1 v. divisions. "B" scale reads 0 to 50 volts in 2 v. divisions. Provides proper test load. With test leads. Wt., 8 oz. 67 F 627. NET. 2.94

# Panel Meters and Testers



## SIMPSON PANEL METERS

3 1/2" and 4 1/2" RECTANGULAR MODELS



Models 27, 29, 37 and 39 employ exclusive patented version of D'Arsonval movement. Models 57 and 59 have iron-vane movements. 27, 37 and 57 are illustrated at left; 29, 39 and 59 are illustrated at right. All are well damped. Polished pivots are seated in finest quality jewels. Accuracy:  $\pm 2\%$ . DC voltmeters, 1000 ohms/volt movement. Scale length: 27, 37 and 57, 2 3/4"; 29, 39 and 59, 3 3/4". Size: 27, 37 and 57, 3 1/2" high x 3" wide x 2 1/4" deep (57, 4 1/4" deep); 29, 39 and 59, 4 1/2" high x 4 1/2" wide x 2 1/4" deep (59, 2 3/4" deep). All require 2 1/4" diameter round holes. Recessed zero adjustments. Black bakelite cases. Shpg. wt., 1 lb.

### DC MILLIAMMETERS

Model 27			Model 29		
No.	EACH	Range	No.	EACH	
67 F 520		0-1	67 F 420		
67 F 521		0-5	67 F 421		
67 F 522		0-10	67 F 422		
67 F 523		0-25	67 F 423		
67 F 524		0-50	67 F 424		
67 F 525	8.53	0-100	67 F 425	9.55	
67 F 526		0-200	67 F 426		
67 F 527		0-300	67 F 427		
67 F 528		0-500	67 F 428		
67 F 529		0-1000	67 F 429		

### DC VOLTMETERS

67 F 500		0-8	67 F 401		
67 F 501		0-10	67 F 402		
67 F 502		0-15	67 F 403		
67 F 503	8.67	0-100	67 F 405	9.55	
67 F 504		0-150	67 F 406		
67 F 505		0-250	67 F 407		
67 F 508		0-500	67 F 408		
67 F 509		0-1000	67 F 409		
67 F 510		0-1500	67 F 410		
67 F 514	12.49	0-2000	67 F 412	13.38	
67 F 511		0-3000	67 F 413		
67 F 512		0-5000	67 F 414		
67 F 513		0-5000	67 F 414		

0-1000 to 0-5000 types are supplied with external multiplier resistor.

### DC AMMETERS

No.	EACH	Range	No.	EACH
67 F 535		0-1	67 F 435	
67 F 536		0-2	67 F 436	
67 F 537		0-3	67 F 437	
67 F 538	8.53	0-5	67 F 438	9.55
67 F 539		0-10	67 F 439	
67 F 540		0-25	67 F 440	

### DC MICROAMMETERS

67 F 544	14.55	0-25	67 F 444	16.76
67 F 545	11.61	0-50	67 F 445	12.79
67 F 546	11.02	0-100	67 F 446	12.35
67 F 547	9.41	0-200	67 F 447	10.73
67 F 548	8.97	0-500	67 F 448	10.14

### MODEL 27 DC GALVANOMETERS

Sensitivity, 500-0-500 microamperes. Scale, 50-0-50. Approximate internal resistance, 46 ohms. 3 1/2" rect. case. Wt., 1 lb.

67 F 591. NET..... 8.53

Sensitivity, 75-0-75 microamperes. Scale, 50-0-50. Approximate internal resistance, 2,000 ohms. 3 1/2" rect. case. Wt., 1 lb.

67 F 592. NET..... 10.29

### STERLING BATTERY TESTERS



Watch-case type testers for checking Hearing Aid Batteries, "B" Batteries, dry cells, etc. Durable and accurate. White dial face with black easy-to-read markings. Handy pocket size. Housed in sturdy nickel-finished cases, 2 1/4" diameter. 3/8" thick. Av. shpg. wt., 6 oz.

#### FOR HEARING-AID BATTERIES

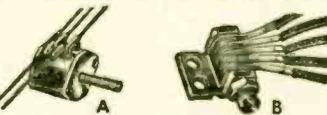
78 F Q31. Type 31A. Voltmeter for 30 or 45 v. "B" and 1 1/2 v. "A" hearing aid batteries. Scale, 0-50 v., 0-2 v. NET..... 2.35

#### FOR PORTABLE BATTERIES

78 F Q24. Type 37A. 0-2-50 Volts..... 2.06  
 78 F Q25. Type 38A. 0-2-100 Volts..... 2.20  
 78 F Q26. Type 39A. 0-2-150 Volts..... 2.20  
 78 F Q27. Type 40A. 0-10-150 Volts..... 2.35

#### FOR DRY CELL BATTERIES

Nickel-finish cases, 2 1/4" dia. 3/8" thick.  
 78 F Q28. Type 24. 0-35 Amps..... 1.47  
 78 F Q29. Type 34C. 0-50 Volts..... 1.96  
 78 F Q30. Type 45. 0-35 Amps and 0-50V volts. NET..... 2.62



### BRADLEY UNIVERSAL INSTRUMENT RECTIFIERS

Just two units to meet all instrument rectifier needs. Supplied complete with all operating data. With Bradley Laboratories' gold-coating.

Fig. A. TYPE CX4D4U. For applications requiring up to 50 ma DC output. AC input as half-wave or full-wave center-tapped rectifier, 12 volts; as double half-wave or full-wave bridge, 6 volts. Complete with all operating data. Size 1/2 x 3/4 x 1/2". Shpg. wt., 4 oz. 78 F Q34. List, \$4.65. NET..... 2.73

Fig. B. TYPE CX2E4U. For circuits up to 5 ma DC output. AC input: As half-wave or full-wave center-tapped rectifier, 12 volts. As double half-wave or full-wave bridge, 6 volts. Size: 1/2 x 1/2 x 1/2". Shpg. wt., 3 oz. 68 F Q33. List, \$3.50. NET..... 2.06

## JBT TIME, FREQUENCY AND TEMPERATURE METERS

### ELAPSED TIME METER

Model 31-EX. Records operating time of AC electrical and electronic equipment. Registers in 1/10th hour steps to 9999.9 hours, then automatically re-sets. Shows tenths in red numerals, and others in black. Molded case is 3 1/2" panel mount type and fully encloses all parts. Recommended for accuracy and dependability, especially where voltage or ambient temperatures vary widely. Self-starting synchronous motor. Mounts in 2 3/8" hole. Body: 2 1/4" dia. x 2 3/8" deep. 110-135 v. 60 cycle. Shpg. wt., 1 1/4 lbs.



66 F 689. NET..... 15.63

### FREQUENCY METER

Model 34-FX. Sturdy, vibrating reed frequency meter. Use wherever constant or known frequency is important to efficient operation of equipment. Accurately measures frequency of AC power in the range of 56-64 cycles in 1-cycle steps. Consists of nine reeds and driving coil, permanent magnet and series resistor. Easy-to-read dial. Guaranteed accuracy of  $\pm 0.3\%$  at reference temperature of 77° F. Designed for continuous operation. For 100-130 volts. Flush panel mounting. Molded case, 3 1/2" diameter, 2 3/8" deep. Power consumption, 1 watt. Wt., 12 oz.



66 F 685. NET..... 26.70

### PORTABLE FREQUENCY METERS

Model 33-FP-9M. New, portable frequency meter for on-the-spot check of 400 cycle power sources, within the range of 100-130 volts AC. Incorporates JBT time-tested, 9 reed meter with a sturdy, lightweight case of anodized aluminum with gray protective finish. Panel and meter bars are molded in one piece to exclude moisture and dirt; coil and electrical connections are fungus-proofed. The case cover, which may be detached by means of slip hinges with stainless steel pins, is the only removable portion; leads, sub-panel and meter assembly are permanently attached. Case locks tightly when not in use. Case is 6 1/2" long x 4" wide x 3 3/8" deep with attached D-ring for belt or carrying strap. Reads from 380-420 cycles in 5 cycle steps; 70 ohms per volt; 1.75 watts power consumption. Guaranteed accuracy (at reference temperature of 77° F)  $\pm 0.3\%$ . Frequency being measured. Supplied complete with leads. Shpg. wt., 5 lbs.



66 F 686. NET..... 48.26

Model 34-FP-9M. Portable frequency meter for 56-64 cycle power, 9 reeds for reading in one cycle increments. Contained in the same fine carrying case as the Model 33-FP-9M described above. Meter specifications same as those for the Model 34-FX listed above. Ideal for checking line frequency in synchronous motor jobs, etc. Shpg. wt., 5 lbs.

66 F 687. NET..... 44.20

### TEMPERATURE METER

Model 23-JP-1. New, portable temperature meter. Tests thermostats on gas or electric appliances. 2 1/2" scale arc reading from 0-650° F. in 10 degree divisions. Automatically compensated for ambient temperature changes. Meter is mounted on a black metal panel. Comes complete with attached SA-119 5/2" thermocouple, clip, and convection shield. Supplied in black top-rain leather case. Size: 4 1/2 x 2 1/4 x 1/4". Shpg. wt., 2 1/4 lbs.



66 F 688. NET..... 23.03

### BENCH-TYPE METER CASE

Sloping front metal case for round meters with 2 1/4" body diameters. Binding posts on top for convenient attaching of test leads. Black wrinkle finish. Holds meter at ideal angle. Height, 3 3/4"; width, 4"; depth at base, 3 1/4". Less meter. Wt., 1 lb.



66 F 506. NET..... 98c

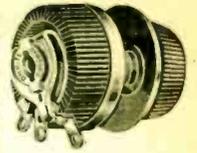
# Ohmite Controls

## WIREWOUND INDUSTRIAL RHEOSTATS



Quality vitreous-enamelled wirewound rheostats. Provide extremely smooth, highly dependable control of industrial and other electronic devices. Resistance wire is wound on a solid ceramic core and each turn is permanently bonded in place by vitreous enamel. The core and base are also bonded by vitreous enamel. A pivoted universal-action-mounted contact brush rides over a smooth, flat surface to assure perfect contact at all settings. Copper-graphite contact brush, except "silver-

graphite contact brush. Ratings indicated are at full setting. U.L. Approved. Types H, J, K and L mount on panels up to 1/4" thick; Type N on panels up to 1 1/4" thick. Specifications: Type H, dia. 1 3/8", depth behind panel 1 1/4"; Type J, dia. 2 3/8", depth behind panel 1 1/4"; Type K, dia. 3 1/4", depth behind panel 1 1/4"; Type L, dia. 4", depth behind panel 2"; Type N, dia. 6", depth behind panel 2 3/8". Av. shpg. wt., 10 oz. With knob.



### 25 WATT—TYPE H

No.	Type	Ohms	EACH	No.	Type	Ohms	EACH
74 M 320	0140*	1	4.14	74 M 341	0152	125	3.66
74 M 321	0141	2		74 M 328	0153	175	
74 M 327	0142	3		74 M 329	0154	250	
74 M 332	0143	6		74 M 342	0155	350	
74 M 338	0144	8		74 M 330	0156	500	
74 M 323	0145	10	3.66	74 M 331	0157	750	
74 M 324	0146	15			74 M 332	0158	1000
74 M 325	0147	25		74 M 333	0159	1500	4.14
74 M 339	0148	35		74 M 334	0160	2500	
74 M 326	0149	50		74 M 335	0161	3500	4.34
74 M 340	0150	75		74 M 336	0162	5000	
74 M 327	0151	100					

### 50 WATT—TYPE J

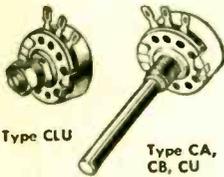
No.	Type	Ohms	EACH	No.	Type	Ohms	EACH	
74 M 350	0308*	0.5	4.60	74 M 359	0321	150	4.14	
74 M 351	0309*	1			74 M 360	0322		225
74 M 352	0310*	2			74 M 361	0323		300
74 M 353	0311	4		74 M 362	0324	500		
74 M 367	0312	6	4.14	74 M 371	0325	800	4.34	
74 M 354	0313	8			74 M 363	0326		1000
74 M 355	0314	12			74 M 372	0327		1600
74 M 368	0315	16			74 M 364	0328	2500	
74 M 356	0316	22			74 M 373	0329	3500	4.60
74 M 369	0317	35		74 M 374	0331	8000		
74 M 357	0318	50		74 M 366	0332	10,000		
74 M 358	0319	80						
74 M 370	0320	125						

### 100 WATT—TYPE K

No.	Type	Ohms	EACH	No.	Type	Ohms	EACH	
74 M 380	0440*	0.5	6.88	74 M 399	0452	200	6.44	
74 M 393	0441*	1			74 M 400	0453		300
74 M 381	0442*	2			74 M 401	0454		400
74 M 382	0443*	3			74 M 387	0455		500
74 M 394	0444*	5			74 M 402	0456		750
74 M 395	0445	7.5	6.44	74 M 388	0457	1000	6.88	
74 M 383	0446	10			74 M 403	0458		2000
74 M 397	0447	16			74 M 404	0459		3000
74 M 384	0448	25			74 M 389	0460		2500
74 M 385	0449	50			74 M 390	0461		5000
74 M 398	0450	75		74 M 391	0462	7500	7.81	
74 M 386	0451	100		74 M 392	0463	10,000		8.25

ALLIED can promptly supply all Ohmite industrial controls, including 75, 225, 500, 750 and 1000 watt types. In addition to standard Ohmite controls, special types are also available—tandem-mounted controls, special resistance values, special length bushings and shafts, bridged-gap types, tapped-winding types and controls for virtually all industrial rheostat applications. Prices available on request; send in blueprints or specifications. Write for free copy of Ohmite catalog, our Stock No. 37 M 047.

## OHMITE "AB" POTENTIOMETERS



The Ohmite "AB" type potentiometer is a high-quality two-watt variable resistance control unit designed especially for industrial laboratory, TV service and other uses where reliability is particularly important. Features molded resistor element construction for exceptionally high safety factor. For complete protection this resistor element is sealed in a metal enclosure to make each unit dust-proof and splash-proof. Carbon sliding contact and terminals imbedded in the resistor element assure smooth, noise-free operation.

### TYPES CA, CB, CU—WITH 2-INCH SHAFT

No.	Type	Ohms	EACH	No.	Type	Ohms	EACH	
28 M 500	CU5001	50	1.91	28 M 512	CB5031	50,000	2.20	
28 M 501	CU1011	100			28 M 513	CU1041	100,000	1.91
28 M 502	CU2511	250			28 M 514	CA1041	100,000	2.20
28 M 503	CU5011	500			28 M 515	CA2541	250,000	1.91
28 M 504	CU1021	1000			28 M 516	CA2541	250,000	2.20
28 M 505	CU2521	2500		28 M 517	CU5041	500,000	1.91	
28 M 506	CU5021	5000		28 M 518	CA5041	500,000	2.20	
28 M 507	CU1031	10,000		28 M 519	CU1052	1 Meg*	1.91	
28 M 508	CB1031	10,000	2.20	28 M 520	CA1052	1 Meg*	2.20	
28 M 509	CU2531	25,000	1.91	28 M 521	CU2552	2.5 Meg*	1.91	
28 M 510	CB2531	25,000	2.20	28 M 522	CA2552	2.5 Meg*	2.20	
28 M 511	CU5031	50,000	1.91	28 M 523	CU5052	5 Meg*	1.91	

SPST switch for AB potentiometers. Type CS-1.

28 M 524, NET. 65c

### 150 WATT—TYPE L

No.	Type	Ohms	EACH	No.	Type	Ohms	EACH	
74 M 450	0524*	0.5	8.72	74 M 463	0537	150	8.25	
74 M 451	0525*	1			74 M 464	0538		200
74 M 452	0526*	2			74 M 465	0539		250
74 M 453	0527*	3			74 M 466	0540		350
74 M 454	0528*	5			74 M 467	0541		500
74 M 455	0529*	7.5		74 M 468	0542	750	8.72	
74 M 456	0530	10	8.25	74 M 469	0543	1250	8.72	
74 M 457	0531	15			74 M 470	0544	1800	9.18
74 M 458	0532	25			74 M 471	0545	2250	9.18
74 M 459	0533	35			74 M 472	0546	3000	9.18
74 M 460	0534	50			74 M 473	0547	4500	9.62
74 M 461	0535	75		74 M 474	0548	7500	10.09	
74 M 462	0536	100		74 M 475	0549	10,000	11.01	

### 300 WATT—TYPE N

No.	Type	Ohms	EACH	No.	Type	Ohms	EACH	
74 M 476	0650*	1	12.39	74 M 487	0661	100	12.39	
74 M 477	0651*	2			74 M 488	0662		150
74 M 478	0652*	3			74 M 489	0663		200
74 M 479	0653*	4			74 M 490	0664		300
74 M 480	0654*	5			74 M 491	0665		400
74 M 481	0655*	7.5		74 M 492	0666	700	12.39	
74 M 482	0656*	10		74 M 493	0667	900		
74 M 483	0657*	15		74 M 494	0668	1200		
74 M 484	0658	25		74 M 495	0669	1500		
74 M 485	0659	35		74 M 496	0670	1750		
74 M 486	0660	75		74 M 497	0671	2500		

Type 5000 Dial Plate. For Type H, J, K and L. 2 3/8" diameter. Hand-somely finished with bright figures and lines on etched black background. 0-100 scale. Shpg. wt., 2 oz. 19c

74 M 405, NET.

Type 5001 Dial Plate. For Type N. 5 1/2" dia. 0-100. 3 oz.

74 M 407, NET. 1.51

### TANDEM COUPLING KITS

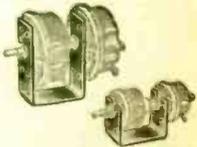
Kits for assembling Ohmite rheostats in tandem, formerly available only in made-to-order assemblies. Rheostats are mounted colinear, so that both are operated with a single knob. Each kit consists of a steel "U" frame, mica washer, coupling, Allen wrench, and complete instructions for assembly. Rheostats are joined together by means of a coupling fastened to the shaft of the rear unit with a socket set screw. Large frame (No. 6533) is designed for Models K and L rheostats, and will accommodate Model H or J in the rear position. Maximum panel thickness when using standard Ohmite knobs. 1/4" Frame is 2 3/8" long and 1 1/4" wide. Small frame (No. 6532) is designed for Models H and J, and will accommodate Model K or L in the rear position. Maximum panel thickness. 3/8" Frame is 2 3/8" long and 1 1/4" wide.

No. 6532 Tandem Coupling Kit. Shpg. wt., 4 oz.

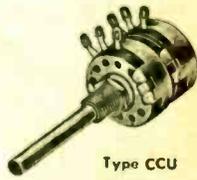
74 M 408, NET. 1.64

No. 6533 Tandem Coupling Kit. Shpg. wt., 5 oz.

74 M 409, NET. 2.04



Size of single units, 1 1/4" dia. x 3/8". Size of double units, 1 1/2" dia. x 3/8". Mount in 1/2" hole on panels up to 1/4" thick. Types CU, CCU, CA and CB have 2" standard 1/4" round shafts; type CLU has locking nut and slotted shaft for screw driver adjustment. Type number prefix indicates taper of potentiometer. CU, CCU and CLU types have linear taper; CA types, clockwise logarithmic; CB types, counterclockwise logarithmic. All ±10% tolerance, except \*±20%. Average shpg. wt., 5 oz.



### TYPE CLU—WITH LOCKING SHAFT

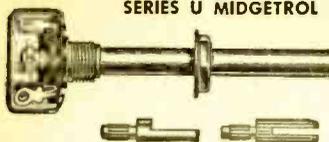
No.	Type	Ohms	EACH	No.	Type	Ohms	EACH	
28 M 525	CLU5001	50	2.50	28 M 533	CLU2531	25,000	2.50	
28 M 526	CLU1011	100			28 M 534	CU1031		50,000
28 M 527	CU2511	250			28 M 535	CU1041		.1 Meg
28 M 528	CU5011	500			28 M 536	CU1051		.25 Meg
28 M 529	CU1021	1000			28 M 537	CU1061		.5 Meg*
28 M 530	CU2521	2500		28 M 538	CU1052	1.0 Meg*		
28 M 531	CU5021	5000		28 M 539	CU1252	2.5 Meg*		
28 M 532	CU1031	10,000		28 M 540	CU1052	5.0 Meg*		

### TYPE CCU DUALS

No.	Type	Ohms	EACH	No.	Type	Ohms	EACH	
28 M 541	CCU1031	10,000	5.73	28 M 545	CCU2541	250,000	5.73	
28 M 542	CCU2531	25,000			28 M 546	CCU5041		500,000
28 M 543	CCU5031	50,000			28 M 547	CCU1052		1 Meg*
28 M 544	CCU1041	100,000						

# Mallory Controls

## SERIES U MIDGETROL CONTROLS



For audio, tone and similar control circuits in home receivers, audio amplifiers, portables, TV sets, and industrial electronic equipment. Available in a full line of resistances, tapers, and taps. Round, hollow shaft—easily cut to desired length. Two spline-shank knob adapters furnished with each Midgetrol—see illustration above. With nut and lock washer. 1/8" dia. brass shaft, 2 1/4" long, 1/4" dia. Less switch (see below). Wt., 3 oz.

No.	Type	Ohms	Taper	No.	Type	Ohms	Taper
29 M 796	U-3	1K	4	29 M 766	U-40	100K	2
29 M 785	U-4	1K	4	29 M 767	U-41	100K	4
29 M 797	U-5	1500	2	29 M 795	U-415	125K	4
29 M 786	U-6	2K	4	29 M 768	U-42	150K	1
29 M 798	U-7	2500	2	29 M 769	U-43	200K	4
29 M 787	U-8	3K	4	29 M 770	U-44	250K	1
29 M 751	U-12	5K	4	29 M 771	U-45	250K	2
29 M 752	U-14	5K	4	29 M 772	U-46	250K	4
29 M 753	U-18	10K	4	29 M 773	U-48	500K	1
29 M 754	U-19	10K	2	29 M 774	U-50	500K	4
29 M 755	U-20	10K	4	29 M 775	U-51	750K	1
29 M 756	U-21	15K	1	29 M 776	U-53	1 Meg	1
29 M 757	U-22	15K	2	29 M 777	U-54	1 Meg	4
29 M 758	U-24	20K	1	29 M 790	U-155	1.5 Meg	4
29 M 783	U-26	20K	4	29 M 778	U-55	2 Meg	1
29 M 759	U-28	25K	2	29 M 781	U-56	2 Meg	4
29 M 760	U-29	25K	4	29 M 784	U-255	2.5 Meg	4
29 M 761	U-33	50K	4	29 M 785	U-256	3 Meg	1
29 M 762	U-34	50K	2	29 M 782	U-59	3 Meg	4
29 M 763	U-35	50K	4	29 M 780	U-65	5 Meg	1
29 M 764	U-36	75K	1	29 M 788	U-67	5 Meg	4
29 M 765	U-39	100K	1	29 M 789	U-82	10 Meg	4

NET EACH.....73c

## TYPE UT SINGLE-TAPPED MIDGETROLS

Same as U-types above, but tapped for tone compensation.

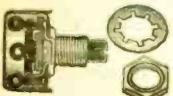
29 M 802	UT-420	250K	50K	29 M 806	UT-443	1 Meg	450K
29 M 803	UT-425	350K	70K	29 M 807	UT-450	2 Meg	125K
29 M 816	UT-429	500K	50K	29 M 808	UT-448	2 Meg	250K
29 M 804	UT-427	500K	100K	29 M 809	UT-454	2 Meg	400K
29 M 860	UT-430	500K	150K	29 M 810	UT-445	2 Meg	600K
29 M 805	UT-431	500K	225K	29 M 811	UT-451	2 Meg	900K
29 M 861	UT-440	1 Meg	200K	29 M 817	UT-457	3 Meg	900K
29 M 862	UT-438	1 Meg	300K				

NET EACH.....1.09

## TYPE UDT DOUBLE-TAPPED MIDGETROLS

No.	Type	Ohms	Taps	EACH
29 M 988	UDT-283	500K	100K/200K	1.09
29 M 989	UDT-289	1 Meg.	250K/500K	
29 M 990	UDT-291	1.5 Meg.	225K/300K	
29 M 991	UDT-295	2 Meg	250K/500K	
29 M 992	UDT-296	2.25 Meg	500K/1 Meg	

## TYPE SU INSULATED-SHAFT MIDGETROLS FOR TV



Size and basic construction is the same as Midgetrols listed above, except the SU type control has a 1/4" dia. fixed knurled and threaded phenolic shaft protruding 1/4" beyond bushing. Meet exact physical and electrical requirements for special applications. Linear taper. With hex nut. Wt., 3 oz.

No.	Type	Ohms	No.	Type	Ohms
29 M 646	SU-6	1.5K	29 M 828	SU-46	250K
29 M 647	SU-8	3K	29 M 814	SU-50	500K
29 M 832	SU-14	5K	29 M 829	SU-54	1 Meg
29 M 826	SU-20	10K	29 M 830	SU-56	2 Meg
29 M 812	SU-29	25K	29 M 833	SU-565	2.5 Meg
29 M 827	SU-35	50K	29 M 831	SU-59	3 Meg
29 M 813	SU-41	100K	29 M 815	SU-67	5 Meg

NET EACH.....73c

## SWITCHES AND ACCESSORIES FOR MIDGETROLS

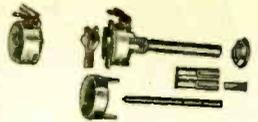
- "Push-on, stay-on" switches for Midgetrols. Shpg. wt., 2 oz.
  - 29 M 620. US-26. SPST switch. NET.....35c
  - 29 M 621. US-26T. SPST switch, with dummy terminal. NET.....44c
  - 29 M 622. US-27. DPST switch. NET.....44c
  - 29 M 623. US-28. SPDT switch. NET.....44c
- 29 M 984. DS-35. Flatted, split-knurled shaft end. Exact replacement for Zenith. Shpg. wt., 2 oz. NET.....26c
- 29 M 985. DS-36. Special 3" extension shaft for tubular shaft Midgetrols above; TV and industrial 2-watt potentiometers at right. Couples front and rear sections together. Shpg. wt., 2 oz. NET.....26c
- 29 M 982. DS-37. 3/8" diameter shaft for use with round-shaft Midgetrols to accommodate knobs requiring 3/8" shaft. Wt., 2 oz. NET.....26c
- 29 M 986. EB-158. Special bushing. Dimensions: 3/8"-28 thread, 1 1/8" long, with a 1/4" milled double flat. Shpg. wt., 2 oz. NET.....35c
- 29 M 987. EB-214. Special bushing. Dimensions: 1/4"-28 thread, 2 3/8" long with .403" milled flat. Shpg. wt., 2 oz. NET.....35c

## EXPLANATION OF TAPERS

- Taper No. 1: For use in audio or antenna shunt circuits.
- Taper No. 2: For series circuits or cathode voltage controls.
- Taper No. 4: Linear. For voltage control.
- Taper No. 7: For antenna shunt plus bias control.

## DUAL CONCENTRIC MIDGETROLS FOR TV

Exact replacements in over 90% of all television sets and auto radios. Each dual Midgetrol is composed of a front and a rear section—each ordered separately. Necessary hardware is supplied with front section. Diameter: only 1 1/4". Hardware supplied with each front section includes one inner shaft, one bakelite spacer, one coupling cup, and two shaft ends which fit .187 and .202 RETMA knobs. Uses Midgetrol switches (see below left). Depth without switch: 1 1/4"; with switch, 1 1/2". Instructions included. Shpg. wt., front section, 5 oz.; rear, 4 oz.



## TYPE UF CARBON FRONT SECTIONS

No.	Type	Ohms	Taper	No.	Type	Ohms	Taper
29 M 648	UF13R	1000	2	29 M 937	UF54L	50K	4
29 M 926	UF13L	1000	4	29 M 738	UF753L	75K	1
29 M 649	UF152R	1500	2	29 M 737	UF754	100K	1
29 M 819	UF152L	1500	4	29 M 939	UF13R	100K	2
29 M 652	UF23R	2000	2	29 M 940	UF15L	100K	4
29 M 918	UF23L	2000	4	29 M 941	UF254A	250K	1
29 M 653	UF252R	2500	2	29 M 919	UF254L	250K	4
29 M 736	UF252L	2500	4	29 M 942	UF55A	500K	4
29 M 654	UF33R	3000	2	29 M 943	UF55R	500K	2
29 M 737	UF33L	3000	4	29 M 944	UF55L	500K	4
29 M 930	UF53R	5000	2	29 M 945	UF16A	1 Meg	1
29 M 930	UF53L	5000	4	29 M 946	UF16L	1 Meg	4
29 M 931	UF73R	7000	2	29 M 739	UF155A	1.5 Meg	1
29 M 666	UF14R	10K	2	29 M 667	UF155L	1.5 Meg	4
29 M 932	UF14L	10K	4	29 M 947	UF26A	2 Meg	4
29 M 933	UF253R	25K	2	29 M 948	UF26L	2 Meg	4
29 M 934	UF253L	25K	4	29 M 740	UF255L	2.5 Meg	4
29 M 935	UF34A	30K	1	29 M 741	UF46A	4 Meg	1
29 M 936	UF54A	50K	1	30 M 012	UF106L	10 Meg	1

NET EACH.....1.18

## TYPE WF WIRE-WOUND FRONT SECTIONS

1 1/4" dia. Tapped: \*250 ohms; \$500 ohms; †2000 ohms.

No.	Type	Ohms	NET	No.	Type	Ohms	NET
29 M 794	WF32	300	1.23	29 M 669	WF152-T52	1500*	1.47
29 M 742	WF751	750	1.23	29 M 744	WF23	2000	1.23
29 M 668	WF751-T52	750*	1.47	29 M 793	WF252-T23	2500†	1.47
29 M 933	WF13-T251	750*	1.47	29 M 996	WF252	2500	1.23
29 M 994	WF13	1000*	1.23	29 M 997	WF33	3000	1.23
29 M 995	WF13-T251	1000*	1.47	29 M 998	WF53	5000	1.23
29 M 743	WF152	1500	1.23	29 M 999	WF73	7000	1.23

## TYPE UR CARBON REAR SECTIONS

No.	Type	Ohms	Taper	No.	Type	Ohms	Taper
29 M 951	UR13L	1000	4	29 M 962	UR254A	250K	1
30 M 011	UR152L	1500	4	29 M 963	UR254L	250K	4
29 M 954	UR23L	2000	4	29 M 746	UR354A	350K	1
29 M 673	UR352R	3500	2	29 M 964	UR354L	500K	1
29 M 745	UR352L	3500	4	29 M 965	UR55L	500K	4
29 M 955	UR53R	5000	2	29 M 966	UR16A	1 Meg	1
29 M 949	UR53L	5000	4	29 M 967	UR16L	1 Meg	4
29 M 956	UR14R	10K	2	29 M 968	UR26A	2 Meg	1
29 M 957	UR14L	10K	4	29 M 969	UR26L	2 Meg	4
29 M 958	UR253L	25K	4	29 M 674	UR255L	2.5 Meg	4
29 M 959	UR34R	30K	2	29 M 747	UR36A	3 Meg	1
29 M 960	UR15R	100K	2	30 M 013	UR56L	5 Meg	4
29 M 961	UR15L	100K	4				

NET EACH.....59c

## 2-WATT TV AND INDUSTRIAL CONTROLS

Two-watt wirewound potentiometers designed especially for replacement of television controls. Also excellent for use as voltage dividers and bias controls. Insulated contact arm type, linear taper. Special dual contactor mechanism. 900 volts AC insulation between resistance element and chassis. .297" rotation. Taper 4. 1 1/4" in diameter. Knurled stub shaft has screwdriver slot. \*Center-tapped. 3/8" bushing. Wt., 4 oz.



No.	Type	Ohms	NET	No.	Type	Ohms	NET
29 M 835	R20L	20	.73	29 M 842	R1000L	1000	82c
29 M 836	R20C*	20	1.09	29 M 843	R1500L	1500	82c
29 M 837	R25L	25	.73	29 M 844	R2500L	2500	82c
29 M 838	R30L	30	.73	29 M 845	R3000L	3000	82c
29 M 839	R30C*	30	1.09	29 M 846	R3500L	3500	82c
29 M 840	R50L	50	.73	29 M 847	R7500L	7500	82c
29 M 864	R100L	100	.73	29 M 693	R10ML	10,000	88c
29 M 841	R250L	250	.73	29 M 694	R15ML	15,000	88c
29 M 834	R500L	500	.73	29 M 695	R20ML	20,000	88c

## TV FOCUS CONTROLS

Wire-wound television focus controls. Exact physical and electrical replacements for most TV receivers. Rated at 4 watts. Have special focus taper. 1/4" shafts are flatted, fixed type, 2" long. Diameter, 1 1/4". Shpg. wt., 3 oz.



29 M 916.	Type TVF140.	1500 ohms.	NET.....	1.09
29 M 917.	Type TVF143.	2500 ohms.	EACH.....	35c
29 M 690.	Type US30	SPST switch.	NET.....	44c
29 M 691.	Type US32	DPST switch.	NET.....	44c

Guide to Auto Radio Replacement Controls. Lists Mallory replacements for controls in auto radios.

29 M 799..... No charge with your next order.

# Mallory Industrial Controls



## TYPE K VITREOUS WIRE-WOUND RHEOSTATS

Power rheostats and potentiometers. Used in battery chargers, blue print machines, dental and medical equipment, fans, film printers, generators, motion picture projectors, motors, and many other applications where it is desirable to vary a stable current. Contact arm is hinged and under constant pressure to insure proper contact with element. Knob and dial plate supplied. Av. shpg. wt., 10 oz.

TYPE 25K—25 WATTS							
Outside diameter, 1 1/2". Angle of rotation, 295 degrees.							
No.	Type	Ohms	EACH	No.	Type	Ohms	EACH
74M 800	25K1P	1	4.12	74M 812	25K125P	125	
74M 801	25K2P	2	3.65	74M 813	25K175P	175	3.65
74M 802	25K3P	3	3.65	74M 814	25K250P	250	
74M 803	25K6P	6	3.65	74M 815	25K350P	350	
74M 804	25K8P	8		74M 816	25K500P	500	3.65
74M 805	25K10P	10		74M 817	25K750P	750	3.65
74M 806	25K15P	15	3.65	74M 818	25K1000P	1000	4.12
74M 807	25K25P	25		74M 819	25K1500P	1500	4.12
74M 808	25K35P	35		74M 820	25K2500P	2500	4.12
74M 809	25K50P	50		74M 821	25K3500P	3500	4.35
74M 810	25K75P	75	3.65	74M 822	25K5000P	5000	4.35
74M 811	25K100P	100					

TYPE 50K—50 WATTS							
Outside diameter, 2 1/8". Angle of rotation, 300 degrees.							
No.	Type	Ohms	EACH	No.	Type	Ohms	EACH
74M 823	50K5P	5	4.59	74M 835	50K125P	125	
74M 824	50K1P	1	4.59	74M 836	50K150P	150	4.12
74M 825	50K2P	2	4.59	74M 837	50K200P	200	
74M 826	50K4P	4	4.12	74M 838	50K300P	300	
74M 827	50K5P	5		74M 839	50K500P	500	4.12
74M 828	50K8P	8		74M 840	50K750P	750	4.35
74M 829	50K12P	12	4.12	74M 841	50K1000P	1000	4.35
74M 830	50K16P	16		74M 842	50K1600P	1600	4.35
74M 831	50K22P	22		74M 843	50K2500P	2500	4.35
74M 832	50K35P	35		74M 844	50K3500P	3500	4.59
74M 833	50K50P	50	4.12	74M 845	50K5000P	5000	4.59
74M 834	50K80P	80		74M 846	50K8000P	8000	4.59

TYPE 100K—100 WATTS							
Outside diameter, 3 1/8". Angle of rotation, 300 degrees.							
No.	Type	Ohms	EACH	No.	Type	Ohms	EACH
74M 847	100K5P	5		74M 859	100K200P	200	
74M 848	100K1P	1		74M 860	100K300P	300	6.44
74M 849	100K2P	2	6.88	74M 861	100K400P	400	
74M 850	100K3P	3		74M 862	100K500P	500	
74M 851	100K5P	5	6.88	74M 863	100K750P	750	6.44
74M 852	100K7.5P	7.5		74M 864	100K1000P	1000	6.88
74M 853	100K10P	10	6.44	74M 865	100K1500P	1500	6.88
74M 854	100K16P	16	6.44	74M 866	100K2000P	2000	6.88
74M 855	100K25P	25		74M 867	100K2500P	2500	6.88
74M 856	100K50P	50		74M 868	100K5000P	5000	7.32
74M 857	100K75P	75	6.44	74M 869	100K7500P	7500	7.79
74M 858	100K100P	100		74M 870	100K10000P	10000	8.23

TYPE 150K—150 WATTS							
Outside diameter, 4 1/8". Angle of rotation, 315 degrees.							
No.	Type	Ohms	EACH	No.	Type	Ohms	EACH
74M 871	150K5P	5		74M 884	150K150P	150	
74M 872	150K1P	1		74M 885	150K200P	200	8.23
74M 873	150K2P	2	8.73	74M 886	150K250P	250	
74M 874	150K3P	3		74M 887	150K350P	350	
74M 875	150K5P	5	8.73	74M 888	150K500P	500	8.23
74M 876	150K7.5P	7.5	8.73	74M 889	150K750P	750	8.73
74M 877	150K10P	10	8.23	74M 890	150K1250P	1250	8.73
74M 878	150K15P	15	8.23	74M 891	150K1800P	1800	9.17
74M 879	150K25P	25		74M 892	150K2250P	2250	9.17
74M 880	150K35P	35		74M 893	150K3000P	3000	9.17
74M 881	150K50P	50	8.23	74M 894	150K4500P	4500	9.61
74M 882	150K75P	75		74M 895	150K7500P	7500	10.08
74M 883	150K100P	100		74M 896	150K10000P	10000	11.00

TYPE 300K—300 WATTS							
Outside diameter, 6 1/8". Angle of rotation, 315 degrees.							
No.	Type	Ohms	EACH	No.	Type	Ohms	EACH
74M 897	300K1P	1		74M 908	300K100P	100	
74M 898	300K2P	2		74M 909	300K150P	150	12.38
74M 899	300K3P	3	12.38	74M 910	300K200P	200	
74M 900	300K4P	4		74M 911	300K300P	300	
74M 901	300K5P	5		74M 912	300K400P	400	
74M 902	300K7.5P	7.5	12.38	74M 913	300K700P	700	12.38
74M 903	300K10P	10		74M 914	300K900P	900	
74M 904	300K15P	15		74M 915	300K1200P	1200	
74M 905	300K25P	25	12.38	74M 916	300K1500P	1500	
74M 906	300K50P	50		74M 917	300K1750P	1750	12.38
74M 907	300K75P	75		74M 918	300K2500P	2500	

## VOLUME CONTROL ACCESSORIES



\*Couples 1/4" shafts to 1/4" or 3/8" to 3/4" shafts. †Bushing for panel mounting; extends body of control 3/4" above from mounting surface. Av. shpg. wts.: Brackets, 3 oz.; shafts, couplers and bushings, 1 1/4 oz.

No.	Type	Fig.	Description	EACH
29 M 676	RB249	A	Mtg. bracket. Mtg. Ctrs. 2 1/2"	
29 M 677	RB248	A	Mtg. bracket. Mtg. Ctrs. 1 1/2"	15c
29 M 661	EB247†	D	Extender	44c
29 M 665	178	E	Wrench for 1/4" 3/8" v.c. hex nuts	
29 M 655	RS242	F	Ext. shaft. 4x 1/2x 1/2" flat.	24c
29 M 656	RS243	F	Ext. shaft. 4x 1/2x 1/2" flat.	
29 M 657	RS244	F	Ext. shaft. 4x 1/2x 1/2" flat.	
29 M 658	RS245	F	Ext. shaft. 2x 1/4" with 3/32" slot.	26c
29 M 672	EC240*	B	Coupling	44c
60 H 390	UB241†	C	Bushing	6c

## "M" AND "MT" WIRE-WOUND CONTROLS

For industrial and laboratory use as bias controls and voltage dividers. Also for TV replacement. 4 watts. Arm insulated from shaft. 294° rotation. Knurled 1/4" shaft is 3/8" long; has screwdriver slot and is hollow to accept DS-36 and DS-37 extension shafts (see page 98). MT types are center-tapped TV units. 1 1/2" dia. x 3/8". Mount in 3/8" hole. Linear taper. Shpg. wt., 4 oz.



No.	Type	Ohms	EA.	No.	Type	Ohms	EA.
29 M 424	M1PK	1		29 M 409	M200PK	200	
29 M 425	M3PK	3	88c	29 M 410	M400PK	400	88c
29 M 426	M6PK	6		29 M 411	M500PK	500	
29 M 427	M10PK	10		29 M 412	M600PK	600	
29 M 428	MT10PK	10	1.32	29 M 413	M1MPK	1000	
29 M 400	M15PK	15		29 M 414	M2MPK	2000	1.03
29 M 401	M20PK	20	88c	29 M 415	M3MPK	3000	
29 M 429	MT20PK	20	1.32	29 M 416	M4MPK	4000	
29 M 402	M25PK	25		29 M 417	M5MPK	5000	
29 M 403	M30PK	30	88c	29 M 418	M10MPK	10000	
29 M 430	MT30PK	30	1.32	29 M 419	M15MPK	15000	
29 M 404	M40PK	40		29 M 420	M20MPK	20000	1.18
29 M 405	M50PK	50	88c	29 M 421	M25MPK	25000	
29 M 406	M60PK	60		29 M 422	M50MPK	50000	
29 M 407	M75PK	75		29 M 423	M70MPK	70000	1.41
29 M 408	M100PK	100					

## RHEOSTATS

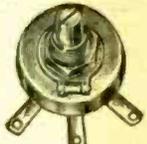
No.	Type	Ohms	Amps	No.	Type	Ohms	Amps
29 M 451	M05RK	1/2	2.80	29 M 459	M20RK	20	.45
29 M 452	M1RK	1	2.40	29 M 460	M25RK	25	.40
29 M 453	M2RK	2	1.40	29 M 461	M30RK	30	.37
29 M 454	M3RK	3	1.15	29 M 462	M40RK	40	.32
29 M 455	M4RK	4	1.00	29 M 463	M50RK	50	.28
29 M 456	M6RK	6	.82	29 M 464	M60RK	60	.26
29 M 457	M10RK	10	.63	29 M 465	M75RK	75	.23
29 M 458	M15RK	15	.52	29 M 466	M100RK	100	.20

Have open or "off" position counter-clockwise. NET EACH.....73c

29 M 651. Type 395 dial plate for "M" Controls. 2 oz. NET.....15c

## "C" WIREWOUND CONTROLS

Ideal for limited space applications. Conservatively rated to dissipate 2 watts. Contact arm grounded to shaft. 266° effective electrical rotation. 1 1/2" dia. x 3/8" deep. 1/2" shaft. slotted 3/4" x 3/4" deep. extends 3/4" from bushing. Hexagon nut furnished. Use dial plate listed below. Linear taper. Average shipping wt., 4 oz.



## POTENTIOMETERS

No.	Type	Ohms	Amps	No.	Type	Ohms	Amps
29 M 720	C6P	6	.58	29 M 725	C40P	40	.22
29 M 721	C10P	10	.45	29 M 726	C50P	50	.22
29 M 722	C15P	15	.37	29 M 727	C100P	100	.14
29 M 723	C20P	20	.32	29 M 728	C200P	200	.10
29 M 724	C30P	30	.26	29 M 729	C400P	400	.07

NET EACH.....88c

29 M 730 | C1MP | 1000 | .045 | 29 M 731 | C3MP | 13000 | .025

NET EACH.....1.03

29 M 732 | C5MP | 5000 | .02 | 29 M 733 | C10MP | 10000 | .014

29 M 733 | C6MP | 6000 | .018 | 29 M 734 | C15MP | 15000 | .011

NET EACH.....1.18

## RHEOSTATS

No.	Type	Ohms	Amps	No.	Type	Ohms	Amps
29 M 700	C6R	6	.58	29 M 704	C30R	30	.26
29 M 701	C10R	10	.45	29 M 705	C40R	40	.22
29 M 702	C15R	15	.37	29 M 706	C50R	50	.22
29 M 703	C20R	20	.32	29 M 707	C100R	100	.14

NET EACH.....73c

34 B 622. Type 393. Dial Plate for "C" controls. 2 oz. NET.....15c

## "E" WIREWOUND POTENTIOMETERS

Ruggedly constructed, heavy-duty, wire-wound potentiometers. Conservatively rated to dissipate 7 watts. For industrial and laboratory production control and research applications. Contact arm grounded to shaft. 295° effective electrical rotation. 2 1/2" dia. x 3/8" deep. 1/2" shaft slotted 3/4" x 3/8" deep. extends 1/2" from bushing. Mount in 3/8" hole. Hexagon nut furnished. Use dial plate 29 M 650, listed below. Linear taper. 6 oz.



No.	Type	Ohms	Amps	NET
29 M 480				

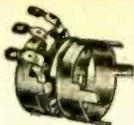
# IRC Controls



PQ



RQ



M

## INDUSTRIAL CONTROLS

Versatile PQ and RQ type Industrial carbon controls with type M add-on control sections. Permit exact "tailoring" of dual, triple and quadruple units to meet individual requirements. Available in two round, fixed shaft styles—standard (PQ), and slotted stub. (RQ). Molded bakelite, blue base, 1 3/4" dia. PQ type has round shaft, 1/4" dia., 3" long. Rated at 1/2 watt, 500 v. max. RQ type has same rating.

shorter shaft slotted for screwdriver adj. For use where control adjustment is semi-permanent. Threaded 1/4" bushing—shaft extends 1/2" beyond. Type M multisections attach like switches to any Q, PQ or RQ controls. Both shaft types and multisection units use type 76 switches listed below. M sections can be used to make inexpensive T and L-pad attenuators. Write for bulletin. Av. shgp. wt., 4 oz.

Mfrs. Type	Ohms	Taper	Stock No.		
			PQ	RQ	M
11-103	500	A	30 M 510	30 M 542	30 M 592
11-108	1000	A	30 M 511	30 M 543	30 M 574
11-110	2000	A	30 M 512	30 M 544	30 M 593
11-112	3000	A	30 M 513	30 M 545	
11-114	5000	A	30 M 514	30 M 546	30 M 575
11-115	7500	A	30 M 515	30 M 547	
11-116	10K	A	30 M 516	30 M 548	30 M 576
13-116	10K	C	30 M 517	30 M 549	
14-116	10K	D	30 M 518	30 M 550	
11-119	20K	A	30 M 519	30 M 551	
11-120	25K	A	30 M 520	30 M 552	30 M 577
14-120	25K	D	30 M 521	30 M 553	
11-121	30K	A	30 M 522	30 M 554	30 M 596
11-123	50K	A	30 M 523	30 M 555	30 M 578
13-123	50K	C	30 M 524	30 M 556	
14-123	50K	D	30 M 525	30 M 557	
11-128	100K	A	30 M 526	30 M 558	30 M 579
13-128	100K	C	30 M 527	30 M 559	30 M 580
11-129	200K	A	30 M 528	30 M 560	
11-130	250K	A	30 M 529	30 M 561	30 M 581
13-130	250K	C	30 M 530	30 M 562	30 M 582
11-133	500K	A	30 M 531	30 M 563	30 M 583
13-133	500K	C	30 M 532	30 M 564	30 M 584
11-137	1.0 meg	A	30 M 533	30 M 565	30 M 585
13-137	1.0 meg	C	30 M 534	30 M 566	30 M 586
11-138	1.5 meg	A	30 M 535	30 M 567	30 M 587
11-139	2.0 meg	A	30 M 536	30 M 568	30 M 588
13-139	2.0 meg	C	30 M 537	30 M 569	
11-239	2.5 meg	A	30 M 538	30 M 570	
11-140	3.0 meg	A	30 M 539	30 M 571	30 M 594
13-140	3.0 meg	C	30 M 540	30 M 572	30 M 589
11-141	5.0 meg	A	30 M 541	30 M 573	30 M 590
11-143	10.0 meg	A			

NET EACH.....73c

See page 101 for explanation of tapers shown on IRC controls.

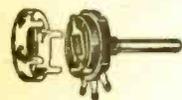
## TYPE 76 ATTACHABLE SWITCHES FOR Q, PQ, RQ AND M CONTROLS

Specialty engineered for type Q, PQ, RQ and M controls. Blue bakelite enclosure is precision molded. Easily and quickly attached. U. L.

Approved. Shgp. wt., 2 oz.  
30 M 359. Type 76-1. SPST.....35c  
30 M 591. Type 76-2. DPST.....35c

## "W" AND "WK" WIRE-WOUND CONTROLS

Dependable 2-watt wire-wound precision controls. All have linear taper except WK 750R and WK 2500R which has a right-hand log and Type WK 750L, which has a left-hand log. All controls are 1 1/4" in diameter; require 3/16" depth behind panel for mounting; shaft length is 3" long from control face; bushing is 1/4" long. Type "W" has a 1/4" full round shaft. Type "WK" has the Knob Master Shaft for both knurled and flatted knobs. Both Type "W" and Type "WK" will accommodate Type "W" switches. Switches for both types are uniform winding assures utmost accuracy, dependability and uniform resistance change and long life. Average shgp. wt., for both Type "W" and Type "WK," 4 oz.



listed below. Simply remove rear cover plate and substitute Type "W" switch in its place. Tight, life. Average shgp. wt., for both Type "W" and Type "WK," 4 oz.

Type	Ohms	Type	Ohms	Type	Ohms
W2	2	W100	100	WK2000	2000
W3	3	W200	200	WK2500	2500
W5	5	WK250	250	WK2500R	2500
W6	6	W300	300	W3000	3000
W8	8	W400	400	WK3000	3000
W10	10	W500	500	W4000	4000
W15	15	W750	750	W5000	5000
W20	20	WK750L	750	WK5000	5000
W25	25	WK750R	750	W7500	7500
W30	30	W1000	1000	WK7500	7500
W40	40	WK1000	1000	W10000	10,000
W50	50	WK1500	1500	WK10000	10,000
W60	60	W2000	2000	WK12500	12,500
W75	75				

30 M 025. Specify type and value.  
NET EACH.....73c

## TV CENTERING CONTROLS—CENTER-TAPPED

Type	Ohms	Type	Ohms	Type	Ohms
W10X5	10	W20X10	20	W30X15	30
				W50X25	50

30 M 045. Specify type and value.  
NET EACH.....1.09

## SWITCHES FOR "W" AND "WK" CONTROLS

Specialty designed switches for use with the Type "W" and "WK" controls listed above. Simplified attachment. Conservatively rated at 6 amperes at 125 volts. U. L. Approved. Shgp. wt., 2 oz.  
30 M 004. No. 51 SPST. NET.....35c  
30 M 005. No. 52 DPST. NET.....44c



## DEALER ASSORTMENT NO. 14

Provides low-cost, rapid replacement coverage of 240 concentric dual control listings among 59 trade names: RCA, Emerson, Admiral, Philco, Crosley, G.E., and other popular makes. Can make any of 149 different concentric controls. Replaces inventory of over \$300.00 worth of units. Complete TV control replacements for the serviceman at great savings. Cuts inventory—everything you want, when you want it. Contains 30 selected base elements, 34 exact duplicate shafts, four K-2 Concentritiks and 3 switches. "Less-than-a-minute" assembly without shaft modification. Assortment No. 14 is contained in sturdy IRC four-drawer, all-metal cabinet, 28 compartments, individually and prominently labeled. Full replacement data and instructions for the parts included, with manufacturer's part and stock numbers listed by trade name. Shgp. wt., 8 lbs.  
30 M 648. List, \$44.60. NET.....26.22



Type Q Controls

## ASSORTMENT NO. 9

An assortment of versatile type Q Volume Controls plus switches and shafts, in a handsome metal cabinet. These units are carefully selected and will handle over 90% of all AM, FM and TV standard control replacements.

### Contains 18 Controls

Contains 18 controls, 6 switches and 5 special shafts, as follows: 1—Q11-116 (10,000 ohms), 1—Q11-123 (50,000 ohms), 1—Q13-123 (50,000 ohms), 1—Q11-128 (100,000 ohms), 1—Q13-128 (100,000 ohms), 1—Q11-130 (250,000 ohms), 1—Q13-130 (250,000 ohms), 1—Q11-133 (1/2 meg), 1—Q13-133 (1/2 meg), 1—Q13-133X (1/2 meg), 1—Q13-137 (1 meg), 1—Q13-137 (1 meg), 1—Q13-139 (2 meg), 1—Q13-139X (2 meg), 1—Q18-139X (2 meg), 6—No. 76-1 SPST switches, 1—BQ shaft, 1—GQ shaft, 2—HQ shaft, and 1—NQ shaft.

### No Charge for Cabinet

Metal cabinet with blue, yellow and silver finish is included at no extra charge. Contains three drawers for shafts, switches and spare parts. Size, 7 1/2 x 1 1/2 x 4 1/2". Wt., 7 lbs.  
30 M 297. NET.....18.17

## TV SIGNAL ATTENUATOR

Type QJ-3. Economically priced L-pad television signal attenuator. For use with sets having 300 ohm twin line antenna input. Minimizes interstation interference, definition loss and sound bars caused by excessive signal strength. Permits easy adjustment of signal right at set. Diminishes buzz or hum due to high signal level in intercarrier systems. Reduces overloading effects in strong signal area. In many cases, corrects or reduces horizontal or vertical jitters in picture; also picture and sound "break-over."



Very useful device for the TV serviceman to simulate fringe-area signals when shop is located near powerful local station. A nearly constant 300-ohm load is maintained on antenna lead-in to minimize ghosts caused by mismatch of antenna lead to receiver. Easily mounted on cabinet or chassis. Slotted shaft for screwdriver adjustment. Supplied with mounting bracket and instructions. 1/4" diameter, 1" deep. Shaft: 1/4" diameter, 1/2" long. Shgp. wt., 3 oz.  
29 M 915. List, \$3.30. NET.....1.94

## TELEVISION CONTROLS

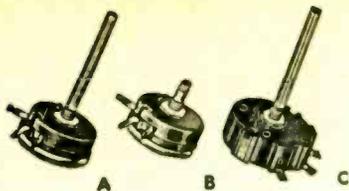


Fig. A. Type 4WK. Wire-wound, 4-watt, controls.  $\frac{1}{4}$ " shafts, 3" long are knurled, flatted and grooved.  $1\frac{1}{4}$ " dia.,  $1\frac{1}{4}$ " depth. Tapers: \*Right-hand log; left-hand log. Others are linear. Shpg. wt., 4 oz.

No.	Type	Ohms	EACH
30 M 463	4WK-10	10	1.18
30 M 464	4WK-20	20	
30 M 465	4WK-30	30	
30 M 466	4WK-50	50	
30 M 467	4WK-100	100	
30 M 468	4WK-200	200	1.18
30 M 469	4WK-300	300	
30 M 470	4WK-400	400	
30 M 171	4WK-500	500	
30 M 472	4WK-600	600	
30 M 473	4WK-650	650	1.18
30 M 474	4WK-750	750	
30 M 485	4WK-1000	1000	
30 M 486	4WK-1350	1350	
30 M 487	4WK-1500	1500	
30 M 489	4WK-2000	2000	1.18
30 M 490	4WK-2500	2500	
30 M 491	4WK-3000	3000	
30 M 492	4WK-5000	5000	
30 M 493	4WK-6000	6000	
30 M 494	4WK-7500	7500	
30 M 495	4WK-10K	10K	1.38
30 M 496	4WK-15K	15K	
30 M 497	4WK-20K	20K	
30 M 498	4WK-25K	25K	
30 M 484	4WK-750R*	750	
30 M 488	4WK-1500L†	1500	

Fig. B. Type 4WS. Same as type 4WK controls but with knurled and slotted shaft  $\frac{3}{4}$ " long. Designed for replacement of TV controls on rear chassis apron or under front panel cover. Linear taper. Shpg. wt., 4 oz.

No.	Type	Ohms	EACH
30 M 263	4WS-25	25	1.18
30 M 264	4WS-250	250	
30 M 265	4WS-500	500	
30 M 266	4WS-1000	1000	
30 M 267	4WS-1500	1500	
30 M 268	4WS-2000	2000	1.18
30 M 269	4WS-2250	2250	
30 M 270	4WS-2500	2500	
30 M 71	4WS-3000	3000	
30 M 272	4WS-4000	4000	
30 M 273	4WS-5000	5000	

Fig. C. Type HV. 2-watt carbon. For sets using electrostatic focus. Shaft same as 4WK type.  $2\frac{1}{4}$ " dia.,  $\frac{3}{4}$ " depth. Wt., 4 oz.

No.	Type	Ohms	EACH
30 M 274	HV-15	15 meg	1.76
30 M 286	HV-25	25 meg	1.76

## Q CONTROLS WITH UNIVERSAL SHAFTS

Handle over 90% of all radio-TV control applications. Knurled, flatted and slotted, 3" shaft.  $\frac{1}{4}$ " dia.,  $\frac{1}{4}$ " long bushing. Use with "M" multi-sections (page 100) for ganged controls. Only the Q control has a removable shaft, freely interchangeable with shafts listed below. \*Includes 270 ohm  $\frac{1}{2}$ -watt fixed bias resistor. Less switch. See attachable switches and taper explanations below. Rev. is abbreviation for reverse. Av. shpg. wt., 4 oz.



No.	Type	Ohms	Taper	No.	Type	Ohms	Taper	
30 M 395	Q11-201	250	A	30 M 317	Q11-128	100K	A	
30 M 300	Q11-103	500	A	30 M 318	Q13-128	100K	A	
30 M 301	Q11-105	750	A	30 M 388	Q11-228	125K	A	
30 M 377	Q11-108	1000	A	30 M 374	Q11-129	200K	A	
30 M 379	Q17-108	1000	B (Rev.)	30 M 319	Q11-130	250K	A	
30 M 380	Q17-109	1500	C (Rev.)	30 M 320	Q13-130	250K	C	
30 M 302	Q11-110	2000	A	30 M 321	Q13-132	350K	C	
30 M 373	Q13-111	2500	A	30 M 322	Q11-133	500K	A	
30 M 381	Q17-111	2500	C (Rev.)	30 M 323	Q13-133	500K	C	
30 M 303	Q11-112	3000	A	30 M 324	Q14-133	500K	D	
30 M 382	Q17-112	3000	C (Rev.)	30 M 397	Q17-133	500K	C (Rev.)	
30 M 304	Q11-114	5000	A	30 M 398	Q11-134	600K	A	
30 M 383	Q13-114	5000	C	30 M 390	Q11-136	750K	A	
30 M 384	Q17-114	5000	C (Rev.)	30 M 325	Q11-137	1 meg	A	
30 M 305	Q11-115	5000	A	30 M 326	Q13-137	1 meg	C	
30 M 306	Q11-116*	10K	A	30 M 327	Q14-137	1 meg	D	
30 M 307	Q13-116*	10K	C	30 M 328	Q11-138	1.5 meg	A	
30 M 308	Q14-116*	10K	D	30 M 329	Q11-139	2 meg	A	
30 M 385	Q11-116	10K	C (Rev.)	30 M 330	Q13-139	2 meg	C (Rev.)	
30 M 309	Q11-119	20K	A	30 M 331	Q11-239	2.5 meg	A	
30 M 310	Q16-119*	20K	Spec.	30 M 332	Q11-140	3 meg	A	
30 M 311	Q11-120	25K	A	30 M 333	Q13-140	3 meg	C	
30 M 312	Q14-120*	25K	D	30 M 334	Q11-141	5 meg	A	
30 M 313	Q11-121	30K	A	30 M 87	Q12-141	5 meg	Spec.	
30 M 396	Q11-122	35K	A	30 M 82	Q13-141	5 meg	C (Rev.)	
30 M 314	Q11-123	50K	A	30 M 353	Q17-141	5 meg	C (Rev.)	
30 M 315	Q13-123	50K	C	30 M 394	Q11-142	7.5 meg	A	
30 M 316	Q14-123*	50K	D	30 M 335	Q11-143	10 meg	A	
30 M 387	Q11-125	75K	A					
				NET EACH.....				73c

## TAPPED Q CONTROLS WITH UNIVERSAL SHAFTS

\* Ohms.

No.	Type	Megs	Taps, Ohms	Taper	No.	Type	Megs	Taps, Ohms	Taper
30 M 378	Q17-105X	750*	250	Spec.	30 M 347	Q17-137X	1.0	35K	Spec.
30 M 386	Q13-118XX	15K*	5K/10K	Spec.	30 M 346	Q13-137X	1.0	250K	Spec.
30 M 288	Q17-118X	15K*	5K	Spec.	30 M 348	Q17-137XX	1.0	50K/100K	Spec.
30 M 389	Q17-28XX	15*	19K/38K	Spec.	30 M 349	Q18-137X	1.0	100K	Spec.
30 M 337	Q18-130X	25	60K	H	30 M 350	Q18-137XX	1.0	250K/5 Meg	Spec.
30 M 336	Q13-130X	25	125K	Spec.	30 M 351	Q19-137X	1.0	.5 Meg	Spec.
30 M 338	Q18-130XX	25	60K/120K	Spec.	30 M 352	QVC-539X	1.0	.5 Meg	Spec.
30 M 339	Q17-132X	.35	35K	Spec.	30 M 391	Q13-138X	1.5	.25 Meg	Spec.
30 M 340	Q18-132X	.35	75K	H	30 M 358	Q19-139X	2.0	50K	Spec.
30 M 342	Q17-133X	.5	25K	Spec.	30 M 355	Q17-139X	2.0	150K	Spec.
30 M 343	Q18-133X	.5	50K	Spec.	30 M 357	Q18-139XX	2.0	250K/5 Meg	Spec.
30 M 341	Q13-133X	.5	125K	H	30 M 354	Q13-139XX	2.0	.5 Meg/1 Meg	Spec.
30 M 344	Q19-133X	.5	250K	Spec.	30 M 353	Q13-139X	2.0	.5 Meg	H
30 M 345	Q18-133XX	.5	100K/200K	Spec.	30 M 356	Q18-139X	2.0	1 Meg	Spec.
				NET EACH.....					1.09

## TYPE 76 ATTACHABLE SWITCHES FOR Q CONTROLS

Blue bakelite enclosure. Easily and quickly attached. U.L. Approved. Shpg. wt., 2 oz.

30 M 359, Type 76-1. SPST..... 35c  
30 M 591, Type 76-2. DPST..... 35c

## EXPLANATION OF TAPERS

Taper A. Linear.

Taper B. A semi-logarithmic curve; used as a tone control or other audio circuit control.

B Reverse: For TV contrast and brightness.

Taper C. Logarithmic curve. Used as audio circuit control or antenna shunt control. C Reverse: For TV contrast and brightness.

Taper D. Tapered at both ends to provide control of grid bias and antenna circuit. Used where control of grid bias is of prime importance in controlling gain.

Taper H. A tapered logarithmic curve used as audio level control for automatic bass compensation.

## INTERCHANGEABLE SHAFTS FOR Q CONTROLS

For quick, easy, conversion of Q controls to special, non-standard controls. These interchangeable shafts make possible the widest coverage of replacement control needs with a small stock of controls. Fit all Q controls. Cushioned retainer ring for fixed shaft security after assembly. Simple to install. Complete instructions for shaft interchange included with each unit. Av. shpg. wt., 3 oz.

30 M 360, Type BQ. Slotted. For remote control cables.  $\frac{1}{4}$ " and  $1\frac{1}{4}$ " guide funnels and tongue.  $\frac{1}{4}$ " diameter.  $3\frac{1}{2}$ " long. NET..... 26c

30 M 364, Type GQ. Slotted with hole in bottom. For Philco sets. Slot,  $\frac{1}{4}$ " x  $\frac{1}{4}$ ".  $\frac{1}{4}$ " dia.  $1\frac{1}{2}$ " long. NET..... 18c

30 M 365, Type HQ. Flatted with groove for dial plate. For Delco, RCA, Silvertone, and Westinghouse.  $\frac{3}{16}$ " flat,  $\frac{1}{4}$ " groove.  $1\frac{1}{4}$ " long.  $\frac{1}{4}$ " dia. NET..... 18c

30 M 361, Type JQ. For Zenith.  $\frac{1}{4}$ " dia., .105" flat.  $4\frac{1}{4}$ " long. NET..... 26c

30 M 366, Type KQ.  $\frac{1}{4}$ " round type with two concentric holes in the end. For Motorola sets.  $1\frac{1}{4}$ " long. NET..... 18c



30 M 368, Type LQ. Short, flat type with groove and threaded hole. For Belmont and Airline. Flat and groove,  $\frac{1}{4}$ ". 1" long from mounting face.  $\frac{1}{4}$ " diameter. NET..... 21c

30 M 362, Type MQ. Double flat type.  $\frac{1}{4}$ " dia.  $1\frac{1}{2}$ " long, threaded for  $\frac{1}{4}$ ". Two concentric holes, smaller one tapped. For Belmont, Airline and Wells-Gardner sets. NET..... 26c

30 M 363, Type NQ. Universal  $\frac{3}{16}$ " flatted and slotted type. 4" long. Milled entire length of shaft except for thin web. NET..... 26c

30 M 369, Type PQ. Universal  $\frac{1}{4}$ " full-round type. For  $\frac{1}{4}$ " or  $\frac{3}{16}$ " bushings. 3" long from mounting face. With  $\frac{3}{16}$ " bushing. NET..... 21c

30 M 370, Type RQ. Short slotted type. For  $\frac{3}{16}$ " bushings (supplied). Slot,  $\frac{3}{16}$ " x  $\frac{1}{4}$ ".  $\frac{1}{4}$ " dia. 1" long. With bushing. NET..... 21c

30 M 367, Type SQ. Knurled and slotted. Knurl,  $\frac{1}{4}$ ". Slot,  $\frac{3}{16}$ " x  $\frac{1}{4}$ ".  $\frac{1}{4}$ " long. NET..... 18c

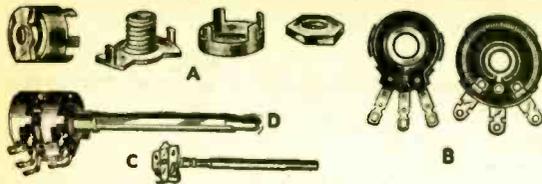
30 M 371, Type TQ. Insulated for TV. Similar to type PQ. Cannot be used with switch. (Not illustrated.) NET..... 35c

30 M 372, Type UQ. Similar to type BQ but with friction-clutch-drive arm. Used for remote control. (Not illustrated.) NET..... 35c

30 M 289, Type VQ. Tongued shaft. 1" long from mounting face. Tongue:  $\frac{3}{16}$ " wide,  $\frac{1}{4}$ " long. .050" thick. For Magnavox television receivers. NET..... 21c

30 M 290, Type WQ. Tongued shaft.  $1\frac{1}{4}$ " long. Tongue:  $\frac{1}{4}$ " wide,  $\frac{1}{4}$ " long. .062" thick. For Zenith TV sets. (Not illus.) NET..... 21c

# TV and Special Volume Controls



## IRC CONCENTRIKIT TV CONTROLS

"One-minute-assembly" concentrikits. Duplicate most TV concentric controls. No filing, slotting, soldering or special tools required. Feature improved design, exact-duplicate shafts and a large choice of base elements. Provide exceptionally wide coverage of TV concentric dual controls—including wire-wound-carbon combination types. For complete listing of single TV controls, see "O" controls on page 100. A concentrikit (A), 2 base elements (B), and a pair of shafts (C), can be quickly assembled to make up the exact complete control needed (D). All stocks always complete and up-to-date. **NOTE:** Manual below is required for selection of correct concentrikit parts to make up exact duplicate controls.

### NOTE—USE THIS GUIDE TO SELECT CONCENTRIKIT PARTS

IRC Replacement Listing by Trade Name and Part Number (Form SO12C). New guide lists all IRC controls. Shows manufacturer's original part number—then IRC replacement part number. Use this guide to order all controls and concentrikit parts.  
**30 K 649.** (Free with your next IRC control order.) NET...15c

Fig. A—CONCENTRIKITS

These concentrikits are one of four items required to make up a complete concentrikit TV replacement control. Each kit consists of a panel cover, rear cover, mounting nut and bushing. Easily and quickly assembled.

Use the IRC Control Replacement Guide Book listed above (30 K 649), for selection of proper base elements and shaft to complete any control. See page 101 for complete listings of IRC "O" type replacement single controls and shafts. Average shpg. wt., 4 oz.

**K-2 CONCENTRIKIT.** For assembly of concentrikit duals having 2 carbon sections. Contains 4 parts: Panel cover; rear cover; bushing and mounting nut. Assembly instructions included. **30 M 775.** List, 80c. NET...47c

**K-3 CONCENTRIKIT.** For assembly of dual controls having wire-wound panel section and carbon rear section. Contains 4 parts: Panel cover; rear cover; ground plate and mounting nut. With complete instructions. **30 M 776.** List, 80c. NET...47c

**K-4 CONCENTRIKIT.** For assembly of concentrikit duals having 2 carbon sections. Contains 4 parts: Panel cover; rear cover; special bushing for Motorola, and mounting nut. Complete assembly instructions included. **30 M 898.** List, 90c. NET...53c

**K-5 CONCENTRIKIT.** Special assembly for Hallcrafters controls. Contains 4 parts: Panel cover; rear cover; special 1/4" long bushing for Hallcrafters and mounting nut. With assembly instructions. **30 M 899.** List, 80c. NET...47c

Fig. B—BASE ELEMENTS

2 required for each concentric dual control. Order by IRC base element type number as given in Concentrikit Guide. Wt., 1 oz. **30 M 785.** NET EACH...29c

Tapped Base Elements. Shpg. wt., 1 oz. **30 M 790.** NET EACH...65c

Fig. C, D—EXACT DUPLICATE SHAFTS

Exact duplicate shafts for concentrikit controls. Factory-tailored for mechanical fit. No filing, slotting, soldering or cutting required. All are flatted as well as slotted. Each shaft assembly is complete. When ordering, specify IRC shaft type number as given in Concentrikit Guide. Each shaft is completely assembled, including contactor. **30 M 795.** NET EACH...35c

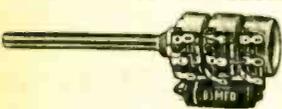
### UNIVERSAL SHAFT KITS

Keep a supply of these universal shaft kits on hand to fill in for exact replacement shafts in emergencies. Shafts are easily modified to meet desired specifications. Permit maintaining minimum inventory of shafts—yet replacement for any requirement can be met. Shpg. wt., 4 oz.

**KS-2 UNIVERSAL SHAFT KIT.** For use with K-2 concentrikit. **30 M 777.** List, \$1.20. NET...71c

**KS-3 UNIVERSAL SHAFT KIT.** For use with K-3 concentrikit. **30 M 778.** List, \$1.20. NET...71c

### TYPE LC-1 LOUDNESS CONTROL



perfect balance in tone. Input: 5 meg. Insertion loss, 6 db. Space required behind panel: With switch, 2 3/8"; without switch, 1 3/4". With complete instructions and hardware, less switch (listed below). Shpg. wt., 4 oz.

**30 M 595.** List, \$9.95. NET...5.85

**30 M 599.** Type 76-1. SPST power on-off switch. Wt., 2 oz. NET, 35c

**30 M 591.** Type 76-2. DPST power on-off switch. Wt., 2 oz. NET, 35c

## CLAROSTAT WIRE-WOUND CONTROLS

Type 58, 3 watts; 1 1/2" dia., 3/4" deep. Type 43, 2 watts; 1 1/2" dia., 3/4" deep. Type 10, 4 watts; 1 1/2" dia., 3/4" deep. All have 2" shaft, 1/4" dia. Molded phenolic body; linear taper; less switch. Wt., 4 oz.



### TYPE 58 CONTROLS

No.	Type	Ohms	EACH	No.	Type	Ohms	EACH
31 M 000	58-1	1		31 M 017	58-500	500	
31 M 001	58-2	2		31 M 018	58-750	750	
31 M 002	58-4	4		31 M 019	58-1000	1000	
31 M 003	58-6	6	73c	31 M 020	58-1500	1500	73c
31 M 004	58-10	10		31 M 021	58-2000	2000	
31 M 005	58-15	15		31 M 022	58-2500	2500	
31 M 006	58-20	20		31 M 023	58-3000	3000	.73
31 M 007	58-25	25		31 M 024	58-3500	3500	.73
31 M 008	58-30	30		31 M 025	58-4000	4000	.73
31 M 009	58-40	40	73c	31 M 026	58-4500	4500	.94
31 M 010	58-50	50		31 M 027	58-5000	5000	.94
31 M 011	58-60	60		31 M 028	58-5500	5500	1.32
31 M 012	58-75	75		31 M 029	58-6000	6000	1.32
31 M 013	58-100	100	73c	31 M 030	58-6500	6500	1.32
31 M 014	58-200	200					
31 M 015	58-300	300					
31 M 016	58-400	400					

### TYPE 43 CONTROLS

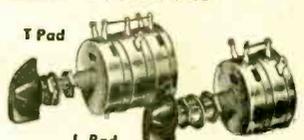
No.	Type	Ohms	EACH	No.	Type	Ohms	EACH
31 M 300	43-5	5		31 M 312	43-400	400	
31 M 301	43-10	10		31 M 313	43-500	500	
31 M 302	43-20	20		31 M 314	43-750	750	
31 M 303	43-25	25	73c	31 M 315	43-1000	1000	73c
31 M 304	43-30	30		31 M 316	43-1500	1500	
31 M 305	43-40	40		31 M 317	43-2000	2000	
31 M 306	43-50	50		31 M 318	43-2500	2500	
31 M 307	43-75	75	73c	31 M 319	43-3000	3000	
31 M 308	43-100	100		31 M 320	43-4000	4000	
31 M 309	43-150	150	73c	31 M 321	43-5000	5000	
31 M 310	43-200	200		31 M 322	43-7500	7500	73c
31 M 311	43-300	300		31 M 323	43-10 K	10K	

### TYPE 10 CONTROLS

No.	Type	Ohms	EACH	No.	Type	Ohms	EACH
31 M 324	10-1	1		31 M 342	10-750	750	
31 M 325	10-2	2		31 M 343	10-1000	1000	
31 M 326	10-4	4		31 M 344	10-1500	1500	
31 M 327	10-6	6		31 M 345	10-2000	2000	
31 M 328	10-10	10	1.09	31 M 346	10-2500	2500	1.09
31 M 329	10-15	15		31 M 347	10-3000	3000	
31 M 330	10-20	20		31 M 348	10-5000	5000	
31 M 331	10-25	25		31 M 349	10-7500	7500	
31 M 332	10-30	30		31 M 350	10-10K	10K	
31 M 333	10-40	40		31 M 351	10-15K	15K	
31 M 334	10-50	50		31 M 352	10-20K	20K	1.29
31 M 335	10-60	60		31 M 353	10-25K	25K	1.29
31 M 336	10-75	75	1.09	31 M 354	10-30K	30K	1.68
31 M 337	10-100	100		31 M 355	10-40K	40K	1.68
31 M 338	10-200	200		31 M 356	10-50K	50K	1.68
31 M 339	10-300	300		31 M 031	10-75K	75K	1.68
31 M 340	10-400	400		31 M 032	10-100K	100K	2.06
31 M 341	10-500	500					

## MALLORY SPEAKER CONTROLS

Constant load attenuator pads. Widely applied to control the level of low impedance audio circuits in sound systems. Rated at 4 watts, continuous DC; 15 w. peak audio. Have 2" shafts. Bushing size: 3/8" diameter. With bar knob, 0-10 dial plate and instructions. Av. shpg. wt., 7 oz.



**T Pad Attenuators.** Present constant source impedance as well as constant load at all control settings. Size: 1 1/2" dia., 1 1/4" deep.

**L Pad Attenuators.** Present a constant load impedance at all control settings. Size: 1 1/2" dia., 1 1/4" deep.

Stock No.	Type	Ohms	Stock No.	Type
29 M 868	T2	2	29 M 883	L2
29 M 869	T4	4	29 M 884	L4
29 M 870	T6	6	29 M 885	L6
29 M 871	T8	8	29 M 886	L8
29 M 872	T15	15	29 M 887	L15
29 M 873	T50	50	29 M 887	L50
29 M 865	T100	100	29 M 920	L100
29 M 874	T200	200	29 M 888	L200
29 M 875	T250	250	29 M 889	L250
29 M 876	T500	500	29 M 890	L500
29 M 866	T600	600	29 M 921	L600
29 M 867	T1000	1000	29 M 922	L1000
29 M 877	T2000	2000	29 M 891	L2000
29 M 878	T3000	3000	29 M 923	L3000
			29 M 924	L4000

"T" Pads. NET EACH...2.50 | "L" Pads. NET EACH...2.20

## MALLORY THEATER SPEAKER CONTROLS

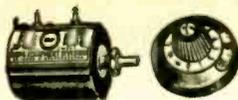
Precision units developed especially as replacements for a majority of controls in drive-in theatre speaker installations. Withstand extremes of temperature and humidity. TSA-10 is an L-pad with 10-ohm input and 4-ohm output. TSA-35 is a 35-ohm series type potentiometer. TSA-6 is a 2-watt shunt-type attenuator. Knurled shaft. 1 1/4" dia., 3/8"-32 thread. Wt., 4 oz.



No.	Type	Description	EACH
29 M 847	TSA-10	L-pad	1.18
29 M 848	TSA-35	Potentiometer	.88
29 M 849	TSA-6	Shunt-type Attenuator	.88

# Special Controls and Resistors

## G.W. BORG MODEL 205 "MICROPOTS"



High-precision, ten-turn linear potentiometers. Widely used in electronic instruments, industrial and aircraft controls, electronic computers, radar and sonar gear, etc. Resistance output directly proportional to shaft rotation. Extremely high accuracy. Wire and terminals are precision-positioned and imbedded firmly within the housing.

Smooth action and low uniform torque. Anti-backlash spring in contact guide. Fine resolution. Every unit machine tested for linearity at 100 points. Mechanical and electrical rotation 360°. Linearity, 0.1%. Torque, not over 1.5 inch-oz. running, not over 3 inch-oz. starting. Power dissipation, 5 watts @ 40° Centigrade. Shaft extension length, 1/4". Life is more than 1 million revolutions. Av. Shpg. wt., 1 1/4 lbs.

Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms
29 M 680	100	29 M 683	5000	29 M 686	50K
29 M 681	500	29 M 684	10K	29 M 687	100K
29 M 682	1000	29 M 685	20K		

NET EACH..... 15.00

**TEN-TURN "MICRODIALS"**. For use with above. Have 2 concentrically mounted dials—one for counting increments of each turn and the other for counting turns. May be locked in any position. For panels 1/4" thick. Satin chrome dial, with black-filled numerals. Black bakelite knob. Overall diameter, 1 1/4". Overall depth, 1 1/8". Shpg. wt., 4 oz.

Type "A". With slotted locking screw for screwdriver. 4.00  
29 M 688. NET.

Type "B". With knurled locking screw. 4.60  
29 M 689. NET.

## CONTINENTAL CARBON X-TYPE PRECISION RESISTORS



"X-1" 1-watt resistors have metallic resistance film formed on surface of low-loss ceramic tubes. Hermetically sealed with smooth, uniform vitreous enamel coating. Hollow body for withstanding temperature to 400° F. Rating, 500 V. No. 18 1 1/2" tinned copper leads. Size, 1/2x1". Shpg. wt., 2 oz.

Ohms	Ohms	Ohms	Ohms	Ohms	Mega
1	500	5500	40,000	300,000	2.0
5	1000	5950	50,000	400,000	2.5
10	1450	7450	60,000	450,000	3.0
15	1500	8500	75,000	490,000	3.5
20	2000	8950	85,000	500,000	4.0
25	2500	9900	90,000	600,000	5.0
50	2950	10,000	100,000	750,000	6.0
100	3500	13,500	150,000	800,000	7.0
150	4000	15,000	200,000	900,000	8.0
200	4450	20,000	240,000	1.0 meg	9.0
300	4950	25,000	250,000	1.5 megs	10.0
400	5000	30,000			

2 M 300. 1 ohm—1.0 megohm. Specify value. NET EACH..... 59c  
26 or more of one value, EACH..... 44c

2 M 301. 1.5—10.0 megohm. Specify value. NET EACH..... 76c  
26 or more of one value, EACH..... 55c

## MALLORY "YO" YARD-OHM RESISTANCE KIT



Yard-Ohm provides the ideal solution to odd-value resistor requirements where flexible resistors are desired. Each kit consists of all necessary materials to construct flexible resistors over a wide range of values. In addition to replacement resistors, high-quality units for meter shunts also may be constructed. An ideal addition to every serviceman's resistor stock. Each Mallory Yard-Ohm Kit consists of the following: 1 yard spiral-wound resistance wire, 1 yard insulated braid, and 24 1/2" spiral leads. Available in the eight values below. Dissipation—all types, 1/2 watt per inch. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Ohms Inch	Max. Amps	Stock No.	Mfr's Type	Ohms/Inch	Max. Amps	NET EACH
2 M 240	YO-1	1	.707	2 M 244	YO-50	50	.100	
2 M 241	YO-5	5	.315	2 M 245	YO-100	100	.071	
2 M 242	YO-10	10	.223	2 M 246	YO-250	250	.044	44c
2 M 243	YO-25	25	.141	2 M 247	YO-500	500	.031	

## ALLIED BARGAIN RESISTOR ASSORTMENT



Servicemen—here's a useful assortment of 100 high quality carbon resistors at a money-saving low price! Contains an excellent selection of most-often-used values, all well-balanced in 1/2 watt and 1 watt sizes. All resistors are brand new and have tinned copper leads. Non-insulated types. An ideal kit for the Amateur and experimenter. Shpg. wt., 12 oz.  
58 M 086. NET..... 95c

## ALLIED'S COLOR-CODE GUIDE



An "Instant-reference" color-code guide for resistors. Code colors may be set to show corresponding resistance values, or resistance values set to show corresponding code colors. Size, 2 1/2x3 1/4". Includes tolerance code and listing of RETMA-JAN 10% standard stock values. (Supplied at no charge with order for 20 or more resistors.) Wt., 2 oz.  
2 M 770. EACH..... 10c

## CENTRALAB CONTROLS



with switch



less switch

## BLUE SHAFT TYPE B—15/16" DIAMETER SINGLE CONTROLS

Radiohms are available with and without switch; types ending with letter S are with switch. Switch is Centralab KB-2 DPST universal type, easily wired for SPST or DPST operation. All controls, except BSK types, have universal fluted shafts; 3" long from end of bushing. BSK types have Centralab-patented, split, knurled shaft; 2 1/2" long from end of bushing. Tapers: C-1, C-2; see "Explanation of Tapers" below. "Fastatch" switches and switch shields are listed below. Av. shpg. wt., 4 oz.

Stock No.	Type	NET EACH	Ohms	Stock No.	Type	NET EACH
29 M 350	B-4		500*	29 M 351	B-4-S	
29 M 352	B-5		1000*	29 M 353	B-5-S	
29 M 354	B-10	73c	5000*	29 M 355	B-10-S	1.03
29 M 356	B-14		10,000*	29 M 357	B-14-S	
29 M 358	B-26		25,000*	29 M 359	B-26-S	
29 M 360	B-31		50,000*	29 M 361	B-31-S	
29 M 362	B-32		50,000*	29 M 363	B-32-S	
29 M 364	B-40	73c	100K*	29 M 365	B-40-S	1.03
29 M 366	B-41		100K*	29 M 367	B-41-S	
29 M 368	B-50		250K*	29 M 369	B-50-S	
29 M 370	B-51		250K*	29 M 371	B-51-S	
29 M 372	B-59	73c	500K*	29 M 373	B-59-S	1.03
29 M 374	B-60	59c	500K*	29 M 376	B-60-S	.88
29 M 377	BSK-60	65c	500K*	29 M 378	BSK-60-S	.94
29 M 379	B-69	73c	1 meg*	29 M 380	B-69-S	1.03
29 M 381	B-70	59c	1 meg*	29 M 382	B-70-S	.88
29 M 383	BSK-70	65c	1 meg*	29 M 384	BSK-70-S	.94
29 M 389	B-75	73c	2 meg*	29 M 390	B-75-S	1.03
29 M 391	B-76	73c	2 meg*	29 M 392	B-76-S	1.03
29 M 393	B-83	73c	2.5 meg*	29 M 394	B-83-S	1.03
29 M 395	B-87	73c	5 meg*	29 M 396	B-87-S	1.03
29 M 397	B-98	73c	10 meg*	29 M 398	B-98-S	1.03

## FASTATCH SWITCHES AND SWITCH SHIELDS

For Blue Shaft controls. Rated at 5 amps, 125 volts AC; 5 amp, 125 volts DC; 12 amps, 12 volts DC. Type KB-5 Switch Shield is for Blue Shaft controls with attached switches only. Wt., 3 oz.

Stock No.	Type	Description	NET EACH
29 M 311	KB-1	SPST	29c
29 M 312	KB-2	DPST (universal)	35c
29 M 313	KB-3	SPDT	44c
29 M 314	KB-5	Switch shield (Pkg. of 5)	29c

## EXPLANATION OF TAPERS

Taper C-1. Linear taper, having uniform resistance change from either end. Television uses: horizontal and vertical centering; horizontal and vertical hold; horizontal drive; vertical linearity; brightness; height and contrast controls. Taper C-2. Semi-log (Audio) 10% center. Used for volume of tone controls. Increases with clockwise rotation. Charted on standard resistance curves, measuring from left to right terminal.

## MINIATURE CONTROLS

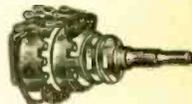
Type B16-228 is for use with the Centralab "Ampec" printed circuit audio amplifier (page 123). Have C2 semi-log (audio) taper. Phenolic-impregnated carbon resistance element is inside knob—only terminals go through panel. Switch types have switch completely enclosed in unit. Switch ratings: 6.5 amps at 1.5 v.; 2 amps at 45 v. Size: knob dia., 3/4"; only 1/4" deep including knob and terminals. Wt., 3 oz.



Less Switch			With Switch, SPST		
No.	Type	Mega EACH	No.	Type	Mega EACH
30 M 418	B16-118	.5	30 M 414	B16-218	.5
30 M 417	B16-120	1	30 M 413	B16-220	1
30 M 416	B16-122	2	30 M 412	B16-222	2
30 M 415	B16-124	3	30 M 411	B16-224	3
30 M 420	B16-128	5	30 M 419	B16-228	5

## CENTRALAB C2-100 COMPENTROL "SENIOR"

Combination volume control and tone compensator. Has printed electronic circuit network. Automatically compensates for reduced response of human ear at low volume levels—insures properly balanced tone regardless of volume level. Permits adjustment for exact amount of compensation desired. A worthwhile addition to hi-fi amplifiers, radios, TV sets, etc. Complete with 2 brown plastic knobs and instructions. Shaft length, 7/8". Shpg. wt., 6 oz.  
30 M 436. NET EACH..... 4.41



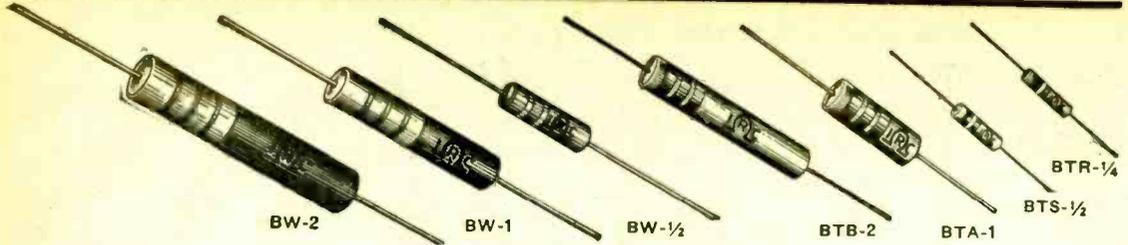
## TYPE C-1 COMPENTROLS

Combination volume control and tone compensator. Easily installed in place of existing volume controls. Switch is SPST with shield to prevent AC hum. No insertion loss. Both types have shaft length of 3". Width across face of switch, 1 1/8". Shpg. wt., 5 oz.



Stock No.	Type	Description	NET
30 M 421	C1-60	1/2 meg, plain	2.45
30 M 422	C1-60-S	1/2 meg, with switch	2.94
30 M 423	C1-70	1 meg, plain	2.45
30 M 424	C1-70-S	1 meg, with switch	2.94

# IRC Resistors



## BT AND BW 10% INSULATED TYPES

**Type BT Filament Carbons.** Exceed rigid MIL-R-11 specifications. Withstand 50-100% overloads for short periods. RETMA-coded. Sizes: BTR,  $1\frac{1}{2} \times \frac{1}{8}$ ";  $1\frac{1}{2} \times \frac{1}{4}$ "; BTA,  $2\frac{1}{2} \times \frac{1}{4}$ "; BTB,  $1\frac{1}{4} \times \frac{1}{4}$ ". Figure in Type No. indicates wattage rating.

**Type BW Wire-Wounds.** Will withstand 50% to 100% overloads with little or no resistance change. Values clearly indicated by standard RETMA color coding. Sizes: BW- $\frac{1}{2}$ ,  $5\frac{1}{8} \times \frac{1}{8}$ "; BW-1,  $1\frac{1}{4} \times \frac{1}{4}$ "; BW-2,  $1\frac{3}{4} \times \frac{1}{4}$ ". Figure in Type No. indicates wattage rating.

### 10% Preferred RETMA Values—Specify Resistance Wanted

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms						
0.27	1.2	5.6	27	120	560	2700	12,000	56,000	0.27 meg	1.2 meg	5.6 meg	27 meg	120 meg	560 meg
0.33	1.5	6.8	33	150	680	3300	15,000	68,000	0.33 meg	1.5 meg	6.8 meg	33 meg	150 meg	680 meg
0.39	1.8	8.2	39	180	820	3900	18,000	82,000	0.39 meg	1.8 meg	8.2 meg	39 meg	180 meg	820 meg
0.47	2.2	10	47	220	1000	4700	22,000	0.1 meg	0.47 meg	2.2 meg	10 meg	47 meg	220 meg	1000 meg
0.56	2.7	12	56	270	1200	5600	27,000	0.12 meg	0.56 meg	2.7 meg	12 meg	56 meg	270 meg	1200 meg
0.68	3.3	15	68	330	1500	6800	33,000	0.15 meg	0.68 meg	3.3 meg	15 meg	68 meg	330 meg	1500 meg
0.82	3.9	18	82	390	1800	8200	39,000	0.18 meg	0.82 meg	3.9 meg	18 meg	82 meg	390 meg	1800 meg
1.0	4.7	22	100	470	2200	10,000	47,000	0.22 meg	1.0 meg	4.7 meg	22 meg	100 meg	470 meg	2200 meg

### TYPE BT 10% CARBONS

5-lot price applies to purchase of one resistance value only.

Stock No.	Mfr's Type	MIL Equiv.	Values	NET EACH	5 FOR
1 M 010	BTR- $\frac{1}{4}$	RC09	82 $\Omega$ to 22 meg	10c	39c
1 M 000	BTS- $\frac{1}{2}$	RC20	10 $\Omega$ to 22 meg	10c	29c
1 M 020	BTA-1	RC30	100 $\Omega$ to 22 meg	15c	44c
1 M 050	BTB-2	RC41	330 $\Omega$ to 22 meg	20c	78c

### TYPE BW 10% WIRE-WOUNDS

5-lot price applies to purchase of one resistance value only.

Stock No.	Mfr's Type	MIL Equiv.	Values	NET EACH	5 FOR
1 M 060	BW- $\frac{1}{2}$	RU-3	0.27 to 820 $\Omega$	10c	39c
1 M 080	BW-1	RU-4	0.47 to 4700 $\Omega$	15c	59c
1 M 100	BW-2	RU-6	1 to 8200 $\Omega$	20c	78c

## Industrial Quantities—Substantial Savings

Industrial quantities—to provide tremendous savings on IRC 10% resistors. Supplied in boxes of 100—the minimum quantity of any one value that you may order.

Values may be assorted for 500- and 1000-lot prices—but only in boxes of 100 per value. For example, if you order 1000 resistors, select up to 10 different values.

### Type BTS $\frac{1}{2}$ -Watt Carbon

Stock No.	MIL Equiv.	Values	Lots of 100, Per 100	Lots of 500, Per 100	Lots of 1000, Per 100
1 M 001	RC20	10 $\Omega$ to 22 meg	4.00	3.00	2.70

### Type BTA 1-Watt Carbon

Stock No.	MIL Equiv.	Values	Lots of 100, Per 100	Lots of 500, Per 100	Lots of 1000, Per 100
1 M 021	RC30	100 $\Omega$ to 22 meg	6.00	4.50	4.00

## BT AND BW 5% INSULATED TYPES

**Type BT Filament Carbons.** Fixed composition, filament carbon 5% resistors. Dependable low cost units for use in circuits requiring close tolerance values. RETMA color coding. Fully insulated.

**Type BW Wire-Wound.** Highly stable, low-cost units, completely insulated. Similar in appearance to carbon resistors, but have double width first color code band. Withstand shock, vibration and temperature changes.

### 5% Preferred RETMA Values—Specify Resistance Wanted

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms						
0.24	1.1	5.1	24	110	510	2400	11,000	51,000	0.24 meg	1.1 meg	5.1 meg	24 meg	110 meg	510 meg
0.27	1.2	5.6	27	120	560	2700	12,000	56,000	0.27 meg	1.2 meg	5.6 meg	27 meg	120 meg	560 meg
0.30	1.3	6.2	30	130	620	3000	13,000	62,000	0.30 meg	1.3 meg	6.2 meg	30 meg	130 meg	620 meg
0.33	1.5	6.8	33	150	680	3300	15,000	68,000	0.33 meg	1.5 meg	6.8 meg	33 meg	150 meg	680 meg
0.36	1.6	7.5	36	160	750	3600	16,000	75,000	0.36 meg	1.6 meg	7.5 meg	36 meg	160 meg	750 meg
0.39	1.8	8.2	39	180	820	3900	18,000	82,000	0.39 meg	1.8 meg	8.2 meg	39 meg	180 meg	820 meg
0.43	2.0	9.1	43	200	910	4300	20,000	91,000	0.43 meg	2.0 meg	9.1 meg	43 meg	200 meg	910 meg
0.47	2.2	10	47	220	1000	4700	22,000	0.1 meg	0.47 meg	2.2 meg	10 meg	47 meg	220 meg	1000 meg
0.51	2.4	11	51	240	1100	5100	24,000	0.11 meg	0.51 meg	2.4 meg	11 meg	51 meg	240 meg	1100 meg
0.56	2.7	12	56	270	1200	5600	27,000	0.12 meg	0.56 meg	2.7 meg	12 meg	56 meg	270 meg	1200 meg
0.62	3.0	13	62	300	1300	6200	30,000	0.13 meg	0.62 meg	3.0 meg	13 meg	62 meg	300 meg	1300 meg
0.68	3.3	15	68	330	1500	6800	33,000	0.15 meg	0.68 meg	3.3 meg	15 meg	68 meg	330 meg	1500 meg
0.75	3.6	16	75	360	1600	7500	36,000	0.16 meg	0.75 meg	3.6 meg	16 meg	75 meg	360 meg	1600 meg
0.82	3.9	18	82	390	1800	8200	39,000	0.18 meg	0.82 meg	3.9 meg	18 meg	82 meg	390 meg	1800 meg
0.91	4.3	20	91	430	2000	9100	43,000	0.20 meg	0.91 meg	4.3 meg	20 meg	91 meg	430 meg	2000 meg
1.0	4.7	22	100	470	2200	10,000	47,000	0.22 meg	1.0 meg	4.7 meg	22 meg	100 meg	470 meg	2200 meg

### TYPE BT 5% FILAMENT CARBONS

5-lot price applies to purchase of one resistance value only.

Stock No.	Mfr's Type	MIL Equiv.	Values	NET EACH	5 FOR
1 M 015	BTR- $\frac{1}{4}$	RC09	82 $\Omega$ to 22 meg	20c	.78
1 M 005	BTS- $\frac{1}{2}$	RC20	10 $\Omega$ to 22 meg	20c	.78
1 M 025	BTA-1	RC30	100 $\Omega$ to 22 meg	30c	1.18
1 M 035	BTB-2	RC41	330 $\Omega$ to 22 meg	40c	1.57

### TYPE BW 5% WIRE-WOUND

5-lot price applies to purchase of one resistance value only.

Stock No.	Mfr's Type	MIL Equiv.	Values	NET EACH	5 FOR
1 M 065	BW- $\frac{1}{2}$	RU-3	0.24 $\Omega$ to 820 $\Omega$	20c	.78
1 M 085	BW-1	RU-4	0.47 $\Omega$ to 5100 $\Omega$	30c	1.18
1 M 105	BW-2	RU-6	1.0 $\Omega$ to 8200 $\Omega$	40c	1.57

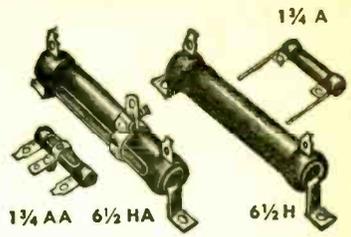
# IRC Resistors

## IRC WIRE-WOUND POWER RESISTORS

Large, non-porous ceramic cores. Thick cement coatings. All have lugs, except types 1 1/4 A and 2D, which have tinned 1 1/4" leads. Units of 25 watts and up include mtg. brackets. All have ±10% tolerance except fixed types of 50 ohms and up, which are ±5%. **NOTES ON ADJUSTABLE TYPES:** Units of 25 watts and up have silver contacts. Wattage rating applies only if total resistance is used. Ohm's values given represent range of maximum values in which the units are available. E.g., under 1 M 202, "6000 to 10,000 ohms" means the units are available in all values from 6000 to 10,000 ohms, as given in table. These are maximum values. Specify resistance values when ordering. Av. shpg. wts.: 10-50 watts, 4 oz.; 100-200 watts, 1 lb. Letter "K" means 1000.

### PREFERRED STOCK RANGES—SPECIFY RESISTANCE VALUES

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1*	15	150*	500*	1200†	2000*	4500	8500†	14300†	40000*	50000*
2*	20	200*	600†	1250	2250	5000*	9000	15000*	15000*	60000*
3*	25*	250*	750*	1450†	2500*	6000*	10000*	20000*	60000*	75000*
5*	50*	500*	800*	1500*	3000*	7000*	11000†	25000*	30000*	100000*
7.5	75*	350†	850†	1750†	3500	7500*	12000*	30000*	30000*	100000*
10*	100*	400	1000*	1850†	4000*	8000*	12500*†	35000*	35000*	100000*



### FIXED POWER RESISTORS

#### 1 1/4 A (AB)—10 WATT

Size, 1 1/4" x 3/4". Available in values above to 25,000, except 850 and 1850.

No.	Ohms	EACH
1 M 120	1 to 1000	44¢
1 M 121	120 to 1000	47¢
1 M 122	6000 to 10K	54¢
1 M 123	11K to 20K	61¢
1 M 124	25K	64¢

#### 2D (DG)—20 WATT

Size, 2" x 3/4". In values above to 50,000, except 2, 3, 7.5, 15, 20, 600, 1450 and 14,300 ohms.

No.	Ohms	EACH
1 M 140	1 to 1000	56¢
1 M 141	1200 to 5000	57¢
1 M 142	6000 to 10K	66¢
1 M 143	11K to 20K	71¢
1 M 144	25K to 40K	81¢
1 M 145	50K	93¢

#### 4 1/2 B (EP)—50 WATT

Size, 4 1/2" x 3/4". Available in all values indicated by\*.

No.	Ohms	EACH
1 M 160	1, 2 and 3	1.32
1 M 161	1500 to 5000	1.03
1 M 162	1500 to 5000	1.03
1 M 163	6000 to 10K	1.13
1 M 164	12K to 20K	1.23
1 M 165	25K to 40K	1.37
1 M 166	50K to 60K	1.52
1 M 167	75K	1.72
1 M 168	100K	1.88

#### 6 1/2 H (HA)—100 WATT

Size, 6 1/2" x 1 1/4". In values below.

No.	Ohms	EACH
1 M 300, 5, 10, 25, 50, 75, 100, 150, 250, 500, 750, 1000 ohms.		1.42
1 M 301, 1250, 1500, 2000, 2500, 3000, 5000 ohms.		1.49
1 M 302, 7.5K, 10K ohms.		1.59
1 M 303, 15K, 20K ohms.		1.74
1 M 304, 25,000, 30,000, 40,000 ohms.		1.88
1 M 305, 50K, 60K ohms.		1.98
1 M 306, 75K ohms.		2.11
1 M 307, 100K ohms.		2.23

#### 10 1/2 H (HO)—200 WATT

Size, 10 1/2" x 1 1/4". In values below.

No.	Ohms	EACH
1 M 320, 25, 50, 75, 100, 150, 250, 500, 750, 1000 ohms.		1.89
1 M 321, 1500, 2000, 2500, 3000, 5000 ohms.		1.94
1 M 322, 7.5K, 10K ohms.		2.08
1 M 323, 15K, 20K ohms.		2.21
1 M 324, 25,000, 30,000, 40,000 ohms.		2.29
1 M 325, 50K, 60K ohms.		2.37
1 M 326, 75K ohms.		2.50
1 M 327, 100K ohms.		2.67

### ADJUSTABLE POWER RESISTORS

#### 1 1/4 AA (ABA)—10 WATT

Size, 1 1/4" x 3/4". In values above except 850, 1200, 1750, 1850 ohms.

1 M 200, 1 to 1000 ohms.	EA. 86¢
1 M 201, 1250-5K ohms.	EA. 90¢
1 M 202, 6K to 10K ohms.	EA. 96¢

#### 2 1/2 DA (DHA)—25 WATT

Size, 2 1/2" x 3/4". Available in all values, except those with†.

1 M 220, 1 to 1000 ohms.	EACH	1.10
1 M 221, 1250-5K ohms.	EA. 1.11	
1 M 222, 6K to 10K ohms.	EA. 1.20	
1 M 223, 12K to 20K ohms.	EA. 1.23	
1 M 224, 25K ohms.	EA. 1.34	

#### 4 1/2 EA (EPA)—50 WATT

Size, 4 1/2" x 3/4". Available in values indicated by \* except 1, 2, 3, 12,500 and 35,000 ohms.

1 M 240, 5 to 1000 ohms.	EACH	1.39
1 M 241, 1.5K to 5K ohms.	EACH	1.45
1 M 242, 6K to 10K ohms.	EACH	1.55
1 M 243, 12K to 20K ohms.	EACH	1.67
1 M 244, 25,000 to 40,000 ohms.	EACH	1.81
1 M 245, 50K, 60K, 100K ohms.	EA. 1.94	
1 M 246, 75K, EA.	2.16	
1 M 247, 100K, EA.	2.30	

#### 6 1/2 HA (HAA)—100 WATT

Size, 6 1/2" x 1 1/4". In values below.

1 M 260, 100, 200, 400, 500, 750, 1000 ohms.	EACH	2.11
1 M 261, 1500, 2000, 2500, 3k, 4K, 5K ohms.	EACH	2.16
1 M 262, 6000, 7500, 8000, 10,000 ohms.	EACH	2.27
1 M 263, 15K, 20K ohms.	EACH	2.42
1 M 264, 25,000, 30,000 and 40,000 ohms.	EACH	2.57
1 M 265, 50K, 60K, EA.	2.67	
1 M 266, 75K, EA.	2.79	
1 M 267, 100K, EA.	2.91	

#### 10 1/2 HA (HOA)—200 WATT

Size, 10 1/2" x 1 1/4". In values below.

1 M 340, 10, 25, 50, 100, 250, 500, 1000 ohms.	EACH	2.57
1 M 341, 1500, 2000, 2500, 3000 and 5000 ohms.	EACH	2.62
1 M 342, 10K, EA.	2.76	
1 M 343, 15K, 20K, EA.	2.89	
1 M 344, 25,000, 30,000 and 40,000 ohms.	EACH	2.96
1 M 345, 50K, 60K, EA.	3.04	
1 M 346, 75K, EA.	3.19	
1 M 347, 100K, EA.	3.33	

#### EXTRA SLIDERS

2 M 604, For 2 1/2 DA.	EA. 15¢
2 M 605, For 4 1/2 EA.	
2 M 600, For 1 1/4 AA.	
2 M 603, For 6 1/2 HA & 10 1/2 HA.	25¢



### IRC 1% "PRECISTORS"

Extremely accurate, deposited carbon resistors for circuits requiring high voltage ratings, low noise levels, excellent frequency and temperature characteristics. Each packed in a capped plastic tube. Specify values desired.

Ohms	Ohms	Ohms	Ohms	Megs
51	500*	4300	36,000	.30*
56	510	4700	39,000	.33
62	560	5000*	43,000	.36
68	620	5100	47,000	.39
75	680	5600	50,000*	.43
82	750	6200	51,000	.47
91	820	6800	56,000	.50*
100*	910	7500	62,000	.51
110	1000*	8200	68,000	.56
120	1100	9100	75,000	.62
130	1200	10,000*	82,000	.68
150*	1300	11,000	91,000	.75
160	1500*	12,000	11 meg	.82
180	1600	13,000	11 meg	.91
200*	1800	15,000*	.12 meg	1.0*
220	2000*	16,000	.13 meg	1.1
240	2200	18,000	.15 meg	1.2
270	2400	20,000*	.16 meg	1.3
300*	2500*	22,000	.18 meg	1.5*
330	2700	24,000	.20 meg	1.6
360	3000*	25,000*	.22 meg	1.8
390	3300	27,000	.24 meg	2.0*
430	3600	30,000*	.25 meg	3.0*
470	3900	33,000	.27 meg	5.0*

TYPE DCC 1/2-WATT. Size, 2 1/2" x 3/4". In all values from 51 ohms to 2.0 meg. Wt., 3 oz. 1 M 490, NET EACH... 39¢

TYPE DCF 1-WATT. Size, 1 1/2" x 3/4". In all values shown with asterisk\*. Wt., 4 oz. 1 M 450, NET EACH... 59¢

TYPE DCH 2-WATT. 2 1/2" x 3/4". Wt., 6 oz.

Stock No.	Values—Megohms	NET EACH
1 M 470	5, 1, 2, 3, 5, 10	71¢
1 M 471	15 and 20	76¢



### IRC WW SERIES PRECISION RESISTORS

Type WW4J. Made in accordance with JAN specification MIL-R-93A. Used by leading instrument manufacturers for precision meter multipliers and shunts, decade boxes, calibrated controls, etc. New windup process reduces inductance to a minimum. Enamelled windings on non-hydroscopic ceramic coil forms. Provides high mechanical strength and low thermal expansion. Tolerance is ±1%. Rated at 1/2 watt. With solder-lug terminals. A special impregnant assures humidity protection, stability and long-life. Wt., 3 oz.

TYPE WW4J			
No.	Ohms	EACH	No.
2 M 549	0.1	1.86	2 M 516
2 M 541	0.2	1.86	2 M 517
2 M 542	0.5	1.61	2 M 518
2 M 540	1		2 M 544
2 M 546	5		2 M 519
2 M 541	10		2 M 520
2 M 502	25		2 M 521
2 M 503	50		2 M 522
2 M 504	100		2 M 523
2 M 505	200		2 M 524
2 M 506	250		2 M 525
2 M 543	300		2 M 526
2 M 507	500		2 M 527
2 M 508	1000		2 M 528
2 M 509	1500		2 M 529
2 M 510	2000		2 M 530
2 M 511	2500		2 M 531
2 M 547	3000		2 M 532
2 M 548	3500		2 M 533
2 M 513	5000		2 M 534
2 M 514	7500		
2 M 515	10000		

Type	Watts	Size	Terminals
WW2J	1	1/2" x 3/4"	Lug
WW4J	.5	1/2" x 3/4"	Lug
WW10J	.15	1/2" x 3/4"	Wire

Type WW10J. Extremely small, wire-wound resistors with ±1% tolerance. Rated at .15 watts. Humidity-proof enameled winding on ceramic core. Have high dielectric insulation and mechanical strength. Temperature coefficient from 20 to 100 degrees C. is .0025% per degree. 2" pigtail leads. Wt., 2 oz.

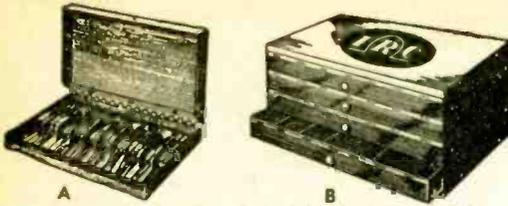
Type WW2J. Meet military specifications MIL-R-93A, style RB19 and JAN-R-93, style RB18. Reversed windings reduce inductance and provides a resistor that has little coupling effect from other parts of the circuit. Tolerance is ±1%. 1 watt. Wound on ceramic forms with lug ends. Odd values available on special order; price same as next higher value. Wt., 2 oz.

TYPE WW10J			
No.	Ohms	EACH	No.
2 M 550	10	1.20	2 M 564
2 M 551	25		2 M 565
2 M 552	50		2 M 566
2 M 553	100		2 M 567
2 M 554	200		2 M 568
2 M 555	250		2 M 569
2 M 556	300		2 M 570
2 M 557	500		2 M 571
2 M 558	1000		2 M 572
2 M 559	1500		2 M 573
2 M 560	2000		2 M 574
2 M 561	2500		2 M 575
2 M 562	3000		2 M 576
2 M 563	3500		2 M 577

TYPE WW2J			
No.	Ohms	EACH	No.
2 M 535	600000	5.88	2 M 538
2 M 536	750000	5.88	2 M 539
2 M 545	900000	8.11	2 M 540
2 M 537	1 Meg.	8.11	

# Wire Wound Resistors

## POPULAR IRC RESISTOR ASSORTMENTS



IRC RESIST-O-KITS and RESIST-O-CABINETS help the busy radio-TV serviceman keep his resistor stocks complete and easily accessible at all times. Save valuable bench space and improve working efficiency. Each resistance stored in its own separate compartment, eliminating time wasted in searching through unsorted stock for a particular needed resistor. The assortments listed below are designed especially to provide greatest possible usefulness at minimum cost. All resistors have  $\pm 10\%$  tolerance. Metal RESIST-O-KITS have 10 compartments, and measure  $1\frac{1}{2} \times 3\frac{1}{2} \times 6\frac{1}{2}$ ". Metal RESIST-O-CABINETS have 4 drawers, and a total of 28 compartments which hold nearly all commonly used resistance values. RESIST-O-CABINETS can be stacked to provide extra storage space. Size,  $5\frac{1}{2} \times 5\frac{1}{2} \times 10\frac{1}{2}$ ". No extra charge for metal cabinets or kit containers. You pay only for the resistors.

### FIG. A—METAL RESIST-O-KITS

**Assortment No. 7.** A versatile selection of often-needed composition resistors. A great aid to servicing; provides handy stock of most-often used resistors. Assortment includes 45 type BTS  $\frac{1}{2}$ -watt resistors. Values selected are especially handy in television servicing; replace most commonly used resistors found in popular television sets. Consist of 6 each—.01 and 0.47 meg; 5 each—47,000 ohms, 0.27 and 1.0 meg; 4 each—1000 ohms, 10,000 ohms and 2.2 megs; 3 each—4700 ohms and 0.22 meg. Wt. 11 oz.  
2 M 758. NET ..... 5.29

**Assortment No. 8.** Contains 30 BTA 1 watt 10% resistors in flat, pocket-sized metal kit. 10 compartments prevent ranges from mixing. For general servicing and replacement. Consists of 4 each—1000 and 47,000 ohms, 0.1 and 0.47 meg; 3 each—10,000 ohms and 1.0 meg; 2 each—2200, 4700, and 27,000 ohms, 0.27 meg. A selection of most commonly needed values. Keep one of these kits handy at all times. Shpg. wt. 11 oz.  
2 M 759. NET ..... 5.29

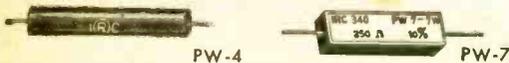
### FIG. B—METAL RESIST-O-CABINETS

**Assortment No. 4.** Consists of 100 BW and BTS  $\frac{1}{2}$  watt 10% resistors.  $\frac{1}{2}$ -watt values most widely found in television. Consist of 6 each—1000 and 47,000 ohms, 0.1, 0.27, 0.47 and 1.0 meg; 5 each—4700 and 10,000 ohms, 0.22 and 2.2 megs; 3 each—100, 470, 3300, 22,000, 27,000 and 33,000 ohms, 0.33 and 4.7 megs; 2 each—47, 220, 270, 1500, 2200, 2700, 56,000 and 68,000 ohms, 3.3 and 10 megs. Wt.  $4\frac{1}{2}$  lbs.  
2 M 755. NET ..... 11.76

**Assortment No. 5.** Contains 83 BW-1 and BTA 1 watt resistors. 4-drawer cabinet has 28 labeled compartments for rapid and accurate location of wanted resistor. Consists of 5 each—1000, 10,000, 27,000 and 47,000 ohms, 0.1, 0.27, 0.47, and 1.0 meg; 3 each—2200, 4700, and 22,000 ohms; 2 each—47, 100, 150, 220, 270, 470, 1500, 2700, 3300, 15,000, 33,000, 39,000, and 68,000 ohms, 0.15, 0.22, 2.2, and 4.7 megs. Shpg. wt.  $4\frac{1}{2}$  lbs.  
2 M 756. NET ..... 14.64

**Assortment No. 6.** Consists of a complete resistor stock for AM, FM and TV—all in one handy cabinet. A real time and money saver for the serviceman, kit-builder, and experimenter. Exact values on each resistor supplement the RETMA color-code. The assortment consists of 91 resistors in the following sizes: 1 each of the DCR "precitors" (see full description on page 105) in values of 1000 and 10,000 ohms, 0.1, 1.0, and 5.0 megohms; 1 each of the 2-watt resistors in values of 47, 100, 470, 4700, 10,000, 22,000, and 47,000 ohms; and a selection of thirty-five 1-watt and forty-four  $\frac{1}{2}$ -watt resistors in values of 47, 100, 150, 220, 270, 470, 1000, 1500, 2200, 2700, 3300, 4700, 10,000, 15,000, 22,000, 27,000, 33,000, 39,000, 47,000, and 68,000 ohms; 0.1, 0.15, 0.22, 0.27, 0.47, 1.0, 2.2, and 4.7 megohms. Shpg. wt., 5 lbs.  
2 M 757. NET ..... 16.76

### TYPE PW WIREWOUND RESISTORS



New, wirewound resistors, with resistance element wound on glass fiber core. Molded in tan, high temperature plastic. PW-4 is tubular in shape; PW-7 and PW-10 are rectangular. Types PW-7 and PW-10 are particularly recommended for circuits where a stable resistor is required with an actual wattage dissipation of 7 or 10 watts or less. Element-lead assembly sealed in ceramic case. Axial leads,  $1\frac{1}{2}$ " long, 4, 7 and 10 watts  $\pm 10\%$  tolerance. Sizes: PW-4,  $1\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$ "; PW-7,  $1\frac{1}{2} \times \frac{3}{4} \times \frac{1}{2}$ "; PW-10,  $1\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$ ". Specify values when ordering ..... Shpg. wt., 2 oz.

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1	10	75	300	1500	5000
2	15	100	500	2000	7500
3	20	150	750	2500	8200
4	25	200	1000	3000	
5	50	250	1250	4000	

1 M 170, PW-4, 4-watt. Specify value. 1 to 2000 ohms. NET EACH 28¢  
1 M 180, PW-7, 7-watt. Specify value. 1 to 5000 ohms. NET EACH 30¢  
1 M 190, PW-10, 10-watt. Specify value. 1 to 8200 ohms. NET EACH 32¢

Write for Quantity Prices

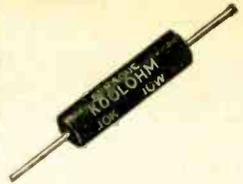
### IRC RESIST-O-GUIDE

Handy vest-pocket color-code resistor guide for instant reference. Has 3 multicolored discs to quickly indicate value of any resistor color-coded to RETMA standards. 2 oz.  
2 M 775. NET ..... 15¢



## SPRAGUE "KOOLOHM" WIREWOUND RESISTORS

Feature specially developed high-insulation resistance wire windings. Type KCT is inductively wound. Type NIT has non-inductive winding. Glazed ceramic jackets and special end-seals provide complete protection against high humidity. Easily meet requirements of television and other high-voltage circuits—will withstand 10,000 volts from surface of ceramic jacket to resistance element. The ceramic coating insulation is resistant to heat—will withstand temperatures as high as 1000°C. Accuracy within 5%. Average shpg. wt., 2 oz.



### SPECIFY VALUES DESIRED

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
5	50	400	1000	4000	12,000	30,000
10	75	500	1250	5000	12,500	40,000
15	100	600	1500	6000	14,000	50,000
20	150	700	1750	7500	15,000	60,000
25	200	750	2000	8000	17,500	70,000
30	250	800	2500	9000	20,000	
40	300	900	3000	10,000	25,000	

### TYPE 5KT—5 WATT— $1\frac{1}{2} \times 1\frac{1}{2}$ "

\*Except 750 ohms.

No.	Ohms	EACH	No.	Ohms	EACH
1 M 640	5 to 1000*	38¢	1 M 645	20,000	56¢
1 M 641	1250 to 5000	47¢	1 M 646	25,000	65¢
1 M 642	6000 to 10,000	47¢	1 M 647	30,000	71¢
1 M 643	12,500 to 14,000	53¢	1 M 648	40,000	88¢
1 M 644	15,000	56¢			

### TYPE 10KT—10 WATT— $1\frac{1}{2} \times 1\frac{1}{2}$ "

\*Except 12,500 ohms.

No.	Ohms	EACH	No.	Ohms	EACH
1 M 660	5 to 1000	44¢	1 M 666	30,000	.76
1 M 661	1250 to 5000	47¢	1 M 667	40,000	.97
1 M 662	6000 to 10,000	53¢	1 M 668	50,000	1.06
1 M 663	12,000 to 17,500*	59¢	1 M 669	60,000	1.18
1 M 664	20,000	65¢	1 M 659	70,000	1.29
1 M 665	25,000	71¢			

### TYPE 5NIT—5 WATT— $1\frac{1}{2} \times 1\frac{1}{2}$ "

\*Except 750 ohms.

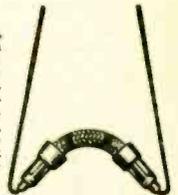
No.	Ohms	EACH	No.	Ohms	EACH
1 M 670	5 to 1000*	59¢	1 M 672	2500 to 4000	73¢
1 M 671	1250 to 2000	68¢	1 M 673	5000	76¢

### TYPE 10NIT—10 WATT— $1\frac{1}{2} \times 1\frac{1}{2}$ "

No.	Ohms	EACH	No.	Ohms	EACH
1 M 680	5 to 1000	59¢	1 M 683	5000 to 6000	.76
1 M 681	1250 to 2000	68¢	1 M 684	7500 to 9000	.85
1 M 682	2500 to 4000	73¢	1 M 685	10,000	1.12

## CLAROSTAT "GLASOHM" RESISTORS

Type FYG. Latest type of glass-insulated, flexible resistors. Consist of a wire winding on a glass fiber core with covering of braided glass fiber. They can be bent or twisted and even knotted—without breakage or weakening. Nothing to burn or char. Withstand heavy overloads without damage. Inexpensive and extremely durable. Ideal for resistance boxes, voltage dividers, attenuators, step-by-step rheostats, multipliers and for use in point-to-point wiring.  $\pm 10\%$  tolerance. Specifications: 1" fabric length, 2" leads,  $\frac{1}{8}$ " diameter core, RETMA color-coded, 2 watts. Wt., 2 oz.



No.	Type	Ohms	No.	Type	Ohms	No.	Type	Ohms
31 M 250	FYG5	5	31 M 261	FYG150	150	31 M 272	FYG750	750
31 M 251	FYG10	10	31 M 262	FYG200	200	31 M 273	FYG800	800
31 M 252	FYG15	15	31 M 263	FYG225	225	31 M 274	FYG850	850
31 M 253	FYG25	25	31 M 264	FYG250	250	31 M 275	FYG900	900
31 M 254	FYG35	35	31 M 265	FYG300	300	31 M 276	FYG1000	1000
31 M 255	FYG40	40	31 M 266	FYG350	350	31 M 277	FYG1250	1250
31 M 256	FYG50	50	31 M 267	FYG375	375	31 M 278	FYG1500	1500
31 M 257	FYG60	60	31 M 268	FYG400	400	31 M 279	FYG1600	1600
31 M 258	FYG75	75	31 M 269	FYG500	500	31 M 280	FYG1750	1750
31 M 259	FYG100	100	31 M 270	FYG600	600	31 M 281	FYG2000	2000
31 M 260	FYG125	125	31 M 271	FYG700	700			

NET EACH ..... 18¢  
10 or more, EACH ..... 16¢

## CARBORUNDUM CO. GLOBAR TYPE F RESISTORS

Widely used in AC-DC radio receivers, television sets, etc. Limits initial current; protects tubes during warm-up. Resistance decreases as temperature increases. Protects circuit components against damage from voltage surges, line voltage fluctuations, etc. Operate dependably over range of 52-100° C. 1 M 950— $1\frac{1}{2} \times \frac{1}{4}$ "; 1 M 951— $1\frac{1}{4} \times \frac{1}{4}$ "; 1 M 952— $3\frac{1}{8} \times \frac{1}{4}$ ". Wt., 3 oz.



No.	Type	Ohms-Hot	Ohms-Cold	NET EACH
1 M 950	439F-1	200	1400	1.13
1 M 951	525F-1	20	250	1.28
1 M 952	327F-1	35	460	1.43

# Ohmite Resistors



## FAMOUS "BROWN DEVIL" WIRE-WOUND RESISTORS

Famous "Brown Devil" resistors for all radio and industrial requirements. These compact wire-wound units are ideal for voltage dropping, bias units, bleeders, etc. All units have thick vitreous enamel coating—assuring best heat conduction, plus insulation. The 5 watt unit's all-welded construction extends the resistance range to 10,000 ohms. This is an unusually high value for a vitreous stock unit. All sizes engineered to provide maximum protection against humidity and mechanical damage. Single-layer winding permits generated heat to be rapidly conducted to the surface through the vitreous enamel coating. Accuracy, ±5%. Dimensions: 5-watt units, 1 3/8" x 1 1/2" x 1 1/4"; 20-watt units, 2 3/8" x 1 1/2" x 1 1/4"; tinned leads. Average shpg. wt., 3 oz.

### STOCK RANGES—SPECIFY VALUES

Ohms	Ohms	Ohms	Ohms	Ohms
1.5*	125*	1100*	7500	35,000
1*	150	1200	8000	40,000
2*	200	12500	8500	45,000
3*	225*	1500	9000*	50,000
4*	250	1750	10,000	55,000
5	300	1850†	11,000*	60,000
7.5	350	2000	12,000*	65,000
10	400	2250	12,500*	70,000
12	450*	2400†	13,000*	75,000
15*	500	2500	14,300*	80,000
20*	600*	2750†	15,000	85,000
25*	650†	3000	16,000*	90,000
30*	700	3500	17,500*	95,000
35*	750	4000	18,000*	100,000
40*	800	4500	20,000	
50	850†	5000	22,500*	
75	900*	6000	25,000	
100	1000	7000	30,000	

### 5 WATT SIZE

Available in all values to 10,000 except those marked †.

No.	Ohms	Each
M 730	1 to 1000	39c
M 731	1100 to 5000	42c
M 732	6000 to 10,000	46c

### 10 WATT SIZE

Available in all values to 50,000 except those marked †.

No.	Ohms	Each
M 700	1 to 1000	44c
M 701	1100 to 5000	47c
M 702	6000 to 10,000	54c
M 703	11000 to 20,000	61c
M 704	22500 to 25,000	64c
M 705	30000 to 50,000	72c

### 20 WATT SIZE

Available in all values except those marked \*.

No.	Ohms	Each
M 720	1 to 1000	56c
M 721	1200 to 5000	60c
M 722	6000 to 10,000	71c
M 723	12500 to 20,000	86c
M 724	25,000 to 40,000	71c
M 725	45,000 to 60,000	93c
M 726	65,000 to 80,000	1.08
M 727	85,000 to 100,000	1.24



### HANDY OHM'S LAW CALCULATOR

New, improved version of Ohm's Law Calculator. Quickly solves any problem involving Ohm's Law or the DC power for voltage. A single setting gives power, voltage and current when resistance is known. When resistance is unknown, single setting of any two known values (E, I or W) gives resistance and the other unknown. Also has slide rule scales (A, B, C and D) and parallel resistance calculator. Size, 9x3".  
 2 M 780. Postpaid In U.S.A. . . . . 25c  
 2 M 781. Deluxe Plastic Model. Postpaid In U.S.A. . . . . 1.50



## "DIVIDOHM" WIRE-WOUND ADJUSTABLE RESISTORS

Used for voltage-dividing networks in power supplies, adjustable dropping resistors, etc. Wire-wound on ceramic core with vitreous enamel coat. Accuracy ±5%. With slider and mounting brackets. Av. shpg. wt., 1/2 lb.

### 10 WATTS—1 1/2x1 1/2"

No.	Type	Ohms	Ma.	EACH
75 M 861	1006	10	1,000	86c
75 M 862	1009	25	632	
75 M 863	1010	50	447	
75 M 864	1011	75	365	
75 M 865	1012	100	316	
75 M 866	1013	150	258	
75 M 867	1015	250	200	
75 M 868	1019	500	141	
75 M 869	1021	750	115	
75 M 870	1023	1000	100	
75 M 871	1025	1500	79	90c
75 M 872	1028	2500	63	
75 M 873	1033	5000	43	
75 M 874	1036	7500	33	96c
75 M 875	1040	10,000	26	
75 M 883	EXTRA SLIDER			15c

### 25 WATTS—2x1 1/2"

No.	Type	Ohms	Ma.	EACH
75 M 780	0368	100	500	1.10
75 M 781	0371	250	316	
75 M 782	0372	500	223	
75 M 783	0373	750	182	
75 M 784	0375	1000	158	
75 M 785	0376	1500	129	1.11
75 M 786	0377	2000	111	
75 M 787	0378	2500	100	
75 M 788	0379	3000	91	1.20
75 M 789	0382	5000	70	
75 M 790	0384	7500	57	1.23
75 M 791	0385	10,000	50	
75 M 792	0386	12,000	42	1.34
75 M 793	0387	15,000	34	
75 M 794	0388	20,000	26	
75 M 795	0389	25,000	21	
75 M 880	EXTRA SLIDER			15c

### 50 WATTS—4x1 1/2"

No.	Type	Ohms	Ma.	EACH
75 M 800	0568	250	447	1.39
75 M 801	0569	500	316	
75 M 802	0570	750	258	
75 M 803	0572	1000	223	
75 M 804	0573	1500	182	1.45
75 M 805	0574	2000	158	
75 M 806	0575	2500	141	
75 M 807	0578	5000	100	1.55
75 M 808	0581	10,000	70	
75 M 809	0583	15,000	57	1.67
75 M 810	0584	20,000	48	
75 M 811	0585	25,000	41	1.81
75 M 812	0586	30,000	36	
75 M 813	0587	40,000	28	
75 M 814	0588	50,000	23	1.94
75 M 815	0591	100,000	12	
75 M 880	EXTRA SLIDER			15c

### 100 WATTS—6 1/2x1 1/2"

No.	Type	Ohms	Ma.	EACH
75 M 830	0962	1000	316	2.11
75 M 831	0964	5000	141	2.16
75 M 832	0965	10,000	100	2.27
75 M 833	0966	15,000	81	2.42
75 M 834	0967	20,000	70	2.42
75 M 835	0968	25,000	53	2.57
75 M 836	0969	30,000	47	2.57
75 M 837	0970	40,000	36	2.57
75 M 838	0971	50,000	29	2.67
75 M 839	0972	75,000	19	2.79
75 M 840	0973	100,000	15	2.91
75 M 881	EXTRA SLIDER			25c

### 200 WATTS—10 1/2x1 1/2"

No.	Type	Ohms	Ma.	EACH
75 M 850	1362	1000	447	2.57
75 M 851	1364	5000	200	2.62
75 M 852	1365	10,000	141	2.76
75 M 853	1366	15,000	115	2.89
75 M 854	1367	20,000	100	2.89
75 M 855	1368	25,000	89	2.96
75 M 856	1369	30,000	81	2.96
75 M 857	1370	40,000	61	2.96
75 M 858	1371	50,000	49	3.04
75 M 859	1372	75,000	33	3.19
75 M 860	1373	100,000	25	3.33
75 M 882	EXTRA SLIDER			25c



## "LITTLE DEVIL" MOLDED RESISTORS

Molded, insulated composition resistors. Meet JAN-R-11 specifications, including salt water immersion and high humidity tests. Dissipate heat rapidly and can be used at their full wattage ratings at 158° F. Tinned copper leads, hardened at the resistor body. Breakdown ratings: 1/2 w., 350 v.; 1 w., 500 v.; 2 w., 1000 v.

### SPECIFY VALUES DESIRED

### 10% TOLERANCE RESISTORS

Ohms	Ohms	Ohms	Mega	Mega
10	220	4,700	0.1	2.2
12	270	5,600	0.12	2.7
15	330	6,800	0.15	3.3
18	390	8,200	0.18	3.9
22	470	10,000	0.22	4.7
27	560	12,000	0.27	5.6
33	680	15,000	0.33	6.8
39	820	18,000	0.39	8.2
47	1,000	22,000	0.47	10.0
56	1,200	27,000	0.56	12.0
68	1,500	33,000	0.68	15.0
82	1,800	39,000	0.82	18.0
100	2,200	47,000	1.0	22.0
120	2,700	56,000	1.2	
150	3,300	68,000	1.5	
180	3,900	82,000	1.8	

Stock No.	Watts	Tol.	NET EACH	100 Lots, EACH
2 M 040	1/2	±10%	10c	6c
2 M 045	1	±10%	15c	9c
2 M 080	2	±10%	20c	12c

\*All ±10% values above, plus: 2.7, 3.3, 3.9, 4.7, 5.6, 6.8 and 8.2 ohms.  
 †Applies to 100 resistors of one value only.

### 5% TOLERANCE RESISTORS

Ohms	Ohms	Ohms	Mega	Mega
10	220	4,700	0.1	2.2
11	240	5,100	0.11	2.4
12	270	5,600	0.12	2.7
13	300	6,200	0.13	3.0
15	330	6,800	0.15	3.3
16	360	7,500	0.16	3.6
18	390	8,200	0.18	3.9
20	430	9,100	0.20	4.3
22	470	10,000	0.22	4.7
24	510	11,000	0.24	5.1
27	560	12,000	0.27	5.6
30	620	13,000	0.30	6.2
33	680	15,000	0.33	6.8
36	750	16,000	0.36	7.5
39	820	18,000	0.39	8.2
43	910	20,000	0.43	9.1
47	1,000	22,000	0.47	10.0
51	1,100	24,000	0.51	11.0
56	1,200	27,000	0.56	12.0
62	1,300	30,000	0.62	13.0
68	1,500	33,000	0.68	15.0
75	1,600	36,000	0.75	16.0
82	1,800	39,000	0.82	18.0
91	2,000	43,000	0.91	20.0
100	2,200	47,000	1.0	22.0
110	2,400	51,000	1.1	
120	2,700	56,000	1.2	
130	3,000	62,000	1.3	
150	3,300	68,000	1.5	
160	3,600	75,000	1.6	
180	3,900	82,000	1.8	
200	4,300	91,000	2.0	

Stock No.	Watts	Tol.	NET EACH	100 Lots, EACH
2 M 045	1/2	±5%	20c	12c
2 M 065	1	±5%	30c	18c
2 M 085	2	±5%	40c	24c

†Applies to 100 resistors of one value only.

## "LITTLE DEVIL" ASSORTMENTS



NO CHARGE for Plastic Cabinet

Selected supply of 150 1/2-watt or 125 1- or 2-watt resistors in most-often-needed values. Complete with bandsome plastic cabinet which is included at no extra charge. Cabinet has 5 drawers and 40 compartments. Wt., 7 lbs.

No.	Type	Description	Each
2 M 761	CAB-10		

# Mallory Capacitors



## FP, WP AND SILVERLYTIC ELECTROLYTIC CAPACITORS

For all filter and by-pass circuits. Feature complete stability under heavy ripple current, high surge voltage, and high temperatures. All units designed to the most rigid specifications. Silverlytics. Ideal for use in transistor or other low voltage circuits. A single standardized size case is utilized regardless of type. Extremely compact. FP and WP. FP types have the ex-

clusive Mallory Fabricated Plates—anodes specially constructed of metallized cotton gauze. WP units have etched plate anodes. Hermetically sealed. Separate positive terminal provided for each section. Can is negative except\*. Insulating washer supplied with FP and WP units. For mounting hardware see Mallory listing on page 110. Average shpg. wt., 6 oz.



Silverlytic Subminiature

### SINGLE SECTION

Stock No.	Mfr's Type	Mfd	DC Wkg. Volts	Size	NET EACH
17 L 360	FP142	10	450	1/2x2"	.91
17 L 364	FP143	15	450	1x2"	1.00
17 L 367	FP143	20	450	1x2"	1.06
17 L 362	FP146	40	450	1x2 1/2"	1.15
17 L 368	FP149	80	450	1 1/2x2 1/2"	1.21
17 L 370	FP137	80	350	1 1/2x2 1/2"	1.23
17 L 759	FP138	50	350	1 1/2x2 1/2"	1.68
17 L 371	FP140	125	350	1 1/2x3"	1.73
17 L 372	FP115	50	150	1x2"	.97
17 L 373	FP216	100	150	1x2 1/2"	1.18
17 L 799	FP117	150	150	1x3"	1.26
17 L 836	FP119	300	150	1 1/2x3"	1.65
17 L 835	WP063	4	50	1x3"	1.75
17 L 350	WP065	500	50	1 1/2x2"	1.58
17 L 258	WP068	1500	50	1 1/2x4"	2.6
17 L 257	WP052	40	25	1x2"	.79
17 L 350	WP057	500	25	1 1/2x2 1/2"	1.50
17 L 352	WP059	1000	25	1 1/2x2 1/2"	2.09
17 L 353	WP039	1000	15	1 1/2x2 1/2"	1.50
17 L 354	WP041	2000	15	1 1/2x2 1/2"	2.03
17 L 256	WP042	3000	15	1 1/2x3"	2.06

### DUAL SECTION

Stock No.	Mfr's Type	Mfd	DC Wkg. Volts	Size	NET EACH
17 L 286	FP288	40-40	500	1 1/2x3"	2.53
17 L 284	FP277	60-80	500-150	1 1/2x3"	2.20
17 L 842	FP258	15-15	475	1 1/2x2 1/2"	1.38
17 L 843	FP262	40-40	475	1 1/2x3"	2.15
17 L 351	FP250	40-80	475-200	1 1/2x3"	2.32
17 L 352	FP216	40-80	475-300	1 1/2x3"	1.82
17 L 282	FP260	20-100	475	1 1/2x3"	3.06
17 L 283	FP266	80-50	475	1 1/2x4"	1.12
17 L 375	FP231	10-10	450	1x2"	1.12
17 L 376	FP234	20-20	450	1x2"	1.50
17 L 765	FP237	30-30	450	1 1/2x2 1/2"	2.03
17 L 430	FP238	40-40	450	1 1/2x3"	2.15
17 L 431	FP239	50-40	450	1 1/2x3"	2.26
17 L 766	FP10*	80-10	450	1 1/2x3"	2.15
17 L 431	FP245	80-10	450	1 1/2x3"	2.12
17 L 281	FP245.3	80-10	450	1 1/2x4"	2.45
17 L 838	FP230	20-50	450-250	1 1/2x2 1/2"	1.65
17 L 268	FP229.6	50-100	450-50	1 1/2x2 1/2"	2.06
17 L 356	FP244	80-50	450-50	1 1/2x4"	2.85
17 L 832	FP229.3	75-75	400	1 1/2x4"	1.53
17 L 483	FP225	15-15	350	1x2"	1.32
17 L 630	FP227	20-20	350	1x2 1/2"	1.35
17 L 265	FP227.3	30-30	300	1 1/2x2 1/2"	1.71
17 L 354	FP218	120-20	300	1 1/2x3"	2.73
17 L 355	FP217.9	75-75	300	1 1/2x3"	2.23
17 L 767	FP217	20-20	250	1x2"	1.12
17 L 837	FP217	40-40	250	1x3"	1.47
17 L 353	FP217.7	150-150	250	1 1/2x4"	3.03
17 L 760	FP208	20-20	150	1x2"	1.00
17 L 379	FP211	30-30	150	1x2"	1.09
17 L 761	FP210	40-20	150	1 1/2x2 1/2"	1.12
17 L 762	FP212	40-40	150	1x2 1/2"	1.12
17 L 763	FP213	50-30	150	1x2"	1.18
17 L 803	FP214	50-50	150	1 1/2x2 1/2"	1.26
17 L 764	FP216	90-40	150	1x3"	1.35
17 L 395	FP215	125-50	150	1 1/2x2 1/2"	2.00
17 L 261	FP214.5	75-75	150	1 1/2x2 1/2"	1.53
17 L 995	FP216.1	200-5	150	1 1/2x4"	2.26
17 L 262	FP216.3	200-150	150	1 1/2x4"	2.52
17 L 263	FP216.4	200-200	150	1 1/2x4"	2.37
17 L 269	WP206	50-150	150-25	1 1/2x2 1/2"	1.29
17 L 433	WP200	1000-1000	15	1 1/2x2 1/2"	2.59
17 L 356	WP204	250-1000	10-6	1 1/2x2 1/2"	1.68

### TRIPLE SECTION

Stock No.	Mfr's Type	Mfd	DC Wkg. Volts	Size	NET EACH
17 L 713	FP398	10-40-40	500-450-450	1 1/2x3"	2.44
17 L 864	FP394	10-10-10	475	1x3"	1.59
17 L 698	FP396.2	30-30-20	475	1 1/2x3"	2.62
17 L 699	FP397	40-35-10	475	1 1/2x2 1/2"	2.26
17 L 697	FP391.1	20-20-60	475-475-450	1 1/2x4"	2.68
17 L 696	FP387.1	10-10-150	475-475-50	1x3"	1.76
17 L 361	FP386	10-10-5	475-475-25	1x3"	1.44
17 L 857	FP385	10-40-100	475-450-200	1 1/2x3"	2.47
17 L 858	FP378	40-40-40	450	1 1/2x4"	2.88
17 L 665	FP375.8	10-10-10	450	1 1/2x4"	3.18
17 L 666	FP376.1	15-15-10	450	1x2 1/2"	1.53
17 L 667	FP376.3	20-10-10	450	1x3"	1.73
17 L 668	FP376.5	20-20-40	450	1 1/2x2 1/2"	2.12
17 L 669	FP376.8	40-40-10	450	1 1/2x2 1/2"	2.44
17 L 664	FP370	40-10-80	450-450-200	1 1/2x3"	2.29
17 L 855	FP375	40-40-100	450-450-200	1 1/2x4"	2.91
17 L 663	FP369.1	40-40-10	450-450-150	1x3"	1.33
17 L 853	FP366	20-10-50	450-450-50	1 1/2x3"	2.44
17 L 597	FP345.2	10-10-20	450-450-25	1x2"	1.68
17 L 598	FP345.5	15-15-40	450-450-25	1 1/2x2 1/2"	1.62
17 L 599	FP345.8	20-20-20	450-450-25	1x3"	1.79
17 L 444	FP346	40-40-20	450-450-25	1 1/2x3"	2.32
17 L 593	FP343.4	20-15-15	450-350-350	1x3"	1.91

### TRIPLE SECTION

Stock No.	Mfr's Type	Mfd	DC Wkg. Volts	Size	NET EACH
17 L 594	FP343.6	20-40-10	450-350-350	1 1/2x2 1/2"	2.06
17 L 573	FP343.1	15-20-20	450-350-250	1x3"	1.73
17 L 574	FP341.5	20-60-100	450-250-25	1 1/2x2 1/2"	2.15
17 L 363	FP341	40-90-50	450-150-150	1 1/2x3"	2.35
17 L 573	FP340	20-50-100	450-150-75	1 1/2x2"	2.00
17 L 359	FP343	40-100-50	450-150-50	1 1/2x3"	2.32
17 L 572	FP333.8	80-20-10	450-400-350	1 1/2x3"	2.53
17 L 428	FP330.5	10-10-10	350	1x2"	1.41
17 L 429	FP330.7	30-20-10	350	1x3"	1.91
17 L 434	FP331.3	80-60-60	350	1 1/2x4"	3.26
17 L 386	FP328.3	20-10-5	350-350-250	1x2"	1.50
17 L 442	FP330	15-10-20	350-250-25	1x2"	1.47
17 L 346	FP331	30-30-20	350-350-25	1x3"	1.82
17 L 846	FP335	100-60-20	300-250-250	1x3"	2.85
17 L 425	FP320	40-20-20	250	1 1/2x2"	1.88
17 L 358	FP319	80-40-50	250-150-50	1 1/2x2 1/2"	1.94
17 L 289	FP311.2	20-20-20	150	1x2"	.35
17 L 337	FP311.4	40-20-20	150	1 1/2x2"	1.41
17 L 338	FP311.5	40-40-40	150	1x3"	.53
17 L 339	FP331.7	80-40-20	150	1 1/2x2"	1.71
17 L 340	FP311.9	120-120-40	150	1 1/2x2"	2.38
17 L 387	FP306	40-20-20	150-150-25	1x2"	1.35
17 L 767	FP307	40-20-100	150-150-25	1 1/2x2"	1.47
17 L 767	FP304	40-20-200	150-150-25	1 1/2x2"	1.59
17 L 768	FP310	40-40-20	150-150-25	1x2 1/2"	1.41
17 L 438	FP309	40-40-20	150-150-25	1x2 1/2"	1.59
17 L 344	FP311	50-50-20	150-150-25	1x3"	1.56
17 L 844	FP314	40-40-200	150-150-25	1x3"	1.65
17 L 288	FP302.7	80-30-300	150-150-10	1 1/2x2"	1.85
17 L 287	WP302.1	15-15-1200	150-150-2	1x2"	1.76
17 L 358	FP312	100-50-25	150-50-25	1x3"	1.76
17 L 337	FP311.4	20-250-100	150-15-15	1 1/2x2"	1.71
17 L 357	WP520	40-40-40	25	1x2"	1.26

### QUADRUPLE SECTION

Stock No.	Mfr's Type	Mfd	DC Wkg. Volts	Size	NET EACH
17 L 880	FP474	10-10-10-10	475	1 1/2x2"	2.06
17 L 994	FP476	40-20-10-10	475	1 1/2x3"	3.00
17 L 370	FP456.5	10-60-30-125	475-450-400-50	1 1/2x4"	3.26
17 L 369	FP456	25-20-40-100	475-450-300-50	1 1/2x3"	2.91
17 L 876	FP456	15-15-80-40	475-475-300-50	1 1/2x3"	2.82
17 L 992	FP455	10-50-30-200	475-450-450-25	1 1/2x3"	2.77
17 L 422	FP434	10-10-10-10	450	1 1/2x2"	1.97
17 L 423	FP444	20-20-20-20	450	1 1/2x3"	2.76
17 L 893	WP433.6	5-5-5-5	450	1 1/2x2"	1.76
17 L 894	FP434.5	20-10-10-10	450	1 1/2x2"	2.76
17 L 895	FP444.4	30-15-15-15	450	1 1/2x3"	3.02
17 L 896	FP444.8	30-30-20-20	450	1 1/2x3"	2.66
17 L 897	FP444.9	30-30-30-15	450	1 1/2x4"	3.12
17 L 898	FP445	35-35-10-5	450	1 1/2x4"	2.70
17 L 899	FP447	40-40-20-20	450	1 1/2x4"	3.26
17 L 990	FP450	80-10-10-10	450	1 1/2x4"	2.97
17 L 892	FP432.9	40-20-10-100	450-450-450-250	1 1/2x4"	3.44
17 L 891	FP432.4	40-40-30-10	450-450-450-200	1 1/2x4"	3.15
17 L 773	FP437	60-40-10-25	450-450-450-25	1 1/2x2 1/2"	2.68
17 L 890	FP431.4	20-20-20-100	450-450-450-50	1 1/2x4"	3.09
17 L 421	FP424	15-15-10-20	450-450-450-50	1 1/2x4"	2.06
17 L 830	FP431	40-10-15-25	450-450-450-25	1 1/2x2 1/2"	2.41
17 L 887	FP430.2	40-20-20-25	450-450-450-25	1 1/2x3"	2.41
17 L 872	FP436	40-20-20-40	450-450-450-25	1 1/2x3"	2.73
17 L 368	FP432	40-10-10-250	450-450-450-25	1 1/2x3"	2.76
17 L 888	FP429	40-30-10-20	450-450-450-25	1 1/2x3"	2.65
17 L 889	FP430.6	40-40-40-10	450-450-450-25	1 1/2x4"	3.23
17 L 448	FP426	20-15-20-20	450-450-450-25	1 1/2x4"	3.53
17 L 886	FP428.4	40-40-30-30	450-450-350-350	1 1/2x4"	2.03
17 L 367	FP423.4	10-40-100-100	450-350-250-50	1 1/2x3"	3.26
17 L 834	FP413 X	40-40-40-20	450-300-300-150	1 1/2x3"	2.88
17 L 895	FP427.5	10-10-60-100	450-450-200-50	1 1/2x2 1/2"	2.26
17 L 818	FP425.5	20-20-60-100	450-450-150-25	1 1/2x2 1/2"	2.50
17 L 819	FP426.9	100-40-80-125	450-450-150-25	1 1/2x4"	3.35
17 L 366	FP429.1	5-5-50-80	400-400-300-250	1 1/2x4"	2.73
17 L 749	FP419.9	15-15-15-50	350-350-350-50	1 1/2x4"	2.98

# Mallory Capacitors



## PLASCAP TRI-SEALED TUBULARS

For use in RF bypass and coupling circuits. Triple-sealed—with moisture-free Malleocone. Exceed RETMA requirements on humidity and immersion tests. Feature stable capacity, low power factor, and high insulation resistance. Will operate continuously at 85° C. "Fastite" tinned copper leads are permanently fastened and sealed with Malleocone, which is impervious to soldering iron heat. Av. shpg. wt., 2 oz.

### 400 VOLTS DC WORKING

No.	Type	Mfd.	Size	EACH
17 L 901	PT411	.01	1/2x1"	15c
17 L 902	PT412	.02	3/4x1 1/2"	15c
17 L 906	PT4122	.022	3/4x1 1/2"	18c
17 L 907	PT413	.03	1x1 1/2"	
17 L 907	PT4133	.033	3/4x1 1/2"	
17 L 908	PT4147	.047	1x1 1/2"	
17 L 904	PT415	.05	1x1 1/2"	21c
17 L 905	PT401	.1	1 1/2x1 1/2"	
17 L 320	PT4015	.15	1 1/2x1 1/2"	
17 L 321	PT402	.2	1 1/2x1 1/2"	
17 L 322	PT4022	.22	1 1/2x1 1/2"	26c
17 L 900	PT4025	.25	1 1/2x1 1/2"	
17 L 909	PT4047	.47	1 1/2x2 1/4"	35c
17 L 909	PT405	.5	1 1/2x2 1/4"	
17 L 910	PT41	1.0	1 1/2x2 1/4"	73c

### 600 VOLTS DC WORKING

No.	Type	Mfd.	Size	EACH
17 L 915	PT621	.001	3/4x1"	15c
17 L 916	PT622	.002	3/4x1"	
17 L 928	PT6222	.0022	3/4x1"	
17 L 917	PT623	.003	3/4x1"	
17 L 929	PT6233	.0033	3/4x1"	
17 L 918	PT624	.004	3/4x1"	
17 L 930	PT627	.007	3/4x1"	
17 L 919	PT625	.005	3/4x1"	
17 L 920	PT626	.006	3/4x1"	
17 L 921	PT611	.01	3/4x1 1/2"	
17 L 937	PT615	.015	3/4x1 1/2"	
17 L 922	PT612	.02	3/4x1 1/2"	18c
17 L 931	PT6122	.022	3/4x1 1/2"	
17 L 923	PT613	.03	3/4x1 1/2"	21c
17 L 932	PT6133	.033	3/4x1 1/2"	
17 L 924	PT614	.04	3/4x1 1/2"	21c
17 L 933	PT6147	.047	3/4x1 1/2"	
17 L 925	PT615	.05	3/4x1 1/2"	24c
17 L 927	PT616	.06	3/4x1 1/2"	
17 L 927	PT601	.1	3/4x1 1/2"	26c
17 L 330	PT602	.2	3/4x2 1/4"	
17 L 331	PT6022	.22	3/4x2 1/4"	41c
17 L 934	PT6025	.25	3/4x2 1/4"	
17 L 332	PT6047	.47	3/4x2 1/4"	47c
17 L 935	PT605	.5	3/4x2 1/4"	
17 L 936	PT61	1.0	1 1/2x3"	73c

### 1600 VOLTS DC WORKING

No.	Type	Mfd.	Size	EACH
17 L 940	PT1621	.001	3/4x1"	32c
17 L 941	PT1622	.002	3/4x1"	
17 L 955	PT16222	.0022	3/4x1"	
17 L 942	PT1623	.003	3/4x1"	
17 L 956	PT16233	.0033	3/4x1"	
17 L 943	PT1624	.004	3/4x1"	
17 L 957	PT16247	.0047	3/4x1"	
17 L 944	PT1625	.005	3/4x1"	
17 L 945	PT1626	.006	3/4x1"	
17 L 946	PT1627	.007	3/4x1"	
17 L 947	PT16275	.0075	3/4x1"	
17 L 948	PT1628	.008	3/4x1 1/2"	35c
17 L 949	PT1611	.01	3/4x1 1/2"	
17 L 950	PT1615	.015	3/4x1 1/2"	35c
17 L 951	PT1612	.02	3/4x1 1/2"	
17 L 958	PT16122	.022	3/4x1 1/2"	41c
17 L 959	PT1613	.03	3/4x1 1/2"	
17 L 960	PT1614	.04	3/4x2 1/4"	41c
17 L 952	PT1615	.05	3/4x2 1/4"	
17 L 953	PT1615	.015	3/4x1 1/2"	47c

## TZ TRANSMITTING CAPACITORS



For filter and bypass circuits in power amplifiers, TV and transmitting equipment. Oil impregnated type in round containers for upright or inverted mounting. Internally insulated from case. 1/2" units have two solder lug terminals. 2" units have special standoff insulated terminals. Supplied with mounting brackets. Ample insulation exceeds RETMA voltage rating requirements. For circuits requiring compact capacitors of long life. Av. shpg. wt., 4 oz.

No.	Type	Mfd.	W.V.	Size	E.A.
17 L 380	TZ383	4.0	600	2x2"	3.65
17 L 381	TZ384	2.0	1000	1 1/2x3 1/4"	3.20
17 L 382	TZ386	5.0	1500	1 1/2x3 1/4"	2.97
17 L 383	TZ389	4.0	1000	2x4"	4.26
17 L 384	TZ387	1.0	1500	2x2 1/2"	3.20



TC



TCD



TCS



TCT

## METAL-CASED ELECTROLYTICS

Metal-cased electrolytics. All units have external insulating sleeves. Type TC has 3" tinned copper leads; TCD, 8" insulated wire leads. TCS, soldering lugs. Shpg. wt., 4 oz.

### TYPE TC SINGLE CAPACITORS

No.	Type	Mfd.	W.V.	Size	E.A.
17 L 450	92	10	600	1 1/2x2 1/4"	1.73
17 L 451	82	10	500	1 1/2x2 1/4"	1.79
17 L 452	81	10	500	1 1/2x2 1/4"	1.59
17 L 246	83	20	500	1 1/2x1 1/2"	.94
17 L 247	84	30	500	1 1/2x1 1/2"	1.03
17 L 452	70	5	450	1 1/2x1 1/2"	.71
17 L 619	71	8	450	1 1/2x1 1/2"	.73
17 L 620	72	10	450	1 1/2x1 1/2"	.76
17 L 638	73	12	450	1 1/2x1 1/2"	.79
17 L 622	74	16	450	1 1/2x1 1/2"	.82
17 L 453	75	20	450	1 1/2x1 1/2"	.91
17 L 454	77	30	450	1 1/2x1 1/2"	1.00
17 L 508	78	40	450	1 1/2x2 1/4"	1.06
17 L 634	60	5	350	1 1/2x1 1/2"	.62
17 L 635	61	8	350	1 1/2x1 1/2"	.71
17 L 455	62	10	350	1 1/2x1 1/2"	.73

No.	Type	Mfd.	W.V.	Size	E.A.
17 L 341	63	12	350	1 1/2x1 1/2"	.76
17 L 637	64	16	350	1 1/2x1 1/2"	.82
17 L 456	65	20	350	1 1/2x1 1/2"	.85
17 L 244	68	60	350	1 1/2x2 1/4"	1.15
17 L 626	50X	5	250	1 1/2x1 1/2"	.66
17 L 457	52	10	250	1 1/2x1 1/2"	.71
17 L 340	53	12	250	1 1/2x1 1/2"	.73

No.	Type	Mfd.	W.V.	Size	E.A.
17 L 629	54	16	250	1 1/2x1 1/2"	.76
17 L 505	55	20	250	1 1/2x1 1/2"	.76
17 L 633	58	40	250	1 1/2x1 1/2"	.91
17 L 243	59	50	250	1 1/2x1 1/2"	1.00
17 L 458	40	5	150	1 1/2x1 1/2"	.59
17 L 624	41	8	150	1 1/2x1 1/2"	.62
17 L 627	42	10	150	1 1/2x1 1/2"	.62
17 L 625	43	12	150	1 1/2x1 1/2"	.65

No.	Type	Mfd.	W.V.	Size	E.A.
17 L 608	44	16	150	1 1/2x1 1/2"	.68
17 L 502	45	20	150	1 1/2x1 1/2"	.71
17 L 610	47	30	150	1 1/2x1 1/2"	.76
17 L 611	48	40	150	1 1/2x1 1/2"	.79
17 L 504	49	50	150	1 1/2x1 1/2"	.82
17 L 640	492	80	150	1 1/2x2 1/4"	.94

No.	Type	Mfd.	W.V.	Size	E.A.
17 L 242	495	150	150	1 1/2x2 1/4"	1.12
17 L 639	302	5	50	1 1/2x1 1/2"	.53
17 L 623	30	10	50	1 1/2x1 1/2"	.59
17 L 603	32	10	50	1 1/2x1 1/2"	.59
17 L 604	36	25	50	1 1/2x1 1/2"	.62
17 L 605	39	50	50	1 1/2x1 1/2"	.62
17 L 641	3501	100	50	1 1/2x2 1/4"	.82
17 L 342	50025	250	50	1 1/2x2 1/4"	1.03
17 L 600	22	10	25	1 1/2x1 1/2"	.59
17 L 601	26	25	25	1 1/2x1 1/2"	.59
17 L 602	29	50	25	1 1/2x1 1/2"	.65
17 L 500	2501	100	25	1 1/2x1 1/2"	.79

## CARDBOARD TUBULARS

Quality tubular condensers for replacement TV and radio applications or as original units in new equipment. In cardboard tubes with inner seal and ample wax seal at ends. All types supplied with flexible leads. All units (except TN-111) equipped with fixed horizontal mounting strip. †Have additional feet for vertical mounting. For above or below chassis mounting. Av. shpg. wt., 4 oz.

### Fig. A—3N TRIPLE COMMON-NEGATIVE

No.	Type	Mfd.	W.V.	Size	E.A.	
17 L 984	541	40-20	450	1 1/2x3 1/4"	2.09	
17 L 983	539	30	450	1 1/2x3 1/4"	2.20	
		30	350	1 1/2x3 1/4"		
		30	250	1 1/2x3 1/4"		
17 L 982	537	30	150	1 1/2x3 1/4"	1.88	
		100	25	1 1/2x3 1/4"		
		100	25	1 1/2x3 1/4"		
17 L 981	535	40	350	1 1/2x3 1/4"	1.94	
		30	250	1 1/2x3 1/4"		
		40	150	1 1/2x3 1/4"		
17 L 050	527	20-20	150	1 1/2x2 1/4"	1.21	
		30	25	1 1/2x2 1/4"		
		30	25	1 1/2x2 1/4"		
17 L 051	533	30-30	25	1 1/2x2 1/4"	1.29	
		20-10	150	1 1/2x2 1/4"		
		125	10	150		1 1/2x2 1/4"
17 L 052	TN-125	40-20	150	1 1/2x2 1/4"	1.18	
		125	10	150		1 1/2x2 1/4"
		125	10	150		1 1/2x2 1/4"
17 L 053	TN-129†	40-20	150	1 1/2x2 1/4"	1.32	
		20	150	1 1/2x2 1/4"		
		20	150	1 1/2x2 1/4"		
17 L 348	529	50-30	150	1 1/2x2 1/4"	1.62	
		200	25	1 1/2x2 1/4"		
		200	25	1 1/2x2 1/4"		
17 L 963	540	80-50	150	1 1/2x3 1/4"	1.82	
		50	150	1 1/2x3 1/4"		
		50	150	1 1/2x3 1/4"		

### TYPE TC SINGLE CAPACITORS

No.	Type	Mfd.	W.V.	Size	E.A.
17 L 466	2505	500	25	1 1/2x2 1/4"	1.35
17 L 460	1505	500	15	1 1/2x2 1/4"	1.03
17 L 462	1502	200	15	1 1/2x1 1/2"	.82
17 L 461	605	500	6	1 1/2x1 1/2"	.91
17 L 462	610	1000	6	1 1/2x2 1/4"	1.12
17 L 463	310	1000	3	1 1/2x1 1/2"	1.00

### TCD COMMON-NEGATIVE DUALS

No.	Type	Mfd.	W.V.	Size	E.A.
17 L 470	71	8-8	450	1 1/2x2"	1.00
17 L 507	72	10-10	450	1 1/2x2"	1.09
17 L 471	74	15-15	450	1 1/2x3 1/4"	1.27
17 L 472	75	20-20			

# Mallory Capacitors



## OIL METAL-CASED TUBULARS

For vibrator buffer, coupling, and other high voltage circuits. In hermetically sealed aluminum containers, externally insulated. 2 1/2" leads. With clip. Av. shpg. wt., 4 oz.

### 600 VOLT DC WORKING

No.	Type	Mfd	Size	NET
17 L 700	101	.01	1 1/2 x 1 1/2"	.56
17 L 701	103	.02	1 1/2 x 1 1/2"	.62
17 L 702	106	.05	1 1/2 x 1 1/2"	.65
17 L 703	110	.1	1 1/2 x 1 1/2"	.73
17 L 704	113	.25	1 1/2 x 2 1/2"	1.09
17 L 705	116	.5	1 1/2 x 2 1/2"	1.29

### 1000 VOLT DC WORKING

No.	Type	Mfd	Size	NET
17 L 706	301	.01	1 1/2 x 1 1/2"	.65e
17 L 707	303	.02	1 1/2 x 1 1/2"	.71e
17 L 708	306	.05	1 1/2 x 1 1/2"	.76e
17 L 709	310	.1	1 1/2 x 2 1/2"	.88e

### 1600 VOLT DC WORKING

No.	Type	Mfd	Size	NET
17 L 035	370	.002	1 1/2 x 1 1/2"	.71e
17 L 036	377	.003	1 1/2 x 1 1/2"	.71e
17 L 037	371	.005	1 1/2 x 1 1/2"	.71e
17 L 038	372	.008	1 1/2 x 1 1/2"	.71e
17 L 039	373	.01	1 1/2 x 1 1/2"	.71e
17 L 041	375	.015	1 1/2 x 1 1/2"	.73e
17 L 042	376	.02	1 1/2 x 1 1/2"	.76e
17 L 043	378	.03	1 1/2 x 1 1/2"	.76e
17 L 044	379	.04	1 1/2 x 1 1/2"	.76e
17 L 045	380	.05	1 1/2 x 2 1/2"	.82e

### 2000 VOLT DC WORKING

No.	Type	Mfd	Size	NET
17 L 046	458	.0025	1 1/2 x 1 1/2"	.73e
17 L 043	459	.005	1 1/2 x 1 1/2"	.73e
17 L 044	460	.0075	1 1/2 x 1 1/2"	.73e
17 L 047	461	.01	1 1/2 x 1 1/2"	.73e
17 L 048	462	.0125	1 1/2 x 1 1/2"	.76e
17 L 048	463	.015	1 1/2 x 1 1/2"	.76e
17 L 049	464	.02	1 1/2 x 1 1/2"	.79e
17 L 049	465	.03	1 1/2 x 2"	.82e
17 L 049	466	.04	1 1/2 x 2 1/2"	.82e
17 L 049	467	.05	1 1/2 x 2 1/2"	.85e



## 6000 V OIL-IMPREGNATED TV PAPER CAPACITORS

Oil-impregnated; wax-sealed. Provide extra safety factor for high-voltage applications. High dependability under severe temperature and humidity variations. Two bare tinned-copper leads, one at each end. May be mounted by its own leads, or with TH clips (see hardware) Av. shpg. wt., 3 oz. Other Mallory capacitors for auto radio noise suppression are listed on page 120.

Stock No.	Type	Mfd	Size	NET
17 L 685	635	.0005	1 1/2 x 1 1/2"	.65
17 L 686	621	.001	1 1/2 x 1 1/2"	.65
17 L 687	622	.002	1 1/2 x 1 1/2"	.65
17 L 688	623	.003	1 1/2 x 1 1/2"	.68
17 L 689	625	.005	1 1/2 x 2 1/2"	.68
17 L 690	6275	.0075	1 1/2 x 2 1/2"	.71
17 L 691	611	.01	1 1/2 x 2 1/2"	.71
17 L 692	612	.02	1 1/2 x 3"	.73
17 L 693	613	.03	1 1/2 x 3 1/2"	.73
17 L 694	615	.05	1 1/2 x 4 1/2"	1.03



## MINIATURE METAL TUBULARS

MT miniature metal tubular capacitors—ideal for use in hearing aids, personal radios, radio-controlled model airplanes—and other applications where very small tubulars are required. 600-volt units are ideal for use in TV sets. Oil-impregnated 600v. units, 100v. condensers are wax-impregnated. Tinned-copper leads. Av. shpg. wt., 2 oz.

No.	Type	Mfd	W.V.	Size	NET
17 L 129	105	.001	100	1 1/2 x 1 1/2"	.53e
17 L 130	107	.002	100	1 1/2 x 1 1/2"	.53e
17 L 131	115	.005	100	1 1/2 x 1 1/2"	.53e
17 L 132	125	.01	100	1 1/2 x 1 1/2"	.53e
17 L 133	127	.02	100	1 1/2 x 1 1/2"	.56e
17 L 134	135	.05	100	1 1/2 x 1 1/2"	.56e
17 L 135	145	.1	100	1 1/2 x 1 1/2"	.59e
17 L 136	605	.001	600	1 1/2 x 1 1/2"	.56e
17 L 137	607	.002	600	1 1/2 x 1 1/2"	.56e
17 L 138	615	.005	600	1 1/2 x 1 1/2"	.56e
17 L 139	625	.01	600	1 1/2 x 1 1/2"	.56e



## AC MOTOR-STARTING CAPACITORS

Type PS non-polarized dry electrolytics. For intermittent duty in starting 110 volt AC motors. \*For 330 v. AC motors. †Type EP. motor-starting, in alum. can. ‡For 163 v. AC motors. Screw type terminals. Av. shpg. wt., 10 oz.

No.	Type	Mfd	Size	NET
18 L 403	2730*	27	1 1/2 x 3 1/2"	3.82
17 L 550	5310	53	1 1/2 x 3 1/2"	1.26
17 L 551	6410	64	1 1/2 x 3 1/2"	1.32
17 L 552	7010	70	1 1/2 x 3 1/2"	1.41
17 L 553	7510	75	1 1/2 x 3 1/2"	1.50
18 L 404†	8130*	81	2 1/2 x 4 1/2"	6.76
17 L 554	8610	86	1 1/2 x 3 1/2"	1.56
17 L 555	9710	97	1 1/2 x 3 1/2"	1.65
17 L 556	10810	108	1 1/2 x 3 1/2"	1.68
18 L 405‡	10830	108	2 1/2 x 4 1/2"	8.06
17 L 557	12410	124	1 1/2 x 3 1/2"	1.73
17 L 558	13010	130	1 1/2 x 3 1/2"	1.73
17 L 559	14510	145	1 1/2 x 3 1/2"	1.88
17 L 400	15810	158	1 1/2 x 3 1/2"	1.91
17 L 561	16110	161	1 1/2 x 3 1/2"	1.91
17 L 563	19410	194	1 1/2 x 3 1/2"	2.29
17 L 565	21610	216	1 1/2 x 3 1/2"	2.38
17 L 566	24310	243	1 1/2 x 3 1/2"	2.38
18 L 402	24365†	243	2 1/2 x 4 1/2"	5.76
17 L 567	27010	270	1 1/2 x 4 1/2"	2.79
18 L 401	28210	282	1 1/2 x 4 1/2"	2.85
17 L 568	32410	324	1 1/2 x 4 1/2"	3.18
17 L 569	34010	340	1 1/2 x 4 1/2"	3.26
17 L 570	37810	378	2 1/2 x 4 1/2"	3.53
17 L 571	40010	400	2 1/2 x 4 1/2"	3.56

## PL & HB HARDWARE FOR ABOVE

Plastic end caps and horizontal mounting brackets for motor-starting capacitors above. P.E.C. indicates plastic end cap. Av. shpg. wt., 3 oz.

No.	Type	Description	Size	NET
18 L 390	PL-3	P.E.C. on motor	1 1/2"	1.2e
18 L 391	PL-6	P.E.C. on motor	1 1/2"	1.5e
18 L 392	PL-8	P.E.C. on motor	2 1/2"	1.8e
18 L 393	PL-3A	P.E.C. off motor	1 1/2"	1.2e
18 L 394	PL-6A	P.E.C. off motor	1 1/2"	1.5e
18 L 395	PL-8A	P.E.C. off motor	2 1/2"	1.8e
18 L 396	HB-4	Horiz. bracket	3"	1.8e
18 L 397	HB-8	Horiz. bracket	4 1/2"	2.1e



## ALUMINUM CAN THREADED NECK DRY ELECTROLYTICS

Threaded neck units for replacement of wet or dry electrolytics. Upright mounting types. With special hardware to facilitate replacement of original units. For sub-chassis mounting, see TH clips at right. RS, HS and RM types have 8" leads. \*Has common positive and separate negative terminals. Type SR638 is lug-type dual. Av. shpg. wt., 7 oz.

No.	Type	Mfd	W.V.	Size	NET
17 L 058	HS693	8	600	1 1/2 x 4"	1.85
17 L 064	HS696	20	600	1 1/2 x 4 1/2"	2.26
17 L 220	RS213	8	450	1 1/2 x 4"	1.29
17 L 801	RS212	8	450	1 1/2 x 3 1/2"	1.29
17 L 059	HD684	10	450	1 x 3"	1.35
17 L 221	RS215	12	450	1 x 2 1/2"	1.41
17 L 802	RS214	12	450	1 1/2 x 3"	1.41
17 L 803	RS217	16	450	1 1/2 x 3"	1.44
17 L 222	RS216	16	450	1 1/2 x 3"	1.44
17 L 231	RS219	20	450	1 1/2 x 3"	1.59
17 L 232	RS223	30	450	1 1/2 x 3"	1.76
17 L 233	RS224	40	450	1 1/2 x 3"	1.85
17 L 327	SR638	8-8	450	1 1/2 x 2 1/2"	1.76
17 L 334	SR645	*8-8	450	1 1/2 x 2 1/2"	1.76
17 L 236	RM202	8-8	450	1 1/2 x 3"	1.76
17 L 237	RM205	8-8	450	1 1/2 x 3"	2.94
17 L 226	RS207	30	250	1 x 3 1/2"	1.21

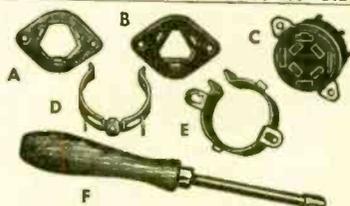
For other listings of Mallory buffer and Auto Radio Noise Suppressor Capacitors see page 120.

## HIGH CAPACITY ELECTROLYTICS

Plastic case electrolytics for all high-capacity, low-voltage uses—dry disc rectifier filters, movie equipment, etc. †Type 1060A has aluminum case and is specially designed for fence control. \*Non-polarized types — for intermittent AC use only. All others are polarized type HC. \*\*For photoflash. Have screw terminals at one end except † lugs. Wt., 10 oz.



No.	Type	Mfd	W.V.	Size	NET
17 L 810	4505*	50	450	1 1/2 x 3 1/2"	4.41
17 L 811	4510*	100	450	2 1/2 x 4 1/2"	6.82
17 L 820	45003**	300	450	2 1/2 x 4 1/2"	6.17
18 L 426	45052**	525	450	2 1/2 x 4 1/2"	13.23
18 L 428	3003*	15	300	1 1/2 x 3 1/2"	2.20
17 L 808	3014*	100	300	2 1/2 x 4 1/2"	3.97
17 L 588	3025*	200	300	2 1/2 x 4 1/2"	5.58
17 L 592	2005	500	200	2 1/2 x 4 1/2"	5.76
17 L 591	15010	1000	150	2 1/2 x 4 1/2"	6.17
18 L 427	1235*	300	125	2 1/2 x 4 1/2"	3.33
17 L 804	1225*	200	125	1 1/2 x 4 1/2"	2.94
17 L 805	1255*	500	125	2 1/2 x 4 1/2"	4.41
17 L 585	5005	500	50	1 1/2 x 3 1/2"	2.29
17 L 586	5010	1000	50	1 1/2 x 3 1/2"	3.76
17 L 590	5020	2000	50	1 1/2 x 4 1/2"	5.14
17 L 582	2510	1000	25	1 1/2 x 2 1/2"	2.85
17 L 583	2520	2000	25	1 1/2 x 3 1/2"	3.38
17 L 584	2540	4000	25	1 1/2 x 4 1/2"	3.97
17 L 580	1520	2000	15	1 1/2 x 2 1/2"	2.25
17 L 581	1540	4000	15	1 1/2 x 3 1/2"	3.23
17 L 589	1560	6000	15	1 1/2 x 4 1/2"	3.71
17 L 576	1020	2000	10	1 1/2 x 3 1/2"	2.32
17 L 577	1040	4000	10	1 1/2 x 4 1/2"	2.88
17 L 579	1060A†	6000	10	1 1/2 x 4 1/2"	3.26



## HARDWARE FOR CAPACITORS

For FP or WP capacitors use MP, BP, PS and MW-100 units listed below. For TC, FP, WP and other tubular capacitors use VR brackets for vertical mtg., or TH spring clips for horizontal mtg. \*Metal. †Phenolic. Av. wt., 3 oz.

No.	Type	Fig.	Size	NET
17 L 531	PS-4	C	1"	.41
17 L 532	PS-6	C	1 1/2"	.53
17 L 402	VR-1	E	1 to 1 1/2"	.09
17 L 413	VR-3	E	1 1/2 to 1 1/2"	.09
17 L 414	VR-4	E	1 1/2 to 1 1/2"	.12
17 L 415	VR-6	E	1 1/2 to 1 1/2"	.15
17 L 416	VR-8	E	2 to 2 1/2"	.18
17 L 412	TH-5	D	1 1/2 to 1 1/2"	.06
17 L 417	MW-100	F	Mtg. Wrench	1.03

Items below in plastic package of 3.

No.	Type	Fig.	Size	Per Pkg.
18 L 414	MP-2	A*	1 1/2"	9c
18 L 415	MP-4	A*	1 1/2"	
18 L 416	MP-6	A*	1 1/2"	
18 L 417	BP-2	B†	1 1/2"	
18 L 418	BP-4	B†	1 1/2"	
18 L 419	BP-6	B†	1 1/2"	
18 L 420	TH-13	D	1 1/2"	9c
18 L 421	TH-15	D	1 1/2 to 1 1/2"	
18 L 422	TH-17	D	1 1/2 to 1 1/2"	
18 L 423	TH-19	D	1 1/2 to 1 1/2"	
18 L 424	TH-21	D	1 1/2 to 1 1/2"	
18 L 425	TH-23	D	1 1/2 to 1 1/2"	

Type "MSU" for P, HC and NP capacitors.

No.	Type	Description	Size	EACH
18 L 406	115-1	Top cap	1 1/2"	12c
18 L 407	116-1	Top cap	2"	
18 L 408	118-1	Bottom cap	2 1/2"	
18 L 409	119-1	Bottom cap	2 1/2"	15c
18 L 410	121-1	Bracket	1 1/2 x 3 1/2"	
18 L 411	122-1	Bracket	1 1/2 x 4 1/2"	
18 L 412	123-1	Bracket	2 x 3 1/2"	
18 L 413	124-1	Bracket	2 x 4 1/2"	

# Cornell-Dubilier Capacitors

## TYPE TAN "SUB-MINIATURE" TANTALUM ELECTROLYTIC CAPACITORS



A newly developed line of remarkably small sub-miniature size Tantalum electrolytic capacitors. Especially well suited for applications in transistor circuits and other uses demanding tiny, compact physical size. These sub-miniature units are only  $\frac{1}{16}$ " long and have a diameter of only  $\frac{3}{16}$ ". Operating temperature range is from  $-55^{\circ}\text{C}$ . to  $+85^{\circ}\text{C}$ . Standard capacitance tolerance is  $\pm 20\%$  (except maximum capacitance for that voltage). Power factor and frequency characteristics are excellent even at their lowest rated operating temperature. Leakage current: Max., .07 microamps per mfd per volt, at room temperature. Av. wt., 2 oz.

### POLARIZED TYPE

No.	Type	Mfd	Volts	NET
19 L 300	TAN 76	1.0	3	1.62
19 L 301	TAN 68	2.0	3	1.62
19 L 302	TAN 77	8.0	3	2.20
19 L 303	TAN 65	4.0	4	1.62
19 L 304	TAN 60A	1.0	6	2.20
19 L 305	TAN 78	4.0	6	2.20
19 L 306	TAN 69	0.5	10	1.62
19 L 307	TAN 56A	1.0	10	1.62
19 L 308	TAN 58A	2.0	10	2.20
19 L 309	TAN 79	3.0	10	2.79
19 L 310	TAN 59A	2.0	15	2.79
19 L 311	TAN 70	0.25	20	1.62
19 L 312	TAN 80	1.75	25	3.38
19 L 313	TAN 81	1.5	30	3.38
19 L 314	TAN 71	0.1	40	1.62
19 L 315	TAN 82	1.0	40	3.38
19 L 316	TAN 83	0.8	50	3.38
19 L 317	TAN 84	0.2	150	2.79

## TYPE BRHV HIGH-VOLTAGE TUBULAR DRY ELECTROLYTICS



Dependable and compact high-voltage electrolytic capacitors—perfect for power supply filter applications in television sets, oscilloscopes, transmitters, etc. All are hermetically sealed in aluminum tube containers and covered with sturdy, wax-impregnated cardboard sleeves. Surge voltages rated at 150 volts above working voltages. Strong, bare tinned copper wire leads provide self-support to permit easy mounting in any circuit. Shpg. wt., 4 oz.

No.	Type	Mfd	W.V.	Size	NET
14 L 538	708	8	700	$1\frac{1}{2} \times 3\frac{3}{4}$	.88
14 L 539	710	8	700	$1\frac{1}{2} \times 3\frac{3}{4}$	.91
14 L 540	712	12	700	$1\frac{1}{2} \times 3\frac{3}{4}$	.94
14 L 541	716	16	700	$1\frac{1}{2} \times 3\frac{3}{4}$	1.03
14 L 534	608	8	600	$1\frac{1}{2} \times 3\frac{3}{4}$	.82
14 L 535	610	10	600	$1\frac{1}{2} \times 3\frac{3}{4}$	.85
14 L 536	612	12	600	$1\frac{1}{2} \times 3\frac{3}{4}$	.88
14 L 537	616	16	600	$1\frac{1}{2} \times 3\frac{3}{4}$	.97
14 L 530	850	8	500	$1\frac{1}{2} \times 3\frac{3}{4}$	.76
14 L 531	1050	10	500	$1\frac{1}{2} \times 3\frac{3}{4}$	.79
14 L 532	1250	12	500	$1\frac{1}{2} \times 3\frac{3}{4}$	.82
14 L 533	1650	16	500	$1\frac{1}{2} \times 3\frac{3}{4}$	.88

## BRH HIGH-CAPACITY LOW-VOLTAGE ELECTROLYTICS



Compact etched-foil electrolytic capacitors for all applications requiring high capacity units operating in low voltage DC circuits. Hermetically sealed in aluminum cans with external cardboard insulating sleeve. Complete with mounting strap. Average shpg. wt., 4 oz.

No.	Type	Mfd	WV	Size	NET
14 L 580	601	100	6	$\frac{3}{8} \times 1\frac{1}{2}$	.71
14 L 581	6025	250	6	$\frac{3}{8} \times 1\frac{1}{2}$	.71
14 L 582	605A	500	6	$\frac{3}{8} \times 1\frac{1}{2}$	.91
14 L 583	610	1000	6	$\frac{3}{8} \times 1\frac{1}{2}$	1.12
14 L 585	620	2000	6	$1\frac{1}{2} \times 1\frac{1}{2}$	1.35
14 L 586	121A	100	12	$\frac{3}{8} \times 1\frac{1}{2}$	.71
14 L 587	1225A	250	12	$\frac{3}{8} \times 1\frac{1}{2}$	.85
14 L 588	125A	500	12	$\frac{3}{8} \times 2$	1.00
14 L 589	151A	100	15	$\frac{3}{8} \times 1\frac{1}{2}$	.73
14 L 590	1525A	250	15	$\frac{3}{8} \times 1\frac{1}{2}$	.91
14 L 591	155A	500	15	$\frac{3}{8} \times 2$	1.03
14 L 596	1510	1000	15	$1\frac{1}{2} \times 2$	1.35
14 L 597	1520	2000	15	$1\frac{1}{2} \times 3$	1.88
14 L 592	251A	100	25	$\frac{3}{8} \times 1\frac{1}{2}$	.71
14 L 593	2525A	250	25	$\frac{3}{8} \times 1\frac{1}{2}$	1.00
14 L 594	255A	500	25	$1\frac{1}{2} \times 2$	1.35
14 L 595	501	100	50	$\frac{3}{8} \times 2$	.82
14 L 598	5050	500	50	$1\frac{1}{2} \times 3$	1.41

## TYPE DYR METAL SHELL PAPER CAPACITORS



Operate efficiently even under severe heat and humidity conditions. For RF and AF bypass, AF coupling, and AC circuits. Tolerance,  $\pm 10\%$ . Impregnated and filled with Dykanol "G". Av. shpg. wt., 6 oz.

### 600 VOLTS DC WORKING

No.	Type	Mfd	Size	NET
14 L 620	6005	.05	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	1.71
14 L 621	6010	.1	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	1.73
14 L 622	6025	.25	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	1.82
14 L 623	6050	.5	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	1.94
14 L 624	6100	1.0	$2\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	2.20
14 L 625	6200	2.0	$2\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	2.20
14 L 626	60055	.05-.05	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	2.15
14 L 627	6011	1-1	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	2.18
14 L 628	6022	.25-.25	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	2.20
14 L 629	6055	.5-.5	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	2.53
14 L 630	6110	1.0-1.0	$2\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	3.12
14 L 631	6111	1-1-1	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	2.47
14 L 632	6222	.25-.25-25	$2\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	2.79
14 L 633	6555	.5-.5-5	$2\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	3.38

### 1000 VOLTS DC WORKING

No.	Type	Mfd	Size	NET
14 L 613	10005	.05	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	1.79
14 L 614	10010	.1	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	1.85
14 L 615	10025	.25	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	1.91
14 L 616	10050	.5	$2\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	2.09
14 L 617	10055	.05-.05	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	2.26
14 L 618	10011	1-1	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	2.35
14 L 619	10022	.25-.25	$2\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	2.47



## TLA & TNAD DYKANOL TRANSMITTING CAPACITORS

Mount inverted style in single  $\frac{3}{4}$ " hole. Dykanol dielectric and impregnation. • Have two 10-32 screw terminals insulated from aluminum can, and ground lug; others have one terminal. All are  $2\frac{1}{2} \times 1\frac{1}{2}$ " dia. except  $\uparrow$  are  $4\frac{1}{2} \times 1\frac{1}{2}$ " dia. With hex main nut and insulating washers. Av. shpg. wt., 2 lbs.

No.	Type	Mfd	Volts	NET
73 L 630	TLA6020	2	600	2.70
73 L 632	TLA6040	4	600	3.70
73 L 633	TNAD6040	4	600	4.17
73 L 635	TNAD10010	1	1000	2.94
73 L 636	TNAD10020	2	1000	3.70
73 L 640	TNAD15005	5	1500	3.44
73 L 641	TNAD15010	1	1500	3.70



## TYPE MP "PUP" METAL END-CAP CARDBOARD TUBULARS

New, self-healing, metallized cardboard tubulars. Light-weight, compact, and made to last. Wax-impregnated and dip-sealed against humidity. Bare wire leads firmly anchored in metal end-caps. Temperature range:  $-40^{\circ}$  to  $+60^{\circ}\text{C}$ . Extended foil construction; non-inductively wound. High insulation resistance, low power factor and low capacity change. Tolerance,  $\pm 20\%$ . Average shpg. wt., 2 oz.

### 200 VOLTS DC WORKING

No.	Type	Mfd	Size	NET
14 L 925	2S1	.01	$\frac{3}{8} \times \frac{3}{8}$	.35
14 L 926	2S2	.02	$\frac{3}{8} \times \frac{3}{8}$	.35
14 L 927	2S3	.03	$\frac{3}{8} \times \frac{3}{8}$	.35
14 L 928	2S5	.05	$\frac{3}{8} \times \frac{3}{8}$	.38
14 L 929	2P1	.10	$\frac{3}{8} \times \frac{3}{8}$	.41
14 L 930	2P25	.25	$\frac{3}{8} \times \frac{3}{8}$	.53
14 L 931	2P5	.5	$\frac{3}{8} \times 1\frac{1}{2}$	.62
14 L 932	2W1	1.0	$\frac{3}{8} \times 1\frac{1}{2}$	.76

### 400 VOLTS DC WORKING

No.	Type	Mfd	Size	NET
14 L 934	4S1	.01	$\frac{3}{8} \times \frac{3}{8}$	.38
14 L 935	4S3	.03	$\frac{3}{8} \times \frac{3}{8}$	.38
14 L 937	4S5	.05	$\frac{3}{8} \times \frac{3}{8}$	.41
14 L 938	4P1	.1	$\frac{3}{8} \times 1\frac{1}{2}$	.47
14 L 939	4P25	.25	$\frac{3}{8} \times 1\frac{1}{2}$	.59
14 L 940	4P5	.5	$\frac{3}{8} \times 1\frac{1}{2}$	.68
14 L 941	4W1	1.0	$\frac{3}{8} \times 2\frac{1}{2}$	.94

### 600 VOLTS DC WORKING

No.	Type	Mfd	Size	NET
14 L 942	6S1	.01	$\frac{3}{8} \times \frac{3}{8}$	.41
14 L 943	6S3	.02	$\frac{3}{8} \times \frac{3}{8}$	.47
14 L 943	6S3	.03	$\frac{3}{8} \times \frac{3}{8}$	.47
14 L 945	6S5	.05	$\frac{3}{8} \times \frac{3}{8}$	.53
14 L 946	6P1	.1	$\frac{3}{8} \times 1\frac{1}{2}$	.57
14 L 947	6P25	.25	$\frac{3}{8} \times 1\frac{1}{2}$	.65
14 L 948	6P5	.5	$\frac{3}{8} \times 1\frac{1}{2}$	.85
14 L 949	6W1	1.0	$\frac{3}{8} \times 2\frac{1}{2}$	1.06

## TJU-TJL DYKANOL TRANSMITTING CAPACITORS



Quality condensers for highly dependable power supply filter applications in industrial, laboratory and transmitting equipment. Dykanol dielectric. Impervious to age or heat. Hermetically sealed steel containers. All are type TJU with universal mounting strap (illustrated), except\* are type TJL with L-shaped bracket which grips rim and clamps condenser to mounting surface. Average shpg. wt., 5 lbs.

### 600 VOLTS DC WORKING

No.	Type	Mfd	Size	NET
73 L 604	6005	.5	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	2.76
73 L 600	6010	1	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	3.41
73 L 600	6020	2	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	4.20
73 L 602	6040	4	$3\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{2}$	5.35
73 L 664	6050	5	$4\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$	6.14
73 L 603	6080	8	$3\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$	7.94
73 L 650	6100	10	$4\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$	8.91

### 1000 VOLTS DC WORKING

No.	Type	Mfd	Size	NET
73 L 609	10001	.1	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	2.44
73 L 614	10025	.25	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	2.76
73 L 614	10005	.5	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	2.91
73 L 605	10010	1	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	3.73
73 L 606	10020	2	$4\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	4.85
73 L 607	10040	4	$4\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{2}$	6.14
73 L 608	10080	8	$4\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$	8.91
73 L 651	10100	10	$4\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$	9.88
73 L 665	10150	15	$4\frac{1}{2} \times 3\frac{1}{2} \times 2\frac{1}{2}$	11.82

### 1500 DC VOLTS WORKING

No.	Type	Mfd	Size	NET
73 L 610	15010	1	$4\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	4.38
73 L 611	15020	2	$4\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{2}$	6.00
73 L 612	15040	4	$4\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$	8.26
73 L 652	*15100	10	$4\frac{1}{2} \times 3\frac{1}{2} \times 2\frac{1}{2}$	14.73

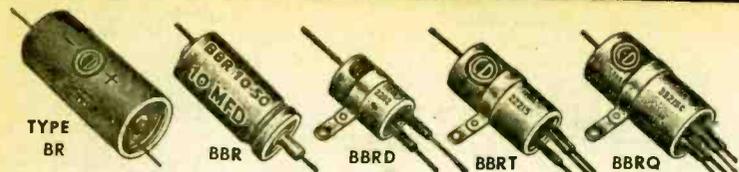
### 2000 VOLTS DC WORKING

No.	Type	Mfd	Size	NET
73 L 618	20001	.1	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	3.88
73 L 619	20005	.5	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	4.38
73 L 615	20010	1	$3\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{2}$	5.35
73 L 616	20020	2	$4\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	6.32
73 L 617	20040	4	$3\frac{1}{2} \times 3\frac{1}{2} \times 2\frac{1}{2}$	8.91
73 L 653	*20100	10	$4\frac{1}{2} \times 3\frac{1}{2} \times 2\frac{1}{2}$	17.96

### 2500 VOLTS DC WORKING

No.	Type	Mfd	Size	NET
73 L 620	25010	1	$3\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$	7.76
73 L 621	*25020</			

# Cornell-Dubilier Capacitors



## "BLUE BEAVER" TUBULAR ELECTROLYTICS

### TYPE BR SINGLE SECTION

Hermetically sealed in aluminum cans and encased in insulating cardboard sleeves. \*Can size. Add 1/8" to diameter and 1/4" to length for overall size with sleeves. Av. shpg. wt., 4 oz.

No.	Type	Mfd	W.V.	*Size	NET
14 L 000	850	8	500	1/4x1 1/4"	.76
14 L 001	1650	16	500	1/2x1 1/4"	.88
14 L 002	2050	20	500	1/2x1 1/4"	.94
14 L 003	3050	30	500	1/2x1 1/4"	1.03
14 L 008	145	1	450	1/2x1 1/4"	.65
14 L 009	245	2	450	1/2x1 1/4"	.65
14 L 010	445	4	450	1/2x1 1/4"	.68
14 L 011	845	8	450	1/2x1 1/4"	.73
14 L 012	1045	10	450	1/2x1 1/4"	.76
14 L 013	1245	12	450	1/2x1 1/4"	.79
14 L 014	1645	16	450	1/2x1 1/4"	.82
14 L 015	2045	20	450	1/2x1 1/4"	.91
14 L 016	3045	30	450	1/2x1 1/4"	1.00
14 L 017	4045	40	450	1/2x1 1/4"	1.00
14 L 004	6045	60	450	1/2x1 1/4"	1.06
14 L 005	8045	80	450	1/2x1 1/4"	1.38
14 L 020	435	4	350	1/2x1 1/4"	1.65
14 L 021	835	8	350	1/2x1 1/4"	.62
14 L 022	1235	12	350	1/2x1 1/4"	.76
14 L 023	1635	16	350	1/2x1 1/4"	.82
14 L 024	2035	20	350	1/2x1 1/4"	.85
14 L 019	3035	30	350	1/2x1 1/4"	.97
14 L 026	4035	40	350	1/2x1 1/4"	1.03
14 L 030	425	4	250	1/2x1 1/4"	.58
14 L 031	825	8	250	1/2x1 1/4"	.68
14 L 032	1225	12	250	1/2x1 1/4"	.73
14 L 033	1625	16	250	1/2x1 1/4"	.76
14 L 034	2025	20	250	1/2x1 1/4"	.79
14 L 035	4025	40	250	1/2x1 1/4"	.91
14 L 040	415	4	150	1/2x1 1/4"	.59
14 L 041	815	8	150	1/2x1 1/4"	.62
14 L 042	1215	12	150	1/2x1 1/4"	.65
14 L 043	1615	16	150	1/2x1 1/4"	.68
14 L 044	2015	20	150	1/2x1 1/4"	.71
14 L 045	3015	30	150	1/2x1 1/4"	.76
14 L 046	4015	40	150	1/2x1 1/4"	.79
14 L 047	5015	50	150	1/2x1 1/4"	.82
14 L 039	8015	80	150	1/2x1 1/4"	.94
14 L 056	10015	100	150	1/2x1 1/4"	1.03
14 L 057	15015	150	150	1/2x1 1/4"	1.12
14 L 050	550	5	50	1/2x1 1/4"	.59
14 L 051	105	10	50	1/2x1 1/4"	.59
14 L 052	205	20	50	1/2x1 1/4"	.59
14 L 053	255	25	50	1/2x1 1/4"	.62
14 L 054	505	50	50	1/2x1 1/4"	.71
14 L 060	102	10	25	1/2x1 1/4"	.59
14 L 061	202	20	25	1/2x1 1/4"	.59
14 L 062	252	25	25	1/2x1 1/4"	.59
14 L 063	502	50	25	1/2x1 1/4"	.65



### ALUMINUM CAN ELECTROLYTICS SCREW-NECK TYPE CAPACITORS

Type KR. Single hole mounting units. Etched foil, dry electrolytic capacitors in aluminum cans. Duals and triples are separate sections. 8" leads. Av. shpg. wt., 6 oz.

#### 600 Volts DC Working

No.	Type	Mfd	Size	NET
14 L 160	604C	4	1 1/2x3 1/4"	1.73
14 L 161	608C	8	1 1/2x3 1/4"	1.85
14 L 162	616C	16	1 1/2x3 1/4"	2.20

#### 450 Volts DC Working

No.	Type	Mfd	Size	NET
14 L 149	504	4	1 1/2x2 1/4"	1.21
14 L 150	508	8	1 1/2x2 1/4"	1.29
14 L 151	512A	12	1 1/2x2 1/4"	1.41
14 L 152	516A	16	1 1/2x2 1/4"	1.44
14 L 163	520	20	1 1/2x2 1/4"	1.62
14 L 164	530	30	1 1/2x3 1/4"	1.76
14 L 165	540	40	1 1/2x3 1/4"	1.85
14 L 153	588A	8-8	1 1/2x3 1/4"	2.20

### WET ELECTROLYTIC REPLACEMENTS

Type WR. Threaded neck. Lock-washer mounting. 500-volt DC units for use in replacing 1 1/2" diameter "wet" types. Type numbers indicate capacity. Av. shpg. wt., 5 oz.

No.	Type	Replaces	Size	NET
14 L 370	10	4 to 12 Mid	1 1/2x2 1/4"	1.35
14 L 371	20	16 to 20 Mid	1 1/2x2 1/4"	1.59
14 L 372	30	20 to 30 Mid	1 1/2x3 1/4"	1.73
14 L 373	40	30 to 40 Mid	1 1/2x3 1/4"	1.85

### TYPE BBR SINGLE SECTION

Popular "Blue Beaver" aluminum can capacitors. Especially suitable for crowded TV and miniature radio chassis, hearing aids, etc. 4 oz.

No.	Type	Mfd	W.V.	Size	NET
19 L 200	25-3	25	3	3/8x1 1/4"	.50
19 L 201	50-3	50	3	3/8x1 1/4"	.56
19 L 202	5-6	5	6	3/8x1 1/4"	.47
19 L 203	25-6	25	6	3/8x1 1/4"	.50
19 L 204	50-6	50	6	3/8x1 1/4"	.56
19 L 205	100-6	100	6	3/8x1 1/4"	.71
19 L 206	250-6	250	15	3/8x1 1/4"	.79
19 L 207	100-15	100	15	3/8x1 1/4"	.79
19 L 208	100-25	100	25	3/8x1 1/4"	.79
19 L 209	1-50	1	50	3/8x1 1/4"	.53
19 L 210	2-50	2	50	3/8x1 1/4"	.53
19 L 211	4-50	4	50	3/8x1 1/4"	.59
19 L 212	10-90	10	90	3/8x1 1/4"	.65
19 L 213	16-90	16	90	3/8x1 1/4"	.65
19 L 214	4-150	4	150	3/8x1 1/4"	.59

### TYPE BBRD DUAL SECTION

Hermetically sealed aluminum tubulars with cardboard sleeve. Negative terminal grounded to can. 7" leads. Common negative. 4 oz.

No.	Type	Mfd	W.V.	Size	NET
19 L 220	2202	20-20	25	3/4x1 1/4"	.82
19 L 250	115	10-10	50	3/4x1 1/4"	.82
19 L 251	2115	20-20	150	3/4x1 1/4"	.91
19 L 252	2215	20-20	150	3/4x1 1/4"	.97
19 L 253	3215	30-20	150	3/4x1 1/4"	1.00
19 L 254	3315	30-30	150	3/4x1 1/4"	1.03
19 L 255	4215	40-20	150	3/4x1 1/4"	1.06
19 L 256	4315	40-30	150	3/4x2	1.06
19 L 257	4415	40-40	150	3/4x2	1.06
19 L 258	5315	50-30	150	3/4x2	1.15
19 L 259	5515	50-50	150	1x2	1.23
19 L 260	8415	80-40	150	1x2 3/4	1.32
19 L 261	16825	16-8	250	1x2	1.00
19 L 262	16D25	16-16	250	1x2	1.06
19 L 263	2225	20-20	250	1x1 1/4"	1.09
19 L 264	7V225	75-20	250	1x3	1.53
19 L 265	8D45	8-8	450	1 1/2x1 1/4"	1.10
19 L 266	16845	16-8	450	1x2 1/4"	1.18
19 L 267	16D45	16-16	450	1x2 1/4"	1.32
19 L 268	2245	20-20	450	1x3	1.47
19 L 221	4445	40-40	450	1x4 1/4"	2.00

### TYPE BBRT TRIPLE SECTION

Cardboard-sleeved electrolytic replacements. Color-coded leads. Normal operation at temperatures up to 85° C. Common negative. 4 oz.

No.	Type	Mfd	W.V.	Size	NET
19 L 230	22215	20-20-20	150	3/4x1 1/4"	1.29
19 L 231	32V215	30-25-20	150	3/4x2	1.32
19 L 232	33315	30-30-30	150	1x2	1.38
19 L 233	42215	40-20-20	150	1x1 1/4"	1.32
19 L 234	43215	40-30-20	150	1x2	1.38
19 L 235	44215	40-40-20	150	1x2	1.38
19 L 236	44415	40-20-20	150	1x2 3/4	1.44
19 L 237	2215C	20-20-20	150.25	1 1/2x1 1/4"	1.21
19 L 238	3315C	30-30-20	150.25	3/4x2	1.29
19 L 239	4215C	40-20-20	150.25	1x1 1/4"	1.26
19 L 240	4315C	40-30-20	150.25	1x1 1/4"	1.29
19 L 241	4415C	40-40-20	150.25	1x1 1/4"	1.32
19 L 242	4415X25	40-40-250	150.10	1x2 3/4	1.53
19 L 243	5315C	50-30-20	150.25	1x1 1/4"	1.38
19 L 244	5515C	50-50-20	150.25	1x2 1/4"	1.47
19 L 245	8415C	80-40-20	150.25	1x2 3/4	1.56
19 L 246	3215C10	30-20-100	150.25	1x2	1.38
19 L 275	5315X20	50-30-20	150.10	1x2 3/4	1.50
19 L 276	5315C10	50-30-100	150.25	1x2 3/4	1.44
19 L 277	8215C10	80-20-100	150.25	1x2 3/4	1.62
19 L 278	2225C	20-20-20	250.25	1x2	1.32
19 L 279	4225C	40-20-20	250.25	1x2 3/4	1.50
19 L 280	4425C	40-40-20	250.25	1x2 1/4"	1.71
19 L 281	7V4125	75-10-10	250	1 1/2x3	2.03
19 L 282	15145	15-15-16	450	1 1/2x3	1.82
19 L 283	2245C	20-20-20	450.25	1x3	1.71

### TYPE BBRQ QUADRUPLE SECTION

Sealed in seamless aluminum cans with cardboard sleeves. High stability under all operating conditions. Common negative. Av. wt., 5 oz.

No.	Type	Mfd	W.V.	Size	NET
19 L 290	4215C	30-30-20	150.25	1x2	1.71
19 L 291	4215C	40-20-150	20.25	1x2	1.68
19 L 292	53215C	50-30-150	20.25	1x2 3/4	1.79
19 L 293	44315C	40-30-150	20.25	1x2 3/4	1.76
19 L 294	55315C	50-50-150	20.25	1x3	2.03
19 L 295	2245C	20-20-20	450.25	1 1/2x3 1/4"	2.38

## TYPE UP, UPE AND UPT DRY ELECTROLYTIC CAPACITORS

Very dependable over wide temperature range. Hermetically sealed in aluminum cans with positive lugs on bakelite insulating base. Can act as common negative with projecting tongues for mounting on metal chassis. Bakelite and metal washers included for easy mounting. Negative tongues and positive terminal lugs have lead-wire holes; tinned for easy soldering. All are UP types, except UPT high-temperature types. UPE type specially designed for use in selenium rectifier circuits. Av. shpg. wt., 5 oz.



### SINGLE SECTION

No.	Type	Mfd	W.V.	Size	NET
14 L 426	1050	10	500	1x2 1/4"	.94
14 L 427	2050	20	500	1x2 1/4"	1.19
14 L 510	3050	30	500	1x2 1/4"	1.09
14 L 511	4050	40	500	1x3 1/4"	1.47
14 L 428	8050	80	500	1 1/2x3 3/4"	1.86
*14 L 322	3045	30	450	1x2 1/4"	1.15
*14 L 408	4045	40	450	1x3 1/4"	1.21
14 L 323	8045	80	450	1 1/2x3 3/4"	1.78
14 L 403	12535	125	350	1 1/2x3 3/4"	2.15
14 L 409	3015	30	150	3/4x2 1/4"	.91
14 L 400	5015	50	150	1x2 1/4"	.97
14 L 414	10015	100	150	1x2 1/4"	1.18
14 L 321	15015	150	150	1x3 1/4"	1.26
14 L 320	1M-50	150	50	1x2	1.06
14 L 320	1M-50	1000	50	1 1/2x3 3/4"	2.20

### DUAL SECTION

No.	Type	Mfd	W.V.	Size	NET
*14 L 326	3145	30-10	450	1x3 1/4"	1.47
14 L 448	2145	20-20	450	1x2 1/4"	1.32
14 L 486	2250	20-10	500	1 1/2x3 1/4"	1.76
14 L 449	4450	40-40	500	1 1/2x3 1/4"	2.53
*14 L 420	1145	10-10	450	1x2 1/4"	1.12
14 L 421	2245	20-20	450	1x3 1/4"	1.50
14 L 447	3345	30-30	450	1 1/2x2 1/4"	1.79
14 L 514	4245	40-20	450	1 1/2x2 1/4"	

# Cornell-Dubilier Capacitors

## MOLDED MICA CAPACITORS



Molded units with India ruby mica dielectric; special wax-treated stack, brown bakelite case. Adapted to serve many functions in radio circuits. Individually tested for accuracy. Tinned brass wire leads. Values are  $\pm 20\%$ . Rated at 500 WVDC, 1000 v. DC test, except  $\ast 300$  WVDC, 600 v. DC test. Shpg. wt., 2 oz.

### TYPE 5W

Size,  $1\frac{1}{4} \times 1\frac{1}{2} \times \frac{3}{16}$ ". With  $1\frac{1}{4}$ " tinned leads.

No.	Type	Mfd.	EACH
14 L 111	5V5	.000005	15c
14 L 112	5Q1	.00001	
14 L 113	5Q2	.00002	
14 L 100	5Q25	.000025	
14 L 101	5Q3	.00003	
14 L 102	5Q4	.00004	12c
14 L 103	5Q5	.00005	
14 L 114	5Q7	.00007	
14 L 104	5T1	.0001	
14 L 105	5T15	.00015	
14 L 106	5T2	.0002	15c
14 L 107	5T25	.00025	
14 L 110	5T3	.0003	
14 L 110	5T4	.0004	
14 L 109	5T5	.0005	

### TYPE 1W

Size,  $\frac{1}{8}$ " square  $\times \frac{1}{4}$ ". With  $1\frac{1}{4}$ " tinned leads.

No.	Type	Mfd.	EACH
14 L 131	5T6	.0006	15c
14 L 132	5T7	.0007	15c
14 L 120	5T8	.0008	15c
14 L 136	5T82	.00082	15c
14 L 133	5T9	.0009	15c
14 L 137	5T91	.00091	15c
14 L 121	5D1	.001	18c
14 L 122	5D15	.0015	18c
14 L 123	5D2	.002	24c
14 L 124	5D25	.0025	26c
14 L 125	5D3	.003	29c
14 L 126	5D4	.004	32c
14 L 127	5D5	.005	35c

### TYPE 1D

Size,  $\frac{1}{8}$ " square  $\times \frac{3}{16}$ ". With  $1\frac{1}{4}$ " tinned leads.

No.	Type	Mfd.	EACH
14 L 128	5D6	.006	44c
14 L 134	3D7*	.007	53c
14 L 138	3D75*	.0075	59c
14 L 129	3D8*	.008	59c
14 L 139	3D82*	.0082	59c
14 L 135	3D9	.009	59c
14 L 130	3S1*	.01	71c

## "SILVER MIKE" HIGH-STABILITY MICA CAPACITORS



Silvered Mica Capacitors molded in low-loss red bakelite. Excellent for use in high Q circuits where it is essential that frequency stability and high efficiency be maintained. Tolerance,  $\pm 5\%$ . 500 volts DC working. 1000 v. DC test. Tinned leads. Av. shpg. wt., 2 oz.

### TYPE 5R

Size,  $1\frac{1}{4} \times 1\frac{1}{2} \times \frac{3}{16}$ ". With  $1\frac{1}{4}$ " tinned leads.

No.	Type	Mfd.	NET
14 L 390	5T1	.0001	24c
14 L 391	5T15	.00015	26c
14 L 392	5T2	.0002	26c
14 L 393	5T25	.00025	26c
14 L 394	5T3	.0003	32c
14 L 395	5T4	.0004	38c
14 L 396	5T5	.0005	41c

### TYPES 1R AND 1DR

Size,  $1\frac{1}{8}$ " square  $\times \frac{1}{4}$ ". With  $1\frac{1}{4}$ " tinned leads.

No.	Type	Mfd.	NET
14 L 341	1R5T75	.00075	.56
14 L 342	1R5T82	.00082	.56
14 L 343	1R5D1	.001	.65
14 L 380	1R5D15	.0015	.79
14 L 381	1R5D2	.002	.79
14 L 382	1R5D25	.0025	1.06
14 L 383	1R5D3	.003	1.21
14 L 384	1R5D4	.004	1.26
14 L 385	1DR5D5	.005	1.32
14 L 344	1DR3D6*	.0068	1.47
14 L 345	1DR3D75*	.0075	1.47
14 L 346	1DR3D82*	.0082	1.47
14 L 347	1DR 3S1	.01	1.47

## TYPE 22R "SILVER MIKE" MIDGET MICA CAPACITORS



Highly stable micas. Tolerance,  $\pm 5\%$ . All rated 500 WVDC. In low-loss red bakelite shell. Fully protected against atmospheric conditions. Size:  $\frac{1}{2} \times \frac{1}{4} \times \frac{1}{16}$ ".  $1\frac{1}{2}$ " tinned leads. Av. shpg. wt., 2 oz.

No.	Type	Mfd.	EACH
14 L 850	5Q1	.00001	24c
14 L 851	5Q15	.000015	
14 L 852	5Q18	.000018	
14 L 853	5Q2	.00002	
14 L 854	5Q22	.000022	
14 L 855	5Q24	.000024	24c
14 L 856	5Q27	.000027	
14 L 857	5Q3	.00003	
14 L 858	5Q33	.000033	
14 L 859	5Q36	.000036	
14 L 860	5Q39	.000039	24c
14 L 861	5Q43	.000043	
14 L 862	5Q47	.000047	
14 L 863	5Q51	.000051	
14 L 864	5Q56	.000056	
14 L 865	5Q 2	.000062	24c
14 L 866	5Q68	.000068	
14 L 867	5Q75	.000075	
14 L 868	5Q82	.000082	
14 L 869	5Q91	.000091	
14 L 870	5T1	.0001	26c
14 L 871	5T11	.00011	
14 L 872	5T12	.00012	
14 L 873	5T13	.00013	
14 L 874	5T15	.00015	
14 L 889	5T16	.00016	26c
14 L 890	5T18	.00018	
14 L 875	5T2	.0002	
14 L 876	5T22	.00022	
14 L 891	5T24	.00024	
14 L 877	5T25	.00025	

## TYPE 22R—1% TOLERANCE

No.	Mfd.	DC WV	NET
14 L 821	.00001	500	29c
14 L 822	.000015	500	29c
14 L 823	.000047	500	29c
14 L 824	.00005	500	29c
14 L 896	.000075	500	29c
14 L 895	.0001	500	29c
14 L 894	.00015	500	35c
14 L 893	.0002	500	35c
14 L 825	.00025	500	33c
14 L 898	.0003	500	41c



## "SUPER MICADON" ENCAPSULATED MOLDED MIDGET MICAS

Increased life, reduced inductance. High "Q", uniform temperature coefficient and excellent retrace.

### TYPE 1A

Size,  $\frac{3}{16} \times 5\frac{3}{16} \times \frac{1}{16}$ ". Tolerance  $\pm 5\%$ . No. 18 leads spaced  $\frac{1}{2}$ ". Shpg. wt., 2 oz.

No.	Type	Mfd.	DC WV	EACH
14 L 979	5D51	.0051	500	1.41
14 L 980	5D68	.0068	500	1.56
14 L 981	5D82	.0082	500	1.56
14 L 982	5S1	.01	500	1.56
14 L 983	5S15	.015	500	2.03
14 L 984	3S2	.02	300	2.35

### TYPE 5A

Size,  $\frac{1}{4} \times \frac{1}{4} \times \frac{1}{8}$ ". Tolerance  $\pm 5\%$ . No. 20 leads spaced  $\frac{1}{8}$ ". Shpg. wt., 2 oz.

No.	Type	Mfd.	DC WV	EACH
14 L 985	5V5	.000005	500	.35
14 L 986	5Q20	.00002	500	.35
14 L 987	5Q	.000033	500	.35
14 L 988	5Q51	.000051	500	.35
14 L 989	5T1	.0001	500	.35
14 L 990	5T24	.00024	500	.35
14 L 991	5T39	.00039	500	.41
14 L 992	5T51	.00051	500	.45
14 L 993	5T75	.00075	500	.59
14 L 994	5D1	.001	500	.73
14 L 995	5D15	.0015	500	1.00
14 L 996	5D2	.002	500	1.12
14 L 997	5D3	.003	500	1.41
14 L 998	3D39	.0039	300	1.47
14 L 999	3D51	.0051	300	1.56

## "CUB" PLASTIC TUBULAR CAPACITORS



Extra-durable, very compact tubulars. High stability and dielectric strength. Dry-assembled and sealed after impregnation to insure long life. 25T types in ceramic case. 200 and 400 volt units are impregnated with special HT compound; 600 volt units are oil impregnated. Av. shpg. wt., 4 oz.

### 200 VOLTS DC WORKING

No.	Type	Mfd.	Size	NET
19 L 000	2S2	.02	$\frac{1}{2} \times 1\frac{1}{2}$ "	15c
19 L 001	2S47	.047	$\frac{1}{2} \times 1\frac{1}{2}$ "	15c
19 L 002	2S5	.05	$\frac{1}{2} \times 1\frac{1}{2}$ "	15c
19 L 003	2P1	.10	$\frac{1}{2} \times 1\frac{1}{2}$ "	21c
19 L 004	2P15	.15	$\frac{1}{2} \times 1\frac{1}{2}$ "	21c
19 L 005	2P22	.22	$1\frac{1}{2} \times 1\frac{1}{2}$ "	24c
19 L 006	2P25	.25	$1\frac{1}{2} \times 1\frac{1}{2}$ "	24c
19 L 007	2P47	.47	$1\frac{1}{2} \times 1\frac{1}{2}$ "	35c
19 L 008	2P5	.05	$1\frac{1}{2} \times 1\frac{1}{2}$ "	35c
19 L 009	2W1	1.0	$\frac{1}{2} \times 2\frac{1}{2}$ "	53c

### 400 VOLTS DC WORKING

No.	Type	Mfd.	Size	NET
19 L 010	4S1	.01	$\frac{1}{2} \times 1\frac{1}{2}$ "	15c
19 L 011	4S2	.02	$\frac{1}{2} \times 1\frac{1}{2}$ "	15c
19 L 012	4S22	.022	$\frac{1}{2} \times 1\frac{1}{2}$ "	18c
19 L 013	4S47	.047	$\frac{1}{2} \times 1\frac{1}{2}$ "	18c
19 L 014	4S5	.05	$\frac{1}{2} \times 1\frac{1}{2}$ "	18c
19 L 015	4S68	.068	$\frac{1}{2} \times 1\frac{1}{2}$ "	21c
19 L 016	4P1	.10	$\frac{1}{2} \times 1\frac{1}{2}$ "	21c
19 L 017	4P15	.15	$1\frac{1}{2} \times 1\frac{1}{2}$ "	24c
19 L 018	4P22	.22	$1\frac{1}{2} \times 1\frac{1}{2}$ "	21c
19 L 019	4P25	.25	$1\frac{1}{2} \times 1\frac{1}{2}$ "	24c
19 L 020	4P5	.50	$\frac{1}{2} \times 2\frac{1}{2}$ "	35c
19 L 021	4W1*	1.0	$1\frac{1}{2} \times 2\frac{1}{2}$ "	53c

### 600 VOLTS DC WORKING

No.	Type	Mfd.	Size	EACH
19 L 022	6T1	.001	$\frac{1}{2} \times 1\frac{1}{2}$ "	15c
19 L 023	6T25	.0025		
19 L 024	6T4	.004		
19 L 025	6T5	.005		
19 L 026	6D1	.001		
19 L 027	6D15	.0015	$\frac{1}{2} \times 1\frac{1}{2}$ "	15c
19 L 028	6D2	.002		
19 L 029	6D22	.0022		
19 L 030	6D3	.003		
19 L 031	6D4	.004		
19 L 032	6D47	.0047	$\frac{1}{2} \times 1\frac{1}{2}$ "	18c
19 L 033	6D5	.005		
19 L 034	6D6	.006		
19 L 035	6D68	.0068		
19 L 036	6S1	.01		
19 L 037	6S15	.015	$\frac{1}{2} \times 1\frac{1}{2}$ "	18c
19 L 038	6S2	.02		
19 L 039	6S22	.022		
19 L 040	6S3	.03		
19 L 041	6S4	.04		
19 L 042	6S47	.047	$\frac{1}{2} \times 1\frac{1}{2}$ "	24c
19 L 043	6S5	.05		
19 L 044	6S6	.06		
19 L 045	6P1	.10		
19 L 046	6P15	.15		
19 L 047	6P5*	.50	$1\frac{1}{2} \times 2\frac{1}{2}$ "	47c

### 1600 VOLTS DC WORKING

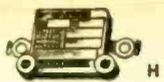
No.	Type	Mfd.	Size	EACH
19 L 050	16T5	.0005	$\frac{1}{2} \times 1\frac{1}{2}$ "	38c
19 L 051	16D1	.001		
19 L 052	16D15	.0015		
19 L 053	16D2	.002		
19 L 054	16D22	.0022		
19 L 055	16D3	.003	$\frac{1}{2} \times 1\frac{1}{2}$ "	38c
19 L 056	16D33	.0033		
19 L 057	16D4	.004		
19 L 058	16D47	.0047		
19 L 059	16D5	.005		
19 L 060	16D6	.006	$\frac{1}{2} \times 1\frac{1}{2}$ "	41c
19 L 061	16D68	.0068		
19 L 062	16D7	.007		
19 L 063	16D75	.0075		
19 L 064	16D8	.008		
19 L 065	16S1	.01	$1\frac{1}{2} \times 1\frac{1}{2}$ "	41c
19 L 066	16S15	.015		
19 L 067	16S2	.02		
19 L 068	16S22	.022		
19 L 069	16S3	.03		
19 L 070	16S4	.04	$\frac{1}{2} \times 2\frac{1}{2}$ "	1.00
19 L 071	16S5	.05		

### 6000 VOLTS DC WORKING

No.	Type	Mfd.	Size	EACH
19 L 075	60T5	.0005	$\frac{1}{2} \times 1\frac{1}{2}$ "	79c
19 L 076	60D1	.001		
19 L 077	60D5	.005		

### 10,000 VOLTS DC WORKING

# Sangamo Mica Capacitors



## TYPES K, C AND KR PIGTAIL MICAS

Molded mica capacitors designed for high temperature and high voltage applications. Excellent for use in television receivers, power amplifiers and transmitters. For coupling, blocking and by-pass use. These capacitors are fabricated from India ruby mica which is rigidly tested to assure long life and high safety factor. Mica stacks are molded in "Humidite" for high resistance to moisture absorption. All have .032" wire leads, each a minimum of 1 1/4" long. DC working voltages indicated are conservative; all types are tested at twice their rated voltage. Type K and type C capacitors are made to standard tolerance; within ±20% of capacity ratings indicated. Type KR silvered capacitors are specially designed for use in circuits requiring extreme frequency stability. Type KR have tolerance of ±5%. All are 500 WVDC, except 1300 WVDC. Av. shgp. wt., 3.0z.

TYPES K and C MICAS				
No.	Type	Mfd	Size	EACH
74 L 066	K-1550	.000005	2 3/16 x 1 3/16 x 3/16"	15c
74 L 067	K-1410	.00001		
74 L 068	K-1420	.00002		
74 L 069	K-1425	.000025		
74 L 081	K-1430	.00003	2 3/16 x 1 3/16 x 3/16"	12c
74 L 083	K-1450	.00005		
74 L 070	K-1482	.000082		
74 L 085	K-1310	.0001		
74 L 086	K-1315	.00015	2 3/16 x 1 3/16 x 3/16"	15c
74 L 087	K-1320	.0002		
74 L 088	K-1325	.00025		
74 L 071	K-1327	.00027		
74 L 089	K-1330	.0003	2 3/16 x 1 3/16 x 3/16"	18c
74 L 072	K-1339	.00039		
74 L 090	K-1340	.0004		
74 L 091	K-1350	.0005		
74 L 175	K-1360	.0006	2 3/16 x 1 3/16 x 3/16"	24c
74 L 073	K-1368	.00068		
74 L 176	K-1370	.0007		
74 L 177	K-1380	.0008		
74 L 178	K-1390	.0009	2 3/16 x 1 3/16 x 3/16"	26c
74 L 179	K-1210	.001		
74 L 180	K-1215	.0015		
74 L 181	K-1220	.002		
74 L 075	K-1222	.0022	2 3/16 x 1 3/16 x 3/16"	26c
74 L 182	K-1225	.0025		
74 L 076	K-1227	.0027		
74 L 183	K-1230	.003		
74 L 077	K-1233	.0033	2 3/16 x 1 3/16 x 3/16"	29c
74 L 074	C-1247	.0047		
74 L 185	C-1250	.005		
74 L 078	C-1255	.0056		
74 L 186	K-1260	.006	2 3/16 x 1 3/16 x 1 1/2"	50c
74 L 187	C-06270	.0071		
74 L 080	C-06082	.0082		
74 L 190	C-06110	.011		

## TYPE KR SILVERED MICAS

Tolerance ±5%.

No.	Type	Mfd	Size	EACH
74 L 221	KR-1550	.000005	2 3/16 x 1 3/16 x 3/16"	23c
74 L 222	KR-1410	.00001		
74 L 223	KR-1420	.00002		
74 L 224	KR-1415	.000015		
74 L 225	KR-1418	.000018	2 3/16 x 1 3/16 x 3/16"	23c
74 L 226	KR-1420	.00002		
74 L 227	KR-1422	.000022		
74 L 228	KR-1424	.000024		
74 L 229	KR-1427	.000027	2 3/16 x 1 3/16 x 3/16"	26c
74 L 230	KR-1430	.00003		
74 L 231	KR-1435	.000036		
74 L 232	KR-1436	.000036		
74 L 233	KR-1439	.000039	2 3/16 x 1 3/16 x 3/16"	32c
74 L 234	KR-1443	.000043		
74 L 235	KR-1447	.000047		
74 L 236	KR-1450	.00005		
74 L 237	KR-1451	.000051	2 3/16 x 1 3/16 x 3/16"	35c
74 L 238	KR-1456	.000056		
74 L 239	KR-1462	.000062		
74 L 240	KR-1468	.000068		
74 L 201	KR-1475	.000075	2 3/16 x 1 3/16 x 3/16"	38c
74 L 202	KR-1482	.000082		
74 L 203	KR-1491	.000091		
74 L 204	KR-1310	.0001		
74 L 205	KR-1315	.00015	2 3/16 x 1 3/16 x 3/16"	41c
74 L 206	KR-1318	.00018		
74 L 207	KR-1320	.0002		
74 L 208	KR-1322	.00022		
74 L 209	KR-1324	.00024	2 3/16 x 1 3/16 x 3/16"	44c
74 L 110	KR-1325	.00025		
74 L 211	KR-1327	.00027		
74 L 212	KR-1330	.0003		
74 L 213	KR-1336	.00036	2 3/16 x 1 3/16 x 3/16"	47c
74 L 214	KR-1339	.00039		
74 L 215	KR-1340	.0004		
74 L 216	KR-1343	.00043		
74 L 217	KR-1347	.00047	2 3/16 x 1 3/16 x 3/16"	51c
74 L 218	KR-1350	.0005		
74 L 219	KR-1351	.00051		
74 L 220	KR-1356	.00056		
74 L 241	KR-1360	.0006	2 3/16 x 1 3/16 x 3/16"	55c
74 L 242	KR-1362	.00062		
74 L 243	KR-1368	.00068		
74 L 244	KR-1370	.0007		
74 L 245	KR-1375	.00075	2 3/16 x 1 3/16 x 3/16"	58c
74 L 246	KR-1380	.0008		
74 L 247	KR-1382	.00082		
74 L 248	KR-1391	.00091		
74 L 249	KR-1210	.001		

## TYPE C—1000 WVDC

No.	Type	Mfd	EACH
74 L 525	C-2215	.00015	38c
74 L 540	C-2222	.00022	50c
74 L 541	C-2233	.00033	62c

## 1500 WVDC

No.	Type	Mfd	EACH
74 L 536	C-3382	.00082	44c
74 L 537	C-3210	.001	47c
74 L 538	C-3215	.0015	65c
74 L 539	C-3220	.002	79c

## 2000 WVDC

No.	Type	Mfd	EACH
74 L 533	C-4350	.0005	38c
74 L 534	C-4356	.00056	38c
74 L 535	C-4368	.00068	41c

## 2500 WVDC

No.	Type	Mfd	EACH
74 L 529	C-5325	.00025	32c
74 L 530	C-5327	.00027	32c
74 L 531	C-5333	.00033	35c
74 L 532	C-5347	.00047	42c

## 3000 WVDC

No.	Type	Mfd	EACH
74 L 526	C-6315	.00015	32c
74 L 527	C-6318	.00018	35c
74 L 528	C-6325	.00025	41c

## TYPE K—1000 WVDC

No.	Type	Mfd	EACH
74 L 587	K-2315	.00015	21c
74 L 588	K-2318	.00018	21c
74 L 589	K-2333	.00033	23c
74 L 590	K-2347	.00047	26c
74 L 591	K-2350	.0005	26c
74 L 592	K-2356	.00056	29c
74 L 593	K-2362	.00062	29c
74 L 594	K-2368	.00068	33c

## 1500 WVDC

No.	Type	Mfd	EACH
74 L 574	K-3482	.00082	18c
74 L 575	K-3310	.0001	21c
74 L 576	K-3312	.00012	21c
74 L 577	K-3315	.00015	21c
74 L 578	K-3318	.00018	21c
74 L 579	K-3320	.0002	23c
74 L 580	K-3322	.00022	23c
74 L 581	K-3325	.00025	26c
74 L 582	K-3327	.00027	26c
74 L 583	K-3330	.0003	29c
74 L 584	K-3333	.00033	29c
74 L 585	K-3336	.00036	29c
74 L 595	K-3339	.00039	32c
74 L 586	K-3347	.00047	35c

## 2000 WVDC

No.	Type	Mfd	EACH
74 L 566	K-4447	.00047	18c
74 L 567	K-4456	.00056	21c
74 L 568	K-4468	.00068	21c
74 L 569	K-4320	.0002	29c
74 L 570	K-4322	.00022	29c
74 L 571	K-4325	.00025	32c
74 L 572	K-4327	.00027	32c
74 L 573	K-4330	.0003	35c

## 2500 WVDC

No.	Type	Mfd	EACH
74 L 557	K-5422	.00022	18c
74 L 558	K-5433	.00033	21c
74 L 559	K-5447	.00047	21c
74 L 560	K-5456	.00056	26c
74 L 561	K-5482	.00082	26c
74 L 562	K-5310	.0001	26c
74 L 563	K-5312	.00012	29c
74 L 564	K-5315	.00015	29c
74 L 565	K-5318	.00018	35c

## 3000 WVDC

No.	Type	Mfd	EACH
74 L 542	K-6550	.00005	18c
74 L 543	K-6410	.0001	18c
74 L 544	K-6412	.00012	18c
74 L 545	K-6415	.00015	21c
74 L 546	K-6418	.00018	21c
74 L 547	K-6420	.0002	21c
74 L 548	K-6424	.00024	21c
74 L 549	K-6427	.00027	21c
74 L 550	K-6430	.0003	23c
74 L 551	K-6433	.00033	23c
74 L 552	K-6439	.00039	26c
74 L 553	K-6447	.00047	26c
74 L 554	K-6450	.0005	29c
74 L 555	K-6456	.00056	29c
74 L 556	K-6468	.00068	32c

## TYPES A AND H MICAS

Mica stacks molded in bakelite. Type A has 6-32 screw terminals, 1 1/2" mtg. centers; 1 1/2 x 1 1/2 x 1/4", except 2 3/4". Type H has lug terminals, 1 3/4" insulated mtg. centers; 1 3/4 x 1 1/2 x 1/4", except 1 3/4". Tolerance: ±10%. Wt., 3.0z.

TYPE A 600 WVDC				TYPE H 600 WVDC			
No.	Mfd	EACH		No.	Mfd	EACH	
74 L 000	.00005	.85		74 L 100	.00005	.71	
74 L 001	.0001	.85		74 L 101	.0001	.71	
74 L 003	.0002	.85		74 L 102	.0002	.71	
74 L 005	.0005	.85		74 L 106	.0005	.71	
74 L 006	.001	.85		74 L 107	.001	.71	
74 L 008	.002	.97		74 L 109	.002	.76	
74 L 009	.003	1.09		74 L 111	.003	.85	
74 L 011	.005	1.23		74 L 113	.005	.91	
74 L 014	.01	1.65		74 L 116	.01	1.26	
74 L 020	.015	1.79		74 L 117	.015†	1.56	
74 L 016	.02	2.09		74 L 119	.02†	1.79	
74 L 017	.025	2.56		74 L 119	.025†	2.12	
74 L 018	.03	2.68		74 L 120	.03†	2.62	
74 L 019	.05*	4.17					
1200 WVDC				1200 WVDC			
74 L 030	.00005	.94		74 L 130	.00005	.94	
74 L 031	.0001	.94		74 L 132	.0002	.94	
74 L 032	.0005	.94		74 L 134	.0005	.94	
74 L 035	.001	1.12		74 L 135	.001	1.06	
74 L 036	.002	1.67		74 L 136	.002	1.41	
74 L 044	.003	1.73		74 L 137	.003	1.79	
74 L 038	.005	1.94		74 L 139	.005†	1.94	

# Sprague Capacitors

## TVL MIDGET CAN ELECTROLYTICS

Famous "Twist-Lok" Aluminum Can Exact Replacement Capacitors



"Twist-Lok" aluminum can capacitors for exact replacement in Admiral, Dumont, Emerson, Motorola, Philco, Stromberg-Carlson, RCA, Zenith and other television receivers. Engineered to withstand extremely high temperatures, ripple currents and surge voltages encountered in TV circuits. Self-mounting, with twist-prong tabs that

go through chassis or connect to washer for above-chassis mounting. Terminals are welded to capacitor cathode and tinned for easy soldering. Supplied with bakelite insulating washer and metal washer for secure mounting. Capacity and voltage clearly printed on tubular casing to eliminate replacement error. Can common negative. Av. wt., 6 oz.

Stock No.	Mfr's Type	Mfd	DC Wkg. V.	Size	NET EACH
16 L 510	TVL-1940	10	500	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.00
16 L 756	TVL-1810	30	475	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.18
16 L 757	TVL-1820	40	475	1 1/2 x 2 <sup>1</sup> / <sub>2</sub> "	1.47
16 L 758	TVL-1850	90	475	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.06
16 L 470	TVL-1705	10	450	1 x 2 <sup>1</sup> / <sub>2</sub> "	.91
16 L 206	TVL-1709	15	450	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.00
16 L 886	TVL-1714	40	450	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.00
16 L 887	TVL-1720	30	450	1 x 2 1/2"	1.15
16 L 473	TVL-1725	40	450	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.21
16 L 217	TVL-1735	80	450	1 1/2 x 2 1/2"	1.79
16 L 755	TVL-1760	125	450	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.26
16 L 885	TVL-1675	80	400	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	1.73
16 L 509	TVL-1621	40	350	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.18
16 L 754	TVL-1630	80	350	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	1.68
16 L 799	TVL-1638	125	350	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.32
16 L 204	TVL-1573	80	300	1 1/2 x 2 1/2"	1.50
16 L 507	TVL-1567	50	300	1 x 2 1/2"	1.21
16 L 753	TVL-1578	100	300	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	1.79
16 L 508	TVL-1580	125	300	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.06
16 L 205	TVL-1584	150	300	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.06
16 L 797	TVL-1509	20	250	1 x 2 <sup>1</sup> / <sub>2</sub> "	.94
16 L 502	TVL-1516	30	250	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.00
16 L 503	TVL-1519	40	250	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.06
16 L 504	TVL-1522	50	250	1 x 2 1/2"	1.15
16 L 203	TVL-1525	60	250	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.21
16 L 505	TVL-1530	80	250	1 x 3 1/2"	1.27
16 L 506	TVL-1535	100	250	1 x 3 1/2"	1.27
16 L 798	TVL-1538	150	250	1 1/2 x 2 1/2"	1.82
16 L 201	TVL-1405	20	150	1 x 2 <sup>1</sup> / <sub>2</sub> "	.85
16 L 202	TVL-1412	40	150	1 x 2 <sup>1</sup> / <sub>2</sub> "	.94
16 L 794	TVL-1415	50	150	1 x 2 <sup>1</sup> / <sub>2</sub> "	.97
16 L 750	TVL-1420	80	150	1 x 2 1/2"	1.09
16 L 501	TVL-1421	80	150	1 1/2 x 2 1/2"	1.09
16 L 218	TVL-1428	140	150	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.26
16 L 795	TVL-1430	150	150	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	1.26
16 L 219	TVL-1431	200	150	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	1.44
16 L 796	TVL-1434	300	150	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	1.65
16 L 793	TVL-1330	500	50	1 1/2 x 2 1/2"	1.56
16 L 500	TVL-1320	150	50	1 1/2 x 2 1/2"	1.06
16 L 463	TVL-1215	100	25	1 1/2 x 2 1/2"	.94
16 L 792	TVL-1220	500	25	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.50
16 L 791	TVL-1168	2000	15	1 1/2 x 2 <sup>1</sup> / <sub>2</sub> "	2.03
16 L 200	TVL-1115	2000	6	1 1/2 x 2 <sup>1</sup> / <sub>2</sub> "	2.03
16 L 460	TVL-2830	40-40	475	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.53
16 L 468	TVL-2750	10-10	450	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.12
16 L 896	TVL-2752	15-10	450	1 x 2 1/2"	1.32
16 L 481	TVL-2755	20-20	450	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.50
16 L 897	TVL-2759	30-30	450	1 1/2 x 2 1/2"	1.79
16 L 477	TVL-2764	40-40	450	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.03
16 L 209	TVL-2770	60-40	450	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.32
16 L 898	TVL-2776	80-10	450	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.12
16 L 499	TVL-2777	30-50	450	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.12
16 L 524	TVL-2735	40-10	450-350	1 1/2 x 2 1/2"	1.53
16 L 523	TVL-2675	80-40	400	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.41
16 L 521	TVL-2672	80-10	400	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.00
16 L 208	TVL-2663	30-10	400	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.38
16 L 520	TVL-2660	15-15	400	1 x 2 1/2"	1.33
16 L 519	TVL-2627	30-20	350	1 x 3 1/2"	1.53
16 L 518	TVL-2621	30-30	350-300	1 x 3 1/2"	1.56
16 L 515	TVL-2568	15-15	300	1 x 2 1/2"	1.12
16 L 895	TVL-2575	40-40	300	1 1/2 x 2 1/2"	1.76
16 L 516	TVL-2579	60-60	300	1 1/2 x 2 1/2"	2.00
16 L 517	TVL-2582	80-40	300	1 1/2 x 2 1/2"	2.09
16 L 514	TVL-2555	20-20	300-25	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.09
16 L 513	TVL-2460	40-40	200	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.35
16 L 762	TVL-2585	80-80	300	1 1/2 x 3 1/2"	2.38
16 L 207	TVL-2515	20-20	250	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.12
16 L 894	TVL-2540	40-40	250	1 x 3 1/2"	1.47
16 L 483	TVL-2415	20-20	150	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.00
16 L 890	TVL-2422	30-30	150	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.09
16 L 468	TVL-2425	40-20	150	1 x 2 1/2"	1.12
16 L 891	TVL-2428	40-40	150	1 x 2 1/2"	1.12
16 L 469	TVL-2432	50-30	150	1 x 2 1/2"	1.18
16 L 484	TVL-2435	50-50	150	1 x 2 1/2"	1.26
16 L 892	TVL-2438	60-60	150	1 x 2 1/2"	1.38
16 L 893	TVL-2442	80-40	150	1 1/2 x 2 1/2"	1.35
16 L 512	TVL-2445	200-125	150	1 1/2 x 3 1/2"	2.20
16 L 511	TVL-2320	50-50	50	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.00
16 L 761	TVL-2160	1000-1000	15	1 x 3 1/2"	2.59
16 L 781	TVL-3835	10-10-10	475	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.59
16 L 969	TVL-3840	30-30-20	475	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.62
16 L 559	TVL-3843	40-30-30	475	1 1/2 x 4 <sup>1</sup> / <sub>2</sub> "	3.03
16 L 558	TVL-3820	20-20-60	475-475-400	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.82
16 L 557	TVL-3813	40-40-25	475-400-500	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.53
16 L 478	TVL-3766	10-10-10	450	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.53
16 L 964	TVL-3778	15-15-10	450	1 x 3 1/2"	1.73
16 L 965	TVL-3780	20-20-20	450	1 1/2 x 2 1/2"	2.12
16 L 966	TVL-3782	30-30-30	450	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.56
16 L 778	TVL-3785	40-40-10	450	1 1/2 x 3 1/2"	2.44
16 L 967	TVL-3787	40-40-40	450	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.88
16 L 554	TVL-3789	60-20-20	450	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.70
16 L 555	TVL-3790	60-30-10	450	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.65
16 L 556	TVL-3796	80-40-10	450	1 1/2 x 4 <sup>1</sup> / <sub>2</sub> "	3.00
16 L 552	TVL-3770	20-20-60	450-450-350	1 1/2 x 3 1/2"	2.97
16 L 553	TVL-3772	40-10-10	450-450-350	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	1.94
16 L 551	TVL-3765	15-10-120	450-450-300	1 1/2 x 3 1/2"	2.76

Stock No.	Mfr's Type	Mfd	DC Wkg. V.	Size	NET EACH
15 L 773	TVL-3761	40-10-80	450-450-200	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.29
15 L 963	TVL-3764	40-40-100	450-450-200	1 1/2 x 4 <sup>1</sup> / <sub>2</sub> "	2.91
15 L 962	TVL-3758	40-40-40	450-450-150	1 1/2 x 3 1/2"	2.44
16 L 549	TVL-3749	10-10-40	450-450-50	1 x 2 1/2"	1.47
16 L 550	TVL-3753	30-15-150	450-450-50	1 1/2 x 3 1/2"	2.18
16 L 547	TVL-3729	10-10-10	450-450-25	1 x 2 1/2"	1.41
15 L 490	TVL-3731	10-10-20	450-450-25	1 x 2 1/2"	1.41
16 L 548	TVL-3733	15-15-20	450-450-25	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.59
15 L 960	TVL-3737	20-15-20	450-450-25	1 x 3 1/2"	1.71
16 L 213	TVL-3735	20-10-20	450-450-25	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.59
15 L 485	TVL-3739	20-20-20	450-450-25	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.79
15 L 961	TVL-3741	30-30-20	450-450-25	1 1/2 x 2 1/2"	2.09
16 L 546	TVL-3727	20-80-10	450-350-350	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.50
16 L 545	TVL-3725	60-20-20	450-350-350	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.53
16 L 547	TVL-3722	20-80-100	450-350-50	1 1/2 x 3 1/2"	2.65
16 L 542	TVL-3719	10-10-20	450-350-25	1 x 2 1/2"	1.35
16 L 544	TVL-3723	30-40-50	450-350-25	1 x 2 <sup>1</sup> / <sub>2</sub> "	2.18
16 L 541	TVL-3690	10-10-10	400	1 x 2 1/2"	1.41
15 L 772	TVL-3684	80-40-150	400-400-50	1 1/2 x 4 <sup>1</sup> / <sub>2</sub> "	3.09
16 L 540	TVL-3675	15-15-40	400-400-25	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.65
15 L 426	TVL-3678	20-20-20	400-400-25	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.68
16 L 539	TVL-3665	10-40-10	400-300-150	1 1/2 x 2 1/2"	1.71
16 L 538	TVL-3660	60-40-20	400-350-50	1 1/2 x 4 <sup>1</sup> / <sub>2</sub> "	2.50
16 L 537	TVL-3628	10-10-20	350-350-25	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.91
15 L 957	TVL-3630	15-10-20	350-350-25	1 x 2 1/2"	1.47
16 L 534	TVL-3632	15-15-20	350-350-25	1 x 2 1/2"	1.59
15 L 958	TVL-3634	20-10-20	350-350-25	1 x 2 1/2"	1.50
15 L 959	TVL-3636	30-20-20	350-350-25	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.82
15 L 771	TVL-3623	40-20-10	350-300-200	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	1.94
16 L 536	TVL-3620	30-30-20	350-300-25	1 x 3 1/2"	1.85
16 L 536	TVL-3619	60-40-20	350-300-150	1 1/2 x 4 <sup>1</sup> / <sub>2</sub> "	1.85
16 L 535	TVL-3627	20-20-20	350-250-25	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.65
16 L 533	TVL-3580	10-10-10	300	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.41
16 L 534	TVL-3585	120-50-40	300	1 1/2 x 4 <sup>1</sup> / <sub>2</sub> "	3.44
16 L 956	TVL-3565	20-20-20	300-300-25	1 x 2 1/2"	1.62
16 L 532	TVL-3573	40-20-20	300-300-25	1 1/2 x 2 1/2"	1.82
16 L 531	TVL-3534	30-15-10	250	1 x 2 1/2"	1.60
16 L 530	TVL-3525	80-80-60	250-250-200	1 1/2 x 3 1/2"	2.65
15 L 955	TVL-3540	40-20-20	250-250-25	1 x 2 1/2"	1.71
15 L 954	TVL-3510	15-15-20	250-250-25	1 x 2 1/2"	1.58
16 L 529	TVL-3513	30-30-20	250-250-25	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.65
15 L 793	TVL-3495	30-30-20	150	1 x 2 1/2"	1.35
15 L 952	TVL-3437	40-20-20	150	1 x 2 1/2"	1.41
15 L 421	TVL-3440	40-40-40	150	1 x 3 1/2"	1.53
15 L 953	TVL-3442	50-50-50	150	1 x 3 <sup>1</sup> / <sub>2</sub> "	1.76
16 L 527	TVL-3446	80-80-80	150	1 1/2 x 3 <sup>1</sup> / <sub>2</sub> "	2.21
16 L 528	TVL-3448	120-80-40	150	1 1/2 x 3 1/2"	2.23
15 L 425	TVL-3415	20-20-20	150-15-25	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.29
16 L 526	TVL-3417	30-20-20	150-150-25	1 x 2 <sup>1</sup> / <sub>2</sub> "	1.32
15 L 951	TVL-3429	30-30-20	150-150-25	1 x 2 1/2"	1.35
16 L 524	TVL-3425	30-40-25	150-150-25	1 x 2 1/2"	1.38
16 L 210	TVL-3422	40-20-20	150-150-25	1 x 2 1/2"	1.35
16 L 522	TVL-3424	40-30-20	150-150-25	1 x 2 1/2"	1.38
15 L 420					

# Sprague Capacitors

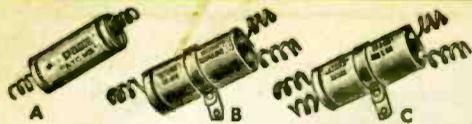


Fig. A—SINGLE-SECTION ATOMS

## TVA AND TU ATOMS—MIDGET ELECTROLYTICS

Very compact, metal-cased dry electrolytics. Engineered especially for replacements in tough TV applications—such as power supplies, decoupling circuits, cathode bypass circuits, etc. Will withstand the high surge voltages and high ripple currents commonly encountered in television circuits. Operate efficiently at temperatures as high as 85° C. \*Separate negative lead. Av. shgp. wt., 6 oz.

No.	Type	Mfd	W.V.	Size	Ea.
15L 175	TVA-1905	8	500	3/8x1 1/8"	.76
15L 176	TVA-1902	16	500	1 1/2x2 1/8"	.89
15L 177	TVA-1906	20	500	1 1/2x2 1/8"	.94
15L 170	TVA-1702	4	450	3/8x1 1/8"	.68
15L 171	TVA-1704	8	450	1 1/2x2 1/8"	.74
15L 225	TVA-1706	10	450	1 1/2x2 1/8"	.76
15L 172	TVA-1706	12	450	3/8x1 1/8"	.79
15L 173	TVA-1708	16	450	3/8x2 1/8"	.82
15L 174	TVA-1709	20	450	3/8x2 1/8"	.91
15L 169	TVA-1711	30	450	3/8x2 1/8"	1.00
15L 178	TVA-1712	40	450	3/8x2 1/8"	1.06
15L 991	TVA-1713	50	450	3/8x2 1/8"	1.06
15L 985	TVA-1716	80	450	1 1/2x2 1/8"	1.65
15L 181	TVA-1603	8	350	3/8x1 1/8"	.71
15L 184	TVA-1608	20	350	1 1/2x2 1/8"	.85
15L 983	TVA-1611	40	350	1 1/2x2 1/8"	1.03
15L 984	TVA-1613	60	350	1 1/2x2 1/8"	1.15
15L 185	TVA-1501	4	250	3/8x1 1/8"	.59
15L 186	TVA-1503	8	250	3/8x1 1/8"	.68
15L 187	TVA-1505	12	250	3/8x1 1/8"	.74
15L 188	TVA-1507	16	250	3/8x1 1/8"	.76
15L 189	TVA-1508	20	250	1 1/2x2 1/8"	.79
15L 190	TVA-1511	40	250	1 1/2x2 1/8"	.91
15L 192	TVA-1402	4	150	3/8x1 1/8"	.59
15L 193	TVA-1405	8	150	3/8x1 1/8"	.62
15L 226	TVA-1406	10	150	3/8x1 1/8"	.62
15L 194	TVA-1407	12	150	3/8x1 1/8"	.65
15L 195	TVA-1409	16	150	3/8x1 1/8"	.68
15L 196	TVA-1410	20	150	3/8x1 1/8"	.71
15L 197	TVA-1412	30	150	3/8x1 1/8"	.76
15L 198	TVA-1413	40	150	3/8x1 1/8"	.79
15L 199	TVA-1414	50	150	1 1/2x2 1/8"	.82
15L 240	TVA-1422	150	150	1 1/2x2 1/8"	1.12
15L 878	TVA-1418	80	150	3/8x1 1/8"	.94
15L 870	TVA-1300	1	50	3/8x1 1/8"	.53
15L 871	TVA-1301	2	50	3/8x1 1/8"	.53
15L 200	TVA-1303	5	50	3/8x1 1/8"	.59
15L 201	TVA-1304	10	50	3/8x1 1/8"	.59

No.	Type	Mfd	W.V.	Size	Ea.
15L 202	TVA-1306	25	50	3/8x1 1/8"	.62
15L 203	TVA-1308	50	50	3/8x1 1/8"	.81
15L 204	TVA-1310	100	50	3/8x1 1/8"	.87
15L 858	TVA-1311	150	50	3/8x1 1/8"	.91
15L 859	TVA-1312	250	50	1 1/2x2 1/8"	1.03
15L 207	TVA-1203	5	25	3/8x1 1/8"	.59
15L 205	TVA-1204	10	25	3/8x1 1/8"	.59
15L 206	TVA-1205	25	25	3/8x1 1/8"	.59
15L 208	TVA-1206	50	25	3/8x1 1/8"	.65
15L 867	TVA-1207	100	25	3/8x1 1/8"	.79
15L 868	TVA-1208	250	25	3/8x1 1/8"	1.00
15L 869	TVA-1209	500	25	3/8x2 1/8"	1.35
16L 236	TVA-1160	100	15	3/8x1 1/8"	.74
16L 237	TVA-1161	250	15	3/8x1 1/8"	.91
16L 238	TVA-1162	500	15	1 1/2x2 1/8"	1.03
16L 239	TVA-1163	1000	15	3/8x2 1/8"	1.35
16L 234	TVA-1102	100	12	3/8x1 1/8"	.71
15L 862	TVA-1131	250	12	3/8x1 1/8"	.85
15L 863	TVA-1132	500	12	3/8x1 1/8"	1.00
16L 235	TVA-1133	1000	12	1 1/2x2 1/8"	1.32
15L 981	TVA-1100	50	6	3/8x1 1/8"	.56
16L 230	TVA-1101	100	6	3/8x1 1/8"	.71
16L 231	TVA-1102	250	6	3/8x1 1/8"	.79
16L 232	TVA-1103	500	6	3/8x2 1/8"	.91
15L 860	TVA-1104	1000	6	1 1/2x2 1/8"	1.12
16L 233	TVA-1105	1500	6	1 1/2x2 1/8"	1.23
15L 861	TVA-1106	2000	6	1 1/2x2 1/8"	1.35
15L 220	TVA-2720	8-8	450	3/8x1 1/8"	1.00
15L 221	TU-88	8-18	450	1 1/2x2 1/8"	1.26
15L 222	TVA-2725	8-18	450	3/8x2 1/8"	1.18
15L 924	TU-2722	10-10	450	3/8x1 1/8"	1.09
15L 925	TU-1616	*16-16	450	1 1/2x3 1/8"	1.65
15L 927	TVA-2730	20-20	450	3/8x2 1/8"	1.47
15L 986	TVA-2735	30-30	450	1 1/2x3 1/8"	1.76
15L 987	TVA-2740	40-40	450	1 1/2x3 1/8"	2.00

No.	Type	Mfd	W.V.	Size	Ea.
15L 245	TVA-2415	8-8	150	3/8x1 1/8"	.88
15L 254	TVA-2420	16-16	150	3/8x1 1/8"	1.06
15L 246	TVA-2425	12-20	150	3/8x1 1/8"	.94
15L 247	TVA-2428	20-20	150	3/8x1 1/8"	.97
15L 248	TU-220	*20-20	150	1 1/2x2 1/8"	1.21
15L 253	TVA-2421	20-30	150	3/8x1 1/8"	.00
15L 252	TVA-2438	20-40	150	3/8x1 1/8"	.03
15L 251	TVA-2434	30-30	150	3/8x1 1/8"	1.06
15L 249	TU-420	*40-20	150	1 1/2x2 1/8"	1.29
15L 250	TVA-2442	40-30	150	3/8x1 1/8"	1.06
15L 243	TVA-2445	40-40	150	3/8x1 1/8"	.09
15L 244	TVA-2450	50-50	150	3/8x1 1/8"	1.15
15L 305	TVA-2453	50-50	150	3/8x2 1/8"	1.23
15L 306	TVA-2460	80-80	150	3/8x2 1/8"	1.29
15L 255	TVA-2315	10-10	50	3/8x1 1/8"	.82

Fig. C—TRIPLE-SECTION ATOMS

No.	Type	Mfd	W.V.	Size	Ea.
15L 307	TVA-3440	20-20	150	3/8x1 1/8"	1.29
15L 311	TVA-3444	30-30	150	3/8x2 1/8"	1.38
15L 308	TVA-3448	40-30	150	3/8x2 1/8"	1.38
15L 309	TVA-3451	40-40	150	1 1/2x2 1/8"	1.44
15L 320	TVA-3455	80-40	150	1 1/2x3 1/8"	1.62
15L 990	TVA-3716	12-12	450	1 1/2x2 1/8"	1.35
15L 988	TVA-3415	20	25	3/8x1 1/8"	1.21
15L 989	TVA-3419	30-30	150	3/8x1 1/8"	1.35
15L 312	TVA-3423	40-30	150	3/8x1 1/8"	1.29
15L 318	TVA-3427	40	150	3/8x2 1/8"	1.44
15L 313	TVA-3430	100	25	3/8x2 1/8"	1.38
15L 329	TVA-3433	50-30	150	1 1/2x2 1/8"	1.62
15L 314	TVA-3436	50-50	150	1 1/2x2 1/8"	1.47

## "BLACK BEAUTY" TELECAPS

Hi-temp plastic tubulars. Highly resistant to heat and moisture; mechanically rugged; completely insulated. Special molded construction for maximum dependability. 600-6000 v. types are oil impregnated. Average shgp. wt., 3 oz.



200 VOLTS DC WORKING					
No.	Type	Mfd	Size	Ea.	
15L 120	2TM-S2	.02	3/8x1 1/8"	15c	
15L 149	2TM-S47	.047	3/8x1 1/8"	15c	
15L 121	2TM-S5	.05	3/8x1 1/8"	15c	
15L 122	2TM-P1	.1	3/8x1 1/8"	21c	
15L 145	2TM-P15	.15	3/8x1 1/8"	21c	
15L 146	2TM-P22	.22	3/8x1 1/8"	24c	
15L 147	2TM-P25	.25	3/8x1 1/8"	24c	
15L 148	2TM-P47	.47	3/8x1 1/8"	35c	
15L 123	2TM-P5	.5	3/8x1 1/8"	35c	
15L 124	2TM-M1	1	3/8x2 1/8"	53c	
400 VOLTS DC WORKING					
15L 125	4TM-S1	.01	3/8x1 1/8"	15c	
15L 126	4TM-S2	.02	3/8x1 1/8"	15c	
15L 013	4TM-S22	.022	3/8x1 1/8"	15c	
15L 014	4TM-S47	.047	3/8x1 1/8"	18c	
15L 017	4TM-S5	.05	3/8x1 1/8"	18c	
15L 015	4TM-S68	.068	3/8x1 1/8"	21c	
15L 128	4TM-P1	.1	3/8x1 1/8"	21c	
15L 016	4TM-P15	.15	3/8x1 1/8"	21c	
15L 012	4TM-P22	.22	3/8x1 1/8"	24c	
15L 012	4TM-P25	.25	3/8x1 1/8"	24c	
15L 010	4TM-P5	.5	3/8x2 1/8"	35c	
600 VOLTS DC WORKING					
16L 250	6TM-T1	.0001	3/8x1 1/8"	18c	
16L 251	6TM-T25	.00025	3/8x1 1/8"	18c	
16L 252	6TM-T4	.0004	3/8x1 1/8"	18c	
16L 253	6TM-T5	.0005	3/8x1 1/8"	18c	
16L 070	6TM-D1	.001	3/8x1 1/8"	15c	
15L 084	6TM-D15	.0015	3/8x1 1/8"	18c	
15L 071	6TM-D2	.002	3/8x1 1/8"	18c	
15L 092	6TM-D22	.0022	3/8x1 1/8"	15c	
15L 072	6TM-D3	.003	3/8x1 1/8"	18c	
15L 073	6TM-D4	.004	3/8x1 1/8"	18c	
15L 093	6TM-D47	.0047	3/8x1 1/8"	18c	
15L 074	6TM-D5	.005	3/8x1 1/8"	18c	
15L 075	6TM-D6	.006	3/8x1 1/8"	18c	
16L 254	6TM-D68	.0068	3/8x1 1/8"	18c	
15L 076	6TM-S1	.01	3/8x1 1/8"	18c	
15L 094	6TM-S15	.015	3/8x1 1/8"	18c	
15L 077	6TM-S2	.02	3/8x1 1/8"	18c	
15L 255	6TM-S22	.022	3/8x1 1/8"	18c	
15L 078	6TM-S3	.03	3/8x1 1/8"	21c	
15L 079	6TM-S4	.04	3/8x1 1/8"	21c	
15L 098	6TM-S47	.047	3/8x1 1/8"	24c	
15L 080	6TM-S5	.05	3/8x1 1/8"	24c	
15L 081	6TM-S6	.06	3/8x1 1/8"	24c	
15L 082	6TM-P1	.1	3/8x1 1/8"	26c	
15L 083	6TM-P15	.15	3/8x1 1/8"	26c	
16L 260	6TM-P5	.5	3/8x2 1/8"	47c	
16L 261	TC-10	1.0	1 1/2x2 1/8"	73c	

1000 VOLTS DC WORKING					
No.	Type	Mfd.	Size	Eaoh	
15L 928	10TM-T5	.0005	3/8x1 1/8"	29c	
15L 929	10TM-D1	.001	3/8x1 1/8"	29c	
15L 930	10TM-D15	.0015	3/8x1 1/8"	29c	
15L 931	10TM-D2	.002	3/8x1 1/8"	29c	
15L 932	10TM-D22	.0022	3/8x1 1/8"	29c	
15L 933	10TM-D3	.003	3/8x1 1/8"	29c	
15L 934	10TM-D47	.0047	3/8x1 1/8"	29c	
15L 935	10TM-D5	.005	3/8x1 1/8"	29c	
15L 937	10TM-D68	.0068	3/8x1 1/8"	29c	
15L 938	10TM-S1	.01	3/8x1 1/8"	29c	
15L 939	10TM-S15	.015	3/8x1 1/8"	29c	
15L 940	10TM-S2	.02	3/8x1 1/8"	29c	
15L 941	10TM-S22	.022	3/8x1 1/8"	29c	
15L 942	10TM-S3	.03	3/8x1 1/8"	29c	
15L 943	10TM-S35	.035	3/8x1 1/8"	29c	
15L 944	10TM-S47	.047	3/8x1 1/8"	35c	
15L 945	10TM-S5	.05	3/8x1 1/8"	35c	
15L 946	10TM-S68	.068	3/8x1 1/8"	38c	
15L 947	10TM-P1	.1	3/8x2 1/8"	44c	
1600 VOLTS DC WORKING					
16L 270	MB-T5	.0005	3/8x1 1/8"	38c	
16L 271	MB-D15	.0015	3/8x1 1/8"	38c	
16L 272	MB-D2	.002	3/8x1 1/8"	38c	
16L 273	MB-D22	.0022	3/8x1 1/8"	38c	
16L 274	MB-D3	.003	3/8x1 1/8"	38c	
16L 275	MB-D33	.0033	3/8x1 1/8"	38c	
16L 276	MB-D4	.004</			

# Sprague Capacitors



## TYPE 96P SUBMINIATURE PAPER CAPACITORS

Sprague subminiature paper capacitors are a product of new techniques, materials, and processes. These new units are electrically and mechanically designed to meet very stringent operating conditions. Positive hermetic closure of the metal cases is assured by glass-to-metal, solder-seal terminals. They are "vitamin Q" oil-impregnated. Inserted tab construction, with both ends insulated from can. Rated for use up to 125 degrees Centigrade. Wt., 4 oz.

### 100 VOLTS DC WORKING

No.	Type	Mfd	Size	NET
15 L 926	10491	.1	1/4x1 1/2"	2.98
15 L 925	47491	.47	1/4x1 1/2"	3.49

### 200 VOLTS DC WORKING

No.	Type	Mfd	Size	NET
15 L 924	10492	.1	1/2x1 1/2"	3.11
15 L 923	47492	.47	1/2x1 1/2"	3.75

### 400 VOLTS DC WORKING

No.	Type	Mfd	Size	NET
15 L 922	10494	.1	1/2x1 1/2"	3.36
15 L 920	22494	.22	1/2x1 1/2"	3.75
15 L 921	47494	.47	1/2x1 1/2"	4.33

### 600 VOLTS DC WORKING

No.	Type	Mfd	Size	NET
15 L 900	10296	.001	1/4x1 1/2"	2.91
15 L 901	22296	.0022	1/4x1 1/2"	2.91
15 L 902	47296	.0047	1/4x1 1/2"	2.94
15 L 903	68296	.0068	1/4x1 1/2"	2.94
15 L 904	10396	.01	1/4x1 1/2"	3.04
15 L 905	22396	.022	1/4x1 1/2"	3.11
15 L 906	47396	.047	1/4x1 1/2"	3.26
15 L 907	68396	.068	1/4x1 1/2"	3.33
15 L 908	10496	.1	1/4x1 1/2"	3.63
15 L 909	22496	.22	1/4x1 1/2"	4.01
15 L 910	47496	.47	1/4x1 1/2"	4.68

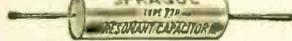
## MOTOR-STARTING CAPACITORS

### TYPE AM

Electrolytic capacitors for 110 volt capacitor-start AC motors. Screw or solder connections. \*Min. max. Av. shpg. wt., 10 oz.



No.	Type	*Mfd	Size	NET
15 L 579	1106	47-56	1 x 2 1/2"	1.23
15 L 580	1107	53-64	1 x 2 1/2"	1.26
15 L 581	1108	64-77	1 x 2 1/2"	1.32
15 L 582	1109	72-88	1 x 2 1/2"	1.35
15 L 583	1110	88-108	1 x 2 1/2"	1.53
15 L 584	1113	108-130	1 1/2 x 2 1/2"	1.68
15 L 585	1116	124-149	1 1/2 x 2 1/2"	1.73
15 L 586	1119	130-156	1 1/2 x 2 1/2"	1.73
15 L 587	1122	145-175	1 1/2 x 2 1/2"	1.88
15 L 588	1125	161-193	1 1/2 x 2 1/2"	1.91
15 L 589	1128	189-227	1 1/2 x 2 1/2"	2.21
15 L 570	1130	200-240	1 1/2 x 2 1/2"	2.21
15 L 571	1131	216-259	1 1/2 x 3 1/2"	2.38
15 L 573	1134	233-280	1 1/2 x 3 1/2"	2.65
15 L 574	1137	243-292	1 1/2 x 4 1/2"	2.76
15 L 575	1140	270-324	1 1/2 x 4 1/2"	2.79
15 L 576	1142	324-388	1 1/2 x 4 1/2"	3.18
15 L 577	1143	340-408	1 1/2 x 4 1/2"	3.26
15 L 589	1146	378-440	1 1/2 x 4 1/2"	3.53
15 L 578	1149	400-480	1 1/2 x 4 1/2"	3.56



## RESONANT PAPER CAPACITORS

**Type 72-P.** Prevent IF regeneration and self-oscillation. Have special inductive design for series resonance at about 455 kc. Stabilize AC-DC "squealer" type receivers. Connect from B- to chassis in AC-DC sets with isolated common negative bus. Shpg. wt., 3 oz.

No.	Type	Mfd	W.V.	Size	NET
15 L 361	72P51	.05	400	1/2x1 1/2"	2.90
15 L 362	72P52	.1	400	1/2x1 1/2"	3.80
15 L 363	72P53	.2	400	1/2x1 1/2"	4.10

## OT TRANSMITTING CAPACITORS

Low cost, dependable, compact transmitting capacitors. Oil-impregnated and oil-filled. Hermetically sealed to protect from dirt and against changes in humidity. Ceramic pillar terminals for maximum insulation. Complete with "Life-guard" protective caps. Diameter, 2". Av. shpg. wt., 2 lbs.

No.	Type	Mfd	W.V.	Length	E.A.
16 L 590	OT-26	2.0	600	2 1/2"	3.20
16 L 591	OT-11	1.0	1000	2 1/2"	2.73
16 L 592	OT-21	2.0	1000	3 1/2"	3.70
16 L 593	OT-41	4.0	1000	5 1/2"	4.70

## "CERA-MITE" DISC CERAMIC CAPACITORS

Ultra-compact ceramic disc capacitors. In ceramic values and all new RETMA values. High by-pass efficiency in critical circuits. Moisture-proof coating. Tolerances: 500 WVDC types, ±20%; 1000 WVDC types, thru 680 mfd, ±10%; thru .0033 mfd, ±20%; thru .01 mfd, min.; 3000 WVDC types 4.7 mfd, ±.5 mfd; thru 68 mfd, ±10%; thru 500 mfd, ±20%. Shpg. wt. 2 oz.



### 500 VOLTS DC WORKING

No.	Type	Cap.	EACH
16 L 300	5GA-V5	5 mfd	15c
16 L 301	5GA-V6	6 mfd	
16 L 302	5GA-V75	7.5 mfd	
16 L 303	5GA-V8	8 mfd	
16 L 304	5GA-V15	10 mfd	
16 L 305	5GA-V12	12 mfd	
16 L 306	5GA-V15	15 mfd	15c
16 L 307	5GA-O18	18 mfd	
16 L 308	5GA-O2	20 mfd	
16 L 309	5GA-O22	22 mfd	
16 L 310	5GA-O25	25 mfd	
16 L 311	5GA-O27	27 mfd	
16 L 312	5GA-O30	30 mfd	15c
16 L 313	5GA-O33	33 mfd	
16 L 314	5GA-O39	39 mfd	
16 L 315	5GA-O47	47 mfd	
16 L 316	5GA-O5	50 mfd	
16 L 317	5GA-O56	56 mfd	
16 L 318	5GA-O68	68 mfd	15c
16 L 319	5GA-O75	75 mfd	
16 L 320	5GA-O82	82 mfd	
16 L 321	5GA-O91	91 mfd	
16 L 322	5GA-T1	100 mfd	
16 L 323	5GA-T12	120 mfd	
16 L 324	5GA-T13	130 mfd	15c
16 L 325	5GA-T15	150 mfd	
16 L 326	5GA-T18	180 mfd	
16 L 327	5GA-T2	200 mfd	
16 L 328	5GA-T22	220 mfd	
16 L 329	5GA-T24	240 mfd	
16 L 330	5GA-T25	250 mfd	15c
16 L 331	5GA-T27	270 mfd	
16 L 332	5GA-T3	300 mfd	
16 L 333	5GA-T33	330 mfd	
16 L 334	5GA-T35	350 mfd	
16 L 335	5GA-T36	360 mfd	
16 L 336	5GA-T39	390 mfd	
16 L 337	5GA-T4	400 mfd	
16 L 338	5GA-T47	470 mfd	
16 L 339	5GA-T5	500 mfd	
16 L 340	5GA-T56	560 mfd	
16 L 341	5GA-T6	600 mfd	15c
16 L 342	5GA-T68	680 mfd	
16 L 343	5GA-T75	750 mfd	
16 L 344	5GA-T8	800 mfd	
16 L 345	5GA-T82	820 mfd	
16 L 346	5GA-T1	.001 mfd	
16 L 347	5GA-D12	.0012 mfd	18c
16 L 348	5GA-D13	.0013 mfd	
16 L 671	5GA-D15	.0015 mfd	
16 L 350	5GA-D16	.0016 mfd	
16 L 351	5GA-D18	.0018 mfd	
16 L 352	5GA-D2	.0020 mfd	
16 L 353	5GA-D22	.0022 mfd	15c
16 L 354	5GA-D25	.0025 mfd	
16 L 355	5GA-D27	.0027 mfd	
16 L 356	5GA-D3	.0030 mfd	
16 L 357	5GA-D33	.0033 mfd	
16 L 358	5GA-D39	.0039 mfd	
16 L 359	5GA-D4	.0040 mfd	18c
16 L 360	5GA-D43	.0043 mfd	
16 L 361	5GA-D47	.0047 mfd	
16 L 362	5GA-D5	.005 mfd	
16 L 672	5GA-D15	.0015 mfd	
16 L 673	5GA-D16	.0016 mfd	
16 L 674	5GA-D18	.0018 mfd	
16 L 675	5GA-D2	.0020 mfd	15c
16 L 676	5GA-D22	.0022 mfd	
16 L 677	5GA-D25	.0025 mfd	
16 L 678	5GA-D27	.0027 mfd	
16 L 679	5GA-D3	.0030 mfd	
16 L 680	5GA-D33	.0033 mfd	

### SINGLE AND DUAL HIGH-K TYPES

No.	Type	Cap.	EACH
16 L 672	5HK-D2	.002 mfd	15c
16 L 673	5HK-D5	.005 mfd	15c
16 L 674	5HK-S1	.010 mfd	18c
16 L 675	5HK-2D1	2 x .001 mfd	24c
16 L 676	5HK-2D15	2 x .0015 mfd	24c
16 L 677	5HK-2D2	2 x .002 mfd	24c
16 L 678	5HK-2D4	2 x .004 mfd	26c

## TYPE NPO CERAMICS

Zero temperature-coefficient capacitors. 500 WVDC. Discs, except \*rectangular. 2 oz.

No.	Type	Mmf	EACH
16 L 450	5TCCB-V1*	1.0	29c
16 L 451	5TCCB-V15*	1.5	
16 L 452	5TCCB-V22*	2.2	
16 L 453	5TCCB-V33*	3.3	
16 L 454	5TCCB-V47*	4.7	
16 L 455	5TCCB-V68*	6.8	
16 L 456	5TCC-O1	10.0	29c
16 L 457	5TCC-O15	15.0	
16 L 458	5TCC-O20	20.0	
16 L 459	5TCC-O22	22.0	
16 L 460	5TCC-O25	25.0	
16 L 461	5TCC-O33	33.0	
16 L 462	5TCC-O39	39.0	32c
16 L 463	5TCC-O47	47.0	
16 L 464	5TCC-O5	50.0	
16 L 465	5TCC-O68	68.0	
16 L 466	5TCC-O75	75.0	
16 L 467	5TCC-O100	100.0	
16 L 468	5TCC-T12	120.0	35c
16 L 469	5TCC-T15	150.0	
16 L 470	5TCC-T175	175.0	
16 L 471	5TCC-T22	220.0	
16 L 472	5TCC-T27	270.0	
16 L 473	5TCC-T33	330.0	

### 1000 VOLTS DC WORKING

No.	Type	Cap.	EACH
16 L 400	10GA-V47	4.7 mfd	18c
16 L 401	10GA-O1	10 mfd	
16 L 402	10GA-O15	15 mfd	
16 L 403	10GA-O18	18 mfd	
16 L 404	10GA-O22	22 mfd	
16 L 405	10GA-O27	27 mfd	
16 L 406	10GA-O33	33 mfd	18c
16 L 407	10GA-O39	39 mfd	
16 L 408	10GA-O47	47 mfd	
16 L 409	10GA-O68	68 mfd	
16 L 410	10GA-O75	75 mfd	
16 L 411	10GA-O82	82 mfd	
16 L 412	10GA-T1	100 mfd	18c
16 L 413	10GA-T15	150 mfd	
16 L 414	10GA-T18	180 mfd	
16 L 415	10GA-T2	200 mfd	
16 L 416	10GA-T22	220 mfd	
16 L 417	10GA-T25	250 mfd	
16 L 418	10GA-T27	270 mfd	18c
16 L 419	10GA-T30	300 mfd	
16 L 420	10GA-T33	330 mfd	
16 L 421	10GA-T39	390 mfd	
16 L 422	10GA-T47	470 mfd	
16 L 423	10GA-T5	500 mfd	
16 L 424	10GA-T56	560 mfd	29c
16 L 425	10GA-T68	680 mfd	
16 L 426	10GA-D1	.001 mfd	
16 L 427	10GA-D12	.0012 mfd	
16 L 428	10GA-D15	.0015 mfd	
16 L 429	10GA-D22	.0022 mfd	
16 L 430	10GA-D33	.0033 mfd	35c
16 L 431	10HK-D47	.0047 mfd	
16 L 432	10HK-D68	.0068 mfd	
16 L 433	10HK-S1	.01 mfd	

### 3000 VOLTS DC WORKING

No.	Type	Mmf	EACH
16 L 370	30GA-V47	4.7	24c
16 L 371	30GA-O1	10	
16 L 372	30GA-O15	15	
16 L 373	30GA-O25	25	
16 L 374	30GA-O30	30	
16 L 375	30GA-O5	50	
16 L 376	30GA-O68	68	24c
16 L 377	30GA-T1	100	
16 L 378	30GA-T12	120	
16 L 379	30GA-T15	150	
16 L 380	30GA-T18	180	
16 L 381	30GA-T2	200	

# Aerovox Capacitors

## TYPE 09 HYVOL CAPACITORS



Designed for heavy-duty continuous service in transmitters, amplifiers, etc. Compact, oil-impregnated, oil-filled units. Hermetically sealed in immersion-proof, sturdy rectangular metal cans. High-voltage screw type pillar terminals fitted with solder lugs. All are supplied with Type MB base strap bracket for easy chassis mounting, except supplied with Type MS chassis bracket which clamps over top rim of can. Av. wt., 2 lbs.

### TYPE 609MB—600 V. DC WKG.

Stock No.	Mfd	Size	NET
13 L 940	5.0	4 1/2 x 2 1/2 x 1 3/8"	6.14
13 L 941	6.0	4 1/2 x 2 1/2 x 1 3/8"	6.64
13 L 942	8.0	3 7/8 x 3 1/2 x 1 1/2"	7.94
13 L 943	10.0	4 1/2 x 3 1/2 x 1 1/2"	8.91
13 L 944	15.0	4 1/2 x 3 1/2 x 1 1/2"	10.88

### TYPE 1009MB—1000 V. DC WKG.

13 L 945	1.0	2 1/2 x 1 1/2 x 1 1/8"	3.73
13 L 946	2.0	3 1/2 x 1 1/2 x 1 1/8"	4.85
13 L 947	4.0	4 1/2 x 2 1/2 x 1 1/8"	6.14
13 L 948	4.0	4 1/2 x 3 1/2 x 2 1/4"	8.26
13 L 949	8.0	4 1/2 x 3 1/2 x 2 1/4"	8.91

### TYPE 2009MB—2000 V. DC WKG.

13 L 985	1.0	3 1/2 x 2 1/2 x 1 3/8"	5.35
13 L 986	2.0	4 x 3 1/2 x 1 3/8"	6.32
13 L 987	4.0	3 7/8 x 3 1/2 x 2 1/4"	8.91
13 L 988	5.0	4 1/2 x 3 1/2 x 2 1/4"	9.88
13 L 989*	6.0	4 1/2 x 3 1/2 x 3 1/8"	11.82

## TYPE 30 HYVOL CAPACITORS



Hermetically sealed, immersion-proof bathtub style. Oil-impregnated, oil-filled, drawn-metal case. Bakelite insulators riveted to case. Built for severe operating conditions, as in aircraft, police, marine, and other heavy-duty equipment. Average shpg. wt., 8 oz.

### 600 V. SINGLE SECTION

No.	Mfd	Size	NET
13 L 950	.05	1 1/2 x 1 1/2 x 3/8"	1.68
13 L 951	.1	1 1/2 x 1 1/2 x 3/8"	1.71
13 L 952	.25	1 1/2 x 1 1/2 x 3/8"	1.82
13 L 953	.5	1 1/2 x 1 1/2 x 3/8"	1.94
13 L 954	1.0	2 1/2 x 1 1/2 x 3/8"	2.20
13 L 955	2.0	2 1/2 x 1 1/2 x 3/8"	2.94

### 600 V. DUAL-SECTION

13 L 956	.05-.05	1 1/2 x 1 1/2 x 3/8"	2.15
13 L 957	-.1-.1	1 1/2 x 1 1/2 x 3/8"	2.18
13 L 958	.25-.25	1 1/2 x 1 1/2 x 3/8"	2.20
13 L 959	-.5-.5	2 1/2 x 1 1/2 x 3/8"	2.53
13 L 960	1.0-1.0	2 1/2 x 1 1/2 x 3/8"	3.12

### 600 V. TRIPLE-SECTION

13 L 964	.05-.05-.05	1 1/2 x 1 1/2 x 3/8"	2.38
13 L 965	-.1-.1-.1	1 1/2 x 1 1/2 x 3/8"	2.47
13 L 966	.25-.25-.25	2 1/2 x 1 1/2 x 3/8"	2.79

## TYPE AEP PLUG-IN ELECTROLYTIC CAPACITORS



Plug-in 1, 2 and 3 section in electrolytic capacitors. Designed to meet requirements of continuous service applications. Permit fast change required in commercial and professional equipment. Plug-in mounting style simplifies installation and testing—units fit standard octal sockets. Feature high capacity in ultra-compact cans. Non-corrosive, etched aluminum foil internal construction throughout. Vented for safety. Rugged, heavy duty. Average shpg. wt., 5 oz.

### SINGLE SECTION

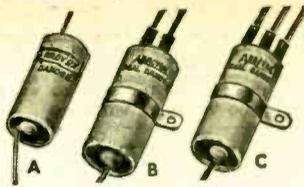
No.	Type	Mfd.	W. V.	Size	NET
13 L 035	2J	10	450	1 3/8 x 2 1/2"	2.38
13 L 037	4J	20	450	1 3/8 x 2 1/2"	2.53
13 L 038	6J	30	450	1 3/8 x 2 1/2"	2.62
13 L 039	8J	40	450	1 3/8 x 2 1/2"	2.68
13 L 040	16J	80	450	1 3/8 x 3 1/2"	3.26
13 L 041	2L	10	600	1 1/2 x 4 1/2"	2.47

### DUAL SECTION

13 L 044	22J	10-10	450	1 3/8 x 2 1/2"	2.59
13 L 045	44J	20-20	450	1 3/8 x 2 1/2"	2.97
13 L 046	88J	40-40	450	1 3/8 x 3 1/2"	3.52

### TRIPLE SECTION

13 L 047	222J	10-10-10	450	1 3/8 x 2 1/2"	3.00
13 L 048	444J	20-20-20	450	1 3/8 x 3 1/2"	3.59



## TYPE PRS MINIATURE ALUMINUM CAN ELECTROLYTICS

Tubular dry electrolytics for use in compact assemblies. Higher voltage units meet requirements of TV circuits. Aluminum can type, with outer cardboard insulating tube and common negative. High purity aluminum construction. All units supplied in etched foil. Vented for excessive gas pressures. Multi-section units are supplied with brackets for single-hole mounting. Av. shpg. wt., 4 oz.

### Fig. A—SINGLE SECTION

No.	Mfd	Volts	Size	NET
13 L 639	8	700	1 1/2 x 3 1/2"	1.76
13 L 640	10	700	1 1/2 x 3 1/2"	2.06
13 L 642	16	700	1 1/2 x 3 1/2"	2.65
13 L 632	8	600	1 1/2 x 3 1/2"	1.62
13 L 633	10	600	1 1/2 x 3 1/2"	1.73
13 L 634	12	600	1 1/2 x 3 1/2"	1.82
13 L 635	16	600	1 1/2 x 3 1/2"	1.91
13 L 385	4	450	1 1/2 x 1 1/2"	.68
13 L 386	8	450	1 1/2 x 1 1/2"	.73
13 L 394	10	450	1 1/2 x 1 1/2"	.76
13 L 387	12	450	1 1/2 x 1 1/2"	.79
13 L 388	16	450	1 1/2 x 1 1/2"	.82
13 L 389	20	450	1 1/2 x 1 1/2"	.91
13 L 395	30	450	1 1/2 x 2 1/2"	1.00
13 L 396	40	450	1 1/2 x 2 1/2"	1.06
13 L 400	4	350	1 1/2 x 1 1/2"	.62
13 L 401	8	350	1 1/2 x 1 1/2"	.71
13 L 402	12	350	1 1/2 x 1 1/2"	.76
13 L 403	16	350	1 1/2 x 1 1/2"	.82
13 L 404	24	350	1 1/2 x 1 1/2"	.91
13 L 410	4	250	1 1/2 x 1 1/2"	.59
13 L 411	8	250	1 1/2 x 1 1/2"	.68
13 L 412	12	250	1 1/2 x 1 1/2"	.73
13 L 413	16	250	1 1/2 x 1 1/2"	.76
13 L 414	20	250	1 1/2 x 1 1/2"	.79
13 L 430	4	150	1 1/2 x 1 1/2"	.59
13 L 431	8	150	1 1/2 x 1 1/2"	.62
13 L 425	10	150	1 1/2 x 1 1/2"	.65
13 L 433	12	150	1 1/2 x 1 1/2"	.68
13 L 432	16	150	1 1/2 x 1 1/2"	.71
13 L 434	24	150	1 1/2 x 1 1/2"	.73
13 L 435	30	150	1 1/2 x 1 1/2"	.76
13 L 436	40	150	1 1/2 x 1 1/2"	.79
13 L 441	50	150	1 1/2 x 1 1/2"	.82
13 L 426	80	150	1 1/2 x 2 1/2"	.94
13 L 427	100	150	1 1/2 x 2 1/2"	1.03
13 L 428	150	150	1 1/2 x 3 1/2"	1.12
13 L 450	10	50	1 1/2 x 1 1/2"	.59
13 L 456	20	50	1 1/2 x 1 1/2"	.62
13 L 451	25	50	1 1/2 x 1 1/2"	.65
13 L 452	50	50	1 1/2 x 1 1/2"	.71
13 L 453	100	50	1 1/2 x 1 1/2"	.82
13 L 460	10	25	1 1/2 x 1 1/2"	.59
13 L 858	16	25	1 1/2 x 1 1/2"	.59
13 L 461	25	25	1 1/2 x 1 1/2"	.59
13 L 462	50	25	1 1/2 x 1 1/2"	.65
13 L 463	100	25	1 1/2 x 2 1/2"	.79
13 L 857	500	25	1 1/2 x 2 1/2"	1.35
13 L 861	100	12	1 1/2 x 1 1/2"	.71
13 L 860	250	12	1 1/2 x 1 1/2"	.85
13 L 859	500	12	1 1/2 x 2 1/2"	1.00
13 L 864	500	6	1 1/2 x 1 1/2"	.91
13 L 863	1000	6	1 1/2 x 2 1/2"	1.12
13 L 862	2000	6	1 1/2 x 2 1/2"	1.35

### Fig. B—DOUBLE SECTION

No.	Mfd	Volts	Size	NET
13 L 391	8-8	450	1 3/8 x 2 1/2"	1.26
13 L 392	8-16	450	1 3/8 x 2 1/2"	1.18
13 L 397	10-10	450	1 3/8 x 2 1/2"	1.09
13 L 851	40-40	450	1 3/8 x 3 1/2"	1.97
13 L 852	20-20	250	1 3/8 x 2 1/2"	1.09
13 L 422	16-16	200	1 3/8 x 1 3/4"	1.00
13 L 437	8-8	150	1 1/2 x 1 1/2"	.88
13 L 438	8-16	150	1 1/2 x 1 1/2"	.88
13 L 439	20-20	150	1 1/2 x 1 1/2"	.97
13 L 442	40-40	150	1 1/2 x 2 1/2"	1.06
13 L 853	50-30	150	1 1/2 x 2 1/2"	1.15
13 L 854	50-50	150	1 1/2 x 2 1/2"	1.23

### Fig. C—TRIPLE SECTION

No.	Mfd	Volts	Size	NET
13 L 855	20-20-20	150	1 1/2 x 1 1/2"	1.26
13 L 870	30-20-15	150	1 1/2 x 1 1/2"	1.32
13 L 871	40-20-20	150	1 1/2 x 2 1/2"	1.26
13 L 872	40-40-40	150	1 1/2 x 2 1/2"	1.44



## MICA CAPACITORS

Molded-in-bakelite mica capacitors are designed for critical service in transmitting circuits, buffer stages, power amplifiers, laboratory equipment, etc. Non-magnetic parts are used to reduce RF losses to a minimum. Intended for point-to-point wiring, being supported entirely by soldered connections. Av. shpg. wt., 1 oz.

### FIG. A—TYPE 1467—500 V

Stock No.	Mfd	Size	NET
13 L 058	.0005		15c
13 L 059	.001		18c
13 L 060	.0015	3/16 x 3/16 x 3/16"	18c
13 L 061	.002		24c
13 L 062	.0025		26c

### FIG. A—TYPE 1467LHV—1500 V

Stock No.	Mfd	Size	NET
13 L 126	.0005		41c
13 L 127	.00075	3/16 x 3/16 x 2 1/4"	47c
13 L 128	.001		53c

### FIG. B—TYPE 1468—300 V

Stock No.	Mfd	Size	EACH
13 L 070	.00004		
13 L 071	.00005		
13 L 072	.000075		
13 L 073	.0001	2 1/2 x 1 1/2 x 3/8"	12c
13 L 074	.00015		
13 L 075	.0002		
13 L 076	.00025		
13 L 077	.00035	2 1/2 x 1 1/2 x 3/8"	15c
13 L 078	.0005		

## HEAVY-DUTY MICA CAPACITORS

Heaviest duty high-voltage molded in bakelite transmitting type capacitors. For Amateur and broadcast transmitter circuits, power amplifiers, buffer stages, laboratory equipment and industrial use. Threaded terminals for round head screws. Types 1650, 1651 and 1652 are brown bakelite. Types 1653L and 1654L are low-loss bakelite. Standard tolerance, ±10%. Size, 1 1/2 x 1 1/2 x 3/8" except\* thickness 3/8". Average shpg. wt., 2 oz.

Type 1650, 600 v.	NET	Mfd.	Type 1651, 1200v.	NET
12 L 800	.85	.00005	12 L 824	.94
12 L 801	.85	.0001	12 L 825	.94
12 L 802	.85	.00025	12 L 826	.94
12 L 804	.85	.0003	12 L 827	.94
12 L 804*	.85	.00035	12 L 828	.94
12 L 805	.85	.0004	12 L 829	.94
12 L 806	.85	.0005	12 L 830	.94
12 L 807	.85	.001	12 L 831	1.12
12 L 808	.85	.0015	12 L 832	1.32
12 L 809	.97	.002	12 L 833	1.47
12 L 810	1.00	.0025	12 L 834	1.65
12 L 811	1.09	.003	12 L 835	1.75
12 L 812	1.18	.004	12 L 836	1.84
12 L 813	1.23	.005	12 L 837	1.94
12 L 814	1.29	.006	12 L 838	2.03
12 L 815	1.44	.008	12 L 839	2.41
12 L 816	1.65	.01	12 L 840	2.76
12 L 817	1.71	.015	12 L 8	

# Aerovox Metallized Capacitors



**TYPE P92ZN METALLIZED PAPER TUBULARS**

High quality capacitors of Aerolene-impregnated metallized-paper. Modified plastic tubular type. Paper cases with Duranite end seals. P92ZN capacitors are ideally suited for original or replacement use in radio and television receivers, amplifiers and other electronic equipment. Will withstand high temperatures. Operating range is -30 degrees C to +100 degrees C. Tolerance of ±20% in all capacities and voltages. Sizes given are diameter and length. Av. shpg. wt., 2 oz.

**200 VOLTS**

Stock No.	Mfd	Size	NET
12 L 700	.01	1/4x1 1/2	.59
12 L 701	.02	1/4x1 1/2	.59
12 L 702	.03	1/4x1 1/2	.59
12 L 703	.05	1/4x1 1/2	.59
12 L 704	.1	1/4x1 1/2	.62
12 L 705	.25	1/4x1 1/2	.94
12 L 706	.5	1/4x1 1/2	1.15
12 L 707	1.0	1/4x1 1/2	1.59
12 L 708	2.0	1/4x1 1/2	1.59

**400 VOLTS**

12 L 709	.01	1/4x1 1/4	.62
12 L 710	.02	1/4x1 1/4	.62
12 L 711	.03	1/4x1 1/4	.62
12 L 712	.05	1/4x1 1/4	.62
12 L 713	.1	1/4x1 3/8	.71
12 L 714	.25	1/4x1 3/8	.88
12 L 715	.5	1/4x1 3/8	1.03
12 L 716	1.0	1/4x1 1/2	1.41
12 L 717	2.0	1/4x1 1/2	1.91

**600 VOLTS**

12 L 718	.01	1/4x1 1/4	.62
12 L 719	.02	1/4x1 1/4	.62
12 L 720	.03	1/4x1 1/4	.71
12 L 721	.05	1/4x1 1/4	.71
12 L 722	.1	1/4x1 3/8	.79
12 L 723	.25	1/4x1 3/8	.97
12 L 724	.5	1/4x1 3/8	1.29
12 L 725	1.0	1/4x1 1/2	1.59
12 L 726	2.0	1/4x1 1/2	2.09



**TYPE P30ZN METALLIZED-PAPER "BATHTUB" CONDENSERS**

Ruggedly constructed, dependable condensers of Aerolene metallized paper. In "bathtub" type metal housings. Vitriolized ceramic or glass terminal seals offer high insulation. Operating temperature range from -55 degrees C to +100 degrees C at full rating. Can be operated at +125 degrees C at 75 per cent of voltage rating. Standard tolerance of ±20%. Av. shpg. wt., 4 oz.

**150 VOLTS**

Stock No.	Mfd	Size (LWH)	NET
12 L 750	3.0	1 1/2x1x1 1/2	4.76
12 L 751	4.0	1 1/2x1x1 1/2	5.09
12 L 752	5.0	1 1/2x1x1 1/2	5.26
12 L 753	6.0	1 1/2x1 1/4x1 1/2	5.38
12 L 754	8.0	2x2x1 1/4	7.41
12 L 755	10.0	2x2x1 1/4	8.56
12 L 756	12.0	2x2x1 1/4	9.70
12 L 757	15.0	2x2x1 1/4	11.67

**200 VOLTS**

12 L 758	.1		2.32
12 L 759	.25		2.50
12 L 760	.5	1 1/4x1x3/4	2.91
12 L 761	1.0		3.15
12 L 762	2.0		3.94

**400 VOLTS**

12 L 763	.1	1 1/4x1x3/4	2.85
12 L 764	.25	1 1/4x1x3/4	2.97
12 L 765	.5	1 1/4x1x3/4	3.15
12 L 766	1.0	1 1/4x1x3/4	3.50
12 L 767	2.0	2x1 1/2x1 1/4	4.32
12 L 768	3.0	2x1 1/2x1 1/4	4.72
12 L 769	4.0	2x2x1 1/4	5.33
12 L 770	5.0	2x2x1 1/4	6.94

**600 VOLTS**

12 L 771	.1	1 1/4x1x3/4	3.09
12 L 772	.25	1 1/4x1x3/4	3.15
12 L 773	.5	1 1/4x1x3/4	3.76
12 L 774	1.0	1 1/4x1 1/2x1 1/4	4.32
12 L 775	2.0	2x2x1 1/4	5.33
12 L 776	3.0	2x2x1 1/4	6.85
12 L 777	4.0	2x2x1 1/4	7.88

**TYPE P1232Z ULTRA-COMPACT METALLIZED PAPER CAPACITOR**

New, ultra-compact tiny capacitors. Extremely small size makes units ideal for military and aircraft applications where minimum size and weight with maximum durability is required. Units are also well suited for replacement and original use in radio, television and electronic

equipment. In hermetically sealed metal cans to withstand moisture and heat. Temperature range, -50° to +50° C., at full voltage rating; to +95° C. at lower voltages. Tol. ±20%. Wt., 2 oz. Type ZNG, for high temperature applications, available on special order.



No.	Mfd	Volts	Size	NET
13 L 900	.001	200	.175x3/8	1.20
13 L 901	.002	200	.175x3/8	1.20
13 L 902	.003	200	.175x3/8	1.20
13 L 903	.005	200	.175x3/8	1.20
13 L 904	.01	200	.175x3/8	1.20
13 L 905	.047	200	.235x3/8	1.23
13 L 906	.050	200	.235x3/8	1.23
13 L 907	.068	200	.312x3/8	1.26
13 L 908	.10	200	.312x3/8	1.26
13 L 909	.22	200	.312x1/2	1.38
13 L 910	.25	200	.312x1/2	1.38
13 L 911	.47	200	.400x1/2	1.41
13 L 912	.68	200	.562x1/2	1.56
13 L 913	1.0	200	.562x1 1/8	1.56
13 L 914	2.0	200	.562x1 1/8	2.32
13 L 915	.0005	400	.235x3/8	1.23
13 L 916	.001	400	.235x3/8	1.23
13 L 917	.002	400	.235x3/8	1.23
13 L 918	.003	400	.235x3/8	1.23
13 L 919	.02	400	.235x3/8	1.26

No.	Mfd	Volts	Size	NET
13 L 920	.022	400	.312x3/8	1.26
13 L 921	.033	400	.235x3/8	1.26
13 L 922	.040	400	.312x3/8	1.29
13 L 923	.047	400	.400x3/8	1.29
13 L 924	.050	400	.400x3/8	1.29
13 L 925	.068	400	.400x1 1/8	1.32
13 L 926	.10	400	.400x1 1/8	1.32
13 L 927	.15	400	.500x1 1/8	1.44
13 L 928	.22	400	.562x1 1/8	1.44
13 L 929	.25	400	.562x1 1/8	1.44
13 L 930	.33	400	.562x1 1/8	1.62
13 L 931	.47	400	.562x1 1/8	1.62
13 L 932	.68	400	.670x1 1/8	1.79
13 L 933	1.0	400	.670x2 1/8	1.79
13 L 934	.01	600	.312x3/8	1.26
13 L 935	.02	600	.312x3/8	1.29
13 L 936	.10	600	.500x1 1/8	1.35
13 L 937	.25	600	.562x1 1/8	1.59
13 L 938	.50	600	.670x1 1/8	1.76
13 L 939	1.0	600	.750x2 1/8	2.15



**TYPE P82 AEROLITE METALLIZED TUBULARS**

Light weight metallized-paper tubular capacitors. Hyvol K impregnated units in moisture-resistant wax-impregnated cardboard cases. Have "self-healing" characteristics for protection against surge voltages. Low power factor, less than 1%. Operate from -40° C to 50° C. Av. shpg. wt., 2 oz.

No.	Mfd	Volts	Size	NET
13 L 670	.01	200	1/4x3/8	.35
13 L 671	.02	200	1/4x3/8	.35
13 L 672	.03	200	1/4x3/8	.35
13 L 673	.05	200	1/4x3/8	.38
13 L 674	.1	200	1/4x3/8	.41
13 L 675	.25	200	1/4x1/2	.53
13 L 676	.5	200	1/4x1 1/2	.62
13 L 677	1.00	200	1/4x1 1/2	1.06
13 L 678	2.00	200	1/4x1 1/2	1.06
13 L 679	.01	400	1/4x3/8	.38
13 L 680	.02	400	1/4x3/8	.38
13 L 681	.03	400	1/4x3/8	.38
13 L 682	.05	400	1/4x3/8	.41
13 L 683	.1	400	1/4x1 1/2	.47
13 L 684	.25	400	1/4x1 1/2	.59
13 L 685	.5	400	1/4x1 1/2	.68
13 L 686	1.00	400	1/4x1 1/2	.94
13 L 687	.01	600	1/4x3/8	.41
13 L 688	.02	600	1/4x3/8	.41
13 L 689	.03	600	1/4x3/8	.47
13 L 690	.05	600	1/4x3/8	.47
13 L 691	.1	600	1/4x1 1/2	.53
13 L 692	.25	600	1/4x1 1/2	.65
13 L 693	.5	600	1/4x1 1/2	.85
13 L 694	1.00	600	1/4x1 1/2	1.06

**TYPE 89XZY SEALED METAL TUBULARS**



Tubular Aerolites in hermetically sealed metal cases. Hyvol K or M impregnated. "Self-healing" characteristic offers protection against voltage surges. Double-rubber bakelite terminal seals. Tolerance: ±20%. Av. shpg. wt., 2 oz.

No.	Mfd	Volts	Size	NET
12 L 728	.05	200	1/4x1	.85
12 L 729	.1	200	1/4x1	.94
12 L 730	.25	200	1/4x1	.94
12 L 731	.5	200	1/4x1 1/2	1.00
12 L 732	1.0	200	1/4x1 1/2	1.23
12 L 733	2.0	200	1/4x2	1.53
12 L 734	.03	400	1/4x1	.82
12 L 735	.05	400	1/4x1	.85
12 L 736	.1	400	1/4x1 1/2	.94
12 L 737	.25	400	1/4x1 1/2	1.06
12 L 738	.5	400	1/4x2	1.47
12 L 739	1.0	400	1/4x2 1/2	1.47
12 L 740	2.0	400	1/4x2 1/2	2.12
12 L 741	.01	600	1/4x1	.82
12 L 742	.02	600	1/4x1	.85
12 L 743	.03	600	1/4x1	.88
12 L 744	.05	600	1/4x1	.91
12 L 745	.1	600	1/4x1 1/2	1.00
12 L 746	.25	600	1/4x1 1/2	1.18
12 L 747	.5	600	1/4x2	1.41
12 L 748	1.0	600	1/4x2 1/2	1.76
12 L 749	2.0	600	1/4x2 1/2	2.35



**TYPE P83Z MICROMINIATURES METALLIZED-PAPER TUBULARS**

Ultra-small (resistor size); metallized dielectric. For replacement and original use as coupling and bypass capacitors in radio, TV and electronic equipment. Hyvol K impregnated. In moisture-resistant cases. Improved metallized foil serves as both dielectric and electrodes. Av. shpg. wt., 2 oz.

No.	Mfd.	W. V.	Size	EACH
13 L 885	.005	200		
13 L 886	.01	200		
13 L 887	.002	400	1/4x3/8	26c
13 L 888	.003	400		
13 L 889	.01	400	1/4x3/8	32c
13 L 890	.0005	600		
13 L 891	.001	600	1/4x3/8	26c
13 L 892	.002	600		
13 L 893	.0022	600		
13 L 894	.0047	600	1/4x3/8	32c
13 L 895	.005	600		
13 L 896	.0068	600		

**SRE BANTAM ELECTROLYTICS METAL CASED TUBULARS**



Extremely small dry electrolytic capacitors for portable and miniature equipment. Sealed-in tubular aluminum cases are protected by external wax-impregnated cardboard insulating tubes. With 2 1/2 tinned leads. Shpg. wt., 2 oz.

No.	Mfd	Volts	Size	NET
13 L 830	5	150	1/4x1	59c
13 L 831	10	150	1/4x1 1/2	62c
13 L 832	15	150	1/4x1 1/2	68c
13 L 833	25	150	1/4x1 1/2	73c
13 L 827	10	50	1/4x1	59c
13 L 828	15	50	1/4x1 1/2	59c
13 L 829	25	50	1/4x1 1/2	62c
13 L 824	25	25	1/4x1	59c
13 L 825	50	25	1/4x1 1/2	65c
13 L 826	100	25	1/4x1 1/2	79c
13 L 821	50	12	1/4x1 1/2	59c
13 L 822	100	12	1/4x1	70c
13 L 823	200	12	1/4x1 1/2	79c
13 L 838	50	6	1/4x1 1/2	56c
13 L 820	100	6	1/4x1 1/2	71c
13 L 834	100	3	1/4x1	65c
13 L 835	200	3	1/4x1 1/2	68c
13 L 836	300	3	1/4x1 1/2	76c
13 L 837	500	3	1/4x1 1/2	82c

**INDUSTRIAL TYPE CAPACITORS**

We can supply all industrial-type capacitors made by any capacitor manufacturer represented on these pages. These include high-temperature types, miniaturized types, humidity-proof types, etc. Write for quotations, specifying manufacturer, type no., and quantities desired.

# Special Purpose Capacitors

## SPRAGUE CAPACITORS

### HYPASS 3-TERMINAL NETWORK CAPACITORS



Feed-through type VHF bypass capacitors. Perform efficiently up to 150 mc. Reduce vibrator hash and harmonic radiation. Type 48P18 is for reduction of voltage regulator noise in mobile applications; leads rated at 40 amps. Type 80P3 leads rated at 20 amps. 48P18 and 80P3 have screw terminals. Wt., 2 oz.

No.	Type	Mfd	DC WV	Size	NET
15 L 688	48P18	.5	50	1x1 1/2"	2.23
15 L 682	46P6	.001	600	1/2x1 1/2"	1.26
15 L 683	46P12	.002	600	1/2x1 1/2"	4.26
15 L 691	46P8	.005	600	1/2x1 1/2"	1.26
15 L 692	47P6	.01	600	1/2x1 1/2"	1.38
15 L 684	47P8	.02	600	1/2x1 1/2"	1.41
15 L 685	48P8	.1	600	1/2x1 1/2"	1.53
15 L 689	80P3	.1	600	1/2x1 1/2"	1.73
15 L 686	48P12	.25	600	1x1 1/2"	1.62
15 L 687	48P16	.5	600	1x2 1/2"	2.06
15 L 693	47P12	.005	1000	1/2x1 1/2"	1.41
15 L 694	47P13	.01	1000	1/2x1 1/2"	1.53
15 L 695	47P14	.005	2500	1x1 1/2"	1.71
15 L 696	47P15	.01	2500	1x1 1/2"	1.82
15 L 697	47P16	.002	5000	1x1 1/2"	1.88

## CAN-TYPE DRY ELECTROLYTICS



FIG. B—PLS TINY MIKE

525 Volts Surge

450 Volts Wkg.

Aluminum can-type dry electrolytic condensers. For replacement and original equipment filter use. Etched-foil construction. Common negative leads. Inverted screw-can mounting. Will replace large, old-style or standard-size units. With mounting hardware. Average shpg. wt., 6 oz.

No.	Type	Mfd	Size	NET
15 L 700	PLS-4	4	1 1/2x2 1/2"	1.18
15 L 701	PLS-8	8	1 1/2x2 1/2"	1.29
15 L 702	PLS-12	12	1 1/2x2 1/2"	1.41
15 L 703	PLS-16	16	1 1/2x2 1/2"	1.44
15 L 705	PLS-20	20	1 1/2x2 1/2"	1.59
15 L 710	PLS-25	25	1 1/2x3 1/2"	1.71
15 L 711	PLS-30	30	1 1/2x3 1/2"	1.76
15 L 712	PLS-40	40	1 1/2x3 1/2"	1.85
15 L 704	PLS-48	4-8	1 1/2x2 1/2"	1.73
15 L 705	PLS-88	8-8	1 1/2x2 1/2"	1.76
15 L 707	PLS-888	8-8-8	1 1/2x2 1/2"	2.94
15 L 708	PLS-81	8-16	1 1/2x2 1/2"	1.94
15 L 709	PLS-216	16-16	1 1/2x3 1/2"	2.09

### FIG. A—LS INVERTED SCREW CAN

525 Volts Surge—450 Volts Wkg.

Negative can. Average shipping wt., 6 oz.

No.	Type	Mfd	Size	NET
15 L 020	LS-8	8	1 1/2x2 1/2"	1.29
15 L 021	LS-12	12	1 1/2x2 1/2"	1.41
15 L 022	LS-16	16	1 1/2x2 1/2"	1.44
15 L 025	LS-20	20	1 1/2x2 1/2"	1.59
15 L 026	LS-25	25	1 1/2x3 1/2"	1.71
15 L 027	LS-30	30	1 1/2x3 1/2"	1.76
15 L 028	LS-40	40	1 1/2x3 1/2"	1.85
15 L 029	LS-88	8-8	1 1/2x2 1/2"	1.76

### FIG. A—SC INVERTED SCREW CAN

600 Volts Surge—475 Volts Wkg.

Threaded bushing mount. Negative can. With hardware, insulating washer. Shpg. wt., 6 oz.

No.	Type	Mfd	Size	NET
15 L 320	SC-4	4	1 1/2x3 1/2"	1.50
15 L 321	SC-8	8	1 1/2x3 1/2"	1.62
15 L 323	SC-12	12	1 1/2x3 1/2"	1.73
15 L 324	SC-16	16	1 1/2x3 1/2"	1.85
15 L 325	SC-88	8-8	1 1/2x3 1/2"	2.41

### FIG. B—CL INVERTED SCREW CAN

600 Volts Surge—475 Volts Wkg.

Like "SC," but can insulated from filter section. Separate pos. and neg. leads. Wt., 8 oz.

No.	Type	Mfd	Size	NET
15 L 720	CL-8	8	1 1/2x4 1/2"	1.62
15 L 721	CL-16	16	1 1/2x4 1/2"	1.85
15 L 722	CL-88	8-8	1 1/2x4 1/2"	2.41

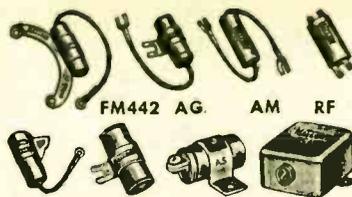
### FIG. A—WR REPLACEMENTS FOR WET ELECTROLYTICS

600 Volts Surge—500 Volts Wkg.

High-voltage dry electrolytics. Specifically designed to replace wet types. Withstand high peak voltages. Lux terminals; can is negative. With insulating washers. Inverted screw can mountings. Average shpg. wt., 8 oz.

No.	Type	Mfd	Size	NET
15 L 040	WR-8	8	1 1/2x3 1/2"	1.68
15 L 041	WR-16	16	1 1/2x4 1/2"	1.94
15 L 042	WR-25	25	1 1/2x5 1/2"	2.21

## MALLOY CAPACITORS



FM441 DL AS CA

### AUTO RADIO NOISE

#### SUPPRESSOR CAPACITORS

For suppressing radio interference caused by auto generators, aircraft, marine equipment, etc. All are wax impregnated cartridges assembled in various style housings, as illustrated. All capacitors rated at DC working volts except 4500 volts AC-DC. Allas shielded leads. Av. shpg. wt., 3 oz.

**Types AG and AS.** For generator, ammeter spark suppression; \*midget aircraft motors.  
**Type AM.** For use at ammeter and gauges.  
**Type FM.** For use on Ford generators.  
**Type DL.** Dome light suppressor.  
**Type RF.** For vibrator hash and general noise suppression. Very low RF impedance.

**Type CA.** Bath tub type for general noise suppression in marine and aircraft units.

No.	Type	Mfd	W.V.	Size	NET
17 L 720	AG442	0.05*	100	1/2x1 1/2"	.47
17 L 670	AG443	0.05	100	1/2x1 1/2"	.59
17 L 671	AG444	0.25	200	3/4x1 1/2"	.35
17 L 672	AG450	5-5	100	1/2x2"	.88
17 L 673	AG451	0.5	200	1/2x2"	.88
17 L 674	AG452	1.0	200	1/2x2"	.53
17 L 675	AG453	0.5	200	1/2x2"	.88
17 L 721	AS125	0.01	100	1/2x1 1/2"	.71
17 L 722	AS145	0.1	100	1/2x1 1/2"	.82
17 L 723	AS165	0.25	100	1/2x1 1/2"	.88
17 L 724	AS185	0.5	100	1x1 1/2"	.73
17 L 725	AS525	0.01	5000	1 1/2x1 1/2"	.94
17 L 726	AS545	0.1	5000	1 1/2x1 1/2"	.94
17 L 727	AS565	0.25	5000	1 1/2x1 1/2"	1.18
17 L 676	AM454	0.5	200	1 1/2x1 1/2"	.38
17 L 677	FM442	0.5	160	1 1/2x1 1/2"	.38
17 L 678	FM441	0.5	100	1 1/2x1 1/2"	.50
17 L 679	DL445X	4	200	1x2 1/2"	1.32
17 L 680	RF480	0.5	100	1 1/2x1 1/2"	.47
17 L 681	RF481	0.1	50	1 1/2x1 1/2"	.53
17 L 682	RF482	0.5	50	1 1/2x1 1/2"	.68
17 L 728	CA275X	4.0	50	2x2 1/2"	1.76



### VIBRATOR BUFFER CAPACITORS

For replacement uses. Type VB is oil-impregnated. Types VO and VD are wax impregnated. Extremely compact size fits into very small places. \*Dual-section buffer (0008-.0008 mrd, 1600 v.) for use in Motorola sets. †Metal case; cartridge and leads are insulated from case. Leads are long enough to permit easiest installation, especially where vibrator assembly is crowded. Av. shpg. wt., 3 oz.

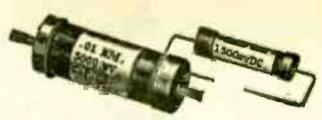
No.	Type	Mfd	W.V.	Size	NET
17 L 659	VB4701	.0075	1600	1/2x3/4x7/8"	650
17 L 660	VB4711	.01	1600	1/2x3/4x7/8"	680
17 L 099	VD491	.5	1600	1/2x3/4x7/8"	380
17 L 661	VO480	.5	120	1/2x3/4x2 1/2"	380

### SPRAGUE CP-53 JAN-C-25

Non-inductively wound oil-filled bath tub capacitors. Tolerance, ±10%. Av. wt., 5 oz.

No.	Mfd	W.V.	Size	NET
15 L 736	.1	600	1 1/2x1 1/2"	1.91
15 L 737	.25	600	1 1/2x1 1/2"	2.00
15 L 738	.5	600	1 1/2x1 1/2"	2.15
15 L 739	1.0	600	2x1 1/2x1 1/2"	2.44
15 L 740	2.0	600	2x2x1 1/2"	3.23
15 L 741	1-1	600	1 1/2x1 1/2"	2.41
15 L 742	.25-.25	600	1 1/2x1 1/2"	2.41
15 L 743	.5-.5	600	2x1 1/2x1 1/2"	2.79
15 L 744	1-1	600	2x1 1/2x1 1/2"	2.70
15 L 745	.25	1000	1 1/2x1 1/2"	2.12
15 L 746	.25-.25	1000	2x1 1/2x1 1/2"	2.70
15 L 747	.5	1000	2x1 1/2x1 1/2"	2.29
15 L 748	1.0	1000	2x2x1 1/2"	2.85

## CONDENSER PRODUCTS



### SILICONE-FILLED GLASSMIKES

New silicone impregnated and filled capacitors. For use in low current power supply filters, TV and scope circuits, audio coupling and bypass, electronic instruments, high-temperature AC and DC circuits, etc. Glass tube case. Metal ferrules soldered to silver end bands. Tolerance, ±10%. Temperature range, to 85°C. 8-32 screw terminals. \*Tinned copper leads. 150% test voltage rating. Av. wt., 6 oz.

#### TYPE ASG

No.	Type	Mfd	W.V.	Size	NET
10 L 900	502-1M*	.005	1000	1 1/2x1 1/2"	.88
10 L 901	103-1M*	.01	1000	1 1/2x1 1/2"	.94
10 L 902	203-1M*	.02	1000	1 1/2x1 1/2"	1.00
10 L 903	503-1M	.05	1000	1 1/2x1 1/2"	1.09
10 L 904	104-1M	.1	1000	2 1/2x1 1/2"	1.26
10 L 905	254-1M	.25	1000	2 1/2x1 1/2"	1.47
10 L 906	202-2M*	.002	2000	1 1/2x1 1/2"	1.12
10 L 907	502-2M*	.005	2000	1 1/2x1 1/2"	1.21
10 L 908	103-2M*	.01	2000	1 1/2x1 1/2"	1.32
10 L 909	203-2M*	.02	2000	1 1/2x1 1/2"	1.47
10 L 910	503-2M	.05	2000	1 1/2x1 1/2"	1.65
10 L 911	104-2M	.1	2000	2 1/2x1 1/2"	1.88
10 L 912	254-2M	.25	2000	2 1/2x1 1/2"	2.18
10 L 913	102-3M*	.001	3000	1 1/2x1 1/2"	3.03
10 L 914	202-3M*	.002	3000	1 1/2x1 1/2"	3.09
10 L 915	502-3M*	.005	3000	1 1/2x1 1/2"	3.18
10 L 916	103-3M*	.01	3000	1 1/2x1 1/2"	3.29
10 L 917	203-3M*	.02	3000	1 1/2x1 1/2"	3.44
10 L 918	503-3M*	.05	3000	1 1/2x1 1/2"	3.62
10 L 919	104-3M	.1	3000	2 1/2x1 1/2"	3.82
10 L 920	102-5M*	.001	5000	1 1/2x1 1/2"	3.82
10 L 921	103-5M	.01	5000	1 1/2x1 1/2"	4.26
10 L 922	203-5M	.02	5000	2 1/2x1 1/2"	4.50
10 L 923	503-5M	.05	5000	2 1/2x1 1/2"	4.79
10 L 924	104-5M	.1	5000	3 1/2x1 1/2"	5.35
10 L 925	102-8M*	.001	8000	1 1/2x1 1/2"	4.12
10 L 926	203-8M*	.002	8000	1 1/2x1 1/2"	4.26
10 L 927	502-8M	.005	8000	1 1/2x1 1/2"	4.44
10 L 928	103-8M	.01	8000	2 1/2x1 1/2"	4.79
10 L 929	203-8M	.02	8000	2 1/2x1 1/2"	5.44
10 L 930	503-8M	.05	8000	2 1/2x1 1/2"	6.76
10 L 931	104-8M	.1	8000	3 1/2x1 1/2"	8.47
10 L 932	204-8M	.2	8000	7x1 1/2"	11.52
10 L 933	501-10M*	.0005	10,000	1 1/2x1 1/2"	4.29
10 L 934	102-10M*	.001	10,000	1 1/2x1 1/2"	4.41
10 L 935	202-10M*	.002	10,000	1 1/2x1 1/2"	4.59
10 L 936	502-10M	.005	10,000	1 1/2x1 1/2"	5.29
10 L 937	103-10M	.01	10,000	2 1/2x1 1/2"	6.17
10 L 938	203-10M	.02	10,000	2 1/2x1 1/2"	7.35
10 L 939	303-10M	.03	10,000	2 1/2x1 1/2"	8.82
10 L 940	501-20M*	.0005	20,000	2 1/2x1 1/2"	11.47
10 L 941	102-20M*	.001	20,000	3 1/2x1 1/2"	12.05
10 L 942	202-20M*	.002	20,000	3 1/2x1 1/2"	12.94
10 L 943	502-20M	.005	20,000	3 1/2x1 1/2"	14.11

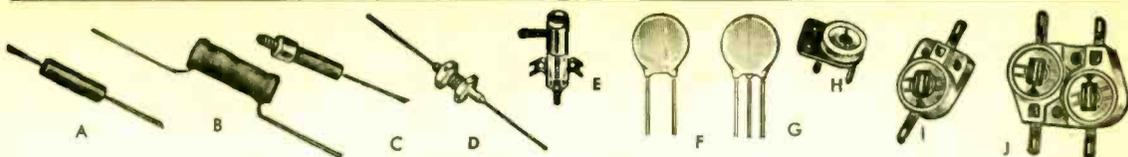
#### TYPE LSG 3500 VOLTS

High-voltage capacitors with plastic L film-silicone fluid in glassmike style case. Tolerance ±10%. Ideal for replacement of mica capacitors in power supplies, transmitters, etc. Av. wt., 4 oz.

No.	Type	Mfd	Size	NET
10 L 944	102-35C	.001	3/4x1"	3.44
10 L 945	202-35C	.002	1 1/2x1"	3.44
10 L 946	502-35C	.005	1 1/2x1"	4.41
10 L 947	602-35C	.006	1 1/2x1"	4.41
10 L 948	102-35C	.01	1 1/2x1"	4.81

#### TYPE AOCO O

# Erie Capacitors



## ERIE "CERAMICON" CERAMIC CAPACITORS

Precision-made ceramic dielectric capacitors with silver electrodes. Outstanding high frequency characteristics, small size, and sturdy construction. Unsurpassed for maintaining circuit stability and correcting for

oscillator drift; for radio frequency coupling and bypass. Compact sizes save space. Widely used in new equipment and as replacements in many popular TV receivers.

### NPO CERAMICONS

Molded insulated, zero temperature coefficient type. "Q" above 30 mmf exceeds 1000, decreasing as capacity decreases below 30 mmf. All values ± 10%. 600 wkg. v. DC. Wt., 1 oz.

No.	Fig.	Type	Mmf	Size	EA.
12 L 075	A	A	1.5		
12 L 074	A	A	2.2		
12 L 076	A	A	3.0		
12 L 095	A	A	3.3		
12 L 096	A	A	4.7		
12 L 077	A	A	5.0		
12 L 097	A	A	6.8		
12 L 098	A	A	8.2		
12 L 081	A	K	10	1/2 x 1/4"	29c
12 L 091	A	K	15		
12 L 092	A	K	18		
12 L 078	A	K	20		
12 L 082	A	L	25	1 1/2 x 1/2"	
12 L 079	A	L	33	1 3/8 x 1/2"	
12 L 083	B	338	50	1 1/2 x 3/8"	29c
12 L 080	B	337	75	1 1/2 x 3/8"	32c
12 L 086	B	337	100	1 1/2 x 3/8"	32c
12 L 087	B	334	150	1 1/2 x 3/8"	44c
12 L 088	B	334	175	1 1/2 x 3/8"	44c

### N750 CERAMICONS

Negative temp. coefficient of 750±10<sup>-6</sup> mmf/mmf/°C. Tolerance, ± 10%. 600 working volts DC. Compensate for positive drift in oscillator circuits. Silver electrodes. Wt., 1 oz.

No.	Fig.	Type	Mmf	Size	EA.
12 L 100	A	A	5	1/2 x 1/4"	
12 L 101	A	A	10	1/2 x 1/4"	
12 L 102	A	K	47	1 1/2 x 1/4"	29c
12 L 103	A	L	75	1 1/2 x 1/4"	
12 L 104	A	L	100	1 1/2 x 1/4"	

### N080 CERAMICONS

Negative temperature coefficient of 80±10<sup>-6</sup> mmf/mmf/°C. Tolerance, ± 10%. 500 working volts DC. Shpg. wt., 1 oz.

No.	Fig.	Type	Mmf	Size	EA.
12 L 110	B	331	10	1/2 x 1/4"	
12 L 111	B	331	22	1/2 x 1/4"	
12 L 112	B	338	33	1/2 x 1/4"	35c
12 L 113	B	338	47	1/2 x 1/4"	
12 L 114	B	338	62	1/2 x 1/4"	

### DISC CERAMICONS

Ceramic dielectric; silver plates; phenolic covering. Wkg. v., 600 DC. Tolerance: Type 831, ± 20%; others ± 100%, -0%. Shpg. wt., 2 oz.

No.	Fig.	Type	Mmf	Dia.	EA.
12 L 211	F	831	.000010		
12 L 212	F	831	.000015		
12 L 213	F	831	.000022	1/4"	
12 L 214	F	831	.000033		
12 L 215	F	831	.000047		
12 L 216	F	831	.000068		
12 L 217	F	831	.000100		
12 L 218	F	831	.000150	1/4"	
12 L 219	F	831	.000220		
12 L 220	F	831	.000330		
12 L 221	F	831	.000470	1/4"	15c
12 L 222	F	801	.000680	1/4"	
12 L 201	F	801	.001	1/4"	
12 L 202	F	801	.0015	1/4"	
12 L 203	F	801	.002	1/4"	
12 L 223	F	811	.0022	1/2"	
12 L 224	F	811	.0033	1/2"	
12 L 225	F	811	.0047	1/2"	
12 L 200	F	811	.005	1/2"	
12 L 226	F	811	.0068	1/2"	
12 L 227	F	811	.01	1/2"	
12 L 228	F	821	.01	1/2"	18c
12 L 229	F	817	.02	1/2"	18c
12 L 210	G	812	2x.001	1 1/2"	
12 L 205	G	812	2x.0015	1 1/2"	24c
12 L 206	G	812	2x.002	1 1/2"	
12 L 207	G	822	2x.003	1 1/2"	
12 L 208	G	822	2x.004	1 1/2"	26c

### STANDOFF CERAMICONS

For RF by-passing, 6-32 threaded stud. Tolerance, ± 20%. 500 WVDC. Shpg. wt., 2 oz.

No.	Fig.	Type	Mmf	Size	EA.
12 L 120	C	323	50	1 1/2 x 1/2"	
12 L 121	C	323	100	1 1/2 x 1/2"	
12 L 122	C	323	500	1 1/2 x 1/2"	32c
12 L 123	C	324	1000	1 1/2 x 1/2"	
12 L 124	C	324	1500	1 1/2 x 1/2"	

### HI-VOLTAGE DISC CERAMICONS

Dia. from 1/4" to 1/2". Lead wires soldered to electrodes. Phenolic coated. Thickness varies with rated voltage. Tolerance, ± 20%. 1 oz.

#### TYPE 1R5KV 1500 VOLTS

No.	Fig.	Dia.	Cap.	EACH
12 L 250	F	1/4"	4.7 mmf	
12 L 251	F	1/4"	6.8 mmf	
12 L 252	F	1/4"	10 mmf	18c
12 L 253	F	1/4"	15 mmf	
12 L 254	F	1/4"	22 mmf	
12 L 255	F	1/4"	33 mmf	
12 L 256	F	1/4"	47 mmf	
12 L 257	F	1/2"	68 mmf	
12 L 258	F	1/2"	100 mmf	
12 L 259	F	1/2"	150 mmf	18c
12 L 260	F	1/2"	180 mmf	
12 L 261	F	1/2"	220 mmf	
12 L 262	F	1/2"	330 mmf	
12 L 263	F	1/2"	470 mmf	
12 L 264	F	3/4"	680 mmf	
12 L 265	F	3/4"	.001 mfd	
12 L 266	F	3/4"	.0015 mfd	29c
12 L 267	F	3/4"	.0022 mfd	
12 L 268	F	3/4"	.0033 mfd	
12 L 269	F	3/4"	.0047 mfd	
12 L 270	F	1/2"	.0056 mfd	35c

#### TYPE 3KV 3000 VOLTS

No.	Fig.	Dia.	Cap.	EACH
12 L 275	F	1/4"	4.7 mmf	24c
12 L 276	F	1/4"	6.8 mmf	
12 L 277	F	1/4"	10 mmf	
12 L 278	F	1/4"	15 mmf	
12 L 279	F	1/4"	22 mmf	
12 L 280	F	1/4"	33 mmf	
12 L 281	F	1/2"	47 mmf	
12 L 282	F	1/2"	56 mmf	
12 L 283	F	1/2"	68 mmf	24c
12 L 284	F	1/2"	100 mmf	
12 L 285	F	1/2"	220 mmf	
12 L 286	F	1/2"	330 mmf	
12 L 287	F	3/4"	470 mmf	
12 L 288	F	3/4"	680 mmf	
12 L 289	F	3/4"	.001 mfd	24c
12 L 290	F	3/4"	.0015 mfd	
12 L 291	F	3/4"	.0022 mfd	
12 L 292	F	3/4"	.0033 mfd	

#### TYPE 6KV 6000 VOLTS

No.	Fig.	Dia.	Cap.	EACH
12 L 241	F	1/4"	4.7 mmf	29c
12 L 242	F	1/4"	6.8 mmf	
12 L 243	F	1/4"	10 mmf	
12 L 244	F	1/4"	15 mmf	
12 L 245	F	1/4"	22 mmf	
12 L 246	F	1/4"	33 mmf	
12 L 248	F	1/2"	47 mmf	

### 1500 MMF FEED-THRU CERAMICON

Fig. D. Type 362-162. For by-passing RF to ground. Terminals can be used as tie points for several connections. Silvered ceramic tube. Cadmium-plated bushing soldered to electrode. Tol. ± 20%. 500 WVDC. 1/2 x 1/4". 1 oz. 59c

12 L 135. NET.....59c

### TUBULAR TRIMMERS

Fig. E. Phenolic-coated for applications where low minimum capacity and high ratio of maximum to minimum capacity are needed. Molded plastic dielectric. For mounting on panels .040" to .065" thick. 500 WVDC. 1 1/2 x 1/2". Shpg. wt., 1 oz.

12 L 130. Type 532-08-0R5. 0.5-5 mmf. 18c  
12 L 131. Type 532-10. 1.0-8 mmf. 32c

### CERAMICON TRIMMERS

Single and dual trimmers with constant capacity change per degree of rotation. \*Zero temp. coefficient. 500 wkg. v. DC. Wt., 1 oz.

No.	Fig.	Type	Mmf	Size	EA.
12 L 185	I	*TS2A	1.5-7	2 7/8 x 2 1/2 x 1/4"	
12 L 186	I	*TS2A	3-12	2 7/8 x 2 1/2 x 1/4"	88c
12 L 187	I	TS2A	4-30	2 7/8 x 2 1/2 x 1/4"	
12 L 188	I	TS2A	7-45	2 7/8 x 2 1/2 x 1/4"	
12 L 189	J	*TD2A	1.5-7	1 1/2 x 1 1/2 x 1/4"	1.47
12 L 190	J	*TD2A	3-12	1 1/2 x 1 1/2 x 1/4"	1.47
12 L 191	J	TD2A	4-30	1 1/2 x 1 1/2 x 1/4"	1.47
12 L 192	J	TD2A	7-45	1 1/2 x 1 1/2 x 1/4"	1.47
12 L 193	H	*S57	3-12	3/4 x 1 1/2 x 1 1/2"	.73
12 L 194	H	*S57	5-25	3/4 x 1 1/2 x 1 1/2"	.73
12 L 195	H	*S57	8-50	3/4 x 1 1/2 x 1 1/2"	.73

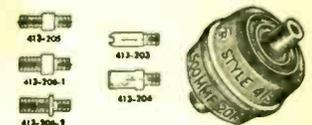
### GP CERAMICONS

"General Purpose" type. Same quality as NPO, but of unspecified temp. coefficient. Tolerance, ± 20%. 600 wkg. v. DC. Average shpg. wt., 3 oz.

No.	Fig.	Type	Mmf	Size
12 L 021	A	K	5	
12 L 050	A	K	10	
12 L 051	A	K	15	
12 L 023	A	K	18	1/2 x 1/4"
12 L 024	A	K	20	
12 L 025	A	K	22	
12 L 026	A	K	24	
12 L 052	A	K	25	
12 L 027	A	K	27	
12 L 028	A	K	30	
12 L 029	A	K	33	
12 L 030	A	K	39	1/2 x 1/4"
12 L 031	A	K	47	
12 L 062	A	K	50	
12 L 032	A	K	51	
12 L 033	A	K	56	
12 L 034	A	K	68	
12 L 054	A	K	75	
12 L 063	A	K	82	
12 L 065	A	K	100	1/2 x 1/4"
12 L 035	A	K	120	
12 L 066	A	K	150	
12 L 036	A	K	180	
12 L 067	A	K	200	
12 L 037	A	K	220	
12 L 038	A	K	240	
12 L 068	A	K	250	
12 L 039	A	K	270	1/2 x 1/4"
12 L 056	A	K	300	
12 L 039	A	K	330	
12 L 040	A	K	360	
12 L 041	A	K	390	
12 L 042	A	K	470	
12 L 069	A	K	500	
12 L 043	A	K	510	
12 L 044	A	K	560	1/2 x 1/4"
12 L 045	A	K	680	
12 L 057	A	L	750	
12 L 070	B	L	1000	
12 L 046	B	L	1200	1 1/2 x 1/4"
12 L 073	B	L	1500	
12 L 047	B	333	1800	
12 L 071	B	333	2000	
12 L 048	B	333	2200	
12 L 049	B	333	2500	
12 L 059	B	333	2700	1 1/2 x 1/4"
12 L 059	B	333	3000	
12 L 003	B	333	3300	
12 L 004	B	333	4000	
12 L 005	B	333	4700	
12 L 235	B	333	5000	
12 L 236	B	333	5600	
12 L 237	B	333	6000	1 1/2 x 1/4"
12 L 238	B	333	6800	
12 L 239	B	333	7500	
12 L 240	B	333	10,000	

NET EACH.....15c

### TYPE 413 UNIVERSAL 20 KV CERAMICON CAPACITOR



New universal HV ceramic, built with threaded sockets into which terminals are threaded. Threaded terminals replace any terminal combinations found in TV sets. Services any set rated 10-20 KV. Cap. 500 mmf, 20,000 WVDC. Size 1/2" long x 1/2" dia. Wt., 3 oz. 12 L 000. NET.....1.03

TERMINALS FOR ABOVE. Wt., 1 oz.

No.	Type	Description	EA.
12 L 010	203	Slotted	
12 L 011	204	Female—6-32	
12 L 012	205	Male—6-32	6c
12 L 013	206-1	Male—8-32 thread	
12 L 014	206-2	Male—8-32 thread	

# Centralab Ceramic Capacitors



## DD60 6000 VOLT DISCS

Quality disc ceramics for bypass and coupling applications in high frequency circuits. Low mass weight and unusual thinness are important features of these popular units. Type DD60 capacitors feature double-thickness insulating coating for higher breakdown to ground and greater strength. Tolerance,  $\pm 20\%$ . Size,  $1/4 \times 5/8$ ". Tested at 12,000 v. Highest capacity values available in disc ceramics.

Totally unaffected by heat, humidity or vibration. Maintain high capacity and performance at  $+85^\circ\text{C}$  operation. Av. wt., 2 oz.

No.	Type	Mmf	NET EACH
LL 458	DD60-100	10	
LL 459	DD60-120	12	
LL 460	DD60-150	15	
LL 461	DD60-220	22	
LL 462	DD60-250	25	
LL 463	DD60-270	27	
LL 464	DD60-300	30	
LL 465	DD60-330	33	29c
LL 466	DD60-390	39	
LL 467	DD60-470	47	
LL 468	DD60-500	50	
LL 469	DD60-560	56	
LL 470	DD60-680	68	
LL 471	DD60-750	75	
LL 472	DD60-820	82	
LL 473	DD60-101	100	
LL 474	DD60-121	120	
LL 475	DD60-151	150	
LL 476	DD60-181	180	
LL 477	DD60-201	200	
LL 478	DD60-221	220	
LL 479	DD60-251	250	
LL 480	DD60-271	270	
LL 481	DD60-301	300	29c
LL 482	DD60-331	330	
LL 483	DD60-391	390	
LL 484	DD60-401	400	
LL 485	DD60-471	470	
LL 486	DD60-501	500	
LL 487	DD60-561	560	



FT

MFT

## FEED-THROUGH HI-KAPS

Tiny ceramics, designed for single-hole mounting where capacity ground to chassis or shield is required. Special construction virtually eliminates lead inductance. Rating, 500 volts DC working. FT—with mounting nut. \*Guaranteed minimum value. Wt., 2 oz.

### TYPE FT

No.	Type	Mmf	Tolerance	EACH
LL 390	FT-500	500	$\pm 20\%$	
LL 391	FT-1000	1000	$\pm 20\%$	
LL 392	FT-1500	1500	$-20$ to $+50\%$	59c
LL 393	FT-1800	1800	$-20$ to $+50\%$	
LL 394	FT-2300	2300	$-20$ to $+50\%$	

### TYPE MFT MINIATURES

No.	Type	Mmf	Tolerance	EACH
LL 488	MFT-50	50	$\pm 10\%$	
LL 489	MFT-100	100	$\pm 10\%$	29c
LL 490	MFT-500	500	$\pm 20\%$	
LL 491	MFT-1000	1000	*GMV	

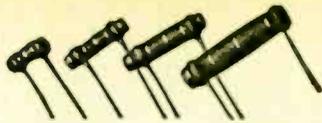
## DK-200 CERAMIC CAPACITOR KIT

200 popular-value BC tubular Hi-Kaps. Metal storage cabinet. All capacitors are in clearly marked envelopes. Listing below shows the 24 different types included in kit and quantity of each. All are rated at 600 wkg. v. DC. Size,  $8 \times 6 \times 6 \frac{1}{4}$ ", 8 lbs.

No.	Mmf	No.	Mmf	No.	Mmf
5	10	5	150	15	500
5	25	5	200	15	680
5	33	5	220	15	1000
5	39	15	250	10	1500
5	47	5	270	5	2000
15	50	5	330	5	4700
20	100	5	390	15	5000
5	120	5	470	15	10000

58 L 451, Cabinet and Capacitors. List, \$50.00. NET. 29.40

MDK-200 Kit. Same assortment as above, but MD-type, molded disc ceramics 8 lbs. 58 L 452. List, \$60.00. NET. 35.28



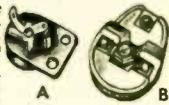
## BC TUBULAR D-6 HI-KAPS

Compact, moisture-proof Hi-Kaps for use in bypass and coupling circuits. 600 wkg. v. DC. 1500 v. flash test. Tolerance:  $\pm 10\%$ , except  $\pm 20\%$ ; \*GMV. Sold in packages of 5 of one value only. Av. shpg. wt., 2 oz.

Stock No.	Type	Mmf	Size	Pkg. of
LL 113	030	3		
LL 043	050	5		
LL 060	100	10		
LL 045	120	12	$1 \frac{1}{2} \times 1 \frac{3}{4}$ "	
LL 061	150	15		
LL 046	180	18		
LL 114	200	20		
LL 047	220	22		
LL 062	250	25		
LL 048	270	27		
LL 049	300	33		
LL 070	390	39	$1 \frac{1}{2} \times 1 \frac{3}{4}$ "	
LL 071	470	47		
LL 050	500	50		
LL 072	560	56		
LL 077	680	68		
LL 078	750	75		
LL 115	820	82		
LL 116	910	91		
LL 051	101	100	$1 \frac{1}{2} \times 1 \frac{3}{4}$ "	
LL 079	121	120		
LL 052	151	150		
LL 080	181	180		
LL 064	201	200		
LL 081	221	220		
LL 053	251	250		
LL 082	271	270		
LL 065	301	300	$1 \frac{1}{2} \times 1 \frac{3}{4}$ "	
LL 083	331	330		
LL 084	391	390		
LL 066	401	400		
LL 085	471	470		
LL 054	501	500	$1 \frac{1}{2} \times 1 \frac{3}{4}$ "	
LL 086	561	560		
LL 089	601	600		
LL 090	681	680		
LL 055	751	750		
LL 117	821	820	$1 \frac{1}{2} \times 1 \frac{3}{4}$ "	
LL 056	102	1000		
LL 091	122	1200		
LL 067	152	1500		
LL 092	182	1800		
LL 057	202	2000		
LL 093	222	2200		
LL 068	252	2500	$1 \frac{1}{2} \times 1 \frac{3}{4}$ "	
LL 094	272	2700		
LL 095	302	3000		
LL 096	332	3300		
LL 097	402	4000		
LL 098	472	4700	$1 \frac{1}{2} \times 1 \frac{3}{4}$ "	
LL 058	502	5000		
LL 099	562	5600		
LL 044	682	6800		
LL 118	752	7500	$1 \frac{1}{2} \times 1 \frac{3}{4}$ "	
LL 059	103	10,000		

## CERAMIC TRIMMERS

Full capacity range with  $180^\circ$  rotation. 600 working v. DC. Power factor less than 0.2% at 1 mc. Type numbers followed by N indicate negative temperature coefficient; Z, zero temp. coef. Silver stator and rotor fired to ceramic. Av. shpg. wt., 1 oz.



Type 827, Fig. A. Phenolic molded. Size,  $1 \frac{1}{2} \times 1 \frac{1}{4}$ ".  
 LL 140. 827-A. 2.5-7 mfm.  
 LL 141. 827-B. 3.0-12 mfm.  
 LL 142. 827-C. 4.5-25 mfm.  
 LL 143. 827-D. 8.0-50 mfm.

Type 822, Fig. A. Steatite.  $2 \frac{1}{2} \times 2 \frac{1}{2}$ ".  

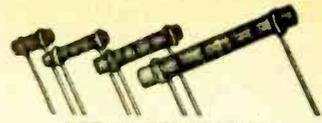
No.	Type	Mmf	No.	Type	Mmf
LL 123	822-AN	5-50	LL 127	822-AZ	4.5-75
LL 124	822-BN	7-45	LL 128	822-BZ	2.5-13
LL 125	822-CN	4.5-25	LL 129	822-CZ	2-7.5
LL 126	822-DN	2-6			

 NET EACH. 88c

Type 823, Fig. B. Steatite.  $1 \frac{1}{2} \times 1 \frac{1}{4}$ ".  

No.	Type	Mmf	No.	Type	Mmf
LL 130	823-AN	20-125	LL 134	823-AZ	12-60
LL 131	823-BN	10-100	LL 135	823-BZ	10-50
LL 132	823-CN	8-50	LL 136	823-CZ	6-25
LL 133	823-EN	8-25	LL 137	823-EZ	6-12

 NET EACH. 1.47



## TYPE TC TEMPERATURE-COMPENSATING CAPACITORS

Comply with JAN-C-20A specs. Type TCZ is negative-positive-zero (NPO); capacity remains essentially constant over a wide temperature range ( $-20^\circ\text{C}$  to  $+85^\circ\text{C}$ ). Type TCN changes capacity with temperature and has a negative coefficient; N750, or 750 parts/million/ $^\circ\text{C}$ . A variety of other coefficients may be achieved by hooking up both types in parallel. DC voltage rating, 600; surge, 1200. \*Tolerance, Wt., 2 oz.

### TC CAPACITOR SIZES

TYPE TCZ			TYPE TCN		
Cap. Mmf	Size		Cap. Mmf	Size	
5 to 24	$1 \frac{1}{2} \times 2 \frac{1}{4}$ "		10 to 62	$1 \frac{1}{2} \times 2 \frac{1}{4}$ "	
27 to 56	$1 \frac{1}{2} \times 2 \frac{3}{4}$ "		68 to 160	$1 \frac{1}{2} \times 2 \frac{3}{4}$ "	
62 to 120	$1 \frac{3}{4} \times 2 \frac{3}{4}$ "		180 to 330	$1 \frac{3}{4} \times 2 \frac{3}{4}$ "	
130 to 180	$2 \frac{1}{2} \times 1 \frac{1}{4}$ "		360 to 510	$2 \frac{1}{2} \times 1 \frac{1}{4}$ "	
200 to 300	$2 \frac{1}{2} \times 1 \frac{3}{4}$ "		560 to 750	$2 \frac{1}{2} \times 1 \frac{3}{4}$ "	

### TYPE TCZ NEGATIVE-POSITIVE-ZERO (NPO)

No.	Mmf	Tol.*	No.	Mmf	Tol.*
LL 200	.5	$\pm .25$	LL 203	1.5	
LL 201	.68	mmf	LL 204	2.2	$\pm .25$
LL 202	1.0		LL 205	3.3	mmf

### NET EACH. 29c

LL 206	4.7		LL 210	15	
LL 207	6.8	$\pm .5$	LL 211	18	$\pm .5$
LL 208	10	mmf	LL 212	20	mmf
LL 209	12				
LL 213	22		LL 226	75	
LL 214	24		LL 228	91	$\pm 2 \frac{1}{2}\%$
LL 492	25		LL 229	100	
LL 215	27				
LL 216	30		LL 230	110	
LL 217	33		LL 231	120	
LL 218	36		LL 232	130	
LL 219	39	$\pm 2 \frac{1}{2}\%$	LL 233	150	
LL 220	43		LL 234	160	$\pm 5\%$
LL 221	47		LL 235	180	
LL 493	50		LL 236	200	
LL 222	51		LL 237	220	
LL 223	56		LL 238	240	
LL 224	62		LL 239	270	
LL 225	68		LL 240	300	

### NET EACH. 29c

### TYPE TCN-NEGATIVE (N750)

No.	Mmf	Tol.*	No.	Mmf	Tol.*
LL 241	5		LL 252	15	$\pm .5$
LL 250	10	$\pm .5$	LL 253	18	$\pm .5$
LL 251	12	mmf	LL 254	20	mmf

### NET EACH. 29c

LL 255	22		LL 273	120	
LL 256	24		LL 274	130	
LL 257	25		LL 275	150	
LL 258	27		LL 276	160	
LL 259	33		LL 277	180	
LL 260	36		LL 278	200	
LL 261	39		LL 279	220	
LL 262	43		LL 280	240	
LL 263	47	$\pm 2 \frac{1}{2}\%$	LL 281	270	
LL 495	50		LL 282	300	$\pm 5\%$
LL 264	51		LL 283	330	
LL 265	56		LL 284	360	
LL 266	62		LL 285	390	
LL 267	68		LL 286	430	
LL 268	75		LL 287	470	
LL 269	82		LL 288	510	
LL 270	91		LL 289	560	
LL 271	100		LL 290	620	
LL 272	110	$\pm 5\%$	LL 291	680	
			LL 292	750	

### NET EACH. 29c

## 850S HIGH-VOLTAGE CERAMICS

For RF power circuits. Negative temp. coef. of 750 parts/million/ $^\circ\text{C}$ , except \*zero temp. coef. Silver electrodes fired to ceramic. Low power factor.  $\pm 10\%$  tol. 6-32 screw mtg.  $1 \frac{1}{2} \times 1 \frac{1}{4}$ " dia. (Type 858S, same size and style). Wt., 2 oz.



No.	Mmf	Wkg.	Volts DC	EACH
LL 100	25*		7500	
LL 101	50*		7500	
LL 102	50*		7500	
LL 103	75		7500	
LL 104	100		5000	
LL 105	100		5000	
LL 108	1000		5000	

1.76

# Centralab Printed Circuits—Ceramics

## TYPE MD MOLDED DISC CERAMIC HI-KAPS



Low-inductance molded discs for bypass, coupling and general applications in high-frequency circuits (such as in TV and FM). Priced like tubulars but much smaller. Completely insulated with "Centratrene." Electrical properties constant to 3000 mc. Insulation resistance, 300,000 megohms. Can be placed under chassis or next to high-voltage leads without danger of flashover or breakdown. Capacity and voltage ratings permanently labeled on each unit. Fungus resistant. Will not become brittle at -55° C. For operation to 85° C. Values to .004 mfd. rated 1000 WVDC; others rated 600 WVDC. No. 22 tinned copper leads, 1 1/2" long. Tolerance, ±10% except \*±20%. †GMV (guaranteed min. value). Size, 1/8" dia. x 3/8" shpg. wt., 2 oz.

No.	Type	Mfd.	No.	Type	Mfd.
11L300	050	.000005	11L327	391	.00039
11L301	100	.00001	11L328	401	.0004
11L302	120	.000012	11L329	471	.00047
11L303	150	.000015	11L330	501	.0005
11L304	180	.000018	11L331	561	.00056
11L305	200	.00002	11L332	601	.0006
11L306	220	.000022	11L333	681	.00068
11L307	250	.000025	11L334	751	.00075*
11L308	270	.000027	11L335	821	.00082*
11L309	330	.000033	11L336	102	.001*
11L310	390	.000039	11L337	122	.0012*
11L311	470	.000047	11L338	152	.0015*
11L312	500	.00005	11L339	182	.0018*
11L313	560	.000056	11L340	202	.002*
11L314	680	.000068	11L341	222	.0022*
11L315	750	.000075	11L342	252	.0025*
11L316	820	.000082	11L343	272	.0027*
11L317	101	.0001	11L344	302	.003*
11L318	121	.00012	11L345	332	.0033*
11L319	151	.00015	11L346	402	.0042
11L320	181	.00018	11L347	472	.0047†
11L321	201	.0002	11L348	502	.005†
11L322	221	.00022	11L349	562	.0056†
11L323	251	.00025	11L350	682	.0068†
11L324	271	.00027	11L351	752	.0075†
11L325	301	.0003	11L352	103	.01†
11L326	331	.00033			

NET EACH.....18c



## TYPE DD DISC CERAMICS

Highly efficient for bypass-coupling applications in high frequency transmitter, receiver, etc., circuits. 1000 v. DC working except †600 v. Sizes range from 1/8" to 1/2" dia. \*GMV (guaranteed minimum value). All units are U. L. Approved for AC lines except f. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Mfd.	Tolerance	NET EACH
11L406	3R3	.0000033	5 mmf	
11L407	050	.000005	.5 mmf	12c
11L408	6R8	.0000068	.6 mmf	
11L409	100	.00001	10%	
11L410	150	.000015	10%	
11L411	200	.00002	10%	
11L412	250	.000025	10%	
11L413	330	.000033	10%	12c
11L414	390	.000039	10%	
11L415	470	.000047	10%	
11L416	500	.00005	10%	
11L417	560	.000056	10%	
11L418	680	.000068	10%	12c
11L419	750	.000075	10%	
11L420	101	.0001	10%	
11L421	121	.00012	10%	
11L422	151	.00015	10%	
11L423	181	.00018	10%	12c
11L424	201	.0002	10%	
11L425	221	.00022	20%	
11L426	251	.00025	20%	
11L427	271	.00027	20%	12c
11L428	301	.0003	20%	
11L429	331	.00033	20%	
11L430	391	.00039	20%	
11L431	471	.00047	20%	
11L432	501	.0005	20%	
11L433	561	.00056	20%	12c
11L434	681	.00068	20%	
11L435	751	.00075	20%	
11L436	801	.0008	20%	
11L437	102	.001	20%	12c
11L438	152	.0015	20%	
11L439	202	.002	20%	
11L440	202	.003	20%	
11L441	472	.0047	20%	
11L442	5022	.005	20%	12c
11L037	502	.005	GMV*	
11L455	103	.01	GMV*	
11L106	1032	.01	20%	
11L042	203†	.02	GMV*	18c

## PRINTED ELECTRONIC CIRCUITS (P. E. C.)

Extremely small size and compactness saves space. One component replaces many standard size components. Cuts down the possibility of wiring errors. Reduces soldered connections by over 50%.  
**37 L 0071. NEW PRINTED CIRCUIT GUIDE NO. 3.** Complete data on all P.E.C. units. Replacement guide for sets listed by 119 mfrs. **NO CHARGE** with your next order.

### RESISTOR-CAPACITOR UNITS

For low-voltage applications. Replacements for Admiral TV sets. 1/2x1/2x1/4". 150 VDC. \*Mmf. Vt., 2 oz.

No.	Type	Circuit	R	C	EA.
11L450	PC-177	Audio couplate	150K 47K 1 meg	.01	59c
11L451	PC-178	Vertical network	15K 270K	*150	44c

### RESISTOR UNITS

Excellent for replacement purposes in existing circuits or for use in newly designed circuits. Small and compact. Wt., 2 oz.

No.	Type	Description	Value	NET
11L163	PC-2	Single resistor	2 meg	21c
11L164	PC-21	Dual resistor	500K, 110K	29c

### FILM DIODE FILTER

Type PC-60. Small balanced diode load filter. Consists of resistance of 47,000 ohms, and 2 capacitors of 100 mmf each. Wt., 2 oz.

11L147. NET.....35c

### AUDET OUTPUT STAGE

Couples 2nd detector-1st audio to output tube in typical 5 tube set. PC-150: C1, .002 mfd, C2, 220 mmf, C3 and C5, 250 mmf. C4, .005 mfd, R1, 6.8 meg, R2 and R3, 470K. PC-151 same but C1 is .005 mfd. Shpg. wt., 2 oz.

11L158. Type PC-150. NET.....59c  
 11L170. Type PC-151. NET.....68c

### PENTODE—PENDET COUPLATES

Replace entire section between stages. Types PC-90, PC-91, PC-92, and PC-165 are for coupling pentode tubes to following stage. PC-160 couples detector and 1st audio pentode in 3-way portables to audio output stage. Type PC-176 is special. Replaces General Electric K821458. Small and compact. Av. shpg. wt., 3 oz.

11L154. Type PC-90. NET.....53c  
 11L155. Type PC-91. NET.....53c  
 11L166. Type PC-92. NET.....59c  
 11L171. Type PC-160. NET.....73c  
 11L172. Type PC-165. NET.....79c  
 11L173. Type PC-176. NET.....44c



### NEW TV H-PADS

For use where TV signal requires attenuation to secure optimum performance. H-pad has 4 terminals. Installed in series with 300 ohm antenna lead-in. 1/4x1/2x3/8". Wt., 3 oz.

No.	Type	Attenuation	EACH
11L190	PCH-10	10 db	
11L191	PCH-20	20 db	
11L192	PCH-30	30 db	47c
11L193	PCH-40	40 db	

11L194. PCH-100. Set of 4 H-Pads, one each of above, in plastic box. NET.....1.76  
 11L454. PCH-4. Switch with H-Pads above. Can be permanently installed. NET.....4.41

### TYPE DD16 1600 VOLT CERAMIC DISC HI-KAPS

Designed for use in electric shavers and as buffers in auto radios. Units are totally unaffected by heat, humidity or vibration. 1600 volts. DCW. Size, 1/4" dia. x 3/8", except \* 7/8" dia. x 1/2". †GMV, guaranteed min. value. Shpg. wt., 2 oz.

No.	Type	Mfd	Tolerance	EA.
11L456	302	.003	GMV	
11L370	502	.005	GMV	
11L372	602	.006	GMV	
11L457	702	.007	GMV	21c
11L373	752	.0075	GMV	
11L374	802	.008	GMV	
11L375	103	.01	GMV	
11L376	*153	.015	-20% +80%	35c

### AMPEC AUDIO AMPLIFIER

3-stage audio amplifier no bigger than a book of paper matches. Operates on 22 1/2 v. "B" battery and 1.5 v. "A" battery. Response 300-5000 cps. Gain of 4500 at 1kc. Type PC-201 complete with tubes: one CK548AX; two CK512AX. Wt., 8 oz. Type PC-200 same but less tubes. Wt., 4 oz. Type B16-228 volume control and switch for use with either Ampec unit. Volume control is 5 meg. SPST switch rated at 6.5 amps @ 1.5 v. and 2 amps @ 45 v. 1/2" dia. 1/2" deep with knob. Complete with detailed instructions.  
 11L160. Type PC-201. NET.....14.70  
 11L159. Type PC-200. NET.....8.82  
 30 M419. Type B16-228. NET.....2.35



### VERTICAL INTEGRATOR PLATES

Three terminal network for replacement of entire circuit. PC-101; R1 and R4, 22K, R2 and R3 8.2K. C1, .01 mfd, C2, .002 mfd, C3 and C4 .005 mfd. Type PC-100 same as PC-101 but less C1 and R4. Av. shpg. wt., 2 oz.  
 11L156. Type PC-101. NET.....65c  
 11L157. Type PC-101. NET.....73c

### TRIODE COUPLATES

Couples triode to following tube. All have C2 and C3 grid RF bypasses of 250 mmf except PC-84, 500 mmf. R2 is 500K. Wt., 2 oz.

No.	Type	R1	C1	NET
11L150	PC-70	500K	.005 mfd	41c
11L151	PC-71	250K	.005 mfd	41c
11L152	PC-80	500K	.01 mfd	44c
11L153	PC-81	250K	.01 mfd	44c
11L165	PC-84	500K	.01 mfd	44c

### PRINTED CIRCUIT KITS

Model PCK-18. Contains 18 printed electronic circuits. (PEC). Will replace 42 resistors and 52 condensers. Each unit contains complete ready-to-function section of an electronic circuit. Consist of resistors, condensers, etc. Enclosed in a ceramic base plate with leads. Ideal for servicemen, experimenters, etc. Wt., 1 oz.  
 58 L 460. List. \$15.00. NET.....8.82  
 Model PCK-46. As above but contains 45 PEC units. Wt., 1 1/2 oz.  
 11L 461. List. \$40.00. NET.....23.52



### HI-VO-KAPS FOR TV

500 mmf hi-voltage ceramics for filter, coupling and HV bypass service. Rated 10,000 wkv. v. DC. 1x1/4" x 20,000 wkv. v. DC. 1x1/2" x 30,000 wkv. v. DC. 1/2x1/4". Shpg. wt., 3 oz.

No.	Type	Terminals	EA.
11L073	TV1-501	Rod	
11L074	TV2-501	Slot-tap	
11L075	TV3-501	Rod	59c
11L076	*TV1-502	Tap-thread	
11L024	*TV3-502	Tap-thread	
11L040	*TV2-502	Slot-tap	.59
11L041	†TV1-303	Rod	1.76
11L018	†TV4-502	Dual male thr.	.59
11L019	*TV5-502	Dual female tap	.59
11L452	*TV7-502	Male. 9/16"	.59
11L453	†TV8-503	Male. 2 1/2"	1.76

Electronic RETMA Color Code Wall Chart. Up-to-date for resistors, capacitors, etc.  
 37 KX 088. Shpg. wt., 8 oz. ....50c

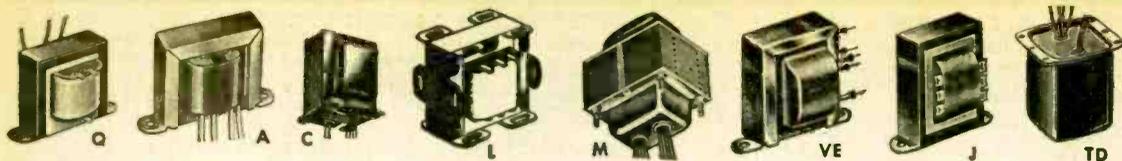
### ATTACHABLE TERMINAL HI-VO KAPS

A precision attachable terminal high-voltage capacitor, v. DC working at 20,000. Rated at 500 mmf @ 20,000. This unit has 8-32 threads to accept one of 5 different terminals contained in kit below. Will not strip or break off when terminals are tightened. Seats terminal at bottom of tap. No possibility of air gap. Shpg. Wt., 3 oz.  
 11L198. Type TV-20. NET.....88c

11L187. TX-1. Slotted rod. }  
 11L188. TX-2. Bevel tap. }  
 11L189. TX-3. Male thread. }  
 11L195. TX-4. Short male. }  
 11L196. TX-5. Long male. }  
 Pkg. of 5, of one type. NET PER PKG. 29c  
 Terminals only.



# Stancor Transformers



## UNIVERSAL OUTPUT TRANSFORMERS

For single or push-pull plates to voice coil. All have wire leads on primary and lugs on secondary, except \*lugs on both primary and secondary. All are Fig. Q except \*Fig. J. Secondary: 1500 ohms; 1500, 333, 200, 125, 50 ohms; others match any voice coil to rated primary.

Stock No.	Type	NET	Primary	Watts	Size	Lbs.
64 G 294	A3250†	2.91	5K; 10, 20K CT	(15 ma)	2x3½x1½	1 ¼
64 G 005	A3822	1.62	7-10K	4	1½x2½x1½	¾
64 G 026	A3823	1.82	4-14K CT	8	1½x2½x1½	¾
64 G 242	A3824	1.91	6-10K	8	2x3½x2	1 ¼
64 G 002	A3825	2.32	1.5-4.5K	8	2x3½x1½	¾
64 G 028	A3830*	3.18	3-10K CT	20	2½x3½x2½	1 ½
64 G 293	A3841††	4.41	2.5, 4.5, 6.7	10	2½x3½x2½	1 ½
64 G 023	A3849	1.85	1.5-10K	10	1½x2½x1½	¾
64 G 024	A3850*	2.12	4-14K CT	8	2x2½x1½	¾
64 G 027	A3852*	2.35	4-14K CT	18	2½x2½x2	1 ¼
64 G 025	A3856	1.71	4-14K CT	4	1½x2½x1½	¾
64 G 029	A3870	2.9	4-14K CT	18	2x3½x2	1 ¼
64 G 292	A3880	3.50	4-14K CT	15	2½x3½x2½	1 ½

## FIXED IMPEDANCE OUTPUT TRANSFORMERS

Deliver maximum audio frequency power from amplifier to load. All are Fig. A mounting type, except \*Fig. C. Type A3337 is similar to Fig. J, but has leads. Type A3330 has 4.5% primary tap used in B+ filter network for hum reduction.

No.	Type	NET	Primary	Secondary	Watts	Ctr.	Lbs.
64 G 013	A2312	2.06	14,000 CT	4	10	2½	1 ¼
64 G 245	A2313	2.07	10K	8	10	2½	1 ¼
64 G 033	A3304*	5.67	7M CT 10M CT 10K CT	500/15/8/4	25	2x1½	2 ¼
64 G 297	A3311*	5.35	10K CT	500/15/8/4	25	2½x2	3 ¼
64 G 296	A3327	1.44	25K	4	5	2	¾
64 G 244	A3328	1.21	4,000	3.5	3	1½	¾
64 G 246	A3329	1.12	8,000	3.5	3	1½	¾
64 G 299	A3330	1.35	2K	3.5	3	1½	¾
64 G 243	A3332	.94	2,000	3.2	3	1½	¾
64 G 295	A3337	1.79	5K	6-8	10	2½	1 ½
64 G 020	A3800*	5.125	0.000 CT	500/250/15/8/4	30	2½x2	4
64 G 021	A3801*	6.146	6.000 CT	500/250/15/8/4	35	2½x2½	5 ¼
64 G 298	A3831	1.97	10K CT	8/4/2	5	2½	1 ½
64 G 015	A3857	1.12	25M CT	4	5	2	¾
64 G 001	A3876	1.1	2,000	4	5	2	¾
64 G 004	A3877	1.18	5,000	4	5	2	¾
64 G 006	A3878	1.15	7,000	4	5	2	¾
64 G 010	A3879	1.12	10,000	4	5	2	¾
64 G 519	A3814	1.56	7,600	3.2	5	2	¾

## LINE-TO-VOICE COIL TRANSFORMERS

All have style J frame and terminal lugs except \* in Q case. Type A3837 is auto-transformer; operates one or more speakers in parallel. A-8102 and A-8103 are RETMA 70.7 volt types. †Power steps in watts.

No.	Type	NET	Primary Imp.	Secondary Imp.	Watts	Ctrs.	Lbs.
64 G 087	A3818	3.20	1500/1000/500	15/8/4	25	3½	2 ¼
64 G 088	A3837	3.23	500 1000 1500 2000 2500 3000	.06 to 8 12 to 16 18 to 24 24 to 32 30 to 40 36 to 48	15	2½	1 ¾
64 G 098	A3883	2.78	500	15/8/6/4	25	2½	1 ¾
64 G 085	A7947*	1.88	2000/1500/ 1000/500	6-8/3.2	8	2½	1 ¾
64 G 086	A7949	2.50	2000/1500/ 1000/500	6-8/3.2	12	2½	1 ¾
64 G 089	A8101*	1.29	500	3.2/6/8	5	2	¾
64 G 091	A8102	2.65	8/4/2/1/0.5†	4/8/16	8	2	¾
64 G 092	A8103	3.70	16/8/4/2/1/1/5†	4/8/16	8	2	¾
64 G 099	A8104	3.59	3000/2000/ 1500/1000/500	16/8/4	16	2½	1 ¾

## PUSH-PULL AUDIO INPUT TRANSFORMERS

For single plate to push-pull grids except \*single plate to single grid; for 7000-20,000 ohm plate impedances. All others, 7000-15,000 ohm plate impedance. Maximum primary DC, 10 ma. All are Fig. A.

Stock No.	Type	NET	Ratio	Size	Lbs.
64 G 079	A52C	1.62	1:2	1½x2½x1½	¾
64 G 090	A53*	1.56	1:3	1½x2½x1	¾
64 G 081	A53C	1.59	1:3	1½x2½x1	¾
64 G 082	A63C	1.79	1:3	1½x2½x1	¾
64 G 083	A73C	2.23	1:3	2x3x1½	1

## DRIVER TRANSFORMERS

Single plate (10,000 ohm primary impedance) to push-pull grids. Both are Fig. A mounting type.

Stock No.	Mfr's Type	NET	Pri. to ½ Sec. Ratio	Pri. Ma.	Size	Wt. Lbs.
64 G 038	A4723	1.76	3:1	30	1½x2½x1½	1
64 G 039	A4752	2.59	2/1.5/1:1	40	2x3x1½	1 ½

## POWER TRANSFORMERS

8400 Series—For 6.3 Volt Tubes. All secondaries center-tapped, except PS-8415. \*For use with 6AX5, 6X4, 6X5 or selenium rectifiers. All are Fig. M, except Type PC in Fig. C and Type PS in Fig. A. †Has extra winding: 6.3 v. @ 3A. C.T. Primary, 117 volts, 60 cycle AC.

Stock No.	Mfr's Type	NET	Plate VCT		Rect. V A		Fil. V A		Overall Size	Wt. Lbs.
			V	Ma	V	A	V	A		
64 G 162	PS-8415	1.85	125	15	0	0	0	2 ½x3½x2	1 ¼	
64 G 216	PS-8416	2.32	250	25	0	0	0	2½x2½x1½	1	
64 G 154	PM-8401	3.97	470	40	0	0	0	2½x3½x2	2 ¼	
64 G 176	PC-8401	3.97	470	40	0	0	0	3½x2½x2½	2 ¼	
64 G 170	PM-8402	4.41	480	55	0	0	0	2½x2½x2	2 ¼	
64 G 177	PC-8402	4.41	480	55	0	0	0	3½x2½x2½	2 ¼	
64 G 175	PM-8419	4.41	480	70	0	0	0	2½x2½x3	2 ¼	
64 G 215	PC-8419	4.41	480	70	0	0	0	3½x2½x2½	2 ¼	
64 G 171	PM-8403	4.94	500	70	0	0	0	6.3-2.5 3½x2½x3½	3 ¼	
64 G 178	PC-8403	4.94	500	70	0	0	0	6.3-2.5 3½x2½x3½	3 ¼	
64 G 179	PC-8404	5.56	520	90	0	0	0	6.3-2.5 3½x3½	4	
64 G 160	PM-8404	5.56	520	90	0	0	0	6.3-2.5 3½x3½	4	
64 G 172	PM-8405	6.14	540	120	0	0	0	6.3-3.5 3½x3½	4 ½	
64 G 183	PC-8405	6.14	540	120	0	0	0	6.3-3.5 4x3x3½	4 ½	
64 G 157	PM-8406	4.06	650	40	2	6.3-2.5	2	2½x3x2½	2 ¼	
64 G 155	PM-8407	4.07	650	55	5	6.3-2.5	2	2½x3x3	2 ¼	
64 G 217	PC-8406	4.06	650	40	2	6.3-2.5	2	3½x2½x2½	2 ¼	
64 G 184	PC-8407	4.47	650	55	5	6.3-2.5	2	3½x2½x2½	2 ¼	
64 G 164	PC-8408	6.06	680	70	2	6.3-2.5	2	3½x3x3½	3 ¼	
64 G 156	PM-8408	5.06	680	70	2	6.3-2.5	2	2½x3½x3½	4	
64 G 158	PM-8409	5.64	700	90	5	6.3-2.5	2	4x3x3½	4 ½	
64 G 185	PC-8409	5.64	700	90	5	6.3-3.5	3	3½x3x3½	4 ½	
64 G 159	PM-8410	6.23	720	120	5	6.3-3.5	3	3½x3x3½	5	
64 G 186	PC-8410	6.23	720	120	5	6.3-3.5	3	4x3x3½	5 ½	
64 G 173	PM-8411	7.47	750	150	5	6.3-3.5	3	3½x3x4½	5 ½	
64 G 187	PC-8411	7.47	750	150	5	6.3-3.5	3	4x3x3½	5 ½	
64 G 161	PM-8412	8.41	800	200	5	6.3-3.5	3	3½x4x3½	8 ½	
64 G 163	PC-8412	8.41	800	200	5	6.3-3.5	3	4x4x3½	8 ½	
64 G 169	PC-8414	10.61	1200	200	5	6.3-3.5	3	4½x4½x4	8 ½	

## FILTER CHOKES

All ratings are with maximum DC in winding. All are Fig. A, mounting type, except \*Fig. L, †Fig. TD, ‡Fig. C, §like Fig. J, but with leads. All are rated 1500 v. rms except \*2000, †3000.

Stock No.	Type	NET	Hys.	Ma.	Ohms	Size	Lbs.
64 G 057	C1001††	2.62	10.5	110	225	2½x4x2½	2 ¼
64 G 056	C1002	1.97	15.0	75	400	1½x3x2½	1 ¼
64 G 055	C1003	1.44	16.0	50	580	2x3½x1½	1 ¼
64 G 065	C1080	1.26	3.5	50	200	1½x2½x1½	¾
64 G 075	C1279	1.29	8.5	50	400	1½x2½x1½	¾
64 G 067	C1355*	1.79	8.0	75	290	2½x2½x1½	1 ¼
64 G 063	C1410††	3.70	4.0	175	100	3½x2½x2½	2 ¼
64 G 466	C1411††	4.20	4.5	200	80	3½x3x3	3 ¼
64 G 455	C1412††	6.20	4.0	250	60	3½x3x3	4 ½
64 G 068	C1420†	1.18	16.0	80	360	3½x2½x2½	2 ¼
64 G 465	C1421††	3.62	7.0	140	165	3½x2½x2½	2 ¼
64 G 058	C1515	1.29	20.0	15	900	1½x2½x1½	¾
64 G 050	C1706	1.09	4.5	50	300	1½x2½x1½	¾
64 G 051	C1707	1.15	7.0	50	550	1½x2½x1½	¾
64 G 052	C1708	1.79	13.0	65	500	2 x3x1½	1
64 G 053	C1709	2.00	8.0	85	250	2 x3½x2	1 ¼
64 G 054	C1710	2.91	7.0	150	200	2½x4 x2½	2 ¼
64 G 069	C1721††	4.82	8.5	200	120	3½x3½x3	3 ¼
64 G 456	C1722††	8.08	8.0	300	80	4½x3½x3½	7 ¼
64 G 055	C2303**	1.82	2.5	130	100	2 x3½x1½	1 ¼
64 G 060	C2304	1.88	2.3	150	60	2 x3½x1½	1 ¼
64 G 061	C2305**	2.76	5.0	100	300	2½x2½x2½	1 ¼
64 G 064	C2308††	8.08	8.0	300	80	4½x4 x3½	7 ¼
64 G 457	C2309**	2.26	3.0	150	90	2½x3½x2½	1 ¼
64 G 505	C2325	2.26	2.0	200	60	3½x2½x2½	2
64 G 520	C2326	2.56	1.0	300	43	3½x4x2½	2 ¼
64 G 073	C2327	1.44	1.5	200	85	1½x2½x1½	¾
64 G 458	C2328	2.97	2.8	375	25	2½x3½x2	1 ¼
64 G 459	C2334	2.50	2.8	300	60	2½x2½x4	2 ¼

## INTERCOM AND TRANSCEIVER TRANSFORMERS

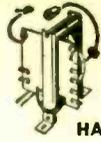
Type A4744 is similar to VE style mounting, but with leads coming out of the bottom; type A3833 and A4748 are A style mounting.

Stock No.	Mfr's Type	NET	Application	Pri.	Sec.	Size In.	Lbs.
64 G 031	A3833	2.53	Transceiver/mike and plate to grid.	200 and 5,000	60 K	1½x2½x1½	1
64 G 030	A4744	1.65	Intercom input	4	25 K 50 K	1½x2½x1½	¾

## MICROPHONE TRANSFORMERS

Type 4350 is for mike to line or line to line. Others are for mike, pickup or line to

# Stancor Transformers



## TELEVISION REPLACEMENT TRANSFORMERS, YOKES AND FOCUS COILS

Exact duplicate transformer-inductor type television replacement components. Electrically identical to original part. Physical dimensions are held to strict tolerances to assure easy, rapid installation. The new Stancor Television Components Replacement Guide gives original part

numbers and replacements for power, vertical and horizontal-HV output, vertical and horizontal blocking, and audio output transformers, focus coils, deflection yokes and filter chokes. There is no charge for the Replacement Guide; ask for 37G037 with your next order.

### HORIZONTAL DEFLECTION AND HV TRANSFORMERS

Meet UL requirements for components in enclosure mounting. Max. scan, 70°.

Stock No.	Type	Fig.	NET	Replacement In	Anode KV	Wt., Lbs.
64 G 546	A-8130	HG	5.88	GE 7711	10-14	1
64 G 549	A-8132	HA	6.17	Muntz TO-0031	13-15	1 1/4
64 G 551	A-8134	HA	6.17	Admiral 79C30-2, 79C30-4, 79C38-1, 79D38-1	12.5-15	1
64 G 572	A-8135	...	6.32	Admiral 79D41-1, 79D41-2	13-15	1 1/4
64 G 573	A-8136	...	5.88	Philharmonic 80-263, 80-265, 80-265-2	13-15	1 1/4
64 G 320	A-8137	...	5.88	Hoffman 5035	13-15	1 1/4
64 G 321	A-8220	HG	6.17	Philco 32-8565	13-15	1
64 G 322	A-8221	HG	6.61	Philco 32-8555	13-15	1
64 G 323	A-8222	HG	6.29	Philco 32-8533 and 32-8534	13-15	1
64 G 324	A-8223	HE	5.67	Philco 32-8572	13-15	1 1/4
64 G 325	A-8224	HE	7.70	Motorola 24C-711265, 24C71126A, 24C721290	13-15	1 1/2
64 G 326	A-8225	HE	7.70	Motorola 24K-71213	13-15	1 1/4
64 G 327	A-8226	HE	7.70	Motorola 24K-721301, 24K721301C and 24K721517C	13-15	1 1/4
64 G 328	A-8227	HJ	4.23	Sylvania 241-0003	13-15	1
64 G 329	A-8228	HJ	4.53	Sylvania 241-0005, and 241-0006	13-15	1
64 G 330	A-8229	HJ	4.76	Sylvania 241-0007	13-15	1
64 G 331	A-8230	...	6.17	Sylvania Air King	13-15	1
64 G 332	A-8231	...	6.17	CBS-Columbia 738068, 738069, 738073, 738074	13-15	1
64 G 333	A-8232	...	6.17	Emerson 738067, 738075, 738082	13-15	1

### DEFLECTION YOKES

For magnetically deflected direct-view kinescopes. 70° deflection. 153° deflection. All have network and extra long leads. Molded nylon coil forms. Ferrite cores and coil windings, except f. Wt., 1 1/2 lbs.

No.	Type	EACH	Fig.	Coil Induct. In Mh		Coil Ohms	
				Horiz.	Vert.	Horiz.	Vert.
64 G 538	DY-1A1†	4.65	...	8.3	50	13.5	66
64 G 539	DY-2A	5.88	DF	10.3	50	14.5	66
64 G 539	DY-8A	5.88	DF	8.5	50	14.5	52.5
64 G 590	DY-9A	5.88	DF	13.5	50	14.5	53.5
64 G 589	DY-10A	5.88	DF	30.0	3.5	45.5	3.5
64 G 596	DY-11A	5.88	DF	50	50	23	50
64 G 597	DY-12A	5.88	DF	30	50	34	50

### WIDTH AND LINEARITY CONTROLS

Replacement width and linearity controls. \*Width coil. †Tapped linearity coil. ‡Width coil with keyed winding. \*\*Width coil and/or linearity coil. ††Width coil with AGC. Shpg. wt., 1/2 lb.

Stock No.	Type	Inductance In Mh	Resls. In Ohms	AGC Inductance In Mh	AGC Res. In Ohms	NET EACH
64 G 492	WC-2†	55-4.6	8.3	...	...	.73
64 G 493	WC-4*	.170-610	1.0	...	...	.71
64 G 494	WC-5**	4.39	32	2.7-7.6	19.5	1.23
64 G 495	WC-6†	1.3-4.1	5.6	...	...	.76
64 G 496	WC-7*	5-3.5	2.3	...	...	.73
64 G 497	WC-8*	1.0-10.0	8.0	...	...	.88
64 G 498	WC-9†	3.2-9	28.0	16-70	1.0	.94
64 G 499	WC-10†	4.0-28	32.0	2.6-7.5	1.2	1.03

### VERTICAL BLOCKING OSCILLATOR TRANSFORMERS

Provide 60-cycle pulse voltage. \*Similar to Fig. J (see page 124) but with leads. Turns ratio pri./sec. of 1:4:2, except: A-8124, Sec. No. 1, 1:0:48, sec. No. 2, 1:1; and A-8126, 1:15.

No.	Type	NET	Fig.	Size	Lbs.
64 G 501	A-8111	1.59	A	1 1/2 x 2 1/2 x 1 1/2	1 1/2
64 G 504	A-8121	2.03	TD	1 1/2 x 2 1/2 x 1 1/2	1 1/2
64 G 543	A-8122	2.47	TS	1 1/2 x 1 1/2 x 1 1/2	1 1/2
64 G 549	A-8124	2.44	A	1 1/2 x 2 1/2 x 1 1/2	1 1/2
64 G 558	A-8125	1.59	A	2 1/2 x 1 1/2 x 1 1/2	1 1/2
64 G 471	A-8126	1.62	*	1 1/2 x 1 1/2 x 2 1/2	1 1/2

### TUBE CHECKER TRANSFORMER

Type P-1834-3. Multiple secondary transformer for applications where many different filament voltages are required. Pri.: 125/115/105 volts, 60 cycles. Secondary output volts: 1.1/1.4/1.5/2.0/2.5/3.0/3.5/5.0/6.3/7.0/7.5/12/25/30/35/50/70/85/110/117. Size, 2 1/2 x 4 1/2". "A" style mounting. With data sheet. Shpg. wt., 2 1/2 lbs. 64 G 139. NET EACH..... 8.35

### TELEVISION REPLACEMENT GUIDE

Shows mfr's original part number and Stancor replacement number. 37 G 037..... No charge with your next order.

### VERTICAL DEFLECTION TRANSFORMERS

Like Fig. A on page 124 except \*like Fig. N. †Autoformer type.

Stock No.	Mfr's Type	NET	DC Res. In Ohms		Size	Wt. Lbs.
			Sec.	Sec.		
64 G 522	A-8112	2.56	1300	10	2 x 3 1/2 x 1 1/2	1
64 G 523	A-8113	2.62	700	12	2 x 3 1/2 x 1 1/2	1
64 G 502	A-8115*	3.88	600	7	3 1/2 x 2 1/2 x 2 1/2	2 1/2
64 G 516	A-8123†	3.56	525	7	3 1/2 x 2 1/2 x 2 1/2	1 1/2
64 G 547	A-8123†	2.38	1200	11	2 x 3 1/2 x 1 1/2	1 1/2
64 G 554	A-8140*	4.03	400	0.3	2 1/2 x 2 1/2 x 3 1/2	3
64 G 557	A-8141†	3.44	1650	4.5	2 1/2 x 2 1/2 x 2 1/2	1 1/2
64 G 460	A-8142*	3.00	540	10.5	2 1/2 x 2 1/2 x 3 1/2	2 1/2
64 G 461	A-8143	2.56	625	14	2 1/2 x 2 1/2 x 3 1/2	2
64 G 462	A-8144	2.26	540	15	2 1/2 x 1 1/2 x 3 1/2	1 1/2
64 G 463	A-8145*	3.38	540	14	2 1/2 x 2 1/2 x 2 1/2	2
64 G 464	A-8146†	2.35	375	10	2 1/2 x 1 1/2 x 3 1/2	1 1/4
64 G 472	A-8147†	2.06	300	9	2 x 1 1/2 x 3 1/2	1
64 G 473	A-8148†	2.50	375	6.5	2 x 1 1/2 x 3 1/2	1 1/4
64 G 474	A-8149†	2.15	330	8.5	2 1/2 x 1 1/2 x 3 1/2	1

### HORIZONTAL BLOCKING OSCILLATOR TRANSFORMERS

No.	Type	Fig.	NET	Size	Lbs.
64 G 500	A-8110	A	1.79	1 1/2 x 2 1/2 x 1 1/2	1 1/2
64 G 503	A-8120	TD	2.53	1 1/2 x 2 1/2 x 1 1/2	1 1/2

### TELEVISION POWER TRANSFORMERS

All plate windings CT. All are Fig. M except †Fig. C. \*With copper shorting band to reduce external magnetic field. For 117 volts, 60 cycles.

Stock No.	Mfr's Type	NET	Plate Rect.		Fil.		Overall Size	Wt. Lbs.	
			V	A	V	A			
64 G 510	P-8154	10.88	750/230	5	3	5/6.3	2/5.6	4 1/2 x 4 1/2 x 4 1/2	9 1/2
64 G 517	P-8156*	17.14	730/340	5	6	5/12.6 CT	2/5	8 1/2 x 3 1/2 x 4 1/2	16 1/4
64 G 518	P-8157	14.76	770/195	5	3	7/6.3	7/6.3	4 1/2 x 3 1/2 x 4 1/2	11 1/4
64 G 576	P-8159*	13.82	720/290	5	2	6/3/5	6/2	5 1/2 x 3 1/2 x 4 1/2	10 1/2
64 G 577	P-8160	11.91	716/185	5	3	6.45	12	4 1/2 x 3 1/2 x 4 1/2	10
64 G 548	P-8163*	14.17	740/250	5	3	6.3/6.3	7.75/1.2	5 1/2 x 3 1/2 x 4 1/2	10 1/2
64 G 578	P-8164*	11.82	600/70	5	3	6.3	9.0	4 1/2 x 3 1/2 x 4 1/2	10 1/2
64 G 580	P-8166*	17.38	680/360	5	6	6.3/6.3/6.3	2.5/5.0/5.0	6 x 3 1/2 x 4 1/2	13
64 G 583	P-8169*	13.91	760/250	5	3	6.3/6.3/6.3	1.2/5/7	4 1/2 x 3 1/2 x 4 1/2	10 1/2
64 G 599	P-8171*	13.88	750/250	5	3	6.3/6.3	2.0/9.0	5 3/4 x 4 1/2 x 1 1/2	10 1/2
64 G 413	P-8331*	11.02	620/240	5	3	6.3/6.3	6.4/3	4 1/2 x 3 1/2 x 4 1/2	9
64 G 414	P-8332*	12.20	560/250	5	3	6.3/6.3/6.3	7.1/1.2/9	4 1/2 x 3 1/2 x 4 1/2	11
64 G 415	P-8333*	11.02	620/275	5	3	6.3/6.3	11.4/1.3	4 1/2 x 3 1/2 x 4 1/2	10
64 G 416	P-8334*	13.38	550/305	5	3	6.3/6.3	8.5/1.2	5 1/2 x 3 1/2 x 4 1/2	13
64 G 417	P-8335*	13.38	600/325	5	6	6.3/6.3	8.8/1.5	5 1/2 x 3 1/2 x 4 1/2	13
64 G 418	P-8336*	9.41	117/280	5	3	6.3/6.3/6.3	9.5/6.1/2	4 1/2 x 3 1/2 x 4 1/2	8
64 G 419	P-8337	11.82	630/225	5	3	6.3	8.25	4 1/2 x 3 1/2 x 4 1/2	8 1/2
64 G 420	P-8338*	12.00	630/310	5	6	6.7/6.4	10/1.6	5 1/2 x 3 1/2 x 4 1/2	12 1/2
64 G 421	P-8339†	9.85	650/255	5	3	12.6 CT	5.25	4 1/2 x 3 1/2 x 4 1/2	8 1/2
64 G 422	P-8340*	12.47	710/270	5	6	6.3/6.3/6.3	9.5/1.65/2.4	4 1/2 x 3 1/2 x 4 1/2	12
64 G 423	P-8341†	11.82	720/115	5	3	12.6 CT	5.45	4 1/2 x 3 1/2 x 4 1/2	11
64 G 424	P-8342*	11.82	730/260	5	6	6.3/6.3	8.85/1.2	5 1/2 x 3 1/2 x 4 1/2	13

### VIBRATOR TRANSFORMERS

\*6-volt DC and 115-volt AC primary. Others 6-volt DC primary only. All are like Fig. A, except P6166, Fig. TC.

Stock No.	Mfr's Type	NET	Sec. DC to Filter		Sec. AC Volts	Size	Wt. Lbs.
			Volts	Ma			
64 G 125	P6301	3.06	150	40	210-0-210	2 1/2 x 2 1/2 x 1 1/2	1 1/2
64 G 126	P6301	3.82	250	50	290-0-290	3 1/2 x 2 1/2 x 2 1/2	2 1/2
64 G 127	P6166†	9.91	Fil. 6.3V. @2.25 amps.	135	350-0-350	4 1/2 x 4 x 3 1/2	7 1/2

### POLY-PEDANCE MODULATION TRANSFORMER

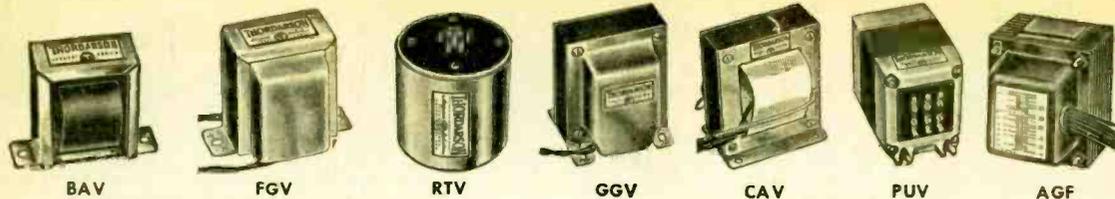
Fig. D. Type A3893. Multi-tapped, 60-watt modulation transformer. Primary and secondary each will match loads from 2,000 to 20,000 ohms. Max. DC, primary and secondary, 180 ma. each. 4 x 3 1/2 x 4 1/2". 7 lbs. 64 G 478. NET EACH..... 10.94

### ISOLATION TRANSFORMERS

Primaries tapped for 125, 115 and 105 volts with 115 volt secondary (except P-6415), to compensate for a wide range of power line voltages. Type P-6415 has 117 volt primary and tapped secondary with 3 standard output receptacles for 105, 115 and 125 volts; electrostatically shielded. Excellent for correction of high and low line voltages. (Not illus.)

No.	Type	NET	Watts	Size	Lbs.
64 G 443	P-6160	11.17	100	4 1/2 x 4 x 3 1/2	7
64 G 447	P-6123	53.80	1500	7 1/2 x 7 1/2 x 8 1/2	40 1/2
64 G 444	P-6415	17.79	350	5 1/2 x 4 1/2 x 5 1/2	17

# Thordarson Transformers



## OUTPUT TRANSFORMERS

Compact, high grade output transformers—for single and push pull plates to voice coil; output to line and voice coil; universal tubes to multiple voice coils; universal tubes to line; line to voice coil, etc. Fig. BAH (see page 127). †Fig. BIH (see page 127). \*Fig. GGV. Av. shpg. wt., 2½ lbs.

Stock No.	Type	NET	Primary	Secondary	Watts
63 G 775	22S45	1.76	1500-3000	3.2-4	3
63 G 776	22S46	2.05	3000-6000	3.2-4	3
63 G 777	22S47	2.05	6000-12,000 CT	3.2-4	3
63 G 778	22S48	2.05	12,000-25,000 CT	3.2-4	3
63 G 779	22S48	2.94	8000/10,000 CT	3.2-4, 6-8	8
63 G 780	22S58	2.94	5,000/7,000 CT	3.2-4, 6-8	8
63 G 781	22S60	2.94	2500/4000 CT	3.2-4, 6-8	8
63 G 782	22S62	2.94	Univ. Plate	1-30	8
63 G 783	22S64	5.59	10,000 CT	3.2-4, 6-8, 15, 250, 500	25
63 G 784	22S66	5.59	8000 CT	3.2-4, 6-8, 15, 250, 500	25
63 G 785	22S68	5.29	6500 CT	3.2-4, 6-8, 15, 250, 500	25
63 G 786	22S70	5.29	5000 CT	3.2-4, 6-8, 15, 250, 500	25
63 G 790	22S78	7.64	3300 CT	3.2-4, 6-8, 15, 250, 500	60
63 G 788	22S74	4.70	Universal CT	1 to 30	25
63 G 789	22S76	4.41	Universal CT	500-600	25
63 G 796	22S86	2.35	Universal CT	3.2-4, 6-8	3
63 G 797	22S87	2.65	Universal CT	3.2-4, 6-8	8
63 G 798	22S88	2.94	Universal CT	3.2-4, 6-8	8
63 G 759	22S93	6.47	10,000 CT	3.2-4, 6-8, 15-16	10
63 G 774	22S95	7.05	5,000 CT-3,000 CT	3.2-4, 6-8, 15-16	15
63 G 799	22S97	7.35	6,000 CT	3.2-4, 6-8, 15-16	25
63 G 772	24S60	2.06	4000/7000/8000/10,000/14,000 CT	0.1-29	6
63 G 773	24S61	2.35	4000/7000/8000/10,000/14,000 CT	0.1-29	8

## FILAMENT TRANSFORMERS

Primaries for 117 volts, 50-60 cycles. T21F05 has 10,000 volt insulation; T21F02, 7500-volt—for use with high voltage rectifiers; all others, 1600 volt insulation. \*2 secondaries, one multi-tapped. †Tapped primary.

Stock No.	Type	NET	Fig.	Volts	Amps.	Lbs.
63 G 665	21F00	2.94	BAV	2.5 CT	5	1
63 G 666	21F01	3.53	BAV	2.5 CT	10	1½
63 G 667	21F02	4.70	CAV	5 CT	10	2½
63 G 668	21F03	2.94	BAV	5 CT	3	1½
63 G 669	21F04	4.41	CAV	5 CT	8	3
63 G 681	21F05	4.70	CAV	5 CT	3	2½
63 G 670	21F06	4.41	CAV	5 CT	13	3¼
63 G 671	21F07	7.05	CAV	5 CT	21	5¼
63 G 672	21F08	2.06	BAV	6.3 CT	1	1
63 G 673	21P10	2.94	BAH	6.3 CT	3	1½
63 G 674	21P11	4.70	CAV	6.3 CT	6	2½
63 G 675	21P12	4.41	CAV	6.3 CT	10	3¼
63 G 676	21P14	2.94	BAH	*6.3/5/2.5	2.5	2¼
63 G 677	21P15	3.82	BAV	7.5 CT	4	2
63 G 678	21P16	4.70	CAV	7.5 CT	8	3¼
63 G 682	21P17	6.17	CAV	7.5 CT	12	5
63 G 679	21P18	4.70	CAV	10 CT	5	2¼
63 G 680	21P19	7.05	CAV	†10 or 11 CT	12 or 11	6
63 G 683	21F22	7.05	GGV	5 v. @ 3 amps; 7.5, 6.3, 5, 2.5 v. @ 6amps	7.5	5½

## PLATE TRANSFORMERS

Primaries for 115 volts, 50-60 cycles. †For two full-wave rectifier systems, or one rectifier at combined current output. All type GGV.

Stock No.	Type	NET	DC Volts	DC Ma.	Lbs.
63 G 657	21P87	12.05	650-500	220	10
63 G 658	21P89	7.94	400	175	6½
63 G 660	21P93†	13.23	1000, 400	95, 125	10

## CLASS "B" AND "AB" DRIVERS

\*Single plate to PP class "B" or "AB" grids. †Single or PP primary to PP grids. Others are for PP plates to PP grids. Av. shpg. wt., 2½ lbs.

Stock No.	Mfr's Type	NET	Fig.	Suggested Tubes	Pri. to 1/2 Sec.	Pri. Ma.
63 G 698	20D75*	2.06	BAH	1H4C or 30 to 19	2.4:1	5
63 G 691	20D76*	2.06	BAH	6N7 to 6N7	5:2:1	15
63 G 692	20D77*	3.23	FGV	6P6 to PP 6P6	2.5:1	30
63 G 693	20D78	5.00	GGV	PP 6F6 to PP 807	4:1	40
63 G 694	20D79†	4.11	FGV	6V6 to PP 6L6	5.2:1	30
63 G 697	20D82	5.88	GGV	PP 2A3 or 6L6 to PP 805	1:1, 4:1, 3.2:1	100

See page 265 for photoflood transformers.

## AUDIO INPUT TRANSFORMERS

Electrostatic shielded. \*Response, 250-3500 cps. †Response, 60-7500 cps hum-bucking construction, 11:3.25. Av. wt., 1 lb.

Stock No.	Mfr's Type	NET	Fig.	Turns Ratio	Application	Mfg. Ctrs.
63 G 760	*20A00	2.06	BAH	1:10	Line or mic to sgl. or PP grids	2½"
63 G 761	†20A01	3.53	FGV	1:20	Line or mic to sgl. grid.	2½"
63 G 762	†20A02	3.82	FGV	1:20	Line or mic to PP grids.	2½"
63 G 763	*20A03	2.94	BAH	1:10	Sgl. plate and mic or line to grid	2½"
63 G 764	*20A04	1.76	BAH	1:80	Voice coil or mic to grid	2"
63 G 765	†20A05	6.82	RTV	1:10	Line or mic to sgl. or PP grids	1½"

## AUDIO INTERSTAGE TRANSFORMERS

Primary current, 8 ma. Type T20A25 has split secondary, hum-bucking coil and core. \*Has wire leads. Av. shpg. wt., 1½ lbs.

Stock No.	Mfr's Type	NET	Fig.	Ratio	Application	Mfg. Ctrs.
63 G 750	*20A16	1.76	BAH	1:2	Sgl. plate to sgl. or PP grids	2"
63 G 751	*20A17	3.82	1:2	Sgl. plate to sgl. or PP grids	1½"	
63 G 752	20A19	2.35	BAH	1:3	Plates to grids, sgl. or PP	2½"
63 G 753	20A22	2.94	BAH	1:3	Sgl. plate to sgl. or PP grids	2½"
63 G 754	20A23	3.82	FGV	1:3	Sgl. plate to sgl. or PP grids	2½"
63 G 755	20A24	4.11	FGV	1:3	PP plates to PP grids	2½"
63 G 756	20A25	7.35	RTV	1:1.4	Plates to grids, sgl. or PP	1½"
63 G 748	20A29	2.35	1:1.1	Univ. car radio interstage	1½"	

## TUBE-TO-LINE TRANSFORMERS (LOW LEVEL)

Primary for single or PP plates. Sec. to line. 60-15,000 cps. 1½ lbs. 63 G 741 has hum-bucking construction.

Stock No.	Type	NET	Fig.	Pri.	Sec.	Mfg. Ctrs.
63 G 740	22S90	3.53	FGV	20,000 CT	125, 200, 500	2½"
63 G 741	22S92	7.35	RTV	20,000 CT	125, 200, 500-600 CT	1½"

## MODULATION TRANSFORMERS

Primaries M52, 10,000 ohms C.T.; M54, 6,600 ohms C.T.

No.	Type	NET	Fig.	Watts	Primary	Sec. Imp.	Lbs.
63 G 801	21M52	3.53	GGV	10	PP-6V6	4500-3000	1½
63 G 802	21M54	5.00	GGV	25	PP-6L6	4000	3¼

Multi-match type with taps to permit proper impedance match between modulator power tubes and RF final load. Split Secondary. \*CHT type.

Stock No.	Type	NET EACH	Fig.	Watts	Prim. Ma. Each Side	Sec. Ma. Ser. Par.	Lbs.
63 G 811	21M60A	8.23	GGV	15	50	50 100	2
63 G 812	21M61A	12.93	GGV	60	125	125 250	6½
63 G 813	21M62A	6.44	GGV	125	210	160 200	10
63 GX 808	21M64*	40.47	PUV	300	250	250 500	20

## FILTERING AND COUPLING CHOKES

T20C58 is speech-frequency tuned audio choke for impedance coupling. T20C50 is plate impedance coupling choke. Others universal for both input and smoothing use. \*Inductance at rated milliamp. load.

Stock No.	Type	NET EACH	Fig.	*Hys.	Rated Ma	Res. Ohms	Insul. Test	Lbs.
63 G 725	20C50	2.94	BAH	350	5	5500	2000	1½
63 G 726	20C51	1.47	BAH	35	15	1850	1200	¾
63 G 727	20C52	1.47	BAH	8	40	450	1200	¾
63 G 728	20C53	2.05	BAH	12	80	375	2000	1½
63 G 729	20C54	3.82	GGV	8	150	145	2700	3
63 G 730	20C55	4.70	GGV	6	200	75	2700	3¼
63 G 731	20C56	6.47	GGV	7	300	60	3500	6½
63 G 733	20C58	1.76	BAH	0.75	10	30	1100	¾

## DUAL TONE CONTROL COMPONENTS

Type 20C74. Reactor. For tone compensating system to boost or attenuate bass or treble independently. Similar to Fig. RTV, but wire leads. Use with R1068X below. Hum-buckings. Inductance, 22 hys. DC resistance, 220 ohms. 2"x1½" dia. Wt., 12 oz.

63 G 734.	NET EACH.	3.53
63 G 165.	NET EACH.	2.35

## SCOPE TRANSFORMER

Type 22R40. Fig. GGV. For use in oscilloscopes, CRT applications and test equipment. Primary, 117 volts 60 cycles. Plate, 1800 volts AC at 2 ma. Rectifier fil., 2.5 volts at 1.8 amps. Fil. 1, 6.3 volts at .6amps.; tapped at 2.5 volts, 2.1 amps. Overall size: 3½"x3¼"x3¼". Mfg. centers, 2½"x2½". Shpg. wt., 5¼ lbs.

63 G 717.	NET EACH.	10.58
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## UNIVERSAL TV POWER TRANSFORMER

Model 26R00. Fig. AGF. Replacement unit for power transformers in over 2000 TV sets. Multi-tapped 295 ma secondary. Primary: 117v., 50-60 cyc. AC. Tapped hi-voltage secondary: 850 v. CT, 720 v. CT, 600 v. CT. Filament windings: Two 5 v. @ 3A. and four 6.3 v. at 3A. Dual electrostatic shielding. Universal mtg. 3¼"x4¼"x4¼". Wt. 11 lbs.

63 G 820.	List.	\$25.00.	NET EACH.	14.70
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# Quality Transformers



AGF BAH BHH

## THORDARSON TRANSFORMERS

### "22R" SERIES POWER TRANSFORMERS

Fig. AGF. Highest quality. Adjustable brackets permit flush, vertical or horizontal mounting. RETMA color-coded, 117 volt, 50-60 cycle primaries. All Fil. 1 windings center-tapped. \*Has additional 2.5 volt CT winding, at 3.5 amps. †Has additional 2.5 volt, 5 amp center-tapped winding.

Stock No.	Mfr's Type	NET EACH	Plate Volts	Ma	Rect. V A	Fil. 1 V A	Mtg. Ctrs.	Wt. Lbs.
63 G 700	22R00	4.70	500 CT	40	5 2	6.3 2.0	2x2 1/2	2 1/2
63 G 701	22R01	4.70	550 CT	50	5 2	6.3 2.5	2x2 1/2	3 1/4
63 G 702	22R02	5.99	600 CT	70	5 2	6.3 3.0	2 1/2 x 3 1/2	3 3/4
63 G 703	22R04	6.17	600 CT	90	5 3	6.3 3.5	2 1/2 x 3 1/2	5 1/2
63 G 704	22R05	6.76	600 CT	120	5 3	6.3 5.0	2 1/2 x 3 1/2	6 1/2
63 G 705	22R06	7.06	650 CT	150	5 3	6.3 5.0	2 1/2 x 3 1/2	8 1/2
63 G 706	22R07	8.82	700 CT	200	5 3	6.3 6.0	3x3 1/2	9 1/2
63 G 708	22R09	5.29	550 CT	50	5 2	2.5 7.5	2x2 1/2	3
63 G 709	22R10*	8.23	650 CT	85	5 2	2.5 9.0	2 1/2 x 3 1/2	4 1/4
63 G 710	22R11†	8.82	650 CT	120	5 3	2.5 12.5	2 1/2 x 3 1/2	6 1/4

### GENERAL PURPOSE "127" POWER TRANSFORMERS

Fig. GGV. (See page 126.) 117 volt, 50-60 cycle primaries. All Fil. 1 windings CT. Standard RETMA color-coded leads, ends stripped and tinned for easy soldering. \*Has additional 6.3 volt, 3-amp CT winding.

Stock No.	Mfr's Type	NET EACH	Plate Volts	Ma	Rect. V A	Fil. 1 V A	Mtg. Ctrs.	Wt. Lbs.
63 G 711	22R30	5.88	550 CT	50	5 2	6.3 2.5	2x2 1/2	3 1/2
63 G 712	22R31	7.05	720 CT	80	5 2	6.3 3.0	2x2 1/2	5 1/2
63 G 713	22R32*	9.41	700 CT	110	5 2	6.3 3.5	2 1/2 x 3 1/2	6 1/4
63 G 714	22R33	9.41	750 CT	160	5 3	6.3 5.0	3x2 1/2	9 1/4
63 G 715	22R34	11.76	770 CT	225	5 3	6.3 5.0	3x3 1/2	11 1/4
63 G 716	22R35	12.93	800 CT	340	5 3	6.3 7.0	3x4 1/2	13 1/4
63 G 719	22R36	10.58	1200 CT	200	5 3	6.3 5.0	3x3 1/2	8 1/2

### ECONOMY "24" SERIES POWER TRANSFORMERS

Low-cost, high-quality power transformers. Types ending with U are for upright mounting (see GGV, page 126). Others have adjustable brackets to permit flush, vertical or horizontal mounting (see AGF above). Both types have 110-120 volt, 50-60 cycle primaries. Fil. 1 windings are center-tapped. All units are RETMA color-coded.

Stock No.	Mfr's Type	NET EACH	Plate Volts	Ma	Rect. V A	Fil. 1 V A	Mtg. Ctrs.	Wt. Lbs.
63 G 319	24R00	4.41	480 CT	40	5 2	6.3 2.0	2x2 1/2	2
63 G 320	24R00-U	4.41	480 CT	40	5 2	6.3 2.0	2x1 3/4	2
63 G 321	24R01	4.70	650 CT	40	5 2	6.3 2.0	2x2 1/2	2 3/4
63 G 322	24R01-U	4.70	650 CT	40	5 2	6.3 2.0	2x1 1/4	2 3/4
63 G 323	24R02	5.29	700 CT	70	5 2	6.3 2.5	2 1/2 x 2 1/4	4
63 G 324	24R04	5.88	700 CT	90	5 3	6.3 3.5	2 1/2 x 2 1/4	4 1/4
63 G 325	24R04-U	5.88	700 CT	90	5 3	6.3 3.5	2 1/2 x 2 1/4	4 1/4
63 G 326	24R05	6.47	700 CT	120	5 3	6.3 4.7	2 1/2 x 3 1/4	5 1/4
63 G 327	24R05-U	6.47	700 CT	120	5 3	6.3 4.7	2 1/2 x 2 1/4	5 1/4
63 G 328	24R06	7.05	750 CT	150	5 3	6.3 4.7	2 1/2 x 3 1/4	6 1/2
63 G 329	24R06-U	7.05	750 CT	150	5 3	6.3 4.7	2 1/2 x 3 1/4	6 1/2
63 G 330	24R07	8.23	800 CT	200	5 3	6.3 5.0	3x2 1/2	6 1/2
63 G 331	24R07-U	8.23	800 CT	200	5 3	6.3 5.0	3x3 1/4	9 1/2

### ECONOMY "24" SERIES OUTPUT TRANSFORMERS TUBE-TO-VOICE COIL

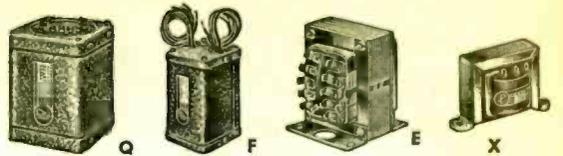
Fig. BAH. Designed for economical replacement service. Available in popular ratings to meet a wide variety of radio servicing needs. All have single 3.2 ohm secondaries and are rated Class A.

Stock No.	Mfr's Type	NET EACH	Primary Impedance	Pri. Ma	Watts	Mtg. Ctrs.	Wt. Lbs.
63 G 742	24S48	1.17	4,000-5,000	10	1	1 1/2	1/2
63 G 743	24S49		7,000-8,000	10	1	1 1/2	1/2
63 G 768	24S50		2,000	55	5	2 1/2	1
63 G 769	24S51		5,000	40	5	2 1/2	1
63 G 770	24S52		10,000-10,000	30	5	2 1/2	1
63 G 771	24S54		7,000-25,000	10	5	2 1/2	1

### UNIVERSAL LINE-TO-VOICE COIL

Fig. BHH. Secondary taps marked with impedance values. \*Also marked for 70 v. power distribution service.

Stock No.	Mfr's Type	NET EACH	Primary Impedance	Sec. Imp.	Watts	Wt. Lbs.
63 G 791	22S80	3.23	500, 600	3.2-4, 6-8, 15	8	2 1/2
63 G 792	22S82	5.00	2000/1500/		25	2 1/2
63 G 793	22S83	5.00	1000/500		15	2 1/2
63 G 794	22S84	3.23	500, 600	3.2-4, 6-8	8	2 1/2
63 G 795	22S85	3.23	500, 600		8	2 1/2
63 G 744	24S66	2.94	2000, 1500, 1000, 500		10	1 1/2
63 G 745	24S62*	3.82	3000, 2500, 2000, 1500, 1000, 500	.06-48	10	2 1/2



## ALTEC-LANSING PEERLESS TRANSFORMERS

### HIGH-QUALITY OUTPUT TRANSFORMERS

Feature high power-handling capacity throughout wide frequency ranges. \*The 20-20 line; recognized as a standard of quality. Frequency response, = 1 db, 20-20,000 cps. Less than 3 db down (at 20 cps) at rated power. †New "20-20 Plus" line, designed for highest quality performance. Frequency response, = 1 db, 10-100,000 cps. Less than 2 db down (at 20 cps) at rated power. ‡New, Super-Standard line; response, = 1 db, 20-30,000 cps; less than 3 db down (at 25 cps) at rated power.

No.	Type	NET	Pri. P. to P.	Second. Watts	Lbs.
63 G 825	S-226-0†	22.34	6600 CT	16-12-8-4	20 3 1/2
63 G 826	S-256-0†	29.40	5000 CT	16-12-8-4	40 7
63 G 828	S-265-0†	27.93	10,000/2,500 CT	16-8-4-2	40 10 1/2
63 G 829	S-240-0†	16.17	5000 CT	16-8-4-2	20 6 1/2
63 G 830	S-227-0*	16.46	10,000 CT	16-8-4-2	20 6 1/2
63 G 831	S-510-F‡	10.00	10,000/8,000 CT	16-8	10 2 1/4
63 G 832	S-526-F‡	12.36	6600/4,000 CT	16-8-4	20 3 1/4
63 G 833	S-542-F‡	15.29	5000/4,000 CT	16-8-4	40 6

### MINIATURIZED POWER TRANSFORMERS

Compact electrostatic shielded units. 117 volt, 50-60 cycle primaries. Sizes: R-340-F, 4 1/2 x 3 1/2 x 2 1/4"; R-490-F, 4 1/2 x 3 3/8 x 3 1/8"; R-562-F, 5 1/2 x 3 1/2 x 3 1/2".

Stock No.	Type	NET EACH	Plate Volts	Ma	Rect. V A	Fil. 1 V A	Wt. Lbs.
63 G 834	R-340-F	10.88	650 CT	100	5 3	6.3 5	3 3/4
63 G 835	R-490-F	13.52	700 CT	200	5 3	6.3 6	6
63 G 836	R-562-F	17.64	800 CT	220	5 3	6.3 6	7

### FILTER CHOKES

No.	Type	NET	Hys. Ma	Ohms	Size	Lbs.
63 G 839	C-325-F	6.91	10 120	240	3 1/2 x 3 1/2 x 2 3/4	3
63 G 840	C-390-F	9.29	10 200	150	4 1/2 x 3 3/8 x 3 1/8	6 1/2
63 G 841	C-315-X	3.06	3 225	80	2 1/2 x 3 1/4 x 2 1/2	2

### IMPEDANCE MATCHING TRANSFORMERS

Line to speaker transformers. = 1 db 30-15,000 cps. Insertion loss 0.6 db. E-374-X, 4 watts. E-383-X, 10 watts. E-386-E, 24 watts.

No.	Type	NET	Primary	Second. Lbs.
63 G 842	E-374-X	6.91	10,000 CT-7500, 5,000 CT-2500-1250	16-12-8-4-2
63 G 843	E-383-X	11.02	2000 CT, 1500-1000 CT 500	16-12-8-4-2
63 G 844	E-386-E	10.88	1600 CT-1200 800 CT-400-200	16-12-8-4-2

## STANCOR HIGH-FIDELITY TRANSFORMERS

Exceptional audio output transformers designed for true high-fidelity performance. Frequency response flat, = 1 db, from 20-20,000 cycles, at 25 watts. Rated at maximum of 50 watts. Types A-8054 and A-8072 may be used in Williamson amplifiers. Have extremely tight coupling and are carefully balanced. Size, 4 1/2 x 3 1/2 x 2 1/4". Hg. wt., 7 lbs.

Stock No.	Type	NET EACH	Pri. Imp. (P-P)	Sec. Imp.	Max. Pri. DC Per Half
64 G 563	A-8053	12.02	5000	8, 16	150 ma
64 G 570	A-8056	12.02	6600	8, 16	125 ma
64 G 564	A-8054	12.02	9000	8, 16	100 ma
64 G 574	A-8072	14.70	7600	4, 8, 16	100 ma

CHASSIS SET WM-8. Two completely punched and finished chassis for the ultra-linear Stancor-Williamson Amplifier (using A-8072 transformer) and power supply. Diagram and parts lists included. 64 G 269. NET PER PAIR.....5.63

### FILAMENT TRANSFORMERS

High-quality, single-secondary transformers for output at rated loads with good regulation. Insulated to provide safety factors greater than primary tapped for 107 and 117 v. and P-8191, which has 6.3 v. primary and secondary for filament isolation in some TV and other applications. Center-tapped secondaries, except P-6469.

No.	Type	NET	Volts	Amps	Insul.	Lbs.
64 G 141	P-6133	3.25	2.5	5.0	7,500	1 1/2
64 G 301	P-3060	4.02	2.5	10.0	10,000	2 1/4
64 G 308	P-6134	1.71	6.3	1.2	3,000	1
64 G 309	P-5014	3.03	6.3	3.0	2,500	2 1/4
64 G 312	P-3064	3.67	6.3	6.0	2,500	2 1/4
64 G 313	P-6308	4.41	6.3	10.0	2,500	3 3/4
64 G 314	P-5015	3.73	7.5	4.0	2,500	3
64 G 318	P-6139	5.47	10.0	8.0	2,500	5 1/2
64 G 142	P-8130	3.03	12.6	2.0	1,500	1
64 G 143	P-6469	2.88	25.2	0.0	1,500	1 1/2
64 G 584	P-8190	2.83	6.3	1.2	5,000	1
64 G 585	P-8191	5.41	6.3	1.2	5,000	1
64 G 255	P-3062	3.73	5.0	6.0	2,500	2 1/4
64 G 256	P-4019	4.23	6.3	4.0	2,500	2 1/2
64 G 257	P-5016	4.50	10.0	4.0	2,500	4 1/2
64 G 258	P-4097	5.94	10.0	8.0	2,500	4 3/4
64 G 262	P-6467	2.82	5.0	3.0	2,500	1 1/2
64 G 263	P-6466	2.73	6.3	3.0	2,500	1 1/2
64 G 264	P-4089	4.85	6.3	6.0	2,500	1 3/4
64 G 265	P-6309	8.35	6.3	20.0	2,500	1 3/4

# RCA Television Components



## RCA UNIVERSAL TV COMPONENTS

A broad line of high-quality, universal television replacement components. The parts listed below are exact replacement units for RCA television receivers and are fully interchangeable with other popular makes of TV sets in current use. This list can also be used as a suggested inventory for RCA TV servicemen, since it consists of the most often-needed replacement parts. Complete descriptive literature on these components is listed at bottom of page. No charge with your next order.

### TV POWER TRANSFORMERS

For 117 v., 60 cyc. operation. \*Fil. 4; 6.3 v., 0.6A. † "630" type.

Stock No.	RCA Type	NET EACH	Plate	Fil. 1		Fil. 2		Fil. 3		Wt. Lbs.	
				V	A	V	A	V	A		
62 G 504	201T6†	17.00	774	295	5	6	12.6/6.3	5/10	5.0	2.0	18
62 G 550	201T7	13.72	770	230	5	3	6.3	9.0	5.0	2.0	13
62 G 551	201T8*	12.41	770	250	5	3	6.3	8.0	5.0	2.0	13
77 G 689	201T9	13.72	730	250	5	6	6.3	8.85	5.0	2.0	13
62 G 553	201T10	13.72	730	260	5	6	6.3	8.85	6.3	1.2	13

### HORIZONTAL OUTPUT & HIGH VOLTAGE TRANSFORMERS

Stk. No.	Type	NET	Mh	Description	Lbs.
77 G 583	204T1	13.08	8	For 16AP4. Use with separate HV supply.	2
62 G 559	211T2	12.41	8	Projection type for STP4. 50".	2½
62 G 560	211T3	5.88	8.3	Isolated-secondary type. 57".	2
62 G 561	211T5	5.88	8.3	Voltage doubler type. 57".	2
77 G 548	211T1	5.88	12.5	Voltage doubler type. 57".	1½
77 G 575	218T1	5.88	10.3	Voltage doubler type. 70".	1½
77 G 585	223T1	5.88	13.3	Auto-transformer type. 70".	1½
77 G 588	225T1	6.76	13.3	Auto-transformer type. 70".	1
77 G 594	230T1	5.88	13.3	Auto-transformer type. 70".	2
77 G 596	232T1	5.73	8 to 30	Univ. auto-transformer type. 50 to 70".	2
77 G 639	235T1	6.76	11.7	Auto-transformer type. 90".	2½

### VERTICAL OUTPUT TRANSFORMERS

Stock No.	Type	EACH	Ratio	Pri. Ω	Sec. Ω	Lbs.
62 G 506	204T2	3.53	10:1	590	6.9	2½
62 G 555	204T9	3.23	10:1	521	6.9	2
77 G 576	222T1	2.50	11.4:1	1200	11.0	1½
77 G 589	226T1	3.38	18:1	1600	4.4	1½

### VERTICAL BLOCKING OSCILLATOR TRANSFORMERS

Stock No.	Type	EACH	Ratio	Pri. Ω	Sec. Ω	Lbs.
62 G 507	208T2	1.91	1.4:2	244	1310	½
62 G 558	208T9	2.35	1.4:2	244	1310	½
77 G 692	209T1	1.62	1.4:2	208	1060	¼

### HORIZONTAL BLOCKING OSCILLATOR TRANSFORMERS

Stock No.	Type	EACH	Ratio	Pri. Ω	Sec. Ω	Lbs.
62 G 556	208T1	2.56	1:2	3.5	8.5	¼
62 G 557	208T3	1.79	1:2	3.5	8.5	¼

### DEFLECTION YOKES

Stock No.	Type	NET	Mh	Ohms	Angle	Lbs.
77 G 595	201D12	5.29	8.3	64.6	57°	1½
77 G 693	201D2	9.14	8.3	68	50°	1½
77 G 580	207D1	5.88	8.4	70	57°	1½
77 G 549	206D1	5.29	10.3	48.7	70°	1½
77 G 638	219D1	11.17	11.7	42.6	90°	1½
77 G 548	205D1†	5.88	12.5	68.8	57°	1½
77 G 587	209D1	5.88	13.3	48	70°	1½
77 G 597	211D2	5.88	13.3	48	70°	1½
77 G 694	222D1	5.88	18.5	48	70°	1½
77 G 695	214D1	5.76	28.5	3.3	70°	1½
77 G 508	201X1	.82	.....	.....	(Hood)	¼

### HORIZONTAL LINEARITY AND WIDTH CONTROLS

Stock No.	RCA Type	NET EACH	Description	Wt. Lbs.
77 G 506	201R1	.59	Width Control (0.054-0.245 mh)	¼
77 G 507	201R3	.79	Horizontal Linearity Control (5.5-20 mh)	¼
77 G 531	201R4	.59	Width Control (0.17-0.61 mh)	¼
77 G 535	201R5	.73	Horizontal Linearity Control (0.55-2.30 mh)	¼
77 G 546	206R1	.73	Width Control (High Efficiency). (0.47-1.7 mh)	¼
77 G 547	207R1	.73	Hor. Linearity Control (High Efficiency). (1.3-4.3mh)	¼
77 G 573	208R1	.62	Width Control for 166P4 (51-1.7 mh)	¼
77 G 574	209R1	.73	Horizontal Linearity Control. (1.3-4.1 mh)	¼
77 G 598	211R1	.88	Width Control (1.65-9.2 mh)	¼
77 G 599	212R1	.88	Width Control (2.9-16 mh)	¼
77 G 635	213R1	.73	Horizontal Linearity Control (1.5-8.3 mh)	¼
77 G 697	214R1	.73	Width Control (1.75-10.5) For AGC/AF. C.	¼
77 G 698	215R1	.73	Width Control (3.9-22)	¼

### ION TRAPS AND FOCUS COILS

77 G 509	202D1	4.90	Focus Coil. 120 ma; 247 ohms.	2
77 G 532	202D2	7.20	Focus Coil. 90-104 ma; 470 ohms.	2
77 G 536	203D1	3.82	Double-Pole, field-coil type. 200 ma.	½
77 G 534	203D3	1.23	Ion Trap. (Universal PM Type)	¼

### HORIZONTAL OSCILLATOR AND SYNC COILS

Stock No.	RCA Type	NET EACH	Description	Wt. Lbs.
62 G 508	208T8	1.44	6-Term. Discr. ("630" type).	¼
77 G 533	203R1	1.12	3-Term. 2-coil Synchro-Guide.	¼
77 G 582	205R1	1.41	4-Term. 3-coil Synchro-Guide.	¼

## UNIVERSAL OUTPUT AND HI-VOLTAGE TRANSFORMER

Type 231T1. Rated at 10 to 15 kilovolts. Ideal for general replacement as well as conversion use in TV receivers employing pulse-operated transformers having isolated secondary windings for yoke connections. Universal mounting brackets fit most sets. Transformer has 7 secondary taps—provides connections to match any commonly used driver tube to yoke having horizontal-coil inductances from 8 to 30 mh. For 50 to 66° deflection angles. Tapped primary matches any output tube and B supply. Shpg. wt., 2 lbs.



77 G 593. NET ..... 5.73

## RCA-VICTOR TV RECEIVER SERVICE PARTS

Parts listed below are exact duplicate replacement parts for RCA TV receivers with part numbers as given in RCA servicing and replacement manuals. Av. shpg. wt., 6 oz., except \*15 lbs., †1½ lbs., ‡3 lbs.

Stock No.	RCA Type	Component	EACH
77 G 167	71440	Height Control	.71
77 G 168	71441	Linearity Control	.71
77 G 169	75215	Hor.-Vert. Hold Control	1.73
77 G 170	75216	Pix & Brt. Control	1.76
77 G 171	75513	Vol. & Tone Control	2.20
77 G 172	75514	Pix & Bright Control	2.35
77 G 173	75516	Width Control	.65
77 G 174	76441	Width Control	1.13
77 G 175	76442	Linearity Control	1.79
77 G 176	76444	AGC Control	1.03
77 G 177	76445	Picture Control	1.03
77 G 178	76483	Linearity Control	.65
77 G 179	76484	Width Control	1.42
77 G 180	76803	Vol. & On-Off Switch	.91
77 G 181	77641	Brightness Control	2.11
77 G 182	77655	Brightness Control	2.60
77 G 183	78208	Pix & Vol. Control	2.25
77 G 133	73578	Antenna Matching Transformer	3.29
77 G 184	73591	Antenna Matching Coil	1.18
77 G 185	74144	Vert. Blocking Oscillator	1.76
77 G 146	74588†	Horizontal Output & HV Transf.	9.70
77 G 186	74586*	Power Transformer	13.82
77 G 188	74950†	Vert. Defl. Output Transf.	3.23
77 G 149	74951†	Horiz. Output & HV Transf.	3.67
77 G 190	75212	IF Transformer	1.47
77 G 191	75213	Horiz. Oscillator	1.47
77 G 192	75508*	Power Transformer	12.94
77 G 193	75519†	Horiz. Output & HV Transf.	3.53
77 G 194	75520†	Audio Output Transformer	1.41
77 G 195	75645*	Power Transformer	14.41
77 G 196	76440	Horizontal Oscillator	1.76
77 G 197	76501†	Horiz. Output & HV Transf.	7.01
77 G 198	76795†	Horiz. Output & HV Transf.	5.88
77 G 199	76980	IF Transformer	.85
77 G 250	76981	IF Transformer	1.96
77 G 251	76984*	Power Transformer	17.05
77 G 252	77112	IF Transformer	2.25
77 G 253	77635*	Power Transformer	13.38
77 G 254	78201†	Horiz. Output & HV Transf.	9.80
77 G 255	76653†	Deflection Yoke	10.04
77 G 256	77697†	Deflection Yoke	7.06
55 G 116	71533	Knob	.24
55 G 113	71534	Knob	.32
55 G 114	71535	Knob	.21
55 G 115	71536	Knob	.18
55 G 117	71537	Knob	.18
77 G 125	73222	Knob	.50
77 G 126	73224	Knob	.62
77 G 128	73228	Knob	.15
77 G 129	73230	Knob	.12
77 G 135	73994	Knob	.19
77 G 137	73998	Knob	.26
77 G 138	74000	Knob	.15
77 G 101	30330	Spring	.02
77 G 572	73440	Detent Spring	2.79
77 G 693	76837	Spring	.03
81 D 169	71530†	Speaker	6.59
77 G 117	71789	Connector	.65
77 G 164	73220	Escutcheon	.41
77 G 130	73465	Belt	.26
77 G 166	76317	PM Ion Trap	.82

## TYPE 201Y1 CONVERTER

An excellent kit for conversions using kinescopes up to 21" size. Contains 231T1 "Universal" transformer and Type 211D2 "Anastigmatic" deflecting yoke. Yoke has 66-70° deflection and separate horizontal coil neutralizing RC network for use with either isolated secondary type horizontal deflection transformer or autotype transformers. Universal type transformer has 7 taps for all usual yoke inductances, damper tube and linearity coil arrangements. Shpg. wt., 5 lbs.



77 G 592. NET ..... 11.61

## RCA REPLACEMENT BOOKLETS

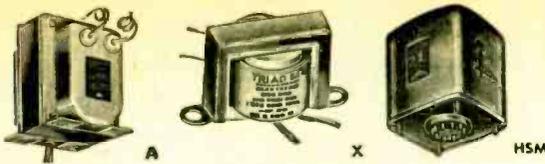
**SERVICE PARTS DIRECTORY, SP-2001.** Complete listings of proper replacement parts for RCA TV sets. Includes comprehensive schematics, line drawings, etc. Excellent for quick reference. Extremely helpful for the serviceman—helps identify the exact replacement part.

37 G 068 ..... NO CHARGE WITH ORDER

**TUNER PARTS GUIDE, SP-2002.** Accurate replacement information on RCA tuners, with complete numbered listings of exact replacement parts. Contains detailed, authoritative information for rapid servicing and adjustments. A valuable, time-saving reference guide for the TV serviceman.

37 A 126 ..... NO CHARGE WITH ORDER

# Triad and Knight Transformers



## TRIAD TRANSFORMERS

In manufacturer's type number, suffix letter indicates case style, except hermetically sealed units, which bear prefix letters, "HS" and "HSM."

### TYPE T UNCASED TRIETS

Ultra-small transformers—shorter than a paper clip and less than half an ounce in weight. Weather-proofed windings. Size,  $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$ ".

Stock No.	Mfr's Type	NET EACH	Application	Impedance	
				Primary	Secondary
64 G 940	T-1	3.47	Line or mike to grid	600/250/50	50,000
64 G 941	T-2	3.53	Line or mike to grid	600/250/50	250,000

### TYPE HSM HI-FI TRANSFORMERS

Triad "HSM" series output transformers for fine audio equipment. Interleaved coil structures. 1 db, 7-50,000 cycles. \*Split primary. HSM-81,  $\frac{3}{4} \times \frac{1}{2} \times \frac{3}{4}$ "; HSM-189,  $\frac{3}{4} \times \frac{1}{2} \times \frac{1}{2}$ ". Av. shpg. wt., 7 lbs.

Stock No.	Mfr's Type	NET EACH	Application	Impedance		Max. Watts
				Prim.	Sec.	
64 G 960	HSM-81	17.93	P.p. to V.C.	8000*	16/8/4	15
64 G 964	HSM-189	23.23	P.p. KT66's, 807's, etc.—for Williamson circuit	10,000/2500*	16/8/4	25

**Type HSM-226, Filament Transformer.** Primary volts, 105-115-125. Secondary, 6.3CT, 2 amps. Insulation test voltage, 2500 v. Size,  $1\frac{1}{2} \times 1\frac{1}{2} \times 2\frac{1}{4}$ ". 1 lb. **NET EACH** ..... 8.82

**Type HSM-305, Smoothing Reactor.** Current, 70 ma DC at 150 volts. Resistance, 300 ohms. Test voltage, 2500. Size,  $2\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2}$ ".  $\frac{1}{2}$  lb. **NET EACH** ..... 8.82

### TYPE A AUDIO AND TV TRANSFORMERS

Stock No.	Mfr's Type	NET EACH	Description	Ratio	Size	Wt. Lbs.
64 G 990	A-9J	7.35	Line or mike to grid	1:12	$1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$ "	$\frac{1}{2}$
64 G 991	A-31X	1.62	Plate to single or p. p. grids	1:3	$1\frac{1}{2} \times 2\frac{1}{4} \times 1\frac{3}{4}$ "	$\frac{1}{2}$
64 G 992	A-751	5.73	Choke for cathode equalizer	...	$1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$ "	$\frac{1}{2}$
64 G 994	A-81X	1.65	Driver transformer for p.p. 19, 30's, 116, etc.	2.66:1	$1\frac{3}{4} \times 2\frac{1}{4} \times 1\frac{3}{4}$ "	$\frac{1}{2}$
64 G 994	A-97X	1.62	Blocking osc. transf. for vertical sweep	1:4.14	$1\frac{3}{4} \times 2\frac{1}{4} \times 1\frac{3}{4}$ "	$\frac{1}{2}$
64 G 995	A-97Y	2.26	As above, different case	1:4.14	$1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$ "	$\frac{1}{2}$
64 G 996	A-99X	2.70	Output—couples vert. output tube to deflection coil	11:4.1	$2\frac{1}{2} \times 3\frac{1}{2} \times 2\frac{1}{2}$ "	$1\frac{1}{2}$
64 G 997	A-102X	2.23	Vertical output autotransformer	18:1	$1\frac{1}{2} \times 2\frac{1}{4} \times 1\frac{3}{4}$ "	$1\frac{1}{2}$
64 G 998	A-104X	2.94	Vertical output autotransformer	18:1	$2\frac{1}{2} \times 3\frac{1}{2} \times 2\frac{1}{2}$ "	$1\frac{1}{2}$
64 G 999	A-107X	3.82	Vertical output transformer	10:1	$2\frac{1}{2} \times 4\frac{1}{2} \times 2\frac{1}{2}$ "	$2\frac{1}{2}$

### TYPE F FILAMENT TRANSFORMERS

Stock No.	Mfr's Type	NET EACH	Secondary		Test Volts	Size	Wt. Lbs.
			Volts	Amperes			
64 G 953	F-13X	1.62	6.3	.6	1500	$1\frac{1}{2} \times 2\frac{1}{4} \times 1\frac{3}{4}$ "	$\frac{1}{2}$
64 G 954	F-14X	1.65	6.3CT	1.2	1500	$1\frac{1}{2} \times 2\frac{1}{4} \times 1\frac{3}{4}$ "	$\frac{1}{2}$
64 G 955	F-16X	2.44	6.3CT	3	1500	$1\frac{1}{2} \times 3\frac{1}{4} \times 2\frac{1}{2}$ "	$\frac{1}{2}$
64 G 956	F-18A	4.26	6.3CT	6	1500	$3\frac{1}{4} \times 2\frac{1}{4} \times 2\frac{1}{2}$ "	$1\frac{1}{2}$
64 G 957	F-21A	4.56	6.3CT	10	1500	$3\frac{1}{4} \times 3 \times 3\frac{1}{4}$ "	$1\frac{1}{2}$
64 G 958	F-22A	7.94	6.3CT	20	2000	$4\frac{1}{2} \times 4\frac{1}{2} \times 3\frac{1}{2}$ "	7
64 G 959	F-25X	4.32	12.6CT	1.5	1500	$1\frac{1}{2} \times 3\frac{1}{4} \times 2\frac{1}{2}$ "	$1\frac{1}{2}$
64 G 974	F-40X	2.25	2.5	1	1500	$1\frac{1}{2} \times 3\frac{1}{4} \times 2\frac{1}{2}$ "	$1\frac{1}{2}$
64 G 973	F-36A	6.82	6.3CT/3.5A/6.3V/3.5A	6.3V/3.5A	2500	$4\frac{1}{2} \times 3\frac{1}{4} \times 3\frac{1}{2}$ "	5
64 G 975	F-52X1	2.09	6.3/3.5	1.2	5000	$1\frac{1}{2} \times 3\frac{1}{4} \times 1\frac{1}{2}$ "	$\frac{1}{2}$

### PLATE AND FILAMENT POWER TRANSFORMERS

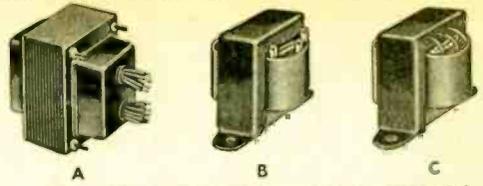
Combined plate and filament transformers. Finished in baked gray enamel with connection data marked on case. Copper foil static shields. \*All center tapped.

Stock No.	Mfr's Type	NET EACH	Plate Supply		Filaments			Size (HWD)	Wt. Lbs.
			Volts	Ma	V	A	V		
64 G 976	R-4A	3.67	500CT	40	6.3	2	2 1/2	$2\frac{1}{2} \times 2\frac{1}{4} \times 2\frac{1}{2}$ "	$1\frac{1}{2}$
64 G 977	R-5A	4.32	600CT	65	6.3	2.7	$3\frac{1}{4} \times 2\frac{1}{4} \times 2\frac{1}{2}$ "	$2\frac{1}{2}$	
64 G 978	R-7A	4.65	600CT	75	2	6.3	$2\frac{1}{2} \times 3\frac{1}{4} \times 2\frac{1}{2}$ "	$2\frac{1}{2}$	
64 G 979	R-9A	5.41	600CT	50	5	2	$3\frac{1}{4} \times 3\frac{1}{4} \times 3\frac{1}{4}$ "	$3\frac{1}{2}$	
64 G 986	R-11A	6.03	700CT	90	5	3	$3\frac{1}{4} \times 3\frac{1}{4} \times 3\frac{1}{4}$ "	$4\frac{1}{2}$	
64 G 987	R-14A	6.76	700CT	125	5	3	$4\frac{1}{2} \times 3\frac{1}{4} \times 3\frac{1}{4}$ "	6	
64 G 988	R-21A	10.35	800CT	200	5	3	$4\frac{1}{2} \times 3\frac{1}{4} \times 5\frac{1}{2}$ "	$9\frac{1}{2}$	

### TYPE M MODULATION TRANSFORMERS

Tube to RF load. Frequency response, 300 to 3000 cps. Primary impedance, 10,000CT. M-1X is  $1\frac{1}{2} \times 2\frac{1}{4} \times 1\frac{1}{4}$ "; M-3X is  $2\frac{1}{2} \times 3\frac{1}{4} \times 2\frac{1}{2}$ ".

Stock No.	Mfr's Type	NET EACH	Application	Secondary Audio Wt.	
				Imp.	Watts Lbs.
64 G 938	M-1X	2.23	For 19, 1J6, 6N7, 6A6, etc.	5000/8000/10,000	5 $\frac{1}{4}$
64 G 939	M-3X	3.29	For 6N7, 6A6, 6F6's, etc.	3000/5000/8000	20 $\frac{1}{2}$



## KNIGHT QUALITY TRANSFORMERS

### FIG. A—REPLACEMENT POWER TRANSFORMERS

High-quality, low-priced units for set replacement, for kit building, etc. Fully shielded; heavy-duty 5" flexible coded leads. All plate and Fil. 1 windings center-tapped. 110-120 volt 50-60 cycle primaries.

#### FOR 6.3 VOLT TUBES

Stock No.	No. of Tubes	NET EACH	Plate		Rect. V	Fil. 1		Mtg. Centers	Wt. Lbs.	
			Volts	Ma		V	A			
62 G 034	4	3.16	480	40	5	2	6.3	2	$2 \times 2\frac{1}{2}$ "	3
62 G 041	5-6	3.26	650	40	5	2	6.3	3	$2 \times 2\frac{1}{2}$ "	5
62 G 042	6-7	3.76	650	70	5	3	6.3	3.5	$2 \times 2\frac{1}{2}$ "	5
62 G 043	8-10	4.04	700	90	5	3	6.3	3.5	$2\frac{1}{2} \times 2\frac{1}{2}$ "	$5\frac{1}{2}$
62 G 044	10-13	4.92	700	120	5	3	6.3	4	$2\frac{1}{2} \times 3\frac{1}{4}$ "	7
62 G 045	12-15	6.25	750	150	5	3	6.3	5	$2\frac{1}{2} \times 3\frac{1}{4}$ "	$7\frac{1}{2}$
62 G 033	12-15	6.96	800	200	5	3	6.3	5	$3 \times 3\frac{1}{4}$ "	10

### FIG. B—UNIVERSAL OUTPUTS

CT primary, 6 taps on sec. Match single or push-pull tubes to speaker voice coil. \*Universal line (500-3000 ohms) to 3.2, 8, 16 ohms VC.

No.	NET	Impedances		Watts	Size	Ctrs.	Lbs.
		Prim.	Sec.				
62 G 023	1.34	14,000 ohms.	4	18	$1\frac{1}{2} \times 2\frac{1}{4} \times 1\frac{1}{2}$ "	2"	1
62 G 022	1.94	*Line-VC	8	18	$2\frac{1}{2} \times 2\frac{1}{4} \times 1\frac{1}{2}$ "	2"	$1\frac{1}{2}$
62 G 076	3.31	*Line-VC	20	20	$3\frac{1}{2} \times 2\frac{1}{4} \times 3\frac{1}{4}$ "	3"	$2\frac{1}{2}$

### FIG. B—70.7 VOLT LINE-TO-VOICE COIL OUTPUTS

Secondaries: 4, 8, 16 ohms, except \*3.2, 4, 6-8.

No.	NET	Watt Taps	Watts	Size	Ctrs.	Lbs.
62 G 077	1.80	10, 5, 2.5, 1.25, .62	10 Max.	$1\frac{1}{2} \times 2\frac{1}{4} \times 1\frac{1}{2}$ "	2"	1
62 G 078	2.46	18, 9, 4.5, 2.25, 1.12, .56	18 Max.	$2\frac{1}{4} \times 2\frac{1}{4} \times 1\frac{1}{2}$ "	2"	$1\frac{1}{4}$
62 G 079	2.98	24, 12, 6, 3, 1.5, .75	24 Max.	$2\frac{1}{4} \times 3\frac{1}{4} \times 2\frac{1}{4}$ "	3"	$1\frac{1}{4}$

### FIG. C—STANDARD OUTPUTS

For coupling plate or plates of the output stage to the speaker voice coil. Designed specifically for class A amplifiers.

Stock No.	NET EACH	Primary		Sec. Imp.	Audio Watts	Size	Mtg. Ctrs.	Wt. Lbs.
		Imp.	Ma					
62 G 064	.79	5,000	40	3.2	3	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$ "	$1\frac{1}{2}$ "	$\frac{1}{2}$
62 G 063	.79	2,500	50	3.2	3	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$ "	$1\frac{1}{2}$ "	$\frac{1}{2}$
62 G 093	.79	8,000	20	3.5	3	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$ "	$1\frac{1}{2}$ "	$\frac{1}{2}$
62 G 065	.89	2,000	50	3-4	5	$1\frac{1}{2} \times 2\frac{1}{4} \times 1\frac{1}{2}$ "	$1\frac{1}{2}$ "	$\frac{1}{2}$
62 G 095	.92	5,000	40	3.5	5	$1\frac{1}{2} \times 2\frac{1}{4} \times 1\frac{1}{2}$ "	2"	$\frac{1}{2}$
62 G 094	1.17	25,000	10	3.5	5	$1\frac{1}{2} \times 2\frac{1}{4} \times 1\frac{1}{2}$ "	2"	$\frac{1}{2}$
62 G 066	.92	7,000	30	3.5	5	$1\frac{1}{2} \times 2\frac{1}{4} \times 1\frac{1}{2}$ "	2"	$\frac{1}{2}$

### FIG. C—AUDIO TRANSFORMERS

No.	NET	Description	Ctrs.	Lbs.
62 G 062	1.34	1.5 step-up. Single plate to single grid	$2\frac{1}{2}$ "	$1\frac{1}{2}$

### FIG. C—FILTER CHOKES

No.	NET	Hys.	Ma	Ohms	Size	Ctrs.	Lbs.
62 G 136	1.08	8.5	50	400	$1\frac{1}{2} \times 2\frac{1}{4} \times 1\frac{1}{2}$ "	2"	1
62 G 137	1.22	16	50	550	$2 \times 3\frac{1}{4} \times 1\frac{1}{2}$ "	2"	$1\frac{1}{2}$
62 G 138	1.60	15	75	400	$2\frac{1}{2} \times 3\frac{1}{4} \times 2\frac{1}{2}$ "	3"	$2\frac{1}{2}$
62 G 139	2.14	10.5	110	220	$2\frac{1}{2} \times 4 \times 2\frac{1}{4}$ "	3"	$2\frac{1}{2}$

### FIG. C—CENTER-TAPPED FILAMENT TRANSFORMERS

Primaries, 105-125 volts, 50-60 cycle AC.

No.	NET	Volts	Amps	Size	Ctrs.	Lbs.
62 G 031	2.18	6.3	3	$2 \times 3\frac{1}{4} \times 1\frac{1}{2}$ "	$2\frac{1}{2}$ "	$1\frac{1}{2}$
62 G 028	2.54	6.3	6	$2\frac{1}{2} \times 3\frac{1}{4} \times 1\frac{1}{2}$ "	$3\frac{1}{2}$ "	$2\frac{1}{2}$

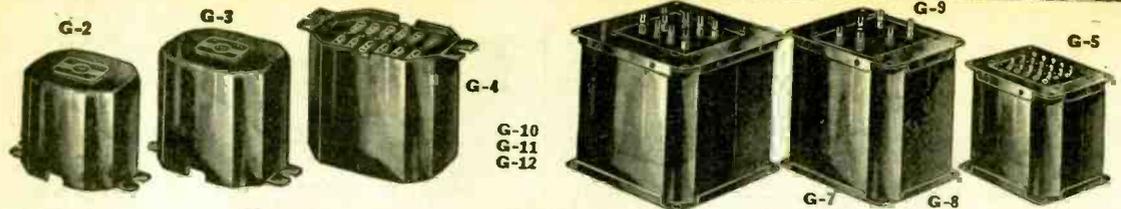
### 230 TO 115 VOLT AUTOTRANSFORMERS

Husky, well-built step-down autotransformers for reduction of 220-250 volts, 50-60 cycles AC down to 110-125 volts. For operating radios, amplifiers, small appliances, etc. Shielded construction. Smooth black enamel finish. Four hole corner mounting. With 8-foot cord and plug. Female receptacle on side of case.



No.	NET	Watts	Size	Mtg. Ctrs.	Lbs.
62 G 511	6.70	150	$3\frac{1}{2} \times 3\frac{1}{4} \times 3\frac{1}{2}</$		

# UTC Transformers



## UTC SPECIAL SERIES AUDIO AND POWER TRANSFORMERS

Special series transformers are specifically designed for Amateur and PA amplifier service. Finish is in commercial gray enamel. Vacuum-

impregnated and compound-filled. Power transformers carry ICAS ratings for intermittent service.

Case	Height	Width	Depth	Shpg. Wt.	Case	Height	Width	Depth	Shpg. Wt.	Case	Height	Width	Depth	Shpg. Wt.
G-2	2 3/8"	3 3/8"	1 1/8"	1 1/2 lbs.	G-5	3 3/8"	3 1/8"	3 1/8"	4 1/2"	G-10	5 1/4"	6 1/4"	6 3/8"	24 lbs.
G-3	2 1/2"	3 3/8"	2 3/8"	2 lbs.	G-7	4 1/8"	4 1/8"	4 1/8"	5 1/2"	G-11	5 7/8"	6 1/2"	7 3/8"	31 lbs.
G-4	2 1/8"	4 1/8"	2 3/8"	3 lbs.	G-8	4 1/8"	5 1/8"	5 1/8"	5 1/2"	G-12	10 1/4"	7 3/8"	9 1/4"	52 lbs.

### CLASS A INPUTS

Stock No.	Type	NET	Ratio	Application	Case
62 G 754	S-1	3.92	3 1/2:1	Plate to grid	G-2
62 G 755	S-2	4.90	2:1, 4:1	Plate to 2 grids	G-2
62 G 758	S-2	3.92	16:1	Single or double button mike or line to grid	G-2

### UNIVERSAL DRIVERS

Stock No.	Type	NET	Application	Case
62 G 761	S-8	5.39	Single driver plate to pp grids	G-3
62 G 762	S-9	6.37	PP pl. to grids of class B tubes	G-4
62 G 763	S-10	5.39	PP pl. to 45's, 2A3's or 6L6's	G-3

### UNIVERSAL OUTPUTS—To Line and Voice Coil

Secondary Impedances: 500, 15, 8, 2 ohms.

Stock No.	Type	NET	Primary Impedance	Watts	Case
62 G 764	S-14	5.88	2500, 4000, 7000, 10,000	10	G-2
62 G 765	S-15	5.39	P.P. tubes: 4000, 5000, 10,000	12	G-2
62 G 766	S-16	6.86	P.P. 3000, 6000, 9000-10,000	30	G-4
62 G 767	S-17	8.82	P.P. 3800, 4500-5000	55	G-5

### SINGLE SECONDARY FILAMENT TRANSFORMERS

All primaries tapped at 105 and 115 Volts—50/60 Cycles. \*Tapped.

Stock No.	Type	NET	Sec. V. (CT)	Sec. Amps.	Insulation	Case
62 G 703	S-53	4.61	2.5	10	1500 V.	G-3
62 G 704	S-54	4.61	5	4	2500 V.	G-3
62 G 705	S-55	4.61	6.3	3	1500 V.	G-3
62 G 706	S-56	4.61	7.5	3	1500 V.	G-3
62 G 707	S-57	7.35	2.5	10	10,000 V.	G-5
62 G 708	S-58	7.84	2.5	20	10,000 V.	G-5
62 G 709	S-59	7.35	5-5.25	13	5000 V.	G-5
62 G 710	S-60	10.78	5-5.25	22	10,000 V.	G-7
62 G 711	S-61	7.84	7.5*, 6.3	10	3000 V.	G-5
62 G 712	S-62	7.35	10	10	3000 V.	G-5
62 G 713	S-63	12.25	14*, 12, 11	10	5000 V.	G-7

### MULTIPLE SECONDARY FILAMENT TRANSFORMERS

Primary tapped 105, 115 volts, 50/60 cycles. Insulation, 3000 V., except S-71, 10,000 V. and S-72, 5000 V. All in G-5 case except \*G-7 case.

Stock No.	Type	NET	Fil. 1	Fil. 2	Fil. 3
62 G 714	S-64	8.33	2.5 CT 5	2.5 CT 5	5 CT 6
62 G 715	S-65	8.33	2.5 CT 5	5 CT 4	6.3 CT 3
62 G 717	S-67	8.33	5 CT 6	6.3 CT 5	5 CT 4
62 G 718	S-68	8.33	5 CT 3	6.3 CT 4	7.5 CT 5
62 G 720	S-70	8.33	6.3 CT 5	6.3 CT 5	5 CT 4
62 G 721	*S-71	11.76	2.5 CT 6	2.5 CT 6	2.5 CT 12
62 G 722	S-72	8.82	5 CT 3	5 CT 3	5 CT 6



### UNCER AUDIO UNITS

Weigh only 1 ounce—for all compact applications. Response characteristics are: \*1 db 30-20,000 cps, except 0-14, 0-15, and units carrying DC, which are for voice from 150 to 4,000 cps. Maximum operating level, 0 db. Sealed in aluminum housings, 7/8" dia., 1 1/8" high. Mount by two 2-56 screws on 1/4" centers opposite terminals. Shpg. wt., 5 oz.

Stock No.	Type	NET	Primary Impedance	Secondary Imp.
62 G 780	0-1	6.86	50, 200-250, 500-600	50,000
62 G 781	0-2	6.86	50, 200-250, 500-600	50,000 CT
62 G 782	0-3	6.37	7.5-30	50,000
62 G 783	0-4	5.88	15,000	60,000
62 G 784	0-5	5.88	15,000 DC In Pri.	60,000
62 G 785	0-6	6.37	15,000	95,000 CT
62 G 786	0-7	6.37	15,000 DC In Pri.	95,000 CT
62 G 787	0-8	6.86	15,000	50, 200-250, 500-600
62 G 788	0-9	6.86	15,000 DC In Pri.	50, 200-250, 500-600
62 G 789	0-10	7.35	30,000 plate to plate	50, 200-250, 500-600
62 G 790	0-12	7.35	50, 200-250	50, 200-250, 500-600
62 G 793	0-13	5.39	(Reactor: 50 hys—3 ma DC, 6000 ohms)	50, 200-250, 500-600
62 G 791	0-14	6.86	15,000	1/2 megohm
62 G 792	0-15	6.86	20,000	1 megohm
62 G 794	0-16	5.88	250 CT	50,000

### MATCHING TRANSFORMERS

Stock No.	Type	NET	Application	Primary	Sec.	Case
62 G 769	S-12	4.90	Line to spkr, 15w	500, 2000	2, 4, 8, 15	G-2
62 G 770	S-13	6.86	Line to spkr, 30w	500, 2000	2, 4, 8, 15	G-2

### FILTER, SWINGING AND AUDIO CHOKES

Stock No.	Type	NET	Henrys	Ma	Ohms	Insul.	Case
62 G 776	S-23	3.72	450	5	5000	1500 V.	G-2
62 G 725	S-24	4.41	500CT	30	6000	1500 V.	G-2
62 G 726	S-25	3.43	30	60	800	1500 V.	G-2
62 G 727	S-26	3.43	15	60	250	1500 V.	G-2
62 G 728	S-27	4.41	30	75	350	1500 V.	G-2
62 G 729	S-28	4.41	20	100	350	1500 V.	G-4
62 G 730	S-29	4.41	10	175	90	1500 V.	G-4
62 G 731	S-30	4.41	5/25	175	90	1500 V.	G-4
62 G 732	S-31	5.88	20	225	100	2700 V.	G-5
62 G 733	S-32	5.88	5/25	225	100	2700 V.	G-5
62 G 751	S-33	8.33	20	300	100	4000 V.	G-7
62 G 734	S-34	8.33	5/25	300	100	4000 V.	G-7
62 G 735	S-35	11.76	20	400	60	4000 V.	G-7
62 G 736	S-36	11.76	5/25	400	60	5000 V.	G-8
62 G 737	S-37	13.72	20	550	60	6000 V.	G-8
62 G 738	S-38	13.72	5/25	550	60	6000 V.	G-8

### PLATE TRANSFORMERS—115 V., 50/60 Cycles

Stock No.	Type	NET	AC High Voltage	DC Ma	Case
62 GX 744	S-44	21.56	575-525-0-525-575	500	G-9
62 GX 745	S-45	16.66	900-750-0-750-900	200	G-8
62 GX 746	S-46	20.58	1000-750-0-750-1000	300	G-9
62 GX 748	S-47	26.46	1500-1250-1000-0-1000-1250-1500	300	G-10
62 GX 749	S-48	33.32	Same as above.	500	G-11
62 GX 750	S-49	32.34	2100-1800-1500-0-1500-1800-2100	300	G-11
62 GX 700	S-50	49.00	3000-2500-0-2500-3000	300	G-11

### POWER TRANSFORMERS—115 V., 50/60 Cycles

62 G 739, S-39, H.V.: 490-400-0-400-490, at 175 ma. Rect. fil., 5V-3A; fil. No. 1, 2.5 VCT-6A; fil. No. 2, 6.3 VCT-4A. Case G-7. EA... 14.70  
 62 G 740, S-40, H.V.: 525-425-0-425-525, at 250 ma. Rect. fil., 5V-3A; fil. No. 1, 6.3 VCT-3A; fil. No. 2, 6.3A VCT-3A. Case G-7. EA... 14.70  
 62 G 741, S-41, H.V.: 600-0-600, at 200 ma. Rect. fil., 5V-3A; fil. No. 1, 7.5V tapped, 6.3V-3A; fil. No. 2, 6.3 VCT-2A. Case, G-7. EA... 14.70  
 62 G 742, S-42, H.V.: 600-525-0-525-600, 300 ma. Rect. fil., 5V-6A; fil. 1, 7.5 V tapped, 6.3V-3A; fil. No. 2, 6.3VCT-3A. Case, G-8. EA... 16.66

### UNIVERSAL MODULATION TRANSFORMERS

Stock No.	Type	NET	Audio Power	Case
62 G 771	S-18	5.88	12 watts	G-3
62 G 772	S-19	7.84	30 watts	G-4
62 G 773	S-20	12.74	55 watts	G-5
62 G 774	S-21	17.64	110 watts	G-7
62 GX 775	S-22	27.44	250 watts	G-9

### SUB AND SUB-SUBONCER TRANSFORMERS

"Tiny" transformers for miniature equipment. Frequency response, +3 db from 200 to 5000 cps. Sub-uncers size 1/4x1/4x1/4". Weight 1/2 oz. Sub-sub-uncers size 1/2x1/2x1/2". Weight 1/2 oz. Fixed imp. ratio; 1250:1 for SO-1 and SSO-1; 1:50 for SO-3 and SSO-3. \*SO-5, 3000 ohms DC resistance; SSO-5, 4400 ohms. Wt., 2 oz.



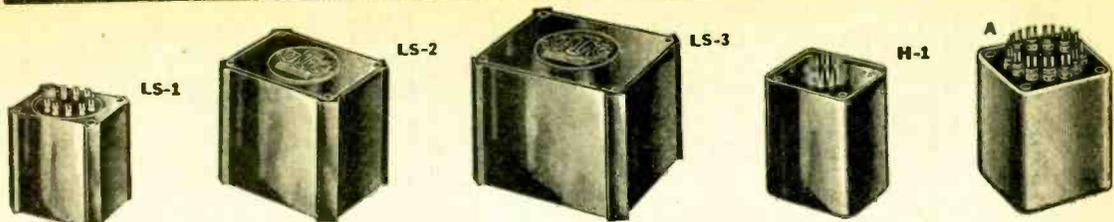
### SUB-UNCER TRANSFORMERS

No.	Type	Use	Pri. Imp.	Pri. DC	Sec. Imp.	NET
62 G 210	↑SO-1	Input	200, 50	0	250K	3.92
62 G 211	SO-2	Audio, 1:3	10,000	0-25 ma	90K	3.53
62 G 212	↑SO-3	Pi. to line	10K, 25K	3, 1.5 ma	200, 500	3.53
62 G 213	SO-4	Output	30,000	1 ma	50	3.53
62 G 214	SO-5	Reactor	50 hys @ 1 ma DC*			2.94
62 G 215	SO-6	Output	100,000	.5 ma	60	3.92

### SUB-SUBONCER TRANSFORMERS

No.	Type	Use	Pri. Imp.	Pri. DC	Sec. Imp.	NET
62 G 236	↑SSO-1	Input	200, 50	0	250K	4.12
62 G 237	SSO-2	Audio, 1:3	10,000	0-25 ma	62.5K	4.41
62 G 238	↑SSO-3	Pi. to line	10K, 25K	3, 1.5 ma	200, 500	3.63
62 G 239	SSO-4	Output	30,000	1 ma	50	3.63
62 G 240	SSO-5	Reactor	50 hys @ 1 ma DC*			3.63
62 G 241	SSO-6	Output	100,000	.5 ma	60	3.63

# UTC Transformers



## LINEAR STANDARD TRANSFORMERS

Designed to serve the extreme demands of equipment for broadcast service. These audio units have a guaranteed response of  $\pm 1$  DB of listed ranges. HIPERM-ALLOY, a stable nickel iron alloy core of very high initial permeability and multiple section interleaved windings arranged in a semi-toroidal coil structure give uniform frequency response at both low and high frequencies. Special winding methods and insulations assure a minimum of distributed capacity and leakage reactance. Minimum hum pickup is achieved with a hum balanced coil

structure which affords maximum neutralization of external fields. All units have high conductivity outer case for maximum shielding. For very low level applications, units with type number ending in X employ multiple alloy shielding, making possible a transformer with extremely low inductive pickup. Multiple tap windings make possible a wide combination of impedance terminations without impairing fidelity or efficiency. Housed in rugged die-cast cases with reversible mounting to permit above chassis or subchassis wiring.

Case	Height	Width	Length	Mounting	Shpg. Wt.
H-1	3 1/4"	1 1/4"	2 3/8"	1 1/2 x 1 1/2"	2 1/2 lbs.
A	2"	1 1/2"	1 1/2"	1 1/2 x 1 1/2"	1 lb.

Case	Height	Width	Length	Mounting	Shpg. Wt.
LS-1	3 1/4"	2 5/8"	3 1/4"	1 1/4 x 2 1/4"	3 1/2 lbs.
LS-2	4 3/8"	3 1/2"	4 7/8"	2 1/4 x 3 1/4"	8 lbs.
LS-3	4 1/4"	5"	5 1/2"	4 3/8 x 5 1/2"	16 lbs.

### INTERSTAGE AUDIO TRANSFORMERS

20-20,000 cps,  $\pm 1$  db, except  $\dagger 10$ -20,000 CPS,  $\pm 1$  db. LS-1 case. \*LS-2 case.

No.	Type	NET	Use	Secondary	Max. Lev.
62 G 835	LS-19	15.68	To PP grids.	95,000 ohms; 1 1/4:1	+12 db
62 G 837	LS-21	14.70	To PP grids.	135,000 ohms; 3:1	+10 db

No.	Type	NET	Use	Secondary	Max. Lev.
62 G 838	LS-22	21.56	To PP grids.	80,000 ohms; 1.6:1	+18 db

### OUTPUT TRANSFORMERS—To Line and Voice Coil

Response,  $\pm 1$  db, 7-50,000 cps, except  $\dagger 10$ -50,000 cps. All in LS-2 case except \*in LS-3 case.

No.	Type	NET	Pri. P. to P.	Secondary	Watts
62 G 845	LS-52	18.62	8,000	1.2, 2.5, 5, 15	15
62 G 847	LS-55	18.62	5,000 & 3,000	7.5, 10, 15, 20	20
62 G 849	LS-58*	37.24	2,500 & 1,500	20, 30, 50, 40	40
62 G 850	LS-61	18.62	10,000 & 6,000	125, 200, 300	15
62 G 851	LS-61L*	29.40	9,000	250, 333, 500	30
62 G 846	LS-54	14.70	8,000	1.2, 2.5, 5, 15	15
62 G 848	LS-57	14.70	5,000 & 3,000	7.5, 10, 15, 20	20
62 G 855	LS-63	14.70	10,000 & 6,000	20, 30	30
62 G 852	LS-64*	19.60	9,000	250, 333, 500	15
62 G 856	LS-60A*	23.52	4,600	1.2 to 15 ohms	30

### MIXING TRANSFORMERS

For mixing; for feeding low impedance mike, pickup or multiple line to multiple line. Maximum unbalanced DC in primary: LS-30, .5 ma. LS-30X, .3 ma. Primary and secondary have 6 taps: 50, 125-150, 200, 250, 333, 500-600 ohms. In LS-1 case.

LS-30. Maximum level, +15 DB. Relative hum-pickup reduction compared to uncased type, -74 DB. Response,  $\pm 1$  db, 7-50,000 cps. 62 G 840. NET 15.68

LS-30X. Maximum level, +15 DB. Multiple alloy shield gives relative hum-pickup reduction of -92 DB. Response,  $\pm 1$  db, 20-20,000 cps. 62 G 841. NET 18.62

### HIGH-LEVEL MATCHING TRANSFORMER

Type LS-33. Primary 50, 125, 200, 250, 333, 500-600 ohms. Secondary, 1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200, 250, 333, 500-600 ohms. Max. level 15 watts. Response  $\pm 1$  db, 10-40,000 cps. Housed in LS-2 case. 62 G 800. NET 17.64

### ULTRA-COMPACT HIGH-FIDELITY AUDIOS

Shielded; hum-balanced coils. Level, +7db, 1 1/2 x 1 1/2 x 2". Shpg. wt., 1 lb. 2 oz. \*Multiple-alloy shield. In A case.

No.	Type	NET	Pri. Imp.	Sec. Imp.	$\pm 2$ db
62 G 820	A-10	10.78	50, 125-150, 200-250, 333, 500-600	50,000	20-20,000
62 G 821	A-11*	9.80	50, 200, 500	50,000 P.P.	50-20,000
62 G 822	A-12	10.78	50, 125-150, 200-250, 333, 500-600	80,000 2 sect.	20-20,000
62 G 824	A-16	8.82	15,000	60,000 2:1	40-20,000
62 G 825	A-18	10.78	15,000	80,000 P.P. 2.3:1	40-20,000
62 G 826	A-19	10.78	15,000—8 ma DC	80,000 P.P. 2.3:1	40-20,000
62 G 827	A-20	10.78	50, 125-250, 200-250, 333, 500-600	Same as pri.	10-50,000
62 G 828	A-21*	10.78	50, 200-250, 500-600	Same as pri.	30-30,000
62 G 777	A-24	10.78	15,000	50, 125-150, 200-250, 333, 500-600	20-40,000
62 G 778	A-25	9.80	15,000—8 ma DC	Same as above	40-20,000
62 G 779	A-26	10.78	30,000 P. to P.	Same as above	20-40,000

### MICROPHONE CABLE TRANSFORMERS

Permit long, low impedance mike lines. Ruggedly built to withstand mechanical abuse. 1 1/2" diam., 2 1/2" long, 12 oz. MC-1. Pri. tapped 30-50 ohms and 200-250 ohms; secondary to grid. 60-8500 cycles. Less cable. 62 G 818. NET 8.82

MC-2. High quality type, 40-12,000 cycles. Primary winding tapped 30-50 ohms and 200-250 ohms; secondary to grid. Less cable. 62 G 819. NET 9.80

### LOW-IMPEDANCE-TO-GRID TRANSFORMERS

For low-impedance mike, pickup, or multiple line. LS-10, LS-10X to single grid; LS-12 to PP grids. "X" indicates multiple alloy magnetic shield for minimum hum pickup. In LS-1 case.

No.	Type	NET	Sec. Imp.—Ohms	$\pm 1$ db From:	Max. Level
62 G 829	LS-10	14.70	60,000, 2 sections	20-20,000	+10 db
62 G 830	LS-10X	18.62	50,000	20-20,000	+10 db
62 G 831	LS-12	16.66	120,000, 2 sect.	20-20,000	+10 db

### PLATE-TO-LINE TRANSFORMERS

LS-50, single plate to multiple line. LS-51, for push-pull low-level plates to multiple line. Secondary impedances: 50, 125-150, 200, 250, 333, 500-600 ohms. In LS-1 case.

No.	Type	NET	Primary	$\pm 1$ db From:	Max. Level
62 G 843	LS-50	15.19	15,000 ohms	10-40,000 cps	+15 db
62 G 844	LS-51	18.62	30,000 ohms	10-40,000 cps	+16 db

### POWER TRANSFORMERS

Type LS-70. For high-power amplifier service. Primary taps range from 100-125 volts (50-60 cycles). High voltage, 425-375-0-375-425 at 200 ma and 70-0-70 at 50 ma. Five filament windings: 5 V.C.T.-3A; 5 V.C.T.-2A; 2.5 V.C.T.-10A; 6.3 V.C.T.-1A; 6.3 V.C.T.-3A. In LS-3 case. 62 G 803. NET 39.20

Type LS-74. For push-pull 6L6's, KT-66's, 6B4's. 115 volt primary. High voltage, 415-395-0-395-415 at 275 ma. Filament, 5 v. at 6 amps, 6.3 V.C.T. at 5 amps. LS-3 case. 62 G 857. NET 34.30

### HIPERM-ALLOY TRANSFORMERS

The UTC Hiperm-alloy audio transformers are specifically designed for portable and compact service. While light in weight, neither dependability nor fidelity has been sacrificed. The frequency characteristic of these units is uniform throughout their range. They incorporate a Hiperm-alloy nickel iron core and hum balanced coil structure. The rugged die cast case is of high conductivity alloy finished in gray, and is arranged for mounting with the terminals either up or down. Terminals are mounted on low-absorption bakelite and arranged in a circular layout so that a round chassis hole will clear all terminals.

### PLATE-TO-LINE TRANSFORMERS

Six secondary taps cover 50, 125-150, 200, 250, 333, 500-600 ohms  $\pm 1$  db from 30-40,000 cps (measured with resistive source). In H-1 case.

No.	Type	NET	Application	Primary	Level
62 G 816	HA-113	11.76	Plate to mult. line	15,000 ohms	+12 db
62 G 869	HA-133	16.66	Plate to mult. line	15,000 ohms	+15 db
62 G 817	HA-114	13.72	PP plates to line	30,000 ohms	+16 db

### LOW-IMPEDANCE-TO-GRID AND MIXING TRANSFORMERS

Six taps on primary cover 50, 125-150, 200, 250, 333, 500-600 ohms. Uniform response of  $\pm 1$  db from 30-20,000 cps, except HA-108X, 20-50,000 cps. Maximum level, +10 db. Maximum unbalanced DC in primary, .5 ma. All units have 2-section secondaries, except HA-108X, which has a single section secondary with six taps to cover 50, 125-150, 200, 250, 333, 500-600 ohms. Units are housed in type H-1 case.

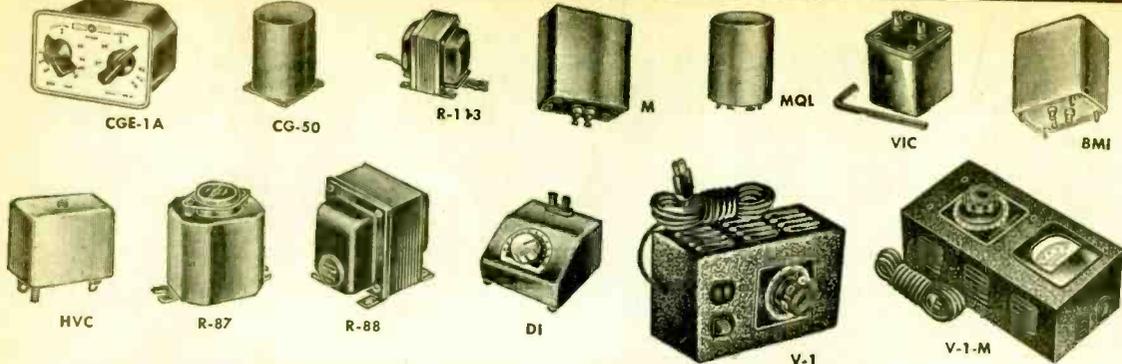
No.	Type	NET	Application	Secondary
62 G 805	HA-100	12.74	Mike, pickup or line	60,000 ohms
62 G 806	HA-100X	14.70	Same, with tri-alloy shield	60,000 ohms
62 G 810	HA-108X	14.70	Mixing, mlke, pickup or multiple line; tri-alloy shield	Same as Primary

### INTERSTAGE AUDIO TRANSFORMERS

Compactly designed for portable service. Incorporate Hiperm-Alloy nickel iron core and hum-balanced coil structure. Uniform frequency response of  $\pm 1$  db from 30-20,000 cps. Primary impedance is 15,000 ohms. Maximum level, +12 db. Designed for shunt-fed stages with no D.C. in primary. Split secondary. Units are housed in type H-1 case.

No.	Type	NET	Application	Secondary
62 G 811	HA-104	12.74	Plate to pp grids	95,000 ohms, 1.25:1
62 G 813	HA-106	12.74	Plate to pp grids	135,000 ohms, 3:1

# UTC Transformers and Inductors



## TRANSFORMERS, TOROIDS, FILTERS, VOLTAGE CONTROLS AND INDUCTORS

### HIGH-FIDELITY COMPONENTS

**UNIVERSAL INTERSTAGE EQUALIZER**  
**Type CGE-1A.** Interstage tone equalizer. Works from low or medium impedance source (0 to 20,000 ohms) to a high impedance (500,000 ohms or open grid). Affords continuously variable equalization over a 30 db range at either end of frequency spectrum, with only 18 db total insertion loss. 2 1/2" deep; 2 1/4 x 3 1/2" panel. Shpg. wt., 3 lbs. **62 G 875. NET.....17.64**

### DYNAMIC NOISE SUPPRESSOR

**DUAL INDUCTOR**  
**Type CG-50.** Highly effective suppression of surface and needle noise when used in proper automatic gate circuit. Diagram of an efficient, tested circuit supplied with each unit. Separate High-Q choke sections rated at 2.4 and 0.8 henries. Round drawn case, 2 1/2" high with 1 1/4 x 1 1/4" base. Wt., 2 lbs. **62 G 870. NET.....9.31**

### FILTER CHOKES

Ideal for PA equipment. Used in the UTC 10 and 20-watt Williamson amplifier kits. Can be used in any other quality-type, high-fidelity amplifier application. Shpg. wts.: 3 lbs.; 7 lbs.; 112 lbs.

Stock No.	Mfrs. Type	Hy.	DC Res. Ma	DC Test Res.	NET EA.
62 G 861*	CG-48C	75	30	2200	1750 5.88
62 G 862†	CG-100	12	150	110	2500 6.37
62 G 863‡	CG-102	12	250	100	3000 9.31

### TYPE DI INDUCTANCE DECADES

Invaluable for design and experimental work with tuned circuits, wave filters, and equalizers. Low hum-pickup toroid coils employ new permalloy dust core. Provide very high "Q", excellent voltage and temperature stability. Employs a new low-capacity switch. Size, 4 1/2 x 4 1/2 x 2 1/4". Shpg. wt., 2 lbs.

No.	Type	Ind. in Hy.	Range	NET
62 G 795	DI-1	10 x .01	2-60 kc	39.20
62 G 796	DI-2	10 x .1	25-20 kc	44.10
62 G 797	DI-3	10 x 1	25-10 kc	49.00
62 G 798	DI-4	10 x 10	2-1.5 kc	63.70

### TYPE R VOLTAGE BOOSTERS

Ideal for TV sets and air conditioners where line load is low. These autotransformers are designed to operate from 95 to 110 volts, 50-60 cycles. Voltage boost is 10%. Complete with line cord and receptacle.

No.	Type	Rating	Size	Wt.	NET
62 G 752	R-87	3A-350W	3 1/2 x 2 1/2"	2	5.88
62 G 753	R-88	18A-2KW	3 1/2 x 4 1/2 x 4 1/2"	12	17.15

### V-1 VARITRAN VOLTAGE CONTROLS

Autotransformers with turns arranged on one layer and insulation removed so that every turn is exposed and may be used as a tap of the winding. A special non-fusing contact can be moved to any position on the winding, permitting the exact voltage desired to be obtained. Easily mounted on any panel, chassis or laboratory service bench. Maximum current available from 0-20 volts and 95-130 volts. From 20-95 volts current capacity tapers off (60% maximum at 65 volts). Output is independent of load. For operation from 110-120 volts 50-60 cycles. Size and weights: Model V-1, 4 1/4 x 8 x 3 1/4", 12 lbs.; Model V-1-M, 4 1/4 x 9 1/2 x 3 3/4", 14 lbs. Cycles V-1. Rated at 5 amps, 570 watts. **62 G 201. NET EACH.....19.60**

Model V-1-M. As above, but with 0-150 v. meter. **62 G 202. NET EACH.....34.30**

### TYPE M TOROIDS

Coils conform to MIL-T-27 specifications. Inductance is virtually independent of frequency, temperature and vibration. Extremely low hum pickup. Very high Q available. Typical Q values: MQE-7 max. Q, 130 @ 8 kc; MQA-10, 150 @ 5 kc; MQB-5, 250 @ 3 kc and 50 @ 250 cycles. Lab. adjusted to 1% tol. DC currents shown will drop coil inductance 5%. Shpg. wts., MQE, 3 oz; MQA, 4 oz; MQB, 1 lb.

No.	Type	Inductance	Max. DC	NET EACH
62 G 945	MQE-1	7 mhy	135	5.39
62 G 946	MQE-2	12 mhy	100	5.39
62 G 947	MQE-3	20 mhy	80	5.88
62 G 948	MQE-4	30 mhy	65	5.88
62 G 949	MQE-5	50 mhy	50	6.37
62 G 975	MQE-6	70 mhy	40	6.37
62 G 976	MQE-7	100 mhy	35	6.86
62 G 977	MQE-8	150 mhy	30	7.35
62 G 978	MQE-9	.25 hy	22	7.84
62 G 979	MQE-10	.4 by	17	8.33
62 G 980	MQE-11	.6 hy	14	8.82
62 G 981	MQE-12	.9 hy	12	9.31
62 G 982	MQE-13	1.5 hy	9	9.31
62 G 983	MQE-14	2 hy	8	9.80
62 G 984	MQE-15	2.8 hy	7.2	10.78

### TYPE MQA—1 1/2 x 1 1/2 x 1 1/2"

No.	Type	Inductance	Max. DC	NET EACH
62 G 985	MQA-1	7 mhy	250	6.37
62 G 986	MQA-2	12 mhy	200	6.37
62 G 987	MQA-3	20 mhy	150	6.37
62 G 988	MQA-4	30 mhy	125	6.86
62 G 989	MQA-5	50 mhy	100	7.35
62 G 990	MQA-6	70 mhy	80	7.35
62 G 991	MQA-7	120 mhy	60	8.33
62 G 992	MQA-8	2 hy	50	8.82
62 G 993	MQA-9	3 hy	40	9.31
62 G 994	MQA-10	.5 hy	30	9.31
62 G 995	MQA-11	.7 hy	25	9.31
62 G 996	MQA-12	1 hy	20	9.80
62 G 997	MQA-13	1.5 hy	17	9.80
62 G 998	MQA-14	2.5 hy	13	10.78
62 G 999	MQA-15	4 hy	10	11.76
62 G 967	MQA-16	6 hy	9	12.74
62 G 968	MQA-17	10 hy	7	13.72
62 G 969	MQA-18	15 hy	5	14.70
62 G 970	MQA-19	22 hy	4	19.60

### TYPE MQB—2 1/2 x 2 1/2 x 1 1/2"

No.	Type	Inductance	Max. DC	NET EACH
62 G 953	MQB-1	10 mhy	400	12.74
62 G 954	MQB-2	30 mhy	250	12.74
62 G 955	MQB-3	70 mhy	170	12.74
62 G 956	MQB-4	120 mhy	120	13.72
62 G 957	MQB-5	.5 hy	60	13.72
62 G 958	MQB-6	2 hy	40	13.72
62 G 959	MQB-7	3 hy	30	14.70
62 G 960	MQB-8	3.5 hy	22	14.70
62 G 963	MQB-9	7.5 hy	16	15.68
62 G 964	MQB-10	12 hy	11	16.66
62 G 965	MQB-11	18 hy	9	17.64
62 G 973	MQB-12	25 hy	8	18.62

### TYPE MQL HIGH "Q" COILS

Laminated Hipernalloy coils. Designed to provide high Q at low frequencies. Exceptional temperature stability. Four terminals permit series, parallel, etc. connection. Size, 2" dia. x 2 3/4". Require 1" cutout. Wt., 1 lb.

No.	Type	Series Hy	Parallel Hy	EACH
62 G 896	MQL-1	10	2.5	19.60
62 G 897	MQL-2	20	5	19.60
62 G 898	MQL-3	200	50	20.58
62 G 899	MQL-4	400	100	21.56

### TYPE R-113 POWER TRANSFORMER

400-0-400 v. at 200 ma secondary, 5 v. at 3 amp; 6.3 v. CT at 6 amps filament windings. Size, 4 1/2 x 3 1/2 x 4 1/2". Shpg. wt., 9 lbs. **62 G 895. NET.....9.41**

### VIC VARIABLE INDUCTORS

Professional high quality inductors for use in tuned audio circuits. Have wide application in oscillators, tuned amplifiers, equalizers, filters, etc. Vacuum-sealed against humidity. Special impregnating materials prevent corrosion. \*Inductance is variable by set screw from +85% to -45% of the mean value shown. Setting is positive. Housed in die-cast, enameled, inverted-mounting style case providing complete magnetic shielding. Virtually eliminates hum pickup. Size, 1 1/8" high, 1 1/4" wide, and 1 1/2" deep, with mounting centers on terminal board. Mfg. ctrs., 1 1/4 x 2 1/4". With Allen wrench for screw adjustment. Wt., 8 oz.

Stock No.	Mfrs Type	Mean Hys.	Max. Ma	NET EACH
62 G 900	VIC-1	.0085	75	
62 G 901	VIC-2	.013	60	
62 G 902	VIC-3	.021	50	
62 G 903	VIC-4	.034	40	5.88
62 G 904	VIC-5	.053	35	
62 G 905	VIC-6	.084	30	
62 G 906	VIC-7	.13	25	
62 G 907	VIC-8	.21	21	
62 G 908	VIC-9	.34	18	
62 G 909	VIC-10	.54	15	
62 G 910	VIC-11	.85	12	6.37
62 G 911	VIC-12	1.3	10	
62 G 912	VIC-13	2.2	8	
62 G 913	VIC-14	3.4	7	
62 G 914	VIC-15	5.4	6	
62 G 915	VIC-16	8.5	5	6.86
62 G 916	VIC-17	13.	4	
62 G 917	VIC-18	21.	3.5	
62 G 918	VIC-19	33.	3	7.35
62 G 919	VIC-20	52.	2	
62 G 920	VIC-21	83.	1.5	7.84
62 G 921	VIC-22	130.	1	10.78

### HVC HERMETIC VARIABLE INDUCTORS

Serve as an ideal solution to many filter, oscillator, equalizer and tuned amplifier problems. Hermetically sealed to MIL-T-27 specs. \*Maximum recommended. Size, 1 1/2 x 1 1/2 x 1 1/2". Shpg. wt., 1/2 lb.

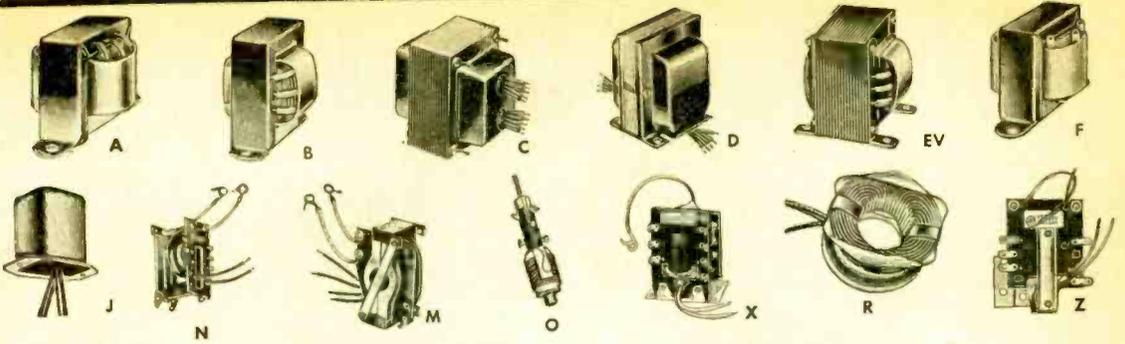
Stock No.	Mfrs Type	Range	DC Ma*	NET EACH
62 G 288	HVC-1	.002-.025	100	
62 G 289	HVC-2	.005-.06	60	
62 G 290	HVC-3	.011-.15	40	7.84
62 G 291	HVC-4	.03-.4	30	
62 G 292	HVC-5	.07-.10	20	
62 G 293	HVC-6	2-2.5	15	
62 G 294	HVC-7	5-6.0	10	
62 G 295	HVC-8	1.1-15.0	7	8.33
62 G 296	HVC-9	3.0-40.0	5	
62 G 297	HVC-10	7.0-100	3.5	8.82
62 G 298	HVC-11	20.0-250	2	9.80
62 G 299	HVC-12	50.0-600	1.5	10.78

### INTERSTAGE AND LINE FILTERS

Quality band-, high- and low-pass filters, identified by initial letter in type number (B H or L). Last letter indicates interstage (I) or line filter (L). Impedance: interstage, 10,000 ohms; line, 500/600 ohms. Shielded to reduce hum pickup to 150 mv. per gauss at 60 cycles. In hermetically sealed cases. Size, 1 1/2 x 1 1/2 x 1 1/2". Av. shpg. wt., 9 oz.

No.	Type	Cycles	NET
62 G 950	BMI-60	60	
62 G 951	BMI-400	400	
62 G 952	BMI-1,000	1,000	
62 G 960	BML-400	400	24.50
62 G 974	BML-1,000	1,000	
62 G 966	*BML-200	200	
62 G 971	LMI-200	200	
62 G 972	LMI-3,000	3,000	

# Merit Transformers



## RADIO AND TV REPLACEMENT TRANSFORMERS

### TYPE 1000 CONVERSION KIT

Contains components for converting TV sets designed for small picture tubes to 70" deflection so that they may be used with 14" to 24" tubes. Includes 1 each of the following components: HVO-7 Horizontal Sweep Transformer (Fig. N); MWC-1 4-29 mh Width Linearity Control with AGC winding (Fig. O); MDF-70 Deflection Yoke (Fig. R). With complete instructions. Wt., 1 lb. 14 oz. **13.63**

### BLOCKING OSCILLATOR TRANSFORMERS

Vertical and horizontal blocking oscillator transformers for replacement purposes. Av. shpg. wt., 6 oz.

No.	Type	NET	Ratio	Mtg. Ctrs.	Size	Fig.
62 G 182	A-3000 vert.	1.56	1:4.2	2"	1 1/2 x 2 1/4 x 1 1/2"	A
62 G 196	A-4000 vert.	1.91	1:4.2	1 1/2"	1 1/2 x 2 1/4 x 1 1/2"	J
62 G 280	A-3003 vert.	1.47	1:4.2	1 1/4"	1 1/2 x 2 1/4 x 1 1/2"	A
62 G 197	A-4002 hor.	2.20	2:1	1 1/2"	1 1/2 x 2 1/4 x 1 1/2"	J
62 G 252	A-4003 vert.	1.91	1:4.2	1 1/2"	1 1/2 x 1 3/4 x 1 1/2"	.....

### UNIVERSAL OUTPUT TRANSFORMERS

Single or push-pull. Primary impedance, 4000-7000-8000-10000-14000 ohms CT. Secondary impedance, .17 to 32 ohms. Av. shpg. wt., 1 lb.

No.	Type	NET	Watts	Pri. Ma	Mtg. Ctrs.	Size	Fig.
62 G 444	A-2900	1.62	4	35	2"	1 1/2 x 2 1/4 x 1 1/2"	F
62 G 445	A-2901	1.76	8	40	2 1/2"	1 1/2 x 2 1/4 x 1 1/2"	F
62 G 446	A-2902	2.35	18	40	2 1/2"	2 1/4 x 2 1/4 x 1 1/2"	.....

### UNIVERSAL LINE TRANSFORMERS

For line-to-voice coil. \*For 70.7 v. line. Rated power furnished on lowest tap. Others reduce power in steps of 3 db. Av. shpg. wt., 8 oz.

No.	Type	NET	Primary Impedance	Sec. Imp.	Watts	Fig.
62 G 447	A-2906	1.91	500-1000-1500-2000	3.2-6-8	10	F
62 G 450	A-3005	1.32	500	3.2-6-8	5	A
62 G 451	A-3013*	1.91	1000-2000-4000-8000-16000	3.5-7	5	F
62 G 452	A-3014*	2.35	500-1000-2000-4000-8000	4-8-16	10	F

### POWER TRANSFORMERS

For 115 V., 50-60 cycles AC. \*For TV boosters. †Have rectifier sockets. All Fig. C except †, D.

Stock No.	Type	NET	Plate		Rec.		Fil.		Mtg. Ctrs.	Wt. Lbs.
			Volts	Ma	V	A	V	A		
62 G 190	P-3059	14.70	720 CT	250	5	3	6.3	2.7	3x3 3/4"	14 1/2
62 G 193	P-3067	14.70	800 CT	220	5	3	6.3	9	3x3 3/4"	13 3/4
62 G 140	P-3069†	13.23	700 CT	225	5	3	6.3	2.6	3x3 3/4"	9 3/4
62 G 142	P-3071†	13.23	720 CT	180	5	3	6.3	9	2 3/4 x 3 3/4"	9 1/2
62 G 255	P-3078	13.82	720 CT	275	5	3	6.3	1.5	3x3 3/4"	12
62 G 273	P-2952	5.00	700 CT	90	5	3	6.3	3.5	2 1/4 x 2 1/4"	5
62 G 272	P-2951	4.56	650 CT	70	5	3	6.3	2.5	2x2 1/2"	3 1/2
62 G 271	P-2950	3.97	650 CT	40	5	2	6.3	2	2x2 1/2"	3
62 G 257	P-3045*	2.94	120	50	5	2	6.3	2	3 1/2"	1 1/2
62 G 145	P-3046*	1.91	150	25	5	2	6.3	5	2"	1
62 G 281	P-3048	4.56	520 CT	90	5	3	6.3	4.7	2x2 1/2"	6
62 G 282	P-2953	5.73	700 CT	120	5	3	6.3	4.7	2 1/2 x 3 1/2"	6
62 G 191	P-3063	13.23	720 CT	250	5	3	6.3	9	3 3/8 x 4 1/8"	12 1/2
62 G 283	P-3148†	4.12	520 CT	90	5	3	6.3	4.7	2x2 3/8"	3 1/2
62 G 284	P-3151†	4.56	650 CT	70	5	3	6.3	3.5	2 1/2 x 1 1/2"	4 1/4
62 G 285	P-3152†	5.00	700 CT	90	5	3	6.3	3.5	2 1/2 x 2 3/8"	5 1/4

### FILTER CHOKES

Type C-2991 has 2000 volt insulation. Others rated at 1500 volts.

No.	Type	NET	Hys.	Ma	Ohms	Size	Lbs.	Fig.
62 G 177	C-2973	1.03	1.5	10	95	1 1/2 x 1 1/4 x 1"	1/4	A
62 G 178	C-2991	2.59	2	250	53	2 1/2 x 3 1/4 x 2"	1 1/2	A
62 G 179	C-2994	1.32	1.5	200	90	1 1/2 x 2 1/4 x 1 1/2"	3/4	A
62 G 180	C-2995	1.76	1.8	100	375	2x3 1/2 x 1 1/2"	1 1/2	A
62 G 181	C-2996	2.06	1.0	300	60	2 1/2 x 3 1/2 x 2"	1 1/2	A

Ask for free Merit TV Replacement Guide, 37 G 073 with your next order.

### FILAMENT AND AUTOTRANSFORMERS

Type P-3074 is a low current (isolation) filament transformer. Type P-3097 transformer isolates damper tube from other filaments. Type P-3098 TV autotransformer provides increased picture tube voltages.

No.	Type	NET	Pri. Volts	Secondary Volts	Amps	Wt. Lbs.	Fig.
62 G 259	P-3074	2.20	115	6.3	1.2	1 1/2	A
62 G 260	P-3097	2.18	6.3	12.6	1	1 1/2	A
62 G 261	P-3098	1.47	6.3	12.6, taps at 9.45-6.3	1	1	A
62 G 286	P-2944	1.76	115	6.3 CT	1	1 1/4	A
62 G 287	P-2945	2.12	115	6.3 CT	2	1 1/4	A
62 G 242	P-2946	2.65	115	6.3 CT	3	1 1/2	A
62 G 243	P-2947	3.38	115	6.3 CT	6	2 1/4	A

### VERTICAL OUTPUT TRANSFORMERS

Separate primary and secondary, except autotransformer type.

Stock No.	Type	NET	Turns Ratio Pri. to Sec.	Size	Wt. Lbs.	Fig.
62 G 189	A-3035	3.67	10:1	3 1/2 x 2 1/4 x 2 1/2"	2 1/2	EV
62 G 151	A-3036	2.50	10:1	2 1/2 x 1 1/2 x 1 1/2"	1 1/2	A
62 G 152	A-3037†	2.50	11.4:1	2 1/2 x 1 1/2 x 1 1/2"	1 1/2	A
62 G 270	A-3038	3.23	10:1	2 1/2 x 3 1/2 x 2 1/4"	1 1/2	A
62 G 154	A-3039†	3.23	18:1	2 1/2 x 3 1/2 x 2 1/4"	1 1/2	A
62 G 250	A-3080	3.53	25:1, 50:1	3x3 1/2 x 2 1/4"	3	A
62 G 251	A-3081†	3.82	30:1, 50:1	2 1/4 x 3 1/2 x 2 1/4"	1 1/2	A

### HORIZONTAL OUTPUTS—WIDTH/LINEARITY CONTROLS

\*Use with MD-12. †For voltage doublers. HVOX7 has new type molded insulation on hi-voltage winding. ‡Use with MDF-70. HVO-7 has universal mounting and AFC winding. \*\*Universal width, linearity control with AGC winding; use with HVO-7 or HVO-8. ††Use with MDF-30 lu direct drive deflection systems.

Stock No.	Mfr's Type	NET EACH	Tube	Equivalent	Wt. Lbs.	Fig.
62 G 161	HVO-3*	4.70	10BP4, etc.	RCA 211T3	2	M
62 G 162	HVO-5†	5.88	16AP4, etc.	RCA 211T5	2 1/4	M
62 G 157	HVO-7†	7.06	10" to 24"	GE 7J11	1 1/2	N
62 G 274	HVO-7‡	8.82	10" to 24"	GE 7J11	1 1/2	N
62 G 158	HVO-8††	3.82	10" to 24"	Air Core None	1 1/2	.....
62 G 198	MWC-1**	1.32	20-60 mh	None	1 1/2	O
62 G 263	MWC-3	1.12	17" and 24"	RC A 230T1	1 1/2	X
62 G 264	HVO-9†	5.88	17" and 24"	Fast Retractor	1 1/2	N
62 G 275	HVO-10‡	5.88	10" to 21"	ZEN. S-16204	1 1/2	N
62 G 276	HVO-11‡	5.29	10" to 19"	Motorola	1	Z
62 G 244	HVO-12	5.88	10" to 20"	.....	1	.....

### Fig. R—DEFLECTION YOKES

With network and leads. \*Cosine type winding. Ferrite core.

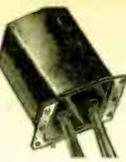
No.	Type	NET	Def.	Ind.—Millihenries Hor.	Ver.	Lbs.
62 G 146	MD-12	5.29	53°	8	48	1
62 G 148	MDF-74*	5.88	70°	10	45	1 1/2
62 G 173	MDF-70*	5.88	70°	20	48	1 1/2
62 G 267	MD-13	5.29	53°	30	48	1 1/2
62 G 268	MDF-71*	5.88	70°	30	50	1 1/2
62 G 245	MDF-73*	5.88	70°	19	40	1 1/2

### OUTPUT TRANSFORMERS

To couple plate or plates of output tube to speaker voice coil. Secondary impedance, 3.5 ohms. \*Push-pull. †Hum-bucking taps. Av. wt., 1/2 lbs.

Stock No.	Mfr's Type	NET EACH	Primary Imp.	Pri. Ma	Max. Watts	Size	Fig.
62 G 434	A-3025	.97	2500	50	3	1 1/2 x 2 1/4 x 1 1/2"	A
62 G 435	A-3026	.97	3000	40	3	1 1/2 x 2 1/4 x 1 1/2"	A
62 G 436	A-2927	1.01	8000	20	3	1 1/2 x 1 1/2 x 1"	A
62 G 437	A-2928	1.12	2000	60	5	1 1/2 x 2 1/4 x 1 1/2"	A
62 G 438	A-2930	1.18	5000	40	5	1 1/2 x 2 1/4 x 1 1/2"	A
62 G 439	A-2931	1.18	7000	30	5	1 1/2 x 2 1/4 x 1 1/2"	A
62 G 440	A-2932	1.18	10000	30	5	1 1/2 x 2 1/4 x 1 1/2"	A
62 G 441	A-2936	1.76	10000*	75	10	1 1/2 x 2 1/4 x 1 1/2"	A
62 G 442	A-2937	1.47	25000†	10	5	1 1/2 x 2 1/4 x 1 1/2"	A
62 G 443	A-3031	1.41	3000†	50	5	1 1/2 x 2 1/4 x 1 1/2"	A

# Chicago Transformers



Case No.	Depth	Width	Height	Case No.	Depth	Width	Height	Case No.	Depth	Width	Height
12	2 1/4"	2 1/4"	2 1/4"	16	2 7/8"	2 1/4"	3 1/2"	20	3 1/16"	3 3/8"	4 3/8"
13	2 1/4"	2 1/4"	2 1/4"	17	2 7/8"	2 1/4"	3 1/2"	21	3 1/16"	3 3/8"	4 1/8"
14	2 1/4"	2 1/4"	3 1/8"	18	3 1/2"	3 1/2"	4 1/4"	22	4 1/8"	4 1/8"	5 1/8"
15	2 1/4"	2 1/4"	3 1/8"	19	3 1/2"	3"	4 1/4"	24	5 1/8"	4 1/8"	6 1/8"

## TRANSFORMERS AND REACTORS

A complete selection of power transformers, filament transformers and filter reactors designed for modern electronic equipment. Three types of construction are available to meet every requirement—hermetically sealed, semi-sealed and compound sealed. All units have high grade magnet wire coils wound on non-aging, silicon steel cores. Core and coil are vacuum-impregnated with varnish and baked at high temperatures to achieve a vibration-proof unit. They are housed in seamless, drawn steel cases and sealed with special moisture-resistant compound. The

hermetically sealed units, Fig. H, meet the rigid standards of Grade I, JAN-T-27 specifications. Sturdy construction. One-piece steel covers are bonded by deep-seal soldering. Designed for military, airborne, marine runs and ground communications equipment; research applications, pilot base covers fitted with phenolic terminal boards and numbered solder lugs. Compound sealed units, Fig. C, have fiber board covers and 10° corner-coded leads. Power units have 117 v., 50-60 cycle primaries.

### POWER TRANSFORMERS FOR CAPACITOR INPUT SYSTEMS

Fig. H. Hermetically Sealed				Fig. S. Semi-Sealed				Fig. C. Compound Sealed				Specifications								
Stock No.	Mfr's Type	Case No.	NET EACH	Stock No.	Mfr's Type	Case No.	NET EACH	Stock No.	Mfr's Type	Case No.	NET EACH	Plate		Rect.		Fil.		Wt. Lbs.		
												V.C.T.	Ma	V	A	V.C.T.	A	V.C.T.	A	
64 G 600	PHC-55	17	12.88	64 G 607	PSC-55	17	8.29	64 G 614	PCC-55	16	5.38	540	55	5	2	6.3	2	3 1/2	3 1/2	
64 G 601	PHC-70	19	14.26	64 G 608	PSC-70	19	9.53	64 G 615	PCC-70	18	6.62	670	70	5	2	6.3	3	4 1/2	4 1/2	
64 G 602	PHC-85	20	15.28	64 G 609	PSC-85	20	10.95	64 G 616	PCC-85	20	7.64	660	85	5	2	6.3	3	6	6	
64 G 603	PHC-105	21	16.29	64 G 610	PSC-105	21	11.61	64 G 617	PCC-105	20	8.29	690	105	5	2	6.3	3.5	6 1/2	6 1/2	
64 G 604	PHC-120	21	17.23	64 G 611	PSC-120	22	12.23	64 G 618	PCC-120	22	9.32	750	120	5	3	6.3	4	9 1/2	9 1/2	
64 G 605	PHC-150	22	22.87	64 G 612	PSC-150	22	16.17	64 G 619	PCC-150	22	10.67	740	150	5	3	6.3	4	11 1/2	11 1/2	
64 G 606	PHC-200	22	24.49	64 G 613	PSC-200	22	17.20	64 G 620	PCC-200	22	12.44	770	200	5	3	6.3	4.5	12	12	

### POWER TRANSFORMERS FOR REACTOR INPUT SYSTEMS

Stock No.	Mfr's Type	Case No.	NET EACH	Stock No.	Mfr's Type	Case No.	NET EACH	Stock No.	Mfr's Type	Case No.	NET EACH	Primary Volts	Secondary Volts	Watts Cont.	Wt. Lbs.			
64 G 621	PHR-55	17	12.73	64 G 629	PSR-55	17	8.53	64 G 637	PCR-55	16	5.59	700	55	5	2	3 1/4		
64 G 622	PHR-70	19	13.79	64 G 630	PSR-70	19	9.77	64 G 638	PCR-70	18	6.32	850	70	5	2	3 3/4		
64 G 623	PHR-85	20	14.79	64 G 631	PSR-85	20	11.17	64 G 639	PCR-85	20	7.35	880	85	5	2	3 3/4		
64 G 624	PHR-105	21	16.29	64 G 632	PSR-105	21	11.76	64 G 640	PCR-105	20	7.85	900	105	5	2	3 3/4		
64 G 625	PHR-120	21	17.23	64 G 633	PSR-120	22	12.50	64 G 641	PCR-120	22	8.79	1000	120	5	3	6 1/2		
64 G 626	PHR-150	22	21.34	64 G 634	PSR-150	22	16.38	64 G 642	PCR-150	22	11.61	1020	150	5	3	6 1/2		
64 G 627	PHR-200	22	22.46	64 G 635	PSR-200	22	17.49	64 G 643	PCR-200	22	12.64	1040	200	5	3	6 1/2		
64 G 628	PHR-300	24	30.66	64 G 636	PSR-300	24	24.99	64 G 644	PCR-300	24	17.93	1100	300	5	6	6.3		
												740	300	5	6	6.3	5	17 1/2
												150	300	5	6	6.3	5	17 1/2

## FILTER REACTORS

Fig. H. Hermetically Sealed				Fig. S. Semi-Sealed				Fig. C. Compound Sealed				Specifications				
Stock No.	Mfr's Type	Case No.	NET EACH	Stock No.	Mfr's Type	Case No.	NET EACH	Stock No.	Mfr's Type	Case No.	NET EACH	Hys.	Ma	Ohms	Test Volts	Wt. Lbs.
64 G 645	RH-1540	12	6.12	64 G 657	RS-1540	12	3.53	64 G 669	RC-1540	12	2.50	15	40	475	2,500	1 1/2
64 G 646	RH-1055	13	6.32	64 G 658	RS-1055	13	3.91	64 G 670	RC-1055	12	2.91	10	55	230	2,500	1 1/2
64 G 647	RH-1535	14	6.32	64 G 659	RS-1535	13	4.12	64 G 671	RC-1555	12	2.06	15	55	420	2,500	2 1/4
64 G 648	RH-1085	14	6.70	64 G 660	RS-1085	15	4.12	64 G 672	RC-1085	14	3.45	10	85	175	2,500	2 1/4
64 G 649	RH-1585	14	6.70	64 G 661	RS-1585	15	4.97	64 G 673	RC-1585	14	3.70	15	85	285	2,500	2 1/4
64 G 650	RH-8105	17	7.85	64 G 662	RS-8105	17	5.14	64 G 674	RC-8105	16	4.11	8	105	100	2,500	3 1/4
64 G 651	RH-12105	17	7.85	64 G 663	RS-12105	17	4.99	64 G 675	RC-12105	16	4.32	12	105	170	2,500	4
64 G 652	RH-8150	18	9.00	64 G 664	RS-8150	19	6.47	64 G 676	RC-8150	18	5.67	8	150	100	2,500	5 1/4
64 G 653	RH-12150	19	9.00	64 G 665	RS-12150	19	6.67	64 G 677	RC-12150	18	5.73	12	150	150	2,500	5 1/2
64 G 654	RH-8200	20	10.58	64 G 666	RS-8200	21	7.64	64 G 678	RC-8200	20	6.67	8	200	85	2,500	7
64 G 655	RH-12200	20	10.58	64 G 667	RS-12200	21	7.82	64 G 679	RC-12200	20	6.76	12	200	140	2,500	7 1/2
64 G 656	RH-8300	22	15.20	64 G 668	RS-8300	22	11.02	64 G 680	RC-8300	22	9.35	8	300	55	3,500	12 1/2

### FILAMENT TRANSFORMERS

Fig. H. Hermetically sealed, 115-230 v., 50-60 cycle primaries.

No.	Type	Case	NET	Sec. V.C.T.	Amps.	Test V.	Lbs.
64 G 681	FH-210	16	13.02	2.5	10	5,000	3
64 G 683	FH-210H	19	15.14	2.5	10	9,000	4
64 G 685	FH-54	15	9.47	5	4	2,500	2 1/4
64 G 687	FH-58	17	13.02	5	10	2,500	3 1/2
64 G 689	FH-516	21	18.82	5	20	2,500	6 1/2
64 G 691	FH-530	22	24.25	5	30	2,500	10 1/2
64 G 721	FH-615	12	6.91	6.3	1.5	2,500	1
64 G 722	FH-63	14	9.38	6.3	3	2,500	2
64 G 693	FH-65	16	10.91	6.3	5	2,500	3
64 G 695	FH-610	19	15.43	6.3	4	2,500	5
64 G 697	FH-104	17	11.20	10	10	2,500	3 1/4
64 G 699	FH-1010	21	18.20	10	10	2,500	6 1/2

Fig. S. Semi-sealed, 115-230 v., 50-60 cycle primaries.

No.	Type	Case	NET	Sec. V.C.T.	Amps.	Test V.	Lbs.
64 G 682	F-210	17	8.91	2.5	10	5,000	3
64 G 684	F-210H	19	10.44	2.5	10	9,000	4
64 G 686	F-54	15	6.38	5	4	2,500	2 1/4
64 G 688	F-58	17	8.53	5	10	2,500	3 1/2
64 G 690	F-516	21	12.85	5	20	2,500	6 1/2
64 G 692	F-530	22	16.61	5	30	2,500	10 1/2
64 G 723	F-615	12	3.67	6.3	1.5	2,500	1
64 G 724	F-63	14	5.14	6.3	3	2,500	2
64 G 694	F-65	17	7.50	6.3	5.5	2,500	3
64 G 696	F-610	19	9.58	6.3	10	2,500	5
64 G 698	F-104	17	7.64	10	4	2,500	3 1/4
64 G 725	F-1010	21	12.50	10	10	2,500	6 1/2

### ISOLATION TRANSFORMERS

Fig. IS. For faster, safer, easier servicing. Chassis ground is isolated from line ground, eliminating shock hazard. Primary slide switch selects high, medium and low secondary voltages. Electrostatic shielding, 8° line cord, female output receptacle. For 50-60 cycle AC operation.

Stock No.	Mfr's Type	Case No.	NET EACH	Primary Volts	Secondary Volts	Watts Cont.	Wt. Lbs.
64 G 726	IS-50	21	7.50	105/115/125	125/115/105	50	5
64 G 727	IS-100	22	11.61	105/115/125	125/115/105	100	8 1/2
64 G 728	IS-150	24	13.82	105/115/125	125/115/105	150	12 1/2
64 G 729	IS-250	24	16.31	105/115/125	125/115/105	250	18 1/4

### TRANSISTOR TRANSFORMERS

Ultra-miniature iron-core audio transformers. Useful range, below 1 mw level. Extremely fine wire, wound on nylon bobbins. Nickel steel laminations. Actual wt., 1/10 oz. All are 1/4x3/8x1/4", except Type UM110, 1/4x3/8x3/8". Shpg. wt., 2 oz.



- 64 G 237. Type UM-110. INTERSTAGE. Imp.: pri., 20,000; sec., 1000 ohms. DC res.: pri., 1675; sec., 285 ohms. NET. 7.20
- 64 G 238. Type UM-111. OUTPUT OR MATCHING. Imp.: pri., 1000; sec., 50/60 ohms. DC res.: pri., 120; sec., 9.0 ohms. NET. 6.17
- 64 G 239. Type UM-112. HIGH-IMP. MIC. INPUT. Imp.: pri., 200,000; sec., 1000 ohms. DC res.: pri., 4,000; sec., 195 ohms. NET. 8.08
- 64 G 240. Type UM-113. INTERSTAGE. Imp.: pri., 20,000; sec., 1000 ohms. DC res.: pri., 1350; sec., 205 ohms. 1/4x3/8x1/4". NET. 6.47

# Transformers

## CHICAGO HIGH-FIDELITY TRANSFORMERS

Fig. B—OUTPUT TRANSFORMERS

Case	Height	Width	Depth	Case	Height	Width	Depth
14	3 1/2"	2 1/2"	2 1/4"	20	4 5/8"	3 1/2"	3 3/4"
16	3 1/2"	2 1/2"	2 1/4"	21	4 1/2"	3 1/4"	3 3/4"
18	3 3/4"	3 1/2"	3"	22	5 1/2"	4 1/4"	4 1/4"

Response, 30-20,000 cycles, averaging  $\pm 0.5$  db. Power: BO-1, 22 mw; BO-2, 1 w.; BO-5, 5 w.; BO-6, 20 w.; BO-8, 30 w.; BO-9, 15 w.; BO-12, 10 w. Williamson circuit. Special "sealed-in-steel" construction. \*Extra 150/4 ohm secondary, 115% inverse feed-back winding. BO-13 is new, 20 w. Ultra-Linear type. †Case number.

No.	Type	NET	Pri. Imp.	Sec. Imp.	Application	Lb.	‡
62 G 522	BO-1	9.96	15,000	600/150CT	Single plate to line	2 1/4	14
64 G 734	BO-2	13.23	20,000 CT	600/150CT	PP plates to line	3	16
64 G 735	BO-5	15.99	10,000 CT	600/16/8CT	PP to line, or V.C.	4	18
64 G 736	BO-6†	17.20	7,500 CT	8/20	PP plates to voice coil	5 1/2	20
64 G 737	BO-8†	18.11	1,500 CT	600/16/8CT	PP par. Pl. to line, V.C.	6 1/2	21
64 G 738	BO-9*	16.90	5000/3000CT	600/16/8CT	PP pl. to line or V.C.	6	20
64 G 747	BO-12	17.50	10,000 CT	600/16/8	PP pl. to line or V.C.	9	22
64 G 748	BO-13	17.49	10,000 CT	16/8/4	Ultra-lin. PP pl. to V.C.	7	21

### HI-FI MINIATURE AUDIO TRANSFORMERS

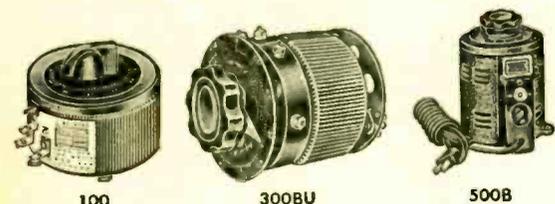
Similar in appearance to Fig. B. 7/8" sq. 1 1/4" ht. Response: 1 db, 30-15,000 cps. Max. level, 0 db. 7/8" sq. x 1 1/4". 50 K ohms sec. imp. except TT14, 60K. \*No DC in pri. Wt., 2 oz.

No.	Type	Net	Application	Pri. Imp.
64 G 591	TT-11	8.32	Mic., pickup or line to S. grid	50, 200/250, 500/600
64 G 592	TT-12	8.67	Mic., pickup or line to push-pull grids	50, 200/250, 500/600
64 G 593	TT-13	7.91	Dynamic mic. to S. grid	7.5/30
64 G 594	TT-14	6.82	Single plate to S. grid	*15,000

### Fig. G—NSI—DYNAMIC NOISE SUPPRESSOR CHOKES

High Q chokes designed specifically for use in noise suppressor circuits, widely used where high Q is required. Inductance values are accurate within  $\pm 5\%$  with up to 15 ma. DC. Units have a minimum Q of 20. Supplied with noise suppressor circuit diagram. Overall size, 1 1/2"x2 1/2"x1 1/2". Shpg. wt., 1/2 lb.

62 G 520. Type NSI-1. Inductance, 0.8 hys. NET  
62 G 521. Type NSI-2. Inductance, 2.4 hys. EACH.....5.73



### STANDARD ELECTRIC AUTO-TRANSFORMERS TYPE 100 VARIABLE AUTOFORMER

Compact autotransformer rated at 150 watts. Requires no special ventilation. "LoRok" commutator eliminates virtually all oxidation. Output variable 0-120 or 0-132 v. at 1.25 amps. Mounts in 1/2" hole. For 120 v. single phase, 60 cycle AC. 3" dia. x 2 1/4". Shpg. wt., 2 1/2 lbs.  
62 G 583. NET.....8.33

### TYPE 300BU VARIABLE AUTOFORMER

Moderately priced autotransformer for laboratory and industrial use. Mounts behind panel with 3 6-32 screws. Terminals for clockwise or counter-clockwise rotation. Output at 0-115 or 0-135 v. Maximum current of 3 amps may be drawn at any voltage setting. Supplied with black bakelite knob and etched dial plate. Rugged, die-cast aluminum frame with black wrinkle finish. For operation from 115 v. 50-60 cycle AC. Can be operated from 25 cycle current at 50% of maximum rating. 4 KVA maximum load rating. 4" diameter x 3 1/4" depth behind panel. Wt., 6 lbs.  
62 G 580. NET.....12.25

### TYPE 500B AND 520B VARIABLE AUTOFORMERS

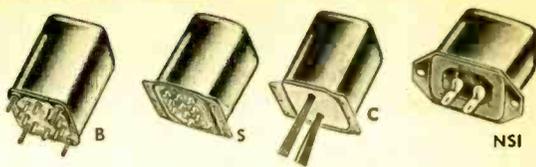
Types 500B and 520B are cased, 6 1/2"x4 1/2", supplied with line cord, plug, receptacle, on-off switch and fuse. 500BU is uncased, 4 1/2"x4 1/2", for back-of-panel mounting. \*115 v. 60 cycle AC input; †115 or 230 v. AC input; KVA and Output Volts indicated with 230 v. input (delivers 0-270 v. at .35 KVA with 115 v. input). Av. shpg. wt., 12 lbs.

Stock No.	Mfr's Type	Output		KVA	NET EACH
		Volts	Ampers		
62 G 581	500B*	0-115/0-135	7.5	.86/1.0	22.54
62 G 582	500BU*	0-115/0-135	7.5	.86/1.0	17.64
62 G 587	520BT	0-230/0-270	3.0	.69/.81	25.48

### TYPE 1500 AND 1520B VARIABLE AUTOFORMERS

Sturdy, highly dependable variable autotransformers for 2 KVA power applications. Rotor and frame of die-cast aluminum. Equipped with dust shield and suitable for bench or panel mounting. 1500B has 115 v. 60 cycle input; 1520B has 115 or 230 v. input. 1520B output listed with 230 v. input; delivers 270 v. at 1.05 KVA with 115 v. input. Size: 8 1/2"x5 1/2". Shpg. wt., 25 lbs.

Stock No.	Mfr's Type	Output		KVA	NET EACH
		Volts	Ampers		
62 G 589	1500B	0-135	15.0	2.0	45.08
62 G 591	1520B	0-270	9.0	2.4	45.08



### PA & COMMUNICATIONS OUTPUT TRANSFORMERS

See chart at left for case size. PA units have response within  $\pm 0.5$  db from 50-10,000 cycles. Types COS-1 and COS-2 are designed for communications use. Particularly adapted for receiving and transmitting equipment, such as Amateurs, police and aircraft types. Frequency response, within  $\pm 1$  db from 200-3,500 cycles. PA types (PSO and PCO) have tertiary winding for 10% inverse feedback.

Stock No.	Type	NET	Impedance		Watts	Wt. Lbs.	Fig.	Case
			Primary	Secondary				
64 G 739	PCO-80	9.14	5000 CT	600/150/16/8/4	20	6 1/2	C	20
64 G 740	PSO-80	12.50	5000 CT	600/150/16/8/4	20	6 1/2	S	20
64 G 741	PCO-200	10.35	6000 CT	600/150/16/8/4	30	9	C	22
64 G 742	PSO-200	13.67	6000 CT	600/150/16/8/4	30	9	S	22
64 G 743	COS-1	6.20	5000	600/150/16/8/4	5	2 1/2	S	14
64 G 744	COS-2	6.38	8000	600/150/16/8/4	5	2 1/2	S	14

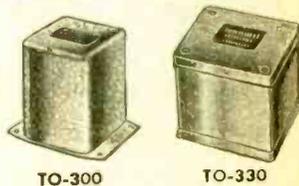
Fig. 5—COMMUNICATIONS INPUT TRANSFORMERS

Same frequency response as COS-1 and COS-2 in listing above. Housed in drawn steel cases. Size, 2 1/2"x1 1/2"x1 1/2". Shpg. wt., 1/4 lbs.

Stock No.	Type	NET	Impedance		Application
			Primary	Secondary	
64 G 745	CIS-1	8.70	600/150 CT	100,000 CT	Low level line to single or PP grids
64 G 746	CIS-2	5.00	125/50 80 MA	125,000 CT	Low level SB, DB carbon mike to single or PP grids

### ACROSOND 300 SERIES HI-FI OUTPUT TRANSFORMERS

Model TO-300. Hi-fidelity audio output transformer for use with Ultra Linear Acrosond and other Williamson type amplifier circuits. Provides a much higher audio output level at very low distortion. Excellent linearity gives uniform response. 7-section concentric symmetrical coil permits small compact construction. Can be used in converting many popular amplifier circuits to Ultra Linear operation. 20 watts of undistorted power from 20 to 30,000 cps; 40 watts of undistorted power from 30 to 20,000 cps. Primary impedance: 6600 ohms. Output impedance: 4, 8 and 16 ohms. Frequency response:  $\pm 1$  db from 10 to 100,000 cps. Permissible feedback: 30 db. Primary shunt inductance: 85 henries minimum. Maximum DC per primary: 75 ma. 10" color-coded leads. Seamless steel flanged case with gray hammettone finish. Size: 4 1/2"x3 3/4"x3 1/4". Shpg. wt., 7 lbs.  
63 G 993. NET.....24.75



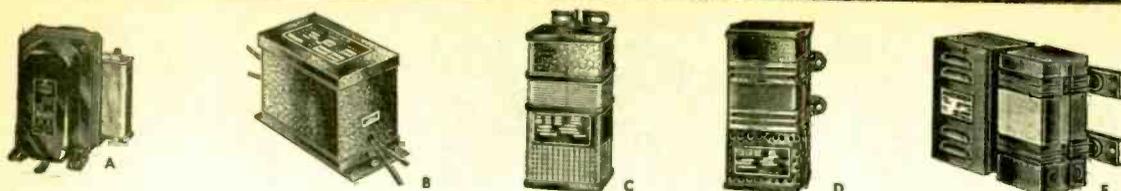
Model TO-310. Hi-fidelity audio output transformer, similar to TO-300, above, but recommended for 12 watt circuits. Excellent for converting amplifiers using type 6V6 tubes for Ultra Linear operation. Primary impedance: 8000 ohms. Output impedance: 4, 8 and 16 ohms. 10 watts of undistorted power output from 20 to 30,000 cps; 20 watts of undistorted power output from 30 to 20,000 cps. Frequency response:  $\pm 1$  db from 10 to 100,000 cps. Permissible feedback: 30 db. Primary shunt inductance: 85 henries minimum. Maximum DC per primary: 75 ma. 10" color coded leads. Seamless steel flanged case. Size: 4 1/2"x3 3/4"x3 1/4". Shpg. wt., 6 lbs.  
63 G 994. NET.....18.75

Model TO-305. Hi-fidelity audio output transformer, similar to TO-300, above, but has 4, 8, 16, 125 and 500 ohm output impedances. Primary impedance, 6600 ohms. Matches push-pull type 6L6 or 5881 tubes for Ultra Linear operation. 20 watts of undistorted power from 30 to 30,000 cps; 40 watts undistorted power from 30 to 20,000 cps. 10" color coded leads. Size: 4 1/2"x3 3/4"x3 1/4". Shpg. wt., 7 lbs.  
63 G 995. NET.....30.75

Model TO-316. Hi-fidelity audio output transformer, similar to TO-310, above, but has 4, 8, 16, 125 and 500 ohm output impedances. Primary impedance 8000 ohms. Matches push-pull type 6V6 tubes for Ultra Linear operation. 10 watts undistorted power from 20 to 30,000 cps; 20 watts from 30 to 20,000 cps. 4 1/2"x3 3/4"x3 1/4". Shpg. wt., 6 lbs.  
63 G 996. NET.....24.75

Model TO-330. Designed for high-power, push-pull parallel Ultra-Linear operation of Acrosond or Williamson type amplifier circuits. Can be used with push-pull parallel type 807 or 8-T-66 tubes to provide 50 watts of undistorted power from 30 to 30,000 cps; 100 watts of undistorted power from 30 to 20,000 cps. Primary impedance: 3300 ohms. Output impedance: 4, 8, 16 ohms. Frequency response:  $\pm 1$  db 10 cps to 100 kc. Permissible feedback: 30 db. Primary shunt inductance: 85 henries minimum. Insertion loss all taps: .5 db maximum. DC per primary maximum: 150 ma. Permissible DC imbalance: 15%. Fully protected—potted in folded steel case. Gray hammettone finish. Top and bottom mounting facilities. Mtg. centers are 3x3 1/4". Size: 5 1/2"x4 1/2"x4 1/2". 10" color-coded leads. Shpg. wt., 15 lbs. Also available with output impedance of 125 or 500 ohms on special order.  
63 G 997. NET.....39.75

# Sola Transformers



## SOLA CONSTANT-VOLTAGE TRANSFORMERS

Fig. A—CVE TRANSFORMERS

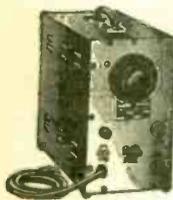
Extremely effective voltage stabilizers. Replace ordinary power transformers and provide excellent voltage regulation at low cost. Stabilize plate and filament voltages within  $\pm 3\%$  with line variations from 100-130 volts. Supplied with Pyranol input filter condensers and mts. bracket. For 100-130 v., 60 cycles AC only.

Type 7104. DC input to filter, 275 v @ 50 ma. Fil., 6.3 v CT @ 2 1/4 A; 5 v @ 2A. 42 VA rating. Shpg. wt., 6 lbs.  
62 G 669. NET.....10.15

Type 7106. Same as above, but furnishes 385 volts DC to filter @ 110 ma. Filaments, 6.3 v. CT @ 3A; 5 v @ 2A. 75 VA. Shpg. wt., 9 lbs.  
62 G 670. NET.....12.60

Type 7107. As above, but 380 v DC to filter @ 250 ma. Fil., 6.3 v @ 4A; 6.3 v @ 8A (in reg.); 5 v @ 3A, 210 VA. Shpg. wt., 19 lbs.  
62 G 671. NET.....19.60

### CVL ADJUSTABLE AC SUPPLIES



For adjustable, regulated, harmonically filtered AC. Two outlet receptacles supply  $\pm 1\%$  regulated voltage. One fixed, 115 v.; other variable, 0-130 v. Two panel jacks (for leads) provide additional 0-130 v. output. Outputs can be used simultaneously. Harmonic distortion, less than 3%. Response, 1.5 cycles or less. Sizes: 50105 is 12 1/2 x 7 1/2 x 14 1/4". For 95-125

12 1/2"; 50106 is 13 1/2 x 7 1/2 x 14 1/4". For 95-125 volts, 60 cycle AC.

No.	Type	Amps	VA	Lbs.	NET
62 GX 672	50105	3	250	50	110.00
62 GX 673	50106	7.5	500	70	153.00

### CV TRANSFORMERS

Static, magnetic voltage regulating transformers. Designed to provide constant voltage output unaffected by changes in input voltage over the ranges indicated. Completely automatic—no manual adjustments required. Output voltage constant,  $\pm 1\%$ . All inputs rated 60 cycles, single phase AC. Input voltages:  $\$190$  to 250,  $\$95$  to 125 and 190 to 250,  $\$190$  to 250 and 380 to 500; others have 95 to 125 v. inputs. Output voltages:  $\$6$ ,  $\$6.3$ ,  $\$230$ ; others have 115 v. outputs. Units designed for 25 or 50 cycle operation can be obtained on special order. Write for quotations, giving full details of your requirements.

Stock No.	Mfr's Type	Fils.	Cap. V.A.	Wt. Lbs.	NET EACH
62 G 650	30488*	B	15	6	16.00
62 G 649	30492†	B	15	6	16.00
62 G 656	30498	B	15	6	16.00
62 G 651	30881†	B	25	12	17.00
62 G 617	30882†	B	50	13	24.00
62 G 657	30804	C	30	12	18.00
62 G 658	30805	C	60	13	25.00
62 G 659	30806	C	120	17	33.00
62 G 618	30888	C	150	19	40.00
62 G 619	30885	C	60	13	25.00
62 G 620	30886	C	120	19	25.00
62 GX 660	30807	D	250	30	52.00
62 GX 621	30M807†	D	250	30	52.00
62 GX 661	30808	D	500	40	81.00
62 GX 622	30M808†	D	500	40	81.00
62 GX 662	30809	D	1000	115	135.00
62 GX 623	30M809†	D	1000	115	135.00
62 GX 624	30811	D	2000	205	245.00
62 GX 624	30M811†	D	2000	205	245.00
62 GX 625	30586†	D	2000	205	245.00
62 GX 664	301706**	D	3000	350	345.00
62 GX 626	301707††	D	3000	350	345.00
62 GX 627	301704**	D	4000	440	435.00
62 GX 666	301702**	D	5000	525	515.00
62 GX 628	301703††	D	5000	525	515.00
62 GX 629	301700††	D	10000	1025	990.00
62 GX 630	301701††	D	10000	1025	990.00

Fig. E—CVH TRANSFORMERS

Provide stabilized source of voltage with extremely low distortion. For the most exacting applications in general laboratory work, instrument calibration, precision electronic equipment, or any other equipment which may be affected by harmonic frequencies of the power source. Less than 3% harmonic content in output. Have regulated sine wave output constant within  $\pm 1\%$ . Type 5003 supplied with power cord and receptacle; others have knock-out boxes. For 95-125 v., 60 cycles. Types 5005 and 5006 illustrated.

Stock No.	Mfr's Type	Seo. V.	Cap. VA	Wt. Lbs.	NET
62 GX 644	5003	115	60	35	35.00
62 GX 645	5004	115	120	45	44.00
62 GX 646	5005	115	250	60	70.00
62 GX 647	5006	115	500	70	105.00
62 GX 648	5008	115	1000	160	175.00
62 GX 642	5010	115	2000	320	310.00

### CVA PLUG-IN TV TRANSFORMERS

Type 7202. Designed to reduce or eliminate distortion and flicker in television screens due to variations in line voltage. Can be used with any TV receiver with power consumption no less than 175 watts and no greater than 300 watts. Keeps voltage constant within 3% despite line voltage variations up to 30%. Turns on and off with TV. Line cord and receptacle. 9 1/4 x 4 1/2 x 7 1/4". 95-125 v., 60 cycle AC. 26 lbs.  
62 GX 667. NET.....32.00



Type 7201. For 110 to 175 watt sets. 19 lbs.  
62 G 631. NET.....29.60

## LINE ADJUSTER TRANSFORMERS FOR ALL APPLICATIONS

### MALLORY LINE VOLTAGE ADJUSTER & ISOLATION TRANSFORMER



Model LVA-2. For Radio-TV shops, labs and industrial service shops requiring line voltage adjustment, line isolation or a low-voltage, heavy-current output. Provides continuously variable AC line adjustment from 90-130 v., at 1200 watts; and electrostatically shielded, isolated and continuously variable low voltage AC from 0-40 v. at 4 amps; and an electrostatically shielded and isolated continuously variable 90-130 v. AC output at 350 watts fed to 2-standard AC outlets, AC meter indicates output. In metal case, 7 1/2 x 5 1/2 x 9 1/2". Shpg. wt., 16 lbs.  
62 G 549. NET.....41.11

### REGENCY VOLTAGE BOOSTER

For TV Receivers

Model VB-1. Autoformer, voltage booster. Adjustable to 117-volt output with line voltage variations of 90-130 volts. Essentially an auto transformer with tapped primary, the VB-1 may be used in high voltage area to decrease the line voltage—as well as for boosting the input voltage in low voltage areas. For TV sets up to 350 watts. Size, 4 1/2 x 3 1/2 x 4 1/4". For 90-130 volts, 60 cycles AC. Wt., 7 lbs.  
62 G 616. List, \$19.95. NET.....11.73



### SERVICE INSTRUMENTS CO. "UP-DOWN" VOLTAGE REGULATOR

New, voltage regulator for increasing low line voltage or decreasing high line voltage. Will raise or lower line voltage 10 volts by simply flicking a switch. Can be used with any television receiver or appliance which has a power consumption of 300 watts or less. Restores proper picture width. Size: 2 1/2 x 3 1/2 x 3 1/4". Shpg. wt., 3 lbs.  
63 G 985. NET.....5.85



New "Up-Ten" Line Booster. Adds ten volts to power line. Can be used with any TV receiver or appliance with power consumption up to 300 watts. Eliminates inadequate picture width and height caused by low line voltage. Size: 2 1/2 x 3 1/2 x 3 1/4". Shpg. wt., 2 1/2 lbs.  
63 G 986. NET.....4.67



### KNIGHT VARIABLE VOLTAGE TRANSFORMERS

Fig. A. COMBINATION TRANSFORMER. Isolation and variable voltage unit. Separate primary and secondary, 150 watts. Delivers 115 v. output from line source of 90-250 volts, 6 pri. taps. Useful in adapting 115 volt equipment to 230 or 250 volts. For 50-60 cycles. Mounting centers, 3 x 3 1/4". 6 ft. cord and plug. Shpg. wt., 9 lbs.  
62 G 080. NET.....12.25

Fig. A. SET-TESTING AUTOTFORMER. Time-saving device for use in radio service shop. Tests potential failure in sets by voltage overload method. Helps to quickly locate hard-to-find, intermittent components. 7-tap switch calibrated in output volts, 90-150 (in 10 volt steps). Rated 150 watts. For 115 volts, 50-60 cycles AC. With 6 ft. cord and plug, output receptacle. Mounting centers, 2 1/2 x 2 1/4". Shpg. wt., 6 1/2 lbs.  
62 G 085. NET.....10.60

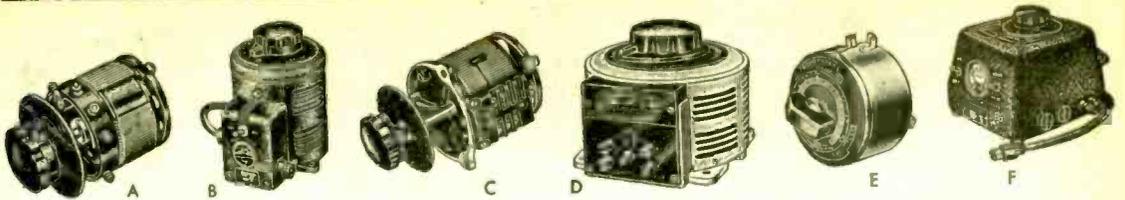
Fig. B. ISOLATION TRANSFORMERS. Valuable additions to radio and television service shops. Vertical-shell, 150 watt transformers for isolating test units. Reduce shock hazard. 100 watt transformer, 4 1/2 x 3 1/2 x 3 1/4". 250 watt transformer, 4 1/2 x 3 1/2 x 4 1/4". For operation from 115v., 50-60 cycles AC. Complete with cord and receptacle.  
62 G 086, 100 watt, 7 lbs. NET.....10.30  
62 G 087, 250 watt, 12 1/2 lbs. NET.....16.75

### RCA WP-25A TV ISOTAP



Isolation and auto transformer. For quick, safe radio-TV servicing. Valuable for detecting intermittent and faulty components, and for checking TV sets at high, medium and low voltage. Isolation-transformer feature eliminates shock hazards when checking transformerless receivers. Protects test equipment. Seven-position switch in primary selects 105-130 volts in 5-volt steps. Outputs: 105, 115 and 130 v. @ 500 VA from auto transformer winding; 105, 115 and 130 v. @ 275 VA from isolated secondary. Switch provides intermediate steps of output voltage. For 50-60 cycle AC. Gray steel case, 5 1/2 x 4 1/2 x 4 1/2". With 5 ft. line cord. Shpg. wt., 15 lbs.  
62 G 516. NET.....17.59

# Superior Voltage Controls



## "SUPERIOR" VARIABLE VOLTAGE CONTROLS

### POWERSTAT VARIABLE AUTOTRANSFORMERS

Deliver adjustable output voltage from AC line—output variable from zero to above line voltage. Negligible voltage change from no load to full load. Current ratings apply over full range of output voltage. Zero waveform distortion. Rated for 50° C. temperature rise under full load. \*For 115 volt AC inputs. †For 230 volt inputs. For 50-60 cycles, except \*60 cycles only. 2PF-136 has standard 2-blade plug and receptacle. 3PF-136 has 3-blade plug and receptacle; third wire is connected to Powerstat frame. Gang assemblies: 1156-2P and

1256-2P consist of two separate units operated from a common shaft. 1156-3P and 1256-3P consist of three units operated from a common shaft. 1156L-3V consists of three phase-for-phase wye-connected operations. Sizes shown on gang types are height and diameter. Mountings: P, panel; and U, general utility. Sizes shown: P types, distance back of panel and diameter; U types, overall height and diameter. Types 116 and 216 have on-off switch, line cord and plug, fuse and output receptacle.

Stock No.	Mfr's Type	Fig.	OUTPUT			Mtg.	Size	Wt. Lbs.	NET EACH
			Volts	Amps	KVA				
62 G 536	10*	E	0-132	1.25	.165	P	3x2 1/8"	2	8.50
62 G 531	20**	A	0-135	3.0	0.4	P	3 1/4 x 3 1/4"	6	12.50
62 G 525	116*	B	0-135	7.5	1.0	U	4 1/2 x 6 1/2"	12	23.00
62 G 524	116G*	C	0-135	7.5	1.0	P	4 1/2 x 9 1/2"	11	18.00
62 GX 543	136*	D	0-120	20.0	2.4	U	7 1/2 x 6 1/2"	25	50.00
62 GX 545	2PF-136*		0-120	20.0	2.4	U	7 1/2 x 6 1/2"	26	65.00
62 GX 546	3PF-136*		0-120	20.0	2.4	U	7 1/2 x 6 1/2"	26	65.00
62 GX 529	1156*		0-135	45.0	6.1	U	13 1/4 x 8 2 3/4"	80	118.00
62 G 527	216†	B	0-270	3.0	0.8	U	4 2 1/2 x 6 1/2"	12	20.00
62 GX 544	236†		0-240	9.0	2.2	U	7 1/2 x 6 1/2"	25	50.00
62 GX 530	1256†		0-270	28.0	7.5	U	13 3/4 x 8 2 3/4"	80	118.00
62 GX 537	1156 2P*		0-135	90.0	12.1	U	13 1/2 x 1 7/8"	170	269.00
62 GX 538	1156 3P*		0-135	135.0	18.2	U	13 1/2 x 2 5/8"	295	418.00
62 GX 539	1256 3P*		0-270	56.0	15.1	U	13 1/2 x 1 7/8"	170	269.00
62 GX 540	216†		0-270	84.0	22.7	U	13 1/2 x 2 5/8"	295	418.00
62 GX 541	1156L-3V		0-230	45.0	17.9	U	13 1/2 x 2 5/8"	280	394.00

### FIG. F MODEL UCIM VOLTBOX

For industrial and electrical, chemical and physics laboratory installations and radio-television servicing. One compact unit provides AC source for variable AC voltage testing. Has a variable voltage transformer, voltmeter, fuse, line switch, two five-way binding posts and three output receptacles. Delivers continuously adjustable output voltage up to 17% above line voltage to all output receptacles and binding posts. Rated at 7.5 amp. Input 115 v. 50-60 cycles. Output, 0-135 volts. In gray enamel finish aluminum case. Size, 3x8x6". Shpg. wt., 17 lbs.

62 GX 533, NET..... 53.00  
Model UC2M. As above but for 220 volts. Output, 0-270 volts at 3 amps.  
62 GX 542..... 55.00

### OTHER "SUPERIOR" EQUIPMENT

ALLIED can supply all Superior Powerstat equipment for commercial, industrial, laboratory and special-purpose applications. Available on special order are motor-driven powerstats, oil-cooled powerstats, and powerstat line correctors; Stabiline automatic voltage regulators, including electronic and electro-mechanical regulators; and all other Superior voltage-regulating equipment. Stabiline regulators are ideal for voltage regulation in radio and TV stations. Write for FREE Superior Bulletin (Stock No. 37 G 102).

### NEW POWERSTAT DIMMER SWITCH



Type WBD360-P2-K1. Wall-box dimmer switch designed to replace ordinary on-off wall switches. Simple to install—easily wired into new or existing circuits. Permits complete control of light intensity from darkness to full lamp brightness. Operation is smooth, silent and without flicker. Has switch incorporated to shut off entire circuit. No external switch is necessary. Can be used with one or more lamps up to 360 watt load. Lamps may be removed from line without affecting brightness of others. Essentially an autotransformer with movable brush riding on winding. Turning control knob moves brush contact to produce desired level of illumination. Only current required is used; unlike resistance-type controls which always dissipate current wastefully in heat. Fully protected by fuse and thermal overload. U. L. listed. Size: 8 1/4 x 6 1/2 x 3 1/4". Shpg. wt., 6 lbs.

62 G 547, NET..... 30.00



### ELECTRONIC VOLTAGE REGULATOR

Type IE 5101. 110-120 v. regulator designed to maintain constant voltage regardless of line or load changes. Completely electronic, instantaneous in action, has no moving parts. Waveform distortion never exceeds 3%. Output voltage is held to within ±0.1% of nominal for wide line variations; to within 0.15% of nominal for any load current change or load power factor change from lagging .5 to leading .9. Input voltage range: 95-135; output current range: 0-8.5 amps. 1 KVA output. Output voltage control and circuit breaker on front panel. Size: 11 1/2 x 20 1/2 x 11 1/2". Wt., 92 lbs.

62 GX 570, NET..... 310.00

### EM TYPE VOLTAGE REGULATOR

Type EM4106. 110-120 volt regulator designed to maintain constant output voltage regardless of variations in input voltage or load current. Consists of an electronic detector circuit controlling a motor-driven variable transformer which feeds a buck-boost auxiliary transformer. Features zero wave form distortion together with insensitivity to magnitude and power factor of load. Has no effect on system power factor. No critical adjustments. Output voltage can be set to different values. Circuit breaker protects unit from overload. Characteristic high efficiency. Nominal single phase output voltage: 115; input voltage range: 95-135; output current range: 110-120; output current: 52 amps. 6 KVA rated output. Size: 27 5/8 x 10 1/2". Shpg. wt., 133 lbs.



62 GX 571, NET..... 450.00

### ACME 150 AND 300 WATT VARIABLE VOLTAGE ADJUSTERS



Type T10306. 150 VA constant duty, manually operated variable transformer. Adjusted by turning rotary tap switch. May be used as step-up or step-down transformer to correct either low or high voltage line condition. Calibrated voltmeter accurately indicates secondary

voltage. Primary tapped for 65, 75, 90, 100, 115, 130, and 145 volts, at 50-60 cycles. Secondary output, 115 v. Non-gaging, silicon steel laminations and thoroughly tested impregnated coils for low core loss. Has 8-ft. cord with plug and output receptacle. Size, 5 1/2 x 3 1/2 x 4 1/2". Mtg. centers, 3 1/2 x 3". Wt., 7 lbs.

62 G 501, NET..... 13.23

Type T8394M. As above, but 300 VA power capacity. Assures proper operation of TV sets regardless of subnormal or excessive line voltage. Meter indicates secondary voltage; 7-position switch for step-up or step-down of line voltages from 95-125 v. to 115 v. Size, 4 1/2 x 4 5/8". Shpg. wt., 9 lbs.

62 G 514, NET..... 14.86

### RAYTHEON VR VOLTAGE STABILIZERS

#### Stabilize Varying Line Voltages to Within ±1/2%

Fully automatic magnetic-type AC line voltage stabilizers. For applications requiring accurate voltage stabilization. Maintain absolutely constant output of 115 volts, within 1/2% despite input voltage fluctuations as great as 15%. Quick response corrects fluctuations so rapidly that no indication can be noticed on an ordinary AC voltmeter. Can be used in parallel for greater power-handling capacity where load is greater than rated capacity of single unit. Require no adjustment. \*Case has flat top instead of style illustrated. In 2 sections, mounted as single unit. For 95-130 v. 60 cycle AC. Available in ratings to 2000 watts on special order.

Stock No.	Mfr's Type	Watts	Size	Mtg. Ctr.	Shpg. Wt.	NET
62 G 675	VR-6110*	15	5 1/4 x 2 1/4 x 3 3/4"	5 1/8"	6 lbs.	16.00
62 G 676	VR-6111	30	7 1/2 x 3 3/8 x 4 1/2"	6 7/8 x 2 1/2"	7 lbs.	18.00
62 G 677	VR-6112	60	7 1/2 x 3 3/8 x 4 1/2"	6 7/8 x 2 1/2"	10 lbs.	25.00
62 G 678	VR-6113	120	7 1/2 x 3 3/8 x 5 1/4"	11 1/8 x 3 1/2"	17 lbs.	33.00
62 GX 679	VR-6114	250	12 1/2 x 5 7/8 x 7 1/2"	11 1/8 x 3 3/8"	29 lbs.	52.00
62 GX 680	VR-6115	500	12 1/2 x 5 7/8 x 9 1/2"	11 1/8 x 3 3/8"	52 lbs.	81.00
62 GX 681	VR-6116†	1000	14 1/2 x 1 3/8 x 9 3/8"	12 1/8 x 1 1/8"	128 lbs.	135.00

### CONNECTING ASSEMBLIES FOR VOLTAGE STABILIZERS

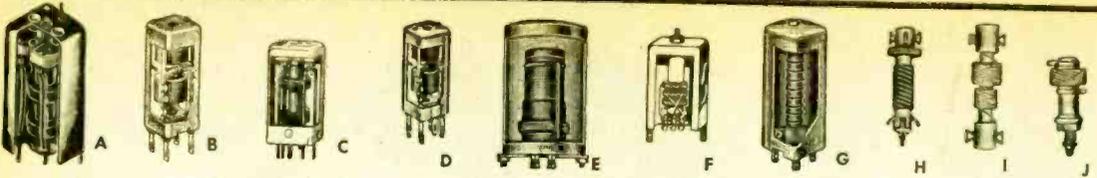
61-690G1. Cord, plug, socket and mounting plate assembly for VR-6111, VR-6112, VR-6113. Shpg. wt., 2 lbs.

62 G 684, NET..... 2.25

61-690G2. Cord, plug, socket and mounting plate assembly for VR-6114 and VR-6115. Shpg. wt., 2 lbs.

62 G 685, NET..... 3.00

# J. W. Miller Coils and Chokes



**FIG. A—REPLACEMENT 455 KC IF TRANSFORMERS**

Double-tuned, air-core, universal input or output transformers. Universal wound primary and secondary tuned by mica insulated compression-type trimmers. RETMA color-coded leads. Size, 1 1/4 x 1 1/2 x 2 1/4". Shpg. wt., 4 oz.

No.	Type	Use	EA.
60 H 739	512-C1	Input IF	1.41
60 H 740	512-C2	Interstage IF	
60 H 741	512-C3	Full-wave output IF	
60 H 742	512-C4	Half-wave output IF	
60 H 512	512-C4	Half-wave output IF	

**FIG. B—MINIATURE IF TRANSFORMERS**

Molded plastic frame with built-in condensers. Tunable powdered iron cores. \*Built-in diode filter condensers. Aluminum shielded 1/4" sq. x 2". With mtg. hdwe. Wt., 4 oz.

No.	Type	Freq.	Use	Net
60 H 727	12-C1	455 kc	IF Input	1.29
60 H 728	12-C2	455 kc	IF Output	1.29
60 H 787	12-C6	455 kc	IF Output*	1.38
60 H 716	12-C7	455 kc	Input (Batt.)	1.29
60 H 717	12-C8	455 kc	Output (Batt.)	1.29
60 H 718	12-C9	455 kc	Input (AC-DC)	1.29
60 H 719	12-C10	455 kc	Output (AC-DC)	1.29
60 H 729	12-H1	262 kc	IF Input	1.47
60 H 731	12-12	262 kc	IF Output	1.47
60 H 732	12-12	262 kc	IF Output*	1.56
60 H 732	1463	10.7 mc	Input or Inter.	1.62
60 H 733	1464	10.7 mc	Discriminator	1.94
60 H 734	1465	10.7 mc	Ratio Detect.	1.94
60 H 789	6203	4.5 mc	Input or Inter.	1.62
60 H 790	6204	4.5 mc	Discriminator	1.94
60 H 791	6205	4.5 mc	Ratio Detect.	1.94

**FIG. C—MIDGET IF TRANSFORMERS**

Air-core mica trimmer tuned IF's. Excellent gain and selectivity. 6-32 spade-bolt mtg. 1 1/2 x 1 1/2 x 2". \*With filter. Shpg. wt., 4 oz.

No.	Type	Freq.	Use	EA.
60 H 735	112-C1	455 kc	Input	1.41
60 H 736	112-C2	455 kc	Interstage	
60 H 737	112-C3	455 kc	CT Output	
60 H 738	112-C4	455 kc	Output	
60 H 855	112-H1	262 kc	Input	
60 H 856	112-12	262 kc	Interstage	
60 H 857	112-13	262 kc	CT Output	
60 H 858	112-14	262 kc	Output	
60 H 859	112-H6	262 kc	Output*	
60 H 859	112-H6	262 kc	Output*	

**FIG. D—SUBMINIATURE 455 KC IF TRANSFORMERS**

New, extremely small IF coils featuring excellent gain and bandwidth characteristics. Ferrite shell cores provide high efficiency. Mica trimmer tuned primary and secondary. Only 1/2" square by 1 1/2" high. Shpg. wt., 3 oz. 60 H 860. Type 10-C1. Input. NET 60 H 861. Type 10-C2. Output. EACH 1.47

**FIG. E—DELUXE BANK-WOUND COILS**

Shielded antenna RF and bandpass coils. Will cover 540-1740 kc with 365 mmf condenser. Two bank Litz secondaries. High impedance primaries. 1 1/4 x 3" high. Shpg. wt., 4 oz.

60 H 783.	Type 242-A.	Antenna.	NET
60 H 784.	Type 242-RF.	RF.	EACH 1.03
60 H 797.	Type 242-BP.	Bandpass.	NET 88c

**FIG. F—UNIVERSAL ADJUSTABLE BROADCAST BAND COILS**

Compact, variable inductance iron-core coils for replacement use. Used with 250-450 mmf condenser. Oscillator coils have tapped secondary. Unshielded, 2 x 3/4" dia. Wt., 4 oz. Shielded, 1 1/4 x 1 1/2 x 2 1/4". Wt., 5 oz.

No.	Type	Use	KC Range	EACH
60 H 749	73-A	Antenna	500-1800	1.62
60 H 748	73-RF	RF	500-1800	
60 H 752	73-OSC	Oscillator	100-550	

No.	Type	Use	KC Range	EACH
60 H 745	72-A	Antenna	500-1800	1.29
60 H 746	72-RF	RF	500-1800	
60 H 747	72-OSC	Oscillator	100-550	

**FIG. G—MINIATURE RF COILS**

Shielded iron-core coils for compact receivers. Use with 365 mmf tuning condensers. 1/2" square by 2" high. \*Required series pad. Shpg. wt., 4 oz.

No.	Type	Use	KC Range	EACH
60 H 798	X-121-A	Antenna	140-425	1.23
60 H 785	X-121-RF	RF	140-425	
60 H 786	X-121-C	Osc.	*120 mmf	
60 H 706	A-121-A	Antenna	540-1700	1.03
60 H 707	A-121-RF	RF	540-1700	
60 H 708	A-121-C	Osc. 455 kc	*400 mmf	
60 H 709	A-121-H	Osc. 262 kc	*600 mmf	

**FIG. H—HIGH "Q" BROADCAST RF COILS**

High-efficiency, unshielded, iron-core coils. For replacement purposes or for new receiver design. Adjustable core for tracking desired frequency range. Range indicated obtained using 365 mmf variable condenser. Coils mount in 1/4" hole. \*Padder values shown are for 455 kc IF. Size: 1 1/2 x 2". Shpg. wt., 4 oz.

No.	Type	Use	KC Range	EACH
60 H 862	A-5495-A	Antenna	540-1700	1.18
60 H 863	A-5495-RF	RF	540-1700	
60 H 864	A-5495-C	Std. Osc.	*400 mmf	
60 H 865	A-5496-C	Tapp'd Osc.	*900 mmf	
60 H 865	A-5496-C	Tapp'd Osc.	*900 mmf	

**FIG. I—MINIATURE ADJUSTABLE RF COILS**

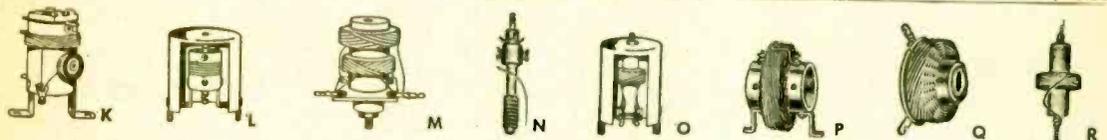
Small, variable-inductance RF coils. Use with tuning condensers of 250 to 450 max. capacity. Type 70-OSC coil has tapped secondary. 70 series installed self-supported. 71-OSC has 2-tap primary. Both track 100 to 550 kc IF. Max. size: 3/8 x 1 1/2" high. Av. shpg. wt., 4 oz.

No.	Type	Use	KC Range	NET
60 H 866	70-A	Antenna	540-1600	.88
60 H 867	70-RF	RF	540-1600	.88
60 H 868	70-OSC	Osc.	540-1600	.88
60 H 869	71-OSC	Osc.	500-1800	1.18

**FIG. J—ADJUSTABLE CERAMIC RF INDUCTORS**

Small, adjustable coils designed for the most exacting requirements. Silicone-impregnated ceramic forms. Tuned by powdered iron core. Types 4502 to 4506 are single-layer wound. Types 4507 to 4509 are twin-ply wound. Others are honeycomb wound. Mount in 3/8" hole. Form size: 1/4 x 1/4" high. Av. shpg. wt., 2 oz.

No.	Type	Microhenries	NET
60 H 870	4500	Form only	.88
60 H 871	4502	1.0 - 1.6	1.18
60 H 872	4503	1.6 - 2.8	1.23
60 H 873	4504	2.8 - 5	1.29
60 H 874	4505	5 - 9	1.35
60 H 875	4506	9 - 16	1.41
60 H 876	4507	16 - 24	1.47
60 H 877	4508	24 - 35	1.47
60 H 878	4509	35 - 60	1.47
60 H 879	4511	60 - 120	1.47
60 H 880	4512	110 - 200	1.53
60 H 881	4513	190 - 330	1.53
60 H 882	4514	320 - 500	1.53



**FIG. K—CAPACITY-OPERATED RELAY COIL**

For alarm systems, window displays, etc. With diagram. 7/8 x 2 1/4" high. Shpg. wt., 4 oz. 60 H 589. Type 695. NET..... 1.62

**FIG. L—BANDPASS COUPLING COIL**

Negative mutual coupling coil for hi-fi TRF receivers. 1 1/2 x 2" Shpg. wt., 4 oz. 60 H 761. Type EL-56. NET..... 73c

**FIG. M—MIDGET OSCILLATOR COILS**

Cover 540-1600 kc with 365 mmf condenser. Series 5480 for pentagrid converters. 5481 series have single tapped coil for 6SA7 and similar tubes. Size: 1 x 1". Shpg. wt., 4 oz.

No.	Type	IF	Padder	EACH
60 H 742	5480-K	175 kc	.001 mfd	68c
60 H 884	5480-H	262 kc	.0006 mfd	
60 H 743	5480-C	455 kc	.0004 mfd	
60 H 744	5481-C	455 kc	.0004 mfd	
60 H 885	5481-H	262 kc	.0006 mfd	

**FIG. N—FERRITE ANTENNA COIL**

Cover 540-1700 kc with condensers having 350 to 450 mmf max. capacity. Adjustable core. Mount in 3/8" hole. 1 1/2 x 2 1/4". Wt., 4 oz. 60 H 883. Type 6300. NET..... 73c

**FIG. O—ANTENNA AND RF COILS**

Untuned. Broadly self-resonant from 540 to 1700 kc. No tuning condenser needed. Aluminum can 2 1/2 x 1 1/2". Shpg. wt., 4 oz. 60 H 758. Type 472-U. Ant. NET..... 1.23 60 H 759. Type 472-UT. RF. NET..... 1.53

**FIG. P—DUO-LATERAL FILTER CHOKES**

Effective line filters. Duo-lateral wound for low distributed capacity. Ideal for use in AC lines to filter RF or noise pulses from Amateur or commercial transmitters; from power supplies, sign flashers, diathermy equipment, farm lighting plants, signal systems, oil burners and all types of intermittent switching systems. Type 7825 is 1 1/4 x 1 1/4" wound on bakelite form. Others are 2 1/2 x 3/4" wound on ceramic forms. Av. shpg. wt., 12 oz.

No.	Type	Amps	Ohms	Mh	NET
70 H 185	7825	2	.6	.600	.97
60 H 886	7826	5	.28	.570	2.59
60 H 887	7827	10	.15	.370	2.91

**FIG. Q—CENTER-TAPPED CHOKE**

Duo-lateral wound, single-section RF chokes. Ceramic dowels. Rated: 20 mh, 100 ohms, 125 ma. 1 1/2 x 3/4" high. Shpg. wt., 4 oz. 60 H 588. Type 691 T. NET..... 65c

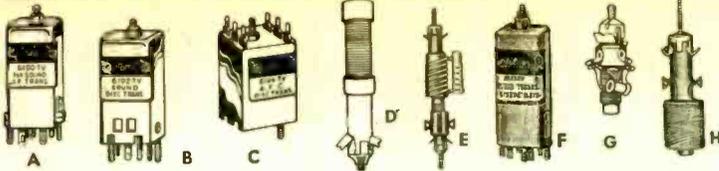
**FIG. R—VIDEO PEAKING & FILAMENT CHOKE COILS**

Type 6175 filament choke. Reduces stray coupling, feedback, etc. Others are video peaking coils for proper bandwidth and wave shape of video signals. Coils without shunt resistor wound on plastic forms; shunt types wound on resistor. 3/8 x 3/8" dia.; all others, 1/2 x 3/8" dia. Av. shpg. wt., 2 oz.

No.	Type	uh	Shunt	EACH
60 H 792	6172	73	None	35c
60 H 889	6153	120	None	
60 H 793	6173	250	22 K	
60 H 794	6174	500	None	
60 H 776	6175*	0.8	None	29c
60 H 888	6152	20	None	
60 H 777	6176	36	None	
60 H 778	6177	93	None	35c
60 H 779	6178	120	22 K	
60 H 780	6179	180	39 K	
60 H 781	6180	180	None	
60 H 890	6154	200	None	
60 H 782	6181	250	None	
60 H 891	6155	300	None	

Complete J. W. Miller Catalog. 37 G 084. No charge with your next order.

# Coils, Transformers & Coil Forms



## J. W. MILLER COILS, INDUCTORS & TRANSFORMERS

### TV COILS AND TRANSFORMERS

#### FIG. A—SOUND IF TRANSFORMERS

Permeability tuned. Types 6190 and 6191 for 21.25 mc in TV sets with separate picture and sound IF channels. 1466 for 4.5 mc in sets with Inter-carrier system. Provide high gain and adequate bandwidth for high fidelity sound. Primary adjustable from top of aluminum can; secondary from bottom. Spade bolt mounting.  $1\frac{1}{2} \times \frac{1}{2} \times 2\frac{1}{4}$  high. 11 $\frac{1}{2} \times 1\frac{1}{2} \times 2\frac{1}{4}$  high. Wt., 5 oz.

No.	Type	Description	NET
60 H 762	6190*	1st IF sound	1.41
60 H 763	6191*	2nd IF sound	1.41
60 H 764	1466	Input or Interstage	1.41
60 H 705	14701	Sound Trap, 4.5mc	.73

#### FIG. B—SOUND DETECTOR AND OSCILLATOR TRANSFORMERS

High quality TV components. Types 6192 and 6184 are for TV receivers with separate 21.25 mc sound IF Channel. Types 1467 and 1468 are for 4.5 mc IF in sets using Inter-carrier sound system. 6192 and 1467 are the Foster-Seely type and are normally preceded by one or two limiter stages. 6184 and 1468 are for use in ratio detector circuits. Type 6182 has tapped coil for horizontal oscillator Synchronizing circuit. Type 6183 dual windings for Sync. Freq. and Phase circuit. Aluminum shields with 6-32 spade bolt mounting.  $1\frac{1}{2} \times 1\frac{1}{2} \times 2\frac{1}{2}$ ,  $1\frac{1}{2} \times 1\frac{1}{2} \times 2\frac{1}{2}$ . Wt., 5 oz.

No.	Type	Description	NET
60 H 765	6192*	Discriminator	1.62
60 H 766	6184*	Ratio detector	1.94
60 H 724	6182†	Hor. Osc.	1.32
60 H 799	6183†	Hor. Osc.	1.62
60 H 767	1467†	Discriminator	1.76
60 H 768	1468†	Ratio detector	1.94

#### FIG. C—HORIZONTAL OSCILLATOR AFC DISCRIMINATOR TRANSFORMER

For horizontal sweep oscillator circuits using "synchro-lock" automatic frequency control system. Consists of two coupled permeability windings; one, tapped for use in horizontal blanking oscillator tank circuit; the second, center-tapped for phase discrimination. Housed in aluminum shield with adjustment for horizontal frequency at top and horizontal phase at bottom. 6-32 spade bolt mounting.  $1\frac{1}{2} \times 1\frac{1}{2} \times 2\frac{1}{2}$  high. Wt., 5 oz.  
60 H 769. Type 6194. NET ..... 1.62

#### FIG. D—HORIZONTAL LINEARITY AND WIDTH CONTROL

Iron core variable inductance coils for use in horizontal sweep circuits.  $1\frac{1}{2}$  have AGC winding. Mounting clip fits  $\frac{3}{16}$  hole. 6300 series are  $\frac{3}{8} \times 2\frac{1}{2}$  long on enameled forms. 6100 series are  $\frac{3}{8} \times 2\frac{1}{2}$  long on bakelite forms. Shpg. wt., 4 oz.

No.	Type	Milihenries	NET
60 H 770	6195	.185-1.000	.73
60 H 771	6196	.054-.045	.73
60 H 772	6197	.550-2.300 tapped	.73
60 H 773	6198	.170-0.610	.65
60 H 774	6199-A	1.300-4.100 tapped	.76
60 H 775	6199-B	.500-1.700	.73
60 H 826	6313	.5-5	.88
60 H 827	6314	2.0-18	1.03
60 H 828	6315	4.0-30	1.06
60 H 829	6316*	4.0-30	1.32
60 H 830	6317*	3.2-9	1.32
60 H 831	6318	2-3	.88
60 H 832	6319	15.0-60	1.32
60 H 833	6320	2-3 tapped	.88
60 H 834	6321	1.0-5 tapped	.88
60 H 835	6322	1.5-10	1.03
60 H 836	6323	1.5-10 tapped	.88

#### HIGH VOLTAGE RF POWER SUPPLY TRANSFORMER

RF power supply transformers for TV receivers and scopes. \*For up to 5,000 v. DC, size  $3\frac{1}{2} \times 1\frac{1}{2}$  dia.  $\frac{1}{2}$  up to 10,000 v. DC (30,000 in rectifier-triplex circuit), size,  $6 \times 2\frac{1}{2}$  dia. Wt., 4 oz.  
60 H 754. Type 4525\*. NET ..... 4.85

60 H 757. Type 4526†. NET ..... 8.08

### TV PICTURE IF TRANSFORMERS

#### FIG. E—20 MC RANGE PICTURE IF COILS

Popular shielded and unshielded permeability tuned picture IF transformers single and bifilar wound. Type 6247 has single tuned circuit and cathode trap. Type 6248 employs single winding. Types 6251 and 6252 are shielded. Unshielded coils have mounting clip for  $\frac{3}{16}$  hole. Maximum dimensions:  $\frac{3}{4}$  O.D. by  $2\frac{1}{2}$  long. \*Bifilar wound. Av. shpg. wt., 5 oz.

No.	Type	IF Mc	Trap Mc	NET
60 H 840	6245	25.5	27.25	1.47
60 H 841	6246	22.0	21.20	1.47
60 H 842	6247	21.25	.....	1.47
60 H 843	6248	24.5	.....	.88
60 H 844	6249	21.25	.....	.88
60 H 845	6250*	25-29	.....	.88
60 H 846	6251*	21-25	.....	1.32
60 H 847	6252*	25-29	.....	1.32
60 H 848	6253*	21-30	20-23	1.62
60 H 849	6254*	22-32	24-29	1.62

#### FIG. F—CONVERTER AND PICTURE CHANNEL IF TRANSFORMERS

Shielded permeability tuned IF transformers for coupling mixer plate to first video IF and for interstage coupling in video IF strip. Six tuned traps for adjacent channel sound rejection.  $\frac{1}{2} \times \frac{1}{2} \times 2\frac{1}{4}$  high. Shpg. wt., 5 oz.

No.	Type	IF Mc	Trap Mc	NET
60 H 837	6185	21.8	21.25	1.62
60 H 838	6186	25.3	27.25	1.62
60 H 839	6187	22.3	19.75	1.23

#### FIG. G—PICTURE CHANNEL IF INDUCTORS

Unshielded permeability tuned inductors. Can be used with shielded IF transformers above in stagger-tuned video IF amplifier of full 6 mc bandwidth. Coils wound on bakelite forms with mounting clip for  $\frac{3}{16}$  hole. Excellent for replacement purposes or new circuit design. Size:  $\frac{1}{2} \times 1\frac{1}{2}$  long. Shpg. wt., 4 oz.

No.	Type	Frequency Mc	NET
60 H 810	6188	3rd Pix IF, 25.2	.73
60 H 811	6189	Video Det. IF, 23.4	.73
60 H 812	6193	Cathode Trap, 21.25	1.18
60 H 813	6171	Tunable Choke, 21-25	.73
60 H 814	6171-A	Tunable Choke, 25-29	.73

#### 40 MC RANGE PICTURE IF COILS

Shielded permeability tuned transformers. For use in TV receivers with 45.75 mc picture carrier, 41.25 mc sound carrier and 4.5 mc picture inter-carrier. 6215 has iron core tuned primary and 75 ohm output. 6216 has 75 ohm input and iron core tuned secondary and trap. 6217 and 6218 have two tuned windings one of which is a trap.  $\frac{1}{2} \times \frac{1}{2} \times 2\frac{1}{4}$  Shpg. wt., 4 oz.

No.	Type	Description	Trap Mc	NET
60 H 815	6215	Converter IF	39.25	1.47
60 H 816	6216	1st Pix IF Grid	41.25	1.76
60 H 817	6217	1st Pix IF Plate	41.25	1.76
60 H 818	6218	2nd Pix IF Grid	47.25	1.62

#### TYPE 6219 TV PICTURE IF COIL

Unshielded permeability tuned IF coils. For use with above coils as subsequent picture IF stages. Bakelite form with  $\frac{3}{16}$  mounting clip. 41.75-45.75 mc.  $\frac{1}{2} \times 1\frac{1}{2}$  Shpg. wt., 2 oz.  
60 H 819 NET ..... 73c

#### FIG. H—SYNC STABILIZER (RINGING) COIL

Has bakelite form with  $\frac{3}{16}$  mtr. clip. 16-42 mb range.  $\frac{1}{4} \times 2\frac{1}{2}$  Shpg. wt., 2 oz.  
60 H 820. Type 6210. NET ..... 1.32

#### TYPE 20 ECONOMY TRF COILS

Efficient, unshielded tuned radio frequency coils. Cover AM broadcast band, 540 to 1750 kc. For use with 365 mmfd. variable tuning condenser. Bakelite form. L mtr. bracket. Single-layer solenoid secondary winding. Low impedance primary on adjustable sleeve over secondary.  $1\frac{1}{2} \times 2\frac{1}{2}$  high. Wt., 3 oz.

60 H 753. 20-A. Antenna Coil. NET ..... 50c  
60 H 590. 20-RF. RF Coil. EACH ..... 50c

## POPULAR ICA COIL FORMS

### RIM TYPE COIL FORM

Low-loss forms with high dielectric strength. Molded rim handle. Prong spacings fit standard sockets.  $1\frac{1}{4}$  dia.,  $2\frac{1}{4}$  high. Shpg. wt., 2 oz.

Stock No.	Type	Prongs	NET
60 H 700	1108B	4	34c
60 H 701	1113B	5	36c
60 H 702	1114B	6	37c

### SMALL RIBBED TYPE

Genuine molded bakelite;  $1\frac{1}{4}$  diameter,  $2\frac{1}{4}$  high. Have raised ribs for low-loss winding. Flange top permits easy grip. Wt., 3 oz.

Stock No.	Type	Prongs	NET
60 H 710	2158	4	34c
60 H 711	2159	5	39c
60 H 712	2160	6	39c

### LARGE RIBBED TYPE

Durable amber bakelite, low-loss coil forms for use in receivers and low power transmitters. Winding length, 3" overall length,  $3\frac{3}{4}$  x  $1\frac{1}{2}$  diameter. Shpg. wt., 6 oz.

Stock No.	Type	Prongs	NET
60 H 713	1051	4	44c
60 H 714	1052	5	44c
60 H 715	1053	6	49c

### 4-PRONG COIL KITS

Complete plug-in coil kits. Precision made coils accurately wound on low-loss bakelite forms. Ranges as indicated with 140 or 150 mmfd condensers. Fit 4-prong tube sockets. 2 windings—1 for grid, 1 for trolley or antenna. Size,  $1\frac{1}{2} \times 2\frac{1}{4}$ . Shpg. wt., 8 oz.

Type 1471. Short-Wave Kit. 4 coils. 9.5 to 217 meters. NET ..... 2.45

Type 1473. Broadcast Kit. 2 coils. 190 to 550 meters. NET ..... 1.96

## AMPHENOL COIL FORMS

Low-loss polystyrene coil forms. Plug-in type for all RF applications. Excellent for receivers, low-power transmitters, VHF and UHF equipment, etc. Rigidly anchored pins, sturdy construction. \*No prongs 6-32 screw mtg. hole in base. Shpg. wt., 1 oz.

No.	Type	Description	Size	Net
71 H 711	24-6H	6-Prong Min.	$1\frac{3}{8} \times 1\frac{1}{2}$	24c
71 H 713	24-4P	4-Prong Std.	$2\frac{1}{2} \times 1\frac{1}{2}$	24c
71 H 714	24-5P	5-Prong Std.	$2\frac{1}{2} \times 1\frac{1}{2}$	24c
71 H 724	24-6P	6-Prong Std.	$2\frac{1}{2} \times 1\frac{1}{2}$	24c
71 H 712	24	Coil Form only*	$1\frac{3}{8} \times \frac{1}{2}$	9c

## AMPHENOL MINIATURE SOCKET

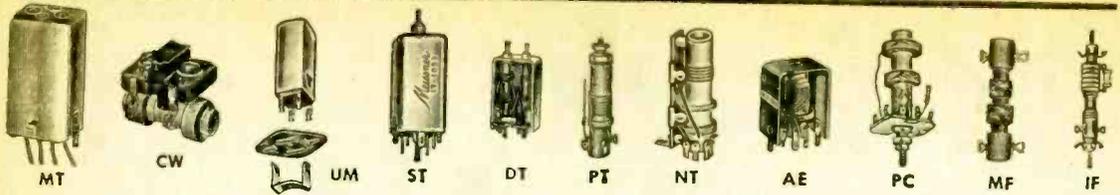
Type 78S6S. Use with coil form 71H711 above, and bantam Jr. tubes. 6-prong. Molded bakelite.  $\frac{3}{8}$  mtr. hole. Shpg. wt., 2 oz.  
40 H 130. NET ..... 13c



## MORRIS COIL WINDER

You'll be able to wind efficient, commercial-looking honeycomb, spiderweb and economical coils with this very versatile, but economical coil winder. It's a real time saver for the Amateur and experimenter and gives you just work a more professional appearance. Just set up the winder for the type of coil you require and turn the handle—dial indicator counts the turns for you. May be used for winding RF coils, oscillator coils, loop antennas, coils for low power transmitters, chokes, filter inductors, parasitic suppressors, TVI traps, etc. Handles up to No. 16 wire, making it suitable for almost all coil requirements in receivers, test equipment and small transmitters. Unit is supplied with two-piece wood spool for holding honeycomb and solenoid coils, plus cast peggolders and four  $6\frac{1}{2}$ " wooden pegs for spiderweb coils. Winder is mounted on rugged cast-iron base with holes for bench mounting. With extension shaft for winding solenoid coils up to  $3\frac{1}{2}$ " long, less wire and forms. Base size:  $4\frac{1}{2} \times 5\frac{1}{2}$  x 4, Shpg. wt., 3 lbs.  
83 P 520. NET ..... 4.95

# Meissner IF's and Coils



## IF TRANSFORMERS

### Fig. MT—LOW COST PRE-TUNED PLASTICS

Air core IF's at low cost. Double-tuned trimmers. Size, 2½x1½x1¼". \*Bandwidth in kc. †Iron core. ‡1½x1½x2½". Wt., 6 oz.

Stock No.	Mfr's Type	Use	Frequency Range, kc	Selectivity*		NET EACH
				2X	10X	
60 H 192	16-6649	Input	140-200	6.0	17.5	1.17
60 H 193	16-6651	Output	140-200	11.5	29.5	1.17
60 H 194	16-6652	Input	200-310	9.5	24.7	1.03
60 H 195	16-6654	Output	200-310	20.5	52.1	1.03
60 H 196	16-6658	Input	400-550	18.8	46.6	1.03
60 H 197	16-6659	Interstage	400-550	12.5	33.0	1.03
60 H 198	16-6660	Output	400-550	17.5	50.5	1.03
60 H 070	16-6668†	Input	400-600	14.1	37.5	1.29
60 H 071	16-6667†	Output	400-600	18.0	49.5	1.29
60 H 139	16-6662‡	Input	380-600	11.2	30.0	1.47
60 H 144	16-6663‡	Output	380-600	11.2	30.0	1.47

### Fig. MT—STANDARD GENERAL REPLACEMENTS

Pre-tuned replacements for most receivers. Double-tuned mica trimmers. Size, 3x1½x1¼". \*Bandwidth in kc. at 2X and 10X down. AV. wt., 4 oz.

Stock No.	Mfr's Type	Use	Frequency Range, kc	Selectivity*		NET EACH
				2X	10X	
60 H 080	16-5712	Input	425-650	11.1	27.7	1.47
60 H 081	16-6133	Interstage	435-1000	14.5	36.5	
60 H 082	16-5714	Output	425-650	12.3	37.2	
60 H 083	16-3736	Output CT	255-550	23.2	60.0	

### Fig. MT—HIGH-Q IRON CORE REPLACEMENTS

Same as above, except coils have Hi-Q powdered iron cores. \*Bandwidth in kc. †1½x1½x3½"; ‡¾x¾x2". †For battery radios.

Stock No.	Mfr's Type	Use	Frequency Range, kc	Selectivity*		NET EACH
				2X	10X	
60 H 181	16-5740†	Input	360-600	8.4	20.0	1.76
60 H 190	16-5742†	Output	360-600	13.8	38.0	1.76
60 H 199	16-6668†	Input‡	350-550	22.5	54.3	1.41
60 H 143	16-6669†	Output‡	350-550	22.5	58.0	1.41
60 H 104	16-6678†	Input/Output	375-550	16.6	41.1	1.41

### Fig. CW—"CARTWHEEL" IF TRANSFORMER

60 H 095. Type 16-6661. Input, interstage or output. Freq. range, 380-600 kc. Size, 1½x1½x¼". Dual trimmers. Wt., 5 oz. NET... 1.06

### Fig. UM—¾" PERMEABILITY TUNED IF's

Tuned top and bottom by adjustable iron cores. Silvered mica condensers. Size, 2x¾x¾". With mtr. plates. \*Bandwidth in kc. at 2X and 10X down. †With diode filters. Wt., 4 oz.

Stock No.	Mfr's Type	Use	Frequency Range, kc	Selectivity*		NET EACH
				2X	10X	
60 H 152	16-6758	Input/Output	400-500	28	60	1.29
60 H 153	16-6770†	Output	400-550	30	65	1.35
60 H 154	16-6754†	Output	245-275	18	45	1.47
60 H 157	16-6752	Input	245-275	12	35	1.41

### Fig. MT—TWEET FILTER OUTPUT IF TRANSFORMER

Type 16-6670. Frequency, 456 kc. 2½x1½x1¼". RETMA color-coded leads, 4" long. Wt., 4 oz. NET... 1.59

### Fig. DT—AM-FM IRON CORE IF

Type 16-6675. Contains a 456 kc AM and 10.7 mc FM transformer. Each circuit tunes by powdered iron cores. With terminals. 2½x1½x1¼". Wt., 7 oz. NET... 2.94

### 10.7 MC FM IF TRANSFORMERS

Permeability tuned. Stable shunt capacities. For replacement, or original construction use. Shpg. wt., 5 oz.

No.	Type	Fig.	Description	Mounting	Size	NET
60 H 069	17-3487	ST	Ratio Det., 400 KC	1½"	1½x1½x2½"	1.94
60 H 097	16-6665	ST	Input or interstage	1½"	¾x ¾x1½"	2.06
60 H 098	17-3484	ST	Discrim., 400 KC	1½"	¾x ¾x1½"	1.94
60 H 158	16-3487	UM	Input or interstage	Var. ¾x1½"	¾x ¾x2"	1.47

### Fig. PT—SHORT-WAVE ADJUSTABLE INDUCTANCE COILS

Adjustable Hi-Q iron cores. Tune with 292 mfd condenser. Inexpensive universal replacements. Single ½" hole mounting. ½x1½". Shpg. wt., 4 oz.

No.	Type	Coil type	Freq. Range	Dimensions	NET
60 H 146	14-1061	Antenna	1.7-5.3 mc	¾x1½"	1.32
60 H 147	14-1062	R.F.	1.7-5.3 mc		
60 H 148	14-1063	Osc. (for 6SA7)	1.7-5.3 mc		

### Fig. NT—MULTIPLE BAND COILS

Carefully engineered for custom set builders, experimenters, etc. For use with 456 kc IF channel. Single bracket mounting. With instructions. Wt., 5 oz.

No.	Type	Coil type	Frequency	Size	NET
60 H 149	14-2860	Antenna	530-1660 kc, 5.8-19 mc	1x1½x3½"	2.94
60 H 124	14-2862	Osc.	530-1660 kc, 5.8-19 mc	1x1½x2½"	

## RF, ANTENNA AND TV COILS

### REPLACEMENT COILS

Air core type. High impedance primary. Litz wire secondary. Tune 545-1620 kc, with 360 mfd tuning condenser. \*Shielded. †456 kc IF frequency; 350 mfd padder required. Shpg. wt., 5 oz.

No.	Type	Fig.	Function	Dimensions	NET
60 H 000	14-1010	NT	Antenna	1½x2½"	73c
60 H 001	14-1011	NT	RF	1½x2½"	73c
60 H 005	14-1004*	AE	Antenna	1½x1½x2½"	1.03
60 H 006	14-1005*	AE	RF	1½x1½x2½"	1.03
60 H 150	14-1022	NT	Antenna	¾x2½"	65c
60 H 151	14-1023	NT	RF	1½x2½"	73c
60 H 075	14-2436*	AE	Antenna	1½x1½x2½"	88c
60 H 076	14-2437*	AE	RF	1½x1½x2½"	88c
60 H 161	14-4034†	PC	Oscillator	1x1½"	73c
60 H 166	14-4243**	AE	Oscillator	1½x1½x1¼"	88c

### Fig. MF—MINIATURE IRON CORE COILS

Broadcast permeability tuned. With leads. Shpg. wt., 3 oz.

No.	Type	Use	For	Size	NET
60 H 167	14-1071	Ant.	AC sets	1½x3"	1.03
60 H 168	14-1072	RF	AC sets	1½x3"	
60 H 169	14-1073	Osc.	AC sets	1x3"	
60 H 163	14-1074	Osc.	Batt. sets	1x3"	

### Fig. PT—PENTAGRID OSCILLATOR COILS

Type 14-1033. Tapped type for 6SA7, 12SA7, etc. 456 kc. Single ¼" hole mounting. ½" diam. 1" long. Use 420 mfd padder. Wt., 4 oz. NET... 65c

Type 14-1063. Oscillator coil. 455 kc. Same as above but requires cut section padder. 162 mfd. Single ¼" hole mounting. ½" diam. Wt., 4 oz. NET... 65c

## UNIVERSAL ADJUSTABLE INDUCTANCE COILS

†For battery-operated sets. \*For IF frequencies between 175 and 520 kc. Single hole mountings. Screwdriver adj. Wt., 5 oz.

No.	Type	Fig.	Coil type	Size	NET
60 H 060	14-1040	PT	Osc. 456 IF	¾x1½"	1.47
60 H 125	14-1060†	PT	Osc. 456 IF	¾x1½"	1.47
60 H 135	14-1026	PC	Antenna	1½x1½x1½"	1.29
60 H 136	14-1027	PC	RF	1½x1½x1½"	1.29
60 H 137	14-1028*	PC	Oscillator	1½x1½x1½"	1.29
60 H 171	14-1056	PT	Antenna	¾x1½"	
60 H 172	14-1057	PT	RF	¾x1½"	
60 H 173	14-1058*	PT	Oscillator	¾x1½"	

Fig. PC. Type 15-2866. Adjustable wave trap. 456 kc. Shielded. With instructions and mounting brackets. Wt., 4 oz. 60 H 126. NET... 88c

## TV IF TRANSFORMERS

Replacement units for TV receivers. Permeability tuned. Mounting centers: \*1½"; †single ¾" hole; ‡1½". ST type primary tunes from top; secondary iron bottom. Wt., 6 oz.

No.	Type	Fig.	Function	Freq. Mc.	Size	NET
60 H 127	17-1013*	ST	Discriminator	21.25	1½x1½x1½"	1.62
60 H 128	17-1023*	ST	Discriminator	4.5	1½x1½x3"	1.76
60 H 129	17-1033*	ST	Ratio Det.	4.5	1½x1½x2½"	1.94
60 H 132	17-1043*	ST	Ratio Det.	21.25	1½x1½x1½"	1.94
60 H 133	17-3493*	ST	Ratio Det.	4.5	1½x1½x2½"	1.94
60 H 134	17-4500†	IF	Converter, IF Coll. Trap	Tune 43.1 Trap 41.6	¾x2½"	1.47
60 H 114	17-4501†	IF	1st Plix. IF Trans./Trap	Tune 42.5 Trap 40	¾x2½"	1.47
60 H 115	17-4502†	IF	2nd Plix. IF Trans./Trap	Tune 45.75 Trap 47.25	¾x2½"	1.47
60 H 116	17-4503†	IF	3rd Plix. IF Trans./Trap	Tune 43.2 Trap 40.0	¾x2½"	1.47
60 H 117	17-4504†	ST	4th Plix. IF Trans./Trap	Tune 44.2 Trap 47.5	¾x2½"	1.76
60 H 033	19-1021‡	IF	Tunable Choke	21.25	1½x1½x1½"	1.76

## MINIATURE ADJUSTABLE PEAKING COILS

Adjustable inductance coils. Exact adjustment of frequency response in video amplifier stages. Mount by leads. Powdered iron cores. Wt., 4 oz.

No.	Type	Fig.	Inductance Range	Size	NET
60 H 034	19-1920	MF	65-115 Microhenries	1x1½"	71c
60 H 035	19-1921	MF	115-195 Microhenries		
60 H 036	19-1922	MF	195-325 Microhenries		
60 H 037	19-1923	MF	325-500 Microhenries		

## PHONO-OSCILLATOR COIL

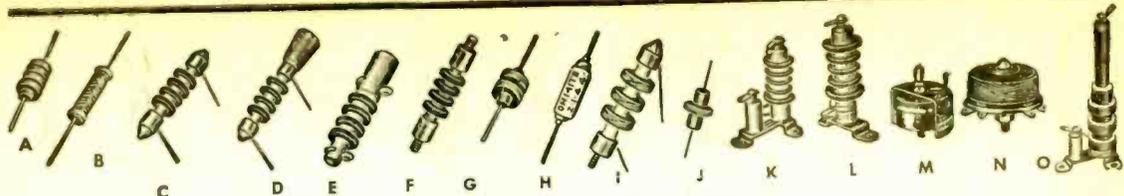
Type 17-9373. For use in building either wireless or direct connected phono-osc. units. Permits record reproduction through any radio receiver. Knob adjustment allows selection to any clear frequency. Size, 3½x1½x1½". Wt., 4 oz. NET... 2.20

## BFO COIL

Type 17-6753. Beat frequency oscillator coil. For receivers having IF's between 200 and 650 kc. Supplies "beat" note necessary to receive CW. 3x1½x1½". Shpg. wt., 6 oz. 60 H 230. NET... 1.76



# RF Chokes - Coils and Capacitors



## POPULAR RF CHOKES FOR EVERY PURPOSE

Chokes below may be used in transmitters, receivers, test equipment, etc. 71 H 100 is recommended for transmitters with plate supply of up to 3,000 volts modulated or 4,000 volts unmodulated. It may be used on all bands from 80 through 10 meters. R-33 series chokes are two-section; R-50 series chokes are 3 and 4-section. 71 H 149 choke is hermetically sealed in glass. National suffix "U" following type number indicates removable stand-off insulator for use as traps. Max. imp. is within freq. range listed. 60 H 825 is a low-priced choke wound on cer-

amic form. National chokes wound on isolantite forms; Meissner, on specially treated dowels, except iron-core type. †Shielded. The four lowest frequency Ohmite chokes are wound on plastic tubes. Windings are insulated and protected by a moisture-proof coating. The single layer winding employed is designed to avoid adverse harmonic effects within the recommended operating range—also prevents breakdown from high RF potentials. ‡Mounted on standoff insulator for vertical mounting. †Millihenries. ‡Microhenries. Av. shpg. wt., 2 oz.

No.	Mfr.	Type	Fig.	Imp	Ma	Ohms	NET
60 H 795	J.W. Miller	4532	I	1.5	200	21	53¢
60 H 825	ICA	277	C	2.5	150	32	36¢
71 H 150	National	R-100	C	2.5	125	50	40¢
71 H 188	National	R-100	C	2.5	125	50	40¢
71 H 189	National	R-100	C	10	125	50	40¢
71 H 152	National	R-300	C	1	300	10	44¢
71 H 151	National	R-100U	D	2.5	125	50	48¢
71 H 186	National	R-100U	D	5	125	50	48¢
71 H 187	National	R-100U	D	10	150	50	48¢
71 H 153	National	R-300U	D	1	300	10	48¢
71 H 161	National	R-100S	E	2.5	125	50	48¢
71 H 178	National	R-100S	E	5	125	50	48¢
71 H 179	National	R-100S	E	10	125	50	48¢
71 H 162	National	R-300S	E	1	300	10	48¢
71 H 174	National	R-100ST	F	2.5	125	50	46¢
71 H 197	National	R-100ST	F	10	125	50	46¢
71 H 164	National	R-300ST	F	10	300	10	46¢
71 H 159	National	R-33	G	10**	75	4.0	40¢
71 H 158	National	R-33	G	50**	75	5.5	40¢
71 H 163	National	R-33	G	100**	75	17	40¢
71 H 148	National	R-33	G	1**	850	0.6	40¢
71 H 149	National	R-33	G	750**	75	17	40¢
71 H 198	National	R-50	G	2.5	50	41.5	40¢
71 H 250	National	R-50	A	5	100	16.2	40¢
71 H 251	National	R-50	A	1.	100	22	40¢
71 H 252	National	R-50-I	A	10	100	30	61¢
71 H 253	National	R-60	B	2**	500	.....	40¢
71 H 155	National	R-154	K	1	600	6	2.01
71 H 156	National	R-154U	L	1	600	6	1.61
71 H 160	National	R-175	O	225	800	6	2.59
60 H 026†	Meissner	19-5584	M	5.5	20	62	76¢
60 H 027†	Meissner	19-5588	M	8.0	30	77	76¢

No.	Mfr.	Type	Fig.	Imp	Ma	Ohms	NET
60 H 030†	Meissner	19-5592	M	30.0	20	165	88¢
60 H 031†	Meissner	19-5594	M	60.0	16	318	1.17
60 H 032†	Meissner	19-5596	M	80.0	16	342	1.17
60 H 010	Meissner	19-1994	M	2.5	20	40	53¢
60 H 011	Meissner	19-4551	M	5.5	20	58	53¢
60 H 012	Meissner	19-2078	M	8.0	20	75	53¢
60 H 013	Meissner	19-8770	M	10.0	20	83	54¢
60 H 014	Meissner	19-1995	M	16.0	20	108	59¢
60 H 015	Meissner	19-2330	M	30.0	20	160	76¢
60 H 016	Meissner	19-3247	M	60.0	20	258	82¢
60 H 017	Meissner	19-2709	M	80.0	16	372	82¢
60 H 040*	Meissner	19-6834	N	2.5	20	22	68¢
60 H 041*	Meissner	19-6840	N	10.0	20	50	85¢
60 H 042*	Meissner	19-6842	N	30.0	20	114	1.00
60 H 043*	Meissner	19-6844	N	60.0	12.5	247.5	1.14
60 H 044*	Meissner	19-6846	N	80.0	15	258	1.27
60 H 045*	Meissner	19-6848	N	125.0	75	330	1.64
72 H 040	Millen	34100	D	2.5	250	52.5	42¢
72 H 073	Millen	34101	C	2.5	250	52.5	42¢
72 H 067	Millen	34103	C	2.5	300	13.5	42¢
72 H 072	Millen	34106	I	1	300	13.5	42¢
72 H 004	Millen	34140	.....	1.4	500	6.25	1.14
72 H 134	Millen	34300-100	J	100**	250	6.7	42¢
72 H 135	Millen	34300-250	J	250**	250	11.	42¢

No.	Mfr.	Type	Fig.	Imp	Ma	Mc	NET
74 M 410	Ohmite	Z-460	H	0.2	1000	320-520	23¢
74 M 411	Ohmite	Z-235	H	0.84	1000	160-350	23¢
74 M 412	Ohmite	Z-144	H	1.8	1000	80-200	23¢
74 M 413	Ohmite	Z-50	H	7.0	1000	35-110	23¢
74 M 414	Ohmite	Z-28	H	21	600	20-60	31¢
74 M 415	Ohmite	Z-14	H	44	600	7-35	48¢
74 M 416	Ohmite	Z-7	H	84	1000	3-20	1.10

### CAMBRIDGE THERMIONIC CERAMIC SLUG-TUNED COIL FORM KIT

This kit of ceramic, slug-tuned coil forms meets coil requirements encountered by development labs. Amateurs and experimenters. Includes 15 coil forms (3 each of 5 different types), 19 powdered iron slugs, 5 silver-plated brass slugs, and complete set of mounting hardware. Coils covering 50 kc to 200 mc can be wound with the coil forms and slugs supplied. Diameter of forms range from 3/8" to 1/2"; mounted heights from 1 1/4" to 1 1/2". Shpg. wt., 13 oz. 72 H 280. NET \$11.82

### CAMBRIDGE THERMIONIC CORPORATION SLUG-TUNED COILS

For broadband RF amplifiers; TV traps, general HF circuits, etc. Coil bodies of LSM, LS3 and LS4 are HF paper base phenolic; LS5 and LS6 are ceramic. LS3 has larger slug and greater bandpass. LS4 for larger inductance and Q. Slugs tunable from either end. Locking feature. Sizes: LSM, 2 3/4 x 1/2" dia.; LS3, 1 3/4 x 1/2" dia.; LS4, 2 x 1/2" dia.; LS5, 1 1/2 x 3/8" dia.; LS6, 2 3/4 x 1/4" dia. Wt., 4 oz.

Stock No.	Type	Description	NET
72 H 294	LS3	Coil Form 1 Mc	55¢
72 H 295	LS3	1 Mc Coil	1.03
72 H 296	LS3	5 Mc Coil	94¢
72 H 297	LS3	10 Mc Coil	92¢
72 H 298	LS3	30 Mc Coil	92¢
72 H 299	LS3	60 Mc Coil	92¢
72 H 282	LSM	Coil Form	55¢
72 H 283	LSM	1 Mc Coil	1.03
72 H 284	LSM	5 Mc Coil	97¢
72 H 293	LSM	10 Mc Coil	93¢
72 H 286	LSM	30 Mc Coil	92¢
72 H 287	LSM	60 Mc Coil	92¢
72 H 288	LS4	Coil Form	74¢
72 H 289	LS4	Coil Form	72¢
72 H 292	LS6	Coil Form	65¢



### IRC INSULATED HF CHOKES

Insulated wire-wound chokes. Molded plastic housings for protection against high humidity. Color-coded for easy identification. 1000 volts insulation breakdown to ground. Values below .82 uh., ±15%; above, ±10%. \*Q rises with frequency. \*Type CLA, 2 3/4" long x 1/4" dia. †Type CL-1, 1 1/4" x 1/4" dia. 2 oz.

Stock No.	Microhenries	Stock No.	Microhenries
74 M 420*	0.47	74 M 435	1.0
74 M 421*	0.56	74 M 437	1.5
74 M 422*	0.68	74 M 438	1.8
74 M 424*	1.0	74 M 439	2.2
74 M 425*	1.2	74 M 440	2.7
74 M 426*	1.5	74 M 441	3.3
74 M 427*	1.8	74 M 442	3.9
74 M 428*	2.2	74 M 443	4.7
74 M 430*	2.7	74 M 444	5.6
74 M 431*	3.3	74 M 445	6.8
74 M 431†	0.47	74 M 446	8.2
74 M 434†	0.82	74 M 447	10.0

NET EACH.....21c

### JFD PISTON-TYPE VARIABLE TRIMMER CAPACITORS

Small variable trimmer capacitors with one-piece spring-loaded piston. Provide extremely high accuracy in settings without backlash. Types VCS, VC11 are quartz; VC11G, VC1G, glass. Insulation resistance, 10,000 megohms. Minimum air gap. Operate efficiently up to 125° C with glass and 200° C with quartz. Dielectric strength, 1,000 volts, 1" long. Shpg. wt., 5 oz. 16 H 000, Type VCS, .5 to 5 mmf. 16 H 001, Type VC11, 1 to 10 mmf. NET EACH.....3.97 16 H 003, Type VC1G, .7 to 6.0 mmf. 16 H 002, Type VC11G, 1 to 12 mmf. NET EACH.....2.35



### E. F. JOHNSON MINIATURE VARIABLE CONDENSERS

For VHF and UHF use. Low-loss stearite insulation. Mount in 1/4" panel hole; 1/4 x 3/8" panel mtg. space. Slotted shaft takes 3/16" knob. 1250 volts approximate peak break-down. Nickel-plated. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	No. of Plates	NET EACH
75 H 175	5M11	5.1	1.5	5	.95
75 H 176	9M11	8.7	1.8	9	1.00
75 H 177	15M11	14.2	2.3	15	1.15
75 H 178	20M11	19.6	2.7	21	1.30

BUTTERFLY

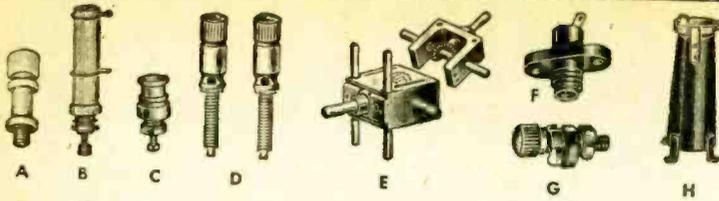
Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	No. of Plates	NET EACH
75 H 179	3MB11	3.1	1.5	7	1.35
75 H 180	5MB11	5.1	1.8	13	1.50
75 H 181	9MB11	8.0	2.2	22	1.70
75 H 182	11MB11	10.8	2.7	31	1.90

### TRANSMITTING CAPACITORS

Unusually sturdy, compact transmitting capacitors. Ideal for use in antenna tuning units, medium power tank circuits, etc. Stator at top to reduce capacity to ground. .032" aluminum plates. Spacing, .075". Approximate peak breakdown: 3000 V. Stearite insulation. 1/4" aluminum tie-roads for rigidity. Type 100E30, Single-section. Capacity: Max. 100 mmf; min., 11 mmf. Shpg. wt., 2 1/2 lbs. 75 H 183, NET \$4.95 Type 100E30, Dual section. Capacity per section: max., 99 mmf; min., 10 mmf. Shpg. wt., 3 1/4 lbs. 75 H 184, NET \$7.85

See pages 142-144 for listings of other variable capacitors.

# Millen Components



## "DESIGNED FOR APPLICATION" COMPONENTS

Components for equipment designs and for replacement purposes in existing equipment. Made to exacting specifications to insure dependable service in all applications. Terminals are located so as to provide shortest possible lead lengths. Mounting feet are designed for easy insertion of screws. For listings of Millen high-quality RF chokes, see page 141 of this catalog. Component listing below covers most

popular Millen types. ALLIED can supply all Millen components, test instruments and equipment. Specify Millen type numbers when ordering items not listed in ALLIED catalogs. Millen's Component Parts Catalog (Stock No. 37 H 010) is available free upon request. Ask for a copy with your next order. \*Indicates item is not illustrated. Coil dimensions are winding lengths.

Stock No.	Mfr's Type	Fig.	Description	NET
72 H 046	10008	*	Instrument Dial, 3/4" dia., 0-100.	1.14
72 H 085	10012	E	Right Angle Drive.	4.20
72 H 087	10050	G	Dial Lock.	.51
72 H 099	10061	*	Shaft Lock, for 3/8" Bushing; 1/4" shafts.	.42
72 H 088	10063	*	Shaft Lock with Knurled Nut.	.42
72 H 027	21100	*	Steatite Ultra-Midget Condenser, 100 mmf.	4.14
72 H 028	22100	*	Steatite Midget Condenser 100 mmf.	3.19
72 H 162	32150	*	Insulated Feed-Through Bushing, 1/4" Pkg. of 5.	.30
72 H 069	36002	*	Steatite Tube Cap, 1/2" For Standard Tubes.	.24
72 H 140	36004	*	Steatite Tube Cap, 3/4" For Standard Tubes.	.24
72 H 036	37001	F	High Voltage Terminal and Thru-Bushing, Black.	.45
72 H 037	37001	F	High Voltage Terminal and Thru-Bushing, Red.	.48
72 H 056	37201	*	Bakelite Discs (2) for 37222 below.	.24
72 H 057	37202	*	Steatite Midget Condenser 100 mmf.	.33
72 H 138	37212	*	Double Banana Plug, Black.	.78
72 H 059	37222	D	Binding Posts (2) for 37212 above.	.45
72 H 163	37302	*	Steatite Terminal Strip, 2 Terminals.	.69
72 H 164	37303	*	Steatite Terminal Strip, 3 Terminals.	.78
72 H 165	37304	*	Steatite Terminal Strip, 4 Terminals.	.90
72 H 166	37305	*	Steatite Terminal Strip, 5 Terminals.	1.05
72 H 167	37306	*	Steatite Terminal Strip, 6 Terminals.	1.14
72 H 139	37412	*	300 ohm Transmission Line Plug.	.24
72 H 129	39023	*	Insulated Shaft Extension.	1.35
72 H 121	64161	*	IF Transformer, 1600 Kc Interstage.	3.45
72 H 119	64454	*	456 Kc Diode Coil.	3.45
72 H 118	64456	*	IF Transformer, 456 Kc Interstage.	3.45
72 H 122	65163	*	1600 Kc. BFO Coil.	3.45
72 H 120	65456	*	456 Kc. BFO Coil.	3.45
72 H 130	69041	C	Ceramic Slug-tuned Coil Form, 1/2x3/4", Copper Slug.	.84
72 H 131	69043	A	Ceramic Slug-tuned Coil Form, 1/4x1/4", Iron Core.	.84
72 H 084	69045	B	Ceramic Slug-tuned Coil Form, 1/2x1/4", Copper Slug.	1.05
72 H 132	69046	*	Ceramic Slug-tuned Coil Form, 1/2x1/4", Copper Slug.	1.05
72 H 161	69047	*	Ceramic Slug-tuned Coil Form, 1/4x1/4", Iron Core.	1.05
72 H 133	69048	*	Ceramic Slug-tuned Coil Form, 1/2x1/4", Copper Slug.	1.05
72 H 150	80042	H	Nicoloi Shield for 2API and 2BPI 2" CR Tubes.	5.85
72 H 151	80043	*	Nicoloi Shield for 3API and 3BPI 3" CR Tubes.	6.75
72 H 152	80045	*	Nicoloi Shield for 5BPI.	11.76
72 H 177	80072	*	Bezel, Cushion and Filter for 2" CR Tube.	1.44
72 H 153	80072	*	Bezel, Cushion and Filter for 3" CR Tube.	4.35
72 H 154	80073	*	Bezel, Cushion and Filter for 5" CR Tube.	8.40
72 H 155	80075	*	Bezel, Cushion and Filter for 5" CR Tube.	8.40



### VARIABLE CONDENSERS

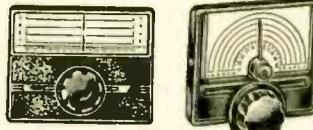
Fig. A. Type 22140. Midget. Perfect for receivers and low-power transmitter use. Air gap .020". Low-loss steatite insulation. Single section unit has maximum capacity of 148.5 mmf. 27 plates, 2 1/4" long. Wt., 4 oz. 72 H 047. NET. 3.72

Type 20000. Ultra-Midgets. Steatite insulated. Air gap .015", single-bearing type, except .045", double-bearing type. Lengths given include shaft. Av. shpg. wt., 5 oz. Capacity given is maximum.

No.	Type	Mmf	Plates	Length	NET
72 H 030	20015	20	5	1 3/8"	1.77
72 H 044	20025	28.5	7	2 1/2"	1.86
72 H 032	20050	56	14	2 3/4"	2.04
72 H 033	20100	111	27	2 3/4"	2.43
72 H 048	20920*	22.5	14	2 1/4"	2.04
72 H 045	21935*	39.5	25	3 1/2"	4.08

Fig. B. Type 19000. Open Frame Midgets. Receiving type. Steatite. Capacity increases clockwise, 850 volt test. Shpg. wt., 10 oz. Capacity given is maximum.

No.	Type	Mmf	Plates	Length	NET
72 H 156	19025	30.5	4	2 3/8"	2.97
72 H 157	19050	58.0	7	2 3/4"	3.09
72 H 158	19100	107	17	3 1/2"	3.36
72 H 159	19200	232.5	27	3 1/2"	3.90



### MULTI-SCALE DIALS

Fig. A. Type 10035. Multi-Scale Dial. Illuminated slide-rule dial. Two built-in pilot lights provide even illumination over dial. Large finger-grip knob control. Has 12 to 1 drive ratio. Has 4 blank scales for calibration and one 0-100 logging scale. Cardboard scale supplied can be used on both sides. Clear plastic, full-view dial window. Ample panel space provides room for 2 small controls. Escutcheon removable without disturbing the mechanism, for easy scale calibration. Escutcheon size, 8 1/2x6 1/2". Attractive black finish. Shpg. wt., 2 1/2 lbs. 72 H 123. NET. 6.75

Fig. B. Type 10039. Midget Panel Dial. Economy model. Excellent for small-size transmitters, receivers and measurement equipment. Drive ratio is 8 to 1. Totally self-contained mechanism eliminates back-of-panel interference; quick, easy installation. Compact design. Comfortable, finger-grip knob. Has 5 blank scales for calibration and one 0-100 logging scale. Easily calibrated without disturbing mechanism. Black finish. Size, 4x3 1/4". Shpg. wt., 13 oz. 72 H 050. NET. 3.00

### TYPE 90901 1" SCOPE

Ultra-compact, basic 1" scope for Amateur and industrial use. Occupies about same panel space as panel-type meter! A dependable modulation-linearity-tuning indicator for AM phone transmitters—shows wave-envelope (see ARRL Handbook) or trapezoidal pattern.



Other uses: Null indicator, Lissajous frequency comparator, phase shift indicator, etc. Sensitivity: Vertical, 1.7 rms v/millimeter; horizontal, 2.5 rms v/millimeter. Requires 600-950 v. DC @ 3.2 ma and 6.3 v. @ 0.6 amp. Controls: Intensity, Vertical Centering, and Horizontal Centering. Uses 1CP1 fixed focus CRT (supplied) 2 1/2x2 1/4x3 1/4" deep. Wt., 2 lbs. 84 F 907. NET. 33.90

### MINIATURIZED COUPLINGS

These miniaturized couplings are designed for use in compact equipment and for limited space applications. M003 is solid brass. M006 (illustrated) is universal joint style made of nickel plated brass with steatite insulation and spring fingers. M008 is an insulated coupling with brass inserts. 39003 is solid brass for 1/4" shafts; all others are for 3/8" shafts. Av. shpg. wt., 2 oz.



Stock No.	Type	Description	NET
72 H 172	M003	Solid brass coupling	30c
72 H 171	M006	Univ. joint coupling	75c
72 H 170	M008	Insulated coupling	48c
72 H 090	39003	Solid brass coupling	24c

### FLEXIBLE COUPLINGS

Popular 39000 series of flexible couplings. Designed to provide higher flexibility, no backlash, high break-down voltages, smaller diameter and accurate alignment. 39001 for "out-of-line" shaft operation. 39016 has insulating barrier diaphragm. All fit 1/4" shafts. Av. wt. 2 oz.



Stock No.	Type	Description	EA.
72 H 034	39001	Insulated universal joint	
72 H 176	39002	Insulated	
72 H 054	39005	Universal joint	48c
72 H 094	39006	Insulated slide action	
72 H 175	39016	Insulated barrier	

### DRIVE MECHANISMS

Type 10000 Worm Drive. A ruggedly constructed drive mechanism offering a 16 to 1 step-down ratio. Cast aluminum frame drilled for secure mounting on panel or chassis base. Spring loaded split gears for smooth operation and minimum backlash. 1/4" left and right hand shafts. 3x2x2 1/4" Shpg. wt., 6 oz. 72 H 173. NET. 7.50



Type A012 Right Angle Drive. Compact single-hole bushing mount type drive mechanism. Has 1 to 1 ratio. 1/2" left and right hand drives can be used together. 1 1/4x1 1/4x3/4" Shpg. wt., 4 oz. 72 H 174. NET. 3.90

### 33087 TUBE BASE CLAMPS

Ruggedly constructed polished spring steel tube base clamps. For securing tubes in sockets. Excellent for mobile equipment and for reducing mechanical vibration of oscillator tubes to improve stability. Av. wt., 2 oz.



Stock No.	Type	Diameter	EACH
72 H 178	33087A	1.125"	
72 H 179	33087B	1.165"	
72 H 180	33087C	1.250"	
72 H 181	33087D	1.275"	
72 H 182	33087E	1.375"	
72 H 183	33087F	1.562"	
72 H 184	33087I	1.000"	36c

### MOLDED COIL FORMS

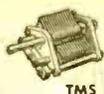
Type 45004. Molded mica phenolic base type coil forms. Four-prong type. For shortwave receivers and low-power transmitters. Size: 1" diameter; 1 1/2" winding length; 2 1/8" overall. Shpg. wt., 2 oz. 72 H 124. NET. 51c

Type 45000. As above, without prongs. Screw mounting, 2 oz. 72 H 128. NET. 39c

Type 45005. Same as 45004, but has 5 prongs. Shpg. wt., 2 oz. 72 H 125. NET. 51c



# National Components



TMS



TMC

## TM TRANSMITTING CAPACITORS

Compact, rigid construction. Sealtite insulation. Brackets for panel or chassis mounting. Air Gap and Peak Voltage: TMS types, .026", 1000 volts; TMSA types, .065", 2000 volts; TMC types, .077", 3000 volts. Lengths: \*3"; †3" to 6"; †4 1/4" to 9 1/4". 180° rotation. Av. shpg. wt., 1 lb.

### TYPE TMS—SINGLE STATOR\*

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET Each
71 H 006	TMSA-35	35	8	4.49
71 H 007	TMSA-50	50	11	5.06
71 H 000	TMS-100	100	9.5	2.99
71 H 001	TMS-150	150	11	3.22
71 H 002	TMS-250	250	13.5	3.80
71 H 003	TMS-300	300	15	4.37

### TYPE TMS—DOUBLE STATOR\*

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET Each
71 H 004	TMS-50D	50-50	6-6	3.45
71 H 005	TMS-100D	100-100	7-7	3.68
71 H 013	TMS-125D	125-125	8-8	3.89

### TYPE TMC—SINGLE STATOR†

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET Each
71 H 015	TMC-50	50	10	4.14
71 H 016	TMC-100	100	13	4.89
71 H 017	TMC-150	150	17	6.04
71 H 018	TMC-250	250	23	6.56

### TYPE TMC—DOUBLE STATOR\*\*

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET Each
71 H 020	TMC-50D	50-50	9-9	5.00
71 H 021	TMC-100D	100-100	11-11	6.84
71 H 022	TMC-200D	200-200	18.5-18.5	8.34

## TYPE ST CAPACITORS



Top quality, dependable units with straight-line wavelength plates. 180° rotation. Isolatite insulation. \*Airgap, .026". All others have airgap of .018". Av. shpg. wt., 7 oz.

### SINGLE BEARING

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
71 H 030	STHS-15	15	3	1.90
71 H 031	STHS-25	25	3.25	2.19
71 H 032	STHS-50	50	3.5	2.42

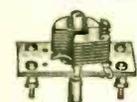
### DOUBLE BEARING

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
71 H 033	ST-35*	35	7	2.13
71 H 034	ST-50*	50	7	2.19
71 H 035	ST-75*	75	8	2.30
71 H 036	ST-100*	100	9	2.42
71 H 037	ST-140*	140	10	2.65
71 H 038	ST-150*	150	10.5	2.65
71 H 039	STH-200	200	12	2.88
71 H 040	STH-250	250	13.5	3.11
71 H 041	STH-300	300	15	3.44
71 H 042	STH-335	335	17	3.57

### SPLIT STATOR DOUBLE BEARING

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
71 H 043	STD-50*	50-50	5.5	4.14
71 H 044	STDH-100	100-100	5.5-5.5	4.49

## UM MINIATURE CAPACITORS



180° rotation. Straight-line-capacity plates. .017" air gap. 1/4" diameter shaft; protrude to permit ganging. Exceptionally low minimum capacitance. Ceramic base for 4-hole mounting or single 3/4" hole. Size, 1x2 1/4x2 3/8", 5 oz.

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET Each
71 H 275	UM-15	15	1.5	1.17
71 H 276	UM-35	35	2.5	1.32
71 H 277	UM-50	50	3	1.43
71 H 278	UM-75	75	3.5	1.67
71 H 279	UM-100	100	4.5	1.84

## VHF MIDGET VARIABLE CAPACITORS



Single and double spaced, one and two-gang variables. Ball bearings front and back. Each has mounting bracket for 7-pin miniature tube socket. \*2-gang (or split-stator), 5 oz.

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	Air Gap	NET Each
71 H 009	VHF-1D	6.75	3.0	.048	3.74
71 H 011	VHF-2D*	6.75	3.0	.048	7.46
71 H 010	VHF-1S	22.5	5.0	.016	3.74
71 H 012	VHF-2S*	22.5	5.0	.016	7.46



ACN



ICN



SCN



MCN

## CALIBRATED AND UNCALIBRATED DIALS

### VERNIER DIALS FOR INDIVIDUAL CALIBRATION

Popular blank dials. Feature the famous "Velvet Vernier" with 5:1 drive ratio. Pointers are clear plastic, with centered hairlines and pin holes for easy, accurate calibration of each scale. All have one 0-100 logging scale. MCN has 3

blank scales; others have 5. Large, polished bakelite knobs. Black, wrinkle-finished escutcheons. Clear-view plastic windows. With instructions, extra scales, hardware, and hub for 1/4" shafts.

**Type ACN.** Large size vernier dial, 5" high, 7 1/4" wide. The famous original of this type. Shpg. wt., 1 1/2 lbs. **3.80**

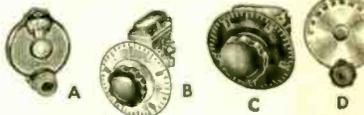
**Type SCN.** Intermediate size vernier dial, 4 1/2" high, 6 1/4" wide. Ideal for applications where space is to be saved. Wt., 1 lb. **3.45**

**71 H 090.** NET **3.80**  
**Type ICN.** Large illuminated vernier dial, 5 1/2" high, 7 1/4" wide. Lights in upper corners. With standard bayonet sockets and mounting screws. Less labels. Shpg. wt., 1 1/4 lbs. **6.90**  
**71 H 087.** NET **6.90**

**71 H 088.** NET **3.45**  
**Type MCN.** Small size vernier dial, only 2 1/2" high, 3 3/4" wide. Perfect for mobile installations and other small units. Mechanism extends 1/4" below frame. Wt., 10 oz. **3.11**  
**71 H 089.** NET **3.11**

## CALIBRATED DIALS

Famous National quality dials—outstanding favorites for accuracy, dependability and smooth action. The models listed below are universally recommended for all types of equipment. We can supply any National dial promptly. Simply specify type number for models not listed in this catalog. \*Not illustrated.



Stock No.	Type	Fig.	Description	EA.
71 H 072	AM-2	*	Dial—Ratio 5:1. 180° Rotation. Scale, 0-100. 3" dia.	2.59
71 H 073	AM-3	*	Dial—Ratio 5:1. 180° Rotation. Scale, 100-0. 3" dia.	
71 H 076	AM-4	*	Dial—Ratio 5:1. 270° Rotation. Scale, 150-0. 3" dia.	
71 H 077	AM-5	*	Dial—Ratio 5:1. 360° Rotation. Scale, 200-0. 3" dia.	
71 H 078	AM-6	*	Dial—Ratio 5:1. 270° Rotation. Scale, 0-150. 3" dia.	
71 H 067	BM-1	A	Dial—Ratio fixed. 180° Rotation. 0-100-0. 3" dia.	2.42
71 H 068	BM-2	A	Dial—Ratio fixed. 180° Rotation. 0-100. 3" dia.	2.42
71 H 069	BM-5	A	Dial—Ratio fixed. 360° Rotation. 200-0. 3" dia.	1.73
71 H 091	K	D	Dial—Old vernier drive. 180°. Scale, 0-100. 3 1/2" dia.	5.18
71 H 063	N-5	*	Dial—Vernier reader. Planetary 5:1. 200-0. 4" dia.	20.45
71 H 083	NPW-O	C	Precision Dial—Drive shaft perpendicular to panel.	25.74
71 H 084	PW-O	B	Precision Dial—Drive shaft parallel to panel.	25.74



## SELECTED QUALITY COMPONENTS

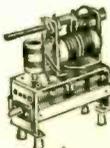
We can supply all National components. A free copy of National's Components Catalog

(Stock No. 37 H 002) will be sent upon request. \*Not illustrated.

Stock No.	Type	Fig.	Description	NET
71 H 064	AN	*	Vernier Mechanism; 5:1 ratio. Fits 1/4" shaft.	2.07
71 H 167	FWA	*	Binding Post, Takes wire, lug, or banana plug.	.23
71 H 166	FWC	*	Insulator for FWA or FWE. Mica-filled bakelite. (Per Pair)	.28
71 H 168	FWE	*	Jack, Nickel-plated brass.	.17
71 H 173	FWH	H	Terminal Strip—Binding Post. (R-39 insulation)	.76
71 H 176	FWJ	*	Terminal Strip—(Same as FWH, but for banana plugs)	.62
71 H 157	FWT	*	Plug for FWA, FWH and FWJ terminal strips.	1.14
71 H 208	HR	F	Knob, Black. HRS type without chrome skirt; white dot.	.35
71 H 209	HR	F	Knob, Gray; same specs as above.	.35
71 H 204	HRB	*	Lever Knob; bright zinc alloy.	.52
71 H 086	HRK	*	Knob, Black. 2 1/2" dia. Set screw; for 1/4" shaft.	.66
71 H 071	HRP-P	*	Bar knob with pointer, as on dial, Model R. 1 1/4"x1/2"	.28
71 H 058	HRS-3	E	Knob, Black; 1 1/4" dia. chrome. 0-10; 300"; Set screw; for 1/4" shaft.	.58
71 H 059	HRS-3	E	Knob, Gray; same specs as above.	.58
71 H 218	HRS-4	*	Knob, Black. Same as HRS-3, but single pointer line.	.58
71 H 219	HRS-4	*	Knob, Gray. Same as HRS-3, but single pointer line.	.86
71 H 056	HRT	*	Knob, Black; chrome trim. Set screw; for 1/4" shaft, 2 1/2" dia.	.86
71 H 057	HRT	*	Knob, Gray; chrome trim. Same specs. as above.	1.15
71 H 082	O	*	Dial, nickel-silver. 0-100; 180°; 3 1/2" dia. Set screw; for 1/4" shaft.	.48
71 H 085	ODD	*	Vernier drive unit for Type O dial.	2.07
71 H 199	OSR	*	100 kc. Osc. Coil; for superregens, etc. 1 1/4" dia., 1 1/2" high.	.69
71 H 070	R	G	Dial, silver; 0-10; 180°; 1 1/2" dia.; set screw for 1/4" shaft.	.07
71 H 116	TP	J	Threaded Polystyrene Bushing.	1.04
71 H 228	NR-50	I	Coil Form, slug tuned. Mica-filled bakelite.	1.32
71 H 229	XR-60	I	Coil Form, slug tuned. Ceramic.	1.32
71 H 122	XS-6	*	Sealtite Bushing.	.14

## MULTI-BAND TANK ASSEMBLIES

### TYPE MB-40SL



Low-power version of MB-150 at right. Excellent for final tank in low-power transmitter or for grid circuit in transmitter using MB-150 in final. Has same frequency coverage. Shielded swinging link minimizes harmonics. Handles up to 40 watts with output link loaded; 20 watts no load. 3 output link impedances. 3 1/2"x2 1/4"x1 1/4" lbs. **17.75**

Shpg. wt. 1 1/2 lbs. **71 H 045.** NET **17.75**

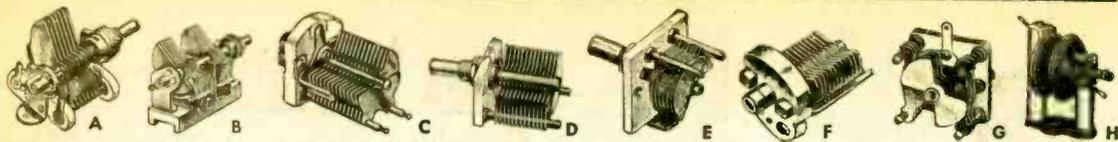
### TYPE MB-150



Tunes all frequencies from 80 thru 10 meters with no LC changing. Constant L/C ratio maintained on all bands. Rated at 150 watts; handles 1500 v. peaks. Consists of 3 coils, 4-gang tank condenser, RF choke. For balanced circuits use single-ended amplifier or single-ended amplifier using link or capacity coupling. Size, 8 1/2"x3 1/2"x2 1/4" lbs. **21.56**

**71 H 046.** NET **21.56**

# Variable Capacitors



## HAMMARLUND CAPACITORS FOR AMATEUR, INDUSTRIAL AND MILITARY APPLICATIONS

FIG. A—MC MIDGETS

Isolantite-insulated. Cadmium plated brass plates. Panel or chassis mounting. \*Straight-line capacity characteristic; others have straight-line frequency characteristic. Air gap: M and S types, .0245"; MX and SX types, .0715". Tested at 1000 v. and 1750 v. (60 cycle rms) respectively. Capacity increases with clockwise rotation. All have rotor stop. Shpg. wt., 10 oz.

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
72 H 425*	MC-20-S	20	5.5	2.64
72 H 426*	MC-35-S	35	6.0	2.79
72 H 427*	MC-50-S	50	6.5	2.88
72 H 428	MC-50-M	50	6.3	2.88
72 H 429*	MC-75-S	80	8.0	3.06
72 H 430	MC-75-M	80	7.3	3.06
72 H 431*	MC-100-S	100	8.3	3.15
72 H 432	MC-100-M	100	7.7	3.15
72 H 433	MC-140-M	140	9.0	3.39
72 H 434*	MC-140-S	140	10.0	3.39
72 H 435	MC-200-M	200	10.3	3.63
72 H 436	MC-250-M	250	12.0	3.87
72 H 437	MC-325-M	320	13.5	4.23

DOUBLE-SPACED MIDGETS

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
72 H 451*	MC-20-SX	20	6.8	2.82
72 H 452*	MC-35-SX	32	8.5	2.97
72 H 453	MC-35-MX	32	7.8	2.97
72 H 454*	MC-50-SX	53	11.5	3.15
72 H 455	MC-50-MX	53	10.5	3.15
72 H 456*	MC-100-SX	100	16.5	3.93

FIG. B—MCD DUAL MIDGETS

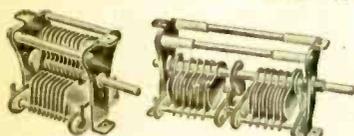
Panel-mount type. Isolantite base; cadmium-plated brass plates. Tested at 1000 v. \*Straight-line capacity characteristic; others straight-line frequency characteristic. Shpg. wt., 11 oz.

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
72 H 465	MCD-50-M	50	5.5	4.44
72 H 466	MCD-100-M	100	6.3	4.89
72 H 467	MCD-100-S	100	7.0	4.89
72 H 468	MCD-140-M	140	7.8	5.28

DOUBLE-SPACED MIDGETS

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
72 H 469	MCD-35-MX	31	6.0	4.62
72 H 470*	MCD-35-SX	31	6.8	4.62

## BUD CAPACITORS



JUNIOR SINGLE-SECTION TYPES

Very sturdy, expertly designed transmitting capacitors. Cadmium-plated brass plates. Smooth, positive rotor contact. Top and bottom brackets for chassis mounting; also accommodate tank coil. \*.051" air gap; all others have .078" air gap. Av. shpg. wt., 10 oz.

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
61 H 165	JC-1525*	50	4	4.41
61 H 166	JC-1526*	100	7	5.14
61 H 167	JC-1527*	145	9	5.50
61 H 168	JC-1528*	250	12	6.61
61 H 169	JC-1529*	340	17	7.35
61 H 170	JC-1532	55	8	5.00
61 H 171	JC-1534	110	10	5.62
61 H 172	JC-1536	190	15	7.35

DUAL-SECTION TYPES

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
61 H 173	JC-1550A*	20	3	6.91
61 H 174	JC-1551A*	50	5	7.41
61 H 175	JC-1553A*	100	7	8.08
61 H 176	JC-1554A*	145	9	8.82
61 H 177	JC-1556A*	250	12	10.29
61 H 178	JC-1572A	55	8	6.61
61 H 179	JC-1574	110	10	9.71
61 H 180	JC-1562A	150	11	11.17

FIG. C—MAPC MIDGETS

Midget padding, trimming and general-purpose capacitors. Similar to type APC, but smaller. Ideal for small space applications. Gap, .0135". Rotors and stators are nickel-plated brass. Nickel-plated phosphor-bronze wiper contact. Tapped (4-40 thread) brass studs in statorite base permit mounting without grounding rotor. Tested at 600 volts rms. 60 cps. Size: 25/32" wide, 1 3/8" high. Slotted shaft tuning. Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
72 H 208	MAPC-15	15	2.3	1.17
72 H 209	MAPC-25	25	2.6	1.20
72 H 210	MAPC-35	36	2.9	1.23
72 H 211	MAPC-50	49	3.2	1.32
72 H 212	MAPC-75	72	3.9	1.44
72 H 213	MAPC-100	99	4.5	1.71

FIG. D—HFA MIDGETS

Sturdy capacitors, similar to type HF, but larger plates and wider air gaps. For general-purpose and transmitting applications. Single-hole panel mounting. Also bracket for base mounting. Letter A in type no. denotes .02" air gap, B—.03", E—.07", 800, 1200 and 1750 test volts respectively. Shpg. wt., 1 lb.

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
72 H 224	HFA-10B	9	2.3	1.92
72 H 225	HFA-15B	16	2.8	1.98
72 H 226	HFA-15E	16	4.0	2.13
72 H 229	HFA-25B	25	3.0	2.07
72 H 227	HFA-50B	50	4.3	2.25
72 H 228	HFA-100B	100	7.5	3.18
72 H 222	HFA-100A	102	4.5	2.37
72 H 223	HFA-100A	145	6.0	2.79

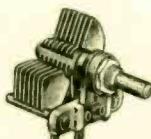
MAC MIDGETS

(Not illustrated.) Extremely small variables; excellent as VHF trimmers. Statorite base; only 1/4" x 1/4". Screwdriver adjustment. Threaded sleeve for panel mounting. Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Min. Mmf	Max. Mmf	NET EACH
72 H 255	MAC-5	5.0	1.4	1.14
72 H 257	MAC-10	8.7	1.7	1.17
72 H 258	MAC-15	14.2	2.1	1.23
72 H 259	MAC-20	19.6	2.7	1.32

"MC" MIDGETS

Single- and double-bearing types; \*double-bearing types. Mount in 3/4" hole. Electro-soldered, cadmium brass plates, semi-circular in shape. Statorite insulation. Double-spaced units have .060" airgap; others, .024". Shpg. wt., 7 oz.



Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	No. of Plates	NET EACH
61 H 142	1850*	15	3	3	1.62
61 H 143	1852*	33	4	5	1.62
61 H 144	1853*	50	5	7	1.88
61 H 145	1855*	100	7	14	2.06
61 H 146	1856*	140	7	19	2.38
61 H 147	1858*	190	9	27	2.53
61 H 148	1859*	235	10	33	2.91
61 H 149	1860*	300	12	43	3.12
61 H 150	1870	15	3	3	1.24
61 H 151	1872	33	4	5	1.38
61 H 152	1873	50	5	7	1.47
61 H 154	1875	100	7	14	1.62
61 H 155	1876	140	8	19	1.80

DOUBLE-SPACED

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH	
61 H 153	1879	15	4	5	1.62
61 H 160	1880	35	5	11	1.71
61 H 161	1881	50	7	15	1.82

MIDGET TRIMMER

Type MT-833. For antenna coupling, interstage coupling and tracking applications. 3 to 36 mm. Ceramic base. Shpg. wt., 2 oz.



FIG. E—HF MICROS

Ideal for tuning or trimming critical high frequency circuits. Isolantite insulation. \*Double-spaced units. Shpg. wt., 6 oz.

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
72 H 215	HF-15	17.5	2.8	1.26
72 H 216	HF-35	36	3.2	1.29
72 H 217	HF-50	52	3.7	1.32
72 H 218	HF-100	102	5.3	1.53
72 H 219	HF-140	142	6.3	1.80
72 H 220	*HF-15-X	15	3.6	1.35
72 H 221	*HF-30-X	30	5.2	1.47

HFD SPLIT-STATOR MICROS

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
72 H 230	HFD-50	52	3.6	3.63
72 H 231	HFD-100	102	5.0	4.17
72 H 232	HFD-140	142	6.0	4.62
72 H 233	*HFD-15-X	16	3.8	3.57
72 H 234	*HFD-30-X	28.5	5.0	3.96

FIG. F—APC MICROS

Compact high-quality variables. Isolantite base. Screwdriver adjustment. Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
72 H 250	APC-25	25	3.0	1.17
72 H 251	APC-50	50	3.9	1.23
72 H 252	APC-75	75	4.6	1.32
72 H 253	APC-100	99	5.5	1.44
72 H 254	APC-140	140	6.7	1.71

FIG. G—BFC BUTTERFLY TYPES

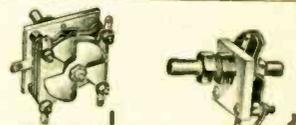
Straight-line capacity type; 90° minimum to maximum. Spacing, .03". Tested at 1200 v. rms., 60 cycles between rotor and each stator. Tapped (6-32 thread) studs in statorite base permit mounting the capacitor without grounding the rotor. Silver contact. Shpg. wt., 1 lb.

No.	Type	Max. Mmf	Min. Mmf	NET
72 H 262	BFC-12	14.5	3.5	1.65
72 H 263	BFC-25	27.5	5.0	1.86
72 H 264	BFC-38	40.5	6.3	2.19

FIG. H—NEUTRALIZING CONDENSER

Type N2-10. Rated, 3000 v. DC peak. Fine adjustment. Capacity, 2.3-10 mmf. 2 7/8" x 1 3/8" x 2 1/8". Shpg. wt., 1 lb.

72 H 249, NET..... 3.48



## CARDWELL CAPACITORS

FIG. I—VHF BUTTERFLY CAPACITORS

90-degree capacitors with butterfly rotor plates. Electrical symmetry; low inductance; no moving contacts. Isolantite insulation. Removable plates. Air gap, .030". Shpg. wt., 10 oz.

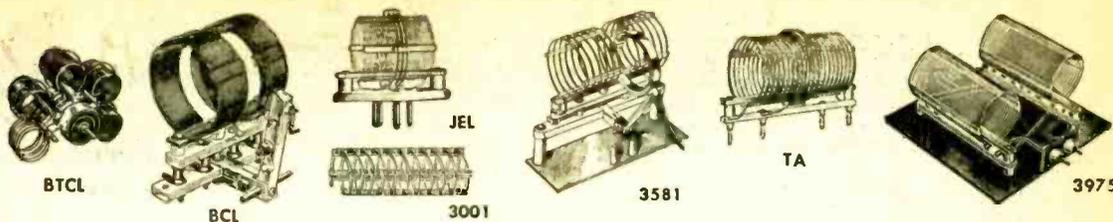
Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET
75 H 001	ER-6BF/S	5	1.5	2.33
75 H 002	ER-8BF/S	7	2.0	2.61
75 H 003	ER-15BF/S	13	3.0	2.78
75 H 004	ER-14BF/SL	13	10.4	2.64

FIG. J—TRIM-AIR MIDGETS

Universal mounting. Isolantite insulation. Shaft has rear extension for ganging; except \* (Air gap, .02"; others, .03". Shpg. wt., 7 oz.)

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
75 H 010	ZR-10AS	10	1.2	1.58
75 H 011	ZR-15AS	15	1.5	1.65
75 H 012	ZR-25AS	25	2.0	1.95
75 H 013	ZR-35AS	35	2.5	2.22
75 H 014	ZR-50AS	50	2.8	2.40
75 H 015	ZU-75AS	75	2.7	2.33
75 H 016	ZU-100AS	100	3.0	2.78
75 H 017	*ZU-140AS	140	5.0	4.28

# B & W Amateur Components



## BARKER-WILLIAMSON AIR INDUCTORS

### 5-BAND TURRETS

Center and end link coil and switch turret type assemblies. Mounted on bandwitch with 3/8" shank for single-hole panel mounting. For 80, 40, 20, 15 and 10 meters. Tune with 50 mmf. BTCL, JTCL and BCL are center-tapped. JEL, JTCL and BEL are untapped. Shpg. wt., 1 1/2 lbs.

No.	Type	Watts	Link	NET
75 H 474	BTCL	35	Center	10.14
75 H 473	BTEL	35	End	10.14
75 H 469	JTCL	75	Center	11.25
75 H 470	JTEL	75	End	11.25
75 H 471	BCL	150	Center	14.01
75 H 472	BEL	150	End	14.01

Dial Plate. For B&W turrets. Marked 3.5, 7, 14, 21, 28 mc. White on black. 2 1/4" dia. Shpg. wt., 3 oz.

75 H 364. NET.....30c

### TA ANTENNA COILS

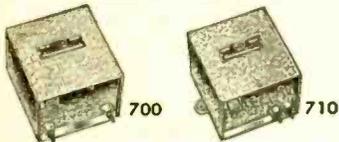
Provide extremely high efficiency as link-coupled antenna coils. Have fixed center links for coupling to either fixed or variable link final tank circuits through a low impedance line. Wound with tinned copper wire to simplify tapping feeders to coil; two tinned clips supplied with each coil. For use with transmitters rated up to 500 watts power input. Av. shpg. wt., 1 lb.

75 H 492. 10 meters. NET EACH..... 3.45  
 75 H 491. 20 meters. NET EACH..... 3.57  
 75 H 490. 40 meters. NET EACH..... 3.96  
 75 H 489. 80 meters. NET EACH..... 4.38

Type 3321 Jack Bar Assembly. For above coils. Shpg. wt., 10 oz.  
 75 H 362. NET.....1.25

### TYPE 3975 BALUN COIL

Bifilar inductors for efficiently matching 75-ohm unbalanced output to either 75-ohm or 300-ohm balanced lines. Excellent for use with transmitters having PI network output. Two coils are required to construct highly efficient matching network for all-band use (80-10 meters). With instructions, less base and connectors. Shpg. wt. each, 12 oz.  
 75 H 594. NET EACH..... 3.75



### TYPE 1-KW SINGLE BAND BALUNS

Beam Types. New 1-KW beam-balancing Baluns designed for rotary type antennas employing "T" match section. Precision components; high grade insulation. Housed in heavy gauge, weather-proofed steel cases, fitted with coax input connectors and ceramic feed-through output terminals. Impedance: 75 ohms unbalanced to 100 ohms balanced. Size, 3 1/2 x 3 1/2 x 4". Shpg. wt., 3 lbs.

Stock No.	Model	Band-Meters	EACH
75 H 415	700	10	16.50
75 H 416	701	15	
75 H 417	702	20	

Folded Dipole Types. Same size and construction as above, but designed for half-wave folded dipole antennas fed with 300-ohm line. Impedance: 75 ohms unbalanced to 300 ohms balanced. Shpg. wt., 2 lbs.

Stock No.	Model	Band-Meters	EACH
75 H 425	710	10	16.50
75 H 426	711	15	
75 H 427	712	20	
75 H 428	713	40	
75 H 429	714	80	

### PLUG-IN COILS

Rugged, efficient and inexpensive coils for use in buffer and final amplifier stages where input power does not exceed 150 watts. Steatite base and plug-in jack mounting for maximum efficiency and flexibility. All types are center-tapped except BEL, 150 watt units. Link is at end and 4 plugs are provided. Type BCL coils have link, center tap and 5 plugs. \*Capacity required to resonate at low frequency end of band.

#### "BEL" 150 WATT END LINK

Stock No.	Band & Type	*Cap. Mmf.	Shpg. Wt.	NET EACH
75 H 475	160BEL	100	10 oz.	4.11
75 H 476	80BEL	36	10 oz.	3.81
75 H 477	40BEL	36	10 oz.	3.39
75 H 478	20BEL	33	10 oz.	2.97
75 H 337	15BEL	21	9 oz.	2.97
75 H 479	10BEL	21	9 oz.	2.91
75 H 361.	Jack Bar Assembly for BEL coils.			85c

#### "BCL" 150 WATT CENTER LINK

Stock No.	Band & Type	*Cap. Mmf.	Shpg. Wt.	NET EACH
75 H 381	160BCL	100	10 oz.	4.11
75 H 366	80BCL	39	10 oz.	3.81
75 H 367	40BCL	37	11 oz.	3.39
75 H 368	20BCL	34	10 oz.	2.97
75 H 338	15BCL	21	10 oz.	2.97
75 H 369	10BCL	20	10 oz.	2.91
75 H 361.	Jack Bar Assembly for BCL coils.			85c

#### "BVL" 150 WATT SWINGING LINK

Stock No.	Band & Type	*Cap. Mmf.	Shpg. Wt.	NET EACH
75 H 385	160BVL	100	11 oz.	3.45
75 H 386	80BVL	46	11 oz.	3.12
75 H 387	40BVL	29	11 oz.	2.73
75 H 388	20BVL	25	10 oz.	2.40
75 H 339	15BVL	25	10 oz.	2.40
75 H 389	10BVL	14	12 oz.	2.31
75 H 395.	BVL Jack Bar Assembly with swinging link. Wt., 14 oz.			3.44

#### "TCL" 500 WATT CENTER LINK

Stock No.	Band & Type	*Cap. Mmf.	Shpg. Wt.	NET EACH
75 H 375	160TCL	100	1 1/4 lbs.	4.71
75 H 376	80TCL	55	1 1/4 lbs.	4.38
75 H 377	40TCL	34	1 1/4 lbs.	3.96
75 H 378	20TCL	21	1 lb.	3.57
75 H 345	15TCL	21	1 1/4 lbs.	3.57
75 H 379	10TCL	19	1 1/4 lbs.	3.45
75 H 362.	Jack Bar Assembly for TCL coils.			1.25

#### "TVL" 500 WATT SWINGING LINK

Stock No.	Band & Type	*Cap. Mmf.	Shpg. Wt.	NET EACH
75 H 400	160TVL	100	1 1/4 lbs.	3.72
75 H 401	80TVL	39	1 1/4 lbs.	3.57
75 H 402	40TVL	29	1 1/4 lbs.	3.12
75 H 403	20TVL	22	1 lb.	2.73
75 H 346	15TVL	22	1 1/4 lbs.	2.73
75 H 404	10TVL	17	1 1/4 lbs.	2.64
75 H 396.	TVL Base Assembly with swinging link. Shpg. wt., 2 lbs.			5.50

#### "HDVL" 1 KW SWINGING LINK

Stock No.	Band & Type	*Cap. Mmf.	Shpg. Wt.	NET EACH
75 H 434	160HDVL	100	2 lbs.	8.67
75 H 435	80HDVL	41	2 lbs.	7.41
75 H 436	40HDVL	33	2 lbs.	6.60
75 H 437	20HDVL	18	1 1/2 lbs.	6.21
75 H 348	15HDVL	16	1 1/2 lbs.	6.21
75 H 438	10HDVL	16	1 1/2 lbs.	5.37
75 H 440.	HDVL Base Assembly with swinging link. Shpg. wt., 3 1/2 lbs.			6.88

### 75 WATT JUNIORS

Rated: 75 watts—850 DC volts. Tune with 15 mmf to 100 mmf. Supplied in fixed end (JEL), fixed center (JCL) or variable center (JVL) link types. 3/16x1 1/8". Shpg. wt., 5 oz.

BAND	JEL	JCL	JVL	EACH
160	75 H 320	75 H 330	75 H 340	1.65
80	75 H 321	75 H 331	75 H 341	
40	75 H 322	75 H 332	75 H 342	
20	75 H 323	75 H 333	75 H 343	
15	75 H 324	75 H 334	75 H 344	
10	75 H 324	75 H 334	75 H 344	
6	75 H 324	75 H 334	75 H 344	

### 25 WATT "BABY" PLUG-IN COILS

Very compact, efficient coils for exciters and low-power transmitters. Only 1/4x1 1/8". MC—CT, no link. MEL—end link; MCL—center link. Tune with 50 mmf (except 100 mmf for 160 M). Wt., 3 oz.

BAND	MC	MEL	MCL	EACH
160	75 H 380	75 H 300	75 H 310	1.26
80	75 H 359	75 H 301	75 H 311	
40	75 H 370	75 H 302	75 H 312	
20	75 H 371	75 H 303	75 H 313	
15	75 H 358	75 H 304	75 H 314	
10	75 H 372	75 H 304	75 H 314	
6	75 H 373	75 H 374	75 H 315	

### "MINIDUCTORS"

Easily cut polystyrene insulated air-wound coils for RF use. 1" diameter coils are 3" long, all others 2". Shpg. wt., 5 oz.

4 Turns Per Inch				8 Turns Per Inch			
Dia.	No.	Type	NET	No.	Type	NET	NET
1/4"	75 H 305	3001	36c	75 H 306	3002	36c	
3/8"	75 H 309	3005	45c	75 H 316	3006	45c	
1/2"	75 H 319	3009	54c	75 H 325	3010	54c	
3/4"	75 H 328	3013	60c	75 H 329	3014	60c	
16 Turns Per Inch				32 Turns Per Inch			
1/4"	75 H 307	3003	36c	75 H 308	3004	36c	
3/8"	75 H 317	3007	45c	75 H 318	3008	45c	
1/2"	75 H 326	3011	54c	75 H 327	3012	54c	
3/4"	75 H 335	3015	60c	75 H 336	3016	60c	

### SHIELDED LINKS

Faraday shielded links for use with Barker-Williamson swinging link base assemblies and jack bar assemblies. (Illustration (3581) shows link installed.) Effectively reduce TVI and BCI caused by harmonic or spurious signal radiations. Only link arm and link required with BVL, TVL, TVH and HDVL swinging link base assemblies. Link, link arm and hinge required to convert HDVL, TCL, BCL and BEL jack bar assemblies (use HDVL coil with HD-jack bar assembly; TVL coil with TCL assembly; BVL coil with BCL and BEL assemblies). \*For 50 ohm line; 175 ohm line; higher impedance lines. HDVL coils require 1000 watt link; others, 500 watt link.

### 500 WATT LINKS

Stock No.	Type	Turns	Wt.	NET
75 H 583*	3581	1	6 oz.	5.10
75 H 584†	3582	2	7 oz.	5.10
75 H 585‡	3583	3		5.10

75 H 586. Type 3588. Link arm assembly for above. Shpg. wt., 5 oz. NET..... 2.40

75 H 587. Type 3589. Link arm and hinge for above. Shpg. wt., 6 oz. NET..... 2.70

### 1000 WATT LINKS

Stock No.	Type	Turns	Wt.	NET
75 H 588*	3781	1	9 oz.	5.40
75 H 589†	3782	2		5.40
75 H 590‡	3783	3		5.40

75 H 591. Type 3788. Link arm assembly for above. Shpg. wt., 6 oz. NET..... 2.70

75 H 592. Type 3789. Link arm and hinge for above. Shpg. wt., 8 oz. NET..... 3.00

# Variable Condensers and Accessories

## RECEIVER TYPE VARIABLE CONDENSERS TRF TYPE CONDENSERS



Fig. A. 2-Gang. For use in superhets without RF stage or in 2-stage TRF receivers. Each section has 29 plates. Range of 15 to 467 mmf. Counterclockwise rotation. With trimmers for each section. End plates slotted for easy tracking. Spring brass wipers. Requires series padder for oscillator use.  $\frac{3}{8}$ " dia. shaft. Use extender No. 60 H 366 (at right) for conversion to  $\frac{1}{4}$ ". See pages 138 to 140 for coils. Size,  $1\frac{1}{2} \times 1\frac{1}{2} \times 2\frac{3}{8}$ ". Shpg. wt., 10 oz. 61 H 059. NET.....1.15



Fig. B. J. W. Miller 365 Mmf Condensers. Compact TRF variables. Have trimmers on side of frame. Outer rotor plates are slotted for tracking adjustment. Tapped holes in frame provide secure mounting. Range: 10 to 365 mmf. Shaft diameter,  $\frac{3}{8}$ ". Type 2112:  $2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{3}{8}$ ". Type 2113:  $3\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{3}{8}$ ". Shpg. wt., each, 6 oz. 60 H 725. Type 2112. 2-gang. NET.....2.06  
60 H 726. Type 2113. 3-gang. NET.....2.94

## SUPERHET CONDENSER SPECIAL

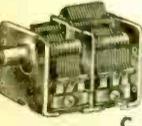


Fig. C. Two-section superhet variable. 19 plate oscillator section with 170.7 mmf.—8.7 mmf.; has one 2-1/2" diameter, 27 plate RF section with 431 max.—11.0 min. mmf.; has one 2-1/2" mmf. trimmer. Provides 455 kc frequency difference in combination with osc. coil and loop below. Counterclockwise rotation. Size,  $1\frac{1}{4} \times 1\frac{1}{2} \times 2\frac{3}{8}$ ". Shaft,  $\frac{1}{4}$ " dia.  $\frac{1}{4}$ " long. Shpg. wt., 10 oz. 61 H 065. NET.....98c  
61 H 507. Oscillator Coil. NET.....53c  
51 C 040. Loop Antenna. NET.....53c

## MIDGET VARIABLES



Fig. D. Midget Superhet. Miniature size without sacrifice of performance makes these 2-gang variables perfect for portable and midget sets. Capacity: RF section, 10.5 to 364 mmf. 27 plates; osc. section, 7.6 to 132.6 mmf. 15 plates. Capacity increases with counterclockwise rotation. For use with 455 kc IF. With trimmers. Size,  $1\frac{1}{4} \times 1\frac{1}{2} \times 1\frac{3}{8}$ ".  $\frac{1}{4}$ " dia. shaft extends 1" beyond frame. Ball-bearing mounted shaft. Shpg. wt., 6 oz. 61 H 008. NET.....1.16



Fig. E. Midget TRF. 27-plate, single-gang condenser. Variable from 13.8 to 371.2 mmf. Capacity increases as shaft is rotated clockwise.  $\frac{1}{4}$ " diameter shaft mounted in ball bearings. Size,  $1\frac{1}{4}$ " deep,  $1\frac{1}{4}$ " wide,  $1\frac{1}{4}$ " high. Shaft extends  $\frac{1}{4}$ " beyond frame. A well-built, compact condenser, useful in many circuits. Particularly adaptable to one, two, and three-tube receivers. 5 oz. 61 H 009. NET.....75c

## FLUTED KNOBS



High quality black bakelite. For use on  $\frac{1}{4}$ " shafts. Have metal inserts. Av. wt., 4 oz.

Fig. F. Pointer Type  
55 H 088.  $\frac{7}{8}$ ". NET. 28c  
55 H 085. 1". NET. 34c  
55 H 086. 1 $\frac{1}{8}$ ". NET. 39c  
55 H 087. 2". NET. 52c



Fig. G. Flange Type  
55 H 095. 1 $\frac{1}{4}$ ". NET. 20c  
55 H 094. 1 $\frac{1}{2}$ ". NET. 17c  
55 H 096. 1 $\frac{3}{4}$ ". NET. 25c  
55 H 097. 2 $\frac{1}{4}$ ". NET. 37c



ICA DIALS



Fig. L. Type 2164. Miniature. Chrome-silver dials with black etched numerals and black knob. Size,  $1\frac{1}{4}$ " deep,  $1\frac{1}{4}$ " wide,  $1\frac{1}{4}$ " dia. Set screw bushing for standard  $\frac{1}{4}$ " shafts. Shpg. wt., 3 oz. 55 H 340. NET.....62c  
Type 2165. As above but 10-0 in 270". 55 H 341. NET.....62c

Fig. M. Precision Vernier. Have chrome-silver dial plates. Black numerals and calibrations. 0 to 100 in 180° or 325°. Dial sets to a fraction of division. Flanged knob. For  $\frac{1}{4}$ " shafts. Wt., 7 oz.

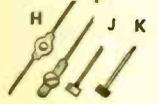
Stock No.	Type	Dia.	Degrees	NET
55 H 350	2170	2 $\frac{3}{8}$ "	325	1.47
55 H 351	2171	2 $\frac{3}{8}$ "	180	1.47
55 H 352	2168	4"	325	1.96
55 H 353	2169	4"	180	1.96

## CRONAME "ON-OFF" SWITCH PLATE



Etched aluminum with black background, polished aluminum letters and border.  $1\frac{1}{4} \times 1\frac{1}{2}$ ". 2 oz. 60 H 338. NET. 12c  
20 or More, EACH 10c

## G-C DIAL POINTERS



Will fit most radio sets. Can be cut shorter for small dials. 60 H 449. Type 6810. Kit of 10 pointers in plastic case. Shpg. wt., 4 oz. NET.....1.91

60 H 446. Fig. H. Type 6802. 5" rotary for  $\frac{1}{4}$ " shaft. Gold and red. Wt., 1 oz. EA.....24c  
60 H 445. Fig. I. Type 6801. 3" rotary for  $\frac{1}{4}$ " shaft. Gold. Wt., 1 oz. EACH.....24c  
60 H 448. Fig. J. Type 6804. 2" slide pointer. White enamel. Shpg. wt., 1 oz. EA.....24c  
60 H 447. Fig. K. Type 6803. 2 $\frac{1}{2}$ " slide pointer. Red translucent. Wt., 1 oz. EA.....24c

## TRIMMERS AND PADDERS

Mica trimmer and padder condensers. Treated for resistance to humidity and permanence of capacity settings. Low-loss ceramic base. Clear India mica. Adjusting plates rigidly constructed to permit bending soldering lugs without affecting capacity. Size,  $1\frac{1}{2} \times \frac{1}{2} \times \frac{3}{8}$ ". Mtg. ctrs.,  $1\frac{1}{2}$ ". Ranges below are mmf. from 3 turns open trimmer to tight setting. Av. shpg. wt., 2 oz.



No.	Mmf	Net	No.	Mmf	Net
60 H 340	2-30	13c	60 H 344	45-380	21c
60 H 341	4-80	13c	60 H 345	70-480	23c
60 H 342	9-180	17c	60 H 346	100-580	25c
60 H 343	25-280	19c			

## WALSCO DIAL ACCESSORIES THRIFTY DIAL CORD RACK



An economical and convenient supply of dial cord. Contains 200 ft. of the most popular dial cord types—50 ft. of type 34—medium, 100 ft. of type 35—Special Thin, and 50 ft. of type 39—Standard. Dustproof, dispenser-type box. Shpg. wt.,  $\frac{1}{4}$  lbs. 86 N 053. NET.....4.95

## POPULAR SERVICE SPOOLS

The following cords cover 80% of the replacement demand. Constructed with fiberglass or linen core and pre-stretched. Nylon-braded latches. Average shpg. wt., 4 oz.

No.	Type	Diam.	Strngth.	Lgth.	EA.	No.	Type	Diam.	Strngth.	Lgth.	EA.
60 N 490	34-Med.	.040"	35 lbs.	25 ft.	82	43 N 197	34-Med.	.040"	35 lbs.	100 ft.	
60 N 491	35-Thin	.025"	15 lbs.	25 ft.		43 N 195	35-Thin	.025"	15 lbs.	100 ft.	2.91
60 N 492	39-Std.	.032"	20 lbs.	25 ft.		43 N 196	39-Std.	.032"	20 lbs.	100 ft.	

## HAMMARLUND COUPLINGS

Type FC-465. Insulated coupling for providing flexible linkage between angularly misaligned shafts. No backlash. Maximum torque that can be handled is limited only by holding power of set screws. For  $\frac{1}{4}$ " shafts. Shaft clearance,  $\frac{1}{16}$ ". Ceramic insulation. Flash voltage, 6000 v. Size,  $1\frac{1}{4} \times \frac{3}{4}$ " x 3 oz.  
72 H 496. NET.....75c  
Type FNC-465. As above, but non-insulated. Durable, plated metal construction. Shpg. wt., 3 oz.  
72 H 497. NET.....75c



## INSULATED COUPLING

For coupling drive shafts to condensers, gang switches, etc. Bakelite insulation. Hubs drilled to fit  $\frac{1}{4}$ " shafts; set-screws hold rigidly. Shpg. wt., 2 oz.  
60 H 395. NET.....49c



## LOW-LOSS CERAMIC COUPLING

Similar in construction to above, but for high-voltage use. Shpg. wt., 2 oz.  
60 H 396. NET.....57c



Coupling Extender

## SHAFT FITTINGS

Couplings for extending shafts of volume controls, switches, condensers, etc., or for gang single units, even when shafts are not of same diameter. Insulated types are made of black phenolic. Extenders for decreasing or increasing shaft diameter and for extending shaft length. 60 H 367 has  $\frac{1}{2}$ " opening,  $\frac{3}{8}$ " shaft—60 H 366 has  $\frac{1}{4}$ " opening,  $\frac{1}{4}$ " shaft. Shaft length on all extenders,  $\frac{3}{8}$ "; overall length,  $1\frac{1}{8}$ ". Av. shpg. wt., 4 oz.

Brass	Insulated	Kind	Size
60 H 360	60 H 350	Coupling	$\frac{1}{4}$ " to $\frac{1}{2}$ "
60 H 361		Coupling	$\frac{1}{4}$ " to $\frac{1}{2}$ "
60 H 362	60 H 352	Coupling	$\frac{1}{4}$ " to $\frac{1}{2}$ "
60 H 365	60 H 355	Ext.	$\frac{1}{4}$ " to $\frac{1}{2}$ "
60 H 366		Ext.	$\frac{1}{4}$ " to $\frac{1}{2}$ "
60 H 367		Ext.	$\frac{1}{4}$ " to $\frac{1}{2}$ "

NET EACH.....18c  
10 or More, EACH.....16c

## E. F. JOHNSON FLEXIBLE SHAFTS

Non-rusting phosphor-bronze flexible shafts with  $\frac{1}{4}$ " hubs. Ideal for connecting out-of-line shafts together. Handy accessory for Amateurs, experimenters, labs, etc. Permit up to 90 degrees angular control. Wt., 2 oz.  
73 H 290. 115-253. Length 3". NET.....36c  
73 H 291. 115-254. Length 6". NET.....50c



## PANEL BEARING ASSEMBLY

For use with rigid or flexible couplings for mounting volume controls, etc. away from the panel. Made of brass. Take panels up to  $\frac{1}{8}$ " thick. For standard  $\frac{1}{4}$ " shafts. Supplied with 2 fiber insulating washers. Shpg. wt., 3 oz.  
60 H 385. Overall length 3". NET.....29c  
60 H 386. Overall length 6". NET.....34c  
60 H 390. Bearing only. NET.....16c



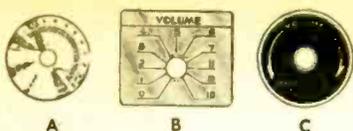
## ICA ALUMINUM IDLER PULLEYS

High quality, lightweight aluminum. Meet servicing requirements. Sturdy construction, easy-operating. Hole diameter, 0.128" to fit  $\frac{1}{4}$ " idler shafts. Take all standard dial cords. Average shpg. wt., 8 oz. In pkgs. of 4 only.



Stock No.	Mfr's Type	O. D.	Trough Dia.	Pkg. of 4, Ea. Pk.
41 H 310	601	$\frac{3}{8}$ "	$\frac{1}{4}$ "	15c
41 H 311	602	$\frac{3}{8}$ "	$\frac{3}{8}$ "	17c
41 H 312	603	$\frac{1}{2}$ "	$\frac{3}{8}$ "	17c
41 H 313	604	$\frac{5}{8}$ "	$\frac{1}{2}$ "	19c
41 H 314	605	$\frac{3}{4}$ "	$\frac{1}{2}$ "	22c

# Dials and Knobs



## DIAL PLATES

Fig. A. Satin-finished chrome-silver dial plates. In 2", 3", and 4" sizes. 0-100 clockwise black scale. Center hole of 2" dial, 2 3/4" - others have 3/4" hole. Av. shpg. wt., 2 oz.

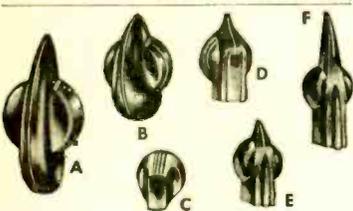
180 Degrees			325 Degrees		
No.	Dia.	NET	No.	Dia.	NET
55 H 120	2"	57c	55 H 128	2"	57c
55 H 121	3 1/2"	90c	55 H 129	3 1/2"	90c
55 H 122	4"	98c	55 H 130	4"	98c

Fig. B. CRONAME ANODIZED ALUMINUM NAMEPLATES. Etched aluminum scales and a black background. Size, 2 3/8 x 2 3/8", with 1/2" center hole. Has 1/8" hole in each corner for mounting. Shpg. wt., 2 oz.

No.	Type	Description
55 H 160	448	Treble, 0-10
55 H 161	447	Bass, 0-10
55 H 137	429	Treble, 5-0-5
55 H 136	428	Bass, 5-0-5
55 H 164	416	Microphone, 1, 0-10
55 H 165	417	Microphone, 2, 0-10
55 H 126	415	Microphone, 0-10
55 H 170	413	Master Gain, 0-10
55 H 124	412	Gain, 0-10
55 H 127	422	Gain, 5-0-5
55 H 123	411	Tone, 0-10
55 H 132	424	Radio-Microphone, 5-0-5
55 H 133	425	Record-Microphone, 5-0-5
55 H 134	426	Volume, 0-10
55 H 125	414	Record, 0-10
55 H 135	427	Fader, 5-0-5
55 H 138	430	Expansion, 0-10
55 H 139	446	Phono, 0-10
55 H 131	423	Increase, with arrow
55 H 172	410	No title, 0-10

NET EACH ..... 29c  
10 or More, EACH ..... 26c

Fig. C. CRONAME ROUND DIAL PLATES. Diameter 1 1/4". Aluminum scale with black background. Type 25 has clockwise arrow labeled "Volume." Type 569 graduated 0-100 over 180° clockwise. Type 905 graduated 0-100 over 270° clockwise. Use with 1/4" bar knobs (see below). Shpg. wt., 2 oz.  
55 H 140, Type 569 ..... 18c  
55 H 108, Type 205 ..... 18c  
55 H 141, Type 25, NET EACH ..... 18c  
10 or More, EACH ..... 16c



## POINTER AND BAR KNOBS

Molded of high-quality plastic. Fit 1/4" round or flat shafts. Slotted set screws. Figs. A, B, and C are Croplastic types by Croname. \*Brass inserts, 1/2" diameter recess in rear for close panel mounting. All black, except red. Shpg. wt., 2 oz.

Stock No.	Fig.	Size	NET EACH	10 or More, EA.
55 H 065*	A	2 1/2"	36c	32c
55 H 063*	B	2 1/2"	26c	26c
55 H 067*	C	1 1/2"	36c	32c
55 H 074	D	1 1/2"	11c	10c
55 H 072	E	1 1/2"	11c	10c
55 H 078*	E	1 1/2"	16c	14c
55 H 073*	E	1 1/2"	11c	10c
55 H 071*	F	2"	21c	19c
55 H 070*	F	2"	21c	19c
55 H 079*	F	2"	26c	23c



## LEVER TYPE KNOBS

Black molded bakelite knobs with heavy brass inserts. For standard 1/4" diameter shafts. Secured by set screws. Shpg. wt., 2 oz.

Stock No.	Fig.	Lgth.	NET EACH	10 or More, EA.
55 H 005	G	1 3/8"	19c	17c
55 H 006	H	2 1/2"	23c	21c

## NEW CRONAME HIGH-QUALITY TUNING ASSEMBLIES

### CROFLEX "TAILORED TO THE CHASSIS" UNITS

Handsome "Croflex" dials are "tailored" to fit any average chassis and are exceptionally easy to install. The tuning knob can be located to suit your preference—at either end of the dial or along its lower edge. Simply choose the location you like best, drill a hole for the knob shaft, and attach the knob shaft assembly. Condenser pulley furnished with each tuner slips onto condenser shaft and is connected to rest of dial mechanism by drive cable. Take clockwise or counter-clockwise condenser with 3/8" or 1/2" shaft. Have modern "3-dimension" edge-lighted glass scales, calibrated horizontally. Complete with gold-bronze finished aluminum escutcheon and two clip-on miniature base, screw-type pilot light sockets (less bulbs).

**Type CR-1 AM-Shortwave.** Small size tuning assembly. Requires 1 1/4 x 4 3/4" cutout. Pointer travels 3 3/4". Tuning ratio of 9 to 1. Dial scale calibrated for 550-1700 kc broadcast and 6-18 mc shortwave bands. Also has 0-100 logging scale. Shpg. wt., 1 lb.  
55 H 317, NET ..... 4.97

**Type CR-1A AM-FM.** Same as CR-1 but with dial scale calibrated for 550-1700 kc AM broadcast and 88-108 mc FM broadcast band. Shpg. wt., 1 lb.  
55 H 318, NET ..... 4.97

**Type CR-1B AM Broadcast.** Same as above but with dial scale calibrated for 550-1700 kc band only. Shpg. wt., 1 lb.  
55 H 319, NET ..... 4.97

**Type CR-2 AM-Shortwave.** Medium size tuning assembly. Requires 1 1/4 x 7 3/4" cutout. Pointer travels 6 3/4". Tuning ratio 17 to 1. Scale calibrated for 550-1700 kc broadcast and 6-18 mc shortwave bands. Has 0-100 logging scale for accurate resetting and station logging. Shpg. wt., 1 lb.  
55 H 322, NET ..... 6.15

**Type CR-2A AM-FM.** Same as CR-2 but with dial scale calibrated for 550-1700 kc AM broadcast and 88-108 mc FM broadcast bands. Shpg. wt., 1 1/4 lbs.  
55 H 323, NET ..... 6.15

**Type CR-2B AM Broadcast.** Same as above but with dial scale calibrated for 550-1700 kc band only. Shpg. wt., 1 1/4 lbs.  
55 H 324, NET ..... 6.15

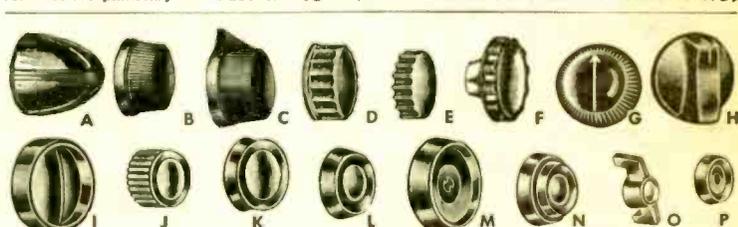
**Type CR-3 AM-Shortwave.** Large size tuning assembly. Requires 2 x 8 1/2" cutout. Pointer travels 7 1/2". Tuning ratio of 18 to 1. Dial scale calibrated for 550-1700 kc broadcast and 6-18 mc shortwave bands. Also has 0-100 logging scale. Shpg. wt., 1 1/2 lbs.  
55 H 325, NET ..... 8.20

**Type CR-3A AM-FM.** Same as CR-3 but with dial scale calibrated for 550-1700 kc AM broadcast and 88-108 mc FM broadcast bands. Shpg. wt., 1 1/2 lbs.  
55 H 326, NET ..... 8.20

**Type CR-3B AM Broadcast.** Same as above but with dial scale calibrated for 550-1700 kc AM broadcast band only. Shpg. wt., 1 1/2 lbs.  
55 H 327, NET ..... 8.20

## AUXILIARY PLANETARY DRIVES

55 H 175, Model 599. Two-speed ball-type planetary drive, 5 to 1 and 1 to 1 ratios. Fit 1/4" shafts. Take dual concentric knobs, (below). Wt. 3 oz. NET ..... 5.29  
55 H 176, Model 27067. Single-speed; 5 to 1 ratio. Has threaded sleeve to mount indicating dial. For 1/4" knobs and shafts. Shpg. wt., 4 oz. NET ..... 5.29  
55 H 328, Type 6665 Dual Combination Knob Set. Consists of two concentric knobs designed for 55 H 175 planetary drive, above. Shpg. wt., 2 oz. NET ..... 73c



## POPULAR MOLDED KNOBS FOR EVERY REQUIREMENT

Plastic knobs, attractively shaped and beautifully finished. Replace those on most radio sets. A and B are adaptable as midset set knob replacements. \*For knurled shafts only. Others have setscrews for round or flat shafts. †With arrow. ‡Have pointer. Figs. I, J, K, L, N and O are gold-metal inlay knobs. All knobs fit standard 1/4" shafts. Av. wt., 2 oz.

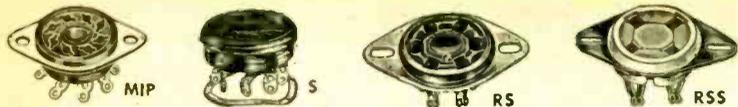
Stock No.	Fig.	Dia.	Color	NET EA.	10 or More EA.	Stock No.	Fig.	Diam.	Color	NET EA.	10 or More EA.
55 H 025	A	3/4"	Black	9c	8c	54 H 965*	J	1 3/8"	Ivory	17c	15c
55 H 027	A	3/4"	Walnut	10c	9c	54 H 982	E	1"	Walnut	10c	9c
55 H 028*	A	3/4"	Walnut	6c	5c	54 H 983	E	1"	Ivory	10c	9c
55 H 022	A	7/8"	Black	13c	12c	54 H 960*	I	1 1/2"	Walnut	24c	22c
55 H 043*	B	1 1/8"	Black	5 1/2c	5c	55 H 018	H	1 1/2"	Black	13c	12c
55 H 042*	C	1 1/8"	Black	5 1/2c	5c	55 H 019	H	1 1/2"	Red	13c	12c
55 H 029	A	3/4"	Ivory	11c	10c	54 H 980	D	1 1/2"	Walnut	10c	9c
55 H 035	B	1 1/8"	Black	9c	8c	54 H 981	D	1 1/2"	Ivory	10c	9c
55 H 036	B	1 1/8"	Walnut	9c	8c	55 H 150†	G	1 1/2"	Black	24c	22c
55 H 023	B	1"	Black	11c	10c	55 H 024	F	1 1/2"	Black	10c	9c
55 H 040†	C	1 1/8"	Black	9c	8c	55 H 050	F	1 1/2"	Black	20c	18c
54 H 964*	J	1 3/8"	Walnut	17c	15c	54 H 962*	K	1 1/2"	Walnut	23c	21c

## TELEVISION REPLACEMENT KNOBS

Fit receivers using dual controls and tuners made by Standard Coil, Sarkes-Tarjian, etc. Used on all popular TV sets such as RCA, Bendix, Westinghouse, Admiral, etc. Walnut pattern with plated gold finish inlay on face. \*1/4" knurled shaft. †1/4" flatted shaft. ‡1/8" flatted shaft. 2 oz.

Stock No.	Fig.	Diam.	Use	NET Each	Stock No.	Fig.	Diam.	Use	NET Each
54 H 966*	L	1 1/8"	Front dual	26c	54 H 970†	N	1 3/8"	Comb. dual	44c
54 H 967*	L	1 1/8"	Front dual	29c	54 H 971†	O	2"	Front dual	53c
54 H 968†	L	1 1/8"	Front dual	29c	54 H 972	P	1 3/8"	Rear dual	17c
54 H 969	M	1 1/8"	Rear dual	27c					

# Amphenol Sockets



## SELECTION OF POPULAR SOCKETS

**MIP.** High dielectric bakelite body with molded-in steel plate. \*Requires 1 1/2" hole. †Requires 1 3/4" hole. All others mount in 1 1/2" hole. ‡Mica-filled bakelite socket. 2 oz.

Stock No.	Mfr's Type	Prongs	EACH
40 H 024	77MIP4	4	7c
40 H 025	77MIP5	5	
40 H 026	77MIP6	6	
40 H 027	77MIP7S	7S	
40 H 029	†77MIP7L	7L	8c
40 H 028	77MIP8	Octal	8c
40 H 126	*88-8	Octal	8c
40 H 030	*88-8X	Loktal	12c
40 H 034	†77MIP8T	8	13c
40 H 032	77MIP9	9	11c
40 H 033	77MIP11	11	14c

**S.** High dielectric molded bakelite body. All mount in 1 1/4" hole except 40H059 and 40H061, which require 1 1/2". With retainer ring. 2 oz.

Stock No.	Mfr's Type	Prongs	EACH
40 H 054	78S4	4	8c
40 H 055	78S5	5	
40 H 056	78S6	6	
40 H 057	78S7S	7 Small	
40 H 059	78S7L	7 Large	10c
40 H 061	78S7C	7S-7L	10c
40 H 058	78S8	Octal	10c
40 H 062	78S9	9	12c
40 H 060	78S8L	Loktal	12c



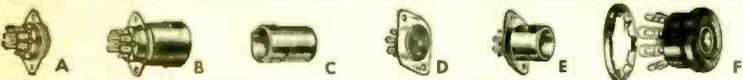
## OCTAL AND MAGNAL SOCKETS

**Type 59-355.** Octal Zip-in. Molded of low-loss "Ethylon-A" insulating material. High "Q" factor. For applications where temperature is below 125° F. May be mounted above or below chassis. Requires 1 1/2" hole. 8-contact. Two 3/4" mounting holes on 1 1/2" centers. Shpg. wt., 2 oz. 40 H 182. NET. 14c

**Type 77-MIP8FK.** Floating Octal. Live rubber grommets in enlarged mounting holes of sturdy steel plate. Mounts in 1 1/4" hole with two 3/4" holes on 1 1/2" centers. With grommets, mtg. screws, nuts and washers. 2 oz. 40 H 043. NET. 23c

**Saddle Type.** Below chassis mounting. For 1" hole. .140" mtg. holes on 1 1/2" ctrs. 2 oz. 40 H 168-015 Black bakelite, octal. NET 8c  
40 H 118. NET. 8c  
Type 168-017 Mica-filled, octal. NET 12c  
40 H 119. NET. 12c

**Type 49-SS11L.** Magnal. Has 1 1/2" pin circle to accept magnal 11-prong cathode-ray tubes. Made of low-loss steatite. Has steel retaining ring for quick assembly. Requires 1 1/2" mounting hole. Shpg. wt., 4 oz. 40 H 090. NET. 71c



## MINIATURE SOCKETS AND SHIELDS

**BAKELITE AND STEATITE SOCKETS**  
High-grade miniature sockets and shields. 147 series mount in 3/8" chassis hole; 7/8" mtg. ctrs. with 1/2" screw holes. 59 series mount in 3/4" chassis hole and have 1 1/2" mtg. ctrs., with .095" rivet holes. Av. shpg. wt., 2 oz.  
\*Steatite. †Black bakelite. ‡Mica-filled bakelite.

**FIG. A—BOTTOM-MOUNTING TYPE**

Stock No.	Type	No. Contacts	NET
40 H 191	†147-500	7	14c
40 H 192	*147-501	7	30c
40 H 199	†147-505	7	15c
40 H 193	‡ 59-400	9	22c
40 H 167	† 59-410	9	24c

**FIG. B—TOP-MOUNTING TYPE**  
Have tube shield base for shields below.

Stock No.	Type	No. Contacts	NET
40 H 194	†147-905	7	23c
40 H 195	*147-925	7	37c
40 H 175	†147-913	7	24c
40 H 176	† 59-407	9	34c
40 H 196	† 59-406	9	33c

**FIG. C—TUBE SHIELDS FOR 7-CONTACT BASES**

Stock No.	Type	Height	NET
40 H 197	5-401	1 3/8"	8c
40 H 198	5-402	1 3/4"	8c

**FOR 9-CONTACT BASES**

Stock No.	Type	Length	NET
40 H 188	5-405	1 1/2"	12c
40 H 189	5-408	1 1/2"	14c
40 H 190	5-409	2 3/8"	14c

**7 AND 9 PIN SOCKETS**  
Zip-in type tube sockets. Molded of low-loss "Ethylon-A". Insulating material with high "Q" factor. For applications where temperature is below 125° F. 7-pin sockets require 3/8" holes; 9-pin, 1/2" holes. Mounting holes, 1 3/8" diameter on 1 1/2" centers. Av. shpg. wt., 2 oz.

**FIG. D—WITHOUT TUBE SHIELD BASE**

Stock No.	Type	Pins	NET
40 H 184	59-357	7	12c
40 H 185	59-359	9	30c

**FIG. E—WITH TUBE SHIELD BASE**

Stock No.	Type	Pins	NET
40 H 186	59-367	7	16c
40 H 187	59-369	9	36c

**Fig. F—RETAINER RING SOCKETS**  
Mount in 3/4" round or "D" shaped chassis hole with retainer ring provided. Available with black bakelite body or mica-filled body. See page 150 for plugs. Av. shpg. wt., 2 oz.

**BLACK BAKELITE**

Stock No.	Mfr's Type	No. Prongs	NET EACH
40 H 131	78-S3S	3	10c
40 H 115	78-S4S	4	10c
40 H 122	78-S5S	5	13c
40 H 130	78-S6S	6	13c
40 H 120	78-7P	7	13c

**MICA-FILLED**

40 H 124	78-7PT	7	16c
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## TELEVISION TUBE SOCKETS

**Type 69-402.** Duodecal socket for cathode-ray tubes with 12 equally spaced pins on circle dia. of 1.063". Bakelite body and removable cap eliminate shock hazard. Shpg. wt., 3 oz. 40 H 100. NET. 92c



**Type 69-415.** Diheptal socket for 14 equally spaced pins on dia. of 1.750". For 2.050" dia. tube base. Wt., 4 oz. 40 H 101. NET. 98c

**Type 69-417.** Same as 40H101, but for tube with 2.250" base. Wt., 4 oz. 40 H 102. NET. 98c

## UNWIRED ADAPTERS

Socket tops and bases for modernization of tube testers, analyzers, and radios. Bases have stud for connection to tube grid cap, and are drilled for self-tapping screws (included). Both octal socket and 9-pin socket fit octal base as listed below. Shpg. wt., 8 oz.



40 H 174. 8085S Octal base. NET 22c  
40 H 54. 44-8. Octal socket. NET 14c  
40 H 166. 44-9. 9-pin socket. NET 26c

## TYPE "S" MINIATURE SOCKETS

For modernizing any electronic equipment. Mount in standard 1 1/4" chassis holes by means of retainer ring. High-dielectric molded bakelite. 2 oz. With retainer ring. 40 H 113. 78-A7P. 7 Pin. NET 18c  
40 H 114. 78-A9P. 9 Pin. NET 26c



## ACS SOCKET SHELLS

Light-weight aluminum shells for type "RSS", "RS", and "S" type sockets at left above. Permit extension of sockets 1 1/2" above or below chassis surface. Size, 1 3/8" high x 1 1/4" body dia. Base dia., 2 3/8". Three mtg. holes take screws up to 3/8" dia. Mts. in 1 1/4" hole. Less socket. 40 H 127. Type 23-1S. For any socket except Types S7L, S7C, RS7L, RS7C and RSS7L. Shpg. wt., 2 oz. NET. 7c  
40 H 128. Type 23-1L. For S7L, S7C, RS7L, RS7C and RSS7L. Shpg. wt., 2 oz. NET. 7c



## INDUSTRIAL SOCKETS

**Barrier Types.** Meet N.E.M.A. and UL requirements. Max. RETMA working voltage, 2,000 DC. Rated 8 amps each contact. Inter-electrode capacitance, 2.6 mmf. Eight screw-type tie points. Bronze bridge contacts; four full lines of contact. Insulating barriers. Size, 3/4 x 1 1/2 x 2 3/4". Mtg. ctrs., 1 1/4". Above or below chassis mtg. Shpg. wt., 5 oz.

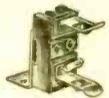


**Type 146-103.** Octal. Socket with screw terminals, less tie inserts. Top mounted. 40 H 180. NET. 93c

**Type 146-104.** Octal. Complete with screw terminals and four molded-in threaded inserts for tie points. Top mounted. 40 H 181. NET. 1.27

**Type 146-111.** 7-pin miniature button. Above or below mounting. 40 H 149. NET. 1.47

**Type 146-121 for Photo-tubes.** For C7026A, 921, 922 and similar cartridge type tubes. Mica-filled bakelite base. Large barrier and high creepage path give high resistance between clips. Spring brass clips. Shpg. wt., 5 oz. 40 H 095. NET. 79c

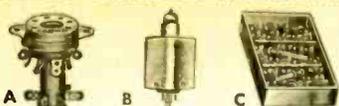


## HIGH VOLTAGE 4-CONTACT SAFETY SOCKET

**Type 77A-4T.** For hi-voltage small-base TV rectifier tubes. Takes all 4-pin types with 1.156" base diameter such as 2X2A. Socket is set at bottom of deep molded bakelite shell to prevent any possibility of touching tube prongs while they are engaged with socket contacts. 3/4" dia. holes, 1 1/4" mtg. centers. Requires 1 1/2" dia. hole. 2 oz. 40 H 147. NET. 89c



# All-Purpose Tube Sockets



## VECTOR SOCKETS

Fig. A—SOCKET-TURRETS

Components mount on mica-filled phenolic form. Turrets are 1/2" dia. Octal units mount in 1" hole; miniature, 3/4" hole. Av. wt., 3 oz. 2 1/2" Turrets. Have 9 terminals in two rings spaced 1 3/4" apart.

Stock No.	Type	Socket	NET
40 H 211	10-O-9T	Octal	55¢

2" Turrets. Have 9 terminals in two rings spaced 1" apart.

Stock No.	Type	Socket	NET
40 H 212	8-O-9T	Octal	51¢
40 H 217	8-M-9T	7-Pin Miniature	60¢
40 H 233	8-N-9T	9-Pin Noval	63¢

1 1/2" Turrets. Have 6 terminals in 1 ring only.

Stock No.	Type	Socket	NET
40 H 213	6-O-6T	Octal	47¢
40 H 218	6-M-6T	7-Pin Miniature	54¢
40 H 234	6-N-6T	9-Pin Noval	57¢

Shield Bases. For miniature sockets above. Fasten above chassis on socket mtg. ctrs. Use with standard bayonet type shield. Wt., 2 oz. 40 H 235, S7. For 7-pin sockets. NET... 8¢  
40 H 236, S9. For 9-pin sockets. NET... 9¢

Fig. B—PLUG-IN TURRETS

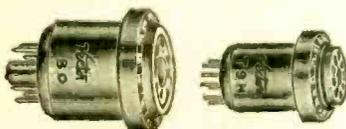
Consist of standard tube socket, tubular terminal post, octal plug and shield can. Can sizes: B10M-B10N, 1.37" square, 2.5" long; C10M-C10N 2" square, 2.5" long. Av. shpg. wt., 5 oz.

Stock No.	Type	Description	NET
40 H 237	B10M	7-Pin Miniature	1.52
40 H 238	B10N	9-Pin Noval	1.57
40 H 239	C10N	9-Pin Noval	1.89
40 H 241	C10M	7-Pin Miniature	1.86

Fig. C—SOCKET KITS

Kit No. 1. Assortment of socket-turrets as listed above for experimenters, designers and Amateurs. Consists of 20 socket-turrets for octal, octal, miniature, and noval tubes in various styles and sizes. Special and standard types included. Shpg. wt., 1 1/4 lbs. 40 H 280. NET... 10.00

Kit No. 2. Assortment of 7 plug-in units with octal, miniature, and noval sockets, 8 and 11 prong plugs. Shpg. wt., 1 1/2 lbs. 40 H 281. NET... 10.00



## VECTOR TUBE ADAPTER TEST KIT

Type T-789. Ideal for making voltage, resistance and wave form measurements from tube side of electronic equipment without disturbing chassis. Set contains 1—7 pin, 1—9 pin miniature, and 1—octal adapter in plastic carrying case. Adapters simply inserted between tube and socket. Recessed tabs for finger protection. 1/2" dia. holes in tabs for test probe points. Adapters will fit into tube shield bases. Wt., 6 oz. 40 H 210, List, \$12.50. NET... 7.50

## NATIONAL SOCKETS



Type C1R. Ruggedly dependable, low-loss steatite sockets for VHF or UHF use. Universal mtg. ring permits installation in any of 6 positions to permit convenient wiring. Mtg. ctrs. 1 1/2". Octal socket has slotted mtg. ctrs. Wt., 4 oz.

Stock No.	Prongs	NET EACH
71 H 100	4	35¢
71 H 101	5	
71 H 102	6	
71 H 103	7	
71 H 105	Octal	



## E. F. JOHNSON TUBE SOCKETS

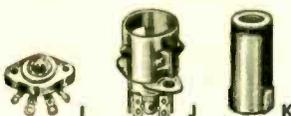
### SPECIAL SOCKET TYPES

73 H 997. (D) Type 122-244. 4-pin steatite wafer for "super jumbo" base tubes. Takes 8008, BR6, SC22, 5C22, GL146, GL152, GL159, GL169, RO858, RH507, SR50, SR53, SK60. 1/2 lb. NET... 1.35

73 H 998. (D) Type 122-275. Steatite wafer socket for tubes with giant 5-pin base. Takes 4-125A, 4-250A, RK28, RK48, 125M, 803. Shpg. wt., 10 oz. NET... 1.31

73 H 194. (E) Type 122-234. Steatite base, silver-plated contacts. For W.E. 5D21, 705A, 715A & B, and Raytheon RK72. Shpg. wt., 10 oz. NET... 2.00

73 H 245. (F) Type 122-101. 7-pin steatite wafer with base shield and retainer springs. For use with 4-65A, 826, 829, 832, etc. Provision for isolating dry leads. Shpg. wt., 1/2 lb. NET... 2.00



### MINIATURE SERIES

40 H 290. (I) Type 120-267. 7-pin steatite socket with silver-plated phosphor bronze contacts. For 9000 series and miniature tubes 1R5, 1S5, 6CB6, etc. 3/4" mtg. hole. Shpg. wt., 3 oz. NET... 33¢

73 H 186. (J) Type 120-277B. As above, but with metal mtg. frame and shield base. Shpg. wt., 3 oz. NET... 49¢

73 H 244. (K) Type 133-278-6 Shield. For use with Type 120-277B socket. With spring. Cadmium plated steel. Height, 1 1/4". Shpg. wt., 3 oz. NET... 15¢

73 H 187. (K) Type 133-278-8 Shield. As above but 2 1/4" high. With spring. Shpg. wt., 3 oz. NET... 22¢

### EBY JAN-APPROVED MINIATURE SOCKETS AND SHIELDS

The Eby JAN miniature sockets and shields listed below have been developed in conjunction with Army, Navy and Air Force Engineers. They are manufactured in accordance with military standards and are warranted to comply with JAN-S28 A and JAN-S28 A1 specifications. Bayonet-type locking shields and sockets. Highest quality materials and workmanship used in the construction. Years of experience, intensive research and experimentation have been combined to produce this line of sockets and shields. Wt., 3 oz.

Stock No.	JAN No.		Eby No.	Description	NET EACH
	S-28 A	S-28 A1			
40 H 263	TSE 7T 102	TS 102C 01	9715	7-Pin Shield Base, Ceramic	62¢
40 H 264	TSE 7T 101	TS 102P 01	9736	7-Pin Shield Base, Mica-filled	35¢
40 H 265	TSE 9T 102	TS 103C 01	9717	9-Pin Shield Base, Ceramic	76¢
40 H 266	TSE 9T 101	TS 103P 01	9718	9-Pin Shield Base, Mica-filled	47¢
40 H 267	TSF OT 101	TS 102U 01	9700	7-Pin Tube Shield, 1 1/4"	15¢
40 H 268	TSF OT 102	TS 102U 02	9701	7-Pin Tube Shield, 1 1/4"	15¢
40 H 269	TSF OT 103	TS 102U 03	9702	7-Pin Tube Shield, 2 1/4"	19¢
40 H 270	TSF OT 104	TS 103U 01	9703	9-Pin Tube Shield, 1 1/4"	19¢
40 H 271	TSF OT 105	TS 103U 02	9704	9-Pin Tube Shield, 1 1/4"	20¢
40 H 272	TSF OT 106	TS 103U 03	9710	9-Pin Tube Shield, 2 1/4"	24¢
40 H 286	TSB 8T 102	TS 101 C01	9756	Octal, Saddle, Ceramic	73¢
40 H 287	TSB 8T 101	TS 101 P01	9753	Octal, Saddle, Mica-filled	47¢

## JAMES MILLEN TUBE SOCKETS



Recommended for UHF use. Higher steatite body gives longer leakage path between contacts. Mounting centers, 1 1/4". Shpg. wt., 4 oz.

Stock No.	Type	Prongs	EACH
72 H 060	33004	4	36¢
72 H 061	33005	5	
72 H 062	33006	6	
72 H 064	33008	8	

## ABOVE-CHASSIS SOCKETS



One-piece molded bakelite construction. Contact designations molded in base. For top-chassis or panel mounting. Mounting centers, 1 1/4", 2 oz.

Stock No.	Prongs	NET EACH
40 H 254	4	33¢
40 H 255	5	38¢
40 H 256	6	41¢
40 H 251	7L&7S	44¢
40 H 258	8 Octal	49¢

Fig. G—STANDARD WAFERS

Steatite wafer sockets for receiving and low-power transmitting tubes. Cadmium plated contacts are reinforced with plated steel springs and recessed in wafer to prevent movement. Metal parts are countersunk and mounting holes bossed to prevent shorting when mounted on metal. Size, 2 3/4" x 1 1/4". Mtg. centers, 1 1/4" to 1 3/4". Shpg. wt., 4 oz.

Stock No.	Mir's Type	Prongs	NET
73 H 238	122-224	4	39¢
73 H 239	122-225	5	42¢
73 H 240	122-226	6	46¢
73 H 241	122-227	7	49¢
73 H 243	122-228	Octal	52¢

Fig. H—JUMBO WAFERS

Type 122-237. Steatite wafer for transmitting tubes with "giant" 7-pin base. Takes 813, 8001, 3D22, 4E27, HK257 tubes. Construction features same as standard wafers above. 2 1/4" square, 4 mtg. holes, 1 1/4" between centers. Shpg. wt., 1/2 lb. 73 H 188. NET... 72¢

Type 122-247. Steatite "giant" 7-pin wafer socket as above, with etched aluminum base shield. For tubes 825, 826, etc. Shpg. wt., 1/2 lb. 73 H 189. NET... 85¢

## BAYONET SOCKETS

Type 123-209. Porcelain base socket for tubes with 4 prong "UX" base. Has phosphor bronze contacts, aluminum shell. Takes 855, 860, 866 tubes, etc. High voltage spacing between contacts and shell. 4 mtg. holes. 2 3/4" between ctrs. Wt., 10 oz. 73 H 195. NET... 1.10

Type 123-211. Porcelain base socket for "jumbo" type 4 pin tubes. Takes 211, 872 tubes, etc. 2 1/4" mounting centers. Shpg. wt., 1 lb. 73 H 191. NET... 1.40

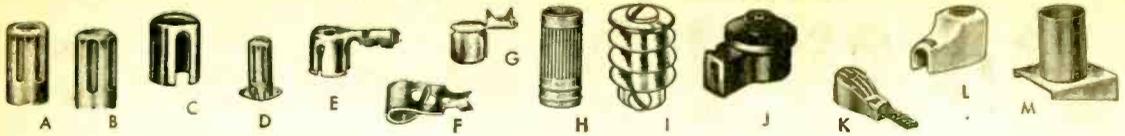
## EBY TV TUBE SOCKET

Type 49-13DD. Laminated bakelite, duo-decal TV picture tube socket. For magnetic or electrostatic focusing tubes. Has plastic cover for complete insulation. 12" leads attached for quick installation. Wt., 4 oz. 40 H 291. NET... 47¢

## EBY CRT TEST SOCKET ADAPTER

Type 1000. TV picture tube socket adapter. Has external lugs to permit checking all voltages present at CRT base connections while set is in operation. An excellent aid for on-the-spot servicing. Valuable addition to any TV serviceman's repair kit. Simple to install and remove—no wiring or soldering required—just insert adapter between CRT tube base and its socket. Makes all connections accessible to meter test leads. Eliminates necessity of moving chassis to check picture tube voltages. Shpg. wt., 3 oz. 40 H 273 List, \$1.60. NET... 96¢

# Shields, Caps, Plugs and Sockets



## RECEIVING AND TRANSMITTING GRID CAPS AND SHIELDS

### RECEIVING TUBE GRID CAPS AND SHIELDS

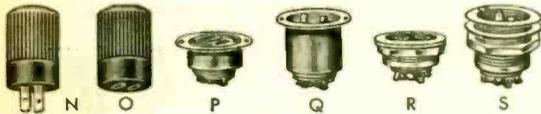
A complete selection of grid caps and shields for receiving type tubes. Shields are sturdily constructed of aluminum; tube caps assure positive contact. Av. shgp. wt., each, 3 oz.

Stock No.	Fig.	Description and Application	Quan. Per Pkg.	NET Per Pkg.
42 N 510	A	Goat G1332-3 tube shield for GT tubes, 2 3/8" high, 7/8" hole.	4	19c
42 N 511	B	Goat G1332-5A. Same as 42 N 510, but with closed top.	4	19c
42 N 513	C	ICA 1552 metal tube grid shield. Slot for grid lead.	2	21c
42 N 512	D	Goat G1700 tube shield for miniature T5 1/2 with G1710-B base. .865"x1 1/2".	3	20c
42 N 516	E	ICA 1550 3/4" grid cap, for glass type receiving tubes.	10	9c
42 N 514	F	National type 24. For standard tubes, 3/4" dia. grid caps.	5	23c
42 N 515	F	National type 8. For octal tubes, 1/2" diameter grid caps.	5	23c
42 N 517	G	ICA 1551 small, 1/4" grid cap for metal, octal, GT bantam tubes.	10	9c
42 N 507	H	Goat G1222K tube shield for all GT types, 1 1/2" dia., 2 3/8" high.	4	19c
42 N 509	H	Goat G1222L tube shield for loktal type tubes, 1 1/2" dia., 2 3/8" high.	4	19c
42 N 508	....	Goat G1004 ground clip for grounding shields on octal tubes.	10	9c
42 N 506	....	Goat G1307-2 double clip for octal base tubes (fits on tube socket).	5	14c

### TRANSMITTING TUBE CAPS AND SHIELDS

Popular type heat dissipating connectors, plate and grid caps and shields for transmitting tubes. \*For wire leads. All others arc cap type. Average shgp. wt., each, 3 oz.

Stock No.	Fig.	Description and Application	Quan. Per Pkg.	NET Per Pkg.
42 P 093	I	Eimac HR-3* heat dissipating cap for 35T, 250TH, etc., .070" hole.	1	.60
42 P 096	I	Eimac HR-6 heat dissipating cap for 4-250A, 304TH, etc., .359" hole.	1	.80
73 P 000	I	Bud TC-488* heat dissipating cap for 1K24, .052" hole.	1	.47
73 P 001	I	Bud TC-489* heat dissipating cap for 35T, HK54, etc., .072" hole.	1	.41
73 P 002	I	Bud TC-1920 heat dissipating cap for 100T, 807, etc., .375" hole.	1	.47
73 P 003	I	Bud TC-1921 heat dissipating cap for 866, T125, etc., .570" hole.	1	.53
72 N 082	J	Millen 36011 industrial snap-action plate cap, 3/8".	1	.69
71 N 246	K	National SPP-9 ceramic insulated grid and plate cap, 3/8".	1	.24
42 N 518	F	National 12 transmitting grid and plate cap, 3/8".	3	.29
72 N 068	L	Millen 36001 steatite plate cap for 866, etc., 3/8".	1	.24
72 N 071	M	Millen 80009 aluminum shield and 5-prong socket for 807.	1	1.05
72 N 070	M	Millen 80010 aluminum shield only for 807.	1	.48



### HART AND HEGEMAN MIDGET CONNECTORS

Midget bakelite 2-prong cord connectors and receptacles. Rated 10 amp, 250 volts, 1-inch hole required for all receptacles, 3/8" contact spacing. Terminals are exposed; threaded cover. \*With plate for screws. †With slide and lock ring. ‡Fits all receptacles. Sturdily constructed. Av. shgp. wt., each, 3 oz.

Stock No.	Mfr's Type	Fig.	Description	NET EACH
52 N 721	80324	N	Male cable connector.	47c
52 N 722	80325	O	Female cable connector.	47c
52 N 723	80332	....	Cord connector.	70c
52 N 724	80330s	....	Terminal cover.	26c
52 N 725	80326*	P	Female flush receptacle.	48c
52 N 726	80328*	Q	Male flush receptacle.	58c
52 N 727	80327†	R	Female flush receptacle.	70c
52 N 728	80329†	S	Male flush receptacle.	70c
52 N 729	80331†	....	Female flush receptacle, recessed.	70c

### WAFER TYPE SOCKETS

For above or below chassis mounting. Laminated bakelite construction. Insulated top. One-piece contacts are full floating and self-aligning. Contacts are tinned for easy soldering. Average shgp. wt., each, 2 oz.

Stock No.	Mtg. Cntrs.	Description	NET EACH	10 for
40 H 224	1 1/2"	4 Prong	5c	45c
40 H 225	1 1/2"	5 Prong	7c	59c
40 H 226	1 1/2"	6 Prong	7c	63c
40 H 229	1 1/2"	7 Prong, large	9c	81c
40 H 227	1 1/2"	7 Prong, small	7 1/2c	67c
40 H 228	1 1/2"	8 Prong	6c	54c
40 H 230	1 1/2"	Loktal	11c	99c
40 H 240	1 1/2"	7 Prong, min. tubes	9c	81c
58 H 004	1"	7 Prong, sub-panel, min. tubes	5c	45c

### RAY-PAR ANTI-CORONA SOCKETS

An 8-prong octal socket for mounting type 1B3 high-voltage rectifier tube. Features shield ring under socket which minimizes corona effects. Made of laminated bakelite. Designed to mount on high-voltage filter condenser with screw-top terminal, or can be mounted directly on chassis. Shgp. wt., 3 oz.

40 H 446.	NET	34c
Same as above but for Types 1AX2, 1X2A, etc., high voltage rectifier tubes.		
40 H 447.	NET	34c

### AMPHENOL SOCKETS AND PLUGS

Single-contact sockets and plugs. Molded bakelite bodies. Sockets mount in 3/8" hole. Supplied with Amphenol 2-11 retainer ring. Contacts recessed 1/8" to prevent shorts. \*In package of 4 of one type only. Shgp. wt., 2 oz.



No.	Type	Description	PKG. OF 4*
41 H 147	71-1L	Plug. Red. For 3/2" socket.	14c
41 H 148	71-1L	Plug. Black. Same as above.	
41 H 145	71-1M	Plug. Red. For 1/2" socket.	
41 H 146	71-1M	Plug. Black. Same as above.	
41 H 194	71-1S	Plug. Red. For 3/2" socket.	
41 H 195	71-1S	Plug. Black. Same as above.	22c
41 H 189	78-1L	Socket. Red. For 1/2" plug.	
41 H 197	78-1L	Socket. Black. Same as above.	
41 H 196	78-1M	Socket. Red. For 1/2" plug.	
41 H 188	78-1M	Socket. Black. Same as above.	
41 H 190	78-1P	Socket. Red. Std. .080" phone tip.	22c
41 H 191	78-1P	Socket. Black. Same as above.	
41 H 192	78-1S	Socket. Red. For 1/2" plug.	
41 H 193	78-1S	Socket. Black. Same as above.	

### 20-CONTACT PLUG AND SOCKET

Type 86-PM-20. Plug. Polarized bakelite plug housed in sturdy steel cap finished in black enamel. Handles 20 No. 18 conductors totaling 3/8" in diameter. Provides protective and attractive connection when used with Type 77-MIP-20 socket below. Prongs are numbered for ease in wiring. Shgp. wt., 3 oz.



Type 77-MIP-20. Socket. Black bakelite body with sturdy steel mounting plate molded directly into body—eliminates loose mountings. Contacts grip plug prongs firmly. Mounts in 1 1/2" hole. Mounting centers, 1 1/2". Shgp. wt., 3 oz.



### TYPE 71 PLUGS

Compact, high dielectric plugs. With molded finger grip. Plated brass prongs. Fit miniature sockets on page 148. Average shgp. wt., 2 oz.



No.	Type	Prongs	No.	Type	Prongs
40 H 177	71-3S	3	41 H 149	71-5S	5
40 H 169	71-4S	4	40 H 179	71-6S	6
NET EACH			.9c		
NET EACH			.12c		

### TUNING INDICATORS

Type MEA-6. Sensitive tuning eye indicator. For use in custom-built AM or FM chassis and tuners, test instruments, etc. For use with 6-prong tuning eye indicator tubes. Easily installed in any receiver which has AVC. Less eye tube. With hood escutcheon. Shgp. wt., 6 oz.



Type MEA-8. As above, but for octal-type magic eye tubes. Less tube. Shgp. wt., 6 oz.

45H856. NET 89c

# Amphenol Connectors

## RF CABLE CONNECTORS



### TYPE "83" COAXIAL CABLE CONNECTORS

Coaxial type low-loss connectors and adapters for use with all RG type cables. Meet rigid government specifications. Rugged construction. Die cast zinc and machined brass shells are silver plated. \*Polystyrene insulation. †Low-loss mica-filled insert. ‡For twin coax RG-22/U and RG-22A/U cable. Complete listing of Amphenol RG coaxial cable on page 223. Any Amphenol RF connector not listed are available on special order. Av. shpg. wt., 3 oz.

#### UHF SMALL SINGLE CONTACT

Stock No.	Military No.	Mfr's Type	Fig.	For RG/U Cables	NET EACH
40H 357	UG-106/U, M-360	83-1H	D	8, 9, 10, 11, 12, 13, 63	.29
40H 360	UG-175/U	83-185	.....	Reducing Adapter, 29, 55	.18
40H 359	UG-176/U	83-168	.....	Reducing Adapter, 59, 62	.18
40H 351	UG-177/U	83-765	D	29, 55, 58A/U	.29
40H 373	UG-203/U, 49482	83-776	A	29, 55, 58A, 59, 62, 63, 71	.89
40H 356	UG-365/U, PL-274	83-1F*	.....	Feed-thru connector	1.77
40H 353	UG-646/U, M-359	83-1AP*	.....	Right Angle Plug Adapter	1.65
40H 354	M-358, 49199	83-1T*	.....	T Adapter	1.88
40H 355	PL-258, 49191	83-1J*	.....	Straight Adapter	1.00
40H 350	PL-259, 49190	83-1SP†	A	8, 9, 10, 11, 12, 13	.76
40H 372	PL-259A, 49195	83-1SPN	A	8, 9, 10, 11, 12, 13, 63, 65	.88
40H 352	SO-239, 49194	83-1RT	B	Receptacle, chassis type	.71
40H 358	.....	83-1AC	.....	Cap and chain	.53

#### UHF SMALL TWIN CONTACT

Stock No.	Military No.	Mfr's Type	Fig.	Description	NET EACH
40H 361	UG-102/U, PL-294	83-22SP‡	A	Straight plus, 22/U	1.00
40H 362	UG-103/U, SO-264	83-22R‡	B	Chassis receptacle	1.12
40H 374	UG-104/U, PL-293	83-22AP‡	.....	Right-angle adapter	1.88

### Fig. E—BNC TYPE CONNECTORS

Small, lightweight, weatherproofed connectors. Low voltage, single contact types for use with 50 ohm RG-55/U and RG-58/U cables except \*for use with 70 ohm RG-59/U, RG-62/U and RG-71/U. 3 oz.

Stock No.	Military No.	Mfr's Type	Description	NET EACH
40H 391	UG-88/U	31-002	Plug	1.29
40H 393	UG-89/U	31-005	Plug	1.29
40H 396	UG-260/U	31-012*	Jack	1.35
40H 397	UG-261/U	31-015*	Jack	1.59
40H 395	UG-262/U	31-011*	Panel Jack	1.41
40H 392	UG-290/U	31-003	Receptacle	1.29
40H 399	UG-291/U	31-001	Panel Jack	1.41
40H 394	UG-306/U	31-009	Right Angle Adapter	2.47
40H 398	UG-657/U	31-102	Receptacle	1.71

### Fig. F—TYPE N AND HN CONNECTORS

#### TYPE N

Low-voltage, constant-impedance connectors for microwave applications. Weatherproofed. Designed for medium size 50 ohm cables except \*70 ohm impedance. All have Teflon insulator. Av. shpg. wt., 3 oz.

Stock No.	Military No.	Mfr's Type	Description	NET EACH
40H 313	UG-218/U	82-61	Plug, 8, 9, 10/U	2.06
40H 314	UG-228/U	82-62	Panel Jack, 8, 9, 10/U	2.06
40H 315	UG-238/U	82-63	Jack, 8, 9, 10/U	1.59
40H 312	UG-58/U	82-24*	Receptacle	1.35
40H 316	UG-94A/U	82-84*	Plug, 11, 12, 13/U	2.53

#### TYPE HN

Stock No.	Military No.	Mfr's Type	Description	NET EACH
40H 375	UG-59A/U	82-38	Plug, 8, 9, 10/U	2.59
40H 317	UG-59B/U	82-80A	Plug, 8, 9, 10/U	3.18
40H 318	UG-560/U	82-805	Receptacle	2.65

### NEW BLUE RIBBON CONNECTORS

New, compact, heavy-duty connectors. High insulation, blue dielectric qualifies under USAF material specification MIL-P-4389. Low insertion and extraction force. Wiping type contacts have silver base plate with gold surface finish. Will not tarnish. Stainless steel, molded-in mounting plates. For up to #16 wire. Rating: 5 amps 600 V DC. Wt., 5 oz.

Contacts	MALE			FEMALE		
	Stock No.	Type	EACH	Stock No.	Type	EACH
8	40 H 542	26-182	1.12	40 H 543	26-183	1.53
16	40 H 544	26-159-16	1.82	40 H 545	26-190-16	2.65
24	40 H 546	26-159-24	2.23	40 H 547	26-190-24	3.29
32	40 H 548	26-159-32	2.59	40 H 549	26-190-32	4.00

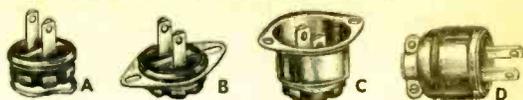
### TYPE "CP" PLUGS

Molded bakelite plugs. Nickel-plated prongs. For use as chassis connectors. Use plate below for replacement mounting in present equipment. With mounting ring for 1 1/4" holes except \*1.328" keyed hole. 9 and 11-prong plugs are octal style. Wt., 2 oz.

No.	Type	Prongs	NET	No.	Type	Prongs	NET
40 H 015	86-CP4	4	8c	40 H 019	86-CP7S	7-Small	8c
40 H 016	86-CP5	5	8c	40 H 020	86-CP8	Octal	10c
40 H 017	86-CP6	6	8c	40 H 021	86-CP9	9	13c
40 H 018	86-CP7*	7-Large	8c	40 H 022	86-CP11	11	17c

40 H 023 Adapter Plate. Nickel-plated steel, 1 1/2" to 1 3/4" ctrs. NET 2c

## AC PLUGS AND RECEPTACLES



U.L. Approved. All items rated at 15 amps, 110 v., or 10 amps, 250 v. High dielectric black bakelite. Fig. A mounts with retainer ring. Requires 1 1/2" hole. Fig. B has mtg. plate. Requires 1 1/4" hole, mtg. centers, slotted 1 1/2" to 1 3/4". Fig. C is recessed type. Requires 1 3/4" hole, mtg. centers, 1 1/4". Fig. D is shielded type with clamp. Two pole female receptacles for standard or polarized plugs. Average shpg. wt., 3 oz.

### RETAINER RING TYPE

Stock No.	Mfr's. Type	Fig.	Description	NET EACH
40 H 675	61-M	A	2-Pole Male Standard	18c
40 H 676	61-MP	A	2-Pole Male Polarized	18c
40 H 081	60-M	A	3-Pole Male Polarized	25c
40 H 677	61-F	A	2-Pole Female Standard	18c
40 H 082	60-F	A	3-Pole Female Polarized	25c

### WITH SEPARATE MOUNTING PLATE

Stock No.	Mfr's. Type	Fig.	Description	NET EACH
40 H 680	61-M1	B	2-Pole Male Standard	20c
40 H 681	61-MP1	B	2-Pole Male Polarized	20c
40 H 083	60-M1	B	3-Pole Male Polarized	27c
40 H 682	61-F1	B	2-Pole Female Standard	20c
40 H 084	60-F1	B	3-Pole Female Polarized	27c

### WITH BELOW-SURFACE SHELL

Stock No.	Mfr's. Type	Fig.	Description	NET EACH
40 H 685	61M10	C	2-Pole Male Standard	28c
40 H 686	61MP10	C	2-Pole Male Polarized	28c
40 H 687	61F10	C	2-Pole Female Standard	28c

### SHIELDED CABLE TYPE

Stock No.	Mfr's. Type	Fig.	Description	NET EACH
40 H 690	61M11	D	2-Pole Male Standard	32c
40 H 691	61MP11	D	2-Pole Male Polarized	32c
40 H 692	61F11	D	2-Pole Female Standard	32c
40 H 693	60M11	D	3-Pole Male Polarized	39c

Type 61-MP-61F. Female receptacle. Like Fig. B above, but has molded-in plate. 1 1/2" mtg. centers. Takes all 2-pole plugs. 18c

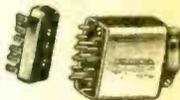
40 H 085. NET 18c

Type 61-61. Shell only. Converts all Fig. A. male or female plugs or receptacles to Fig. C. Shpg. wt., 2 oz.

40 H 086. NET 11c

## MULTI-CONTACT PLUGS AND SOCKETS

Versatile, shielded connectors with 11, 15 and 20 contacts. Two types—cable and chassis. May be combined for "pull-out" rack mounting, inter-connecting several units, and extending conductors. Mica-filled phenolic plastic. Contacts are silver plated with .00002" hard gold shell. Rated at 900 v., 60 cycles, AC. \*Insert only; all others with can. Cable type, 4 oz., chassis type, 2 oz.



Stock No.	Mfr's Type	Total Contacts	Contacts		Description	NET EACH
			No. 16	No. 20		
40 H 530	26-804*	11	2	9	Chassis plug	1.12
40 H 531	26-805*	11	2	9	Chassis socket	.88
40 H 532	26-809*	11	2	9	Cable plug	1.76
40 H 533	26-808	11	2	9	Cable socket	1.53
40 H 534	26-810*	15	3	12	Chassis plug	1.35
40 H 535	26-150*	15	3	12	Chassis socket	.95
40 H 536	26-152	15	3	12	Cable plug	2.06
40 H 537	26-153	15	3	12	Cable socket	1.65
40 H 538	26-806*	20	4	16	Chassis plug	1.94
40 H 539	26-807*	20	4	16	Chassis socket	1.59
40 H 540	26-811	20	4	16	Cable plug	2.76
40 H 541	26-810	20	4	16	Cable socket	2.41

## MULTI-WIRE CONNECTORS

Consists of Amphenol "S" type socket and "CP" plug. Take cables up to 7/8" O.D. For chassis-mounting sockets, see page 148. Size, 1 1/2 x 1 1/2". Av. shpg. wt., 2 oz.



Contacts	MALE			FEMALE		
	Stock No.	Type	EACH	Stock No.	Type	EACH
4	40 H 504	86-PM4	18c	40 H 524	78-PF4	18c
5	40 H 505	86-PM5	18c	40 H 525	78-PF5	18c
6	40 H 506	86-PM6	18c	40 H 526	78-PF6	18c
7S	40 H 507	86-PM7S	18c	40 H 527	78-PF7S	18c
8 octal	40 H 508	86-PM8	21c	40 H 528	78-PF8	21c
9	40 H 512	86-PM9	23c	40 H 516	78-PF9	23c
11	40 H 513	86-PM11	28c	40 H 517	78-PF11	28c

AMPHENOL CABLE CLAMP, TYPE 79-CC4. For use with above connectors. Relieves strain on soldered connections. Shpg. wt., 5 oz. 7c

## MINIATURE CABLE CONNECTORS

Last letter in Type No. indicates long (1 1/4"), or short (1 1/8"). Last fig. in Type No. denotes contacts. PCG—chassis type, 1/4" O.D. Figs. A and C are female types; Fig. B, male. 2 oz.



No.	Type	Fig.	NET	No.	Type	Fig.	NET
40 H 320	91-M-PF3L	A	21c	40 H 574	91-M-PM4S	B	24c
40 H 571	91-M-PF3S	A	21c	40 H 570	91-M-PM5L	B	26c
40 H 321	91-M-PF4L	A	24c	40 H 328	91-M-PM6L	C	21c
40 H 572	91-M-PF4S	A	24c	40 H 327	78-PCG4	C	21c
40 H 325	91-M-PM3L	B	21c	40 H 331	78-PCG4	C	21c
40 H 573	91-M-PM3S	B	21c	40 H 332	78-PCG5	C	24c
40 H 326	91-M-PM4L	B	24c	40 H 333	78-PCG6	C	24c

# Cinch-Jones Connectors

## FANNING STRIPS



Newest improvement in terminal wiring. Fanning strips and barrier-type terminal connectors, when used together, insure correct, positive, firm connections. Ideal for cable or harness wiring. These units simplify assembly—connections can be made through the fanning strip at any convenient point away from the barrier strip, and then slipped into the assembly. Soldering can be accomplished without unnecessary complications. Also assure correct connection when unit is being reconnected after servicing. Last letter of type no. indicates right or left mounting hole position. Fanning strips are laminated bakelite; barrier strips are molded bakelite. Terminals are .032" thick brass, cadmium-plated. Mounting holes at ends. Av. shgp. wt., 3 oz.

The following Fanning Strips fit 140 series barrier terminals at right. Terminals are mounted on  $\frac{3}{32}$ " bakelite,  $\frac{1}{2}$ " wide and on  $\frac{1}{4}$ " centers.

No.	Type	Term.	NET	No.	Type	Term.	NET
41 H 808	2-160L	2	8¢	41 H 814	6-160L	6	23¢
41 H 809	3-160L	3	12¢	41 H 817	8-160L	8	30¢
41 H 812	4-160L	4	15¢	41 H 818	10-160L	10	37¢
41 H 813	5-160L	5	19¢	41 H 819	12-160L	12	45¢

## 160R SERIES FANNING STRIPS

The following Fanning Strips fit the 140 series barrier terminals.

No.	Type	Term.	NET	No.	Type	Term.	NET
40 H 956	2-160R	2	8¢	40 H 960	6-160R	6	23¢
40 H 957	3-160R	3	12¢	40 H 961	8-160R	8	30¢
40 H 958	4-160R	4	15¢	40 H 962	10-160R	10	37¢
40 H 959	5-160R	5	19¢	40 H 963	12-160R	12	45¢

## 161L SERIES FANNING STRIPS

The following Fanning Strips fit the 141 series barrier terminals at right. Terminals are mounted on  $\frac{3}{32}$ " bakelite,  $\frac{3}{8}$ " wide and on  $\frac{3}{16}$ " centers.

No.	Type	Term.	NET	No.	Type	Term.	NET
41 H 822	2-161L	2	8¢	41 H 828	6-161L	6	24¢
41 H 823	3-161L	3	13¢	41 H 829	8-161L	8	30¢
41 H 824	4-161L	4	16¢	41 H 832	10-161L	10	38¢
41 H 827	5-161L	5	20¢	41 H 833	12-161L	12	45¢

## 161R SERIES FANNING STRIPS

The following Fanning Strips fit the 141 series barrier strips at right. Terminals mounted on  $\frac{3}{32}$ " bakelite,  $\frac{3}{8}$ " wide and on  $\frac{3}{16}$ " centers.

No.	Type	Term.	NET	No.	Type	Term.	NET
40 H 964	2-161R	2	8¢	40 H 968	6-161R	6	24¢
40 H 965	3-161R	3	13¢	40 H 969	8-161R	8	30¢
40 H 966	4-161R	4	16¢	40 H 970	10-161R	10	38¢
40 H 967	5-161R	5	20¢	40 H 971	12-161R	12	45¢

## 162L SERIES FANNING STRIPS

The following Fanning Strips fit the 142 series barrier terminals at right. Terminals are mounted on  $\frac{3}{32}$ " bakelite,  $\frac{3}{8}$ " wide and on  $\frac{3}{16}$ " centers.

No.	Type	Term.	NET	No.	Type	Term.	NET
41 H 834	2-162L	2	10¢	41 H 846	6-162L	6	25¢
41 H 823	3-162L	3	14¢	41 H 847	8-162L	8	32¢
41 H 844	4-162L	4	17¢	41 H 848	10-162L	10	40¢
41 H 845	5-162L	5	21¢	41 H 849	12-162L	12	47¢

## 162R SERIES FANNING STRIPS

The following Fanning Strips fit the 142 series barrier strips at right. Terminals are mounted on  $\frac{3}{32}$ " bakelite,  $\frac{3}{8}$ " wide and on  $\frac{3}{16}$ " centers.

No.	Type	Term.	NET	No.	Type	Term.	NET
40 H 972	2-162R	2	10¢	40 H 976	6-162R	6	25¢
40 H 973	3-162R	3	14¢	40 H 977	8-162R	8	32¢
40 H 974	4-162R	4	17¢	40 H 978	10-162R	10	40¢
40 H 975	5-162R	5	21¢	40 H 979	12-162R	12	47¢

## CABLE CLAMPS



Cable clamps for fanning strips above. Made of nickel-plated brass, with 6-32 round head screws. Serve as strain relief and anchor cable securely. Sizes shown are I.D. Wt., 2 oz.

No.	Type	Size	EACH	No.	Type	Size	EACH
41 H 852	CC-161-4	$\frac{1}{4}$ "	8¢	41 H 857	CC-161-10	$\frac{3}{8}$ "	8¢
41 H 853	CC-161-6	$\frac{3}{8}$ "	8¢	41 H 858	CC-161-12	$\frac{7}{16}$ "	8¢
41 H 854	CC-161-8	$\frac{1}{2}$ "	8¢	41 H 859	CC-161-14	$\frac{1}{2}$ "	8¢

## SERIES 101 PLUG AND SOCKET



Low-loss plug and socket for lid-fret, RF connections. For coax or shielded 1/cond. Cadmium-plated brass; prong, contacts, silver-plated. Wt., 4 oz.

40 H 825, Type P-101- $\frac{1}{4}$ " Plug, Length  $\frac{1}{4}$ ". NET..... 43¢

40 H 835, Type S-101 Socket, Overall diameter  $\frac{7}{16}$ ". NET..... 38¢

## SERIES 202 PLUGS AND SOCKETS

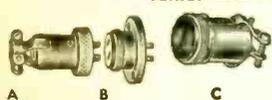


Fig. A, P-202-CCT Plug, 2-contact. Cadmium-plated brass; bakelite insulation. For use with sockets below. Polarized. Knurled nut,  $\frac{1}{4}$ "-27 thread. With cable clamp, 3 oz.

40 H 980, NET..... 52¢

Fig. B, S-202-B Socket, For base mounting. Socket mtg. holes, No. 30 drill on 1" centers.  $\frac{1}{4}$ "-27 thread. Shgp. wt., 3 oz.

40 H 982, NET..... 62¢

Fig. C, S-202-CCT-THR Socket, Makes ideal extension connection when used with P-202-CCT plug- $\frac{1}{4}$ "-27 thread. With cable clamp. Shgp. wt., 3 oz.

40 H 981, NET..... 72¢

Allied can supply all other Howard B. Jones connectors and terminal strips, plugs and sockets on special order. Order by the manufacturer's Type Number or write for descriptive literature and prices.

## BARRIER TERMINALS



Barriers between each terminal provide increased insulation. Excellent for industrial and experimental applications. Barrier, follow edge of strips and terminate at base. Make a long leakage path and prevent direct shorts caused by frayed wires at the terminals. Base is molded bakelite, with mounting holes at ends. Eyelets and binder screws of nickel-plated brass; terminals of hot tin-finish brass. Barrier-type terminals and fanning strips, when used together, insure positive contact and firm connections. No. 140 terminal strips have  $5.40 \times \frac{3}{8}$ " binder head screws,  $\frac{1}{4}$ " metal-to-metal spacing. No. 141 terminal strips have  $6.32 \times \frac{3}{8}$ " binder head screws,  $\frac{1}{4}$ " metal-to-metal spacing. No. 142 terminal strips have  $8.32 \times \frac{3}{8}$ " binder head screws,  $\frac{3}{8}$ " metal-to-metal spacing. Av. shgp. wt., 5 oz.

## 140 SERIES BARRIER TERMINALS

Metal-to-metal spacing over bakelite  $\frac{1}{4}$ ". Base dimensions  $\frac{3}{8}$ " wide x  $1\frac{1}{2}$ " high.  $\frac{3}{8}$ " terminal centers. Use with 160 series fanning strips.

No.	Type	Term.	NET	No.	Type	Term.	NET
41 H 580	1-140	1	9¢	41 H 586	12-140	12	.66
41 H 580	2-140	2	16¢	41 H 584	13-140	13	.72
41 H 581	3-140	3	20¢	41 H 585	14-140	14	.77
41 H 583	4-140	4	24¢	41 H 586	15-140	15	.82
41 H 587	5-140	5	30¢	41 H 587	16-140	16	.87
41 H 582	6-140	6	34¢	41 H 588	17-140	17	.92
41 H 581	7-140	7	40¢	41 H 589	18-140	18	.98
41 H 584	8-140	8	45¢	41 H 590	19-140	19	1.03
41 H 582	9-140	9	51¢	41 H 591	20-140	20	1.08
41 H 583	10-140	10	56¢	41 H 592	21-140	21	1.14
41 H 583	11-140	11	61¢				

## 141 SERIES BARRIER TERMINALS

Metal-to-metal spacing over bakelite  $\frac{3}{8}$ ". Base dimensions,  $1\frac{1}{2}$ " wide x  $\frac{1}{2}$ " high.  $\frac{3}{8}$ " terminal centers. Use with 161 series fanning strips.

No.	Type	Term.	NET	No.	Type	Term.	NET
41 H 835	2-141	2	19¢	41 H 840	10-141	10	.72
41 H 836	3-141	3	24¢	41 H 841	12-141	12	.84
41 H 837	4-141	4	31¢	41 H 876	14-141	14	.98
41 H 838	5-141	5	38¢	41 H 877	16-141	16	1.12
41 H 838	6-141	6	44¢	41 H 878	18-141	18	1.25
41 H 839	8-141	8	58¢	41 H 879	20-141	20	1.38

## 142 SERIES BARRIER TERMINALS

Metal-to-metal spacing over bakelite  $\frac{3}{8}$ ". Base dimensions,  $1\frac{1}{2}$ " wide x  $\frac{3}{8}$ " high.  $\frac{3}{8}$ " terminal centers. Use with 162 series fanning strips.

No.	Type	Term.	NET	No.	Type	Term.	NET
41 H 670	2-142	2	22¢	41 H 680	12-142	12	1.04
41 H 671	3-142	3	30¢	41 H 681	13-142	13	1.12
41 H 672	4-142	4	38¢	41 H 682	14-142	14	1.20
41 H 673	5-142	5	46¢	41 H 683	15-142	15	1.28
41 H 674	6-142	6	54¢	41 H 684	16-142	16	1.36
41 H 676	8-142	8	71¢	41 H 686	17-142	17	1.44
41 H 678	10-142	10	87¢				

## NEW SOLDER TERMINALS

New,  $\frac{1}{2}$ " W and Y solder terminals for replacement purposes on barrier strips listed above. Made of brass; hot tin finish. Assure firm, positive solder connections; simplify cable or harness wiring. Fasten securely under binder head screws. Fig. A is Y type—Fig. B is  $\frac{1}{2}$ " W type. Av. shgp. wt. per 10, 3 oz.



TYPE $\frac{1}{2}$ " W				TYPE Y			
No.	Type	For	Pkg. of 10	No.	Type	For	Pkg. of 10
41 H 887	$\frac{3}{4}$ " W-140	140	26¢	41 H 891	Y-140	140	26¢
41 H 888	$\frac{1}{2}$ " W-141	141	35¢	41 H 892	Y-141	141	35¢
41 H 889	$\frac{1}{2}$ " W-142	142	43¢	41 H 893	Y-142	142	43¢

## TYPE 170 TERMINAL STRIPS

New terminal strips with extra heavy solder terminals. Ideal for industrial users, experimental labs, etc. Black molded bakelite insulation,  $\frac{3}{8}$ " wide,  $\frac{1}{4}$ " thick. Terminals are mounted on  $\frac{3}{8}$ " centers. Mounting holes are  $\frac{3}{8}$ " from center of end terminals.



Terminals are .032" brass, tin plated. Double-notched solder terminals for rapid soldering or wrap-around connections. Compact, sturdy units. Av. shgp. wt., 5 oz.

No.	Type	Term.	NET	No.	Type	Term.	NET
40 H 990	1-170	1	14¢	40 H 995	6-170	6	30¢
40 H 991	2-170	2	17¢	40 H 996	7-170	7	32¢
40 H 992	3-170	3	20¢	40 H 997	8-170	8	36¢
40 H 993	4-170	4	23¢	40 H 998	9-170	9	39¢
40 H 994	5-170	5	26¢	40 H 999	10-170	10	42¢

## "2000" TERMINALS

Terminals are made of .019" brass, tin-plated, and spaced on  $\frac{3}{8}$ " centers. Molded bakelite insulation. Mounting brackets are made of cadmium-plated steel. Mounting holes at each end of bracket. Average shgp. wt., 2 oz.

Stock No.	Mfrs. Type	Term.	Mtg. Ctrs.	NET	Stock No.	Mfrs. Type	Term.	Mtg. Ctrs.	NET
41 H 687	2002	2	1"	5¢	41 H 691	2006	6	2 $\frac{1}{2}$ "	7 $\frac{1}{2}$ ¢
41 H 688	2003	3	1 $\frac{1}{2}$ "	6¢	41 H 693	2008	8	2 $\frac{3}{4}$ "	8 $\frac{1}{2}$ ¢
41 H 689	2004	4	1 $\frac{3}{4}$ "	6¢	41 H 695	2010	10	3 $\frac{1}{4}$ "	9 $\frac{1}{2}$ ¢
41 H 690	2005	5	1 $\frac{5}{8}$ "	7¢	41 H 697	2012	12	4 $\frac{1}{4}$ "	10 $\frac{1}{2}$ ¢

## 2R2 CHASSIS TYPE AC SOCKET

For chassis mounting in radio sets, amplifiers, etc. Molded bakelite with solder lug terminals. For 250 volts, or 15 amps, 125 volt, 2 screw mounting,  $\frac{1}{4}$ "-27 mounting hole. Overall size  $1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$ ". Shgp. wt., 2 oz.

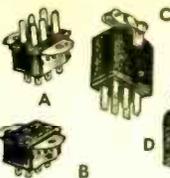


40 H 830, NET EACH..... 15¢

# Plugs, Sockets and Connectors

## CINCH-JONES PLUGS AND SOCKETS

### CINCH-JONES SUB-MINIATURE SOCKETS



**SERIES 300 PLUGS & SOCKETS**  
Compact, multi-circuit connectors. Rated at 730 rms volts at 10 amps. Black, crystal-finish metal caps encase bakelite body. Phosphor-bronze "knife-switch" type socket contacts engage both sides of flat plug contacts. All units are polarized; plugs with 24 and more contacts have positioning pins. Plug contacts are  $\frac{3}{16}$ " wide by  $\frac{3}{4}$ " thick. Round shell; others rectangular. Av. shpg. wt., 3 oz.

Used extensively for miniature radios and transmitters, hearing aids and other electronic equipment which requires subminiature tubes. Molded from mica-filled low-loss bakelite. Silver-plated beryllium copper contacts. 4-prong tubes and G.E. transistors G11 and G11A fit 2H5 socket. All  $\frac{1}{2}$ " deep. Wt., 2 oz.



Stock No.	Type	Contacts	Size	NET
40 H 245	2H5	5	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{3}{16}$ "	27c
40 H 246	2H6	6	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{3}{16}$ "	28c
40 H 247	2H7	7	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{3}{16}$ "	30c
40 H 242	8SM	8	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{3}{16}$ "	52c

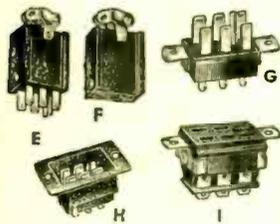
### TYPE AB WITH ANGLE BRACKETS

Con- tacts	PLUGS, FIG. A			SOCKETS, FIG. B		
	Stock No.	Type	NET	Stock No.	Type	NET
2	40 H 870*	P-302-AB	.17	40 H 880*	S-302-AB	.22
3	40 H 871*	P-303-AB	.21	40 H 881*	S-303-AB	.22
4	40 H 872*	P-304-AB	.24	40 H 882*	S-304-AB	.25
6	40 H 873*	P-306-AB	.29	40 H 883*	S-306-AB	.31
8	40 H 874*	P-308-AB	.33	40 H 884*	S-308-AB	.38
10	40 H 875*	P-310-AB	.38	40 H 885*	S-310-AB	.46
12	40 H 876*	P-312-AB	.43	40 H 886*	S-312-AB	.53
15	40 H 816	P-315-AB	.56	40 H 864	S-315-AB	.67
18	40 H 817	P-318-AB	.71	40 H 865	S-318-AB	.81
21	40 H 818	P-321-AB	.89	40 H 866	S-321-AB	.99
24	40 H 819	P-324-AB	1.08	40 H 867	S-324-AB	1.18
27	40 H 820	P-327-AB	1.28	40 H 868	S-327-AB	1.37
30	40 H 821	P-330-AB	1.46	40 H 869	S-330-AB	1.55
33	40 H 822	P-333-AB	1.65	40 H 877	S-333-AB	1.74

### TYPE CCT WITH CABLE CLAMP

Con- tacts	PLUGS, FIG. C			SOCKETS, FIG. D		
	Stock No.	Type	NET	Stock No.	Type	NET
2	40 H 802*	P-302-CCT	.39	40 H 852*	S-302-CCT	.39
3	40 H 803*	P-303-CCT	.43	40 H 853*	S-303-CCT	.43
4	40 H 804*	P-304-CCT	.46	40 H 854*	S-304-CCT	.46
6	40 H 806*	P-306-CCT	.51	40 H 856*	S-306-CCT	.53
8	40 H 808*	P-308-CCT	.56	40 H 858*	S-308-CCT	.62
10	40 H 810*	P-310-CCT	.62	40 H 860*	S-310-CCT	.70
12	40 H 812*	P-312-CCT	.69	40 H 862*	S-312-CCT	.79
15	40 H 805	P-315-CCT	.89	40 H 850	S-315-CCT	.99
18	40 H 807	P-318-CCT	1.08	40 H 851	S-318-CCT	1.17
21	40 H 809	P-321-CCT	1.28	40 H 855	S-321-CCT	1.37
24	40 H 811	P-324-CCT	1.50	40 H 859	S-324-CCT	1.61
27	40 H 813	P-327-CCT	1.70	40 H 859	S-327-CCT	1.99
30	40 H 814	P-330-CCT	1.98	40 H 861	S-330-CCT	2.07
33	40 H 815	P-333-CCT	2.12	40 H 863	S-333-CCT	2.22

### SERIES 400 AND 2400 PLUGS & SOCKETS



Highly dependable, heavy-duty multiple-circuit type plugs and sockets. Series 400 rated at 1100 rms volts, 15 amps; series 2400 rated at 1700 rms volts, 15 amps. All have polarizing pins. Plug contact prongs are  $\frac{1}{16}$ " wide by  $\frac{1}{4}$ " thick. Bodies are molded bakelite. Phosphor-bronze "knife-switch" type socket contacts engage both sides of flat plug contact prongs to minimize contact resistance. Series 2400 improved design offers longer leakage path permitting use on higher operating voltages. Metal caps are finished in black crystal, equipped with fiber inner lining. 2400 series plugs and sockets can be mated with 400 series. \*Similar to Fig. 1. †Take type CCT (Fig. F) sockets. Shpg. wt., 5 oz.

### TYPE CCT WITH CABLE CLAMP

Con- tacts	PLUGS, FIG. E			SOCKETS, FIG. F		
	Stock No.	Type	NET	Stock No.	Type	NET
2	40 H 910	P-402-CCT	.67	40 H 920	S-402-CCT	.72
4	40 H 911	P-404-CCT	.80	40 H 921	S-404-CCT	.90
6	40 H 912	P-406-CCT	.94	40 H 922	S-406-CCT	1.09
8	40 H 913	P-408-CCT	1.08	40 H 923	S-408-CCT	1.28
10	40 H 914	P-410-CCT	1.22	40 H 924	S-410-CCT	1.46
12	40 H 915	P-412-CCT	1.37	40 H 925	S-412-CCT	1.65
2	40 H 833	P-2402-CCT	.81	40 H 840	S-2402-SB*	.64
4	40 H 834	P-2404-CCT	.92	40 H 841	S-2404-SB*	.74
6	40 H 836	P-2406-CCT	1.04	40 H 842	S-2406-SB*	.86
8	40 H 837	P-2408-CCT	1.14	40 H 843	S-2408-SB*	.98
10	40 H 838	P-2410-CCT	1.25	40 H 844	S-2410-SB*	1.11
12	40 H 839	P-2412-CCT	1.38	40 H 845	S-2412-SB*	1.22

### TYPE AB FOR CHASSIS MOUNTING

Con- tacts	PLUGS, FIG. G			SOCKETS, FIG. I		
	Stock No.	Type	NET	Stock No.	Type	NET
2	40 H 890	P-402-AB	.42	40 H 900	S-402-AB	.47
4	40 H 891	P-404-AB	.52	40 H 901	S-404-AB	.62
6	40 H 892	P-406-AB	.62	40 H 902	S-406-AB	.76
8	40 H 893	P-408-AB	.71	40 H 903	S-408-AB	.89
10	40 H 894	P-410-AB	.81	40 H 904	S-410-AB	1.04
12	40 H 895	P-412-AB	.89	40 H 905	S-412-AB	1.17

### Fig. H—TYPE DB RECESSED PLUGS FOR CHASSIS MOUNTING†

Con- tacts	Stock No.	Type	NET Each	Con- tacts	Stock No.	Type	NET Each
4	40 H 955	P-404-DB	.67	10	40 H 953	P-410-DB	1.09
6	40 H 951	P-406-DB	.81	12	40 H 954	P-412-DB	1.23

ALLIED can supply all other Cinch-Jones "Series 400" and "Series 2400" plugs and sockets.

**Transistor Types.** 5-contact sockets for transistors. Use type 5PC for printed circuits and 5WC for wired circuits. Av. shpg. wt., 2 oz.

Stock No.	Type	Size	For	NET
40 H 248	5WC	$\frac{3}{16} \times \frac{1}{2} \times \frac{1}{8}$ "	Raytheon CK703 & CK716	1.00
40 H 249		$\frac{3}{16} \times \frac{1}{2} \times \frac{1}{8}$ "	Raytheon CK721 & CK722	.39
40 H 252	5PC	$\frac{1}{2} \times \frac{1}{2} \times \frac{1}{4}$ "	Raytheon CK721 & CK722	.36
40 H 253		$\frac{1}{2} \times \frac{1}{2} \times \frac{1}{4}$ "	W.E. A1698 & A1768	1.48

### TYPE 8PB 8-CONTACT PLUG

For making up to 8 connections between chassis. Molded black bakelite. Fit any octal socket. Use with retaining ring or 16F shield. (below). 2 oz.

40 H 846. NET... 22c

**Type 11PB 11-Contact Plug.** Same as above but with 11 contacts. 40 H 847. NET... 24c

### TYPE 16F STEEL SNAP-ON SHIELD

Cadmium-plated, durable steel shield. Designed to snap on 8PB and 11PB sockets. Rubber grommet with  $\frac{3}{16}$ " hole protects cable. Wt., 2 oz. 40 H 848. NET... 28c

### TYPE 11RB 11-CONTACT SOCKET

For use with 11PB 11-contact plug, (above). Molded from high-dielectric, black bakelite. Hot solder-dipped tinning on brass contact terminals for making quick, positive solder connections. Can be mounted on  $\frac{1}{8}$ " thick chassis using retaining ring. Can also be used with 16F snap-on shield, (above) on extension cables. Keyed to assure positive alignment. Shpg. wt., 2 oz. 40 H 849. NET... 28c

### NEW AMPHENOL SERIES 165 AN-TYPE CONNECTORS

New 165 series electrical connectors combine small size with extremely efficient operation. Two sizes available—small size in 5, 9 or 12 contacts and large size in 11, 14 or 24 contacts. All available with either male or female inserts in plug or receptacle. Waterproof, mated or apart. Bronze contacts are gold-plated over silver. Aluminum shells. Small receptacles mount in  $\frac{1}{8}$ " hole. Secured through mount in  $1\frac{1}{2}$ " hole. Security through 4 125° equally spaced holes on  $1\frac{1}{2}$ " square flange. Large receptacles mount in  $1\frac{1}{2}$ " hole. Security through 4 125° equally spaced holes on  $1\frac{1}{2}$ " square flange. Plugs are approximately  $\frac{2}{16}$ " long. Small is  $\frac{7}{16}$ " diameter; large is  $\frac{1}{2}$ " diameter. Rated 500 v. rms except \*600 v. rms. Av. shpg. wt. 3 oz.

#### SMALL SHELL—5 No. 20 AWG

Stock No.	Type No.	Contacts and Ampere Rating	Description	NET EACH
40 H 595	165-33	*5 @ 7.5	Male Plug	4.70
40 H 596	165-34	*5 @ 7.5	Female Plug	5.29
40 H 597	165-35	*5 @ 7.5	Male Receptacle	3.53
40 H 598	165-36	*5 @ 7.5	Female Receptacle	4.12

#### SMALL SHELL—9 No. 20 AWG

40 H 579	165-13	9 @ 7.5	Male Plug	5.00
40 H 580	165-14	9 @ 7.5	Female Plug	5.88
40 H 581	165-15	9 @ 7.5	Male Receptacle	3.82
40 H 582	165-16	9 @ 7.5	Female Receptacle	4.70

#### SMALL SHELL—12 No. 20 AWG

40 H 575	165-9	12 @ 7.5	Male Plug	5.29
40 H 576	165-10	12 @ 7.5	Female Plug	6.17
40 H 577	165-11	12 @ 7.5	Male Receptacle	4.12
40 H 578	165-12	12 @ 7.5	Female Receptacle	5.00

#### LARGE SHELL—4 No. 16 & 7 No. 20 AWG

40 H 583	165-17	4 @ 17; 7 @ 7.5	Male Plug	7.06
40 H 584	165-18	4 @ 17; 7 @ 7.5	Female Plug	8.23
40 H 585	165-19	4 @ 17; 7 @ 7.5	Male Receptacle	4.70
40 H 586	165-20	4 @ 17; 7 @ 7.5	Female Receptacle	5.88

#### LARGE SHELL—14 No. 16 AWG

40 H 591	165-29	14 @ 17	Male Plug	8.23
40 H 592	165-30	14 @ 17	Female Plug	8.82
40 H 593	165-31	14 @ 17	Male Receptacle	5.88
40 H 594	165-32	14 @ 17	Female Receptacle	6.47

#### LARGE SHELL—24 No. 20 AWG

40 H 587	165-25	24 @ 7.5	Male Plug	8.82
40 H 588	165-26	24 @ 7.5	Female Plug	10.29
40 H 589	165-27	24 @ 7.5	Male Receptacle	5.88
40 H 590	165-28	24 @ 7.5	Female Receptacle	7.35

# Amphenol AN Connectors



AN 3100A



AN 3101A



AN 3102A



AN 3106A



AN 3106B



AN 3108A



AN 3108B

## MEET ARMY-NAVY SPECIFICATIONS

These Amphenol "AN" connectors meet Army-Navy specs for use in power, signal and control circuits in aircraft and electronic equipment. Compact, dependable, and simple in design to assure the best possible performance under a wide variety of the most demanding operating conditions. Explanation of type nos.: E.g. Type 3102A-20-7P. The

letter "A" after the first 4 digits indicates solid shell construction (the letter "B" would indicate split back shell). -20- indicates shell size in 16th's of an inch; -20- equals 20/16" or 1 1/4". The suffix "P" indicates male contacts (the suffix "S" would indicate female contacts). Av. shpg. wt., 6 oz. Write for quantity prices.

### Size 8S

Stock No.	"AN" Type	Con-tacts	NET
39H 700	3102A-8S-1P	1	.50
39H 701	3106A-8S-1P	1	.87
39H 702	3108A-8S-1P	1	1.15
39H 703	3102A-8S-1S	1	.55

### Size 10S

Stock No.	"AN" Type	Con-tacts	NET
39H 704	3102A-10S-2P	1	.46
39H 705	3102A-10S-2S	1	.50
39H 706	3106A-10S-2S	1	.89
39H 707	3108B-10S-2S	1	1.02

### Size 10SL

Stock No.	"AN" Type	Con-tacts	NET
39H 708	3106A-10SL-4S	2	.98
39H 709	3100A-10SL-3P	3	.93
39H 710	3101A-10SL-3P	3	1.02
39H 711	3102A-10SL-3P	3	.63
39H 712	3106A-10SL-3S	3	1.07
39H 713	3108B-10S-4S	2	1.52
39H 714	3108A-10SL-4S	2	1.35
39H 715	3108B-10SL-4S	2	1.11

### Size 12SL

Stock No.	"AN" Type	Con-tacts	NET
39H 716	3106A-12SL-844S	4	1.66

### Size 12S

Stock No.	"AN" Type	Con-tacts	NET
39H 717	3102A-12S-3P	2	.59
39H 718	3106A-12S-3P	2	1.00
39H 719	3108A-12S-3P	4	1.46
39H 720	3100A-12S-3S	2	.02
39H 721	3102A-12S-3S	2	.69
39H 722	3106A-12S-3S	2	1.11
39H 723	3108B-12S-3S	2	1.57
39H 724	3102A-12S-4S	2	1.24
39H 725	3106A-12S-4S	1	.52
39H 726	3106A-12S-4S	1	1.02
39H 727	3108B-12S-4S	1	1.15

### Size 14

Stock No.	"AN" Type	Con-tacts	NET
39H 728	3102A-14-3P	1	.76

### Size 14S

Stock No.	"AN" Type	Con-tacts	NET
39H 729	3102A-14S-1P	3	.72
39H 730	3106A-14S-1P	3	1.17
39H 731	3102A-14S-1S	3	.78
39H 732	3106A-14S-1S	3	1.24
39H 733	3108A-14S-1S	3	1.76
39H 734	3108B-14S-1S	3	1.35
39H 735	3106A-14S-2P	4	.80
39H 736	3106A-14S-2P	4	1.37
39H 737	3108B-14S-2P	4	1.87
39H 738	3108A-14S-2P	4	1.78
39H 739	3100A-14S-2S	4	1.22
39H 740	3101A-14S-2S	4	1.33
39H 741	3102A-14S-2S	4	.87
39H 742	3106A-14S-2S	4	1.33
39H 743	3108B-14S-2S	4	1.43
39H 744	3108A-14S-2S	4	1.85
39H 745	3108B-14S-2S	4	1.43
39H 746	3102A-14S-4S	4	.61
39H 747	3101A-14S-4P	5	1.35
39H 748	3102A-14S-4P	5	.89
39H 749	3106A-14S-4P	5	1.35
39H 750	3100A-14S-5S	5	1.30
39H 751	3102A-14S-5S	5	.96
39H 752	3106A-14S-5S	5	1.42
39H 753	3108B-14S-5S	5	1.96
39H 754	3108A-14S-5S	5	1.52
39H 755	3108B-14S-5S	5	1.52
39H 756	3102A-14S-6P	6	.98

### Size 14S

Stock No.	"AN" Type	Con-tacts	NET
39H 757	3106A-14S-6S	6	1.51
39H 758	3108B-14S-6S	6	1.61
39H 759	3102A-14S-7P	3	1.23
39H 760	3106A-14S-7P	3	1.18
39H 761	3101A-14S-7S	3	1.24
39H 762	3102A-14S-7S	3	.78
39H 763	3106A-14S-7S	3	1.24
39H 764	3108A-14S-7S	3	1.76
39H 765	3108B-14S-7S	3	1.35
39H 766	3108A-14S-9P	2	1.09
39H 767	3102A-14S-9P	2	.63
39H 768	3106A-14S-9P	2	1.09
39H 769	3102A-14S-9S	2	1.26
39H 770	3106A-14S-9S	2	1.15
39H 771	3108B-14S-9S	2	1.69

### Size 16

Stock No.	"AN" Type	Con-tacts	NET
39H 772	3106A-16-10P	3	1.30
39H 773	3101A-16-11P	2	1.07
39H 774	3102A-16-11P	2	.70
39H 775	3106A-16-11S	2	1.33
39H 776	3106A-16-12P	1	1.33

### Size 16S

Stock No.	"AN" Type	Con-tacts	NET
39H 777	3101A-16S-1P	7	1.42
39H 778	3102A-16S-1P	7	1.04
39H 779	3106A-16S-1P	7	1.55
39H 780	3108B-16S-1P	7	1.66
39H 781	3100A-16S-1S	7	1.57
39H 782	3106A-16S-1S	7	1.19
39H 783	3106A-16S-1S	7	1.70
39H 784	3108B-16S-1S	7	1.80
39H 785	3108B-16S-1S	7	1.80
39H 786	3102A-16S-5P	3	.70
39H 787	3106A-16S-5S	3	1.35
39H 788	3106A-16S-6P	3	1.29
39H 789	3102A-16S-8P	5	.96
39H 790	3102A-16S-8S	5	1.02
39H 791	3106A-16S-8S	5	1.52

### Size 18

Stock No.	"AN" Type	Con-tacts	NET
39H 792	3102A-18-1P	10	1.42
39H 793	3106A-18-1P	10	1.98
39H 794	3108B-18-1P	10	2.11
39H 795	3100A-18-1S	10	1.98
39H 796	3102A-18-1S	10	1.59
39H 797	3106A-18-1S	10	2.16
39H 798	3108B-18-1S	10	2.28
39H 799	3106A-18-1S	10	2.90
39H 800	3108B-18-1S	10	2.29
39H 801	3102A-18-3P	2	.76
39H 802	3106A-18-3S	2	1.52
39H 803	3102A-18-4P	4	.89
39H 804	3106A-18-4P	4	1.46
39H 805	3102A-18-4S	4	1.09
39H 806	3106A-18-4S	4	1.66
39H 807	3102A-18-8P	8	1.26
39H 808	3106A-18-8P	8	1.83
39H 809	3102A-18-8S	8	1.46
39H 810	3106A-18-8S	8	2.02
39H 811	3102A-18-9P	8	1.19
39H 812	3106A-18-9P	7	1.78
39H 813	3100A-18-9S	7	1.96
39H 814	3106A-18-9S	7	1.96
39H 815	3102A-18-11P	5	1.09
39H 816	3106A-18-11P	5	1.66
39H 817	3106A-18-12P	6	1.52
39H 818	3102A-18-12S	6	1.26
39H 819	3106A-18-12S	6	1.83
39H 820	3102A-18-15S	4	1.17
39H 821	3102A-18-16S	1	.84

### Size 20

Stock No.	"AN" Type	Con-tacts	NET
39H 822	3102A-20-4P	4	1.04
39H 823	3106A-20-4S	4	1.89
39H 824	3102A-20-7P	8	1.33

### Size 20

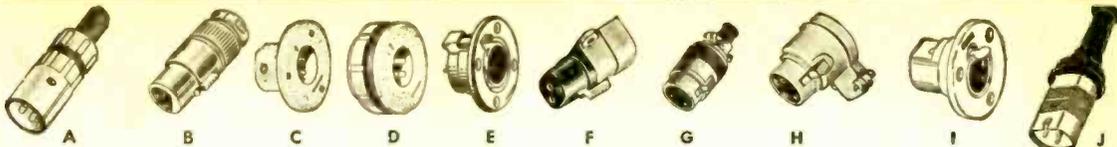
Stock No.	"AN" Type	Con-tacts	NET
39H 825	3106A-20-7P	8	1.96
39H 826	3101A-20-7S	8	2.14
39H 827	3102A-20-7S	8	1.51
39H 828	3106A-20-7S	8	2.16
39H 829	3102A-20-9P	8	1.35
39H 830	3106A-20-11P	13	2.11
39H 831	3102A-20-11S	13	1.94
39H 832	3102A-20-15P	7	1.22
39H 833	3106A-20-15P	7	1.84
39H 834	3102A-20-15S	7	1.61
39H 835	3102A-20-16P	9	1.22
39H 836	3106A-20-16P	9	1.85
39H 837	3102A-20-18P	9	1.43
39H 838	3102A-20-18S	9	1.68
39H 839	3102A-20-27P	14	1.80
39H 840	3106A-20-27P	14	2.44
39H 841	3106B-20-27P	14	2.55
39H 842	3108B-20-27P	14	2.55
39H 843	3100A-20-27S	14	2.44
39H 844	3102A-20-27S	14	2.04
39H 845	3106A-20-27S	14	2.66
39H 846	3106B-20-27S	14	2.76
39H 847	3108A-20-27S	14	3.66
39H 848	3108B-20-27S	14	2.76
39H 849	3102A-20-29P	17	1.68
39H 850	3106A-20-29P	17	2.29
39H 851	3102A-20-29S	17	2.28
39H 852	3106A-20-29S	17	2.92

### Size 22

Stock No.	"AN" Type	Con-tacts	NET
39H 853	3102A-22-5P	6	1.17
39H 854	3106A-22-5P	6	2.28
39H 855	3100A-22-14P	19	2.29
39H 856	3102A-22-14P	19	1.87
39H 857	3106A-22-14P	19	2.81
39H 858	3108B-22-14P	19	2.72
39H 859	3100A-22-14S	19	3.03
39H 860	3102A-22-14S	19	2.60
39H 861	3106A-22-14S	19	3.33
39H 862	3108B-22-14S	19	3.44
39H 863	3106A-22-14S	19	4.33
39H 864	3108B-22-14S	19	3.44
39H 865	3106A-22-18P	8	1.98
39H 866	3102A-22-18S	8	1.66
39H 867	3102A-22-19P	14	1.94
39H 868	3102A-22-19S	14	2.16
39H 869	3106A-22-19S	14	2.90
39H 870	3106A-22-23P	8	2.22
39H 871	3102A-22-23S	8	1.85

### Size 24

# Cannon Connectors, Mueller Clips



## CANNON PLUGS AND RECEPTACLES

### TYPE XL CONNECTORS

Matched family of small 3-contact connectors for low-level sound transmission circuits. Lightweight, polarized and streamlined. Latchlock device for tight connection.  $\frac{3}{16}$ " diameter. Fig. A, grip and strain relief spring. Fig. B, steel shell cable clamp, 15 amp contacts, No. 14 wire. Working voltage, 250. Flash-over point, 1500 v. Zinc shells. Bright nickel finish. Shpg. wt., 4 oz.

#### STRAIGHT CORD PLUGS

Stock No.	Type	Fig.	Description	EACH
40 H 714	XL-3-12	A	Male (pin insert)	88¢
40 H 713	XL-3-11	A	Female (socket insert)	91¢
40 H 788	XL-3-11SC	B	Female (socket insert)	2.00
40 H 789	XL-3-12SC	B	Male (pin insert)	1.97

#### CHASSIS MOUNT RECEPTACLES

40 H 716	XL-3-14	C	Male (pin insert)	71¢
40 H 715	XL-3-13	C	Female (socket insert)	91¢

#### PANEL MOUNT RECEPTACLES

40 H 718	XL-3-14N	D	Male (pin insert)	85¢
40 H 717	XL-3-13N	D	Female (socket insert)	91¢

### TYPE O CONNECTORS

Accepted as the standard of quality in microphone and other low-level sound circuits. Oval-shaped for ease of handling and space-saving mounting. With 30-ampere silver-plated contacts. Shpg. wt., 4 oz.

No.	Type	Fig.	Description	EACH
40 H 782	O3-11	.....	Cable plug, female (socket)	3.59
40 H 783	O3-12	.....	Cable plug, male (pin)	3.59
40 H 784	O3-13	E	Panel mount, female (socket)	4.20
40 H 785	O3-14	.....	Panel mount, male (pin)	4.20
40 H 786	O3-41	F	Panel receptacle, female (socket)	5.09
40 H 787	O3-42	.....	Panel receptacle, male (pin)	5.09

### ELCO "VARICON" CONNECTOR KIT



This new kit includes all parts necessary to assemble almost any connector—a great time-saver for electronic labs. A complete kit to assemble numerous male and female connectors in a wide variety of sizes. Silver-plated phosphor bronze contacts. May be polarized. Max. ratings: 1330 v.; 30 amps. Plugs take wire to .095" overall dia. Packaged in convenient 7-compartment, hinged cover, transparent plastic box. Shpg. wt., 1 lb.  
41 H 342. NET.....5.88

### TYPE P CONNECTORS

Panel receptacles and cable connectors for audio circuits. For any size wires up to No. 10, 15 amp. contact capacity. Black phenolic insulation. Plugs have steel shells and zinc cable clamps. Die-cast zinc pin mounts with mtg. screws. Female units have latch-lock which engages recess in male units. Av. wt., 4 oz.

No.	Type	Fig.	Description	EA.
40 H 707	P3-13	E	Panel mount, female (socket)	3.15
40 H 757	P3-14	E	Panel mount, male (pin)	1.65
40 H 724	P3-CG-11S	G	Cable plug, female (socket)	3.70
40 H 701	P3-CG-12S	G	Cable plug, male (pin)	3.03
40 H 775	P3-CG-15	H	90° Cable plug, female (socket)	4.20
40 H 776	P3-CG-16	H	90° Cable plug, male (pin)	3.85
40 H 777	P3-17	.....	Panel receptacle, female (socket)	4.70
40 H 778	P3-18	.....	Panel receptacle, male (pin)	2.56
40 H 779	P3-23	.....	Heavy duty cable plug, female (socket)	5.41
40 H 780	P3-24	.....	Heavy duty cable plug, male (pin)	5.41
40 H 709	P3-35	.....	Wall receptacle, female (socket)	5.38

### TYPE UA "ULTIMATE" AUDIO CONNECTORS

Latest type 3-contact fittings. Splash-proof and shock-proof. Meet RETMA standards. Gold-plated contacts for low-loss and noise-free operation. Flat top construction provides positive polarization. Thumb action latch-lock for quick insertion and firm engagement. 1 $\frac{1}{2}$ " rubber sleeve handle for firm easy grip. 15 amp capacity. Wt., 3 oz.

No.	Type	Fig.	Description	EACH
40 H 758	UA-3-11	J	Cable plug, female (socket)	3.15
40 H 759	UA-3-12	J	Cable plug, male (pin)	2.59
40 H 760	UA-3-13	I	Panel mount, female (socket)	2.41
40 H 761	UA-3-14	I	Panel mount, male (pin)	1.47

We can supply every type of Cannon Electric connector made. Write us for literature and quotations on types not listed on this page.

### TV COAX CABLE CONNECTORS

Low-cost solderless coaxial cable connectors for use with RG-59/U and other  $\frac{1}{8}$ " diameter cable. Low-loss insulation. Silver-plated for high conductivity. Av. shpg. wt., 1 oz.  
Fig. K, Male Connector. Fits units below.  
40 H 300. NET.....48c  
Fig. L, Female Receptacle.  $\frac{3}{16}$ " threaded stem. Chassis type.  
40 H 301. NET.....48c  
Fig. M, Cable Junction. Feed-through. Both ends fit 40 H 300.  
40 H 302. NET.....60c



## MUELLER UNIVERSAL CLIPS AND FLEXIBLE INSULATORS

Clips for positive electrical contact. For batteries, high-frequency work, transmitting apparatus, electroplating and countless other applications. Standard package: 10 clips, 5 are marked + and 5 are unmarked.

### Fig. N—MESH TEETH TEST CLIPS

No.	Type	Amp.	Size	Open	EA.	10 For
45 N 000	§45	5	1 $\frac{1}{2}$ "	$\frac{3}{8}$ "	7¢	.78
45 N 005	§48C	10	1 $\frac{1}{2}$ "	$\frac{3}{8}$ "	11¢	.99
45 N 010	§45B	10	2"	$\frac{3}{8}$ "	8¢	.54
45 N 078	§48C	10	2"	$\frac{3}{8}$ "	13¢	.88
45 N 087	§150C	10	2 $\frac{1}{2}$ "	$\frac{3}{8}$ "	24¢	1.76

\*Solid copper. †Solid bronze.  
‡Steel, cad.-plated. †Needle in jaw pierces insulation.

### Fig. N—LEAD-PLATED BATTERY CLIPS

45 N 020	24A	25	2 $\frac{7}{8}$ "	$\frac{3}{4}$ "	16¢	1.08
45 N 030	21A	50	4"	1 $\frac{1}{2}$ "	29¢	2.06
45 N 040	11A	100	6"	1 $\frac{3}{4}$ "	82¢	5.78

### Fig. N—SOLID COPPER CLIPS

45 N 025	24C	50	2 $\frac{7}{8}$ "	$\frac{7}{8}$ "	.27	1.96
45 N 035	21C	100	4 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	.72	5.00
45 N 045	11C	200	6"	1 $\frac{3}{4}$ "	1.37	9.60
45 N 050	33C	300	7 $\frac{3}{4}$ "	2"	2.64	18.62

### Fig. O—3-SIDED MESH TEETH CLIPS

45 N 015	§27	20	2 $\frac{1}{2}$ "	$\frac{3}{8}$ "	11¢	.78
45 N 097	§27C	40	2 $\frac{1}{2}$ "	$\frac{3}{8}$ "	19¢	1.27

‡Steel, cadmium-plated. \*Copper.

### Fig. P—CROCODILE CLIPS

45 N 060	85	2 $\frac{1}{2}$ "	Screw Connection	8¢	.54
45 N 062	§85C	2 $\frac{1}{2}$ "	Screw Connection	14¢	.98
45 N 098	§85T	2 $\frac{1}{2}$ "	Tip Clip	18¢	1.27

\*Solid copper. ‡Standard phone tip on one jaw.

### Fig. Q—ALLIGATOR CLIPS

No.	Type	Size	Description	EA.	10 For
45 N 200	§60	2"	Fit banana plugs	7¢	45¢
45 N 065	60S	2"	Fit banana plugs	8¢	52¢
45 N 080	§60CS	2"	Fit banana plugs	11¢	75¢

\*Made of solid copper. Others are of steel.  
†Solder type. Suffix "S" indicates screw connectors.

### Fig. R—INSULATED ALLIGATOR CLIPS

45 N 070	60HS	2 $\frac{1}{2}$ "	Ins'd red handle	12¢	.82
45 N 075	60HS	2 $\frac{1}{2}$ "	Ins'd blk. handle	12¢	.82
45 N 090	§60CS	2 $\frac{1}{2}$ "	Ins'd red handle	16¢	1.08
45 N 095	§60CS	2 $\frac{1}{2}$ "	Ins'd blk. handle	16¢	1.08

\*Solid copper; others of cadmium-plated steel.

### Fig. S—NON-FERROUS R.F. TEST CLIP

45 N 055	§88	1 $\frac{1}{4}$ "	Ideal for coils	19¢	1.27
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### Fig. T—TWIN CLIPS

Type 22. Non-corrosive double-ended spring clip. 2" long. Jaw spread,  $\frac{1}{4}$ ". Shpg. wt., 1 oz.  
58 N 010. NET EACH. 10¢ 10 for.....69c

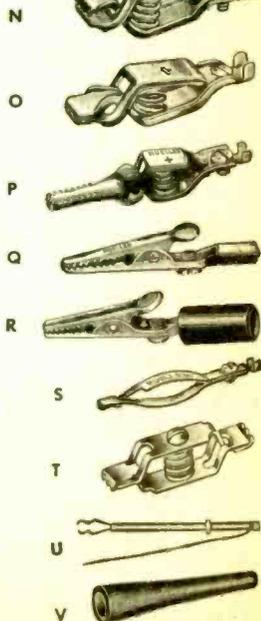
### Fig. U—SNAPPER

Type 99. Unique tool—test clip, contact prod and screw and nut holder. Leads attached to post at end. Thumb button opens, closes spring contact jaws. Makes testing easier. 7" long. 2 oz.  
46 N 101. NET.....71c

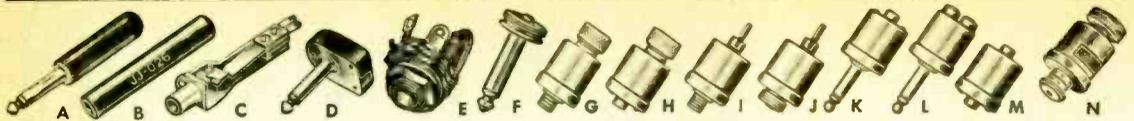
### Fig. V—FLEXIBLE INSULATORS FOR MUELLER CLIPS

Packed 10 to a box, 5 red and 5 black to indicate polarity.

No.	Type	For Clip	EACH	Box of 10	No.	Type	For Clip	EACH	Box of 10
45 N 100	47	45, 45C	.07	.49	45 N 096	62	60, 60S, 60CS	7¢	.49
45 N 105	49	48B, 48C, 50C	.10	.69	45 N 20	29	27, 27C	17¢	1.18
45 N 099	35	33C	1.69	11.76	45 N 125	13	11C, 11A	71¢	4.90
45 N 110	26	24C, 24A	.24	1.76	45 N 130	87	85, 85T, 85C	7¢	.49
45 N 115	23	21A, 21C	.38	2.65	45 N 135	93	88	5¢	.34



# Plugs and Jacks



## SWITCHCRAFT PLUGS AND JACKS

Fig. A—"LITTEL PLUGS"

Fit standard 1/4" phone jacks, except 41H614 and 41H615 which have 2065" dia. sleeves for Revere Recorders, etc. Overall, 2 3/4" long, 1/2" dia. Dual-purpose terminal serves as cable anchor. Sleeve threaded into terminal and staked. Solder connections. Wt., 3 oz.

- 41 H 611, Type 260, 2-conductor. Black Tenite handle. NET.... 41c
- 41 H 612, Type 267, 3-conductor. Black Tenite handle. NET.... 62c
- 41 H 616, Type 255, 2-conductor. Red Tenite handle. NET.... 41c
- 41 H 613, Type 280, 2-cond. Nickel plated brass handle. NET.... 59c
- 41 H 617, Type 297, 3-conductor. Shielded handle. NET.... 76c
- 41 H 614, Type S-250, 2-conductor. Black Tenite handle. NET.... 44c
- 41 H 615, Type S-128, (Fig. B.) Ext. cable jack for S-250. NET..88c

### MILITARY TYPE PLUGS AND JACKS

- Jacks are Fig. C; plugs are not illustrated. Shpg. wt., 4 oz.
- 41 H 618, Type 440, 2-cond. plug. Screw term. Black plastic handle. Military No. JJ-058B. Supersedes Army No. PL-55. 2 3/4" long; handle, 1 3/4" long, 1/2" dia. Sleeve, 1/2" dia. NET.... 82c
  - 41 H 619, Type 820, Fig. B, 2-cond. ext. Jack. Screw term. 2 1/4" handle. Military No. JJ-026. Supersedes Army JK-26. NET.... 1.18
  - 41 H 602, Type 480, 3-cond. plug. Screw term. Black plastic handle. Length, 3 1/4". Sleeve dia., 2065". JAN PJ-068. NET.... 2.12
  - 41 H 603, Type MT331. JAN JJ-086 jack. Diagram I. NET.... .88
  - 41 H 604, Type MT332A. JAN JJ-024 jack. Diag. II. NET.... 1.00
  - 41 H 606, Type MT332B. JAN JJ-022 jack. Diag. III. NET.... 1.00

Fig. D—NEW FLAT PLUG

41 H 621, Type 220. Radically new design. Very small. Removable black handle only 1x1 1/4". 1/4" dia. sleeve, 1 3/4" long. 2-conductor type with screw terminals; marked for identification. Shpg. wt., 4 oz. NET.... 44c

### Fig. F—NEW ADAPTER/CONNECTOR

Type 44. Simplifies connection of equipment with different connectors. Used to adapt Amphenol Type 75-MC1F or 75-MC1E-A connectors for use with 2-conductor phone jack (25" I.D. sleeves). Shpg. wt., 3 oz. 41 H 657. NET EACH.... 29c

Fig. E—"LITTEL-JAX" PHONE JACKS

New line of improved jacks. Many are military equivalents. Size, 1/2" diameter; overall length, 1 1/2". For 1/4" diameter sleeve plugs. \*O.C. indicates open circuit; S.C., closed circuit. See page 157 for diagrams. Wt., 2 oz.

No.	Type	Description*	Diagram	JAN Type	NET
41 H 622	I1	O.C.-2 cond.	I		24c
41 H 623	C11	O.C.-2 cond.	I	JJ-034 Old (JK-34A)	35c
41 H 624	12A	S.C.-2 cond.	II		26c
41 H 631	C12A	S.C.-2 cond.	II	JJ-089	44c
41 H 632	12B	O.C.-3 cond.	III		32c
41 H 633	C12B	O.C.-3 cond.	III	JJ-033 Old (JK-33A)	41c
41 H 634	13B	S.C.-3 cond.	IV		44c
41 H 607, Type S11		O.C.-2 cond. Use with S250 plug.			26c

### SHIELDED ADAPTERS

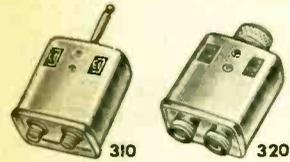
For quick adaptation of any type plug to any other type jack on recorders, amplifiers, etc. Sturdily constructed nickel-plated brass housing. Adapters have 1 1/2" body diameter. Av. shpg. wt., 6 oz.

No. Stock	Mfr's No.	Fig.	Input Description	Input Dia.	Output Description	Output Dia.	NET
41 H 636	332	G	Phone jack	1/2"	Fem. mike conn.	1/2"	1.03
41 H 637	334	H	Phone jack	1/2"	Fem. mike conn.	1/2"	.86
41 H 638	336	I	Phone jack	1/2"	Phono plug	1/2"	.86
41 H 639	338	J	Male mike conn.	3/8"-27	Phono plug	1/2"	.86
41 H 609	342	K	Post/Banana Jack	1/2"	Phone Plug	1/2"	1.53
41 H 645	344	L	Phono jack	1/2"	Phone plug	1/2"	.86
41 H 649	346	L	Tip jacks	1/2"	Phone plug	1/2"	1.26
41 H 608	348	M	Phono jack	1/2"	Phono jack	1/2"	.82

Fig. N—MICROPHONE CONTROL ADAPTER

Type 329. Provides handy volume control attachment on hi-impedance mikes using 1-cond. shielded cable. Employs std. mike connectors—connects between mike and mike cable. 6 oz. 41 H 946. NET.... 4.09

### "MINI-MIX" AUDIO MIXERS



Miniature, 2-input audio mixers. Small, inexpensive units for greatly increasing the flexibility of recording equipment. Accommodate 2 high impedance inputs. Allow mixing of 2 mikes, contact mike and record player, etc., with independent volume controls. 2 1/2"x1 1/4"x1 1/4". 4 oz.

Model 310 Mixer. Has phone jack inputs with phone plug output. Fits std. jacks. Connects directly to equipment—no external cables. 41 H 953. NET EACH.... 4.67

41 H 699, Type 8266. Recessed Jack Adapter. For 310 above. With 1-ft., 2-cond. cable. Shpg. wt., 4 oz. NET.... 2.20

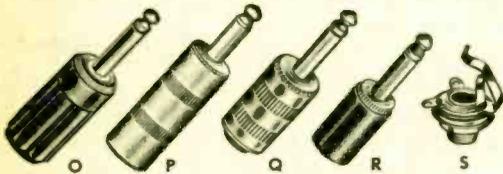
Model 320 Mixer. Has microphone connector inputs, and output mating with standard microphone connectors. 41 H 954. NET EACH.... 4.67



Two new additions to "Mini-Mix" line of miniature audio mixers. Provide same functions as other "Mini-Mix" units, but have special connectors to cover other commonly used sound and recording equipment connections. Accommodate 2 high impedance inputs. Connect directly to equipment—no external cables. Minimum lead lengths inside shielded housing reduce ray pickups. Allow mixing of two mikes, contact mike and record player, tuner and microphone, etc., with independent volume control of each. 2 1/2"x1 1/4"x1 1/4". 4 oz.

Model 315 Mixer. Has phone jack inputs with mike connector output mating with std. mike connectors or No. 44 Adapter (above, left). 41 H 658. NET EACH.... 4.67

Model 325 Mixer. For use with recorders and amplifiers using Jones-type connectors. Fits recessed connectors on Webor tape recorders, etc. 41 H 686. NET EACH.... 5.85



### POPULAR ICA PHONE PLUGS AND JACKS

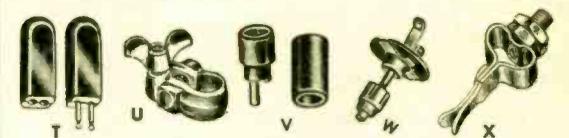
Fig. O. Type 24 Standard Plug. Bakelite barrel, 3/4"x1 1/4". 2 1/4" long overall. Sleeve, 1/4" dia. With screw connections. Shpg. wt., 3 oz. 41 H 600. Black. 10 for 2.97. 41 H 601. Red. NET EACH.... 33c

Fig. P. Type 25 Shielded Plug. Nickel plated brass, 1 1/4"x2" barrel. 3 1/4" overall. Sleeve, 1/4" dia. Screw term. Shpg. wt., 3 oz. 41 H 605. 10 for 5.31. NET EACH.... 59c

Fig. Q. Type 27 Stubby Shielded Plug. 1 1/4"x1" barrel. 2 1/4" overall. Sleeve, 1/4" dia. Screw terminals. Shpg. wt., 3 oz. 41 H 610, 10 for 4.30 NET EACH.... 48c

Fig. R. Type 29 Midget Plug. Very small. 3/8"x1 1/4" bakelite barrel, 2 1/4" overall. Sleeve, 1/4" dia. Solder lugs. Shpg. wt., 3 oz. 41 H 625. Black. 10 for 2.97. 41 H 626. Red. NET EACH.... 33c

Fig. S. ICA Miniature Jacks. Precision-made for use where space is limited. Fits all 1/4" sleeve phone plugs. Shpg. wt., 3 oz. 41 H 627, Type 1870. Open circuit. 10 for 2.61. NET EACH.... 29c 41 H 628, Type 1871. Closed circuit. 10 for 2.97. NET EACH.... 33c 41 H 629, Type 1872. 3-way mike. 10 for 3.33. NET EACH.... 37c



### CONNECTOR, BATTERY BINDING POST, PLUGS AND JACKS

Fig. T. 2-Pin Miniature Plug and Jack. Only 1 1/4" long, 1/4" wide, 1/4" thick. Two conductor type. Black bakelite case. Wt., 3 oz. 43 H 260. Plug. NET.... 35c 43 N 261. Jack. NET.... 47c

Fig. U. Universal Storage Battery Binding Post. 5 oz. 41 H 785. NET.... 36c

Fig. V. Alden Connector. Miniature in-line type of connector. Ideal for high voltage lead in TV sets. Completely insulated to prevent flash-over. Length, 1 1/4". Black bakelite insulation. Wt., 2 oz. 52 H 627. NET. PER PAIR.... 15c

Fig. W. Shielded Phono Pin-Plug and Jack. For auto radios, record players, etc. Pin plug fits standard phono jack on radio. Pin plug dia., 1/4", length 3/8". Single prong jack on 1/4" bakelite disc. 1 1/4" mtg. centers. Av. wt., 1 oz. 46 H 212, Pin Plug, 10 Pkgs.... 1.53. Pkg. of 3.... 17c 46 H 213, Jack, 10 Pkgs.... 2.16. Pkg. of 3.... 25c

Fig. X. Grayhill Type 2-0 Panel Mount Test Clip. Spring clip for installation on test board; for quick attachment to digital leads of resistors, condensers, etc. Excellent for production line incoming inspection. Low resistance connection (approximately .003 ohm). 8-32 stud mounting. Hex nut included. 1 3/4". Shpg. wt., 2 oz. 45 H 182. NET.... 15c

# Plugs, Jacks and Jack Panels



## MALLORY PLUGS, JACKS, EXTENSIONS

### 1/4" PHONE AND MICROPHONE PLUGS

- 41 H 641. **Type 75.** Two-conductor Plug with tie-cord anchor and insulated phenolic shell. Brass terminals for either phone tips or wire. Overall length, 2 3/4". Handle, 1 1/2" long. Shpg. wt., 3 oz. **NET** ..... 38¢
- 41 H 640. **Type 76N.** Two-conductor Plug with tie-cord anchor and polished, shielded nickel shell. Brass screw terminals. Overall length, 2 1/2". Handle, 1 1/2" long. Shpg. wt., 4 oz. **NET** ..... 59¢
- 41 H 937. **Type 75A.** Two-conductor Plug with tie-cord anchor and highly polished, shielded nickel shell and built-in cable clamp. Brass screw terminals. Overall length, 3 3/8". Handle, 1 1/2" long. Shpg. wt., 4 oz. **NET** ..... 97¢
- 41 H 941. **Type 76.** Three-conductor mike Plug with insulated phenolic shell. Silver-plated lug terminals. Overall length, 2 1/2". Handle, 1 1/2" long. Similar to Type 75. Shpg. wt., 3 oz. **NET** ..... 59¢
- 41 H 942. **Type 76A.** Three-conductor mike Plug in highly polished, shielded nickel shell with built-in cable clamp. Silver-plated lug terminals. Overall length, 3". Handle, 1 1/2" long. Similar to type 75A. Shpg. wt., 4 oz. **NET** ..... 1.15

### EXTENSION JACK TYPES

- 41 H 938. **Type 100.** Two-Way Extension Jack for No. 75 plug. Fiber shell. 2 3/4" long. Overall length, 3 1/4". Shpg. wt., 4 oz. **NET** ..... 76¢
- 41 H 939. **Type 100N.** Two-Way Extension Jack for No. 75N plug. Highly polished, shielded nickel shell. Overall length, 3 3/8". Shpg. wt., 6 oz. **NET** ..... 97¢
- 41 H 940. **Type 100A.** Two-Way Extension Jack for No. 75A plug. Shielded nickel shell with built-in cable clamp. Overall length, 3 3/8". Shpg. wt., 5 oz. **NET** ..... 1.35



### MALLORY LONG-FRAME JACKS

Nos. 1, 2, 2A and 5 mount in 3/8" hole in panels to 1/4" thick, require 3/4" behind panel. XP types have plain bushings and mounting plates, require 2 1/8" behind panel. Mount with nut and screw. Wt., 4 oz.

No.	Fig.	Type	Description	Diagram	NET
34 H 440	E	1	Open Circuit	I	38¢
34 H 441	E	2	Short-Circuiting	VII	47¢
34 H 442	E	2A	Closed Circuit	II	47¢
41 H 055	E	5	Closed Circ. Make-Break	IX	71¢
34 H 445	F	XP1	Open Circuit	I	53¢
41 H 644	F	XP2B	2-Circuit Mike	III	59¢
34 H 446	F	XP3B	3-Circuit. Make-Break	VIII	76¢

## AUDIO DEVELOPMENT JACK PANELS, PLUGS AND PATCH CORDS



### BROADCAST TYPE JACK PANELS

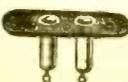
Professional quality jack panels for use in broadcast stations, paging systems, theaters, recording studios, and in any other installation requiring efficient distribution, switching and control of audio signals. Molded bakelite panels have closed circuit jacks. Jacks have standard spacing for use with any double plug. Pairs of holes so spaced that plug cannot be inserted to connect one side of each of two circuits. Easily inserted designation card strips. Fit standard 19" relay rack.

- Type PJ341.** Double Row Jack Panel complete with 48 (24 pairs) Closed Circuit Jacks. Width, 2 1/8". Shpg. wt., 5 lbs. **45.00**
- 86 HX 802, NET** ..... 45.00
- Type PJ343.** Single Row Jack Panel complete with 24 (12 pairs) Closed Circuit Jacks. Width, 1 1/4". Shpg. wt., 3 1/4" lbs. **26.46**
- 86 HX 803, NET** ..... 26.46

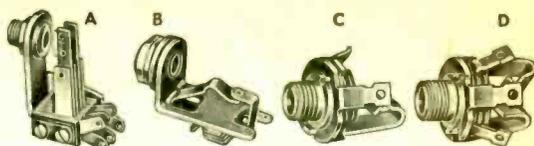
### TWIN JACK STRIPS



**BAKELITE TWIN TIP JACK.** Securely mounted on laminated bakelite strip 2" long by 3/8" wide. For speakers, headphones, etc. Wt., 1 oz. **41 H 379. NET EACH .9¢ 10 for** ..... **81c**



**TYPE 2443 ICA JACK.** For use with headphones, speakers, test equipment, etc. Use with standard phone tips. 1 1/2" wide, 2" long, 1 1/4" mtg. ctrs. Bakelite strip. Wt., 2 oz. **41 H 381. NET** ..... **15c**  
10 for ..... **1.35** 100 for ..... **12.15**



## MALLORY JUNIOR AND MIDGET JACKS

### Fig. A—JUNIOR JACKS

- Small, compact Junior Jacks—extend only 1 1/4" behind panel. Nickel-plated brass frames and bushings. Phosphor-bronze springs. Silver contacts. Take standard plugs. Mount in single 3/8" hole in panels up to 1/4" thick. With mounting nut and washer. Av. shpg. wt., 2 oz.
- 41 H 054. **Type 701.** Open Circuit Jack. Diagram I. **NET** ..... 32¢
- 41 H 058. **Type 702B.** Two-Circuit Jack. For type 76 and 76A Mike Plugs at left. Diagram III. **NET** ..... 44¢
- 41 H 052. **Type 703.** Open Circuit Jack with additional "make" circuit. Diagram V. **NET** ..... 50¢
- 41 H 059. **Type 703B.** 3-circuit jack; 1-circuit transfer. Diagram IV. **NET** ..... 50¢
- 41 H 060. **Type 704B.** 4-circuit jack; 2-circuit transfer. Diagram VI. **NET** ..... 59¢

### Fig. B—MIDGET JACKS

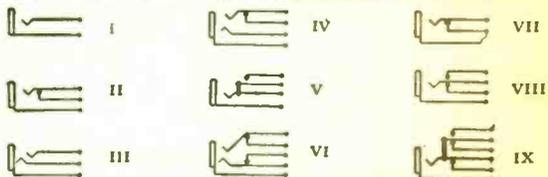
- Extremely small "Midget" and "Infant" Type Jacks for limited space applications. Midget type Jack extends 1 1/4" behind panel; Infant type Jack, 1/2". Same quality construction as Junior Jacks above. Mount in single 3/8" hole in panels up to 1/4" thick. With hdw. Av. wt., 3 oz.
- 41 H 050. (Not Shown) **Type A-1.** Infant Open Circuit Jack. Fits standard plugs. Diagram I. **NET** ..... 18¢
- 41 H 051. **Type A-2.** Midget Shorting Type Closed Circuit Jack. Diagram VII. **NET** ..... 29¢
- 41 H 053. **Type A2A.** Midget Closed Type 2-Circuit Jack. Diagram II. **NET** ..... 32¢
- 41 H 056. **Type A3A.** Midget Closed Circuit, Make-Break Jack. Diagram VIII. **NET** ..... 47¢

### MILITARY TYPE JACKS

- High quality Phone and Microphone Jacks designed to Military specifications. Nickel-plated brass bushings. 3/8" diameter, 1/2" thick. Require only 1 1/4" behind panel.
- 41 H 642. **Fig. C. Type 5C-1A.** Open Circuit Jack. Equivalent to Military Jack No. JJ-034. Fits Mallory Plug No. 75; Western Electric Nos. 47A and 47B; Military No. PL-47, PL-48, PL-55, PL-148, PL-155. Shpg. wt., 2 oz. Diagram I. **NET** ..... 32¢
- 41 H 643. **Fig. D. Type SCA-2B.** Two-Circuit Jack. Equivalent of Military Jack No. JJ-033. Fits W.E. Plug 109 and Military PL-46, PL-68 and PL-168. Shpg. wt., 2 oz. Diagram III. **NET** ..... 38¢

## JACK SCHEMATIC DIAGRAMS

Diagrams shown below illustrate circuits of jacks listed on pages 156-157.



## AUDIO DEVELOPMENT JACK PANELS, PLUGS AND PATCH CORDS

### PATCH CORD SETS

One Patch Cord and two Double Plugs. Tinned-copper, 2-conductor, insulated wire. Heavy braid overall. Bakelite and brass plugs. Have polarizing identifications. Wt., 9 oz.



- 41 H 661. **Type PJ12.** Patch Cord Set. 2-ft. long. **NET** ..... **7.41**
- 41 H 662. **Type PJ13.** Patch Cord Set. 3-ft. long. **NET** ..... **7.59**
- 41 H 664. **Type PJ15.** Patch Cord Set. 5-ft. long. **NET** ..... **8.07**
- 41 H 666. **Type PJ1.** Double Plug Only. **NET** ..... **2.76**

**Replacement Cords.** Same fine quality 2-Conductor Cords as used on Patch Cord Sets above. Insulated tinned copper. Heavy protective braid. Fit all makes of standard plugs. Average shpg. wt., 6 oz.

- 41 H 667. **Type PJ22.** Replacement Cord. 2-ft. long. **NET** ..... **1.65**
- 41 H 668. **Type PJ23.** Replacement Cord. 3-ft. long. **NET** ..... **1.74**
- 41 H 669. **Type PJ24.** Replacement Cord. 4-ft. long. **NET** ..... **1.80**
- 41 H 659. **Type PJ25.** Replacement Cord. 5-ft. long. **NET** ..... **1.89**

### MOLDED BLACK BAKELITE TWIN JACK.

Have single mounting screw mounted into bakelite. Size, 2x1 1/8". For cord tips. Shpg. wt., 2 oz. **41 H 392. EACH** ..... **45c**

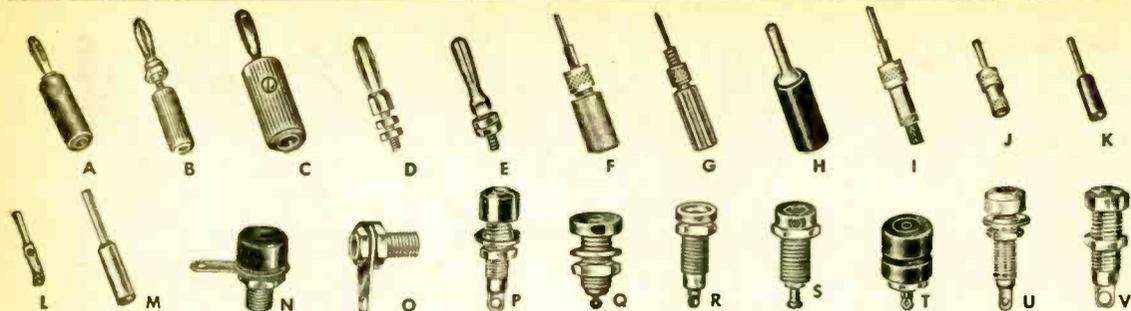


### CONTINENTAL ADAPTER

**JFD Type 2-449.** Male-female adapter. Permits using standard flat prong American plugs in Continental Europe outlets designed for round prongs. 2 oz. **49 E 536. NET** ..... **29c**



# Plugs, Jacks and Clips



## BANANA PLUGS, TIP PLUGS AND MATCHING JACKS

### BANANA PLUGS

**Fig. A. Spring Type Solderless Plug.** 1" handle. Overall length, 1 3/4". Shpg. wt., per 10, 5 oz.  
 41 H 405. Red Handle. NET EACH 13c  
 10 for... 1.15 100 for... 10.35

**Fig. B. Silver Plated Spring Plug.** Solder type. 1 1/4" tenite handle. L. 1 1/8". Wt., per 10, 5 oz.  
 41 H 407. Red Handle. NET EACH 30c  
 10 for... 2.70 100 for... 24.30

**Fig. C. Split Type Plugs.** Solderless connection. Overall length, 1 1/2". Shpg. wt., per 10, 5 oz.  
 41 H 425. Red Handle. NET EACH 15c  
 10 for... 1.35 100 for... 12.15

**Fig. D. All-Metal Plug.** Spring type. 1 3/8" L. Wt., per 10, 4 oz.  
 41 H 400. NET EACH 12c  
 10 for... 1.08 100 for... 9.72

**Fig. E. All-Metal Plug.** Split type. 1 1/4" Wt., per 10, 4 oz.  
 41 H 420. NET EACH 12c  
 10 for... 1.08 100 for... 9.72

### INSULATED TIP PLUGS

**Fig. F. Solderless.** Fit standard phone tip jacks. Overall length, 2". Shpg. wt., per 10, 5 oz.  
 41 H 250. Red Handle. NET EACH 14c  
 10 for... 1.26 100 for... 11.34

### INSULATED TIP PLUGS

**Fig. G. Solderless Locking Phone Tip Plugs.** For 41H435 and 41H436 jacks. Insulated barrel. Overall length, 1 1/4". Length of tip, 3/4". Shpg. wt., per 10, 5 oz.  
 41 H 418. Red Handle. NET EACH 18c  
 10 for... 1.62 100 for... 14.58

**Fig. H. Solder Type Tip Plugs.** For standard tip jacks. Length, 1 1/8". Shpg. wt., per 10, 5 oz.  
 41 H 260. Red Handle. NET EACH 10c  
 10 for... 90c 100 for... 8.10

### NON-INSULATED TIP PLUGS

**Fig. I. Solderless Screw-On Connector.** 1 3/8" L. Shpg. wt., per 10, 5 oz.  
 41 H 240. NET EACH 9c  
 10 for... 81c 100 for... 7.29

**Fig. J. Locking Type Solderless Screw-On Connector.** For use with 41H435 and 41H436 jacks. 1 3/8" Shpg. wt., per 10, 6 oz.  
 41 H 409. NET EACH 14c  
 10 for... 1.26 100 for... 11.34

**Fig. K. Solderless screw-on connector.** 1 3/8" Wt., per 10, 4 oz.  
 41 H 230. NET EACH 9c  
 10 for... 81c 100 for... 7.29

**Fig. L. Standard cord tip.** Lth., 1" Wt., per 10, 5 oz.  
 41 H 200. 10 for... 16c  
 100 for... 1.24

**Fig. M. Cord tip with soldering hole.** 1" Wt., per 10, 5 oz.  
 41 H 220. 10 for... 26c  
 100 for... 2.34

**Fig. N. Cord tip for heavy duty use.** 1 3/8" Wt., per 10, 5 oz.  
 41 H 139. 10 for... 25c  
 100 for... 2.00

### BANANA AND TIP JACKS

**Fig. N. Insulated Banana Jacks.** With solder lugs and removable insulated top. Fit all banana plugs on this page. For 1/4" holes on panels up to 3/8" Ht., 1/4" Wt., per 10, 5 oz.  
 41 H 475. Red. NET EACH 12c  
 41 H 480. Black. 10 for... 1.08 100 for... 9.72  
 41 H 422. Yellow.  
 41 H 423. Green.  
 41 H 424. Blue.

**Fig. O. All-Metal Banana Jack.** With solder lug and nut. For 1/4" hole. Wt. per 10, 5 oz.  
 41 H 470. NET EACH 9c  
 10 for... 81c 100 for... 7.29

**Fig. P. Insulated Tip Jacks.** For standard phone tips. One-piece spring contacts. Removable insulated tops. For mounting in 1/4" holes on panels up to 1/4" thick. Overall height, 1 3/8". Shpg. wt., per 10, 3 oz.  
 41 H 110. Red. NET EACH 12c  
 41 H 115. Black. 10 for... 1.08 100 for... 9.72  
 41 H 432. Yellow.  
 41 H 433. Green.  
 41 H 434. Blue.

**Fig. Q. Insulated Locking Type Tip Jacks.** Bakelite insulated jack with internal thread in brass body. For 41 H 418 and 41 H 419 tips. Twist of phone tip locks it in place. May be used with standard tips as well as with locking types. Phosphor bronze spring contacts. Mounting hole, 3/8". Overall size, 1 3/8" long x 1/2" dia. Shpg. wt., per 10, 5 oz.  
 41 H 435. Red. NET EACH 19c  
 41 H 436. Black. 10 for... 1.71 100 for... 15.39

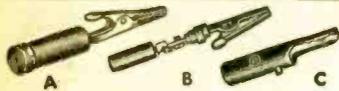
**Fig. R. Molded Tip Jacks.** All molded tip jack for mounting on panels up to 1/4" thick. Mounting hole, 3/8". Size, 1" long x 1/2" dia. Shpg. wt., per 10, 5 oz.  
 41 H 442. Red. NET EACH 21c  
 41 H 443. Black. 10 for... 1.89 100 for... 17.01  
 41 H 444. Yellow.  
 41 H 445. Green.  
 41 H 446. Blue.

**Fig. S. Miniature Nylon Tip Jacks.** All-insulated jacks molded from low-loss nylon. Silver plated contacts. Overall size, 7/8" long x 3/8" dia. Shpg. wt., per 10, 5 oz.  
 41 H 495. Red. NET EACH 25c  
 41 H 496. Black. 10 for... 2.25 100 for... 20.25  
 41 H 497. Yellow.  
 41 H 498. Green.  
 41 H 499. Blue.

**Fig. T. High-Voltage Nylon Tip Jacks.** 10,000 volt breakdown. Complete with snug-fitting insulating washer. Mounting hole, 1/4". Overall size, 1 1/4" long x 3/8" dia. Shpg. wt., each, 2 oz.  
 41 H 140. Black. NET EACH 44c  
 41 H 141. Red.  
 41 H 429. Natural.

**Fig. U. Combination Jacks.** Will accommodate both tip plugs and banana plugs. Mount in 1/4" holes in panels to 1/2" thick. Overall length, 1 1/4". Shpg. wt., per 10, 5 oz.  
 41 H 130. Red. NET EACH 15c  
 41 H 135. Black. 10 for... 1.35 100 for... 12.15

**Fig. V. Metal Tip Jack.** Mount in 1/4" holes in panels up to 3/4" thick. Wt., per 10, 3 oz.  
 41 H 100. NET EACH 9c  
 10 for... 81c 100 for... 7.29



### ICA INSULATED CLIPS

**Fig. A. With tip plug adapter.** Length, 2 1/8". Shpg. wt., per 10, 5 oz.  
 41 H 300. Red. NET EACH 29c  
 41 H 305. Black. 10 for... 2.61

**Fig. B. Fully insulated clip.** Length, 2 1/4". Shpg. wt., per 10, 5 oz.  
 41 H 482. Red. NET EACH 47c  
 41 H 493. Black. 10 for... 4.33

**Fig. C. With push button release.** Length, 2 1/8". Shpg. wt., per 10, 5 oz.  
 41 H 484. Red. NET EACH 29c  
 41 H 485. Black. 10 for... 2.61

### GRAYHILL INSULATED TEST CLIP

Fully insulated. Clips may touch without shorting. Silver contact points. Current carrying parts silver-plated. Molded phenolic insulation. Contact resistance, .0015 ohms. Wt., 2 oz.  
 45 H 180. Black. NET EACH 73c  
 45 H 181. Red.

### NU-WAY SNAPS, STUDS, AND LUGS

Make and break contacts for temporary connections. Made of nickel plated brass. Snaps may be cascaded together for multiple connections.

**Fig. A. Snaps for lugs and studs.** 3/8" D x 3/4" L. With solder lug. Wt., per 100, 12 oz.  
 44 N 450. Per 100... 5.75 Per 1000... 40.00

**Fig. B. Studs for panel or chassis mounting.** 6-32 x 1/2" thread. Wt., per 100, 12 oz.  
 44 N 452. Per 100... 2.85 Per 1000... 20.00

**Fig. C. Lugs for flush mounting.** 1/2" x 3/8" x 1/4". Hole for 6-32 screw. Wt., per 100, 9 oz.  
 44 N 451. Per 100... 2.85 Per 1000... 20.00

### GENERAL RADIO TYPE 274-MB

#### DOUBLE PLUG

Dual plug for standard banana jacks. Molded as a unit on 1/2" centers. Recessed top forms double jack, allowing units to be used in tandem. Banana plug prongs. Holes in body accept phone tips or wires up to No. 12; terminal screws clamp conductors securely. Black polystyrene. 15 amp rating. DC leakage, 100 million megohms. 1 3/8" wide, 1 1/4" long. 3 oz.  
 41 H 242. NET 65c



### ICA SOLDERLESS BANANA PLUGS

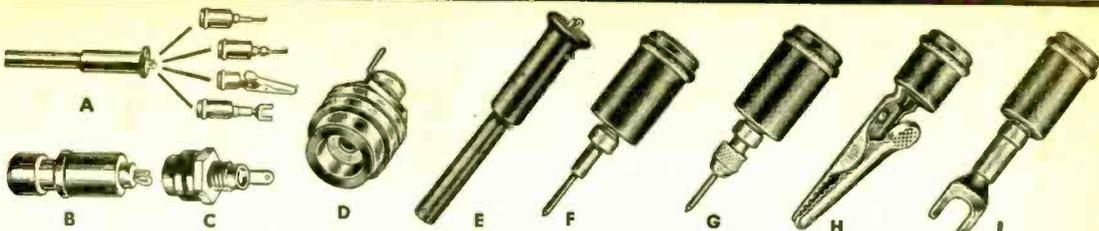
**Fig. A. Standard split-head banana plugs** with plastic base. Wire secured by hex head screw in body of plug. Wt., per 10, 4 oz.  
 41 H 427. Black. Model 434-B. NET EACH 18c  
 41 H 428. Red. Model 434-R. 10 for... 1.62 100 for... 14.58

**Fig. B. Spring type banana plugs.** Contain spring collet at rear for quick wire attachment. Size, 1 1/8" long, 3/8" D. Wt., per 10, 5 oz.  
 41 H 486. Black. Model 433-B. NET EACH 35c  
 41 H 487. Red. Model 433-R. 10 for... 3.15 100 for... 28.35

### RELEX TUBE PILOTS

Phenolic wafers with center metal pilot studs. Fit over miniature tube pins for easy insertion into sockets.  
**Type 7TP9-15.** Box of 15 for 7-pin miniature tubes.  
 40 H 282. Wt., 4 oz. NET 44c  
**Type 7TP9-C.** Box of 100 for 7-pin miniature tubes.  
 40 H 283. Wt., 10 oz. NET 2.79  
**Type 9TP9-12.** Box of 12 for 9-pin tubes.  
 40 H 284. Shpg. wt., 4 oz. NET 44c  
**Type 9TP9-C.** Box of 100 for 9-pin tubes.  
 40 H 293. Shpg. wt., 10 oz. NET 2.79

# Connectors, Strips, Terminals, Clips



## HARVEY HUBBELL SELF-LOCKING SLIDE TYPE CONNECTORS

Interlock connectors provide reliable connections to assure uninterrupted circuits. Suited to a wide variety of applications by Amateurs, experimenters, and laboratory engineers. The interlock prod-coupler (Fig. E) attaches to the end of test lead and locks instantly and automatically to any of the basic attachments. Forms a time-saving, universal testing unit. Makes it unnecessary to change the entire test lead when switching from one tip to another. Spring-loaded connector features constant low

resistance, since contact point strikes hammer-blow to break dirt or oxide film. Easily released by sliding flanged sleeve outward—force exerted in any other manner has no effect. With plastic insulating sleeves and silver-plated contacts and terminals. Ideal for all solderless connections. \*Approximate overall length. †Solder terminals. Prods and attachments rated 5000 volts. Panel plugs and jacks have current capacity of 15 amps. Average shpg. wt., 4 oz.

No.	Fig.	Type	Description	Size*	Net
42 N 323	E	702S11	Prod coupler, black.	4"	65c
42 N 324	E	703S11	Prod coupler, red.	4"	65c
42 N 325	F	704S29	Phone tip attach., black	1 3/4"	21c
42 N 326	F	705S29	Phone tip attach., red	1 3/4"	21c
42 N 327	G	706S29	Phone needle attach., black	1 3/4"	31c

Fig. A. TYPE 700S90 TEST PROD KIT. Consists of first 10 items in list above and right. Test prods supplied complete with 4 ft. test leads already attached. Makes it unnecessary to change entire test lead to switch tips. Shpg. wt., 1 lb.

42 N 300. NET ..... 5.14

No.	Fig.	Type	Description	Size*	Net
42 N 328	G	707S29	Phono needle attach., red	1 3/4"	31c
42 N 329	H	708S29	Alligator clip attach., black	2 1/4"	31c
42 N 330	H	709S29	Alligator clip attach., red	2 1/4"	31c
42 N 331	I	710S29	Spade term. attach., black	1 3/4"	31c
42 N 332	I	711S29	Spade term. attach., red	1 3/4"	31c
42 N 337	B	716S19	Plug, black, solderless term.	1 1/4"	40c
42 N 338	B	717S19	Plug, red, solderless term.	1 1/4"	40c
42 N 333	D	712S21†	Jack, plastic entry, black	3/8" dia.	25c
42 N 334	D	713S21†	Jack, plastic entry, red	3/8" dia.	25c
42 N 335	C	714S21†	Jack, metal entry, black	3/8" dia.	35c
42 N 336	C	715S21†	Jack, metal entry, red	3/8" dia.	35c



Fig. J—STANDARD BAKELITE TIE-POINTS

Terminals riveted to 1/8" thick bakelite on 3/8" centers. \*Have one mounting lug; others have two. Mounting centers, 4-terminal, 1 1/4"; 6-terminal, 1 3/4". Average shpg. wt., pkg. of 10, 1/2 lb.

No.	Terminals	Pkg. of 10	No.	Terminals	Pkg. of 10
41 H 500	2*	21c	41 H 503	5*	41c
41 H 501	3*	25c	41 H 504	6	53c
41 H 502	4	41c			

Fig. K—SINGLE-LUG TIE-POINTS

Terminals riveted to 1/8" thick high-quality bakelite. One mounting lug. Tinned solder lug. Shpg. wt., pkg. of 10, 4 oz.

41 H 515. Pkg. of 10. .... 15c

Fig. L—TERMINAL STRIPS

Excellent for cabled sub-assemblies, to simplify chassis removal. 1/8" thick bakelite terminal strips. Cadmium-plated screw terminals and tinned solder lugs. Av. shpg. wt., pkg. of 5, 1 lb.

No.	Terminals	Pkg. of 5	No.	Terminals	Pkg. of 5
41 H 505	2	29c	41 H 508	5	69c
41 H 506	3	44c	41 H 509	6	83c
41 H 507	4	59c			

Fig. M—MINIATURE TIE-POINTS

Consist of .025" tinned brass terminals on 1/8" thick laminated phenolic. Ground lug included. Average shpg. wt., per pkg., 8 oz.

No.	Terminals	Pkg. of 10	No.	Terminals	Pkg. of 10
41 H 510	2	15c	41 H 513	5	31c
41 H 511	3	21c	41 H 514	6	35c
41 H 512	4	25c			

Fig. N—HEAVY-DUTY STRIPS

Black 1/8" bakelite. Cadmium-plated screw terminals. Tinned solder lugs. For ant.-ground connection on receivers, etc. Av. wt., 4 oz.

No.	Term.	EACH 10 For	No.	Term.	EACH 10 For
41 H 875	2	1.3c	41 H 895	6	3.4c
41 H 875	3	1.8c	41 H 897	7	4.1c
41 H 885	4	2.3c	41 H 898	8	4.6c
41 H 890	5	2.8c			

## TERMINALS—CONNECTORS

Stock No.	Fig.	Description	Per Doz.
41 H 755	O	Single hole mount. For 1/8" dia. fuses	14c
41 H 765	P	Terminal lugs. Make your own strips	59c
41 H 775	Q	Black insulated pin-plug. 1/8" dia. pin	84c



## SPRING CLIPS AND BINDING POSTS

### FAHNESTOCK SPRING CONTACT CLIPS

Positive contact clips. ALLIED can supply all other Fahnestock clips. Specify types required. \*Made of bronze. All others brass. Wt., 10, 3 oz.

Stock No.	Mfr's Type	Fig.	Length	Width	Max. Wire	Mtg. Hole	Pkg. of 10	10 Pkgs. of 10
41 H 700	2	R	1"	3/8"	1/16"	#10	#8	11c .99
41 H 702	3	R	1 1/8"	3/8"	1/16"	#10	#8	13c 1.17
41 H 705	10	R	1 1/2"	3/8"	1/16"	#14	#6	9c .81
41 H 703	5	S	1 1/4"	3/8"	1/16"	#10	#8	23c 2.07
41 H 707*	15	S	1 1/2"	3/8"	1/16"	#16	#4	9c .81
41 H 704	9	T	2 1/4"	3/8"	1/16"	#10	#8	52c 4.68
41 H 710	9C	T	1 1/2"	3/8"	1/16"	#10	#8	79c 7.11
41 H 715	18	T	1 1/2"	3/8"	1/16"	#14	#6	63c 5.67
41 H 708*	36	U	1 1/2"	3/8"	1/16"	#10	lug	1.13 10.17
41 H 709	45	V	3/4"	3/8"	1/16"	#12	#6	1.7c 1.53

Fig. W. Superior Binding Posts. Take spade lugs, banana plugs, phone tips, lugs, or wire. Capacity, 30 amps. For panels 1/8" to 1/4". Wt., 4 oz.

41 H 177. Type DF30BC. Black.

41 H 178. Type DF30RC. Red

100 or more, EACH. .... 34c NET EACH ..... 40c

Fig. X. EBY. Type 30. Non-removable screw top binding posts. 1/2" dia. 6-32x1/2" screw, with nut. Wt., 2 oz.

41 H 350. 10 or more, EACH. .... 19c NET EACH ..... 21c

### ICA BINDING POSTS

Fig. Y. SINGLE POSTS. Solidly constructed of molded bakelite. 3/8" diameter head with brass threaded insert. Nickel-plated 8-32 screw and knurled locking nut. Length overall, 1 3/4". Wt., 2 oz.

41 H 369. Type 618 Black.

41 H 370. Type 617 Red. 10 or more, EACH. .... 13c NET ..... 15c

Fig. Z. COMBINATION. For banana plug or phone tip. Std. banana jack in head. 8-32 screw. Length, 1 3/4". Wt., 2 oz.

41 H 330. Type 622 Red.

41 H 335. Type 623 Black. 10 or more, EACH. 21c NET ..... 24c

Fig. AA. METAL POST. For heavy-duty use and where low resistance connections are required. Nickel-plated brass. 3/8" dia. 1 3/4" long. Wt., 2 oz.

41 H 371. Type 620. 10 or more, EACH. .... 19c NET ..... 21c

Fig. BB. Type 697. Vise-grip binding posts. When tightened, a flat slide closes down across full inserted length of wire. Holds even finest strands. Head knurled for firm grip. 1" high, 3/8" diameter. 8-32 female thread for mounting with screw (not supplied). Wt., 2 oz.

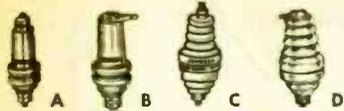
41 H 358. 10 or more, EACH. .... 29c NET ..... 33c

Type 637. Same as type 697 above but has 8-32 threaded stud 3/8" long for mounting with nut (not supplied). Shpg. wt., 2 oz.

41 H 357. 10 or more, EACH. .... 35c NET ..... 39c

# Insulators, Tip Jacks and Plugs

FAMOUS E. F. JOHNSON QUALITY PRODUCTS



**Type 135. Thru-Panel Insulators.** High mechanical strength; long leakage paths. All are white glazed porcelain except (steatite). \*With jacks as listed at right below. Wt., 12 oz.

Stock No.	Mfr's Type	Fig.	Top Ht.	Panel Hole	Hardware	NET
73 H 225	40†	A	1 1/4"	7/8"	10-32	.25
73 H 226	40-2	B	1 1/4"	7/8"	74*	.33
73 H 227	42†	A	1 1/2"	1 1/8"	10-32	.24
73 H 228	42-2	B	1 1/2"	1 1/8"	74*	.32
73 H 229	44†	A	1 3/4"	1 1/4"	6-32	.33
73 H 230	45	C	1 3/4"	1 1/4"	10-32	.33
73 H 231	45-2	D	1 3/4"	1 1/4"	74*	.41
73 H 232	45	A	2 1/4"	1 3/4"	6-32	1.84
73 H 235	47	A	4 1/4"	3 1/2"	1/4-20	1.24
73 H 233	48	A	4 1/4"	3 1/2"	10-32	.48
73 H 224	48-2	D	2"	1 1/2"	74*	.60

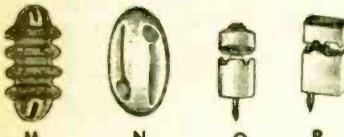


**Lead-In Bushings.** Have many applications in transmitter and antenna installations. Ideal as power supply and high voltage terminals. 50, 51, 52, 53 are steatite, with nickelled brass rod and nuts; 53 and 54 are porcelain, less hardware. Av. shgp. wt., 8 oz.

Stock No.	Mfr's Type	Fig.	Top Ht.	Dia.	Panel Hole	NET
73 H 160	135-50	L	1 1/2"	3/4"	1 1/2"	24c
73 H 161	135-51	L	1 1/2"	1 1/2"	1 1/2"	40c
73 H 162	135-52	L	1 1/2"	1 1/2"	1 1/2"	59c
73 H 163	135-53	J	1 1/2"	1 1/2"	1 1/2"	26c
73 H 164	135-54	I	1 1/2"	3/4"	2 1/2"	62c
73 H 165	135-55	K	4"	1 1/2"	1 1/2"	23c

**Ultra-Steatite Cone Insulators.** Ideal for mounting coils, condensers, etc. Threads tapped directly into steatite. With screws, and washers. Width is max. Shgp. wt., 5 oz.

No.	Type	Height	Width	NET
73 H 150	135-500	2 1/2"	1 1/2"	20c
73 H 151	135-501	1 1/2"	1 1/2"	24c
73 H 152	135-502	2 1/2"	1 1/2"	43c
73 H 153	135-503	1 1/2"	1 1/2"	49c
73 H 154	135-504	3"	1 1/2"	85c



## ANTENNA INSULATORS

51 C 223. Fig. M. Glazed porcelain insulator. 2 1/2" long. Ribbed design. Shgp. wt., 2 oz. 10 Pkgs. of 4 for 1.89  
Per Pkg. of 4.....21c

51 C 224. Fig. N. Low-loss white porcelain strain insulator, 1 1/2" dia. Shgp. wt., 2 oz. 10 Pkgs. of 4 for 2.61.  
Per pkg. of 4.....29c

51 C 225. Fig. O. Popular, standard nail knob. 1 1/4" diameter. Shgp. wt., 4 oz. 10 Pkgs. of 4 for 1.53  
Per Pkg. of 4.....17c

51 C 226. Fig. P. Porcelain insulator for 300 ohm twin-lead. Shgp. wt. 5 oz. 10 Pkgs. of 4 for 2.25  
Per Pkg. of 4.....25c

## B&W "CC-50" COAXIAL CONNECTOR

Provides weatherproof, strong cable connections to antennas. Water-tight aluminum housing. Antenna elements connect to forged steel eye-bolts. Internal soldering connections for coax cable. Rubber sleeve for small diameter cable. Also serves as center insulator for half-wave doublet. Includes cement, eye-bolts rubber sleeve, screws, 2 housing sections, and instructions. Shgp. wt., 1 lb.  
75 H 593. NET.....5.85



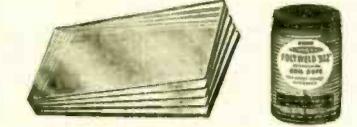
**Type 136. Stand-Off Insulators.** High glaze porcelain (except (steatite). Ideal for transmitter applications, etc. Feature long leakage path, low capacity and freedom from moisture absorption. Heavy breakage-resistant bases. Nickel-plated brass hardware. Types 65, 65-2, 68, 68-2 are ribbed; rest have drawn bases. †With jacks as listed below. \*Like Fig. G but square base. Wt., 1 lb.

Stock No.	Mfr's Type	Fig.	Body Ht.	Hardware	NET
73 H 120	20†	E	1 1/4"	10-32	15c
73 H 121	20-2	F	1 1/4"	74†	20c
73 H 122	22†	E	1 1/4"	8-32	13c
73 H 123	22-2	F	1 1/4"	74†	16c
73 H 129	24	E	3/4"	6-32	10c
73 H 135	60	*	4 1/2"	1/4-20	68c
73 H 126	62	*	2 1/2"	1/4-20	36c
73 H 127	65	G	1 1/2"	10-32	21c
73 H 128	65-2	G	1 1/2"	74†	26c
73 H 129	66	H	2 1/2"	1/4-20	50c
73 H 130	66-2	H	2 1/2"	76†	72c
73 H 131	67	H	4 1/2"	1/4-20	72c
73 H 136	68	*	2 1/2"	10-32	34c
73 H 137	68-2	*	2 1/2"	74†	42c



**Jacks & Plugs.** A complete line of highest quality jacks and plugs. Designed to make easy, positive contact. Banana type plugs have nickel-silver springs; jacks are nickelled brass with phosphor bronze spring sleeves. Type 77A plugs have long screw for mounting on ceramic or steatite plug-in coil forms. Supplied with all hardware. Average shgp. wt., 2 oz.

Stock No.	Mfr's Type	Fits	Lgth.	NET EACH
73 H 200	108-74	75, 75A, 75C	5/8"	10c
73 H 201	108-75	74	1 1/2"	11c
73 H 202	108-75A	74	1 1/2"	11c
73 H 203	108-75C	74	1 1/2"	11c
73 H 204	108-76	77, 77A	1"	26c
73 H 205	108-77	76	1 1/2"	24c
73 H 206	108-77A	76	1 1/2"	27c



## AMPHPHENOL POLYSTYRENE SHEET STOCK AND CEMENT

**Type 912A.** Extremely low-loss polystyrene sheets. Excellent for AC, DC and RF applications including VHF, UHF and SHF. High dielectric strength. Colorless; does not deteriorate under varying climatic conditions. No moisture absorption. Also fine for dial and gauge glass use. Easy to cut and fit.

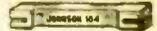
Stock No.	Type	Size	Wt.	NET
71 H 738	19-0628	4x8x1/4"	3 oz.	17c
71 H 739	19-0938	4x8x1/2"	4 oz.	20c
71 H 746	19-1258	4x8x3/4"	5 oz.	24c
71 H 749	19-1878	4x8x1"	6 oz.	29c
71 H 748	19-2508	4x8x1 1/4"	8 oz.	39c

**Polyweld "912" Cement.** Type 63-912-2. 2 oz. bottle. Securely "welds" polystyrene. Shgp. wt., 3 oz.  
43 N 139. NET.....35c

## NATIONAL STAND-OFF INSULATORS

Molded steatite insulators for use in RF circuits. Glazed to prevent moisture absorption. Base and terminal assembly removable to form single-screw type pillar mount. Av. shgp. wt., 3 oz.

No.	Type	Ht.	Dia.	EACH
71 H 125	GS-1	1 1/2"	1 1/2"	27c
71 H 126	GS-2	2 1/2"	1 1/2"	35c
71 H 127	GS-3	2 1/2"	1 1/2"	69c



## ANTENNA INSULATORS

Types 107 and 112 are wet-process porcelain; 800 lbs. breaking strength. Type 104 is dry-process porcelain; 400 lbs. breaking strength.

No.	Type	Size	Wt.	NET
73 H 215	136-104	4"x3/4" sq.	4 oz.	15c
73 H 216	136-107	7"x1" dia.	10 oz.	75c
73 H 217	136-112	12"x1" dia.	1 1/4 lb.	85c

## FEEDER SPREADERS

General purpose feeder spreaders for lowest leakage loss. For constructing open-wire feeders and transmission lines, with impedances of approximately 200 to 600 ohms. Unglazed porcelain bars, 1/2"x1/2", treated with "Silanex," a silicone product—impervious to moisture. Av. shgp. wt., 3 oz.

Stock No.	Mfr's Type	Length	NET EACH
73 C 111	136-122	2'	12c
73 C 112	136-124	4'	17c
73 C 113	136-126	6'	22c

## NYLON TIP JACKS

Completely insulated .081" tip jacks. Head and body of molded low-loss nylon. Silverplated beryllium-copper contacts. Hot tin-dipped solder terminal. Mating plug firmly engages jack—assures low contact resistance. Jack body threaded 1/4"-32, mounted by single nut. DC breakdown, 11,000 volts. Length, 2 1/2". Diameter, 1/4" Wt., 2 oz.

Stock No.	Mfr's Type	Color	EACH
73 H 250	105-601-1	White	
73 H 251	105-602-1	Red	25c
73 H 252	105-603-1	Black	
73 H 253	105-604-1	Green	

## CINCH-JONES STAND-OFF TERMINALS

Permits more direct wiring between chassis components. 2 metal caps separated by ceramic spacer. One end rivets into chassis; other for soldering leads. Fully insulated. 4 oz.

No.	Type	Dia. x L.	Rating	EA.
73 H 247	SOT-1	1 1/4"x1 1/4"		
73 H 248	SOT-2	1 1/4"x1 1/4"	500 v.	13 1/2c
73 H 249	SOT-3	1 1/4"x1 1/4"		

## JFD AC-DC LINE CORD RESISTORS

Supply proper voltage for tubes wired in series across 115 volt lines. 135, 160, 180 and 200 ohm cords can also be used for 1-lamp, 15 and 20-watt fluorescent units. \*For 4523 tube. †For 3-way battery portables. 6' long. Wt., 6 oz.

Stock No.	Type	Ohms	EACH
49 T 522	2180	135	
49 T 520	2181	160	
49 T 519	2182	180	
49 T 518	2183	200	
49 T 517	2184	220	
49 T 516	2185	250	
49 T 515	2186	290	
49 T 524	2187	300	
49 T 512	2188	330	
49 T 511	2189	350	
49 T 510	2190	390	
49 T 525	2197†	560	
49 T 526	2157*	960	1.81

**Type 2175 Universal AC-DC Cord.** Replaces AC-DC cords from 220 to 300 ohms. Select desired resistance leads; clip off unused ones. For std. 3-terminal or pilot bulb tapped cords. 6' long. Shgp. wt., 5 oz.  
49 T 530. NET.....1.81

**Type 2192. Step-down Line Cord.** For 110-volt AC-DC radio sets from 220 volts AC-DC. With plug. 560 ohms. 0.2 amp. cap. For sets using .15 amp tubes. Wt., 5 oz.  
49 T 580. NET EACH.....2.54

**"MAKE-UP-OVER" RESISTANCE CORDS**  
For supplying exact line cord resistance needed. Shgp. wt. for 10' 1/2 lb., 25' 1 lb.  
49 W 560. 30 ohms resistance per foot.  
49 W 570. 60 ohms resistance per foot.  
NET Per Foot.....11c  
25 feet for.....2.25

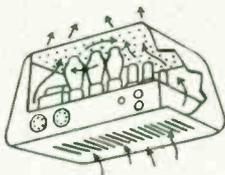
# KNIGHT SOUND is your Best Buy for every Public Address need

ALWAYS the "Best Buy" in Sound—the Knight P. A. line now is *better than ever*: You get functional styling, highest usable output, features that count, and completely satisfying performance—unmatched in the public address field.

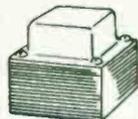
UNDERWRITERS' APPROVED. Knight 15 to 80 watt amplifiers meet the rigid U.L. specifications for complete safety under any operating conditions.



heavy-duty SJ type AC cable



maximum ventilation "RUNS COOL"



extra-large output transformer for clean, high power



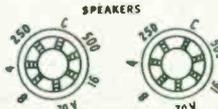
"battleship" all-weld construction



mixes mikes and phono



extended frequency response for superb tone



an output impedance for every speaker application



## KNIGHT Amplifiers Are Guaranteed for One Full Year

Every Knight amplifier is *unconditionally guaranteed for one full year* against defects in material or workmanship. We can make this iron-clad guarantee with absolute confidence because we know that each Knight amplifier delivers:

**Highest Usable Output**—you get the full power we claim—*usable* power, for maximum area coverage.

**Top Fidelity**—you get it even in our lowest-priced system—with tonal response that exceeds your needs.

**Rugged Dependability**—you get "dreadnaught" service, day in and day out, under any conditions.

**Knight Systems are "Ready-to-Use."** The system you buy comes to you *complete*—ready to use. Plugs and cables are attached to speakers and microphones—there's nothing more to buy, nothing to add. You set up the system in just three quick, simple steps: Plug speakers into amplifier, plug mike into amplifier, plug amplifier into AC outlet, and the system is ready to go to work.

It's Easy to Select the System You Need. We show the approximate audience and area coverage of each Knight System. You can tell at a glance which system is best for your needs. In case your requirements are more complex, ALLIED's staff of Sound experts will help you make the proper selection. Simply give us full details, including data on noise level, and a rough sketch of area to be covered. Our careful recommendations will be made promptly.

**Buy a Complete System and Save.** A Knight Sound System costs less than the total of the established prices for the individual components. You save money by buying our recommended systems.

**Buy on Easy Terms.** Any Knight amplifier or complete public address system selling for \$45.00 or more may be purchased on easy terms. Use the equipment while you are paying for it. For full details of ALLIED's liberal monthly payment plan, see page 299.

## MONEY-BACK GUARANTEE AND 15-DAY TRIAL

We guarantee absolute satisfaction or your money back. Order any Knight Sound System and try it under your own operating conditions. If you don't agree that your Knight equipment meets every claim we make for it, send it back—any time within 15 days—and we'll refund every penny you paid, less only transportation charges. In addition to this money-back guarantee, every Knight Amplifier is unconditionally guar-

anteed against defects in material or workmanship for *One Full Year*, and every other component in a Knight System carries the 90-day warranty of the Radio-Electronics-Television Manufacturers' Association. Knight Sound Systems and Knight amplifiers give you the most for your money in efficient design, quality construction and guaranteed performance.

—ALLIED RADIO CORP.

# FAMOUS KNIGHT 30 WATT AMPLIFIER AND



## 30-Watt Amplifier Technical Specifications

**OUTPUT:** Full 30 watts usable power. (Hum is inaudible; 79 db below rated output.) **EXTENDED FREQUENCY RESPONSE:**  $\pm 2$  db. from 40 to 20,000 cps on phono and microphone channels. **OUTPUT IMPEDANCES:** 4, 8, 16, 250 and 500 ohms, plus new 70 volt output. **INPUTS:** Three—two for high-impedance microphones; one for phono. Each input has individual volume control. **GAIN:** 130 db on each microphone channel; 80 db on phono. Adequate gain for any high-impedance dynamic or crystal microphone. Full output on phono from any crystal pick-up. **tone CONTROL:** Attenuates treble 15 db at 10,000 cps. **TUBES:** 3—6SC7, 2—6L6G, 1—5U4G. **SIZE:** 14 $\frac{1}{2}$ x8 $\frac{1}{2}$ x11 $\frac{1}{4}$ ". **LINE DRAIN:** 118 watts. Power transformer has tapped primary for optimum results from 110 to 130 volt lines. U.L. Approved.

**Guaranteed for One Full Year**

### 30-WATT SYSTEMS:

Audience coverage up to 4,000 persons.  
Area coverage up to 20,000 sq. ft.



### Knight 30-Watt Deluxe Portable Sound System

The most popular Knight P.A. system—used in thousands of church and school auditoriums, small theaters, lecture halls, etc. Powerful, yet compact and practical for carrying anywhere—it provides maximum flexibility. Dealers from coast to coast prefer the Knight 30-Watt Portable System, because it's the answer to 90% of all P.A. requirements—and because it's priced to give extra profits from sales or rentals!

**FAMOUS KNIGHT 30-WATT AMPLIFIER.** The heart of this system is a Knight amplifier famous for power and versatility. Provides full 30 watts of usable power. It gives you three inputs, 2 for mike, and 1 for phono, each with individual volume control. Tone control permits easy adjustment to meet acoustic requirements anywhere. Case has die-drawn ends for extra strength. Handsomely designed, it looks good in any setting! *Unconditionally guaranteed for one full year.* For technical specifications, see description at top of page. Underwriters' Laboratories Approved.

**MATCHED COMPONENTS.** Top-notch performance is assured by matched components. Uni-directional Electro-Voice "Cardax" mike reduces acoustic feedback problems—picks up from front only, back is dead. The 2 heavy-duty speakers have 14.5 oz. Alnico V magnets for greater audio output. Both are "Safused" for protection against accidental overload. All components have been carefully selected to match perfectly!

**COMPACT PORTABLE CASE.** A marvel of convenience and efficiency, the compact, sturdy case has a place for everything. Amplifier is mounted on baseboard which slides into case in grooves; clips hold mike stand stem, with a bolt for securing the base; special pocket

holds mike and cable. Pyroxylin-coated, maroon fabric covering will withstand the rigors of portable use. Houses both speakers; one in each half of split case. Gray flocked speaker grilles.

**EASY TO SET UP AND OPERATE.** Just plug speakers and mike into amplifier. Plug amplifier line cord into 110-130 volt AC line. Turn on and adjust the volume. That's all there is to it! Nothing more to add—nothing more to buy. And you get perfect results right from the first time you try it.

**COMPLETE PORTABLE SYSTEM.** Includes: Knight 30-Watt Amplifier with tubes (less phono top); Electro-Voice Cardax crystal mike (Fig. A) with 20 ft. shielded cable and plug; 3-section adjustable floor stand; 2 heavy-duty 12" PM dynamic speakers, each with 30-ft. cable and plug; portable carrying case as illustrated. Size: 16 $\frac{1}{4}$ x12 $\frac{1}{4}$ x25". Full operating instructions. For 110-130 volts, 60 cycle AC. Carrying wt.. 59 lbs.; shpg. wt.. 75 lbs.  
93 PA 672. Complete system, less phono top. NET. . . . \$129.50

Add \$16.00 for above system with Electro-Voice 636 "Slimair" dynamic microphone (Fig. B), instead of the Cardax crystal mike (Fig. A). See page 170 for complete description of the Electro-Voice 636 "Slimair" dynamic mike.

**3-SPEED PHONO TOP.** The ideal turntable for Knight amplifiers. Supplied installed on amplifier when purchased together. See top of page 163 for complete description. For 110-130 volts, 60 cycle AC. Shpg. wt.. 10 lbs.  
93 PA 640. NET. . . . \$17.45

# COMPLETE SOUND SYSTEMS

## Knight 30-Watt Amplifier Only

Here's just the unit you need to bring your old system up to date, or to use as the basis of a system designed to meet your special needs. Easily provides sound coverage up to 100,000 square ft. when used with trumpet speakers. Gives you high power at low cost. Features all specifications described at left. Housed in handsome case of one-piece all-welded heavy steel construction, with die-drawn ends. Top and bottom are removable; with invisible ventilating louvers at bottom. Control panel is illuminated. Finished in rich two-tone baked-on gray enamel with hammered effect. Size:  $14\frac{1}{2} \times 8\frac{1}{2} \times 11\frac{1}{4}$ ". Complete with tubes; full set of plugs for mike, phono and speaker sockets; instructions. For operation from 110-130 volts, 60 cycle AC. Shpg. wt., 31 lbs. Underwriters Laboratories' Approved. *Unconditionally guaranteed for one year.*

93 SX 670. NET ..... 62.50

**3-SPEED PHONO TOP.** An excellent record-playing unit for the Knight 30-watt amplifier. Plays 78, 33 $\frac{1}{2}$ , and 45 rpm records. Has constant speed motor, pickup with turn-over type cartridge and dual precious-metal tipped needles. Complete with switch, arm rest and plug-in connections. Installed on amplifier when purchased together. For 110-130 volts, 60 cycle AC. Shpg. wt., 10 lbs.

93 PA 640. NET ..... 17.45

For companion portable 3-speed changer, see below, at right.



## 30-Watt System for Permanent Installations

Here is the ideal all-purpose Knight Sound System—designed to fill a wide variety of requirements for medium-powered permanent sound installations. Particularly recommended for installation in moderate-size auditoriums, schools, churches, clubs, and entertainment spots. Delivers a full 30 watts of usable power. The Knight amplifier is U.L. Approved. In addition, it is unconditionally guaranteed for one full year. For power, dependability, top value—it's the versatile Knight 30-watt system.

**REMARKABLE PERFORMANCE.** You get exceptional results with the Electro-Voice "Cardax" unidirectional crystal microphone—reduces feedback and acoustical howl. Properly designed wood baffles provide handsome enclosures for the powerful heavy-duty 12" PM speakers. For completely versatile service, you can add the optional matched 3-speed phono top described above. The carefully selected components of this Knight system assure top-quality performance under all operating conditions. We believe no 30-watt system of comparable quality and as up-to-date as this Knight system is available today at so low a price.

**COMPLETE PERMANENT SYSTEM.** Includes: 1—Knight 30-watt amplifier (as described above) with tubes; 1—Electro-Voice "Cardax" crystal microphone with 20-ft. shielded cord and plug; 1—adjustable floor-type mike stand; 2—heavy-duty 12" PM Dynamic speakers (14.5 oz. Alnico V magnets) "Safused" for protection, and equipped with 30-foot cables and plugs; 2—handsome inclined-front wood wall baffles finished in walnut. Complete with instructions. Easy to install and operate. For 110-130 volts, 60 cycle AC. Shpg. wt., 68 lbs.

93 PA 673. Complete System, less phono top. NET ..... 126.50

Add \$16.00 for above Sound System equipped with Electro-Voice 636 "Slimair" dynamic microphone instead of the Cardax crystal microphone. For description of the 636 "Slimair" mike, see page 170.



## 30-Watt Trumpet Systems

Area Coverage up to 100,000 Square feet

**Fig. A—COMPLETE SYSTEM WITH REFLEX TRUMPETS.** For maximum power and coverage, we recommend this Knight 30-watt system with 20" reflex trumpets. These trumpets have 4 to 5 times the efficiency of cone speakers, and are ideal for plant and outdoor paging where noise level is high or where large areas must be covered. The complete system includes: 1—Knight 30-watt amplifier (described at left); 2—University Model PH 20" weatherproof reflex trumpets with 25-watt driver units; 2—universal line-to-speaker transformers; Electro-Voice "Cardax" crystal microphone equipped with "on-off" switch, 20-foot shielded cable and plug; desk stand; complete set of plugs for speakers and record player; full instructions. Amplifier is Underwriters Laboratories' Approved and unconditionally guaranteed for one year. Less cable for speaker lines (use any 2-conductor cable). See optional 3-speed phono top described at left. For operation from 110-130 volts, 60 cycle AC. Shpg. wt., 75 lbs.

93 PA 674. NET ..... 149.50

**Fig. B—SYSTEM WITH ELECTRO-VOICE PROJECTORS.** Same as above but includes 2 Electro-Voice Model 848 compound diffraction projectors instead of University-type trumpets. Extended high-frequency response. For full details, see page 178. Shpg. wt., 135 lbs.

93 PA 676. Complete system, less phono top. NET ..... 149.50

## COMPANION ACCESSORIES

### FOR KNIGHT 30-WATT SYSTEMS

#### V-M 960 3-Speed Portable Changer

Ideal portable record changer for Knight amplifiers. Uses V-M 950 tri-o-matic changer to play 78, 33 $\frac{1}{2}$  and 45 rpm records. Automatic tone arm setdown, 10" and 12" records of same speed can be intermixed. Changer shuts off after last record. Dual-needle, turnover crystal cartridge. Low needle pressure. Simple, centralized controls. Sturdy, attractive carrying case covered in mahogany wood-grain simulated leather. With AC line cord, 6-ft. shielded lead and plug. Size:  $13\frac{1}{2} \times 15\frac{1}{2} \times 8\frac{1}{2}$ ". For 105-125 v., 60 cycle AC. Shpg. wt., 18 lbs.

96 RX 730. List. \$64.50. NET ..... 41.92

#### Compact Microphone Mixer

Feeds 3 high-impedance microphones or instrument pickups into a single microphone channel. Has 3 separate controls for mixing. High impedance output. Shielded case,  $1\frac{1}{2} \times 3\frac{1}{2} \times 7\frac{1}{4}$ ". Blue-gray Hammertone finish. 33" shielded cord and 3 phone plug adapters. Designed for use with Amphenol type MC1F connectors or standard phone plugs. Wt., 1 lb.

93 S 282. List. \$15.00. NET ..... 8.82

# KNIGHT 80-WATT AMPLIFIER AND COMPLETE SOUND SYSTEM

## Knight 80-Watt Amplifier Only

Use this super-power amplifier as the heart of your present PA installation—for increased power and coverage at low cost. Or, build a new system around it to meet your particular sound requirements. Uses two 807 transmitter-type tubes in final stage for high power. Crisp, faithful reproduction of speech and music is assured by extended range response and bass-treble control. Features 600-ohm ungrounded output winding on driver transformer—for phone lines or driving another amplifier. Controls: Mike 1, Mike 2, Phono 1 & 2 (fader), Bass-Treble Tone, and On-Off. Supplied with all tubes, plugs for mike and speaker jacks and complete operating instructions. Ultra-rugged, heavy-gauge welded-steel case, finished in two-tone gray enamel. Safety interlock on top cover. Size: 8 3/4" high, 17" wide, 11 1/4" deep. For operation from 110-130 volts, 50-60 cycle AC. Shpg. wt., 40 lbs. U.L. Approved.

93 SX 680. NET ..... 133.25

**GUARANTEED FOR ONE FULL YEAR**



### AMPLIFIER SPECIFICATIONS

**OUTPUT:** Full 80 watts *usable* power. Hum inaudible—76 db below rated output.

**OUTPUT IMPEDANCES:** 4, 8, 16, 250 and 500 ohms, plus new RETMA 70-volt output.

**INPUT CHANNELS:** Four—2 for mike (individually controlled), and 2 for phono (on fader). Permits complete mixing.

**600-OHM SPECIAL OUTPUT:** Has 600-ohm ungrounded output winding on driver transformer—for connection to phone lines or additional amplifiers for extra power.

**RESPONSE:** ±2 db, 30-20,000 cycles on phono and mike channels.

**GAIN:** On mike, 115 db; on phono, 83 db—.25 volt phono input drives to full output.

**tone CONTROLS:** Bass control attenuates bass 22 db at 30 cycles; treble control attenuates treble 21 db at 20,000 cycles.

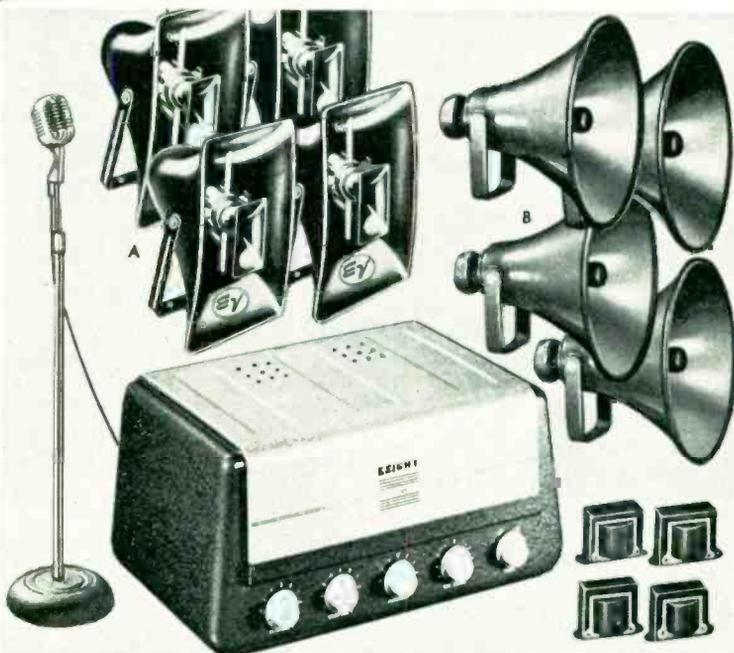
**TUBES:** 2—6SC7, 2—6SN7GT, 2—807. Also, 4 rectifiers: 2—5Y3GT and 2—5U4G.

**POWER DRAIN:** No signal, 127 watts; at rated output, 300 watts. Fused.

**POWER REQUIREMENTS:** Operates from 110-130 volts, 50-60 cycle AC. Tapped for optimum operation at 117 and 130 volts.

**CASE:** Welded steel, with die-drawn ends for extra strength. Two-tone gray enamel finish. Size: 8 3/4" high, 17" wide, 11 1/4" deep.

**GUARANTEE:** *Unconditionally guaranteed* against defects in material and workmanship for one full year.



## Knight 80-Watt Super-Power Complete Sound System

Here's the Super-Power King of Sound Systems—the Knight 80-Watt Trumpet System! You get more power, greater value—with this system—than with any other high-power system in this price bracket. Compare features, compare prices—and buy Knight!

**IDEAL FOR INDUSTRIAL APPLICATIONS.** You can't beat the Knight 80-Watt System for such applications as high-power paging, music distribution in industrial plants, etc. Wherever large areas need to be covered—wherever high noise conditions prevail—the Knight 80-watt system is the answer. The full 80 watts of usable power gives you coverage of 260,000 square feet—and up to 40,000 persons. With this system, you can easily blanket an entire factory or industrial area, a large stadium, auditorium or amusement park. It's the one dependable, super-power system that meets all the sound requirements of large indoor and outdoor areas.

**CHECK THESE "SUPER-SYSTEM" COMPONENTS:** Shure Model 555 "Unidyne" broadcast-quality dynamic mike with variable impedance; unidirectional, cuts down acoustic feed-back; impervious to weather. Four University Type PH trumpets (20" bell dia.) with 25-watt driver units (—or the new Electro-Voice fiberglas Model 848 projectors). Four speaker matching transformers.

**AMPLIFIER DELUXE FEATURES:** Four inputs—2 mike with individual controls and 2 phono on fader. Wide choice of output impedances. Extra 600-ohm ungrounded output off driver transformer (for phone lines or using a second amplifier). Separate on-off knob—settings of other controls remain undisturbed when system is turned off. U.L. Approved. *Unconditionally guaranteed for one full year.*

**COMPLETE SYSTEM WITH REFLEX TRUMPETS (Fig. 8).** Includes: 1—Knight 80-watt amplifier with all tubes; 1—Shure Model 555 "Unidyne" dynamic microphone with 20 ft. cable and attached plug; 1—adjustable floor-type mike stand; 4—University type PH 20" dia. reflex trumpets, mounting brackets, and type MA-25 25-watt driver units; 4—70-volt type speaker transformers; full instructions. Less speaker cable (see listing below). For 110-130 volts, 50-60 cycle AC. Shpg. wt., 195 lbs.

93 PA 684. NET ..... 299.50

**COMPLETE SYSTEM WITH ELECTRO-VOICE PROJECTORS (Fig. A).** As above but 4 Electro-Voice 848 compound diffraction projectors instead of University trumpets. For complete description of projectors, see page 178. Shpg. wt., 175 lbs.

93 PA 685. NET ..... 299.50

### ACCESSORY EQUIPMENT

96 RX 362. V-M 956 CHANGER ON METAL BASE. 3-speed automatic changer for use with Knight 80-watt amplifier. With cord and plug. For 60-cycle AC operation only. See page 35 for complete description. Shpg. wt., 14 lbs.

NET ..... 32.66

99 S 612. SHURE DISPATCHER MICROPHONE. Desk mike for paging applications. Grip-to-talk switch on stand. With 20 ft. cord, plug, and desk stand. Shpg. wt., 8 lbs. .... NET 22.64

47 T 410. Two-conductor, rubber-covered speaker cable for use with 80-watt system. Shpg. wt., 100 ft., 4 1/2 lbs. 100 feet for 4.26

# KNIGHT MOBILE 25-WATT 6V-110V AMPLIFIER AND SYSTEMS

## Knight 25-Watt Mobile Amplifier Only

Ideal for PA systems on sound trucks, in band shells, carnivals, etc., and indoor use. Operates from both 6 volts DC and 110-130 volts, 50-60 cycle. With tubes, AC and DC cables, plugs for mike and speaker jacks, and instructions. U.L. Approved. *Unconditionally guaranteed for 1 full year.* Shpg. wt., 60 lbs. 93 SX 630. Less phono top. NET..... 98.75

**STANDARD PHONO TOP.** For Knight 25-watt amplifier. Plays standard 78 rpm records. For mobile or stationary use. Crystal pickup and precious metal-point needle. No extra charge for installation when purchased with amplifier. For 60 cycle AC operation only. Shpg. wt., 10 lbs. 93 PA 642. NET..... 15.45

**3-SPEED PHONO TOP.** Plays 78, 33 $\frac{1}{2}$ , and 45 rpm records. Has constant-speed motor, pickup with turn-over crystal cartridge and dual needles. For use with Knight 25-watt amplifier in stationary applications. Installed on amplifier when purchased together. For 60 cycle AC operation only. Shpg. wt., 6 lbs. 93 PA 640. NET..... 17.45

**AMPLIFIER GUARANTEED FOR ONE FULL YEAR**



### AMPLIFIER SPECIFICATIONS

**OUTPUT:** Full 25 watts of usable power (31 watts peak power). Hum is inaudible—75 db below rated output.

**OUTPUT IMPEDANCES:** 4, 8, 16, 250, 500 ohms, and new RETMA 70-volt output. For PM speakers or long lines.

**INPUT CHANNELS:** Three—two for high-impedance microphones, one for phono.

**TONE CONTROL:** Attenuates treble 15 db at 10,000 cycles.

**GAIN:** On microphone stages, 130 db; on phono stage, 80 db.

**RESPONSE:**  $\pm 2$  db, 40 to 15,000 cycles.

**TUBE LINEUP:** 3—6SC7's (dual-triodes), 2—6L6G's. Also, 2—6X5GT/G rectifiers.

**POWER DRAIN:** 120 watts on AC, 20 amps on DC. Fuse-protected on DC operation.

**POWER REQUIREMENTS:** Operates from 6 volts DC, or 110-130 volts, 50-60 cycle AC. Change from 6 to 110 volts quickly and easily accomplished by changing plugs at rear. Power transformer tapped for optimum AC operation on 117 and 130 volts.

**CASE:** Welded steel case with die-drawn ends for extra strength. Finished in rich 2-tone gray Hammerloid. 14 $\frac{1}{2}$ " wide, 8 $\frac{3}{4}$ " high, 11 $\frac{1}{4}$ " deep.

**GUARANTEE:** *Unconditionally guaranteed against defects in material and workmanship for one full year.*



## Knight 25-Watt Universal 6V-110V Mobile Sound Systems

Here's a Universal Sound System that has won the acclaim of PA users everywhere! It's engineered and built right for the most rugged mobile or stationary service. Provides powerful coverage of areas up to 85,000 square feet. Just check the features, the ease of operation—the ruggedness and quality of this Knight 25-Watt Universal Sound System. We believe it to be the finest universal system ever offered at this price.

**WORKS ANYWHERE.** Operate it from any 6-volt automobile storage battery; or from 110-130 volts, 50-60 cycle AC. Whichever way you use it, we guarantee full 25 watts usable output. Use it indoors or outdoors—you can't beat this system for versatility!

**MAXIMUM FLEXIBILITY.** Two hi-impedance mike inputs and 1 phono input. Instant control over "mixing" and "fading." Optional built-in record player. Wide selection of speaker output impedances. Tone control for simple acoustical correction.

**RUGGED DEPENDABILITY.** Uses quality parts for years of trouble-free service. Electro-Voice dynamic mike—built for rough handling. University type P11 all-metal, all-weather trumpets (20" bell diameter) and 25-watt driver—or the new Electro-Voice fiberglas Model 848 projectors. You can count on this Knight 25-watt system to serve you dependably, anytime, anywhere.

**COMPLETE, READY FOR QUICK INSTALLATION.** You get everything you need for immediate installation and operation—in any car or truck, or indoors. Arranged for easy, quick switch-over from mobile to indoor operation or vice versa.

**AMPLIFIER "PLUS" FEATURES.** Change from 6 to 110 volts in a jiffy—just change plugs at rear of amplifier. Economizer switch saves power during stand-by periods. Wide-range response: 40 to 15,000 cycles.  $\pm 2$  db. Two speaker outlets. Speaker output impedances: 4, 8, 16, 250, 500 ohms, and RETMA 70-v. output. Separate volume controls for 2 microphones and 1 record player. U.L. Approved.

**COMPLETE SYSTEM WITH REFLEX TRUMPETS (Fig. B).** Includes: Knight 25-watt, 6 volt-110 volt amplifier with all tubes; AC and 6-volt cables; 2 University type P11 all-metal reflex trumpets, complete with 25-watt driver units; E-V 630 mike with table stand and 20-foot cord and plug. See listing of optional phono tops above. With instructions, and 50 feet of speaker cable. For 6 volts DC and 110-130 volts, 50-60 cycle AC. Shpg. wt., 140 lbs. 93 PA 632. Complete system, less phono top. NET..... 182.50

**COMPLETE SYSTEM WITH ELECTRO-VOICE PROJECTORS (Fig. A).** Same as above but includes 2 Electro-Voice Model 848 compound diffraction projectors instead of University-type trumpets. The Model 848 is a radically new projector using coaxial horns and is made of spun fiberglas. Extended high-frequency response. For full details, see page 178. Shpg. wt., 135 lbs. 93 PA 635. Complete system, less phono top. NET..... 182.50

25-Watt Amplifier or System for 12-Volt Operation  
The Knight Mobile 25-watt Amplifier only, or the complete 25-watt Mobile System, can be supplied from stock for 6V-12V-110V operation for an additional \$9.00.

# KNIGHT 15-WATT AMPLIFIER AND SOUND SYSTEMS



## 15-Watt Amplifier Technical Specifications

**OUTPUT:** Full 15 watts usable power. (Hum is inaudible; 74 db below rated output.) **Frequency Response:**  $\pm 2$  db from 40 to 10,000 cps on phono and microphone channels. **Output Impedances:** 4, 8, 16, 250 and 500 ohms, plus new 70 volt output. **Inputs:** Two—one for high-impedance microphone; one for phono. Each input has individual volume control. **Gain:** 121 db on microphone channel; 76 db on phono. More than enough gain for any high-impedance mike and crystal pickup. **Tone Control:** Attenuates treble 16 db at 10,000 cps. **Tubes:** 1—6SJ7, 1—6SC7; 2—6V6GT, 1—5Y3GT. **Size:**  $14\frac{3}{4} \times 8\frac{3}{4} \times 11\frac{1}{4}$ ". **Line Drain:** 74 watts. Power transformer has tapped primary for optimum results from 110 or 130 volt line. U. L. Approved.

Guaranteed for One Full Year

## Knight 15-Watt Amplifier Only

An ideal replacement for obsolete units—perfect as the heart of a system to meet your special requirements. An outstanding value—built for top performance and dependable service. Covers up to 50,000 square feet when used with trumpet-type speakers. Housed in a streamlined case of one-piece, all welded steel construction, with die-drawn ends. Top and bottom are removable. Invisible ventilating louvers at bottom. Control panel is illuminated. Large fluted controls. Finished in two-tone baked-on gray enamel, with hammered effect. **Size:**  $14\frac{3}{4} \times 8\frac{3}{4} \times 11\frac{1}{4}$ ". With tubes and full set of plugs for mike, phono, and speaker sockets. Full operating instructions. For 110-130 volts, 50-60 cycle AC. Shpg. wt., 26 lbs. U. L. Approved. *Unconditionally guaranteed for one full year.*

93 SX 660. NET ..... 44.75

**3-SPEED PHONO TOP.** Plays all records—78,  $33\frac{1}{2}$ , and 45 rpm. Complete with constant-speed motor, pickup with turn-over crystal cartridge and 2 precious metal-tipped needles. Includes switch, arm-rest, and plug-in connections. Supplied installed on amplifier when purchased together. For 110-120 volt, 60-cycle AC operation only. Shpg. wt., 10 lbs.

93 PA 640. NET ..... 17.45

## Powerful 15-Watt Trumpet System

Covers up to 50,000 square feet. Trumpet has 4-5 times the efficiency of a cone speaker; ideal for paging use outdoors or where noise level is high. Complete system includes: 1—Knight 15-watt amplifier with tubes; 1—University PH 20" weatherproof trumpet with 25-watt driver; 1—speaker transformer; 1—Shure "Dispatcher" magnetic mike on grip-to-talk stand, with 20-ft. cord and plug (see page 172); all necessary plugs. Full instructions. Less speaker cable (use any 2-conductor cable). For 110-130 volts, 50-60 cycle AC. Amplifier U. L. Approved and guaranteed for one year. Shpg. wt., 52 lbs.

93 PA 664. NET ..... 97.50

## Knight 15-Watt Portable Sound System

This system gives you more watts, greater convenience, and greater performing dependability for your money. It's ideal for lectures, auctions, taverns, small traveling orchestras (fine for use with electric guitars); perfect as a rental system. Covers audiences up to 2,000 and areas up to 10,000 sq. ft.

**OUTSTANDING FEATURES:** The amplifier is U. L. Approved and unconditionally guaranteed for one full year. You get full rated output—15 usable watts. The Shure mike is unidirectional—keeps acoustic feedback at a minimum. Three-section floor stand with 2 clutches telescopes to very small size. The heavy-duty 12" speaker (with 14.5 oz. magnet) is "Safused" for protection against accidental overload. Ingenious portable case is handsome and practical. Brackets, clips, grooves, etc., provide a secure place for every component. Case is covered in tough, plastic-coated maroon fabric, and has gray flocked speaker grille.

**COMPLETE PORTABLE SYSTEM—READY TO OPERATE.** Everything you need is supplied—there's nothing more to buy. Included are: 1—Knight 15-watt amplifier with tubes; 1—Shure 737A chrome-plated crystal mike (Fig. A), 20-ft. shielded cord and attached plug; 1—mike floor stand; 1—12" "Safused" PM dynamic speaker with 30-ft. cord and plug; carrying case. **Size:**  $16\frac{3}{4} \times 12\frac{3}{4} \times 25$ ". Full instructions. For 110-130 volts, 50-60 cycle AC. Carrying wt., 51 lbs. Shpg. wt., 77 lbs.

93 PA 662. Complete system, less phono top. NET ..... 97.50

93 PA 665. System as above, but with 2—8" PM speakers, instead of single 12" speaker. Provides same coverage, with better sound "spread." Carrying weight, 56 lbs. Shpg. wt., 82 lbs. NET ..... 97.50

Either system available with new Shure 555 "Unidyne" dynamic unidirectional mike (Fig. B), instead of the 737A crystal mike—at additional \$19.00 cost. Model 555 is recommended for conditions of high humidity and temperature. See page 172 for complete description of the 555.



## Knight 15-Watt System for Permanent Installation

You'll find exceptional value in this Knight 15-watt system designed for permanent installations. Covers audiences up to 2,000 and areas up to 10,000 square feet. Recommended for small auditoriums, lodges, country clubs, office and factory paging, etc. Supplied 100% complete. The 15-watt, U. L. Approved amplifier is unconditionally guaranteed for one full year.

**COMPLETE PERMANENT SYSTEM.** Includes: 1—Knight 15-watt amplifier, with tubes; 1—Shure 737A crystal microphone, with 20 ft. shielded cord and plug; 1—adjustable mike floor stand; 2—heavy duty 12" "Safused" PM dynamic speakers, each with 30-ft. cable and plug; 2—inclined-front wood wall baffles finished in walnut. For 110-130 volts, 50-60 cycle AC. Shpg. wt., 68 lbs.

93 PA 663. Complete system, less phono top. NET ..... 108.00

93 PA 666. System as above, but with 2—8" PM speakers and 8" baffles instead of the 12" speakers and 12" baffles. Shpg. wt., 50 lbs.

NET ..... 89.50

Either system is available with the Shure Model 555 "Unidyne" dynamic unidirectional microphone instead of the 737A crystal mike—at an additional cost of \$19.00. See page 172 for complete description of the 555.

# SPECIAL P.A. VALUE!

## Quality at Economy Prices!

### KNIGHT 8-WATT AMPLIFIER AND SOUND SYSTEMS

**COVERAGE:**  
**UP TO 5000 SQ. FT.**  
**UP TO 1000 PERSONS**

#### 8-Watt Amplifier Technical Specifications

Output: Full 8 watts usable power. (Hum is inaudible; 70 db below rated output.) Frequency Response:  $\pm 2$  db from 70 to 9,000 cps on microphone and phono channels. Output Impedances: 4 and 8 ohms. Inputs: Two—one for high-impedance microphone; one for phono. Each input has individual volume control. Gain: 76 db on phono channel; 123 db on microphone. More than enough gain for any high-impedance mike, and crystal pickup. Tone Control: Attenuates treble 19 db at 10,000 cps. Tubes: 1—6SL7GT, 1—6L6, 1—5Y3GT rectifier. Line Drain: 68 watts. Power transformer has tapped primary for optimum results from 110 or 130 volt line. Size:  $7\frac{1}{4} \times 10\frac{1}{4} \times 7\frac{1}{4}$ ".

Guaranteed For One Full Year

#### Knight 8-Watt Amplifier Only

This amazingly powerful, compact amplifier features low initial cost combined with economy in service. Covers up to 20,000 square feet when used with trumpet speaker (see below right). Separate input controls permit blending or mixing microphone and phono. With 2 speaker sockets. Bull's-eye design; "on-off"; AC switch is on tone control. Trim design; all-steel construction, finished in handsome gray. Size:  $7\frac{1}{4} \times 10\frac{1}{4} \times 7\frac{1}{4}$ ". Complete with tubes; full set of plugs for mike, phono and speaker sockets; instructions. For 110-130 volts, 50-60 cycle AC. Shpg. wt., 13 lbs.

93 SX 350. NET ..... 28.50



#### 8-Watt Permanent System

Here's the "Little Giant" in a complete, low-cost system that's ideal for all those smaller permanent installations. Covers audiences up to 1000 and areas up to 5000 sq. ft. Has all the fine features described above. Provided with wall baffle for permanent type mounting. The complete system includes the Knight 8-watt amplifier with tubes; the new Shure "Slim-X" all-purpose, lightweight crystal microphone with 20-foot cable and plug and S38 desk stand (see page 172 for description); 8" PM Dynamic speaker with 30-foot cable and plug attached; attractive leatherette-covered inclined wall baffle to house speaker; complete instructions. For operation from 110-130 volts, 50-60 cycle AC. Shpg. wt., 22 lbs.

93 PA 352. NET ..... 46.75



#### Knight 8-Watt "Little Giant" Portable System

There's more for your money than ever in the popular "Little Giant"—the ideal sound package for those smaller installations. You get the same quality you'll find in the larger Knight Systems, the same unconditional one year guarantee on the amplifier—the same full rated power delivery and completely dependable performance. Here's the system that's a natural for sales demonstrations, auctions, lodges, clubs, classrooms, churches, stores, cafes—the perfect low-cost equipment for hundreds of applications covering audiences up to 1,000 and areas up to 5,000 square feet.

**READY TO USE.** Complete—nothing more to add or buy. Sets up in a jiffy. Just plug mike and speaker cables into amplifier—plug amplifier into AC outlet—and you're ready to operate. That's all there is to it. You couldn't ask for anything simpler—it's the last word in Portable Public Address Convenience.

**"BIG SYSTEM" FEATURES.** Completely portable in a single convenient case that holds everything. Has built-in, quality 8" PM Dynamic speaker (with 6.8 oz. Alnico V magnet). Uses the new Shure "Slim-X" all-purpose, lightweight crystal microphone, and S38 desk stand (see page 172 for description). Amplifier has two inputs to take any high-impedance microphone and record player; separate input controls permit blending or mixing mike and phono as desired. With special outlet for adding an extra dynamic speaker. Includes tone control. The carrying case is covered in rich maroon Pyroxylin-treated fabric with gray-flocked speaker grille; case includes pocket which stores mike and desk stand.

**COMPLETE SYSTEM.** Includes: Knight 8-watt amplifier, complete with tubes; 1—microphone with 20-foot shielded cable and plug attached; 1—8" PM Dynamic speaker (Quam heavy duty type 8A6) and 30-foot cable with plug attached; attractive carrying case covered with tough, weatherproof fabric (only  $16\frac{1}{2} \times 11 \times 8\frac{3}{4}$ "). The 8-watt "Little Giant" Portable System is supplied with full instructions. For operation from 110-130 volts, 50-60 cycle AC. Total carrying weight is only 21 lbs. Shpg. wt., 26 lbs.

93 PA 351. NET ..... 53.50

99 S 639. Lavalier cord for suspending mike around neck. NET ..... 53c

#### Complete Knight 8-Watt Trumpet System

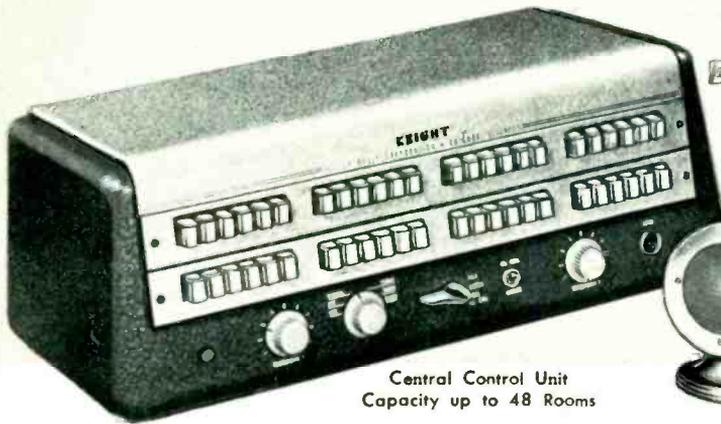
Covers up to 20,000 Sq. Ft.

This is the most powerful small system we know of. You get amazing output and widest coverage with the reflex-type trumpet which has from four to five times the efficiency of a cone speaker. Complete system includes: 1—Knight 8-watt amplifier with tubes; 1—University Model 1B8 8" weather-proof reflex trumpet with a 90° dispersion angle, plus a built-in 12-watt driver unit (see page 177 for description); 1—Shure "Slim-X" all-purpose, lightweight crystal microphone with S38 desk stand, nylon-lined A25 swivel and 20-foot cable and plug (see page 172 for description); plugs for speaker and phono; full operating instructions. Less speaker cable (any 2-conductor cable can be used for speaker line). For operation from 110-130 volts, 50-60 cycle AC. Amplifier is guaranteed for one year. Shpg. wt., 36 lbs.

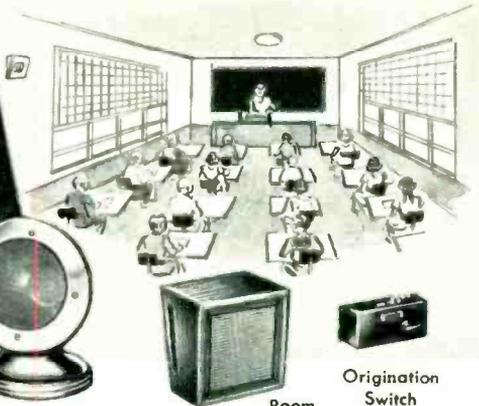
93 PA 353. NET ..... 62.50



# NEW KNIGHT LOW-COST CENTRALIZED SCHOOL SOUND SYSTEMS



Central Control Unit  
Capacity up to 48 Rooms



Room Speaker  
Origination Switch

## Provides 2-Way Communication and Program Distributing Facilities

New Knight centralized 30-watt school sound system. Provides all necessary facilities for the reinforcement and distribution of sound and intercommunication. Knight consolette offers the small school, or limited budget school, a complete high-powered system of intercommunication between a central location and each classroom plus emergency all-call to every room. Fine frequency response for voice or music programming.

**FEATURES.** Push-button selection of up to 48 speaker lines, individually or simultaneously. Emergency "All-Call" switch connects all speaker lines to central system without disturbing previous settings. Volume-level indicator for correct level to room speakers. Facilities are provided for microphone (at control unit or remote location), phono and an auxiliary input. Auxiliary may be used for an additional phono or radio, tape recorder, etc. Rooms may originate a call to central system by using accessory origination switch. Separate switch required for each room desiring intercom origination feature.

**SPECIFICATIONS.** Output: 30 watts. Inputs: Microphone; phono; auxiliary (radio, tape, additional phono, etc.). Controls: Output volume (for mike, phono, aux.); incoming volume (for intercommunication); outgoing volume level (to room speakers). Switches: 4-position selector (mike, normal, phono and aux.); talk-listen (intercom); "All-Call" (connects all room speakers to programming). Use with 500 ohm remote speakers. Tubes: 2—6SF5, 1—6SL7GT, 2—6L6, 5U4G rectifier. Two-tone gray hammetone cabinet, 8 3/4x23 1/2x11 1/2". For 110-120 v., 50-60 cycle AC.

Recommended room speakers: 6" for average size class-room; 8" for auditorium, gymnasium, etc. Requires two-conductor cable to each speaker. Additional pair to each originating switch (see below).

**24-ROOM CENTRALIZED SYSTEM.** Provides push-button facilities for up to 24 rooms. Complete with desk-type speaker-mike unit. Shpg. wt., 40 lbs.  
93 SX 790. NET ..... 157.50

**48-ROOM CENTRALIZED SYSTEM.** As above, but push button facilities for up to 48 remote speakers. Shpg. wt., 50 lbs.  
93 SX 791. NET ..... 198.50

**6" ROOM SPEAKER.** Impedance, 500 ohms. In brown-finish, plastic coated wall baffle. May be painted to match room. Shpg. wt., 4 lbs.  
93 PA 793. NET ..... 7.95

**8" ROOM SPEAKER.** Impedance, 500 ohms. In baffle as described above. Shpg. wt., 6 lbs.

93 PA 794. NET ..... 9.45

**ORIGINATION SWITCH.** One required for each room desiring call to control unit. Shpg. wt., 1 lb.

93 S 792. NET ..... 2.80

**CABLE.** For room speakers and originating switch.  
48 W 890. NET PER 100 FEET ..... 2.06

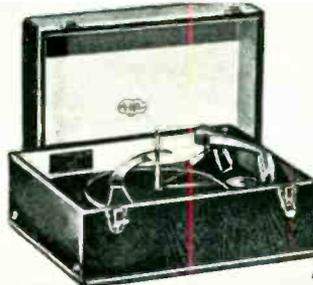


## Bell Model 2195 Transcription Player

Professional-quality transcription player designed for double-duty service. Serves as a variable-speed phonograph or powerful 10 watt PA system.

**DELUXE FEATURES.** Entire unit is contained in a single portable case. One half of case serves as a speaker baffle; may be placed up to 25 feet from amplifier and turntable. Speaker is 12", heavy-duty PM type. External 4-ohm speaker jack. Turntable speed can be varied continuously between 30 to 80 rpm. 16" pick-up arm, with twin crystal cartridge. Separate bass and treble controls. Two mike inputs with individual gain controls permit mixing voice and music; mike inputs may also be used for instrument pickups. Tone of one mike input is unaffected by tone controls; permits controlling tone of instrument pickup or phono without affecting mike operation.

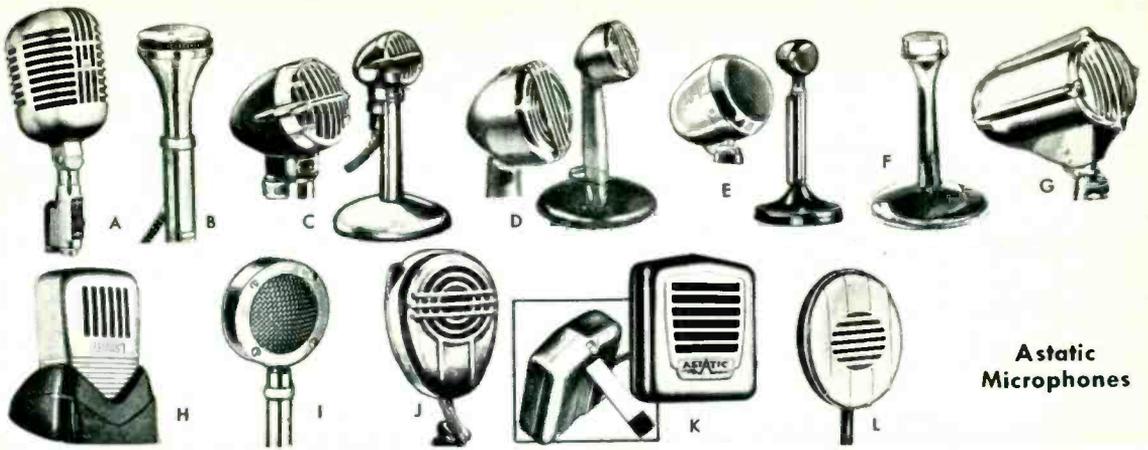
**SPECIFICATIONS.** Output: 10 watts with less than 3% distortion. Response: ±1 db 30 to 15,000 cps. Hum: 60 db below 10 watts. Controls: Two mike gain; phono gain; bass, treble-AC-off-on; speed selector; motor off-on. Two Inputs: Mike or instrument pickups. Tubes: 2—6SJ7, 2—6SL7GT, 2—6V6GT; 5Y3GT rectifier. Size: 12 1/2x18x17 1/2". With 25' speaker cable; less mike. For 110-120 v., 50-60 cycle AC. Shpg. wt., 40 lbs.  
99 RX 040. List. \$245.75. NET ..... 154.33



## V-M Record Playing Accessories

**Fig. A. MODEL V-M 960 3-SPEED PORTABLE CHANGER.** Ideal portable changer for above centralized school system, or any Knight amplifier. Uses V-M 950 tri-o-matic changer to play 78, 33 1/3 and 45 rpm records. Automatic tone arm setdown. 10" and 12" records of same speed can be intermixed. Changer shuts off after last record. Dual-needle, turnover crystal cartridge. Simple, centralized controls. Sturdy carrying case covered in mahogany wood-grain simulated leather. With AC line cord, 6-ft. shielded lead and plug. Size: 13 1/2x15 1/2x8 1/2". For operation from 110-120 v., 60 cycle AC. Shpg. wt., 18 lbs.  
96 RX 730. List. \$64.50. NET ..... 41.92

**Fig. B. MODEL V-M 120 3-SPEED RECORD PLAYER ATTACHMENT.** Small, lightweight 3-speed record player attachment. Plays all 3 speeds, in 7, 10, and 12" records. Has turntable speed control. Semi-precious metal needle. Free-floating tone arm. Carrying case of new Styron 475 material for added strength. Rich maroon finish. Case measures only 10 1/2x8x6 1/16". U.L. Approved. With 6-ft. power cord and 4-ft. phono cord. May be attached to any amplifier. For operation from 110-120 v., 60 cycle AC. Shpg. wt., 6 1/2 lbs.  
96 R 641. List. \$19.95. NET ..... 14.00



### Astatic Microphones

**Fig. A. SYNBAR UNIDIRECTIONAL CARDIOID CRYSTAL MIKE.** For high-quality reproduction and minimum noise pickup. Sintered metal filter provides 15 db front-to-back ratio at all frequencies. Response, 50-10,000 cps. Response selector switch provides choice of crisp voice frequencies or full range voice and music. Output level, -54 db. High impedance. Crystal element has metal-seal protection. 18 feet of detachable shielded cable. Satin chrome finish.  $4\frac{1}{2}''$  H.  $3\frac{1}{2}''$  W.  $3\frac{1}{2}''$  D. Shpg. wt., 2½ lbs.

**MODEL DR-10-S.** With on-off Switch. 99 S 421. List. \$39.95. NET..... 23.49

**MODEL DR-10.** Less On-off Switch. 99 S 420. List. \$37.25. NET..... 21.90

**Fig. B. DK-1 CRYSTAL MIKE.** New, small-size inconspicuous non-directional mike. Excellent frequency range. High impedance. Output, -55 db. Crystal is coated against moisture. Chrome finish.  $1\frac{1}{16}''$  dia.;  $5\frac{1}{8}''$  long.  $\frac{3}{4}''$ -27 thread. With 10-ft. cable. Shpg. wt., 2 lbs.

99 S 643. List. \$22.00. NET..... 12.94

**MODEL DK-1-S.** With On-off switch. 99 S 642. List. \$24.70. NET..... 14.52

**Fig. C. JT-30 CRYSTAL MICROPHONE.** For Amateurs, PA systems, home recorders, etc. Frequency response, 30 to 10,000 cycles. Output level, -52 db; provides ample output for use with low-gain amplifiers. Completely equipped with 10 feet of shielded, detachable cable and a desk stand. The stand stem unlocks from base to make hand mike. Handle may be removed and mike may be used on any stand with  $\frac{3}{4}''$ -27 thread. Opalescent gray with chrome grill. Overall height, 8"; grille dia.,  $2\frac{3}{8}''$ ; depth,  $3\frac{1}{8}''$ . Shpg. wt., 2½ lbs.

99 S 302. List. \$16.95. NET..... 9.97

**MODEL JT-30C.** As above, but with ceramic element. Unaffected by heat or moisture. Ideal for outdoor public-address applications where ruggedness and dependability—as well as economy—are important considerations. Output, -62 db. With 5-ft. cable. Shpg. wt., 2½ lbs.

99 S 422. List. \$16.15. NET..... 9.50

**Fig. D. "VELVET VOICE" MODEL 200 CRYSTAL MIKE ON STAND.** Head fixed at convenient angle. Response, 30-10,000 cps. Output level, -52 db. High impedance. With built-in handle and separate "quick-lock" detachable base. Standard  $\frac{3}{4}''$ -27 thread. With 10 feet of shielded cable. Height, 8"; grille dia.,  $2\frac{1}{2}''$ . Gold-finish, with chrome grille; enamel base. Wt., 2 lbs.

99 S 314. List. \$13.95. NET..... 8.20

**Fig. E. T-3 CRYSTAL MIKE.** Response is 30-10,000 cps. Output, -52 db. Tilting head. Has metal-sealed element. Chrome finish case. With 15-ft. detachable, shielded cable. Less stand. Shpg. wt., 2 lbs.

99 S 300. List. \$27.35. NET..... 16.08

**MODEL GT-3.** As above, but on  $8\frac{1}{4}''$  "Grip-to-talk" desk stand, with built-in switch. 6-ft. cable. Shpg. wt.,  $3\frac{1}{4}$  lbs.

99 S 301. List. \$40.40. NET..... 23.76

**Fig. F. 54M3 CRYSTAL MIKE.** High output crystal microphone. Excellent for all lowest general applications—public address, home recording, etc. Output, -51 db. Range: 30-10,000 cps. Non-directional in vertical position (when used as shown in illustration—Fig. F). Locks in base by inserting and turning  $\frac{1}{2}$ -turn. In rich brown baked enamel finish. Base adapter threaded,  $\frac{3}{4}''$ -27. With 5-ft. rubber-covered, shielded cable. Ht.,  $7\frac{1}{2}''$ ; base diameter, 5". Shpg. wt., 2 lbs.

99 S 426. List. \$12.75. NET..... 7.50

**Fig. G. "DN-HZ" DYNAMIC MIKE.** Unaffected by temperature or humidity. Response, 50 to 7,000 cps. Output, -55 db. Tilting head. An excellent mike for general, public-address applications. Ruggedly constructed. Gray case; chrome plated grille.  $6\frac{1}{8}'' \times 4\frac{3}{8}'' \times 2\frac{3}{8}''$ . 10-ft. detachable cable.  $\frac{3}{4}''$ -27 thread. High-impedance output. For paging use with stand below. Wt., 2½ lbs.

99 S 304. List. \$29.50. NET..... 17.35

**MODEL G STAND.** Grip-to-talk. For DN, T-3, D-104 mikes. Switch shorts mike and controls relay leads. Chrome on gray base.  $8\frac{1}{2}'' \times 5\frac{1}{2}''$ . 6-ft. cable.  $2\frac{1}{4}$  lbs.

94 S 011. List. \$18.50. NET..... 10.88

**Fig. H. "CARDINAL" CX CRYSTAL MIKE.** Response, 30-10,000 cps. Output, -52 db. Attractive gold finish case. May be used on standard floor stand with addition of adapter below. Less adapter.  $3\frac{1}{2}'' \times 2\frac{1}{2}'' \times 1\frac{1}{4}''$ . 10-ft. cable. Wt., 1½ lbs.

99 S 317. List. \$9.75. NET..... 5.73

**DESK STAND BASE.** Brown plastic. For above. 8 oz.

99 S 390. List. \$1.00. NET..... 59c

**FLOOR STAND ADAPTER.** For above. 6 oz.

99 S 391. List. 35c. NET..... 21c

**Fig. I. D-104 CRYSTAL MIKE.** Built especially for speech range. 500 to 4,000 cps. High output of -45 db; requires only a low-gain speech amplifier. Chrome finish.  $3\frac{1}{2}'' \times 1\frac{1}{8}''$ . 5-ft. cable. Wt., 1½ lbs.

99 S 309. List. \$24.60. NET..... 14.46

**Fig. J. MODEL 10M5 CARBON HAND MIKE.** Single button carbon mike. For maximum speech intelligibility. Range, 100-4500 cps. Moisture and fungus-proofed. Press-to-talk switch; can be used for relay. Self-coiling cable. Retracted cable length, 12"; extended, 5'. Shpg. wt., 2 lbs.

99 S 423. List. \$29.50. NET..... 17.35

**Fig. K. MODEL M302 CRYSTAL MIKE.** Wide response, 30-10,000 cps. Output, -47 db. Crystal element has metal seal protection. Zinc die-cast housing. 8' cable and easel type stand. Shpg. wt., 2 lbs.

99 S 440. List. \$10.50. NET..... 6.17

**MODEL M301. CERAMIC MIKE.** As above, but has ceramic element. Unaffected by temperature and humidity. Output, -54 db. Response, 30-8,000 cps.

99 S 441. List. \$10.00. NET..... 5.88

**Fig. L. MODEL M102 CRYSTAL MIKE.** Excellent performance—low cost. Response, 30-10,000 cps. Output, -46 db. 5' cable. Tan plastic housing. Wt., 1½ lbs.

99 S 442. List. \$7.25. NET..... 4.26

**MODEL M101 CERAMIC MIKE.** As above, but has ceramic element. Response, 30-8,000 cps. Output, -53 db.

99 S 443. List. \$7.00. NET..... 4.12

### Turner Microphones

**Fig. M. MODEL 80 CRYSTAL MICROPHONE.** New, slender, attractively-styled crystal mike for all general applications. Tiny enough to be hidden in palm of hand, yet has performance characteristics of larger sized units. Can be used on stand or as a "walk-around" mike, indoors or out. Non-directional pickup pattern. Frequency response, 80-7,000 cps. Output level, -58 db. Uses quality Himorph moisture-sealed crystal, blast and mechanical shock proof. Diecast zinc alloy, satin chrome finished. With 7-ft. single conductor, shielded cable. Size,  $4\frac{1}{4}'' \times \frac{3}{4}''$ . Shpg. wt., 9 oz.

99 S 525. List. \$15.95. NET..... 9.38

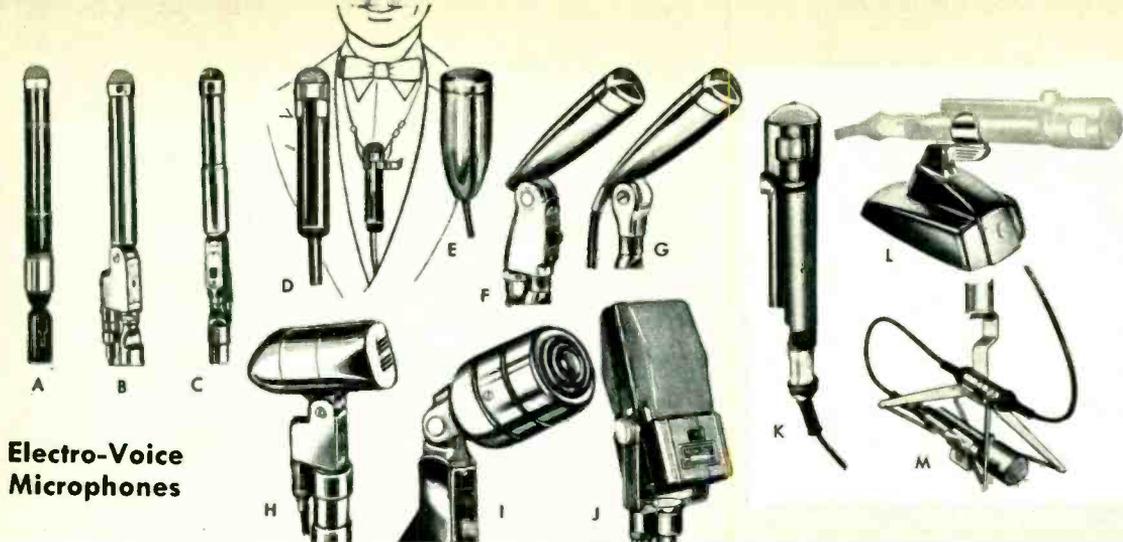
**Fig. N. MODEL C-4 STAND.** Matching stand for Turner Model 80 microphone. Diecast zinc alloy overlaid with satin chrome plate. Pivots microphone in  $135^\circ$  arc for any operational angle. Mike is firmly held by positive-action hinge; moves smoothly to any desired position. Size (with mike),  $6\frac{1}{4}''$  length,  $1\frac{1}{2}''$  dia. Shpg. wt., 12 oz.

94 S 081. List. \$5.75. NET..... 3.38

**Fig. O. MODEL ADA95D DYNAMIC MICROPHONE.** Slender, jet-shaped dynamic mike at a popular price. Combines rugged, dependable performance with very low cost. Excellent sound characteristics for PA and recording work. Slim shape lets speaker be seen as well as heard. Maximum sensitivity to voice and music. Frequency response, 70-10,000 cps. Output level, -58 db. Standard  $\frac{3}{4}''$ -27 coupler swings mike in  $60^\circ$  arc. Satin chrome finish. High impedance. With 20-foot removable shielded cable set. Size,  $7\frac{1}{4}'' \times 1\frac{1}{4}''$ . Shpg. wt., 1½ lbs.

99 S 526. List. \$35.00. NET..... 20.58





## Electro-Voice Microphones

**Fig. A. MODEL 655 "SLIM TRIM" TV DYNAMIC.** Hi-fi mike. Pencil-thin profile ideally suited for TV and other "live" shows—night clubs, etc. Completely self-contained, dynamic microphone. "Pop-proof" mesh head—stops breath blast. Audio response, 40 to 20,000 cycles. Output level, -55 db. Omni-directional polar pattern. Alnico V and Armo magnetic iron. Imp., 50 and 250 ohms. Has  $\frac{1}{2}$ " pipe threads:  $\frac{3}{8}$ "-27 adapter furnished.  $1\frac{1}{4}$ "x1", 18' cable; UA-3 connector. Shpg. wt.,  $\frac{1}{4}$  lbs.  
99 S 579. List, \$200.00. NET.....117.60

**Fig. B. MODEL 654 "SLIM TRIM" BROADCAST DYNAMIC.** Omnidirectional hi-fidelity mike. Ideal for audience participation, applause pick-up, recording and high quality public address. Frequency response, 50-14,000 cps, substantially flat. Output level, -55 db. "Pop-proof" head stops breath blast and wind. Brass swivel case. Recessed switch for selection of 50 or 250 ohms output. Cannon XL-3 connector.  $\frac{3}{8}$ "-27 stand thread. With  $\frac{1}{2}$ " adapter and 18-ft. cable.  $10\frac{1}{2}$ " long, 1" dia. Wt.,  $\frac{1}{4}$  lbs.  
99 S 583. List, \$95.00. NET.....55.86

**Fig. C. MODEL 636 "SLIMAIR" DYNAMIC.** PA dynamic mike of exceptional quality. Wide-range response. Acoustically-treated grille head stops wind rumble and "pop" of sound percussion. Response, 60-13,000 cps. High and low impedance outputs, changed within connector. Output level, -55 db. Omni-directional polar pattern. Uses Alnico V magnet. Swivel head. Type MC-4 connector.  $\frac{3}{8}$ "-27 stand thread. Satin chrome finish case. With On-Off switch. Size,  $10\frac{1}{4}$ "x  $1\frac{1}{4}$ "; 18' cable. Shpg. wt., 2 lbs.  
99 S 581. List, \$70.00. NET.....41.16

Model 636G. As above, but gold finish.  
99 S 591. List, \$80.00. NET.....47.04

**Fig. D. MODEL 646 LAVALIER DYNAMIC.** Omnidirectional TV and broadcast lavalier-type dynamic microphone. Very clean, extended response. Frequency response, 40-15,000 cps. Output, -57 db. Has exclusive Electro-Voice acoustalloy non-metallic diaphragm. Sturdy dynamic head uses Alnico V and Armo magnetic iron. Extremely versatile and rugged. Has "pop-proof" mesh head. Impedance: 50 ohms. Supplied with neck cord and clip and 18' cable.  $6\frac{1}{2}$ "x1". Also available in 150 or 250 ohms—on special order. Shpg. wt., 1 lb.  
99 S 584. List, \$140.00. NET.....82.32

**Fig. D. MODEL 647 LAVALIER DYNAMIC.** PA type similar to above. Size,  $4\frac{1}{2}$ "x1". Response, 60-13,000 cps. Hi-Z output, -57 db. Also available in 150 ohms—on special order. Shpg. wt.,  $\frac{1}{2}$  lbs.  
99 S 585. List, \$80.00. NET.....47.04

**MODEL 416 DESK STAND.** (Not illustrated.) Black rubber; converts Model 646 or 647 (above) to desk mike. Size:  $3\frac{1}{8}$ " diameter, 1" high. Shpg. wt., 4 oz.  
94 S 058. List, \$5.00. NET.....2.94

**Fig. E. NEW MODEL 924 LAVALIER CRYSTAL.** New, crystal-type lavalier mike at very moderate cost. For PA, paging, home recording and Amateur use. Permits free movement of hands. Excellent response; 70 to 8000 cps. Wire mesh head minimizes wind and breath blasts. Output, -60 db.  $3\frac{1}{2}$ "x1 $\frac{1}{2}$ " diameter. With 18-ft. cable, neck-cord and clip. Lustrous, satin-chrome finish. Shpg. wt., 12 oz.  
99 S 594. List, \$18.00. NET.....10.58

**Fig. F. NEW MODEL 623 SLIM DYNAMIC.** High-quality, moderately priced, dynamic mike. A fine choice for PA, recording and general-purpose applications. Very smooth response characteristics. Semi-directional. Can be used in stand, or as hand mike. Acoustalloy diaphragm. Response, 60-11,000 cps. Output, -55 db. High or low-impedance output. Off-On switch. Built-in MC-4 connector. Tiltable head. Cast case with satin-chrome finish.  $\frac{3}{8}$ "-27 thread.  $7\frac{1}{2}$ "x1 $\frac{1}{2}$ ". 18-ft. cable. 2 lbs.  
99 S 595. List, \$49.50. NET.....29.10

**Fig. G. NEW MODEL 926 SLIM CRYSTAL.** Carefully designed, general-purpose mike; delivers excellent results in PA, paging, home recording and Amateur applications. Very clean response from 70-8000 cps. Output, -60 db. Tiltable head. Cast case finished in handsome satin chrome. Standard  $\frac{3}{8}$ "-27 thread. Size,  $6\frac{1}{4}$ "x1 $\frac{1}{8}$ ". With 18-ft. cable. Shpg. wt.,  $\frac{1}{2}$  lbs.  
99 S 596. List, \$24.50. NET.....14.41

**Fig. H. MODEL 650 DYNAMIC.** Hi-fi broadcast dynamic. Unusually high output, -48 db. Frequency response, 40-15,000 cps. Dual type external shock mount. Acoustalloy diaphragm, tiltable head. Cast case with satin chrome finish. Switch selects 50 or 250 ohms.  $2\frac{1}{4}$ "x4 $\frac{3}{4}$ "x5 $\frac{1}{2}$ ". With 18-ft. cable and  $\frac{3}{8}$ "-27 coupler. Shpg. wt., 3 lbs.  
99 S 573. List, \$150.00. NET.....88.20

**Fig. I. MODEL 635 DYNAMIC.** Hi-fi microphone for broadcast use. Features wide-range response, high output and sturdy construction. Non-metallic acoustalloy diaphragm provides 60 to 13,000 cycles response. Output, -55 db. Imp., 50 or 250 ohms. Cannon XL-3 connector. Head tilts. Satin-chrome finish.  $\frac{3}{8}$ "-27 thread.  $2\frac{1}{4}$ "x4 $\frac{3}{4}$ "x1 $\frac{1}{2}$ ". 18' cable. Wt., 3 lbs.  
99 S 327. List, \$75.00. NET.....44.10

**Fig. I. MODEL 630 DYNAMIC.** High-output dynamic microphone for general-purpose use. Excellent for industrial and transportation depot paging, dispatcher service, and all communications uses. Features exceptional mechanical strength. Special acoustalloy diaphragm assures smooth frequency response over the range of 60-13,000 cps. Output, -55 db. Built-in cable connector. Head tilts through a 90° arc. Satin chromium finish. On-Off side switch and 18' cable. Shpg. wt., 3 lbs.  
99 S 336. High Impedance.  
99 S 347. 250 Ohms.

List Each, \$47.00. NET EACH.....27.64

**Fig. J. MODEL V-2A VELOCITY.** Bi-directional velocity microphone. Excellent reproduction of voice and music. Advanced design adds dynamic advantages to velocity performance. Equal pickup at front and back—zero pickup at sides, top and bottom. Reflection-free housing; internal shock absorber. High-Z output. Response, 40-10,000 cps. Output, -54 db. Acoustalloy diaphragm. Excellent for broadcasting, recording, etc.  $8\frac{1}{2}$ "x2 $\frac{3}{4}$ ". Tiltable head; locking cradle. On-off switch. Standard  $\frac{3}{8}$ "-27 thread. Supplied with 18 ft. cable. Shpg. wt., 4 lbs.  
99 S 559. List, \$65.00. NET.....38.22

**Fig. K. MODEL 666 SUPER-CARDIOID DYNAMIC.** An ideal, super-cardioid, dynamic microphone for the most exacting broadcast and TV applications—indoors and out. The 666 combines all the advantages of dynamic and velocity microphones and includes an array of outstanding features: Exceptionally fine cardioid pattern; wide response; lightweight (11 oz.) pencil-slim design; virtually impervious to mechanical shock, temperature extremes, and humidity.

Frequency response is substantially flat from 40-15,000; maintains cardioid pattern at all frequencies within this range. An average front-to-back ratio of 24 db (no less than 14 db at any frequency) permits excellent results in locations where ambient noise and reverberation would normally present a serious problem. High resistance to shock allows fast "pans" on boom shots. Mike is free of proximity effect; no bass "boominess" when speaking close to mike. Acoustalloy diaphragm is practically indestructible and provides extremely smooth response. Acoustically treated steel-mesh grille minimizes wind and breath blasts. Easily accessible terminals provide choice of 50, 150 or 250 ohms output. Output level, -57 db. Clamp-on stand adapter may be removed to permit hand-held use.

Gray finish. With detachable, clamp-on adapter for  $\frac{1}{2}$ " and  $\frac{3}{8}$ "-27 stands, 20-ft. 2-conductor cable, and Cannon UA-3-11 connector. Size:  $7\frac{1}{2}$ " long, 1" barrel diameter. Shpg. wt.,  $\frac{1}{2}$  lbs.  
99 S 593. List, \$245.00. NET.....144.06

**Fig. L. MODEL 420 DESK STAND.** For Model 666 mike (above) and Models 655, 646 and 647 (left-hand column), or any other mike with 1" dia. barrel. Heavy cast-iron base with handsome gray finish. With clamp attachment. Shpg. wt., 4 lbs.  
94 S 056. List, \$20.00. NET.....11.76

**Fig. M. MODEL 366 BOOM SHOCK-MOUNT.** Extremely light, boom-suspension shock-mount for Model 666 (above) and Models 655, 646, and 647 (left-hand column), or any other mike with 1" diameter barrel. Lightweight design minimizes boom over-swing—combined weight of 366 and 666 only 17 oz. Highly effective rubber shock absorbers. Shpg. wt.,  $\frac{3}{4}$  lb.  
94 S 057. List, \$40.00. NET.....23.52



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### Electro-Voice Microphones

**Fig. N. "CENTURY" CRYSTAL, CERAMIC AND DYNAMIC TYPES.** Highly popular, low-cost microphones. For PA, paging, home recording and Amateur communications use. Can be used as hand-held mike or on stand. Have inner insulated element for safe use in AC-DC circuits. Satin-chrome finish. Size 3x2½x1". Supplied with 5-ft. cable and ¾"-27 stand adapter. Shpg. wt., 1 lb.  
**MODEL 915 "CENTURY" CRYSTAL.** Has moisture-sealed cartridge. Frequency response, 60-7000 cps. Output level, -50 db.  
**99 S 567.** List, \$11.25. NET..... 6.61

**MODEL 915-S.** Same as Model 915 above, but equipped with slide-to-talk, shorting-type switch.  
**99 S 582.** List, \$13.00. NET..... 7.64

**MODEL 715 "CENTURY" CERAMIC.** Has ceramic cartridge to assure very dependable performance under conditions of high temperature and humidity. Frequency response, 80-7000 cps. Output, -55 db.  
**99 S 586.** List, \$11.25. NET..... 6.61

**MODEL 615 "CENTURY" DYNAMIC.** High-impedance. Withstands extreme heat, humidity and mechanical shock. Response, 100-6000 cps. Output, -55 db.  
**99 S 549.** List, \$19.50. NET..... 11.47

**Fig. O. MODEL 415 DESK STAND.** Reclining desk stand for "Century" microphones above. Holds mike at 15° tilt. Satin-chrome finish. Shpg. wt., 6 oz.  
**94 S 050.** List, \$1.70. NET..... 1.00

**STAND ADAPTER.** Permits using wire and tape recorder mikes, similar to above, with ¾"-27 stands. Wt., 3 oz.  
**94 S 052.** NET..... 13c

**Fig. P. MODEL 606-20 DIFFERENTIAL DYNAMIC MICROPHONE.** Close-talking, noise-cancelling dynamic microphone. Response, flat, 100-6,000 cps. Output, -55 db. For use in airport control towers, police dispatching, close-talking public-address and high-noise industrial applications, etc. Acoustalloy diaphragm. Head fixed at 22° angle. Impedance, 50 ohms (one side grounded). Attractive satin-chrome finish. Built-in connector. ¾"-27 thread. Size, 2x3¼x2¼". 18' cable. Shpg. wt., 2 lbs.  
**99 S 564.** List, \$45.00. NET..... 26.46

**Fig. Q. MODEL 628 DYNAMIC.** High-quality, general-purpose dynamic microphone at very moderate cost. Has touch-to-talk stand; lever-type switch closes or opens instantly, or locks in "talk" position. Smooth response from 65 to 7500 cps. Rugged, Acoustalloy non-metallic diaphragm. High-impedance output. Output level, -55 db. Satin-chrome finish. Built-in connector and 6-ft. cable. Shpg. wt., 3 lbs.  
**99 S 577.** List, \$43.50. NET..... 25.58

**Fig. R. MODEL 605-8.** Same as Model 628 described above, but less stand. ¾"-27 thread. Shpg. wt., 2½ lbs.  
**99 S 592.** List, \$27.50. NET..... 16.17

**Figs. S & T. CARDIOID UNI-DIRECTIONAL TYPES.** The Model 950 "Cardax" and Models 726 and 731 "Cardyne" microphones listed below, feature Electro-Voice's "Mechanophase" uni-directional principle. This principle provides excellent voice and music clarity and solves difficult installation problems. True cardioid performance for wide-angle pickup from the front with high reduction of sound from the rear. Minimize possibility of feedback—simplify microphone and speaker placement and permit operating amplifier at substantially higher volume level. Tiltable heads. Satin-chrome finish. Fit ¾"-27 stands.

**Fig. S. MODEL 950 "CARDAX" CRYSTAL.** Dual frequency response; flat response for music reproduction and high-frequency boost for very crisp voice reproduction. Screwdriver adjustment for response selection. Response, 30 to 10,000 cps. Output: flat response, -57 db; boosted, -50 db. Off-On switch. Built-in MC-1 cable connector. 18-ft. cable. 2¼x2¼x6¼". Wt., 2¼ lbs.  
**99 S 348.** List, \$32.50. NET..... 24.99

**Fig. T. MODEL 726 "CARDYNE I" DYNAMIC.** Response, essentially flat from 50-8000 cps. Output level, -55 db. High-low impedance selector. Off-On switch. Built-in MC-3 connector. Supplied with 18-ft. cable. Size, 2¼x3x8". Shpg. wt., 4 lbs.  
**99 S 341.** List, \$75.00. NET..... 44.10

**Fig. U. MODEL 731 "CARDYNE II" DYNAMIC.** Same as above, but: response, 40-10,000 cps; output, -52 db; external shock mount; Cannon XL-3 connector. Wt., 4 lbs.  
**99 S 550.** List, \$95.00. NET..... 55.86

**Fig. V. MODEL 600-D DYNAMIC.** Extra-rugged, hand-held dynamic microphone. High-impedance. Excellent for mobile PA and communications applications. Includes press-to-talk switch for microphone and relay control. Response is substantially flat from 100-6000 cps. Rugged, Acoustalloy diaphragm. Black phenolic case. Size, 2¼x2¼x4". 5-ft. cable. Shpg. wt., 1 lb.  
**99 S 323.** List, \$38.50. NET..... 22.64

**MODEL 600-DL.** Same as Model 600-D above, but has switch lock.  
**99 S 324.** List, \$40.00. NET..... 23.52

**MODEL 602.** Same as Model 600-D, but features close-talking, noise-cancelling, differential design.  
**99 S 562.** List, \$49.50. NET..... 29.11

**MODEL 602-L.** Same as Model 602 noise-cancelling mike above, but impedance is 50 ohms and has switch lock.  
**99 S 563.** List, \$51.00. NET..... 29.99

**Fig. W. MODEL 210KK CARBON.** Rugged, hand-held carbon microphone. Designed for mobile communications use. Smooth response throughout frequency range. Provides highly intelligible speech transmission. Includes press-to-talk switch for controlling relay. Rugged, black phenolic case. With 5-ft. coiled cord. Shpg. wt., 1 lb.  
**99 S 589.** List, \$32.50. NET..... 19.11

**Fig. Y. MODEL 205KK DIFFERENTIAL CARBON.** Single-button microphone for use where background noise presents a problem. Features close-talking, noise cancelling differential design. Blast-proof, waterproof and shock-resistant. Output, -50 db. Rugged, black phenolic case. Size, 2¼x2¼x4". Push-to-talk switch. With 5-ft. coiled cord. Shpg. wt., 1 lb.  
**99 S 590.** List, \$42.50. NET..... 24.99

**Fig. W. NEW MODEL 622SK DYNAMIC HANDSET.** High-quality dynamic handset for the most rigid intercom, paging and communications requirements. Lightweight yet shock-resistant. Standard 250-ohm magnetic receiver with response from 200-4000 cps. Microphone impedance, 250 ohms; response, 100-6000 cps. Output level, -55 db. Black phenolic case. Size, 9x3x2¼". With 5-ft., 5-conductor, unshielded, coiled cord. Shpg. wt., 2 lbs.  
**99 S 597.** List, \$78.00. NET..... 45.86

**Fig. X. MODEL 920 "SPHEREX" CRYSTAL.** A highly popular, very reasonably priced, crystal microphone. Features 360° pick-up pattern and essentially flat response from 60-7000 cycles. Output, -50 db. Coupling threaded for standard ¾"-27 stands. Satin chromium finish. With 18-ft. cable. Shpg. wt., 1 lb.  
**99 S 578.** List, \$22.50. NET..... 13.23

**Fig. Y. MODEL 911-20 "MERCURY" CRYSTAL.** Widely used crystal mike for low-cost PA installations, home recording, and Amateur communications. Very smooth response. Rugged. Acoustalloy non-metallic diaphragm. Non-directional pattern. Response, 50-8000 cps. Output, -50 db. Moisture-sealed crystal. Tiltable head. Satin-chrome case. Size, 2¼x3¼x6¼". Fits stands with standard ¾"-27 thread. On-Off switch. Built-in cable connector. With 18-ft. cable. Shpg. wt., 2½ lbs.  
**99 S 554.** List, \$27.50. NET..... 16.17

**Fig. Z. MODEL 335 BLAST FILTER.** A highly effective remedy for wind and breath blast, percussion "pop," etc. For E-V Models 630, 635 and 628. Shpg. wt., 1 lb.  
**94 S 055.** List, \$5.50. NET..... 3.23

### LOW-COST, HIGH OUTPUT MIKE

New high-output crystal microphone at very low cost. Ideal for Amateurs, home recording work, lectures, etc. Moisture-sealed crystal—resistant to humidity. Output, -50 db. Response, 60-7500 cycles. High impedance. Incutulated inner element for safe use in AC-DC circuits. Handsome gray plastic case. Complete with 5 ft. of cable. Shpg. wt., 1 lb.  
**99 S 598.** List, \$8.25. NET..... 4.85



Model  
912

## Shure Microphones



### Popular Unidynes

**Fig. A. MODEL 55S.** Smaller, restyled version of the famous Shure "55" series of unidirectional dynamic microphones. Moving coil unit is rubber-mounted to prevent shock noises. Smooth, peak-free response from 40-15,000 cycles at front—dead at rear. Simple screwdriver adjustment gives choice of output impedances: 35-50 ohms, 150-250 ohms or Hi-Z. Output level at Hi-Z, -60.5 db. Swivel mounting permits tilting head 90°. Satin-chrome finish. Size, 3 3/4" H, 2 3/4" W, 3 1/4" D. 3/8"-27 thread. With 20-ft. cable and connector. Shpg. wt., 3 1/2 lbs. **99 S 395. List. \$76.50. NET..... 44.98**

**Fig. B. MODEL 565S.** Same appearance and characteristics as Model 55S above, but engineered to finest broadcast requirements. Brings out fullest tone values in music or speech without distortion. With vibration-isolation unit, 20-ft. cable and Cannon connector. Shpg. wt., 3 1/2 lbs. **99 S 396. List. \$110.00. NET..... 64.68**

### Fig. C—Model 51 "Sonodyne"

Popular, low-cost dynamic mike. Multi-impedance switch for matching any input: 30 to 50 ohms, 150 to 250 ohms or Hi-Z—screwdriver adjustment. Single microphone can be used on long lines or connected to input of any amplifier, regardless of input impedance. Response 60-10,000 cps. For use where high temperatures and humidity are encountered. For recording, PA and general use. Output, -52 db at Hi-Z, -53 db at Low-Z. 15-ft. detachable cable. 3/8"-27 thread. Shpg. wt., 3 1/2 lbs. **99 S 378. List. \$47.50. NET..... 27.93**

### Fig. D—Model 737A "Monoplex"

High-output crystal, super-cardioid unidirectional mike, incorporating the Shure "Uniphase" principle. Wide angle front response. Phase-shifting network reduces sound from rear by 15 db. Pickup of random sound is reduced by 73%. Greatly reduces effects of room reverberation or echo. Practically eliminates problems of feedback. Response, 60-10,000 cps. Output, -54 db at Low-Z, -55 db at Hi-Z. 15-ft. cable. Shpg. wt., 2 1/2 lbs. **99 S 380. List. \$42.50. NET..... 24.99**

### Fig. E—Model 520SL "Dispatcher"

Low-cost desk stand, reluctance microphone. Ideal as fixed-station mike for transmitters, paging or dispatch systems. Grip-to-talk, slide-to-lock switch operates mike and relay circuit. High impedance. Frequency response, 100-7000 cps. Output, -52.5 db. Chrome and green metallic finish. Ht., 9 1/2"; base, 5", 7-ft., 2-conductor cable. Shpg. wt., 3 1/2 lbs. **99 S 388. List. \$38.50. NET..... 22.64**  
**MODEL 520 "GREEN BULLET."** As above, but less stand and switch. Shpg. wt., 1 1/2 lbs. **99 S 383. List. \$19.50. NET..... 11.47**

### Fig. F—Model 505 "Ranger"

A very popular, ruggedly built, hand-type microphone. An excellent choice for communications, public address and paging applications. Same type used by armed forces. Controlled-reluctance magnetic design for highly dependable performance despite excessive heat and humidity. Frequency response, 100-9000 cps. Has heavy-duty, push-to-talk, DPST switch. In high-impedance and low-impedance models. Outputs: Hi-Z, -50.5 db; Low-Z, -47 db. 5-ft. cable. Shpg. wt., 1 1/4 lbs.

**MODEL 505-B, 150-250 ohms (Low-Z). 99 S 392. List. \$29.50. NET EACH..... 17.35**

**MODEL 505-C, High-imp. (Hi-Z). 99 S 389. List. \$29.50. NET EACH 17.35**

### Fig. G—Model 777 "Slim-X" Mike

Highly versatile, dependable, "pencil" type crystal microphone. May be suspended by neckstrap, hand-held, or used with stand. A perfect "walk-around" mike for audience participation shows, carnivals, home recording, etc. Supplied with nylon stand adapter for vertical mounting of mike in S-38 base below, or any stand with 3/8"-27 thread—adapter permits instant conversion of mike to stand-mounted type. May also be used as adjustable-angle, desk-top mike when used with A-25 swivel adapter and S-38 base below. Very smooth, extended response; 50-10,000 cps. Output, -59 db. Size, 1" diameter and 4 1/2" long. With nylon stand adapter, neckstrap, and 7-ft. cable. Shpg. wt., 8 oz. **99 S 616. List. \$21.00. NET..... 12.35**

**MODEL 777S.** Same as Model 777 described above, but equipped with On-Off switch. Shpg. wt., 8 oz. **99 S 617. List. \$23.00. NET..... 13.52**

**Fig. I. MODEL S-38 BASE.** For vertical desk-top mounting of "Slim-X" mike; or adjustable swivel mounting of mike when used with A-25 below. Wt., 2 lbs. **94 S 038. List. \$3.30. NET..... 1.94**

**Fig. H. MODEL A-25 SWIVEL ADAPTER.** For desk-top, swivel mounting of "Slim-X" mike when used with S-38 base above. Nylon-lined mike clamp permits quick, noise-free removal of mike. Wt., 8 oz. **94 S 039. List. \$5.50. NET..... 3.23**

### Fig. J—Model 707A Crystal Mike

This very moderately priced crystal microphone delivers very clean, peak-free response. Widely used for low-cost public address, paging and communications applications. Has heavy die-cast case with handsome pearl-gray finish. High-quality, shock-mounted bimorph crystal element. Frequency response, 100-9000 cps. High output level, -51 db. Fits stands with 3/8"-27 thread, 2 3/8" dia. and 3 1/4" long. With 7-ft. cable. Shpg. wt., 1 1/4 lbs. **99 S 361. List. \$16.95. NET..... 9.97**

### Low-Cost Mikes

**Fig. K. "REX" CRYSTAL MICROPHONES.** Low-cost microphones for good quality reproduction of voice and music. Response, 60-9,000 cps. High output; -50 db. With adapter for desk or floor stand and 5-ft. cable. Red metallic finish. 2 3/4 x 3 1/4 x 1 1/4". **MODEL 710S.** With Off-On switch. Shpg. wt., 1 1/2 lbs. **99 S 387. List. \$12.95. NET..... 7.61**

**MODEL 710A.** As above but less Off-On switch. Shpg. wt., 1 1/4 lbs. **99 S 386. List. \$10.95. NET..... 6.44**

**Fig. L. "HERCULES" CONTROLLED RELUCTANCE MAGNETIC MICROPHONES.** Unaffected by heat and humidity—for rugged general-purpose use. Frequency response, 100-7,000 cps. Output level, -52.5 db. With stand adapter for use with any standard desk or floor stand. High Z, 2 3/4 x 3 1/4 x 1 1/2". With 5-ft. cable.

**MODEL 510S.** With On-Off switch. Shpg. wt., 1 3/4 lbs. List. \$17.00. **99 S 385. NET..... 10.00**

**MODEL 510C.** Less switch, 1 1/2 lbs. **99 S 384. List. \$15.00. NET..... 8.82**

### Fig. L—Model 708A "Stratoliner"

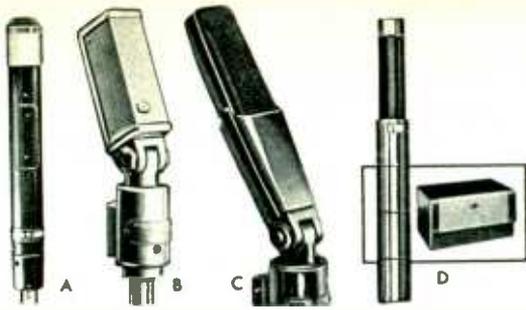
An expensive-looking, reliable crystal microphone at moderate cost. For use in conferences, group work, lectures, etc. Wide-range response for excellent reproduction of both voice and music. Placed horizontally, the 708A is semi-directional; used vertically, it becomes non-directional. Swivel permits 90° tilting of microphone. Frequency response, 70 to 8,000 cps. free from undesirable peaks. Output level, -51 db. Diecast case finished in attractive iridescent gray. Length, 4 1/8", diameter, 2 1/2". 3/8"-27 thread. With 7-ft. cable and plug assembly. Shpg. wt., 2 lbs. **99 S 363. List. \$29.50. NET..... 17.35**

### Fig. M—Model 768 Lapel Microphone

Specially designed, compact crystal microphone for attaching to the lapel. Only 1 1/4" diameter. Extremely light in weight; only 1 1/2 ounces. Frequency response, 30 to 6,000 cycles for quality speech reproduction. High output. Pressure-actuated, diaphragm-type Bimorph crystal is moisture-sealed for long life. Output level, -57 db. With 20 feet of featherweight cable and convenient lapel clip. Gray finish. Shpg. wt., 1 lb. **99 S 372. List. \$27.00. NET..... 15.88**

### Fig. N—Model 533 Deluxe Desk Stand

Deluxe desk stand for broadcast-type microphones. Die-cast base, tilt-proof type. For use with Models 300, 333, 556 and 525 microphones. Mikes can be easily removed by simply lifting out—or can be permanently mounted. "Grayje" non-reflecting finish. 6 x 5 1/2". Shpg. wt., 3 lbs. **94 S 034. List. \$15.00. NET..... 8.82**



### Shure Professional Microphones

**Fig. A. NEW "CONCERT-LINE" MODEL 525.** Exceptionally fine, probe-type, broadcast-quality microphone. Dynamic; omni-directional. Precision, moving-coil design. Excellent response from 40-15,000 cps. "Duracoustic" diaphragm withstands physical shock as well as extreme heat and cold. Impedance switch selects 50-250 ohm or high-impedance output. Output level: 50-250 ohms. -59 db; high-impedance. -58 db. Diameter, 1"; length, 8 1/2". Standard 3/8"-27 thread. Non-reflecting "Grayje" finish. With swivel adapter, lavalier assembly (cord and clip), belt clip assembly, and 20-ft. cable equipped with Cannon connector. Shpg. wt., 3 3/4 lbs.  
**99 S 454.** List. \$200.00. NET.....117.60  
**A-500G OFF-ON SWITCH.** Easily attached to above. Wt., 1 lb.  
**41 S 919.** List. \$6.50. NET.....3.82

**Fig. A. NEW "SLENDYNE" MODEL 530.** Probe-type, omni-directional, dynamic mike. An outstanding choice for deluxe sound systems. Very wide, clean response, 60-15,000 cps. Employs Shure's "Duracoustic" diaphragm for high resistance to physical shock and extreme heat and cold. Impedance switch selects 50-250 ohm or high-impedance output. Output level: 50-250 ohms. -59 db; high-impedance. -58 db. Dia. 1"; length, 7 1/2". Standard 3/8"-27 thread. Beautiful black and gold finish. With swivel adapter, lavalier assembly (cord and clip), belt clip assembly, and 20-ft. cable with Cannon connector. Shpg. wt., 3 3/4 lbs.  
**99 S 455.** List. \$110.00. NET.....64.68  
**A-500 OFF-ON SWITCH.** Easily attached to above. Wt., 1 lb.  
**41 S 918.** List. \$6.50. NET.....3.82

**Fig. B. NEW "CONCERT-LINE" MODEL 333.** Uni-directional, ribbon mike. For broadcast and TV stations, recording studios, and other exacting applications. Ultra-cardioid pattern reduces pickup of random noise by 73%. Response, ± 2.5 db from 30-15,000 cps. Has vibration-isolation unit mounted in live rubber. Blast filter. Impedance switch and voice-music switch. Impedances: 35-50 ohms, 150-250 ohms, and high-impedance. Output: 35-50 ohms. -58 db; 150-250 ohms. -58 db; high-impedance. -56 db. Size: 1 1/2" wide, 3 3/8" high, 1 1/4" deep. Standard 3/8"-27 thread. Two-tone "Grayje" non-reflecting finish. 20-ft. cable with Cannon connector. Shpg. wt., 4 lbs.  
**99 S 456.** List. \$250.00. NET.....147.00

#### Fig. C—Bi-Directional Gradient Microphones

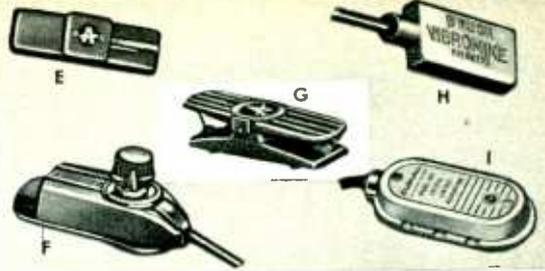
"Figure 8" pattern cuts pick-up from sides—permits operation at higher levels. Switch selects low, medium or high impedance. Blast filter. Unaffected by temperature and humidity. Tilts to 90°.

**"CONCERT-LINE" MODEL 300.** High-fidelity broadcast mike. Features outstanding directional characteristic—permits placing mike at greater distance from performer than is possible with omni-directional types. Exceptionally smooth, peak-free response, 40 to 15,000 cycles. Output, -57 db. Has "Voice-Music" switch. Special vibration-isolation unit mounted in live rubber. Standard 3/8"-27 thread. Cannon connector and 20-ft. cable. Size, 6" high; 1 1/4" wide; 1 1/2" deep. Shpg. wt., 3 3/4 lbs.  
**99 S 397.** List. \$135.00. NET.....79.38

**MODEL 315.** General-purpose mike; similar to Model 300, above. Permits sound system to be operated at level almost 6 db higher than possible with omnidirectional mikes. Response, 50-12,000 cps. Output, -57 db. Standard 3/8"-27 thread. Shure 3-prong "positive-lock" connector and 20-ft. cable. Shpg. wt., 3 3/4 lbs.  
**99 S 398.** List. \$79.50. NET.....46.75

#### Fig. D—Shure "Vagabond 88" Wireless Microphone

Sensational, portable wireless microphone system for broadcast and TV studios, night clubs, etc. Allows performers complete freedom of movement—no cables to pull across floors. Permits use of mike with no connecting cables to amplifier. Transmitting antenna housed in microphone case—transmits to remotely located amplifier. Receiver unit can be used with any conventional audio amplifier. Plugs into any AC outlet. Operates on 2 megacycles (FM). No permit or special licensing needed. Peak-free frequency response of 50-10,000 cps for excellent voice or music reproduction. Output level, -50 db. Signal from receiver can also be fed to tape recorders, broadcast station transmitters, etc. Operating area, 1000 sq. ft. Requires no special training to install or use. Uses 2 hearing aid batteries (25-hr. minimum life) and 5 hearing aid tubes: 3—CK526AX AF RF; 2—CK512AX AF. Sizes: Receiver, 15 1/2 x 11 1/2 x 9"; mike, 12" L, 1 1/4" dia. With batteries, mike (enclosing antenna-transmitter unit) stand adapter, lavalier cord and clip, and receiver. Shpg. wt., 20 lbs.  
**99 SX 618.** NET.....686.00



### Contact-Type Microphones

Attach to musical instruments for sound amplification through amplifier. See pages 161-168 for Knight Amplifier systems.

**Fig. E. AMPERITE MODEL SKH.** Hi-imp. magnetic. Response, 40-9000 cps. Output, -40 db. 3/4 x 3 x 1". 12-ft. cable. Wt., 10 oz.  
**99 S 406.** List. \$12.00. NET.....7.06  
**Fig. F. MODEL KKH.** Same as above, with built-in volume control. For tremolo effects. With 12-ft. cable. Shpg. wt., 12 oz.  
**99 S 408.** List. \$18.00. NET.....10.58  
**Fig. G. FOOT VOLUME CONTROL.** For all models. Wt., 1 lb.  
**41 S 900.** List. \$18.00. NET.....10.58  
**KONTAK STRAP.** Not illus. For attaching contact mike to flat-top guitars. Shpg. wt., 4 oz.  
**41 S 902.** NET EACH.....59c  
**Fig. H. BRUSH MODEL VM-1 VIBROMIKE.** Response, 30-6000 cps. Sealed crystal. Output, .05 to .1 volt. Size, 1/4 x 1/4 x 3/4". With 25-ft. cable. Shpg. wt., 13 oz.  
**99 S 483.** List. \$19.50. NET.....11.47  
**Fig. I. ELECTRO-VOICE MODEL 805.** Response, 40-8000 cps. Output, .1 to 1 volt. With 15-ft. cable and clip. Hi-Z. Wt., 10 oz.  
**99 S 319.** List. \$19.75. NET.....11.61

### RCA Professional Microphones

**Fig. J. RCA MODEL BK-1A PRESSURE MIKE.** High-fidelity "Commentator" pressure microphone designed for broadcast use in AM, FM and TV stations. Rugged, insensitive to wind and mechanical vibration. An excellent microphone for outdoor use where constant handling is necessary. Frequency response 60-10,000 cps. Output level, -52 dbm. Microphone is easily removable from ball and socket swivel base. Output impedances, 30, 150 and 250 ohms. 1/2" thread fitting. Supplied with 30-ft. cable. Size, 7 3/4" long and 1 1/4" diameter. Shpg. wt., 1 1/4 lbs.  
**99 S 434.** NET.....79.50

**Fig. K. RCA MODEL 44-BX VELOCITY MIKE.** Primarily designed for studio use and other critical applications where highest quality reproduction must be achieved. Bi-directional pattern. Shock mounted to reduce undesirable vibrations. Adjustable frequency response for best voice or music pickup. Unaffected by humidity or air pressure. Frequency response, 50-15,000 cps. Output level, -55 dbm. Output impedances, 30, 150 and 250 ohms. Attractively finished in satin chrome and neutral gray. Supplied with 30-ft. cable. Size, 12 x 4 1/4 x 3 3/4". Shpg. wt., 9 lbs.  
**99 SX 435.** NET.....129.00



### Microphone Accessories

**Fig. L. COMPACT MIKE MIXER.** Accommodates 3 hi-impedance mikes or instrument pickups. 3 separate controls for mixing. Hi-imped. output. Size, 1 1/2 x 3 3/4 x 7 3/4". 33" shielded cord and 3 phone plug adapters. For use with MC1F connectors or standard phone plugs. Blue gray finish. Shpg. wt., 1 lb.  
**93 S 282.** List. \$15.00. NET.....8.82  
**Fig. M. PENTRON "AUDIO-MIX" ELECTRONIC MIXER.** Professional-type mixer for use with tape, wire or disc recorders. 8 db gain on mike inputs compensates for insertion losses. Permits blending 4 channels. 6 hi-imp. inputs: 4 for mike and 2 for phono. Response, 20-20,000 cps. 8 x 6 x 5". For 105-125 v., 60 cyc. AC. 5 lbs.  
**93 S 285.** Type MM4. List. \$59.50. NET.....35.70



**Microphone Switches, Connectors, Adapters and Fittings**

**Microphone Switches**  
**Fig. A. SHURE A84B PRESS-TO-TALK SWITCH.** Momentary press-to-talk. On-Off switch. Quickly attached to all Shure connector-type mikes. No soldering or wiring necessary.  $\frac{1}{8}$ "-27 thread. Shpg. wt., 10 oz. **41 S 931. NET 5.00**  
**Fig. B. SHURE A83B ROTARY SWITCH.** No wiring necessary—simply screw on. Smooth-operating switch. Quickly attached to all Shure connector-type microphones. Assures positive electrical connection. Connections made by internal plug. Fits all stands with  $\frac{1}{8}$ "-27 thread. Shpg. wt., 10 oz. **41 S 930. NET 5.00**  
**SHURE A88A GRIP-TO-TALK, SLIDE-TO-LOCK SWITCH.** (Not illustrated.) Heavy-duty, smooth operating switch. Ideal for the most rigorous applications. Fits all Shure connector-type microphones. No soldering necessary—simply plug in. Excellent for use on Shure S36A desk stand. Rich satin-chrome finish. Standard  $\frac{1}{8}$ "-27 thread. Shpg. wt., 1 lb. **41 S 929. NET 6.91**  
**Fig. E. AMPHENOL 75-MC15 SWITCH.** Push-to-talk, slide-to-lock switch. May be connected to any mike equipped with 75-PC1M or similar receptacle.  $\frac{1}{8}$ "-27 thread. Wt., 6 oz. **41 H 950. NET 82c**

**Atlas Microphone Adapters and Fittings**  
Atlas high-quality microphone adapters and fittings. Made of brass; carefully machined to assure a smooth easy fit. Have handsome, highly durable "super-chrome" plating.  
**Fig. I. MODEL AD1 MIKE STAND ADAPTER.** Adapts RCA microphones to standard-thread stands. Has  $\frac{1}{8}$ " male pipe thread and standard  $\frac{1}{8}$ "-27 female thread. Shpg wt., 2 oz. **41 S 928. NET 50c**  
**Fig. J. MODEL AD2.**  $\frac{1}{8}$ " pipe female to  $\frac{1}{8}$ "-27 male thread. Shpg. wt., 2 oz. **94 S 060. NET 35c**  
**Fig. K. MODEL AD3.**  $\frac{1}{8}$ " pipe female to  $\frac{1}{8}$ "-27 female. Shpg. wt., 2 oz. **94 S 061. NET 35c**  
**Fig. L. MODEL AD4.**  $\frac{3}{8}$ " long.  $\frac{1}{8}$ "-27 male running thread. Shpg. wt., 2 oz. **94 S 062. NET 18c**  
**Fig. M. MODEL AD5.**  $\frac{1}{8}$ "-27 female to  $\frac{1}{8}$ "-27 female. coupling. Shpg. wt., 2 oz. **94 S 063. NET 35c**  
**Fig. N. MODEL AD6.**  $\frac{1}{8}$ "-27 female to  $\frac{1}{8}$ "-27 female coupling. Shpg. wt., 2 oz. **94 S 064. NET 44c**  
**Fig. O. MODEL AD7 EXTENSION ROD.** 3" long tube.  $\frac{1}{8}$ "-27 male each end. Shpg. wt., 3 oz. **41 S 913. NET 35c**  
**Fig. P. MODEL AD8 EXTENSION ROD.** 6" long tube.  $\frac{1}{8}$ "-27 male each end. Shpg. wt., 4 oz. **41 S 907. NET 41c**  
**Fig. Q. MODEL AD9.**  $\frac{1}{8}$ "-27 female to  $\frac{1}{8}$ "-27 female. Shpg. wt., 2 oz. **94 S 065. NET 41c**  
**Fig. R. MODEL AD10.** For adapting Western Electric microphones to standard microphone stands.  $\frac{1}{8}$ "-24 female to  $\frac{1}{8}$ "-27 female. Shpg. wt., 2 oz. **94 S 066. NET 71c**

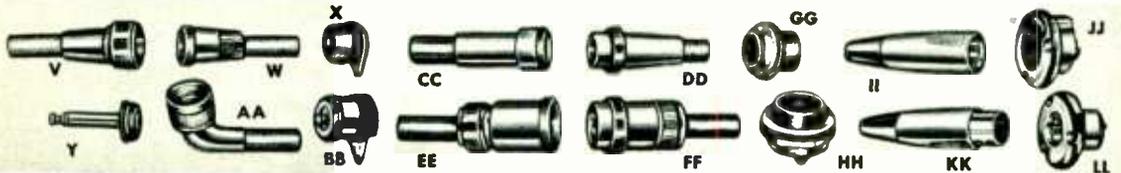
**Microphone Accessories**

**Fig. P. SHURE TYPE A86A CABLE-TYPE TRANSFORMER.** For matching 35-50 ohm and 150-250 ohm microphones to high-impedance inputs. Completely enclosed solder terminals. Shielded. With 2-ft. cable. Size,  $2\frac{1}{2}$ " long;  $1\frac{1}{2}$ " diameter. Shpg. wt., 1  $\frac{1}{2}$  lbs. **41 S 917. List. \$17.50. NET 10.29**  
**Fig. Q. SHURE TYPE R5 MAGNETIC MICROPHONE CARTRIDGE.** Controlled reluctance microphone cartridge. For easy modification of almost any crystal microphone to magnetic type. Ideal for use where heat and humidity are a problem. Excellent frequency response characteristics. Supplied with special adapter ring for simple installation. Diameter of ring,  $2\frac{1}{4}$ "; thickness,  $\frac{3}{16}$ ". Cartridge is  $\frac{1}{4}$ " deep. Shpg. wt., 4 oz. **41 S 934. List. \$10.00. NET 5.88**  
**Fig. R. SHURE TYPE R7 CRYSTAL MICROPHONE CARTRIDGE.** Replacement for Shure 707A and 708A series and most other crystal microphones. High output and very smooth response. Output, —48 db. Supplied with rubber mounting rings and installation instructions. Shpg. wt., 5 oz. **41 S 945. List. \$7.75. NET 4.56**  
**Fig. S. ASTATIC TYPE MC-161 CRYSTAL MICROPHONE CARTRIDGE.** Replacement crystal cartridge for the following Astatic microphones: CX, JT-30, T-3, W-30, 200, 200-S, W-30 and 600. Shpg. wt., 2 oz. **41 S 960. List. \$7.00. NET 4.12**  
**Fig. T. SHURE C16C RETRACTING MIKE CORD.** Heavy rubber-covered 4-conductor coiled cable for use in mobile transmitters, telephones, etc. Extends to length of 6 ft.; only 1 ft. long when retracted. Colored wires, with tinned and trimmed ends. Shpg. wt.,  $\frac{1}{4}$  lb. **41 S 932. List. \$5.75. NET 3.38**  
**Fig. U. SAVE-UR-MIKE COVER.** Hand-some, plastic-coated white celanese mike cover for all mikes. Especially recommended for use with outdoor PA systems. Protects mikes from dust and moisture. An inexpensive, but highly valuable accessory. Fits microphones to  $\frac{1}{4}$ " dia. Shpg. wt., 2 oz. **41 S 995. NET 69c**

**Microphone Connectors**  
**Fig. D. Y CONNECTOR.** Two males and one female for connecting two mikes in parallel to one mike input. Wt., 2 oz. **41 S 996. NET 1.03**  
**Fig. E. DOUBLE MALE CONNECTOR.** For connecting mike extension cables having standard female couplers. Wt., 2 oz. **41 S 997. NET 42c**  
**Fig. F. DOUBLE FEMALE CONNECTOR.** With coupling nuts. For connecting extension cables equipped with standard male couplers. Wt., 2 oz. **41 S 998. NET 48c**

**Mike Stand Threading Tools**  
Standard  $\frac{1}{8}$ "-27 tap and die for stands, connectors, and other mike fittings. Invaluable aids for servicing sound equipment, new installations, etc. or chasing worn threads or threading stands and adapters. High-quality tool steel, heat-treated and hardened. Shpg. wt., 5 oz.  
**46 N 187. (G) Tap. NET 2.94**  
**46 N 188. (H) Die. NET 4.70**

**MIKE BASE FLANGES.** For attaching microphones to any desk, pulpit, etc.  $\frac{1}{8}$ "-27 thread. Wt., 6 oz.  
**Fig. N. MODEL AD11. Female flange. 41 S 906. NET 35c**  
**Fig. O. MODEL AD12. Male flange. 41 S 905. NET 35c**



**Amphenol Microphone Connectors**

**SERIES 76. SINGLE-CONTACT TYPES.** Standard connectors for most amplifiers and mike cables.  $\frac{1}{8}$ "-27 mating threads;  $\frac{1}{8}$ " mounting holes. Chrome-plated brass. Pressure-type center contacts. Av. wt., 3 oz.

Stock No.	Type	Fig.	NET	Description
41 H 958	75-MC1F	V	26c	Cable plug
41 H 955	75-MC1M	W	21c	Cable jack
41 H 957	75-PC1M	X	8c	Chassis receptacle, non-shorting
41 H 962	75-MC1P	Y	29c	Phone plug adapter
41 H 959	75-MC1FA	AA	59c	90° angle cable plug
41 H 967	75-CL-PC1M	BB	26c	Chassis receptacle, closed circuit

**SERIES 80. SINGLE AND DOUBLE CONTACT TYPES.** For shielded mike cables, concentric lines, photo-cell leads and similar uses. Center contacts are cone and socket type. \*Single-contact type. †Double-contact type. Av shpg wt., 3 oz.

Stock No.	Type	Fig.	NET	Description
42 H 080	*80-F	CC	42c	Female cable jack
42 H 084	*80-C	GG	26c	Female chassis receptacle
42 H 081	*80-M	DD	42c	Male cable plug
42 H 082	†80-MC2F	CC	52c	Female cable jack
42 H 085	†80-PC2F	GG	29c	Female chassis receptacle
42 H 083	†80-MC2M	DD	52c	Male cable plug

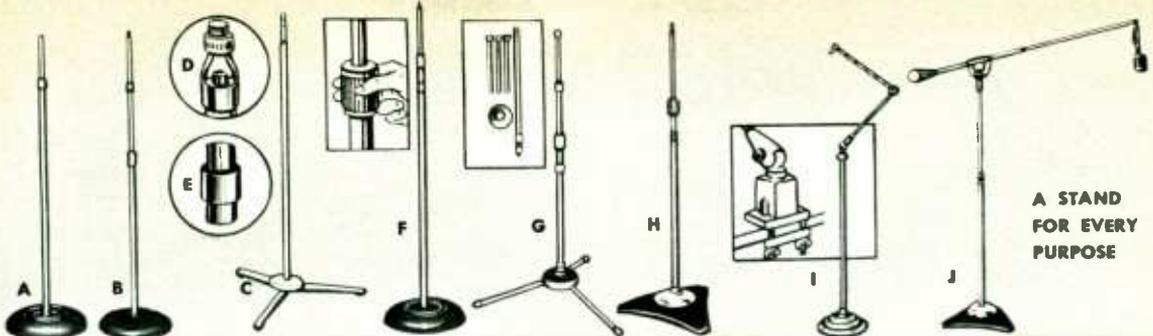
**TYPE 75-CC21 CAP AND CHAIN.** (Not illustrated.) For sealing chassis-mounted, Series 75 and 80 receptacles (listed above) against dirt and dust. Shpg. wt., 3 oz. **40 H 881. NET 32c**

**SERIES 91. 3- AND 4-CONTACT TYPES.** Microphone connectors for all types of portable equipment. Polarized to prevent incorrect insertions. Clamp grip cable, eliminating stress on soldered connections. \*3 contact type. †4-contact type. Shpg. wt., 3 oz.

Stock No.	Type	Fig.	NET	Description
41 H 970	*91-MC3F	EE	65c	Female cable jack
41 H 972	*91-PC3F	HH	32c	Female chassis receptacle
41 H 971	*91-MC3M	FF	65c	Male cable plug
41 H 977	†91-MC4F	EE	71c	Female cable jack
41 H 978	†91-PC4F	HH	35c	Female chassis receptacle
41 H 976	†91-MC4M	FF	71c	Male cable plug

**NEW "QWIK" SERIES 91. 3- AND 4-CONTACT TYPES.** Highly convenient, dependable, mike connectors. Steamlined design. Simply pushed together; released by slight thumb pressure on lock button and pulling outward. Built-in cable clamp consists of rubber boot and set screw. Gold-plated (over silver) bronze contacts. Polarized. Satin-nickel plated, zinc-alloy shells. \*3-contact type. †4-contact type. Av. shpg. wt., 3 oz.

Stock No.	Type	Fig.	NET	Description
42 H 065	*91-853	II	.91	Male cable plug
42 H 066	*91-854	KK	1.12	Female cable plug
42 H 067	*91-855	JJ	.68	Male chassis receptacle
42 H 068	*91-856	LL	1.35	Female chassis receptacle
42 H 069	†91-857	II	.91	Male cable plug
42 H 070	†91-858	KK	1.23	Female cable plug
42 H 071	†91-859	JJ	.68	Male chassis receptacle
42 H 072	†91-860	LL	1.50	Female chassis receptacle



**A STAND FOR EVERY PURPOSE**

**Microphone Floor Stands and Booms**

**Fig. A. KNIGHT ECONOMY MODEL.** In two sections; telescopes from 35" to 64". Chrome-plated stem. Die-cast iron base, 10" in diameter, gray crackle. Has standard 3/8"-27 thread. Shpg. wt., 12 lbs.  
**94 SX 004. NET.....5.85**

**Fig. B. KNIGHT 3-SECTION MODEL.** Extremely compact mike stand. Ideal for portable applications. Adjustable from 25" to 61". Two smooth-operating clutches provide wide up-and-down adjustment. Chrome-plated stem. Gray, wrinkle-finished die-cast iron base. 3/8"-27 thread. Shpg. wt., 9 lbs.  
**94 SX 001. NET.....7.35**

**Fig. C and D. ELECTRO-VOICE MODEL 425.** Deluxe stand, with single-button control of shaft height. When button is released, shaft locks automatically. Adjustable from 37" to 66". Button is just below mike. Legs fold back for storing and carrying. Satin chrome finish. Base has 17" spread. Standard 3/8"-27 thread. Shpg. wt., 9 lbs.  
**94 SX 049. List. \$27.50. NET.....16.17**

**Fig. C and E. ELECTRO-VOICE MODEL 430.** Similar to 425, but with button on lower section for height adj. from 36" to 65". 3-leg spread, 17". Shpg. wt., 9 lbs.  
**94 SX 048. List. \$17.00. NET.....10.00**

**Fig. F. ATLAS MODEL MS-11C.** Chrome-plated. Adjustable from 35" to 65". Weighted 10" base, with shock-absorbing pads. 3/8"-27 thread. Shpg. wt., 12 lbs.  
**94 SX 012. List. \$13.00. NET.....7.64**

**Fig. G. ATLAS MODEL CS-33.** Readily taken apart for ease in carrying. Collapses to 22 1/2". Adjustable from 26-64". Rubber-tipped legs. Chrome-plated. 5 lbs.  
**94 SX 016. List. \$11.75. NET.....6.91**

**Fig. H. ATLAS MODEL MS-25 "AIR-LOCK" STAND.** Features "air lock" safety cushion which prevents slippage of oversized telescoping tube. Controlled flow of air allows only slow, quiet collapse into lower section. Full-grip clutch; shock-absorbing base. 3/8"-27 thread. Ht. adj., 37" to 66". Base dia., 17". Shpg. wt., 20 lbs.  
**94 SX 029. List. \$21.50. NET.....12.64**

**Fig. I. FLEJO "MIKESTER," MODEL 3.** Holds any mike up to 4 lbs. in any position. Swings out up to 36" in any direction. Royal gray finish. With 40" floor stand and 13 1/2" base. Shpg. wt., 23 lbs.  
**94 SX 043. 1. list. \$26.50. NET.....15.58**

**MODEL 1 "MIKESTER."** As above, less stand; with clamp. Shpg. wt., 4 3/4 lbs.  
**94 SX 044. List. \$13.00. NET.....7.64**

**Fig. J. ATLAS MODEL BS-36 "AIR-LOCK" BOOM STAND.** Newest model featuring "air-lock" safety cushion. Built into the vertical section, it prevents any accidental or sudden slippage of upright section. Cushioned on air, controlled escapement of air allows only smooth and quiet collapse of upright tube. New gyromatic swivel joint for proper, secure hanging adjustment. "Snap-On" mike hangers. Shock-mounted, chrome pads for gliding over floor surfaces with minimum friction. Boom length, 72". Adj. vert. extension from 48" to 72". Base dia., 17". Tubes chrome-plated. Shpg. wt., 33 lbs.  
**94 SX 021. List. \$60.00. NET.....35.28**



**Desk Stands and Special Microphone Mounts**

**Fig. K. ELECTRO-VOICE 427A.** Modern, sturdy die-cast base with 5" stem riser. Rests firmly on desk or table. Has standard 3/8"-27 thread. Finished in handsome satin chromium. 4 3/4" diameter base. Shpg. wt., 1 1/4 lbs.  
**94 S 054. List. \$3.50. NET.....2.06**

**Fig. L. SHURE S36A.** A Modern streamlined desk stand. Fits all Shure connector-type microphones. An excellent stand for use with Shure Model A88A, grip-to-talk, slide-to-lock switch. Has adapter for other microphones. Removable button permits installation of 3/8" bushing switch or volume control. Handsome pearl gray finish. Base size, 2 1/2 x 3 7/8". Shpg. wt., 1 1/2 lbs.  
**94 S 035. List. \$6.00. NET.....3.53**

**Fig. M. ATLAS DS-7 ADJUSTABLE.** Height adjustable from 8" to 13". Uses full-sized clutch mechanism and 3/8"-7/8" tube combination. All tubular sections finished in chrome. Gray crackle base, 6" diameter, with rubber pads. Standard 3/8"-27 thread. Shpg. wt., 3 lbs.  
**94 S 014. List. \$5.00. NET.....2.94**

**Fig. N. ATLAS TS-6 ADJUSTABLE BANQUET STAND.** Employs same finish and fine workmanship embodied in floor models. Full-grip clutch assembly—vee-action control. Adjustable from 18" to 32". Completely finished in "superchrome." 8" base with pads included. Standard 3/8"-27 threads. Shpg. wt., 5 1/2 lbs.  
**94 S 024. List. \$9.00. NET.....5.29**

**Fig. O. ATLAS MODEL DS-10 "STREAMLINER."** Modern design desk stand. Cable concealed in slot underneath center section of chrome trim. Space under base for installation of switches. Rubber bumpers. 3/8"-27 thread. Shpg. wt., 1 1/2 lbs.  
**94 S 073. List. \$5.00. NET 2.94**

**Fig. P. ATLAS MODEL TB-1 MIKE MOUNT.** Permits use of 2 mikes on 1 stand. Holds written material for speaker. Can be used in various combinations—suitable for binaural mike mounting. 9x11". Shpg. wt., 2 1/2 lbs.  
**94 S 072. List. \$10.00. NET 5.88**

**MODEL TS-7 BANQUET STAND.** For use with TB-1. All chrome. 10" dia. base. 11 lbs.  
**94 S 074. List \$10.00. NET.....5.88**

**Fig. Q. ELECTRO-VOICE MODEL 428 TOUCH-TO-TALK STAND.** Fits any mike with 3/8"-27 thread. Lever-type switch opens and closes with very slight pressure. Locking-latch keeps mike circuit in "talk" position. 6 1/2" SPDT switch unit is easily removed from die-cast base. Satin chrome finish. Ht., 7" with base. Shpg. wt., 2 lbs.  
**94 S 053. List. \$16.00. NET 9.41**

**Fig. R. TURNER MODEL 3H "THIRD HAND."** Slips over head and holds mike close to mouth. Insures correct speaker-mike spacing. Allows freedom of vision and hands—as natural to wear as a necktie. Can be used with long lines. 6 3/4" flexible gooseneck; 3/8"-27 thread. In black enamel. 2 1/2 lbs.  
**94 S 080. List. \$5.00. NET 2.94**

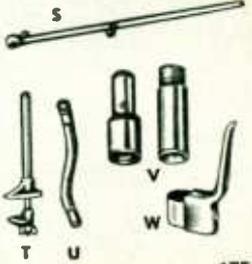
**Fig. S. MODEL BB-1 "BABY BOOM" ATTACHMENT.** Permits a quick, fixed positioning of microphone anywhere within a five-foot circle. All swivel parts are precision die castings—for smooth operation and secure positioning. Attaches easily to any stand with standard 3/8"-27 thread. Chrome plated tube is 32" long. Gray crackle-finish castings. Counterbalance weight for any mike. Shpg. wt., 4 1/2 lbs.  
**94 SX 019. List. \$7.50. NET.....4.41**

**Fig. T. MODEL BC-1 BRACKET CLAMP.** For attaching microphone, boom arm or goose neck to desk, stand or any other solid object. Has numerous useful applications. 6" chrome stem, gray crackle-finish clamp. Standard. 3/8"-27 thread. Shpg. wt., 1 lb.  
**94 S 028. List. \$3.50. NET.....2.06**

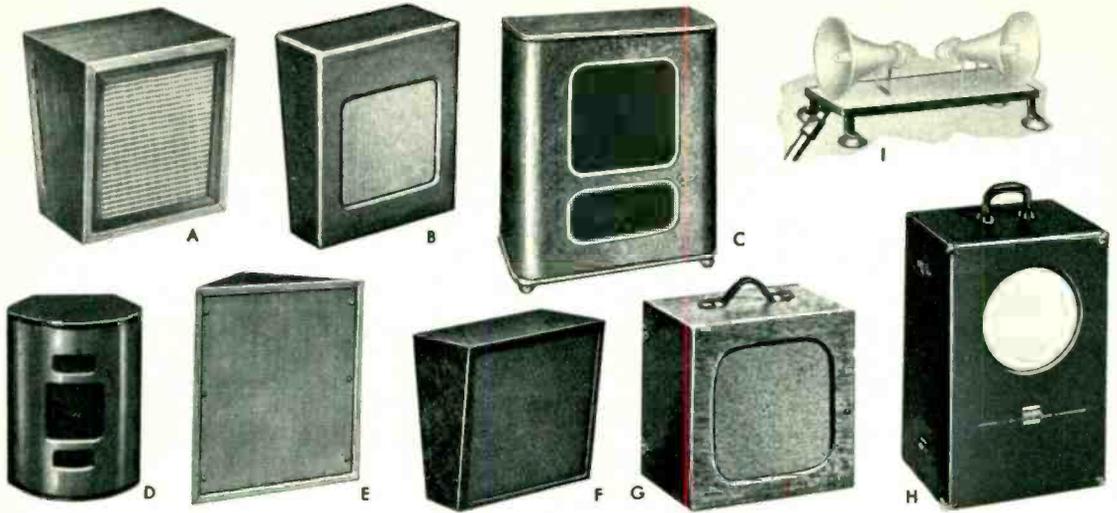
**Fig. U. MODEL GN-13 FLEXIBLE GOOSE NECK.** Attaches to stand—adjustable for individual use. 3/8"-27 thread. Chrome; 13" long. Wt., 1 lb.  
**94 S 027. List. \$2.75. NET.....1.62**  
**94 S 075, 19" long. List. \$3.75. NET.....2.20**

**Fig. V. MODEL SO-1 SNAP-ON MIKE ATTACHMENT.** "Snap-On" sleeve attachment permits mike to be attached or removed instantaneously. 1 section attaches to mike—other fastens to stand. Chrome finish. 3/8"-27 thread. Shpg. wt., 1/2 lb.  
**94 S 017. List. \$2.75. NET.....1.62**

**Fig. W. MODEL CH-1 CABLE HANGER.** Fits on all tubes to 1 1/4" dia. Mike cable coils over hanger when moving mike and stand. Attached or removed with one screw. All chrome. Shpg. wt., 1/2 lb.  
**94 S 076. List. \$3.00. NET.....1.76**



**Atlas Microphone Stand Fittings**



### Speaker Baffles and Portable Carrying Cases

**Fig. A—Modern Deluxe Wood Baffles**  
 Fine-quality, very moderately priced wood baffles in models for 8" or 12" speakers. Excellent for all indoor installation, paging systems, school rooms, offices, stores, etc. Rugged, thoroughly reinforced wood construction. Handsomely finished in walnut or blonde. Attractive, acoustic plastic grille covers almost entire front of unit.  
**FOR 8" SPEAKERS.** Size, 11¼" high x 10¼" wide x 7¼" deep. Shpg. wt., 4 lbs.  
 95 DX 400. Walnut finish.  
 95 DX 401. Blonde finish. **NET . . . . 4.25**  
**FOR 12" SPEAKERS.** Size, 16" high x 14" wide x 9" deep. Shpg. wt., 7½ lbs.  
 95 DX 402. Walnut finish.  
 95 DX 403. Blonde finish. **NET . . . . 5.75**  
**BAFFLE MOUNTING KIT.** For convenient wall mounting. Consists of two screw eyes and two wall hooks. Shpg. wt., 3 oz.  
 45 D 845. **NET . . . . . 15c**

**Fig. B—Fabrikoid-Covered Baffles**  
 Quality-built, attractive, non-resonant baffles. Ideal for all indoor installations: paging systems, school rooms, stores, offices, auditoriums, etc. Wall-mounting type. Provide coverage over wide angle. Made of strong plywood, covered with durable dark brown leatherette.  
**12" SPEAKER BAFFLE.** 17x13½x8" D. Shpg. Wt., 6 lbs.  
 93 DX 520. **NET . . . . . 3.25**  
**8" SPEAKER BAFFLE.** 11x9¼x6" D. Shpg. wt., 4 lbs.  
 93 DX 522. **NET . . . . . 2.50**

**Fig. C—Jensen Utility Bass Reflex**  
 An inexpensive, durably built speaker enclosure. Impregnated composition board. Construction assures maximum acoustic performance. Solid lumber frame for strength and rigidity. Cabinet is finished in hammered brown lacquer. Attractive chromium and aluminum trim. Enclosure volume is 4.1 cubic feet. Designed for use with all types of 12" speakers. 28½" H. 23¾" W. 11¾" D. Shpg. wt., 34 lbs.  
 95 DX 011. List. \$38.75. **NET . . . . 22.79**

**Fig. D—Jensen Sector Cabinet**  
 TYPE H-81. Sector cabinets designed for mounting horizontally at the junction of ceiling and wall, or vertically in the corner of a room. Quarter circle design permits 4 cabinets to be mounted in a cluster in the center of a room, or around a post for complete sound distribution. Sturdily constructed; solid wood frame with composition wood panels. Enclosure volume is 1¼ cu. ft. Designed for 8" speakers. Handsome brown finish. Overall dimensions, 22¾x17¾x8½". Complete with mounting brackets and screws. Shpg. wt., 15 lbs.  
 95 DX 017. List. \$25.70. **NET . . . . 15.11**

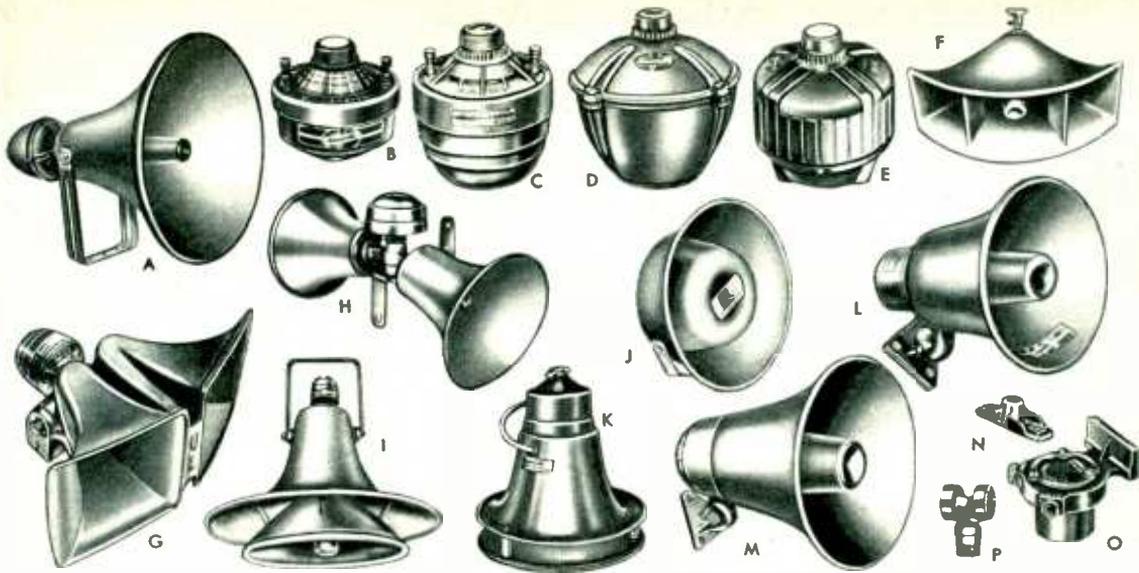
**Fig. E—New Argos Corner Baffles**  
 Handsomely styled, low-cost baffles for corner mounting of 8" or 12" speakers. Incorporate bass-reflex design and utilize walls of room to enhance performance. Deliver rich, full-toned reproduction and provide excellent sound coverage. Ideal for PA use, music distribution systems, plants, etc. Rigidly constructed of reinforced plywood and hardboard; covered with highly attractive and durable, brown or blonde, plastic-coated leatherette. Matching plastic grille. Lined with Cellufoam acoustic insulation. May be finished with paint (not lacquer) to match walls. Built-in 8-32 bolts for quick, simplified speaker installation.  
**FOR 8" SPEAKERS.** Size, 14" high x 12½" wide x 6½" deep. Shpg. wt., 5 lbs.  
 95 DX 420. CB-8A. Brown.  
 95 DX 421. CB-8BA. Blonde. **NET EACH . . . . . 6.61**  
**FOR 12" SPEAKERS.** Size, 20¼" high x 17¾" wide x 9" deep. Shpg. wt., 9 lbs.  
 95 DX 422. CB-12A. Brown.  
 95 DX 423. CB-12BA. Blonde. **NET EACH . . . . . 9.11**

**Fig. F—New Argos Wall Baffles**  
 These up-to-the-minute, low-cost, wall baffles combine ultra-smart styling, excellent acoustic design, and sturdy construction. Made of thoroughly reinforced plywood and hardboard; finished in highly attractive and durable plastic-coated leatherette. Available in brown or blonde finish; may be finished with paint (not lacquer) to match walls. Plastic grille. Built-in 8-32 speaker bolts and wall-hanging slots permit installation in just a few minutes.  
**FOR 4"-5" SPEAKERS.** Size, 6" high x 6" wide x 4¾" deep. Shpg. wt., 2 lbs.  
 95 D 410. WB-4/5A. Brown.  
 95 D 411. WB-4/5BA. Blonde. **NET EACH . . . . . 2.32**  
**FOR 6" SPEAKERS.** Size, 8½" high x 7½" wide x 5½" deep. Shpg. wt., 3 lbs.  
 95 D 412. WB-6A. Brown.  
 95 D 413. WB-6BA. Blonde. **NET EACH . . . . . 2.84**  
**FOR 8" SPEAKERS.** Size, 10½" high x 9¾" wide x 6½" deep. Shpg. wt., 5 lbs.  
 95 D 414. WB-8A. Brown.  
 95 D 415. WB-8BA. Blonde. **NET EACH . . . . . 3.36**  
**FOR 10" SPEAKERS.** Size, 12¼" high x 11½" wide x 7¾" deep. Shpg. wt., 7 lbs.  
 95 DX 416. WB-10A. Brown.  
 95 DX 417. WB-10BA. Blonde. **NET EACH . . . . . 3.94**  
**FOR 12" SPEAKERS.** Size, 14" high x 13½" wide x 9" deep. Shpg. wt., 10 lbs.  
 95 DX 418. WB-12A. Brown.  
 95 DX 419. WB-12BA. Blonde. **NET EACH . . . . . 4.62**

**Fig. G—Speaker Cases**  
 Exceptionally well-built carrying cases for one or two 12-inch speakers. Excellent for portable sound systems where a means of carrying additional speakers is desired. Constructed of plywood covered with dark brown leatherette. Have speaker openings of harmonizing brown flocking on rigid metal screen. Removable covers fitted with sturdy trunk-type clasps. With durable leather carrying handles.  
**SINGLE SPEAKER CASE.** Will accommodate one 12-inch speaker. Inside dimensions: 12¼x12¼x9½". Shpg. wt., 9 lbs.  
 93 DX 601. **NET . . . . . 7.25**  
**DUAL SPEAKER CASE.** Will accommodate two 12-inch speakers. Divides into two convenient separate units which serve as baffles. Inside dimensions: 20¼x12¼x9½". Shpg. wt., 25 lbs.  
 93 DX 600. **NET . . . . . 9.25**

**Fig. H—Speaker-Amplifier Cases**  
 Rugged cases for housing complete PA systems, including mike, stand and cable. Larger case will accommodate two 12" speakers and amplifier measuring about 14¾x8¾x11¼", similar to Knight 15- or 30-watt models. Smaller case will accommodate one 8" speaker and amplifier measuring about 7¾x10¼x7¼". Sturdy plywood construction. Attractive burgundy red leatherette covering. Speaker openings of gray flocking on strong metal screen. Interiors have windup brackets for speaker cable and leatherette pocket for carrying microphone. Have metal corner plates to provide extra strength and rigidity. With leather carrying handles.  
**LARGE CASE.** For system using two 12" speakers. Divides into 2 units which serve as speaker baffles. Has clasp and screw mount for mike stand and base, and slide-in shelf for mounting amplifier. Inside dimensions: 24" high, 16" wide, and 12¾" deep. Shpg. wt., 25 lbs.  
 93 SX 613. **NET . . . . . 17.95**  
**SMALL CASE.** For system using one 8" speaker. Inside dimensions: 16" high, 10¾" wide, and 8¾" deep. Shpg. wt., 9 lbs.  
 93 SX 612. **NET . . . . . 9.85**

**Fig. I—Car-Top Platform**  
 Exceptionally sturdy wood platform for mounting baffles or horns on auto tops. Fits contour of any car top. Ideal for mobile PA work. Attaches by four non-slip vacuum cups. Secured with straps anchored by rubber insulated hooks to the gutter over doors (like car carriers). Easily and quickly attached or removed. Heavily varnished, weather-resistant finish. Measures 7½x46". Shpg. wt., 9 lbs.  
 93 DX 220. **NET . . . . . 5.91**



### University Trumpets, Drivers, Speakers and Accessories

Fig. A. REFLEX LOUDSPEAKER TRUMPETS. For use with driver units below. Fully weatherproof. Heavy-gauge metal. Model GH with 6½" air column and a low-frequency cutoff at 85 cps is ideal for music. Models LH and PH have higher cutoff for general use. Model SMH is for voice only. With "U" mounting bracket, less driver unit.

Stock No.	Mfr's Type	Bell Dia.	Overall Length	Low Cutoff	Wt. Lbs.	List	NET EACH
95 DX 158	GH	30¾"	27¾"	85 cyc.	22½	\$65.00	38.22
95 DX 155	LH	25¾"	19"	120 cyc.	20	44.50	26.17
95 DX 156	PH	20¼"	15¼"	150 cyc.	12½	31.00	18.21
95 DX 157	SMH	16½"	12"	200 cyc.	9	26.00	15.29

BREAKDOWN-PROOF DRIVER UNITS. PM dynamic type, hermetically sealed units for reflex-type trumpets and radial-reflex projectors. Corrosion-proof—molded phenolic diaphragms. Excellent fatigue characteristics. Exclusive "rim centering" construction insures rigidity of assembly. Thread, 1¼"-18. MA-25 is rugged general purpose unit. SA-11F is wide-range unit.

Stock No.	Mfr's Type	Fig.	Range C.P.S.	Watts Rating	Ohms Imp.	Wt. Lbs.	List	NET EACH
81 D 573	MA-25	B	90-6,000	25	16	4	\$27.50	16.17
81 D 571	SA-11F	C	90-10,000	25	16	6	35.00	20.58

Fig. D. PA-30 HEAVY-DUTY DRIVER UNIT. For general-purpose use and for broadcasting chime music from church steeples. Range, 80 to 10,000 cps. Features built-in line matching transformer; has five taps marked for both the RETMA 70-volt system, and standard impedances. All terminals are located on driver base for maximum convenience. Power capacity, 30 watts. Inputs, 16, 165, 250, 500, 1000, 2000 ohms; constant-voltage taps, 30, 20, 10, 5 and 2½ watts. Speaker V.C., 16 ohms. Wt., 7 lbs.  
81 D 574. List, \$50.00. NET.....29.40

Fig. E. SA-30 HEAVY-DUTY DRIVER UNIT. For rugged PA and industrial use. Range, 90-10,000 cps. Has built-in universal transformer, designed for both the 70-volt systems and regular impedance-matched circuits. Input terminals: 45 (for intercom circuits), 165, 250, 500, 1000 and 2000 ohms; constant-voltage taps, 30, 20, 10, 5, and 2.5 watts. Weather-proof die-cast aluminum head and housing. V. C. impedance, 16 ohms. Length overall, 6¾". Power capacity, 30 watts. Shpg. wt., 5 lbs.  
81 D 582. List, \$45.00. NET.....26.46

Fig. F. COBRA 12 REFLEX LOUDSPEAKER. A wide-angle paging and intercom speaker; also serves as very effective mid-range unit in 3-way hi-fi speaker systems. Provides uniform sound pattern over a horizontal angle of 120° and a vertical angle of 60°. Built-in driver unit uses Alnico V magnet, bakelite diaphragm and rim-centered voice coil. Response, 250-10,000 cycles. Voice coil impedance, 8 ohms. Length overall, 6¾". Power-handling capacity, 12 watts. Shpg. wt., 5 lbs.  
95 DX 178. List, \$45.00. NET.....26.46

Fig. G. COBREFLEX-2 REFLEX TRUMPET. Wide-angle trumpet for use with any University heavy-duty driver, such as MA-25, SA-11F, PA-30 and SA-30. Offers same excellent dispersion characteristics as Cobra 12 loudspeaker, above. A fine choice for highpower PA and industrial applications. 250-cycle low-end cutoff assures very high penetration and minimizes reverberation effects. Takes 2YC connector, at right, to permit use with two drivers for greater power handling capacity. Size: 9¼" high, 18½" wide, 10¼" deep. Less driver. Shpg. wt., 12 lbs.  
95 DX 184. List, \$35.00. NET.....20.58

Fig. H. 2W-25 WIDE-ANGLE SPEAKER. Dual horns 180° opposed. Have single driver. Dispersion, 120° each horn. Power handling capacity, 25 watts. Response, 350-6000 cps. Impedance, 16 ohms. 20½x8" dia. Shpg. wt., 10 lbs.  
95 DX 179. List, \$48.00. NET.....28.22

Fig. I. MODEL RPH RADIAL REFLEX TRUMPET, 14" high, yet provides 4-ft. air column with low-frequency cutoff at 140 cps. Rubber loading minimizes vibrations. Dia., 25¾". For driver units listed at left. Use of 2YC "Y" connector (Fig. P) permits use with two drivers. Use of PMA adapter (Fig. N) permits mounting on ½" pipe fitting. With "U" bracket. Less driver. Shpg. wt., 24 lbs.  
95 DX 162. List, \$45.00. NET.....26.46

Fig. J. NEW MODEL BLC HIGH-FIDELITY COAXIAL. Exceptionally fine weatherproof coaxial. Full-range voice and music reproduction; high intelligibility; wide dispersion. For bandshells, stadiums, auditoriums, and other indoor or outdoor applications. Low-frequency driver in compression-type aluminum horn. Coaxially mounted tweeter, 2000-cycle crossover network. Response, 70-15,000 cps. Dispersion, 120°. Capacity, 25 watts. Impedance, 8 ohms. 22½" dia., 9" deep. With adjustable "U" mounting bracket. Shpg. wt., 20 lbs.  
95 DX 186. List, \$75.00. NET.....44.10

MODEL WLC. Larger version of above. Response, 50-15,000 cps. Dispersion, 90°. Power capacity, 30 watts. Impedance, 8 ohms. 33½" dia., 20" deep. Shpg. wt., 80 lbs.  
95 DX 181. List, \$250.00. NET.....147.00

#### Industrial Paging Speakers

Reflex type air-column reproducers with built-in hermetically sealed PM dynamic driver units. Corrosion-proof finish. For locations where maximum penetrating power is required.

Fig. K. MODEL 1BR. Radial reflex trumpet with built-in 12-watt PM driver unit. 360° distribution. For voice frequencies. Range, 300-10,000 cps; input imp., 8 ohms. Size, 9¼" dia. x 11" high. With top-suspension ring for quick, convenient mounting from ceiling. Shpg. wt., 7 lbs.  
81 DX 576. List, \$39.00. NET.....22.93

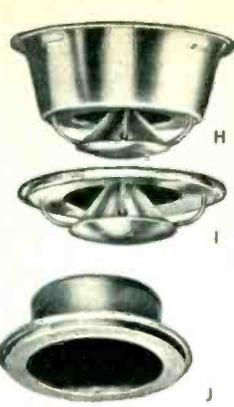
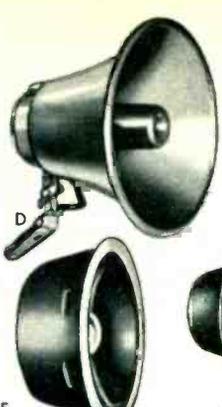
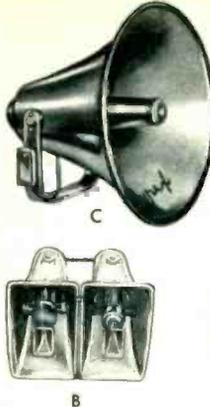
Fig. L. MODEL 1B8. Reflex-type with built-in 12-watt driver unit. 90° dispersion angle. Range, 300-10,000 cps. Input impedance, 8 ohms. Size, 8½" bell dia. x 9" long. Has adjustable wall mounting bracket. Shpg. wt., 7 lbs.  
81 DX 575. List, \$32.50. NET.....19.11

Fig. M. MODEL MIL. Reflex-type for low-power use. Screw-in 3-watt driver unit; high efficiency at speech frequencies. Range, 400-9000 cps. Dispersion angle, 120°. Impedance, 8 ohms. 6¾" dia. x 7" high. Adjustable mounting bracket. Shpg. wt., 5 lbs.  
95 D 163. List, \$25.00. NET.....14.70

Fig. N. PMA ADAPTER. Attachable to "U" bracket for mounting trumpets on ½" pipe fittings. Shpg. wt., 2½ lbs.  
95 D 160. NET.....88c

Fig. O. CTR-20 25-WATT MATCHING TRANSFORMER. In waterproof case. Meets every mtg. requirement. Pri.: 45, 500, 1,000, 1,500, 2,000 ohms; Sec.: 4, 8, and 16 ohms. Shpg. wt., 3 lbs.  
95 G 154. List, \$15.00. NET.....8.82

Fig. P. 2YC "Y" CONNECTOR. For greater power handling capacity with a single trumpet. Permits connection of two driver units to any of the trumpets listed on this page, including the Cobreflex-2 and the Model RPH. Shpg. wt., 1 lb.  
95 D 159. NET.....5.88



**Projectors, PA Speakers and Ceiling Baffles**

**Fig. A—Electro-Voice CDP Projector**

**MODEL 848.** Unique coaxial PA projector with single driver. Features: Virtually indestructible spun fiberglass construction; greater coverage; wide, smooth frequency response for full range music reproduction; excellent voice penetration.

Two horns are employed; large horn for low frequencies—175-1000 cps; small horn for highs—1000-10,000 cps. Low-end response is augmented by 100 cps horn taper, insuring at least one-half octave added bass. Horns are coupled to opposite sides of driver diaphragm, providing dispersion from both sides of projector.

Maximum polar coverage, 120°. Power handling capacity, 25 watts. Impedance, 16 ohms. Weatherproof, splash-proof and blast-proof. Gunmetal gray. Size: 20 1/2 x 10 1/2 x 4 1/2 inch; 20" deep. Shpg. wt., 17 lbs. **81 D 490.** List, \$69.50. **NET..... 40.87**

**MODEL 876 25-WATT LINE MATCHING TRANSFORMER.** Mounts on rear of Model 848 projector. Primary taps for 25, 10, 5, and 2.5 watts with 70-volt line. Impedance taps of 45, 200, 500, 1000, and 2000 ohms. Size, 3 1/2 x 5 1/4 dia. Shpg. wt., 4 lbs. **81 G 492.** List, \$16.50. **NET..... 9.70**

**MODEL 877 LINE MATCHING TRANSFORMER.** Same as Model 876 except with thermal bimetallic relay for overload protection. Size, 3 1/2 x 5 1/4 dia. Shpg. wt., 4 lbs. **81 G 493.** List, \$17.50. **NET..... 10.29**

**MODEL 878 BASS AND THERMAL OVERLOAD PROTECTOR.** Prevents distortion due to frequencies below Model 848 Horn cutoff. Reduces power to driver when over 25 watts. Size, 3 1/2 x 5 1/4 dia. Shpg. wt., 4 lbs. **81 D 494.** List, \$16.50. **NET..... 9.70**

**MODEL 879 JOINING KIT.** For assembling two or more Model 848 projectors (as shown in Fig. B) in multiple arrays. One kit required for each additional projector. Shpg. wt., 1 lb. **81 D 495.** List, \$2.75. **NET..... 1.62**

**Jensen Hypex Projectors**

Complete with driver units and adjustable brackets. Reflex design reduces length to a minimum. Four to five times the efficiency of cone speakers for paging purposes. Weatherproof, aluminum construction.

**Fig. C. MODEL VH-24.** Response, 110-6,000 cps. 25 watts. 75° coverage. 16-ohm VC. 22 1/2 x 25" dia. Shpg. wt., 32 lbs. **95 DX 024.** List, \$89.50. **NET..... 52.63**

**Fig. C. MODEL VH-20.** Response, 140-6,000 cps. 25 watts. 80° coverage. 16-ohm VC. 20 1/4 x 21" dia. Shpg. wt., 25 lbs. **95 DX 023.** List, \$76.00. **NET..... 44.69**

**Fig. C. MODEL VH-15.** Response, 180-6,000 cps. 15 watts. 90° coverage. 8-ohm VC. 15 x 16" dia. Shpg. wt., 18 lbs. **95 DX 025.** List, \$56.50. **NET..... 33.22**

**Fig. D. MODEL VH-91.** For paging and intercom systems. 15 watts. 100° coverage. Locks with single wing nut. 8-ohm VC. 7 1/4 x 8 1/4" dia. Shpg. wt., 15 lbs. **95 D 035.** List, \$35.80. **NET..... 21.05**

**Fig. E—Jensen Model AP-10 Speechmaster**

High-quality 5-inch PM speaker—completely enclosed in a streamlined, acoustically designed enclosure. Enclosure has smart, professional appearance; protects speaker from damage; keeps out dust. A fine choice for low-power PA amplifiers; also for use with receivers. Smooth-operating tilt adjustment. For desk-top or wall mounting; holes for wall-mounting screws in base. Internal mounting bracket for small output transformer. Power handling capacity, 5 watts. Voice coil impedance, 4 ohms. Size: 6 1/4" high; 5 1/2" deep. Hammered gray finish with lustrous chrome trim. Supplied with 36° rubber-covered cord. Shpg. wt., 6 lbs. **82 D 040.** List, \$19.30. **NET..... 11.35**

**Fig. F—Altec-Lansing 400B Speaker**

An extremely efficient 8" speaker—widely used in deluxe-quality PA installations. Delivers remarkably clean, wide-range frequency response for an outstanding standard of voice-music reproduction. Extra-large Alnico V magnet provides unusually high flux density. Utilizes famous Dia-Cone design to achieve exceptionally fine high-frequency response and dispersion—treble frequencies are reproduced by a metal diaphragm at apex of cone. Excellent frequency response; 40 to 10,000 cps. Cone resonance, 94 cps. Voice coil impedance, 8 ohms. Power handling capacity, 12 watts. Shpg. wt., 4 lbs. **95 D 058.** List, \$30.00. **NET..... 21.60**

**Fig. G—General Electric Speakers**

High-quality, very popular PM speakers. Expertly engineered for first-rate performance and top dependability in exacting public-address applications. Non-warping, aluminum-base voice coils are virtually unaffected by extreme humidity and have unusually good heat-dissipation characteristics for greatly improved power handling capacity. Excellent magnet structures with Alnico V magnets assure very high efficiency and clean, authentic reproduction. Voice coil impedance, 8 ohms.

**MODEL 818-D 8".** Frequency response, 80 to 10,000 cps. Cone resonance, 100 cps. Magnet weight, 6.8 oz. Power handling capacity, 12 watts. Shpg. wt., 2 1/4 lbs. **81 D 481.** List, \$14.40. **NET..... 8.47**

**MODEL 1218-D 12".** Frequency response, 60 to 8000 cps. Cone resonance, 70 cps. Magnet weight, 6.8 oz. Power handling capacity, 12 watts. Shpg. wt., 4 1/2 lbs. **81 DX 486.** List, \$19.55. **NET..... 11.50**

**MODEL 51201A 12".** Widely used in deluxe PA installations. Frequency response, 50 to 13,000 cps. Cone resonance, 70 cps. Employs extra-heavy magnet and large voice coil for extremely high efficiency and unusually clean reproduction. Rigid, "All-Weld" construction maintains optimum flux density. Voice coil diameter, 1 1/4". Magnet weight, 14.5 oz. Power capacity, 25 watts. Shpg. wt., 6 lbs. **81 DX 510.** List, \$33.95. **NET..... 19.95**

**Lowell Ceiling Baffles**

Excellent for installations where speaker system must be as neat and inconspicuous as possible, but provide efficient sound dispersion. Feature floating conical diffuser action and heavy jute loading to cancel metallic resonance. Provide 360° coverage. Heavy gauge aluminum with clear lacquer coating. For normal height ceilings.

**Fig. H. SURFACE MOUNTING TYPE.** Recommended for all types of ceilings. Can be installed quickly.

**MODEL 816-A.** For 6" speakers. Size: 12 1/4" dia. x 7 1/4" high; 5 1/2" deep. Shpg. wt., 7 1/2 lbs. **95 DX 223.** List, \$13.00. **NET..... 7.64**

**MODEL 818-A.** For 8" speakers. Size: 14 1/4" dia. x 8 1/4" high; 6 1/2" deep. Shpg. wt., 9 1/2 lbs. **95 DX 224.** List, \$22.00. **NET..... 12.94**

**MODEL 812-A.** For 12" speakers. Size: 16 1/2" dia. x 9 1/4" high; 7 1/2" deep. Shpg. wt., 11 1/2 lbs. **95 DX 225.** List, \$27.00. **NET..... 15.88**

**Fig. I. FLUSH MOUNTING TYPE.** Use where speaker can be recessed into ceiling. Require can and plaster ring assembly, below.

**MODEL AL6-A.** For 6" speakers. Size: 10 1/4" dia. Shpg. wt., 5 lbs. **95 DX 226.** List, \$7.50. **NET..... 4.41**

**MODEL AL8-A.** For 8" speakers. Size: 12 1/4" dia. Shpg. wt., 7 lbs. **95 DX 227.** List, \$12.15. **NET..... 7.14**

**MODEL AL12-A.** For 12" speakers. Size: 16 1/2" dia. Shpg. wt., 9 lbs. **95 DX 228.** List, \$15.30. **NET..... 9.00**

**Fig. J—Can & Plaster Ring Assembly for Flush Mounting Baffles**

For recessed mounting of Lowell baffles in wall or ceiling. Consists of strong steel speaker can with ring attached for mounting in plaster. Interior treated to prevent metallic resonance. Have 1/4" knockouts for wiring. With all mounting hardware.

**MODEL CP6.** For Model AL6A assembly in new construction. Size, 7" ID x 4" deep x 12" OD. Shpg. wt., 4 1/2 lbs. **95 DX 235.** List, \$6.85. **NET..... 4.03**

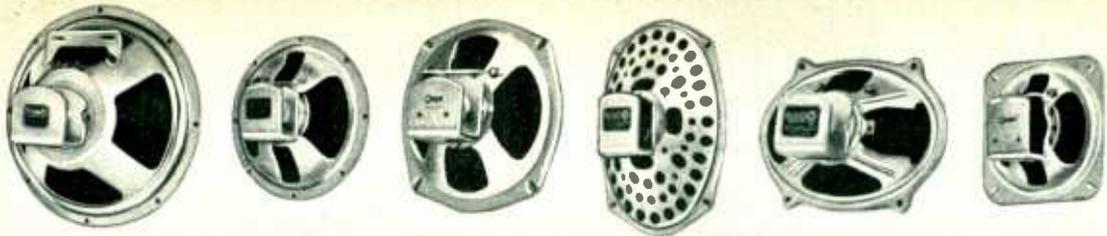
**MODEL CP8.** For Model AL8A assembly in new construction. Size, 8 1/2" ID x 4 1/4" deep x 12 1/2" OD. Shpg. wt., 5 lbs. **95 DX 236.** List, \$8.50. **NET..... 5.00**

**MODEL CP12.** For Model AL12A assembly in new construction. Size, 12 1/2" ID x 7" deep x 17 1/2" OD. Shpg. wt., 7 lbs. **95 DX 237.** List, \$11.50. **NET..... 6.76**

**MODEL XCP6.** For Model AL6A assembly in existing construction. Size, 7" dia. x 4" deep. Shpg. wt., 4 1/2 lbs. **95 DX 232.** List, \$6.00. **NET..... 3.53**

**MODEL XCP8.** For Model AL8A assembly in existing construction. Size, 8 1/2" dia. x 4 1/4" deep. Shpg. wt., 5 lbs. **95 DX 233.** List, \$7.50. **NET..... 4.41**

**MODEL XCP12.** For Model AL12A assembly in existing construction. Size, 16 1/2" dia. x 7" deep. Shpg. wt., 7 lbs. **95 DX 234.** List, \$10.00. **NET..... 5.88**



## Famous Quam Adjust-A-Cone Speakers

Quam speakers feature two exclusive engineering developments. One is the U-shaped field coil pot feature which provides an unbroken flux path of sufficient cross section to carry the full energy of the magnetic field. The second feature is the Quam Adjust-A-Cone suspension consisting of a clamping ring securely fastening the spider to the basket by means of two machine screws rather than cementing the spider. This assures

precision centering of the voice coil. Quam speakers employ Alnico V magnets in the PM units. Special pot material is selected for low carbon content and high magnetic properties. All models are carefully dust-proofed. Quam 3½" to 6½" units are furnished with a universal mounting bracket which may be attached to any two of the four mounting holes in the pot. All are high efficiency speakers with improved response.

### Permanent Magnet Speakers

Quam permanent magnet speakers are dependable, quality units for replacement in home receivers, auto receivers, television sets, phonographs and intercommunications systems. Built to RETMA standard dimensions. Fully dustproofed and finished in baked aluminum enamel. All models use Alnico V magnets and have 3.2-ohm voice coils.

Stock No.	Model No.	Size	Max. Watts	Magnet Weight	Wt. Lbs.	NET EA.
81 D 346	3A07	3½"	2.5	.68 oz.	½	2.35
81 D 320	4A07	4"	3.0	.68 oz.	½	2.35
81 D 321	4A1	4"	3.0	1.0 oz.	¾	2.50
81 D 322	4A15	4"	3.0	1.47 oz.	¾	2.76
81 D 347	46A07	4x6"	3.5	.68 oz.	¼	2.62
81 D 371	46A1	4x6"	3.5	1.0 oz.	1	2.79
81 D 372	46A15	4x6"	3.5	1.47 oz.	1	3.03
81 D 323	5A07	5"	3.5	.68 oz.	¾	2.47
81 D 324	5A1	5"	3.5	1.0 oz.	1	2.62
81 D 325	5A15	5"	3.5	1.47 oz.	1	2.85
81 D 317	5Z2A1	5½"	4.0	2.15 oz.	1¼	3.35
81 D 348	5Z7A	5½"	5.0	1.0 oz.	1	3.53
81 D 334	5Z7A15	5½"	5.0	1.47 oz.	1	3.41
81 D 339	5Z7A21	5½"	5.0	2.15 oz.	1¼	3.79
81 D 326	6A1	6½"	5.0	1.0 oz.	1	2.82
81 D 327	6A15	6½"	5.0	1.47 oz.	1	3.06
81 D 328	6A21	6½"	5.0	2.15 oz.	1¼	3.44
81 D 332	6A31	6½"	6.0	3.16 oz.	1½	3.97
81 D 373	69A2	6x9"	8.0	1.4 oz.	1½	4.41
81 D 374	69A3	6x9"	10.0	3.2 oz.	1¾	5.26
81 D 331	7A21	7"	6.0	1.4 oz.	1	4.26
81 D 332	7A31	7"	9.0	3.16 oz.	2	5.00
81 D 329	8A21	8"	7.0	2.15 oz.	1½	4.23
81 D 330	8A31	8"	9.0	3.16 oz.	2¼	5.00
81 DX 388	10A31	10"	9.0	3.16 oz.	2¼	6.17
81 DX 333	12A31	12"	10.0	3.16 oz.	3¼	6.67

### Outdoor Theater Speakers

Recommended for installations that must withstand excessive moisture. All equipped with moisture-resistant cones and Alnico V magnets; air gap surfaces and frame are weatherproofed. Voice coil impedance, 3.2 ohms.

Stock No.	Model No.	Size	Max. Watts	Magnet Weight	Wt. Lbs.	NET EA.
81 D 308	3A07(T)	3½"	2.5	.68 oz.	½	2.35
81 D 393	4A10(T)	4"	3	1.0 oz.	¾	2.50
81 D 305	4A15(T)	4"	3	1.47 oz.	¾	2.76
81 D 306	5A15(T)	5"	3.5	1.47 oz.	1	2.85
81 D 307	6A21(T)	6"	5	2.15 oz.	1¼	3.44

Quam outdoor theater speakers not listed above are available on special order. You can save by buying in large quantities. Write for quotations.

### Heavy-Duty Public Address Permanent Magnet Speakers

These heavy-duty permanent magnet speakers are specifically designed to deliver highly dependable service in public address installations. Offer high power handling capacity, excellent tonal quality, and rugged construction throughout. Complete dust-proofing and rigid welding assure permanent alignment of integral parts. Incorporate Quam's Adjust-A-Cone suspension for precision centering of spider assembly and cone. Excellent frequency response characteristics for very smooth, clean reproduction of voice and music. All have 6-8 ohm voice coils.

See page 30 for Quam Hi-Fi Speakers and Tweeters

### General Electric Replacement Speakers

Years of manufacturing experience and the best of materials go into the construction of these loudspeakers. All feature Alnico V magnets and aluminum-base voice coils—unaffected by moisture and temperature changes. All speakers have 3.2 ohm voice coils. Chassis mounting brackets are included with all 4", 5", and 5½" speakers. \*Specially designed for outdoor theatre use; have water-resistant cones, waterproof gaskets and special metal finish.

Stock No.	Model No.	Size	Max. Watts	Magnet Wt., Oz.	Shpg. Wt.	NET EA.
81 D 470	400(D)	4"	4	1.3	10 oz.	2.70
81 D 471	403(D)	4"	4	.68	8 oz.	2.35
81 D 472	500(D)	5"	4	1.3	12 oz.	2.82
81 D 473	503(D)	5"	4	.68	10 oz.	2.47
81 D 474	525(D)	5½"	4	1.3	12 oz.	2.94
81 D 475	526(D)	5½"	4	1.0	12 oz.	2.73
81 D 476	527(D)	5½"	4	.68	12 oz.	2.70
81 D 477	625(D)	6½"	4	1.3	14 oz.	3.06
81 D 478	626(D)	6½"	4	1.0	14 oz.	2.94
81 D 479	703(D)	6x9"	8	1.47	1½ lbs.	5.09
81 D 480	810(D)	8"	12	6.8	2½ lbs.	8.11
81 D 483	1012(D)	10"	12	3.16	3½ lbs.	6.94
81 DX 485	1212(D)	12"	12	3.16	4½ lbs.	7.61
81 D 487	*400C22	4"	4	1.3	12 oz.	2.35
81 D 488	*525C18	5½"	4	1.3	12 oz.	2.53

See page 178 for listings of G.E. PA speakers.

For Complete Index, see Pages 301-304

### Electro-Dynamic Speakers

Field coils made from carefully tested materials. 3.2-ohm voice coil impedance. Wattage ratings are conservative. 4", 5", 5½", 5x7", 6½" and 4x6" speakers have 4 tapped holes in coil pot for chassis mounting plus universal mounting brackets. 1 Equipped with hum-bucking coils.

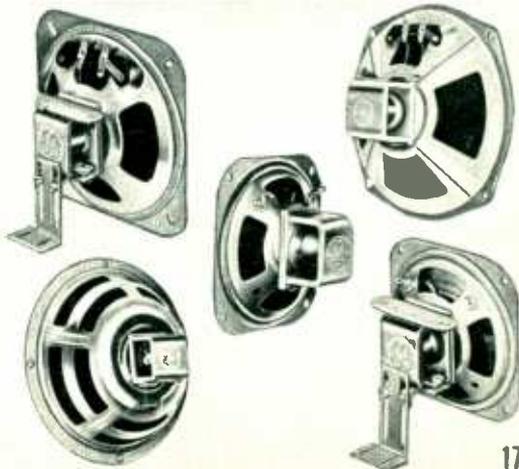
Stock No.	Model No.	Size	Field Ohms	Max. Watts	Wt. Lbs.	NET EA.
81 D 350	4E45	4"	450±	3.0	1	2.59
81 D 375	46E45	4x6"	450±	3.5	1¼	3.12
81 D 377	46E15	4x6"	1500	3.5	1¼	3.12
81 D 351	5E6V	5"	6-V.	3.5	1	2.70
81 D 352	5E45	5"	450±	3.5	1	2.70
81 D 353	5E10	5"	1000	3.5	1	2.70
81 D 354	5E18	5"	1800	3.5	1¼	2.70
81 D 349	5E27	5"	2700	3.5	1	2.70
81 D 389	5Z1E10	5½"	1000	4.0	1¼	2.94
81 D 366	5Z1E6V	5½"	6-V.	4.0	1½	2.94
81 D 369	5Z1E45	5x7"	450±	5.0	1½	3.53
81 D 356	6E6V	6½"	6-V.	5.0	1½	3.18
81 D 357	6E10	6½"	1000	5.0	1½	3.18
81 D 358	6E18	6½"	1800	5.0	1½	3.18
81 D 378	69E6V	6x9"	6-V.	8.0	2	3.97
81 D 368	7E6V	7"	6-V.	7.0	2	3.97
81 D 360	8E6V	8"	6-V.	7.0	1½	3.97
81 D 361	8E10	8"	1000	7.0	1½	3.97
81 D 362	8E18	8"	1800	7.0	1½	3.97
81 DX 391	10E10	10"	1000±	10.0	4	6.17
81 DX 386	12E60	12"	600±	12.0	5	7.44
81 DX 364	12E10	12"	1000±	12.0	5	7.44
81 DX 392	12E15	12"	1500±	12.0	5	7.44

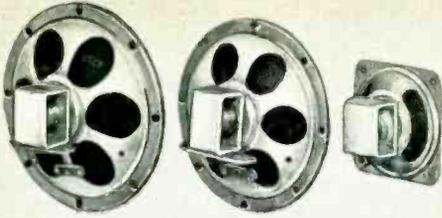
### Television Speakers

Electro-dynamic type speakers for exact replacement in TV receivers. All are equipped with hum-bucking coil. Impedance, 3.2 ohms.

Stock No.	Model No.	Size	Max. Watts	Wt. Lbs.	NET EA.	
81 D 380	5E62	5"	62	3.5	2	2.70
81 D 381	5E95	5"	95	3.5	2	2.70
81 D 382	46E62	4x6"	62	3.5	2	3.12
81 D 383	46E95	4x6"	95	3.5	2	3.12
81 D 384	6E62	6½"	62	5	2½	3.18
81 D 385	6E95	6½"	95	5	2½	3.18

All of the Quam speakers listed on this page can be supplied with special voice coil impedances and special field coil resistances. Speakers with special voice coils are available at 15c extra; special field coils are available at no extra charge.



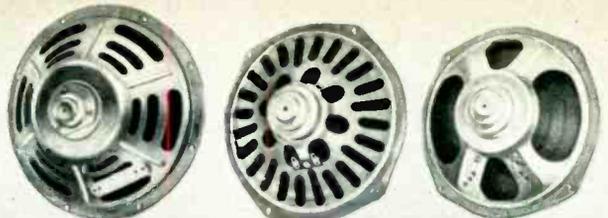


## RCA "Gold Label" PM Dynamic Speakers

Designed to fulfill most speaker replacement requirements. Have felt cones for uniform strength and smooth response over the entire operating frequency range. Moisture-resistant voice-coil and cone. Alnico V magnets. All 4", 4x6", and 5" types supplied with universal mounting brackets for transformer and speaker. (RETMA mounting standards followed.) Dust-sealed and rust-resistant. Voice-coils 3.2 ohms, except \*11.8 ohms (for RCA "Personal Portable") and 16-8 ohms.

Specialized manufacturing equipment and exclusive RCA structural processes make each speaker a rugged, reliable replacement for almost every speaker requirement.

Stock No.	RCA Type	Size	Watts	Magnet Weight	Wt. Lbs.	NET EACH
81 D 456*	214S1	2x3 <sup>3</sup> / <sub>4</sub> "	1/4	1 oz.	1/2	2.79
81 D 119	216S1	3"	2	1 oz.	1	2.35
81 D 457	304S2	4"	3	1 oz.	3/4	2.35
81 D 462	404S2	4"	3	1.47 oz.	1	2.55
81 D 452	246S2	4x6"	3	0.68 oz.	1 1/2	2.47
81 D 453	446S2	4x6"	3	1.47 oz.	1 1/2	2.79
81 D 120	205S2	5"	3	0.68 oz.	1	2.35
81 D 121	217S1	5 1/2"	4	1 oz.	1	2.35
81 D 451	406S2	5"	3	1.47 oz.	1 1/4	2.70
81 D 459	257S1	5x7"	6	1.47 oz.	1 1/4	3.38
81 D 123	220S1	6 1/2"	4	2.15 oz.	2	3.57
81 D 122	218S1	6x9"	8	2.9 oz.	2	6.12
81 D 466	208S2	8"	8	2.15 oz.	2 1/4	4.41
81 D 460†	208S4	8"	8	2.15 oz.	2 1/4	4.41
81 DX 467†	215S1	10"	10	6.8 oz.	4 3/4	7.79
81 DX 454	112S1	12"	12	2.15 oz.	3 3/4	6.17
81 DX 455	412S6	12"	12	6.8 oz.	4 1/2	8.08
81 DX 458†	412S7	12"	12	6.8 oz.	4 1/2	8.82



## Jensen "Viking" Speakers

The new "Viking" line of Jensen loudspeakers are especially designed to deliver maximum quality at a minimum cost. They fill the need for a low-cost line of speakers for replacement purposes or for installation in original equipment. This listing of "Viking" speakers is ample in scope to cover most of the requirements of loudspeaker applications. Specifications covering the basic designs include, as standard, 2 solder lugs for voice coil connections, cone rim gasket and cadmium plating. Voice coil impedance of all speakers listed is 3-4 ohms. These speakers are ideal economical replacements for speakers in AC, AC-DC, auto or portable sets, as well as small table radios, etc. All 3 1/2" to 6" speakers have 3/8" dia. voice coils. All 7" and 8" speakers have 1/2" dia. voice coils. 10" and 12" speakers have 1" dia. voice coils. The 4x6" has a 3/8" dia. voice coil, the 5x7" and 6x9" speakers have 1/2" dia. voice coils. \*Takes mounting bracket CTM-1. Order 81 D 187; no charge with speaker order.

Stock No.	Jensen Type	Size	Mtg. Centers	Max. Watts	Wt., Lbs.	NET EACH
81 D 174	316	3"	2 3/8"	2	1/2	2.07
81 D 188	3516*	3 1/2"	2 3/8"	2	1/2	2.02
81 D 189	416*	4"	3 3/8"	2	1/2	2.02
81 D 190	516*	5"	3 3/8"	2.5	1/2	2.26
81 D 191	525J6*	5 1/2"	3 3/8"	3	3/4	2.33
81 D 192	616*	6"	4 1/4"	3.5	3/4	2.45
81 D 180	719	7"	5 1/2 x 4 1/4"	4.5	1	3.49
81 D 181	819	8"	6 1/2"	5	1 1/4	3.49
81 DX 193	10110	10"	6 5/8"	7	2 1/2	5.61
81 DX 194	12110	12"	8 1/8"	9	3 1/2	6.24
81 D 184	4616*	4x6"	3 3/4 x 4 3/8"	3	1 1/2	2.63
81 D 185	5719	5x7"	4 1/2"	4	1	3.29
81 D 186	6919	6x9"	6 3/8 x 4 5/8"	5	1 1/4	3.65

See below for additional listings of Jensen "Standard Series" and "Weathermaster" outdoor speakers, accessories, and transformers.



## Jensen "Standard Series" PM Dynamics

A popular line of high-quality speakers for use as replacements or for installation in original equipment. Have famous Alnico V magnets for greater clarity and efficiency in speaker operation. Magnetic structures are carefully designed to achieve maximum gap energy. Cones are felted and have been selected for uniformity of frequency response. Completely dustproof. Require minimum cabinet space for mounting. Have provisions for mounting speaker matching transformers on frames. All units have 3.2 ohm voice coils; meet RETMA standards. Excellent for replacements in console, table model and auto radios; also excellent for numerous public address applications. All "Standard Series" speakers are finished in aluminum.

Stock No.	Jensen Model	Size	Mtg. Centers	Watts	Wt. Lbs.	NET EACH
82 D 172	P275-V	2 1/4"		15	1/4	4.26
82 D 173	P4-X	4"	4 1/8"	2 0	1 1/2	2.73
82 D 174	P5-X	5"	4 1/8"	2 5	1 3/4	2.95
82 D 176	P5-V	5"	4 1/8"	3 5	1 3/4	3.12
82 D 177	P6-N	6"	6 3/8"	3 0	2	2.91
82 D 179	P6-V	6"	6 3/8"	4 0	2	3.23
82 D 181	P6-T	6"	6 3/8"	6 0	2	3.97
82 D 195	P69-V	6x9"	6 3/8 x 4 3/8"	5 0	2 1/2	3.97
82 D 182	P8-V	7"	7 1/8"	5 0	2 1/2	4.09
82 D 183	P8-U	8"	7 1/8"	6 0	2 3/4	4.85
82 D 184	P8-T	8"	7 1/8"	7 0	2 3/4	5.41
82 D 185	P8-S	8"	7 1/8"	8 0	3 3/4	6.35
82 D 187	P10-T	10"	9 3/8"	8 0	5	6.17
82 D 188	P10-S	10"	9 3/8"	9 0	5	7.88
82 DX 190	P12-T	12"	11 3/8"	9 0	5	8.00
82 DX 191	P12-S	12"	11 3/8"	10 0	6	8.67

## Jensen "Weathermaster" Outdoor Speakers

Excellent weather-resistant speakers for drive-in theatre speaker systems. Made with special adhesives, phenolic-impregnated spiders, baked varnish-impregnated voice coils, and non-swelling gaskets. Magnets permanently locked in center position to withstand rough handling. Type WP-401 has cone of phenolic resin-impregnated fabric to form a tough impervious plastic diaphragm (of the same type used in military weather- and blast-proof speakers). Types WF-400 and WF-350 have cones formed of high rag content fibers, lacquer- and fungicide-impregnated. Shpg. wt., 1 1/2 lbs.

Stock No.	Mfr's Type	Width x Depth	Coil Imp.	NET
82 D 196	WF-350-3 1/2"	3 1/2 x 1 3/8"	3.2	2.25
82 D 197	WF-400-4"	4 1/8 x 1 3/8"	3.2	2.25
82 D 198	WP-401-4"	4 3/8 x 1 3/8"	3.2	3.82

## Jensen Matching Transformers

Jensen adjustable impedance transformers are specifically designed for coupling all types of speakers to widely different impedance requirements. All impedance values are clearly identified opposite each jack connector on a bakelite terminal strip. Adjustments are easily made with flexible lead and pin plug. Moisture-protected by heavy wax impregnation. Uncased. May be mounted directly on speaker.

### Type "ZY" for Matching Line

Impedances: 500, 1000, 1500, 2000 ohms to voice coil. Impedance values permit properly matching several transformer-speaker combinations to 500-ohm line. Use with public address or paging systems when speaker is over 100 ft. from amplifier.

Stock No.	Jensen Type	Mounting Centers	Sec.	Watts	Wt. Lbs.	NET EACH
64 G 812	ZY-2003	3 1/4"	6-8	16	2	6.06
64 G 806	ZY-2002	2 1/8"	6-8	10	1 1/2	4.23
64 G 820	ZY-4002	2 3/8"	3-4	6.5	1	2.82

### Types "ZP" and "ZL" for Plate or Line

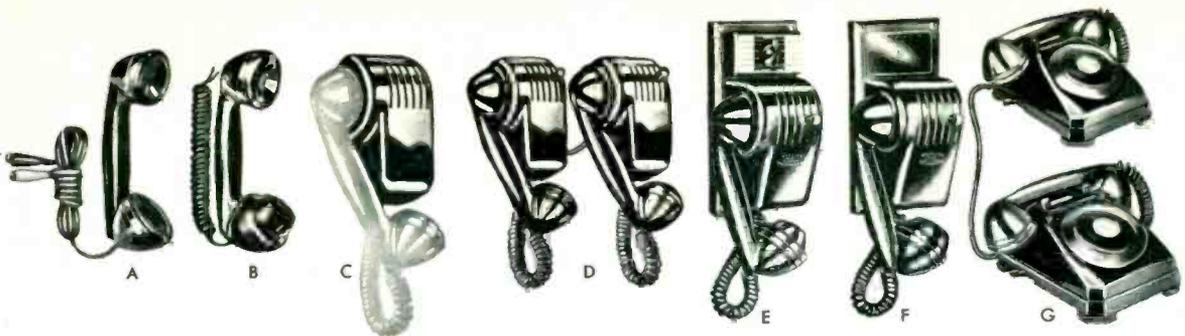
Solder Lug Terminals. Low cost "P" and "L" transformers similar to types X and Y, but without pin jack arrangement. Adjustments require solder connections to terminal strip lugs. Types ZP1023 and ZP1024 are plate transformers for 1500, 2000, 10,000 and 14,000 ohms. Type ZP1025 is plate transformer for 1500, 2000 and 2500 ohms. Type ZL2021 is line transformer for 500, 1000, 1500, 2000 ohms. \*Center-tapped.

Stock No.	Jensen Type	Mounting Centers	Sec.	Watts	Wt. Lbs.	NET EACH
64 G 821	ZP-1023	2"	3-4	3.5	3/4	1.82
64 G 823	ZP-1025	2"	3-4	3.5	3/4	1.82
64 G 824	ZL-2021	2"	3-4	3.5	3/4	1.82
64 G 822	*ZP-1024	2 3/8"	3-4	6.5	1	2.12

## Jensen Speaker Volume Controls

"L" pad-type volume controls for connection at speaker voice coils. Have many uses in adjusting volume levels at individual speakers in PA, intercom and custom home installation systems. For use in low-impedance circuits. Type ST-276, 5 watts. ST-411, 15 watts, are constant load type controls for general purpose 6-8 ohm level control. Type ST-760 is rated 5 watts for 3-4 ohm level control. All have "on" and "off" positions and gradual, smooth control. With knob and dial. Shpg wt., 5 oz.

33 M 940.	Type ST-276.	List \$3.00.	NET	1.76
33 M 941.	Type ST-411.	List \$4.70.	NET	2.76
33 M 942.	Type ST-760.	List \$3.35.	NET	1.97



## Wheeler Sound-Powered Telephones

### Individual Handsets and Holders

**Fig. A. MODEL SPT-102 HANDSET.** Self-contained, self-powered telephone handset. Requires no batteries or supply line voltage. For distances to 20 miles. Up to 12 units may be connected in parallel. With 3½-ft. cable and clips, less wire. Uses 2-conductor, twisted-pair wire. 1½ lbs.

**59 J 350.** List, \$13.75. **NET EACH... 9.62**

**Fig. B. MODEL SPT-123 HI-LEVEL HANDSET.** Extra-sensitive handset for use where background noise is particularly high. Up to 12 units may be connected in parallel. Two-conductor twisted-pair cable may be used for hookup. Shpg. wt., 1½ lbs.

**59 J 360.** List, \$15.40. **NET EACH... 10.78**

**MODEL SPT-150.** Same as SPT-123 but with insulated clips.

**59 J 361.** List, \$16.00. **NET EACH... 11.20**

**Fig. C. MODEL F-5308 HANDSET HOLDER.** Wall mount handset holder with switch hook and terminal board for use with SPT-102 and SPT-123 handsets. For installations where separate ringing systems are to be used. 2¼x5¼x3". 1½ lbs.

**59 J 355.** List, \$14.00. **NET EACH... 8.40**

**MODEL F-4182 HANDSET HOLDER WITH BELL.** As above, with bell. For SPT-123 handsets. Has lever to ring bell at other end of line. Up to 3 may be used in a common ringing system. 1½ lbs.

**59 J 356.** List, \$19.48. **NET EACH... 11.69**

### Telephone Intercom Systems

**Fig. D. MODEL SPS-205 TWO-PHONE.** Each has lever for ringing bell at other end of line. Uses twisted-pair (2-cond.) wire. Neoprene-sheathed, self-retracting cord. No batteries or outside source of power required. Less cable. Shpg. wt., 7 lbs.

**59 J 351.** List, \$73.15. **Per System, 43.89**

**MODEL SPS-205-H.** Similar to SPS-205 but delivers higher voice level. 3-cond. wire.

**59 J 362.** List, \$86.00. **NET EACH... 51.60**

**MODEL SPS-205-3 THREE-PHONE.** Same features as above, but has 3 handset stations. Uses 2-conductor cable. 10 lbs.

**59 J 352.** List, \$109.72. **Per System 65.83**

### Multi-Service Intercom Systems

Wheeler phones and intercom systems provide clear communication over distances to 25 miles—without batteries or other outside power. Current for transmission is generated by the voice; bell-ringing current is generated by bell-ringing lever. Free of sparking and fire hazards. Handsets and holders of impact-resistant plastics. All operating parts are corrosion-resistant.

### TELEPHONE INTERCOM SYSTEM

There are 2 types of telephone intercom systems; both are selective-ringing, common-talking. **All-Master System:** Consists of up to 12 SPS-205-M1 master phones (Fig. E). Any master can ring and communicate with any other master, or up to 6 stations may be used on a conference basis. **Master-Sub System:** Consists of 1 SPS-205-M1 master phone and up to 11 SPS-205-SI sub-station phones (Fig. F). The master can ring and communicate with any sub-station; subs can ring and communicate with the master directly and can reach other sub-stations by having the master ring the desired sub-station. Up to 6 stations may be used on a conference basis. **Cable Requirements:** All-Master system, 2 common wires and 1 additional wire for each station, between each station; Master-Sub System, 3 common wires, and 1 wire from each sub-station to the master station.

**Fig. E. MODEL SPS-205-M1 MASTER PHONE.** Shpg. wt., 5 lbs.

**59 J 353.** List, \$61.60. **NET EACH, 36.96**

**Fig. F. MODEL SPS-205-SI SUB-STATION PHONE.** Shpg. wt., 5 lbs.

**59 J 354.** List, \$52.25. **NET EACH, 31.35**

### Executive Type Phone System

Newest Wheeler "Executive" top-of-desk mounting cradle phone set. Particularly suitable for desk mounting applications as part of a pair-phone system or three-phone, common ringing, common-talking system. For office-to-stockroom, etc. Systems can be of one SPS-405 desk set of two cradle phones, or a combination of cradle-phone and one SPS-205 wall instrument.

### DURABLE CONSTRUCTION

The generator, ringer and handset are completely enclosed in high-quality, molded black plastic case with a rugged metal sub-base. Cradle base utilizes shock-absorbing pads. Installation is simple—complete instructions are included with each instrument. Standard cup-type mouth-piece provides true speech reproduction, unaffected by static or other electrical noises. All metal parts are made of corrosion-resistant materials. Switch contacts are double-palladium welded. Impregnated, moisture-proof coils. Uses 2-conductor, twisted-pair cable. The set is provided with an 8-ft., 2-conductor neoprene insulated cable and 3-point terminal board with cover. Size of base, 5¼" wide, 9" deep. Shpg. wt., per two-phone system, 7½ lbs.

**Fig. G. MODEL SPS-405.** Consists of two "Executive" model, cradle-type phones. List, \$93.00.

**59 J 358.** **NET PER SET... 55.80**

**MODEL SPS-205, SPS-405.** Consists of one SPS-205 wall-mounting phone; one SPS-405 cradle-type phone. List, \$83.08.

**59 J 359.** **NET PER SET... 49.85**

### Cable for Wheeler Phones

**2-CONDUCTOR CABLE, No. 18, weatherproof.** Shpg. wt., 100 feet, 2½ lbs.

**47 T 639, 100' or more.** Per 100'... **3.38**

**1-CONDUCTOR CABLE, No. 18, Wt., 100 ft., 12 oz.**

**47 T 901, 100' or more.** Per 100'... **1.52**

**12-CONDUCTOR CABLE, Vinyl-covered cable.** Shpg. wt., 100 feet, 4¼ lbs.

**48 W 893, 100' or more.** Per 100'... **6.27**

**3-CONDUCTOR CABLE, No. 19 solid 3-cond cable for intercom and telephone wire.** For interior or exterior use. Two conductors tinned, one black enameled for coding. Shpg. wt., 100 feet, 4 lbs.

**48 W 825, 100' or more.** Per 100'... **4.53**

For additional wire and cable listings, see pages 220 to 223.

## Rear Deck Auto Speaker Selection

**Fig. H. AUTONE MODEL 600.** For rear deck installation in automobiles. Three-way control switch permits operation of front or rear speaker independently, or both simultaneously. Consists of 6" PM Alnico V speaker with 1.47-oz. magnet and protected basket. Has 3.2-ohm voice coil. Brown finish grille. Complete with 15-ft. 2-conductor cable, 2-ft. 3-conductor cable. Wt., 2 lbs.

**81 D 670.** List, \$9.50. **NET... 5.59**

**Fig. H. AUTONE MODEL 690 6X9" DELUXE.** A new model 6x9" deluxe speaker using a 2.15-oz. Alnico V magnet. Gray hammerloid, aluminum die-cast grille with gray flocked wire screen. With 3-way switch, 15-ft. of cable and all necessary hardware. Fits all auto radios in all cars. Shpg. wt., 4 lbs.

**81 D 676.** List, \$13.50. **NET... 7.94**

**Fig. I. PERMOFLUX MODEL R546A 4X6" "UNIVERSAL".** For any auto radio in any car. For operation of front and rear speakers separately or together. V. C. Imp. 3.2 ohms. 2¼" deep. Grille, 6½x4½". Wt., 2½ lbs.

**81 D 527.** List, \$13.50. **NET... 7.94**

**Fig. J. MODEL R5691, 6x9" speaker, 3½" deep. Grille 6½x9½". Wt., 3 lbs.**

**81 D 528.** List, \$17.50. **NET... 10.29**

**Fig. K. QUAM MODEL AS-2.** Deluxe rear-deck speaker kit, featuring a Quam 6x9" Adjust-A-Cone speaker. Uses 2.15 oz., Alnico V magnet. Imp., 3.2 ohms. 3-position switch mounts on dash. With cable and hardware. Wt., 3½ lbs.

**81 D 390.** List, \$13.95. **NET... 8.20**

**Fig. L. D & M MODEL SG69C.** Chrome grille for 6x9" speaker. With flocked screen and mounting hardware (less speaker and switch). Wt., 1 lb.

**95 D 243.** List, \$3.95. **NET... 2.32**



Master with  
Redi-Power



A



B

Optional Features



D

E

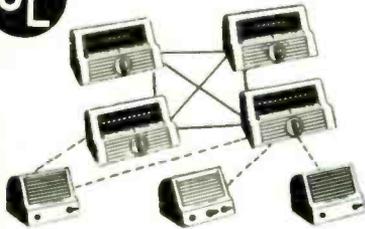


Talk-A-Phone "Chief" Intercommunication Systems—U.L. Approved

**MEETS EVERY INTERCOM NEED.** The "Chief" is the ultimate in a completely flexible, deluxe intercom system. It meets all possible intercommunication needs in every type of office, factory, institution, etc. "Dynasonic" design permits expansion or modification of systems to meet new situations—without discarding original "Chief" equipment. Ruggedly built, for dependable, day-in and day-out operation. Economical to operate—only Masters are connected to power lines. Easy to install.

**SAVES TIME AND EFFORT.** A great time-saver, the "Chief" soon pays for itself. Avoids needless trips; reduces load on busy switchboards. Provides instantaneous communication between executives and key personnel.

**BEAUTIFUL STYLING.** Both Masters and Staffs are housed in molded bakelite cabinets and finished in rich walnut or executive gray. Streamlined, compact design—ideal for use in any surroundings.



**MAXIMUM FLEXIBILITY.** The "Chief's Dynasonic" design permits any kind of combination: An all-Master Station system; a single Master with Staffs; Masters inter-mixed with Staffs. The possible number of stations in any system is virtually unlimited. Six, 12, 20, 40 and 50 station Masters can be used within the same system. Masters may talk with any other Master in the system and with any Staff. Staffs may answer all Masters and originate calls to as many as 6 Masters, depending upon the Staff's capacity.

**STANDARD FEATURES:** "Chief" systems give you (in addition to "Dynasonic" design): (1) Multi-Magic Selector, which permits selection of up to 40 stations with only 12 push-buttons; (2) Uni-Trans, which locks the push-to-talk bar in "Talk" position for convenience in dictating; (3) Hold-A-Matic Conference Control, which holds down several buttons at once for conferences.

Fig. A—"Chief" Universal Master Stations

Chief Masters with 6, 12, 20, 30, 40 and 50 station capacity. Operate from 110-120 volts, 50-60 cycle AC, or 110-120 volts DC. Plastic Push-to-Talk bar and volume control knob. Pilot light illuminates volume control knob when intercom is "On." Complete with junction box and instructions. Walnut-finish bakelite cabinets. Overall size, 12" wide, 7" high, 9 1/4" deep.

C-4906. 6-station capacity Master. Shpg. wt., 13 lbs.	
95 RX 885. List, \$89.50. NET PER STATION	52.50
C-4912. 12-station capacity Master. Shpg. wt., 14 lbs.	
95 RX 887. List, \$106.00. NET PER STATION	62.25
C-4920. 20-station capacity Master. Shpg. wt., 17 lbs.	
95 RX 888. List, \$125.00. NET PER STATION	73.50
C-4930. 30-station capacity Master. Shpg. wt., 20 lbs.	
95 RX 889. List, \$144.00. NET PER STATION	84.50
C-4940. 40-station capacity Master. Shpg. wt., 23 lbs.	
95 RX 861. List, \$163.00. NET PER STATION	95.50
C-4950. 50-station capacity Master. Shpg. wt., 26 lbs.	
95 RX 862. List, \$182.00. NET PER STATION	107.00

Fig. A—"Chief" Redi-Power Master Stations

"Redi-Power" masters can be included in any "Chief" system. Built-in amplifier provides a maximum of 20 watts which may be divided among as many as 10 stations—or concentrated on 1 station. Just press the Redi-Power button (Fig. C) for high-power paging use C-20 or IIP-3 sub-station (see p. 183). AC only; other features same as for the Universal Masters described above.

C-RP-5912. Redi-Power Master; 12-station capacity. 18 lbs.	
95 RX 882. List, \$160.00. NET PER STATION	94.00
C-RP-5920. Redi-Power Master; 20-station capacity. 21 lbs.	
95 RX 883. List, \$179.00. NET PER STATION	105.25
C-RP-5911. New Redi-Power Master. Features single-button paging of pre-selected stations—in addition to serving as a Master intercom. To page all stations in paging circuit, merely press the "Page" button. 11-station capacity. Shpg. wt., 18 lbs.	
95 RX 892. List, \$190.00. NET PER STATION	112.00

**"Chief" Staff Stations**  
For use with Masters at left. May be connected "non-privately" to permit persons at Staff Stations to answer from a distance, without operating controls; or "privately," to require operation of Staff Talk-Listen switches. No current is consumed by Staffs.

Fig. B. TYPE C-41 STAFF STATION. For originating calls to one Master. Walnut finish molded bakelite cabinet. Size, 6 1/4" high, 8" wide, and 7 1/2" deep. Shpg. wt., 5 lbs.	
95 RX 886. List, \$22.00. NET PER STATION	12.95
TYPE C-41M STAFF STATION. (Not illustrated.) Same as C-41 except in metal cabinet with brown wrinkle finish. 6 1/4" x 8 x 7 1/2" deep. 3 lbs.	
95 R 863. List, \$22.00. NET PER STATION	12.95
Fig. B. TYPE C-42 STAFF STATION. For originating calls to two Masters. Walnut finish molded bakelite cabinet. Size, 6 1/4" high, 8" wide, and 7 1/2" deep. Shpg. wt., 5 lbs.	
95 RX 890. List, \$29.00. NET PER STATION	17.00
TYPE C-42M STAFF STATION. (Not illustrated.) Same as C-42 except in metal cabinet with brown wrinkle finish. 7x6x4. 3 lbs.	
95 R 864. List, \$29.00. NET PER STATION	17.00
TYPE C-46 PUSH-BUTTON STAFF STATION. (Not illustrated.) For originating calls to six Masters. Walnut finish molded bakelite cabinet. Size, 7" high, 12" wide, and 9 1/4" deep. Wt., 9 lbs.	
95 RX 891. List, \$65.00. NET PER STATION	38.00

How to Determine Cable Requirements

Where Master Stations are inter-connected, measure from first Master to second Master only, from second to third Master only, etc., and then total these measurements. The 20-station C-4920 (or C-RP-5920) requires 2 lengths of 6224 cable; C-4930 requires 3 lengths of 6224, etc.; C-4912 (or C-RP-5911 or C-RP-5912) requires only 1 length of 6224 cable. For cable between Masters and Staffs, measure from Staff Station to each Master to which the Staff originates calls. Repeat for each Staff Station.

49 W 606. Type 6212. Cable for inter-connecting C-4906. Per Foot. 14 c  
 49 W 608. Type 6224. Cable for Masters C-4912, C-RP-5911, C-RP-5912, C-4920, C-RP-5920, C-4930, C-4940, C-4950. Per Ft. 28 c  
 49 W 607. Type 6204. Cable for any Staff Station. Per Foot. 6 c

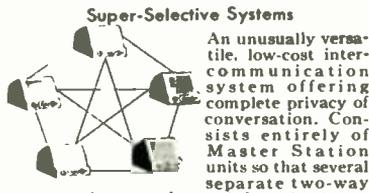
Talk-A-Phone "Built-in" Optional Features

- PRIVACY EARPHONE. (Fig. D.) For all stations listed on this and opposite page. In brown only. Add \$12.00 per station.
- CRADLE PHONE. (Fig. E.) For all Masters and bakelite-case Staffs and Sub-stations listed on this and opposite page. Add \$26.45 per station.
- LONG-DISTANCE ADAPTER. For all Masters on this page. Permits communications between Masters over cables of 10,000 feet or greater. One adapter required for each Master; add \$11.75 per station.
- BUSY SIGNAL. For all Masters on this page. Add \$7.00 per station.
- EXECUTIVE GRAY. All Masters and bakelite-cabinet Staff stations listed on this page are available in Executive Gray. Add \$2.50 per station for Masters and C-46 Staffs. Add \$1.50 per station for others.

and Accessories



Talk-A-Phone Deluxe Intercommunication Systems—U.L. Approved



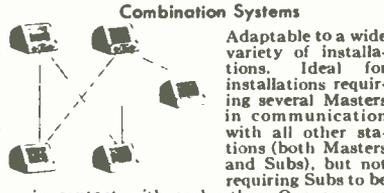
**Super-Selective Systems**  
An unusually versatile, low-cost intercommunication system offering complete privacy of conversation. Consists entirely of Master Station units so that several separate two-way conversations may be carried on simultaneously without cross-talk. (No sub-stations can be used in a Super-Selective system.) Any one Master Station may talk to any other Master Station at will with absolute privacy. Masters may call one another regardless of whether station being called has power "on." Silencing feature eliminates all sound pickup when stations are not in use. Up to 2,000 feet of cable may be used between stations. Walnut color bakelite cabinet, 8 1/4 x 6 1/4 x 7 1/2". For 110-120 volt AC-DC. With instructions. Shpg. wt., 7 lbs.

Fig. I. LS-5 MASTER. For up to 5 stations. 95 RX 875. List. \$45.00. NET EACH. 26.45

Fig. I. LS-10 MASTER. For up to 10 stations. 95 RX 874. List. \$58.00. NET EACH. 34.00

TYPE 5506 CABLE. 6-conductor cable for Model LS-5 above. 49 W 605. Per Foot. 7 1/2c

TYPE 9911 CABLE. 11-conductor cable for Model LS-10 above. 49 W 603. Per Foot. 14c



**Combination Systems**  
Adaptable to a wide variety of installations. Ideal for installations requiring several Masters in communication with all other stations (both Masters and Subs), but not requiring Subs to be in contact with each other. One or more Subs may be connected to one Master; Masters may be interconnected. Masters may be operated "privately" or "non-privately." Master stations have volume control and Talk/Listen switch. Masters and LR-2 Sub are in walnut-color bakelite cabinets, 8 1/4 x 6 1/4 x 7 1/2". LR-2M is in brown, rectangular metal cabinet, 7 x 5 1/4 x 3 1/2"; may be wall mounted. Shpg. wts.: CL-5, 7 lbs.; CL-10, 8 1/2 lbs.; LR-2, 5 lbs.; LR-2M, 3 lbs. Instructions. For 110-120 v., AC-DC.

Fig. I. CL-5 MASTER. Capacity, 5 stations. 95 RX 842. List. \$55.00. NET EACH. 32.35

Fig. I. CL-10 MASTER. Capacity, 10 stations. 95 RX 843. List. \$74.00. NET EACH. 43.50

Fig. J. LR-2 SUB-STATION. 95 RX 844. List. \$15.95. NET EACH. 9.35

LR-2M SUB-STATION. Metal cabinet. 95 R 847. List. \$15.95. NET EACH. 9.35

TYPE 6212 CABLE. 6-pair cable for interconnecting CL-5 Masters. 49 W 606. Per Foot. 14c

TYPE 6224 CABLE. 12-pair cable for interconnecting CL-10 Masters. 49 W 608. Per Foot. 28c

TYPE 6902 CABLE. 2-conductor cable for connecting LR-2 or LR-2M Subs to CL-5 or CL-10 Masters. 49 W 613. Per Foot. 2c



**Master-Selective Systems**  
Consist of one Master and up to 10 Subs. Four Master-Selective systems: Normal-Output LM-5 Master with up to five LR-3 or LR-3M Subs; normal output LM-10 Master with up to ten LR-3 or LR-3M Subs; high-output AC-5406 Master with up to five AR-3 or AR-3M Subs; high-output AC-5411 Master with up to ten AR-3 or AR-3M Subs. High-output Masters are specifically for use in large areas and noisy locations; deliver about 10-times greater volume. Master may call Subs individually or simultaneously. Subs may call Master only. Operate with as much as 2000 feet of cable between stations. Sounds from Subs are cut out when system is not in use, yet calls may be received. Persons may answer from up to 50 feet from Sub. Subs require no power. Only single Master can be used in each system. Masters and Subs (except LR-3M and AR-3M) are in walnut-color bakelite cabinets, 8 1/4 x 6 1/4 x 7 1/2". LR-3M and AR-3M are in brown, rectangular metal cabinets, 7 x 5 1/4 x 3 1/2". Metal cabinets may be wall mounted. With instructions, Models AC-5406 and AC-5411 for 110-120 volts, 50-60 cycle AC; all others for AC or DC. Shpg. wts.: Masters, 7 lbs.; bakelite Subs, 5 lbs.; metal Subs, 3 lbs.

Fig. I. LM-5 MASTER. For up to 5 Subs. 95 RX 870. List. \$45.00. NET EACH. 26.45

Fig. I. LM-10 MASTER. For up to 10 Subs. 95 RX 869. List. \$58.00. NET EACH. 34.00

Fig. J. LR-3 SUB-STATION. 95 RX 871. List. \$15.95. NET EACH. 9.35

LR-3M SUB-STATION. Same as LR-3 except in brown metal case. 95 R 846. List. \$15.95. NET EACH. 9.35

Fig. I. AC-5406. HIGH-OUTPUT MASTER. For up to 5 Subs. AC operation only. 95 RX 807. List. \$55.00. NET EACH. 32.35

Fig. I. AC-5411 HIGH-OUTPUT MASTER. For up to 10 Subs. AC operation only. 95 RX 808. List. \$68.00. NET EACH. 39.95

Fig. J. AR-3 SUB-STATION. For use with Model AC-5406 or AC-5411 Masters. 95 RX 838. List. \$16.95. NET EACH. 9.95

AR-3M SUB-STATION. Same as AR-3 except in brown metal case. 95 RX 839. List. \$16.95. NET EACH. 9.95

TYPE 5303 CABLE. 3 conductors. 49 W 604. Per Foot. 3c

**EXECUTIVE GRAY CABINETS.** All Master Stations and bakelite-cabinet Sub-Stations in the Talk-A-Phone Super-Selective, Combination, and Master-Selective intercommunication systems are available in executive gray. Add \$1.50 per station.

Talk-A-Phone Accessory Equipment

Fig. F. C-20 TRUMPET-TYPE HIGH-POWER SUB-STATION. 9", weather-proof re-entrant horn for use in "Chief" and Master-Selective systems. Provides greater volume—excellent for outdoor use, large rooms, and noisy locations. Delivers especially good results with "Chief" Redi-Power or Master-Selective AC-5406 or AC-5411 Masters. Rated, 15 watts. Shpg. wt., 8 lbs. 95 RX 878. List, \$44.95. NET. 26.50

Fig. G. HP-3 HIGH-POWER SUB-STATION. 8" speaker housed in brown, wrinkle-finish wall baffle. Same applications as C-20 Trumpet-Type Sub-Station above, but for indoor use. Size, 12x12x8". Rated, 5 watts. Shpg. wt., 8 lbs. 95 RX 849. List, \$25.00. NET. 14.70

Fig. H. WALL SWITCHES. For use with C-20 trumpet or HP-3 speaker above. Shpg. wt., 2 lbs. S-100 SWITCH. For Master-Selective system. Connects C-20 or HP-3 to originate calls to Master station. 95 R 845. List, \$5.00. NET. 2.95

S-101 SWITCH. For "Chief" systems. Connects C-20 or HP-3 to originate calls to one master. 95 R 841. List, \$5.00. NET. 2.95

S-102 SWITCH. For "Chief" systems. Connects C-20 or HP-3 to originate calls to either of two Masters. 95 R 848. List, \$9.00. NET. 5.25

How to Determine Cable Needs

**SUPER-SELECTIVE SYSTEMS:** Measure from first Master Station to 2nd Master Station only. 2nd to 3rd only, etc.

**COMBINATION SYSTEMS:** For Master cable, measure from Master Station to Master Station; for Sub-Station cable, measure from each Sub-Station to nearest Master only.

**MASTER-SELECTIVE SYSTEMS:** Measure from Master Station to each Sub-Station.



**Talk-A-Phone  
2-Station  
Wired and Wireless  
Intercom Systems**

**Figs. A & B—Low-Cost Wired System**

Here's a deluxe, up-to-the-minute intercommunication system at exceptionally low cost. Presented in smartly styled matching cabinets, sturdily made of durable molded bakelite. Choice of walnut or gray finish. Provides voice communication between any two points in the home, farm, professional office, store, or other locations. Consists of one Master unit, a Substation, and fifty feet of cable. Additional cable available in lengths up to 2000 feet. When connected "privately" the Master unit cannot listen in on the Substation. Either station may originate calls. When connected "non-privately" the Master station can listen in on the Substation. Master unit has a volume control. For 110-120 volt AC-DC, U.L. Approved. Size of cabinets, 8 1/4 x 6 1/4 x 7 1/2". Shpg. wt., each system, 11 lbs.

- LC-2. 2-Station System. Walnut cabinets.  
95 RX 840. List. \$51.00. NET. . . . . 29.95
- LC-2G. 2-Station System. Gray cabinets.  
95 RX 857. List. \$56.00. NET. . . . . 32.95
- Type 5303. Extra 3-conductor cable.
- 49 W 604. Per Foot . . . . . 3c

**Fig. A—Wireless Intercom System**

Wireless intercom—uses power line as transmitting medium. Has the exclusive "Sonic Gate Circuit" which, together with the Talk-A-Phone "Squelch," effectively suppresses line noises and hum while system is in actual operation as well as when in standby position. No cables or wiring required—simply plug in units to nearest electrical outlet. Has ground adapter for direct ground transmission when necessary. Stations may be added to system at any time—all stations will receive messages transmitted from any other station. Beautifully styled in sturdy bakelite cabinets. For 110-120 volts AC or DC. Size, 8 1/4" long, 6 1/4" wide, and 7 1/2" high. U.L. Approved. Shpg. wt., 14 lbs. per pair.

- LC-33. Two stations. Walnut cabinets.  
95 RX 821. List. \$120.00. NET. . . . . 69.95
- LC-33G. Two stations. Gray cabinets.  
95 RX 822. List. \$125.00. NET. . . . . 72.95
- LC-17. Additional station in walnut.  
95 RX 823. List. \$60.00. NET. . . . . 35.00
- LC-17G. Additional station in gray.  
95 RX 824. List. \$62.50. NET. . . . . 36.50

**Fig. C—New, Deluxe Wireless All-Master System  
Up to 6 Stations—No Installation—Easy to Operate**

This new LCM-8806 deluxe wireless intercom combines maximum flexibility with simplicity of installation. Each station is supplied complete and ready for operation. No accessories to buy. No wiring required—just plug units into electrical outlets and talk. Each unit can transmit and receive on any of 6 separate channels. Channel selector switch provides wireless "Selective" communication. Each station can carry on a conversation with any other station separately. Three separate 2-way conversations may be carried on simultaneously when six units are used in the system. By calling other stations individually to come in on the same channel a conference can be set up. "Unit-Trans" feature permits

locking any unit in "talk" position for one-way transmission; for dictation, or to permit monitoring. Exclusive "Sonic-Gate" circuit suppresses line noises while system is in actual operation, as well as when in stand-by position. Beautifully styled, sturdy bakelite cabinets; 7" high, 12" wide and 9" deep. Available in walnut or executive gray. For operation from 110-120 volts, AC-DC, U.L. Approved. Shpg. wt., 12 lbs.

LCM-8806. Walnut Cabinet.  
95 RX 826. List. \$110.00.  
NET PER STATION. . . . . 64.00

LCM-8806. Executive Gray Cabinet.  
95 RX 827. List. \$114.00.  
NET PER STATION. . . . . 66.50

See pages 182-183 for complete Talk-A-Phone listing.

**Bogen 2-Station Intercoms**

**MODEL TWIN.** Wireless 2-station intercom system for use in the home, office, farm or factory. Uses power line as transmitting medium. Each station contains a transmitter and receiver. Adjustable squelch circuit eliminates line noises permitting clear reception at all times.

Stations can be locked in "transmit" position if desired, as when used in nurseries, industrial, institutional and other applications where aural supervision is required. Excellent for "remote" minute-taking at meetings or dictation. Virtually no limit to number of stations which can be used. Conversations will be heard by all—excellent for conferences.

Simple internal adjustment permits using two or three separate systems in the same office or factory without interference between systems. To install—just plug units in to electrical outlets powered from the same meter. Attractive brown polystyrene cabinets, 6x6 1/2 x 7 1/2". For operation from 110-120 volts, AC-DC, U.L. Approved. Shpg. wt., 10 lbs.

95 RX 911. List. \$95.00. NET. . . . . 57.00

**MODEL CHALLENGER 200.** Complete 2-station system. Consists of: Master station, Remote station and 50 feet of cable. Simple to install—no wires to cut, splice or solder. Master plugs into electrical outlet. Remote placed in desired location, connecting cable plugged together and the system is ready to use. Supplied complete—ready to use—nothing else to buy.

An outstanding feature of the "200" is the "Dual-Duty" volume control on Master; can be set to eliminate use of press-to-talk bar at Remote; permits Master to hear all activities and announcements originating in vicinity of Remote. Volume control can also be set to silence Remote unless its press-to-talk bar is operated. In either system of use, Master answers by operating its press-to-talk bar. This versatility permits the "200" to serve practically every 2-station intercom requirement.

Sturdy, brown, polystyrene cabinets. Size: 6" high, 6 1/2" wide and 7 1/2" deep. For operation from 110-120 volts, AC-DC, U.L. Approved. Shpg. wt., 10 lbs.  
95 RX 910. List. \$43.95. NET. . . . . 26.35

**Feiler Port-A-Phone Wireless Intercom**

**MODEL WI-100-2.** Compact, two-way wireless intercom system. No installation or wiring required. Simply plug units into electrical outlet. System consists of two complete units. System can be expanded to include 20 or more stations.

In standard operation all units in a system receive all transmissions originating from any other unit in the system. Each unit has a special service adjustment to change its operating frequency. This permits two and sometimes three groups of units to be used on the power transformer circuit with individual group privacy, if desired. Dual transmission is provided. "Line" transmission for systems in which all units from

a circuit are powered by the same meter; and "Ground" transmission for systems operating over long distances and around power meters. U.L. Approved.

Operation over distances up to 2 1/2 miles is possible if all units in system operate from same power line transformer circuit. Electronic circuit eliminates line noises in both standby and operating positions. 6x8 1/4 x 5 1/2" plastic cabinets in mahogany finish. For 110-120 volts, AC-DC.  
**TWO-STATION SYSTEM.** Shpg. wt., 12 lbs.  
96 RX 646. List. \$84.50. NET. . . . . 59.15  
**ADDITIONAL UNITS.** Shpg. wt., 6 lbs.  
96 RX 645. List. \$42.25. NET. Ea. . . . . 29.57





Fig. A—"Monitoradio" DR-200 2-Band FM Receiver

Excellent for central installations with very weak outlying stations. Covers 30-50 mc and 152-174 mc in two ranges. Dual-conversion and separate front-end for each range. Provision for 2 crystal-controlled receiving frequencies (less crystals); one in each range. Has squelch circuit with front-panel frequency adjustment. Sensitivity for 20 db quieting: 30-50 mc, 1 microvolt; 152-174 mc, 2 microvolts. 0.9 watts audio output. Tubes: 6BJ6 low-band RF, 6BK7 high-band RF, 6U8 low-band osc-mixer, 6U8 high-band osc-mixer, 6CB6 low-band crystal osc., 6BK7 high-band crystal osc., 6BJ6 1st IF (10.7 mc), 6U8 2nd osc-mixer, 6BJ6 2nd IF (455 kc), 6BJ6 limiter IF, 6BN6 limiter-discriminator, 6AL5 output, 5Y3GT rectifier. Brown cabinet with gray panel. Size: 8x14x9 1/2". With tubes; less speaker. For 105-125 volts, 60 cycles AC. Shpg. wt., 21 lbs. Crystals for fixed frequency reception available on special order at \$15.75 each. Specify frequency desired.

97 SX 939. NET ..... 149.95  
 Fig. B. 6" MATCHING SPEAKER. For above. Wt., 5 1/4 lbs.  
 97 SX 949. NET ..... 14.95

Fig. C—"Polic-Alarm" FM Receivers

Versatile, low-cost FM units for dependable reception of police dispatches and similar services. Ideal for law enforcement officers, taxicab operators, hospital personnel, etc. May be used for bus, truck, and railroad dispatchers' radio nets. Superhet circuit has ratio detector; drift compensation; 10 microvolt sensitivity; 100 kc selectivity. 5" PM speaker. Uses: 12AT7, 2-6BJ6, 19T8, 35B5; rectifier is 35W4. Size: 6 1/4x10 1/2x6 1/2". For operation from 110-120 volts, AC, or DC. Shpg. wt., 8 lbs.

Model PR-931. 30-50 mc Band. For police, fire, emergency calls. Requires 6-ft. vertical antenna for best reception. Use type RG59/U 72 ohm shielded lead-in line. See pages 223 and 226 for antennas; pages 220 and 223 for coaxial line.  
 97 SX 907. NET ..... 49.95  
 Model PR-9. 152-174 mc Band. For taxicab calls and similar services. With vertically mounted 16" stub antenna.  
 97 SX 908. NET ..... 49.95

Fig. D—Hallicrafters New "Civic Patrol" Receivers

These two new high-performance FM receivers replace the popular models S-81 and S-82. The S-94 covers from 30 to 50 mc and the S-95 covers from 150 to 173 mc. Offer greatly improved sensitivity and higher audio output—plus an extremely reliable, adjustable built-in relay squelch system. Excellent for monitoring purposes; squelch completely cuts off entire audio system until a signal is received.

Features: RF amplifier for high sensitivity. Relay-type squelch system. Separate high-gain DC amplifier for squelch system. Wide impedance range antenna input system for maximum performance with any antenna. Low oscillator radiation. Greater frequency stability. Sensitivity, 1 1/2 microvolts. Provisions for headphones; built-in speaker.

Tubes used: 6AB4 RF amplifier, 12AT7 oscillator and mixer, 2-12BA6 IF amplifiers, 12AL5 ratio detector, 6BH6 1st audio amplifier, 50L6 audio output, 12AU7 squelch amplifier. Selenium rectifier power supply. Controls: Main tuning; Volume/AC on-off; Squelch/on-off.  
 Gray steel cabinet with silver trim panel and red pointer. Size: 12 7/8" wide x 7" high x 7 3/4" deep. For operation from 105-125 volts 50-60 cycle AC, or DC. Shpg. wt., 12 1/2 lbs.  
 98 SX 708. Model S-94. 30-50 mc.  
 98 SX 721. Model S-95. 150-173 mc. NET EACH ..... 59.95



Fig. E—Stewart-Warner Model 73 2-Way "Portafones"

Citizens 2-way AM radio system with telephone-type handsets. Transmits a mile or more along line-of-sight paths; up to several hundred yards where obstructions exist. Transmitter and receiver are built into handset. Transmitter operates at 465 megacycles. Convenient frequency adjustment knob for tuning unit to exact transmitter frequency. Frequency is in special band established by FCC. Station license is easily obtained; operator's license is not required for authorized use. Antennas are horizontal dipole collapsible plug-in type. Portafones are sold only in pairs. Each individual unit shipped in fabric carrying case which holds antenna and has room for batteries. Unit is 10 1/2" high—17" with antenna. Less power supply; use with Central Station Power Pack for operation from AC outlet or with Battery Pack for portable operation. Shpg. wt., 12 lbs.

93 SX 881. NET PER PAIR (Add \$7.00 Federal Excise Tax).....199.50  
 CENTRAL STATION POWER PACK. For Model 73 Portafones, above. Designed to plug into 115-120 volt, 60 cycle outlets. Includes mounting base to hold Portafone. Shpg. wt., 6 lbs.  
 93 S 883. NET ..... 34.65  
 PORTAFONE HANDY BATTERY PACK. Special flat pack which fits Portafone carrying case. Contains all necessary A, B, and C batteries. Socket connection accommodates plug of Portafone power cord. Size: 6 1/2x8x1 1/2". Shpg. wt., 4 lbs.  
 93 S 882. NET ..... 6.45

Fig. F—New 9179 Stewart-Warner Portafone Master Station

The 9179 Master Station is a broadband superhet receiver designed to pick up any Portafone transmission between 464.5 and 465.5 mc. 10 microvolt sensitivity for loudspeaker reproduction. Provides continuous monitoring of Portafone operating channel yet leaves hands free for transcription or other work. Ideal for use at central station to monitor transmissions from portable units in the field. Loudspeaker reproduction attracts operator's attention to incoming transmission. Master Station contains a built-in power pack for operation of separate model 73 Portafone (not supplied). Special switch-hook holds Portafone in standby position with filaments on, ready for use. Lifting Portafone from hook cuts the loudspeaker and applies high voltage to Portafone for instant 2-way communication. Maroon and gray metal case, 10x12x14". For 110-120 v. 50-60 cycle AC. With detachable antenna. Shpg. wt., 36 lbs.  
 93 SX 884. NET (Add \$8.50 Federal Excise Tax) ..... 189.50

Fig. G—Stewart-Warner Portable Power Megaphone

Completely self-contained, portable, power megaphone. Range up to one quarter mile, depending on noise conditions. Invaluable for handling crowds, Civil Defense work, athletic events, emergency traffic control, fire fighting, freight loading, and many other uses. Light in weight. Has pistol grip and trigger switch. Instant action—no warmup required. Powered by six flashlight batteries. Life of batteries is 120 to 150 hours. Includes shoulder strap for easy carrying, plastic mouthpiece, and perforated microphone cover to keep out moisture and dust. Horn dia., 8 1/2".

Standard Unit. Gray enamel finish. Batteries included. Shpg. wt., 7 lbs.  
 81 DX 565. NET ..... 58.75  
 Deluxe Unit. Wine colored enamel finish. In wine colored naugahyde carrying case. 14" H. 11" W. 9 1/2" D. Wt., 10 lbs.  
 81 DX 566. NET ..... 68.55  
 Batteries. Burgess #2 cells for use in above units. Six required. Shpg. wt., 6 oz.  
 53 J 009. NET EACH ..... 11c



S-38D



S-53A



S-93

# hallicrafters

the Radio Man's Radio



S-85



SX-96

### S-38D Low-Cost 4 Band Receiver

Latest version of the world-famous S-38 Amateur-SWL receiver. Features sensitive voice and code reception. New, smartly styled cabinet with easy-to-read, wide-visibility, slide rule type dial. Tunes the standard AM broadcast band and all short-wave frequencies to 32 mc, for thrilling reception of police, aircraft, Amateur, foreign and domestic shortwave and ship-to-shore transmissions.

**4-BAND COVERAGE.** 4-position range selection switch. Band 1: 540 to 1650 kc; Band 2: 1650 kc to 5.1 mc; Band 3: 5 to 14.5 mc; Band 4: 13 to 32 mc. Separate bandspread dial simplifies tuning the crowded short-wave bands.

**AC-DC SUPERHET CIRCUIT.** Up-to-the-minute, high sensitivity superhet circuit employing four tubes and rectifier. 5" PM speaker gives excellent tonal quality for music reproduction. 2 watts audio output. Tip jacks on rear apron for use when headphone reception is desired. Standby-receive switch for use when transmitting (cuts B-plus voltage but keeps tube filaments on). AM-CW switch for reception of code or AM phone transmissions. Gray steel cabinet with silver frame trim. 12 7/8 x 7 1/4". For 105-125 volts. 50-60 cycle AC or DC. Shpg. wt., 13 lbs.

98 SX 709. NET ..... 49.95  
220-VOLT ADAPTER CORD. For above. Wt., 5 oz.  
49 T 580. NET ..... 2.54

### S-53A Low-Cost Receiver

True professional performance in a low-cost communications receiver. Highly sensitive and selective circuit provides thrilling world-wide shortwave reception at maximum performance. Covers: 6 Amateur bands, Police, Aircraft, Marine, Foreign and domestic shortwave broadcasts and other services as well as standard broadcast programs. Has excellent stability and high signal-to-noise ratio.

**TUNES TO 54.5 MC.** Range 1, 540-1630 kc; Range 2, 2.5-6.3 mc; Range 3, 6.3-16 mc; Range 4, 14-31 mc; Range 5, 48-54.5 mc. Provides excellent Amateur 6-meter reception on Range 5. Edge-illuminated slide-rule dial. All panel controls clearly identified; Main Tuning, Bandspread, Bandwidth, Volume-On-Off, Sensitivity-Phono, Standby, Tone, Automatic Noise Limiter, and Phone-Code switch. Electrical bandspread tuning control separates stations on crowded bands. Speaker-Headphone switch, headphone and phono jacks on rear panel.

**MODERN SUPERHET CIRCUIT.** Uses: 1—6C4 osc. (temperature-compensated for minimum drift). 1—6BA6 mixer. 2—6BA6 IF's. 1—6I16 detector-AVC-noise limiter. 1—6SC7 BFO-1st AF. 1—6K6GT output (2.5 watts). Rectifier is 5Y3GT/G. 5" PM speaker. Satin black steel cabinet with brushed chrome trim. Size, 12 7/8 x 7 3/4" deep. Piano-hinge top. For 105-125 volts, 50-60 cycles AC. Shpg. wt., 20 lbs.

97 SX 573. NET ..... 89.95

### New S-93 4-Band Portable

A completely new, 4-band, 3-way portable receiver for dependable performance at low cost. Offers coverage of marine, standard broadcast, aircraft, ship-to-shore, Amateur, foreign and domestic short wave channels on four ranges. Bandswitch selects 170 to 400 kc, 540 to 1600 kc, 2 to 6 mc, or 6 to 18 mc range.

**FEATURES:** Sensitive and selective superhet circuit; highly efficient miniature tubes; low noise, high gain loop antenna for broadcast and long wave reception; telescoping whip antenna for short wave reception; world call zone map; receives voice or code transmission; stand-by switch; 3-way operation (AC-DC-Battery). Small and compact—easy-to-carry.

**TUBE COMPLEMENT:** 1U4 RF amplifier. 1L6 converter. 1U4 IF amplifier. 1U5 detector and audio amplifier. 3V4 audio output; uses selenium rectifier in power supply. No warm up time required.

**CONTROLS:** Sensitivity/volume, CW/phone switch, standby-receive switch, tuning/band switch.

Cabinet of seasoned wood, covered in gray leatherette. 10 1/2 x 15 x 8". For 105-125 v. 50-60 cycles AC, DC or battery operation. Less battery pack (see below). Shpg. wt., 19 lbs.

98 SX 710. NET ..... 99.95  
BATTERY PACK. For above. 7 lbs.  
80 J 616. NET ..... 4.38

### New S-85 Communications Receiver

The new S-85 communications receiver supersedes the famous S-40 series. Completely restyled for improved operating ease and greater tuning accuracy. Retains circuit features which made the S-40 series lasting favorites of Amateurs and short-wave listeners alike. Puts world-wide communications at your finger tips. Tunes 540 kc to 34 mc continuously in 4 ranges.

**FEATURES:** All-new, beautifully-styled front panel with large, illuminated dials. Bandsread dial is now calibrated for 80, 40, 20, 15, 11 and 10 meter Amateur bands to give greater tuning accuracy. Also features—RF amplifier; 2—IF amplifiers; BFO with variable pitch control; automatic noise limiter; 3-position tone control; built-in 5" PM speaker; 4 tuning ranges—standard broadcast plus 3 shortwave.

**TUBES USED:** 6SG7 RF amplifier. 6SA7 converter. 2—6SK7 IF amplifiers. 6SC7 BFO and audio amplifier. 6K6GT audio output. 6H6 ANL-AVC detector; rectifier is 5Y3GT.

**FRONT PANEL CONTROLS:** Sensitivity, band selector switch, volume, main tuning, AVC on/off, noise limiter on/off, AM/CW, tone (high-medium-low) and AC on/off, pitch control, standby/receive, Panel jack for headphones.

Steel cabinet finished in gray and black. 8 3/4 x 18 1/2 x 10". For 105-125 v. 50-60 cycle AC. Shpg. wt., 36 lbs.

98 SX 711. NET ..... 119.95  
S-86. Same as S-85 in design and appearance, but for operation from 105-125 v. DC or 50-60 cycle AC. Shpg. wt., 32 lbs.  
98 SX 712. NET ..... 119.95

### New SX-96 Receiver with Selectable Side-Band

The SX-96 is an all-new, deluxe communications receiver incorporating dual-conversion and selectable single side-band reception. Precision engineered with the latest circuit refinements for years of dependable operation. Designed to meet the exacting requirements of Amateurs, short-wave enthusiasts and engineers. Covers 540 kc to 33 mc in four ranges.

**FEATURES:** RF stage; dual conversion (50 kc IF system, for high selectivity); mixer type second detector; crystal controlled second conversion oscillator; selectable sideband operation; full precision gear drive mechanisms used on both main tuning and bandsread dials. Carrier level meter calibrated in S units to S9 and to 100 db over S9.

**TUBES AND FUNCTIONS:** 6CB6 RF amplifier. 6AU6 1st converter. 6C4 HF oscillator. 6BA6 2nd converter. 12AT7 dual crystal second conversion oscillator. 2—6BE6 50 kc IF amplifiers. 6BE6 50 kc mixer type 2nd detector. 6AL5 AVC-noise limiter. 6SC7 1st audio and BFO. 6K6 audio output; 5Y3GT rectifier and VR150 voltage regulator.

**CONTROLS:** Sensitivity, Band selector, Volume, Main tuning, AVC on/off, Noise limiter on/off, AM/CW, Selectivity, Bandsread, Pitch control, Reception, Standby/receive, Headphone jack, 500 and 32 ohm speaker outputs.

Cabinet finished in gray and black with brushed chrome trim. Size: 8 1/2 x 18 3/4 x 10 3/4". For 105-125 volts, 50-60 cycles AC. Less speaker. (Use R-46A, page 187.) Shpg. wt., 43 lbs.  
98 SX 713. NET ..... 249.95



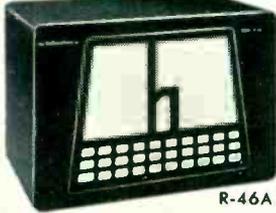
SX-88



SX-99



SX-62 A



R-46A



HT-20



HT-30

### Model SX-88 Dual-Conversion Receiver

An outstanding achievement in receiver design. Two RF stages, double conversion, super-sharp 50 kc second IF, crystal-controlled second conversion oscillators, and precision gear-drive tuning contribute to its sensational performance. For AM phone, single-sideband phone, and CW. Covers 535 kc to 33.3 mc in 6 ranges; bandwidth calibrated for 160, 80-75, 40, 20, 15 and 11-10 meter Amateur bands.

**SUPERIOR DESIGN.** First IF either 1550 or 2075 kc. Three 50 kc IF amplifiers with 8 tuned circuits. Extreme selectivity; selectivity variable from 10 kc to 250 cps at 6 db down, in 6 steps. Built-in crystal calibrator provides 100 kc check points. Two BFO positions; one provides increased output for reception of single-sideband. "S" meter. Headphone jack. 10-watt, push-pull audio. Takes 3.2, 8, or 500-600 ohm speakers.

**SPECIFICATIONS.** Sensitivity: Range 1 (535 to 1710 kc), 10 microvolts for 0.5 watt output; Ranges 2 through 6 (1690 kc to 33.3 mc), 1 microvolt for 0.5 watt output. **Image Rejection:** 80 db or better below 20 mc; 60 db or better above 20 mc. **Tubes:** 2-6CB6, 7-6BA6, 6U8, 12AT7, 6AL5, 12AU7, 12AX7, 2-6V6GT, 6C4; 5U4G rectifier and VR150 voltage regulator.

Black and gray cabinet, 10 $\frac{1}{2}$ x20x18 $\frac{1}{4}$ " deep. Less speaker. For 105-125 volts, 50-60 cycles AC. Shpg. wt., 85 lbs.  
98 SX 715. NET.....595.00

### SX-62A All-Wave Receiver

The SX-62A offers peak performance on AM broadcast, short wave and Hi-Fi FM. Six bands: 540-1620 kc; 1620 kc-4.9 mc; 15-32 mc; 27-56 mc (AM-FM); 54-109 mc (AM-FM).

**HIGH FIDELITY AUDIO.** A push-pull 6V6 output stage furnishes a full 10 watts of audio power. Bass boost and four-position tone control. Phonograph input jack.

**FOR SWL'S AND DX FANS.** Red dots identify proper settings of controls for AM and SW reception; green dots for FM. Wide-visibility slide-rule dial, 60-to-1 ratio tuning knob, 500 kc calibrating crystal, with dial pointer for pin-point reset accuracy. With BFO for code signals.

**MODERN CIRCUIT.** Three IF and two RF stages provide maximum usable sensitivity. Crystal filter provides 6-step selectivity. Separate RF and AF gain controls. AVC, BFO, ANL, temperature-compensated, voltage-regulated oscillator. 300-ohm antenna input. 3.2, 8 and 500 ohm outputs.

Black steel cabinet with gray panel. Dimensions: 10 $\frac{1}{4}$ x20x16". Less speaker. (See R-46A, at right.) For 105-125 volts, 50-60 cycles AC. Wt., 77 lbs.

97 SX 540. NET.....349.95

### New Top-Value SX-99 Receiver

The all-new SX-99 represents an outstanding value in the medium-priced communications receiver line. Skillfully engineered to give excellent performance and ease of operation at a remarkably low price. Offers features usually found only in high priced communications receivers. Crystal filter—Calibrated electrical bandspread—"S" meter. Also features RF and AF gain controls; large, illuminated, easy-to-read dials and all-new cabinet styling.

**FREQUENCY COVERAGE.** Full coverage of all frequencies from 540 kc to 44 mc in 4 ranges; the standard AM broadcast band plus 3 short-wave ranges. Provides thrilling reception of broadcasts from all over the world. Receives police, aircraft, marine, Amateur stations, as well as foreign and domestic short-wave transmissions. An ideal receiver for the Amateur or the enthusiastic short-wave listener.

**FEATURES:** Bandspread dial calibrated for 80, 40, 20, 15, 11 and 10 meter Amateur bands for excellent tuning accuracy; "S" meter is calibrated in units of 6 db to S9 and in db above S9 for accurate signal reports; Crystal filter for razor-sharp selectivity; RF stage and two IF stages for very high sensitivity; Terminals for 3.2-ohm or 500-ohm speaker. Also has separate BFO with pitch control, automatic noise limiter and 3-position tone control.

**TUBES AND FUNCTIONS:** 6SG7 RF amplifier, 6SA7 converter, 2-6SK7 IF amplifiers, 6SC7 BFO and audio amplifier, 6K6GT audio output, 6H6 ANL-AVC-detector; rectifier is 5Y3GT. 7 tubes in all; plus rectifier.

**CONSTRUCTION:** The SX-99 has the famous Hallicrafters precision construction and expert craftsmanship—known the world over. Use of high-quality components assures years of dependable performance. Beautifully styled steel cabinet is attractively finished in gray and black with brushed chrome trim.

Size: 8 $\frac{1}{2}$ x18 $\frac{3}{4}$ x11" deep. For operation from 105-125 volts, 50-60 cycles AC. Less speaker (see R-46A below). Shpg. wt., 36 lbs.

98 SX 714. NET.....149.95

### New R-46A Matching Speaker

The new R-46A speaker is a 10", high efficiency, permanent magnet type. It is housed in a rugged metal cabinet finished in black and gray to match Hallicrafters receivers. Has power handling capability more than adequate for even the SX-62A. Also for use with SX-96, SX-88, SX-99 and any other receiver having 3.2 ohm output. Cabinet size: 11WD, 10 $\frac{1}{4}$ x15x10 $\frac{1}{4}$ ". Shpg. wt., 15 lbs.

98 SX 716. NET.....19.95

### Model HT-20 Phone-CW Transmitter

The HT-20 delivers an exceptionally clean signal—and virtually eliminates the TVI problem! Power Output: AM phone, 100 watts; CW, 115 watts. Covers 160 through 10 meters. Bandswitching exciter and continuous-tuning final.

**EFFECTIVE TVI SUPPRESSION.** Spurious outputs above 30 mc are at least 90 db below rated output—Pi-network tank followed by 4-section low-pass filter; dial and meter scales screened for minimum RF leakage.

**OPERATING CONVENIENCE.** 10-position crystal selector switch with additional position for external VFO. Meter with 8-position switch. Control for adjustment of drive. **Panel Controls:** Oscillator Range, Buffer Range, Drive, Loading (coarse), Matching, Final Tuning, Loading (fine), Crystal Selector, Oscillator Tuning, Meter Switch, Buffer Tuning, AM-CW, Send-Receive, Output (Off-Low-Full), Power Off-On, and AF Gain.

**Tubes:** 6AG7, 6L6, 4D32, 6SL7, 6K6, 2-807; 5U4G low-voltage rectifier, 2-5R4GY high-voltage rectifiers, 6BL7 bias rectifier, 1N64 RF carrier rectifier, 11 $\frac{1}{2}$ x20 $\frac{1}{2}$ x16 $\frac{1}{4}$ ". With tubes and instruction manual; less crystals, microphone and key. For 105-120 volts, 50-60 cycles AC. Shpg. wt., 130 lbs.

97 SX 554. NET.....449.50

### New HT-30 Single Side-Band Exciter

New transmitter/exciter for SSB suppressed carrier and AM/CW transmission. 35 watts peak output. TVI-proofed.

**LATEST DESIGN:** RF selective filter system; Built-in VFO and provision for 3 crystals; 100 to 1 ratio gear drive system; Band-switching for 80, 40, 20, and 10 meters; Function control for AM, CW, upper or lower side-band; Full metering; High-gain preamplifier; Hum and noise -40 db; Unwanted side-band -40 db; Undesired beat -60 db; TVI-suppressed—filtered control circuits and AC power lines. **Tubes used:** 6AU6 1st audio, 12AT7 2nd audio-voice control, 6AL5 voice control rectifier, 12AT7 2nd voice control amplifier, 2-6AU6 50 kc balanced modulators, 6C4 50 kc master oscillator, 12AT7 1700 kc conversion mixer, 12AT7 upper or lower side-band oscillator, 12AT7 5.3 or 10.6 second conversion mixer, 12AT7 5.3 or 10.6 beat oscillator-harmonic amplifier, 12AT7 balanced conversion mixer, 6AU6 VFO, 6AU6 harmonic amplifier, 2-6CD6 linear power amplifier. Rectifier is 5R4G; VR150 regulator.

Steel cabinet finished in gray and black with brushed chrome trim. Size: 9x18 $\frac{1}{4}$ x12 $\frac{1}{4}$ ". For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 51 lbs.

97 SX 571. NET.....349.95



NC-98



NC-125



SW-54



NC-88

### FAMOUS NATIONAL RECEIVERS

#### New National NC-98 Receiver

One of the most sensational values ever offered in a communications receiver! The outstanding, new NC-98 includes an array of features never expected in a unit priced so low. Has crystal filter, S meter, separate HF oscillator, plus other features usually found only in higher priced equipment. Unusual stability, selectivity and sensitivity. Tunes from 550 kc to 40 mc in four ranges; provides complete broadcast band as well as shortwave coverage. Calibrated bandspread for 80-75, 40, 20, 15 and 11-10 meter Ham bands.

Features include: tuned RF stage for high sensitivity; antenna trimmer to permit peaking of RF stage for maximum gain at any portion of tuning range; one non-crystal and two crystal selectivity positions; crystal phasing; noise limiter; RF gain control and tone control. BFO with pitch control for CW reception. Provision for headphones. Crystal phono input for record reproduction.

Tubes used: 6BA6, 6BE6, 6C4, 2-6BD6, 6AL5, 12AX7, 6AQ5; 5Y3GT rectifier. Accessory socket on rear apron takes NFM-83-50 NBFM adapter (listed under HRO-Sixty next page) and remote standby-receive switch. Edge-lighted lucite dials. Gray cabinet, 8 3/4" high x 16 1/2" wide x 10 1/2" deep. For 105-125 volts, 50-60 cycle AC. Less speaker (listed below). Shpg. wt., 30 lbs.

98 SX 732. NET. 149.95

MODEL NC-98SW. Same deluxe features, design and construction as above, but bandspread dial is calibrated for 17, 19, 25, 31 and 49 meter international shortwave broadcast bands.

98 SX 720. NET. 149.95

MODEL NC-98TS SPEAKER. Designed for use with above models. 6" PM speaker in matching cabinet. Shpg. wt., 8 lbs.

98 SX 722. NET. 11.00

#### National NC-88 "World Master"

The "World Master" offers famous National performance at moderate cost. Brings in stations from every corner of the world. For SWL's and Amateurs. Phone and CW reception. Covers 540 kc to 40 mc in 4 ranges for reception of all Amateur bands from 160 to 10 meters, standard broadcast, police, aircraft, ships-at-sea, and other services. Has electrical bandspread calibrated for 80-75, 40, 20, 15 and 11-10 meter Amateur bands; also logging scale.

CIRCUIT: Highly stable separate local oscillator. Tuned RF stage and 2 IF stages give high sensitivity and selectivity for communications and general shortwave listening. Bandwidth is 11 kc at 20 db down. Series-valve type automatic noise limiter effectively reduces ignition and similar interference.

TUBE COMPLEMENT: 6BA6 RF amplifier, 6BE6 mixer, 6C4 local oscillator, 2-6BD6 IF amplifiers, 6AL5 2nd detector and AVC limiter, 12AX7 1st audio and BFO, 6AQ5 audio output; 5Y3GT rectifier.

CONTROLS: Main tuning, bandspread tuning, band selector, sensitivity, off-on-volume, receive-standby switch, ANL off-on switch, tone switch (low-high), BFO pitch, antenna trimmer, and CW-AM switch.

FEATURES: Input jack on rear for crystal phono pickup. Built-in 5" speaker provides crisp, full-toned record reproduction. Tone control with settings for high or low frequency attenuation. Amplifier delivers 1.5 watts power output. Phone jack on the front panel for headphone reception. Jack can also be used for external speaker. Dial scales are each 6" wide, easy-to-read, edge-illuminated lucite. Steel cabinet finished in gray hammertone enamel. Hinged cover provides easy access to top of chassis. Size: 8 3/4" high, 16 1/2" wide and 10 1/2" deep. For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 30 lbs.

98 SX 731. NET. 119.95

#### Popular Low-cost National SW-54 Receiver

Smart, ultra-compact communications receiver at low cost. Perfect for the beginning Amateur or short wave listener. A real DX-getter! Provides sensitive, selective reception.

WIDE-RANGE COVERAGE. Offers full coverage of the frequencies between 540 kc and 30 mc. Receives standard AM broadcasts, police, foreign and domestic shortwave broadcasts, ships, aircraft and Amateur reception. Single knob drives main and bandspread dials. All important channels are clearly marked on the well illuminated main tuning dial. Bandspread dial simplifies tuning of the crowded shortwave stations; has 0-100 scale which makes it easy to reset dial or log setting for stations received with high accuracy. Receives voice or code.

FEATURES: Sensitive and selective modern superhet circuit employs miniature tubes: 12BE6 converter, 12BA6 CW oscillator-IF amplifier, 12AV6 2nd detector-1st audio amplifier and automatic volume control, 50C5 audio output; 35Z5 rectifier. Has built-in 5" PM speaker; pin jacks for headphone reception.

CONTROLS: Main tuning, bandspread tuning, AC off-on switch, volume, receive-standby switch, bandswitch, AM-CW switch, and speaker-headphones switch. National gray enamel finish steel cabinet is 7" high, 11" wide and 7" deep. With instructions. For 105-125 volts, DC or 50-60 cycle AC. Shpg. wt., 15 lbs.

97 SX 711. NET. 49.95

#### National NC-125 Receiver

The NC-125 has attained tremendous popularity among Amateurs and SWL's who want real communications receiver performance. Covers 550 kc to 36 mc in 4 ranges—with calibrated electrical bandspread on all Amateur bands.

INCORPORATES SIMPLIFIED SELECT-O-JECT CIRCUIT. Filter circuit gives 45 db rejection, variable over audio range of 100-12,000 cycles. Overall boost for CW operation is 38 db.

EXCELLENT FREQUENCY RESPONSE. Overall response is excellent for communications use, with sharp attenuation above 2,500 cycles. Audio amplifier is essentially flat to 10,000 cycles. Excellent for use as phono amplifier. Has phono jack and delivers 3 watts of audio output. Separate audio and RF gain controls.

FAMOUS NATIONAL ENGINEERING. Sensitivity is 2 microvolts for 10 db signal to noise ratio on 10 meter band. "S" meter reads S9 on 50 microvolt signal. Modern features include AVC, ANL, antenna trimmer, variable CW pitch control, accessory socket for phono or NFM-73B (see below), voltage regulator for stabilized oscillator, and headphone jack. Power socket on rear takes batteries for portable or emergency service.

CALIBRATED BANDSPREAD. Covers 550 kc to 36 mc in four ranges with calibrated electrical bandspread on Amateur bands, including the 15-meter band. Tube complement: 6SG7 RF amplifier; 6SB7Y converter; two 6SG7 IF amplifiers; 6H6 detector, AVC, and ANL; 6SL7 BFO and first audio amplifier; two 6SL7 Select-O-Ject audio; 6V6GT audio amplifier. Rectifier is 5Y3GT; VR-150 voltage regulator. Gray enamel cabinet measures 16 1/2 x 11 3/4 x 8 1/4". For operation from 105-125 volts, 50-60 cycles AC. Less speaker (see below). Shpg. wt., 36 lbs.

97 SX 727. NET. 199.95

NC-125TS SPEAKER. High quality 6" PM speaker. Gray enamel matching cabinet. With cord and connectors. Wt., 10 lbs.

97 SX 728. NET. 11.00

NFM-73B NBFM ADAPTER. Plugs into NC-125. Wt., 2 lbs.

97 S 729. NET. 18.95



NC-183D



HQ-140X



HRO-60



PRO-310

**National NC-183D**

Double-conversion communications receiver superseding the renowned NC-183. Features razor-sharp selectivity, extreme sensitivity and "solid-as-a-rock" stability. Tunes from 540 to 31 mc and 47-55 mc in 5 ranges; calibrated electrical bandwidth for 80-75, 40, 20, 15, 11-10 and 6 meter Amateur bands.

**RAZOR-SHARP SELECTIVITY.** Double-conversion, 3 IF stages and 16 tuned circuits from 4.4-55 mc. Single-conversion and 12 tuned IF circuits below 4.4 mc. Six selectivity positions; 5 crystal and 1 non-crystal. Selectivity: sharpest position, 80 cycles at 6 db and 7.0 kc at 60 db. Image rejection: 55 db at 10 meters.

**EXTREME SENSITIVITY.** Better than 1.5 microvolt sensitivity for 6 db signal-to-noise ratio throughout entire tuning range.

**NEW DELUXE CIRCUIT.** Tubes: 2-6BA6 RF, 6BE6 1st converter, 6BE6 2nd converter, 3-6BA6 IF, 6AL5 2nd detector-AVC, 6AH6 AVC amp., 6SJ7 BFO, 6AL5 noise limiter, 6SJ7 1st audio, 6J5 phase inverter, 2-6V6GT/G output; plus OB2 voltage regulator and 5U4G rectifier. Push-pull audio output stage delivers a very clean 8 watts. Has edge-illuminated lucite dials; accessory socket (takes NFM-83-50 adapter for narrow-band FM reception; listed under HRO-Sixty below); auxiliary power socket; phono input; headphone jack and output for 500 or 8 ohm speakers. In gray cabinet, 10 1/4 x 19 1/4 x 16 3/4". For 110-120 or 220-240 volts, 50-60 cycles AC. Less speaker. Shpg. wt., 65 lbs.

97 SX 666. NET. **399.50**  
 NC-183DTS. 10" PM speaker in metal cabinet. Wt., 12 lbs.  
 97 SX 663. NET. **16.00**

**National HRO-Sixty**

The latest version of the great HRO receivers—up-to-the-minute with dual-conversion! The new HRO-Sixty provides virtually image-free reception, has superb "weak signal" sensitivity, remarkable selectivity, plus extreme stability.

**TUNING RANGE.** Plug-in coil units supplied, provide general coverage from 1.7-30 mc or bandwidth on 80, 40, 20 and 11-10 meter Amateur bands. Famous National dial mechanism.

**OUTSTANDING CIRCUIT.** Dual-conversion above 7 mc; 2 RF stages. Sensitivity: 1 μv, or better at 6 db signal-to-noise ratio. IF frequencies are 1900 kc and 456 kc. 12 permeability-tuned IF circuits plus 6-step crystal filter. Selectivity: from 80 cycles to 3.5 kc at 6 db. Current-regulated heaters in HF osc. and 1st converter; voltage-regulated HF osc., S-meter amp. and BFO; operation is drift-free after brief warm-up.

Features include: ANL with threshold control; S-meter; phono input; auxiliary power socket; accessory socket; provision for crystal calibrator and NBFM adapter; headphone jack; 8 and 500 ohm output. Tubes 2-6BA6 RF, 6BE6 mixer, 6C4 HF osc., 6BE6 2nd conv., 3-6SG7 IF, 6H6 det-AVC, 6H6 ANL, 6SJ7 audio, 6SN7 phase inv. and S-meter amp., 6SJ7 BFO and 2-6V6GT output; 5V4G rect., OB2 VR tube and 4H4C current regulator. Gray cabinet, 19 1/2 x 10 1/2 x 17 1/8". With coils, less speaker. For 115 or 230 volts, 50-60 cycles AC. Shpg. wt., 84 lbs.

97 SX 722. NET. **533.50**  
 HRO-60-TS. 10" Speaker. Matching gray cabinet. Wt., 10 lbs.  
 97 SX 721. NET. **16.00**  
 97 S 717. HRO-60-XCU-2. 100/1000 kc crystal cal. NET **27.50**  
 97 S 719. NFM-83-50. NBFM Adapter. NET **26.75**  
 97 S 789. HRO-60-AC. 21.0-21.5 mc coil. NET **24.50**  
 98 S 048. HRO-60-E. 900-2050 kc coil. NET **24.50**  
 98 S 049. HRO-60-F. 480-960 kc coil. NET **24.50**

**Hammarlund Receivers**

**HQ-140X Communications Receiver**

The HQ-140X communications receiver supersedes the renowned HQ-129X, retaining the features that have made the "HQ's" famous for quality and performance. Its high selectivity and first-rate electrical and mechanical stability make it an ideal receiver for Amateur operators as well as the avid shortwave listener.

Covers 540 kc to 31 mc in six ranges. Electrical bandwidth is calibrated for the 80, 40, 20, 15 and 10 meter Amateur bands. Calibration charts easily made for tuning other ranges on arbitrary bandwidth scale. Uses Hammarlund-patented crystal filter; provides extreme selectivity for high attenuation of adjacent interfering signals. Six selectivity positions: 3 phone crystal positions, 2 CW crystal positions and crystal "Off" position. Advanced-type series noise limiter has minimum effect on modulation. Antenna trimmer for peaking RF stage. Audio output, 3 watts. "S" meter. Antenna input for single-wire or balanced line. Tubes: 6BA6 RF, 6BE6 mixer, 6C4 oscillator, 3-6BA6 IF, 6AL5 2nd det-AVC-ANL 12AU7 BFO-audio, 6V6GT output; 5U4G rectifier and OC3/VR105 voltage regulator.

Two-tone gray cabinet, 11 x 20 1/2 x 13 1/2" deep. Less speaker (see below). For operation from 110-120 volts, 50-60 cycles, AC. Shpg. wt., 75 lbs.

98 SX 766. NET. **264.50**  
**SPEAKER.** 8" PM, in matching cabinet. Wt., 12 lbs.  
 97 SX 757. NET. **14.50**

**New Hammarlund Pro-310 Dual-Conversion Receiver**

The new Pro-310 offers every feature essential to an extremely high order of sensitivity, selectivity and stability; plus unusual operating ease. Provides continuous coverage of the frequencies from 540 kc to 34 mc in six ranges. Up-to-the-minute design with printed circuit RF section and sectionalized construction for compactness and stability.

**PRECISION TUNING.** Differential tuning system combines electrical and mechanical bandwidth for extremely accurate logging. Bandspread effectively magnifies any 10% section of main dial ten times. Bandspread is readable to .02% (1 part in 5000).

**DELUXE FEATURES.** Rotary turret bandswitch for short leads in critical circuits. Two tuned RF circuits, one RF stage and dual conversion provide exceptionally high sensitivity and image rejection without amplification of noise. 1 microvolt CW signal produces a 10 to 1 signal-to-noise ratio. IFs at 1802 and 52 kc with crystal controlled second conversion oscillator for high stability. Normal and high level BFO output for CW and single side band reception. Other features include: 3-position selectivity switch—250, 1750, 3500 cps at 3 db down. Antenna trimmer permits peaking antenna for band in use. Highly effective series noise limiter.

TUBES: 3-6BA6, 2-6BE6, 2-6C4, 2-6AL5, 12AX7, 6V6GT/G, 6AN8; 5U4G rectifier and OB2 voltage regulator.

Modern cabinet has slant panel with wrist-high placement of knobs. Size: 8 1/4 x 17 1/4 x 15 1/2". For 105-115 volts, 50-60 cycle AC. Shpg. wt., 45 lbs.

98 SX 770. NET. **495.00**  
**SPEAKER.** 6 1/2" PM in matching cabinet. Size: 7 1/4 x 11 7/8". Shpg. wt., 4 1/2 lbs.  
 98 S 771. NET. **18.50**



### Johnson High-Quality Amateur Equipment

**Fig. A. 240-102 VIKING II KIT.** Power input: 135 watts on phone; 180 watts on CW. Covers 160, 80, 40, 20, 15 and 11-10 meters. Provision for 10 crystals and external VFO. TVI-proofed: Copper-plated steel cabinet with phosphor-bronze bonding strip; filters with low-inductance chokes and disc ceramics; filter in AC line; Pi-network provides 30 db 2nd harmonic attenuation (use low-pass filter for additional attenuation). 6A16 crystal osc., 6AQ5 buffer doubler, 2 parallel 6146 final, 6AU6 speech, 6AU6 driver, PP 807's mod., 6AL5 bias rect., 2—5R4GY HV rect., 5V4G LV rect., meter with switching circuit. Takes crystal or dynamic mike. 11 $\frac{3}{4}$ x15x21". With tubes, instructions and all parts; less crystal, key and mike. For 105-125 v., 50-60 cycle AC. Shpg. wt., 91 lbs.  
**98 SX 057. NET. 279.50**  
 240-102-2. As above, but wired. 337.00  
**98 SX 058. NET.**

**Fig. B. 250-23 "MATCHBOX" ANTENNA COUPLER.** Performs all transmission line matching and switching functions required in low or medium power Amateur stations. For Amateur bands from 3.5-30 mc. Matches balanced antennas from 25 to 1200 ohms and unbalanced or single wire antennas from 25 to 3000 ohms. Nominal input impedance 52 ohms, rated at 250 watts. A built-in transmit/receive relay grounds receiver antenna terminals when in "transmit" position. Independent adjustment for matching antenna to receiver input. Has RF probe to actuate CW keying monitor. Coaxial input and seven terminal receiver and relay strip. Fully shielded. Maroon and gray. 9 $\frac{7}{8}$ x10 $\frac{1}{2}$ x7". Shpg. wt., 7 lbs.  
**99 SX 026. NET. 49.85**

**Fig. C. NEW 240-161 VIKING "RANGER" TRANSMITTER KIT.** Complete 7-band, TVI-proofed, bandswitching, phone and CW transmitter/exciter. Features extremely stable, built-in VFO with large, accurately calibrated dial; 9" of dial scale on 10 meters. Separate dial scales for each band. 75-watt CW and 65-watt phone input. 100% AM modulation. Pi-network output matches 50 to 500 ohm lines. Bandswitching on 160, 80, 40, 20, 15, 11 and 10 meters. Excellent break-in keying. Complete meter switching provided. Tube lineup: 6AU6 VFO, 6CL6 crystal osc., 6CL6 buffer, 6146 final amp., 6AQ5 clamper, 12AX7 speech amp., 12AU7 audio driver, 2—1614 push-pull mod.; OA2 voltage reg., 6AX5 low voltage rect., 5R4GY high voltage rect. With instructions; less tubes, crystal, key and mike. Size: 15x11 $\frac{1}{2}$ x9". For 105-125 v. 50-60 cycle AC. Wt., 54 lbs.  
**98 SX 071. NET. 179.50**  
 240-161-2. As above, but wired.  
**98 SX 070. NET. 258.00**

**Fig. D. 240-122 VFO KIT.** An expertly engineered, very stable VFO. For use with Johnson Viking, or any other transmitter. For 160, 80, 40, 20, 15 and 11-10 meters. Output frequency ranges: 1.75-2 mc for 160-40 meters; 7-7.425 mc for 40-10 meters; 6.7-7 mc for 11 meters. Output: 5.5 to 8 volts. Excellent isolation between grid and output circuit and temperature compensation. Keys cleanly for "break-in" operation. Obtains power from Viking I or II; requires 250-300 volts DC at 15 ma. and 6.3 volts at 3 amps. Uses 6AU6, OA2. Size, 7x6 $\frac{1}{2}$ x6 $\frac{1}{2}$ ". Supplied with parts and instructions; less tubes. Shpg. wt., 7 lbs.  
**97 S 714. NET. 42.75**  
 As above, but wired.  
**98 SX 059. NET. 63.75**

**Fig. E. 250-25 SIGNAL SENTRY.** Covers all bands. No tuning. For convenient monitoring of either phone or CW transmissions. Consists of audio oscillator keyed by RF detector and gated amplifier. Can also be used as code practice oscillator. Installation is simple. Plug provided fits headphone jack of receiver; headphones plug into jack on Signal Sentry. RF probe coupled loosely to transmitter provides signal. Mutes receiver output. Requires: 250 v. DC @ 5 ma, 6.3 v. @ .6 amp. 3 $\frac{1}{2}$ x3 $\frac{1}{2}$ x3 $\frac{1}{2}$ ". With cables, connectors and instructions. Less 12AX7 and 12AU7. Shpg. wt., 3 lbs.  
**99 S 027. NET. 14.70**

**250-24 STANDING WAVE RATIO BRIDGE.** For adjustment of antenna coupler and transmission line and for effective use of low pass filter. 52 ohm input (can be changed by replacing resistor). For 0-1 ma meters. Coax fittings. 2 $\frac{3}{8}$ x4 $\frac{1}{2}$ ". Wt., 1 lb.  
**99 S 028. NET. 9.75**

**Fig. F. 240-141 MOBILE TRANSMITTER KIT.** Up to 60 watts input on 75, 40, 20, 15, 11-10 meter bands. Bandswitching; gang tuning; 4 position crystal selector with additional position for external VFO (see Johnson VFO, fig. G); provision for push-to-talk operation. 52 ohm output. Meter with switching circuit indicates current at osc. plate. Buffer plate, final grid, final plate and modulator plates. "Transmit-Receive-Tune" switch controls entire mobile installation—mutes receiver. Tubes: 6BH6 osc., 6AQ5 buffer-doubler, 807 final, 6BH6 speech, 6BH16 driver and PP 807's mod. Requires: 300-600 v. DC at 200-240 ma and 6.3 v. at 4 amps. 7 $\frac{1}{2}$ x6 $\frac{1}{2}$ x10 $\frac{1}{2}$ ". With all parts; less tubes and mike. Instructions supplied are completely illustrated for simplified assembly. Control wiring specifications and antenna suggestions are included. Can be wired for either 6-v. or 12-v. systems by choice of filament arrangement. Shpg. wt., 16 lbs.  
**98 S 056. NET. 99.50**

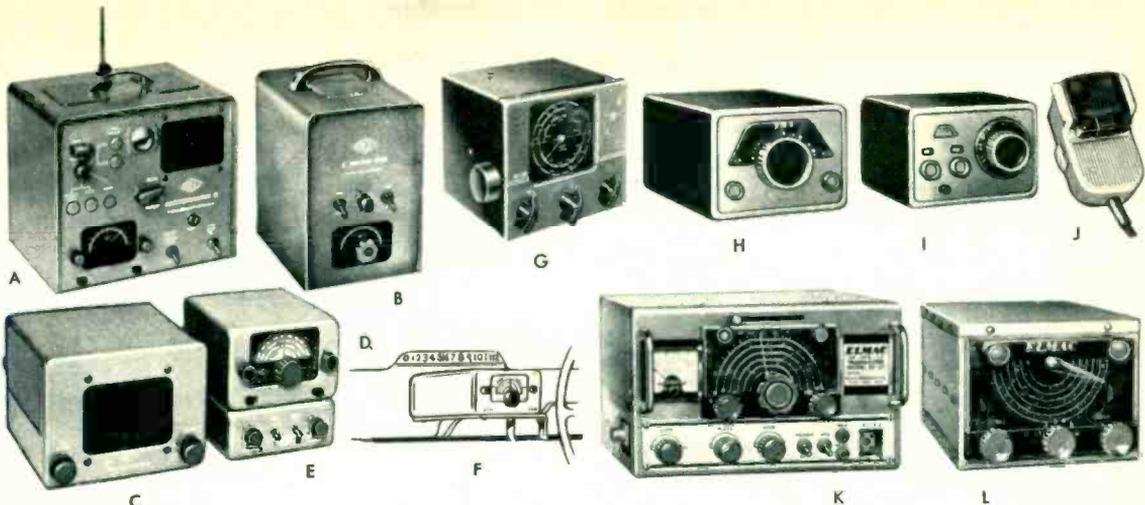
**Fig. G. 240-152 MOBILE VFO KIT.** Compact VFO. Very stable. Edge lighted dial accurately calibrated for 3.75-4.0 mc., 7.05-7.45 mc., 14.1-14.7 mc., 21.2-21.7 mc., 28.2-29.8 mc. Vernier tuning ratio, 7 to 1. 6BH6 osc., 6BH6 amp.-multiplier; OA2 VR. Requires: 6.3 v. at 3 amps, or 12.6 v. at .15 amps, and 250-300 v. DC at 20 ma. With cable, connectors, all parts and instructions; less tubes. Size: 4x4 $\frac{1}{4}$ x5". Wt., 3 lbs.  
**99 S 029. NET. 29.45**

240-152-2. As above, but wired. 44.95  
**99 S 025. NET. 44.95**  
**Fig. H. 250-20 LOW-PASS FILTER.** 4 shielded sections. For Viking I and II or any other Amateur transmitter. Handles 1 kw, 100% modulated. 75 db or more attenuation of harmonics above 54 mc. Imp.: 52 ohms. 2 $\frac{1}{2}$ x9 $\frac{3}{4}$ ". Shpg. wt., 2 $\frac{1}{2}$  lbs.  
**98 S 055. NET. 13.50**

**Fig. I. 250-26 "WHIPLoad 6."** High-efficiency, bandswitching mobile antenna loading coil. For bandswitching on 75, 40, 20, 15, 11 and 10 meters. Variable capacitor shunts coil on 75 meters for tuning entire band. Dial scale for accurate calibration. High "Q" airwound coil with polystyrene support strips. Fiberglass housing protects unit against shock. For use with 10 meter whips. With mtg. hdwe. Wt., 2 lbs.  
**98 C 396. NET. 19.50**

**Fig. J. 250-22 "BI-NET" RESONATOR.** Enables single 10-meter mobile whip antenna to be used for transmission and reception on both the 10- and 20-meter amateur bands. Operation is fully automatic with only one antenna and transmission line required. Unnecessary to use switches, relays or other mechanical controls. After initial adjustment, the Bi-Net needs no further attention. Unit mounts in center of any standard mobile whip antenna and permits operator to change bands while car is in motion. For the first time, true bandswitching mobile operation is available. Streamlined, weatherproof plastic housing; has 3 $\frac{1}{2}$ "-24 female threads. Shpg. wt., 3 lbs.  
**73 C 170. NET. 10.95**

**DYNAMOTOR BASE ASSEMBLY KITS.** Mounting for PE-103's or units below. With dropping resistor for low voltage stages; fuse holders and receptacles. For Johnson and other mobile gear. Size: 2 $\frac{1}{2}$ x7 $\frac{1}{4}$ x7 $\frac{1}{4}$ ". Shpg. wt., 4 lbs.  
**99 S 030. 239-101. 6 volt. NET. 16.50**  
**99 S 031. 239-103. 12 volt. NET. 17.40**  
**CARTER GENEMOTORS.** For use with Johnson mobile transmitter kit. Output: 500 v. DC at 200 ma. Shpg. wt., 12 lbs.  
**99 S 032. Type 520AS for 6 v. NET. 49.24**  
**99 S 033. Type 520BS for 12 v. NET. 51.08**



## Latest Amateur Communications Equipment

### Gonset Transceiver and VFO

**Fig. A. 3025 COMMUNICATOR II.** Complete 2-meter station in one portable case. Operates from power line or storage battery. Adjustable squelch, phone jack, dial light switch. Transmitter: AM; 5-7 watts output; crystal or carbon mike; uses 8 mc crystals. Receiver: 144-148.3 mc.; cascade RF stage; 3 IF stages; noise limiter; PM speaker. With 19" whip type antenna; less mike and crystal.  $9\frac{1}{4} \times 10\frac{1}{2} \times 7\frac{1}{8}$ ". For 115 v. 50-60 cycle AC or 6 v. DC. 24 lbs. 83 S X 820. NET..... 229.50

**Fig. B. 3024 VFO-AUDIO PREAMPLIFIER.** New, 2-meter VFO with self-contained, voltage regulated power supply. For use with 3025 Communicator, above, or similar 2-meter rigs. Highly stable, Clapp-type oscillator circuit. Dial has 0 to 100 logging scale in addition to 2-meter band calibration. Output at 24 mc with special filter circuits to minimize spurious radiations. Output is plugged into crystal socket of 3025 Communicator and is actuated by main transmit/receive switch. "Spotting" switch for "zeroing in" on received signal. Built-in preamp provides added gain for increased pickup with crystal microphone. For operation from 105-125 volts. 50-60 cycle AC. Cabinet matches 3025 Communicator. Size:  $9\frac{1}{4} \times 6\frac{1}{2} \times 7\frac{1}{8}$ ". Shpg. wt., 10 lbs. 83 S X 819. NET..... 84.50

### Gonset Converters

**Fig. D. 3030 "SUPER SIX."** Mobile converter covers 75 to 10 meter Ham bands including 19 and 49 meter SW bands. Excellent signal-to-noise ratio. Controls. Antenna Trimmer, On-Off, Band Selector, RF gain control, Oscillator Compensator and hi-lo impedance antenna switch on rear panel. Output. 1430 kc. With tubes and cables. Gray metal case,  $5\frac{1}{4} \times 3\frac{1}{2} \times 5\frac{1}{4}$ ". Requires 80-135 volts DC at 10 ma, 6 volts at .9 amp. Shpg. wt., 5 lbs. 84 S 913. NET..... 52.50

**Fig. D. 3002 3-30 MC CONVERTER.** Excellent for all-band mobile installations. 3 ranges. Power requirements: 10 ma at 135 volts and 6 volts DC at 0.75 amp, 1500 kc output. With cables, and instructions. Gray case,  $5\frac{1}{4} \times 3\frac{1}{2} \times 5\frac{1}{4}$ ". Shpg. wt., 5 lbs. 84 S 954. NET..... 44.75

**Fig. C and E. 3041 NEW MOBILE SUPER-CEIVER.** IF-audio strip for use with "Super 6" or other converter for high selectivity. Xtal control, 8 tuned circuits (262 kc), adjustable squelch, BFO, AF-RF controls, noise clipper and speaker. 1430 kc input.  $6\frac{1}{4} \times 5\frac{1}{4} \times 6\frac{1}{8}$ ". Control head 2" high. With crystal, cables and power supply for operation from 6 volts DC. Shpg. wt., 8 lbs. 84 S 914. NET..... 119.50

### Gonset Deluxe FM Tuners and Accessories

**Fig. D. FM TUNERS.** Compact tuners for mobile or stationary installations. Squelch circuit. Easily connected to AM receiver. Require 14 ma, 150 v. DC; 1.8 A, 6.3 v.  $5\frac{1}{4} \times 3\frac{1}{2} \times 5\frac{1}{4}$ ". \*Less squelch. Supplied with complete instructions. Shpg. wt., 5 lbs. 83 S 822. Type 3009. 30-40 mc. 83 S 823. Type 3010. 40-50 mc. 84 S 925.\*Type 3011. 88-108 mc. 83 S 824. Type 3012. 152-162 mc. NET EACH..... 69.50

**Fig. C. 3034 AUDIO AMPLIFIER, POWER SUPPLY AND SPEAKER.** For any Gonset tuner. For 6 volt DC.  $6\frac{1}{8} \times 7 \times 6\frac{1}{4}$ ". Shpg. wt., 8 lbs. 83 S 826. NET..... 44.50

**TYPE 3001 CLIPPER NOISE LIMITER.** Reduces interference. Recommended for use in mobile installations. Size,  $2 \times 4 \times 1\frac{1}{2}$ ". Supplied with 9006 tube, cables and instructions. Shpg. wt., 2 lbs. 60 S 596. Type 3001. NET..... 9.25

**Fig. F. TYPE 3006 STEERING POST MOUNTING BRACKET.** For all Gonset converters and tuners. Wt., 1 lb. 84 S 994. Type 3006. NET..... 3.90

### RME E-V Communications Equipment

**Fig. G. MC-55 MOBILE CONVERTER.** Covers 80-75, 40, 20, 15, 11-10 meters. High degree of sensitivity; built-in noise limiter; antenna change-over switch; worm-gear dial mechanism; edge-illuminated dial. IF frequency: 1550 kc. Heaters operate from 6 or 12 volts. Requires plate supply of 150-180 v. DC at 18 ma. Easily available from car radio. Gray case,  $4\frac{1}{2} \times 4\frac{1}{2} \times 5\frac{1}{4}$ " wide x  $5\frac{1}{4}$ " deep. With cables and underdash bracket. Shpg. wt., 7 lbs. 98 S 032. NET..... 69.50

**MC-53.** For 11-10, 6, 2 meters. As above, plus OB2 regulator and for 6 volt operation only. 98 S 031. NET..... 66.60

**Fig. H. DB-23 PRESELECTOR.** Tremendously boosts the gain and signal-to-noise ratio of Amateur receivers. Covers 80-75, 40, 20, 15, and 11-10 meter bands. Average overall gain, 25 db. Operation is simple. Controls: Off-On, Band Selector and Antenna Peaking. Tubes: 3-6J6's plus rectifier. Blue-gray steel case,  $5 \times 7\frac{1}{4} \times 6$ ". For 110-120 volts. 50-60 cycles AC. Shpg. wt.,  $6\frac{1}{2}$  lbs. 98 S 751. NET..... 49.50

**Fig. I. MODEL 100 SPEECH CLIPPER.** Valuable accessory for phone transmitters. Clips audio peaks to permit a considerably higher average percentage of modulation. Output feeds speech amplifier. Filter eliminates harmonics resulting from clipping and attenuates frequencies above 3000 cps. Frequencies below 200 cps also are attenuated. Clipping level control (3-20 db); Off-On switch and In-Out control. With 6SC7 and 6H6; 6X5GT rectifier.  $7\frac{1}{2} \times 5 \times 6$ ". For 110-120 v., 50-60 cycles AC. Shpg. wt.,  $6\frac{1}{2}$  lbs. 98 S 750. NET..... 39.50

**Fig. J. MODEL 208 ELECTRO-VOICE MICROPHONE.** Noise-cancelling, single-button, carbon mike. Blast-proof and shock-resistant. Response: 100-4000 cps. Output: -50 db. Press-to-talk switch. With 5 ft. cable. Size,  $2\frac{1}{4} \times 1\frac{1}{2} \times 1\frac{1}{4}$ ". Shpg. wt., 8 oz. 99 S 587. List. \$16.50. NET..... 9.70

### Elmac Communications Equipment

**Fig. K. AF-67 TRANS-CITER.** 60 watts input on AM, CW or NBFM. Bandswitching on 160, 80/75, 40, 20, 15, and 11/10 meters. Pi-network output. 5-circuit meter. Tubes: 6AK6, 6AG5, 6AQ5, 6146, 6AU6, 12AU7, 6BJ6, 2-5881; OB2 regulator. Requires 475 v. DC at 170 ma and 225 v. DC at 60 ma. Filaments require 6 or 12 v. AC or DC.  $7 \times 11\frac{1}{2} \times 11\frac{1}{4}$ ". Shpg. wt., 20 lbs. 98 S 091. NET..... 177.00

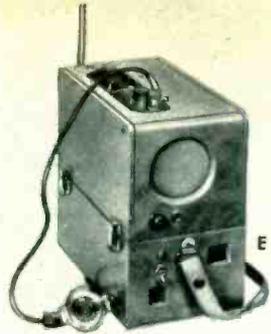
**PS-2V 115V. AC POWER SUPPLY.** For AF-67. Wt., 30 lbs. 98 S X 760. NET..... 49.50

**CFS-1 CONNECTING CABLE.** Connects PS-2V and AF-67. 98 S 761. NET..... 4.75

**Fig. L. PMR-6A MOBILE RECEIVER.** 9-tube, dual-conversion, communications receiver. Covers 160, 80, 40, 20, 15, and 10 meter bands, as well as broadcast band, in 6 ranges. Double conversion plus 10 tuned circuits including RF stage for excellent sensitivity, selectivity and image rejection. 1  $\mu$ v signal for  $3\frac{1}{2}$  watts output. Voltage-regulated oscillator and BFO for high stability. Noise limiter circuit. 50-ohm coax input. Gray cabinet,  $4\frac{1}{2} \times 6 \times 8\frac{1}{2}$ ". Requires 6 v. at 3.3 amps and 250 v. at 90 ma. Less 3-4 ohm speaker and power supply. (See PSR-6 and PSR-12 below.) Shpg. wt., 8 lbs. 98 S 089. NET..... 134.50

**PSR-6 6-VOLT POWER SUPPLY.** For above. Supplies all voltages. With rectifier, cables and plugs.  $6 \times 4\frac{1}{2} \times 5$ ". Wt. 8 lbs. 98 S 090. NET..... 24.50

**PSR-12 12-VOLT POWER SUPPLY.** Same specifications as PSR-6 above but 12 v. input. 98 S 069. NET..... 24.50



## Popular Amateur Receiving and Transmitting Equipment

### Famous Collins Amateur Gear

**Fig. A. 75A-3 AMATEUR RECEIVER.** Featuring the amazing resonant mechanical filter for almost rectangular skirt selectivity. Designed specifically for Amateur communications; peak performance from 160 to 11/10 meters. Dual conversion plus nine tuned circuits and crystal filter. Crystal and mechanical filters may be used together. 3 kc mechanical filter supplied. 800 cycle filter below, may also be used; selector switch on panel. Crystal controlled converter and drift-free VFO in second converter. Single control operates drum dial and vernier. Sensitivity, 2 microvolts for 10 db signal to noise ratio. Series type noise limiter for phone, shunt type for CW. 50 db minimum image rejection. 2 watts audio output with 4 and 500 ohm terminals and phone jack. Uses 6CB6 RF, 2-6BA7 mixers, 2-6BA6 VFO and buffer, 12AT7 crystal osc., 4-6BA6 IF amp., 6BA6 BFO, 6AL5 det.-AVC, 12AX7 AVC amp./audio amp., 2-6AL5 noise limiters, 6AQ5 output, OA2 regulator; 5Y3GT rect.  $21\frac{1}{2} \times 12\frac{1}{2} \times 13\frac{1}{2}$ ". Less speaker. For 115 v. 50-60 cycle AC. Shpg. wt., 70 lbs.

98 SX 028. NET. 530.00

98 S 029. 800 cycle Mechanical Filter. For 75A-3. Shpg. wt., 2 lbs. NET. 35.00

97 SX 776. 10" Speaker. For 75A-3 receiver. Has matching cabinet. Shpg. wt., 34 lbs. NET. 20.00

98 S 034. 8R-1 Crystal Calibrator. With 100 kc crystal. Plugs into 75A-3. Operation controlled by switch on receiver. Shpg. wt., 2 lbs. NET. 25.00

98 S 033. 148C-1 NBFM Adapter. Plugs into 75A-3. Controlled by switch on panel of receiver. Shpg. wt., 2 lbs. NET. 22.50

**Fig. B. 32V-3 AMATEUR TRANSMITTER.** Latest version of the outstanding 32V series and successor to the famous 32V-2. Extensive research and engineering have gone into the 32V-3 to assure excellent all-band performance on both phone and CW. Provisions for suppression of TVI have also been added. Conservatively rated at 160 watts input on CW and 140 watts phone. All controls on front panel. Complete bandswitching, VFO and all exciter stages are ganged. Covers 80, 40, 20, 15 and 11/10 meters. Slide-rule dial shows band in use and vernier dial provides direct reading in kilocycles. 2 meters: 1 for final plate current; the other reads low voltage, high voltage, grid drive, modulator plate current and serves as modulation indicator. TVI-suppression features: one-piece cabinet opens only at front; hand-carry slots at side are completely lined; only  $\frac{1}{4}$ " diameter ventilating holes; inner shield for entire RF section; low-pass filters in AC line, antenna relay line, receiver disabling circuit, microphone line and keying circuit.

Tubes: 6SJ7 VFO, 6AK6 buffer, 6AG7 and 2-7C5 multipliers; 4D32 final; 6SL7 speech; 6SN7 driver, 2-807's modulator; 5Z4 and 2-5R4GY rectifiers; VR75, OB2 and 3-OA2 voltage regulators. Size,  $21\frac{1}{2} \times 12\frac{1}{2} \times 13\frac{1}{2}$ ". With tubes and instructions. For 110-120 volts, 50-60 cycles AC. Shpg. wt., 133 lbs.

97 SX 667. NET. 775.00

35C-2 Low-Pass Filter. For antenna output circuit of 32V-3. Provides additional harmonic attenuation of about 75 db. Impedance: 52 ohms. Fits connector on rear of cabinet. Shpg. wt.,  $2\frac{1}{2}$  lbs.

97 S 778. NET. 40.00

### New Barker-Williamson Transmitter

**Fig. C. MODEL 5100.** For dependable operation on phone and CW; VFO or crystal control. Output rated at 100 watts phone and 125 watts CW. TVI suppression features include a built-in 75 ohm low-pass filter which provides a minimum of 85 db attenuation through the TV channels. Additional precautions have been taken to prevent radiation from all external leads. Covers 80/75, 40, 20, 15 and 11/10 meters. Has built-in, highly stable VFO and crystal oscillator. Uses 80 meter crystals. Pi-network antenna output.

**CONSTRUCTION FEATURES:** RF section consists of two separate independent units. VFO and crystal oscillator comprise one unit and the multiplier-amplifier is the other. Either is readily removable. Hinged top lid. Speech amp.-modulator and power supply complete the 5100.

TUBES USED: 3-6BJ6 VFO and crystal oscillator, 4-6AQ5 RF multipliers, 2-6146

power amplifiers, 6U8 speech amplifier, 6AQ5 driver, 2-6146 modulators; 2-5R4GY and 1-5V4 rectifiers, VR-150 and VR-105 voltage regulators.

**CONTROLS:** Lower portion contains—AC line switch, tune-operate switch, meter selector switch, microphone input jack, audio gain control, key jack, function switch, pilot light and plate power switch. Right hand side of panel contains master band selector, loading control, exc. control, and plate tuning. Center has main frequency dial with clearly marked slide rule type dial. Left side contains all-purpose meter which indicates amplifier grid current, amplifier plate current or modulator plate current. Complete unit housed in heavy gauge copper-plated steel cabinet finished in blue-gray. Panel is etched aluminum. Size: 22" width,  $11\frac{1}{2}$ " height,  $14\frac{1}{4}$ " depth. For operation from 115 v. 50-60 cycle AC. Shpg. wt., 90 lbs.

98 SX 044. NET. 442.50

### Sonar Equipment

**Fig. D. SRT-120P TRANSMITTER KIT.** New TVI-suppressed all-band transmitter kit. Rated input of 120 watts CW, 100 watts phone. Covers 80/75, 40, 20, 15, 11/10 meters plus extra position for additional band. Front panel sockets for 2 crystals or VFO. Thoroughly TVI suppressed. Voltage regulator assures oscillator stability. Complete RF section, modulator, and power supply in one unit. Uses 12BV7 osc.-multiplier, 12BV7 buffer-multiplier, 990J/5894A straight-through final, 2-6CB6 speech amplifiers, 12AT7 driver, push-pull 6L6GA modulators, 6AQ5 keying tube, OA2 voltage regulator, and 2-5U4G rectifiers. Complete with tubes, cabinet, all parts, and clear, easy-to-follow instructions. Less wire, solder, microphone, key, and crystals. Size:  $13\frac{1}{2} \times 8\frac{1}{2} \times 13\frac{1}{2}$ ". For 115 volts, 50-60 cycles AC. Shpg. wt., 47 lbs.

98 SX 786. NET. 198.50

SRT-120P TRANSMITTER. As above, but completely wired and tested. Less microphone, key, and crystals. Shpg. wt., 44 lbs.

98 SX 785. NET. 279.50

**Fig. E. SONAFONE MODEL M4W Compact,** self-contained, battery operated, marine radiotelephone transmitter and receiver. No installation required. Operates about 20 hours before recharging is necessary. 4-watt transmitter has range of 5-30 miles on any of 4 channels between 2 to 3 mc. Extra-sensitive receiver has RF stage and 2 IF stages; also crystal-controlled osc. for high stability. Crystal-controlled transmitter features push-to-talk system. Also functions as 2-watt PA system. FCC type-accepted; FCC will issue license on application. With battery, tubes, antenna, and mike; less crystals. Size,  $12 \times 11\frac{1}{2} \times 7$ ". Shpg. wt., 24 lbs. Up to 4 transmitting and 4 receiving crystals may be used; available on special order at \$6.00 each. Indicate each transmitting and each receiving frequency.

98 SX 794. NET. 198.50

SONACHARGE TYPE 43. Charger for above battery. With cables. For 110-120 v. AC. 98 S 795. NET. 19.95

TELEPHONE TYPE HAND-SET. With cable. 98 S 796. NET. 18.00

ZIPPED WATER REPELLENT CASE. For M4W. 98 S 797. NET. 3.95

**Fig. F. V-120 VFO TUNING HEAD.** Designed specifically for the SRT-120P. Extremely stable, employs four high-Q circuits. Tuning ratio of 8:1. With cable. Size:  $4\frac{1}{2} \times 4\frac{1}{2} \times 3\frac{3}{8}$ ". Wt., 2 lbs.

98 S 789. NET. 19.95

**Fig. G. PP-24 PHONE PATCH.** For coupling transmitter and receiver to phone circuit. With separate rec. and transmit gain controls.  $4 \times 4 \times 2$ ". Shpg. wt., 2 lbs.

98 S 798. NET. 19.50



### Eldico Amateur Station Equipment

**Fig. A. TR-2TV TRANSMITTER KIT.** An ultra-compact AM phone and CW transmitter with complete band-switching from 80 through 10 meters. With 90 watts input on CW, 65 watts input on phone. Efficient pi-network output. All exciter stages are broadbanded and pre-tuned so that no exciter tuning is needed. Unit is completely shielded and all circuits are by-passed and filtered for excellent TVI-proofing. Choice of eight crystals or external VFO with front-panel switch. Can be keyed in oscillator, buffer, or final cathode. Clean, clickless keying with "break-in" operation. Uses 6CL6 osc., 6CL6 buffer/multiplier, 6146 final amplifier. Audio system has high-impedance microphone input to a dual-section 12AT7, 6AQ5 driver, 4-6AO5 modulators in push-pull-parallel, 5R4G rectifier. Complete with all hardware, tubes, wiring harness, cabinet and instructions. Less solder, key, microphone, crystals. For 115 v., 60 cycles AC. Size, 10½x 19x11". Shpg. wt., 50 lbs.

98 SX 013. NET..... 429.95  
 98 SX 014. NET..... 549.95  
 Fig. D. A-300 ANTENNA TUNER KIT. 300-watt universal antenna coupler. Designed to couple any conventional antenna feedline, (regardless of impedance), to any conventional tank circuit. Includes split-stator capacitor, swinging link, shielded case, 2" square meter, coax connector from transmitter, and output connectors. With 8x10x8" cabinet and full instructions. Uses BKW TVL coils (not supplied; see page 145). Shpg. wt., 9 lbs.

98 SX 015. NET..... 179.95  
 TR-2TV. As above, factory wired and tested. 98 SX 016. NET..... 229.95  
 TR-2TV. FOR CW ONLY. Kit, as described above, less audio system. 98 SX 017. NET..... 139.95  
 TR-2TV. FOR CW ONLY. Completely factory wired and tested. 98 SX 018. NET..... 179.95

**Fig. B. TR-75TV TRANSMITTER KIT.** Popular 60-watt CW transmitter for the beginner and the old-timer. Incorporates the utmost in filtering, by-passing, and complete shielding for maximum protection from TVI. Carefully engineered for very easy construction. Covers 80, 40, 20, 15, 11, and 10 meter bands. Clean, smooth keying characteristic. Built-in antenna tuner permits easy loading of any single-wire antenna. Single meter with switching circuit for convenient metering of all stages. Uses 6AG7 crystal oscillator and 1625 final amplifier, 5U4G rectifier. Complete with parts and instructions. Less key and crystal. Size, 10x17x9". For operation from 110-120 volts, 50-60 cycles AC. Shpg. wt., 42 lbs.

97 SX 953. NET..... 69.95  
 TR-75TV TRANSMITTER. As above, but completely factory wired and tested. 98 SX 019. NET..... 99.95

**Fig. C. SSB-50 SINGLE SIDEBAND TRANSMITTER KIT.** Complete, self-contained, single-sideband exciter and transmitter kit with full 50-watt output. Covers 80, 40, 20, 15, and 11/10 meters. Features precision no-drift VFO with hermetically sealed permeability tuning. Also includes: 1st mixer/crystal osc., single-control exciter, linear amplifier, 2nd mixer, and pi-filter linear power amplifier. 3 heavy duty power supplies with vacuum rectifiers. Switch selects AM, SSB-lower or upper sideband. Has built-in voice break-in, receiver quieting, and VFO calibrating. Panel size, 10½x 19". Depth, 12". For 115 v., 50-60 cycles AC. Shpg. wt., 40 lbs.

98 SX 013. NET..... 429.95  
 SSB-50 TRANSMITTER. As above, but completely wired and tested. Wt., 40 lbs.  
 98 SX 014. NET..... 549.95

**Fig. E. FS-100 FREQUENCY STANDARD.** 100 kc self-contained frequency standard, gives accurate frequency markers every 100 kc. Smaller than a package of cigarettes, with its own power supply. Rugged construction. Use of transistor insures long battery life. Ideally suited for mobile operation. Shpg. wt., 1 lb.

98 S 046. NET..... 18.95

**Fig. F. ANTENNASCOPE KIT.** An impedance measuring instrument for obtaining maximum efficiency from your antenna. Has impedance range of 10-500 ohms; frequency range up to 200 mc. Bridge type circuit and 100 microamp meter for utmost accuracy. Size, 6x2½x2½". Complete with instructions. Shpg. wt., 3 lbs.

97 S 770. Model AT1. NET..... 29.95

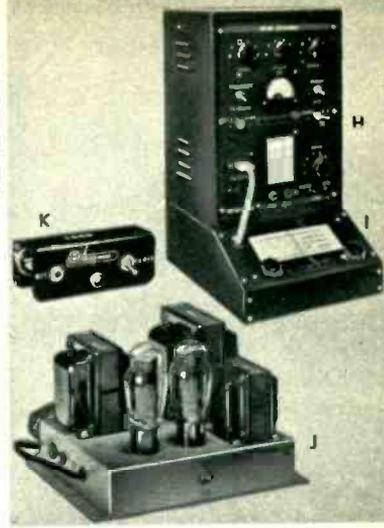
**ANTENNASCOPE.** As above, but factory wired and tested. Shpg. wt., 3 lbs.

97 S 769. NET..... 34.95

**Fig. G. VFO-2.** Variable frequency oscillator, specially designed for use with the TR-1, TR-1TV, TR-2TV, and TR75TV. A remote, simple, compact, high-stability VFO, gives complete coverage on 80, 40, 20, 15, and 10 meters. Self-contained in a handsome gray hammertone case, with large, easy-to-read 6" dial. Features hi-Q air inductor, vernier special tuning capacitor, plus a tubeless circuit to avoid drift caused by heat. No external power connections needed. Shpg. wt., 4 lbs.

98 S 045. NET..... 29.95

See page 197 for a complete listing of Eldico Filters.



### Harvey-Wells Equipment

**Fig. H. BANDMASTER DELUXE.** Compact, all-hand, 50-watt phone-CW transmitter. Features instant bandswitching, 80 through 2 meters. No coil changing. 100% break-in operation on CW and a high-activity oscillator. Pi-section tank matches loads from 50 to 600 ohms (link for 2 meters). Has DC milliammeter with 0-10 and 0-200 scales. Panel frequency calibration chart. Uses APS-50 power supply described below. Tubes: 6AQ5 osc., 6AQ5 multiplier, 807 final. Speech amplifier for crystal mike has 2-6AU6's, 1-12AT7 phase inverter, 2-6L6's in modulation. Less power supply. Attractive case finished in black. Size, 13¼x9x7½". With tubes and instructions, less crystal and microphone. Shpg. wt., 20 lbs.

97 SX 792. NET..... 137.50

**BANDMASTER SR.** 50-watt phone-CW transmitter. Same as Bandmaster Deluxe, but modulator does not have high-gain speech amplifier. Requires single-button carbon microphone. Supplied complete with tubes and detailed operating instructions, but less crystal and power supply (use APS-50 power supply described below). Shpg. wt., 20 lbs.

97 SX 791. NET..... 111.50

**Fig. I. BANDMASTER VFO.** Designed specifically for Bandmasters. Covers 80/75, 40, 20, 15, 11/10 meters. Power requirements: 6.3 v. at 0.65 amp., 300 v. at 30 ma. Sloping front panel with slide-rule dial. Uses 6AG7 and OB2 regulator. Size, 9x11¼x4". Shpg. wt., 9 lbs.

98 SX 043. NET..... 47.50

**Fig. J. APS-50 AC POWER PACK.** For use with Bandmaster transmitters. Delivers 425 volts of well-filtered DC at 275 ma; 6.3 volts at 4 amps. With two 5U4G rectifiers. For operation from 105-125 volts, 50-60 cycles AC. Size, 11x6¼x8¼". Shpg. wt., 27 lbs.

97 SX 698. NET..... 39.50

**DPS-50 6-VOLT DYNAMOTOR.** For portable or emergency use with Bandmaster transmitters. Operates from 6-volt storage battery. Output, 300 v., DC, 250 ma. Size, 10¼x5¼x5¾". Shpg. wt., 16 lbs.

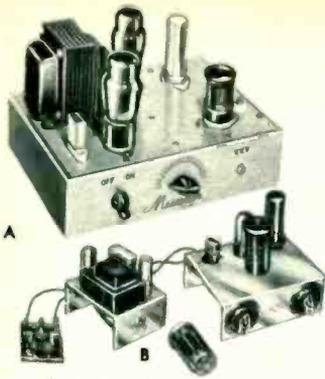
97 SX 697. NET..... 87.50

**DPS-50 12-VOLT DYNAMOTOR.** For use with any 12-volt storage battery. Ideally suited for use with new model cars which have 12-volt electrical systems. Delivers 400 volts DC at 250 ma. Wt., 16 lbs.

98 SX 776. NET..... 54.50

**Fig. K. REMOTE CONTROL PANEL.** For mobile Bandmaster installation with transmitter mounted in car trunk. Complete with 25' microphone cable and 25' power cable with matching plugs and spade terminals. Designed for use with standard DPS-50 power supply. Size, 5½" long x 2" high. Shpg. wt., 5 lbs.

98 S 063. NET..... 22.50



## Popular Amateur Equipment Selections

### Novice Transmitter Kits

**Fig. A. MEISSNER 2-CW KIT.** An easy-to-build 14-watt transmitter kit for the Amateur 20, 40 and 80 meter bands. Features straightforward circuitry and simplicity—only a minimum of radio knowledge required to assemble and operate. Makes an ideal transmitter kit for the Novice Amateur. Uses a crystal-controlled 6L6 oscillator and a 5U4 in the power supply. Designed to operate with a folded type dipole antenna. Instructions are included showing how to use transmitter with random-length antennas. Includes a terminal strip on rear apron of chassis for metering plate circuit of the 6L6 oscillator. Size  $6\frac{1}{2} \times 7\frac{1}{4} \times 10\frac{1}{4}$ ". With 80 meter coil and all parts including instructions and diagrams. Less crystal and tubes. For 110-120 volts, 60 cycle AC operation. Shpg. wt. 7½ lbs.

83 S 524. NET ..... 23.52  
83 S 522. 20-meter coil ..... NET EACH 3.23  
83 S 523. 40-meter coil ..... NET EACH 3.23

**Fig. B. PHILMORE NT-200 KIT.** New, improved, low-cost, 3-band, 25-watt CW transmitter kit. Particularly suited for the beginning Ham and Novice. For operation on 3.7 to 3.75 mc, 7.175 to 7.2 mc and 21.10 to 21.25 mc; 80, 40 and 15 meter Novice bands. Circuit consists of an untuned type Pierce crystal oscillator; uses a 6V6 driving a 6L6 power amplifier. 5Y3 rectifier is used in power supply. Transmitter and power supply are on separate chassis. Power supply delivers 370 volts DC at 100 ma. Tuned amplifier output feeds into Pi-type network for use with single-wire antenna. No meters needed for tuning. Bulb is used in plate circuit of final amplifier to indicate resonance. With all parts, tubes, punched chassis bases, coil forms, coil winding data, key and full instructions. Step-by-step, easy-to-follow pictorial wiring diagrams simplify assembly. Less wire, solder and crystal. Transmitter size,  $7 \times 5\frac{1}{2} \times 6\frac{1}{2}$ "; power supply,  $4\frac{1}{2} \times 5\frac{1}{2} \times 6$ ". For 110-120 volts, 60 cycle AC. Wt., 10 lbs.

83 S 556. NET ..... 29.40

### Morrow Mobile Equipment

**Fig. C. 5BRF CONVERTER.** Latest model in a fine line of converters. Designed for use with the new FTR receiver below. Covers 80/75, 40, 20, 15 and 10 meters. 1525 kc output. Hi-Q coils on Poly forms for improved signal to noise ratio. Temperature compensated Clapp oscillator and mixer for high stability. 3-gang tuning with separate coils for each band in RF, mixer and oscillator. Big, easy-to-read slide-rule dial shows frequency at a glance; 20:1 tuning ratio.  $4 \times 5\frac{1}{2} \times 7$ ". Complete with hardware, cables and instructions. Takes operating voltages from FTR. Shpg. wt., 5 lbs.

84 S 908. NET ..... 66.59

**5BR-1 CONVERTER.** For 75, 40, 20, 15 and 10 meters. Tuned RF stage. Sensitivity, ½ microvolt. Slide-rule dial. 1525 kc output. Uses: 6CB6 RF, 12AT7 mixer, 12AT7 osc., 6BA6 IF; 6AL5 ANL. Gray case,  $4 \times 5\frac{1}{2} \times 6\frac{1}{2}$ ". Requires 6 v. at 1.5 amps and 200 v. DC at 20 ma. Wt., 5 lbs.

84 S 934. NET ..... 73.45

**MODEL 3BR-1.** Same as above, but for 10-20-75 meters. Shpg. wt., 5 lbs.

84 S 928. NET ..... 63.65

**Fig. D. FTR IF AND AUDIO AMPLIFIER.** New, fixed frequency receiver. An ideal companion unit for the 5BRF above, or any other converter with 1525 kc output, 10 tube circuit. Features: 1  $\mu$ v sensitivity, 3 kc bandwidth at 6 db down, excellent stability for SSB reception. Has crystal controlled mixer, 200 kc IF, 3 stage audio amplifier, noise balance squelch, "S" meter. Has separate 6 v. DC power supply; isolates receiver circuits from heat and vibration. With cables, mounting hardware, and instructions. Less PM speaker. Size:  $4 \times 5\frac{1}{2} \times 7$ ". Shpg. wt., 8 lbs.

84 S 909. NET ..... 125.83

**Fig. E. GC-10 GENERATOR NOISE FILTER.** For 10-meter mobile use. Minimizes generator noise. Tunable. Shpg. wt., ½ lb.

84 S 933. NET ..... 3.68

84 S 911. GC-20. 20 meter filter. NET 3.68

### Central Electronics SSB Gear

**Fig. F. 20A SSB EXCITER KIT.** Phasing-type, single-sideband, bandswitching exciter. Covers 160 to 10 meters. 20 watts peak output—drives kw beam-power linear amplifier, 500-watt triode linear amplifier, or serves as low-power SSB transmitter. Also delivers conventional AM, narrow-band phase modulation, or CW. Voice-controlled break-in on SSB, AM and NBPM mutes speaker or headphones during modulation; also CW break-in. 9000-kc master crystal oscillator. Socket for injection-frequency crystal (or VFO). Tubes: 3—12AT7, 6U8, 12BH7, 6BA7, 2—6AG7; 6E5 "magic eye," 5U4G and 6AL5 rectifiers. With 9000-kc crystal, factory-wired RF unit, pre-aligned phase-shift network, wiring harness, tubes and all parts; less injection-frequency crystal.  $8\frac{1}{2} \times 14\frac{1}{2} \times 10$ ". For 110-120 volts, 60 cycle AC. Shpg. wt., 35 lbs.

83 SX 810. NET ..... 199.50

**20A WIRED MODEL.** Same as above, but factory wired and tested.

83 SX 811. NET ..... 249.50

**QT-1 ANTI-TRIP UNIT.** Speaker anti-trip unit. Plug-in accessory for 20A exciter. Prevents noise or signal from tripping the voice control. Shpg. wt. 2 lbs.

83 S 812. NET ..... 12.50

### Millen Amateur Equipment

**Fig. G. 90801 50-WATT EXCITER-TRANSMITTER.** 90 watts input on CW and 67½ watts input on phone. Can be used as an exciter driving high power stages or as transmitter. Bandswitching on 80/75, 40, 20, 15 and 11/10 meter bands. Uses 5763 oscillator-buffer multiplier and 6146 high-efficiency power amplifier. Designed for installation in standard 19" rack. Series tuned, inductively coupled, low impedance RF output couples to 50-75 ohm flat line. Meter switching permits reading oscillator-multiplier current, amplifier screen current, amplifier grid current, amplifier plate current and amplifier plate voltage.

**TVI-SUPPRESSED.** Carefully designed to minimize possibility of TVI. Shielded RF sections. Leads from RF sections to band-switch and metering sections are shielded and by-passed. Two High "Q" tuned circuits and buffer between any harmonic generating stages and transmitter output. Requires 400-750 volts DC at 90-182 ma high voltage, 250-300 volts DC at 26-35 ma low voltage and 6.3 volts AC at 2 amps. filament supply. Size:  $3\frac{1}{2} \times 19 \times 6\frac{1}{4}$ ". Less tubes. Shpg. wt., 12 lbs.

83 SX 835. NET ..... 75.00

**Fig. H. 90671 STANDING WAVE RATIO BRIDGE.** Accurately indicates standing wave ratio in a 52- or 75-ohm coaxial line. RF bridge circuit compares resistance of antenna and coax to an internal 52-ohm resistor. A calibrated 75-ohm resistor is furnished for substitution in circuit when 75-ohm coax is used. External 0-1 ma meter required to measure deviation from balance. Chart converts meter reading to standing wave ratio. Frequency range, 1-150 mc. Size,  $4\frac{1}{4} \times 2\frac{1}{2} \times 1\frac{1}{4}$ ". Wt., 1 lb.

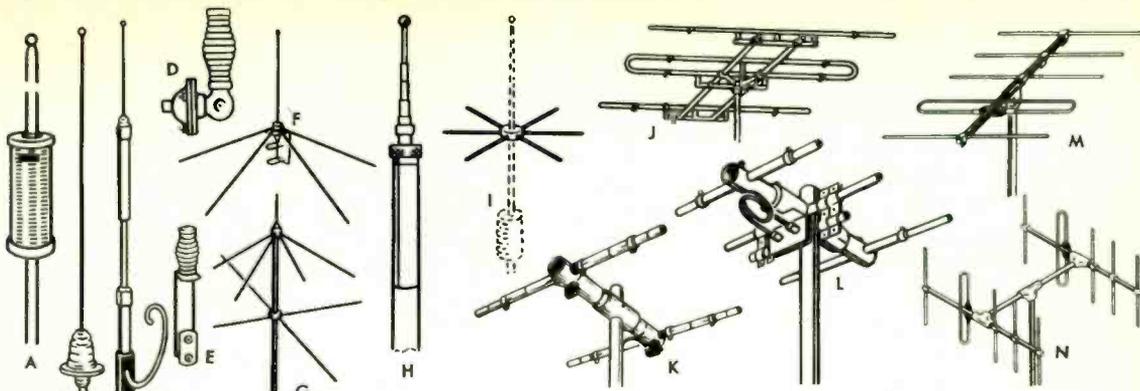
84 F 997. NET ..... 16.80

### New Knight VFO Kit

The new Knight VFO kit offers high-quality performance at incomparably low cost. A complete VFO with built-in, voltage regulated power supply. Outstanding features include: extremely high stability; excellent oscillator keying characteristic for fast break-in; TVI suppression; plenty of bandspread; vernier drive; 2-chassis construction to keep heat from frequency-determining circuits; and ultra-compact construction, only  $8\frac{1}{2} \times 6 \times 5$ ", to conserve table space. Simple to use—plugs into crystal socket of transmitter. **FREQUENCY COVERAGE:** Easy-to-read dial calibrated for 80, 40, 20, 15, 11 and 10 meters. Output on 80 and 40 meters.

**CIRCUIT:** Uses 6BH6 drift-free Clapp oscillator, 6BH6 buffer-doubler; 6X4 rectifier and OA2 voltage regulator. Spot/off/transmit switch for "no-swish" tuning. Extra switch contacts for operation of relays or other equipment. Supplied with tubes, all parts, easy-to-follow instructions and diagrams. Steel cabinet finished in gray and green. For 105-125 volts, 50-60 cycle AC. Shpg. wt., 8 lbs. Available November 15, 1954.

83 S 725. NET ..... 29.50



## High-Quality Amateur Antennas and Accessories

### Master Mobile Antennas and Mounts

**Fig. A. 88-60 MOBILE ANTENNA.** New, high gain whip antenna. When used with Hi-"Q" coils listed below, becomes Hi-"Q" AB precision-quality mobile antenna. In 2 sections to permit all band operation; comes apart to insert new Hi-"Q" 20, 40 or 75 meter loading coils for very efficient operation. Serves as 10-meter antenna when used without coils. Features: air-spaced coil windings; require little or no tuning; protectively coated; instantly interchangeable. Antenna has  $\frac{3}{8}$ " threaded stud to fit mounts listed below. Length, 108". Less mount. Wt. 6 lbs.  
**98 CX 359. NET. 6.86**

**HI-"Q" COILS.** Excellent transmission and reception characteristics when used with Model 88-60 mobile antenna. Coil windings are glyptol-coated for added protection.  
**75-METER COIL.** Size,  $7\frac{1}{2} \times 2\frac{3}{8}$ " dia. 12 oz. **98 C 355. NET. 6.81**  
**40-METER COIL.** Size,  $6\frac{1}{2} \times 2\frac{3}{8}$ " dia. 11 oz. **98 C 364. NET. 6.81**  
**20-METER COIL.** Size,  $3\frac{1}{2} \times 2\frac{3}{8}$ " dia.  $7\frac{1}{2}$  oz. **98 C 365. NET. 6.81**

**"ALL BANDER" 666 COIL.** Hi-"Q" variable antenna coil. Tunes 10 to 75 meters with 60" whip.  $2\frac{3}{8} \times 13\frac{1}{4}$ ". Wt.,  $1\frac{1}{2}$  lbs.  
**97 C 167. NET. 14.65**

**Fig. B. 113 VHF ROOF-TOP ANTENNA.** 2-meter coaxial antenna. Covers 140 to 165 mc range. Mounts in  $\frac{3}{16}$ " hole in car roof. With 10' coax cable and mtg. hdwe. Wt., 1 lb.  
**97 CX 148. NET. 4.85**

**Fig. C. 114 COAXIAL ANTENNA.** As above, but mounted on support rod. Threaded to fit body or bumper mounts. Support rod raises antenna above roof. With 10' coaxial cable. Shpg. wt., 5 lbs.  
**97 CX 149. NET. 9.75**

**100-96S-96" WHIP ANTENNA.** Stainless steel whip.  $\frac{3}{8}$ " threaded stud fits mounts listed below. Less mount. Wt. 2 lbs.  
**97 CX 155. NET. 5.14**

**92 18" WHIP EXTENSION.**  $\frac{3}{8}$ " threaded stud on one end and collet at other. Tubular construction. Shpg. wt., 1 lb.  
**97 CX 154. NET. 3.18**

**9-96T LOW-COST 96" WHIP.** Silicon-chrome, cadmium-plated whip antenna.  $\frac{3}{8}$ " threaded stud. Less mount. Shpg. wt., 3 lbs.  
**98 CX 302. NET. 3.67**

**BODY AND BUMPER MOUNTS.** Take  $\frac{3}{8}$ " threaded stud. Wt., 3 lbs.  
**97 C 151. Fig. D. 132C. Body mount; double-taper, swivel spring base; coaxial fitting. NET. 8.57**  
**97 C 157. Fig. D. 132XC. Heavy-duty type 132C. NET. 9.65**  
**98 C 300. Fig. D. 132JC. Economy version of 132C. NET. 5.07**  
**98 C 304. Fig. D. 132XSC. Stainless steel version of 132XC. Swivel base; coaxial fitting. NET. 14.65**  
**98 C 301. Fig. E. 140J. Economy bumper mount. NET. 4.09**  
**97 C 160. Fig. E. 140X. Heavy-duty bumper mount; double-taper spring; rigid mount. NET. 7.50**

**Fig. F. MODEL GP-4 GROUND PLANE ANTENNA.** Provides complete coverage of 2-meter band. Four "drooping" radial elements match 52-ohm coax transmission line. Sturdily constructed of special alloy aluminum to withstand extreme weather conditions. Has coaxial fitting and ceramic top insulator. With brackets and U-bolts. Shpg. wt., 1 lb.  
**98 CX 356. NET. 5.83**

**Fig. G. MODEL 300.** Designed to efficiently cover the entire amateur 2-meter band. "Drooping" type ground plane plus four straight radials give a low angle of radiation. Radiation pattern almost a perfect circle. Matches 52-ohm coaxial transmission line; includes coax connector. Sturdily built of finest aluminum alloys. With 36" mast. Shpg. wt.,  $2\frac{3}{4}$  lbs.  
**98 CX 357. NET. 12.69**

### Fig. H—Webster "Band Spanner" Antenna

Newest mobile antenna features operation on 75-40-20-15-11-10 meter bands with no external taps, projections or coils. Band change is accomplished by simply raising or lowering top whip to pre-calibrated setting corresponding to band selected. Essentially an effective, center-loaded type antenna with loading inductor wound directly on upper portion of fiberglass support column. Inductor has sufficient turns to permit resonance of lowest frequency band (75-meter), with top whip used. Top whip telescopes for door clearance.  $\frac{3}{8}$ " threaded stud. Shpg. wt., 2 lbs.  
**98 CX 149. NET. 29.50**

### Fig. I—Morrow Model TH "Top Hat"

This new capacity loading unit is very effective in improving the performance of mobile whip antennas. Simple raising and lowering of "Top Hat" provides resonance at high or low end of band. Length of spikes, 9". Shpg. wt.,  $\frac{1}{4}$  lb.  
**51 C 031. NET. 2.45**

### Fig. J—Hy-Lite 3-Element Rotary Beams

Ruggedly constructed, all aluminum antennas. Quickly and easily assembled. 10-meter beam  $\frac{3}{8}$ " and  $\frac{3}{4}$ " tubing; 20-meter beam  $\frac{7}{8}$ " and 1" tubing. With 6' mast but less transmission line.  
**TYPE 3E10F. 10-METER ROTARY BEAM ANTENNA.** With folded-dipole driven element. Matches 52-ohm coax. Shpg. wt., 40 lbs.  
**97 CX 496. NET. 42.40**  
**TYPE 3E20T. 20-METER ROTARY BEAM.** With "T" match. Adjustable from 52 to 300 ohms. Shpg. wt., 30 lbs.  
**97 CX 497. NET. 64.95**

### New Telrex "Beamed Power" Arrays

10- and 20-meter Amateur beams. Have "T" transformers and balun for optimum coupling to 52-ohm line. Precision machined (.005") for easy assembly. Factory tuned and calibrated with stops provided for reassembly. No measuring required.  
**Fig. K. MODEL 520 20-METER 2-ELEMENT "MINI-BEAM."** 19' driven element; 20' reflector; 2x82" boom. Less  $1\frac{3}{8}$ " dia. mast. Wt., 12 lbs.  
**92 CX 202. NET. 55.50**  
**Fig. L. MODEL 503 20-METER 3-ELEMENT ARRAY.** 16'3"x3" boom;  $1\frac{3}{8}$ " dia. telescoping sections. Less 2" dia. mast. Wt., 61 lbs.  
**92 CX 201. NET. 120.00**  
**Fig. M. MODEL 10M3 10-METER 3-ELEMENT ARRAY.** 8'5"x2" boom;  $\frac{1}{4}$ " dia. telescoping sections. Less 2" dia. mast. Wt., 20 lbs.  
**92 CX 200. NET. 67.50**

### Elincor Beam Antenna Kits

**Fig. M. MODEL 200-EA 2-METER KIT.** 5-element beam. Mtg. bracket fits 1" mast. For 52-ohm line. With hdwe. Shpg. wt., 3 lbs.  
**97 CX 487. List. \$15.40. NET. 9.06**  
**Fig. N. MODEL 210-EA STACKED 2-METER KIT.** Consists of two 200-EA beams, plus 5' mast, boom and "T" brackets. Wt., 10 lbs.  
**97 CX 495. List. \$35.75. NET. 21.02**

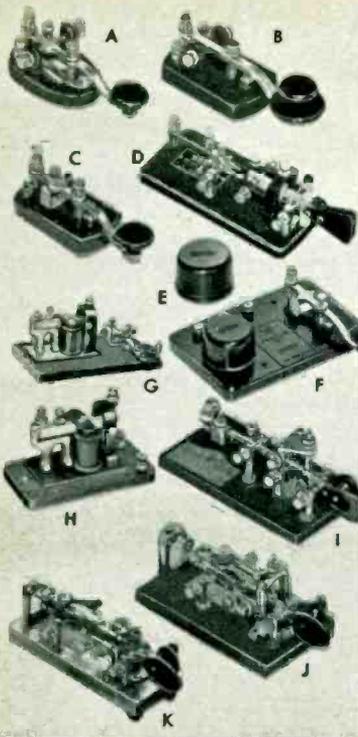
### Amphenol Folded Dipoles

Folded dipole antenna kits for the 4 most popular bands. Antenna sections use high-strength 300-ohm twin-line with copper-clad steel conductors. With 75 feet standard 300-ohm twin-line feeder. \*May be cut for 9- or 12-mc SW broadcast bands. For 15-meter operation use 20-meter dipole; instructions included for cutting. Less end insulators. With installation instructions.

Stock No.	Type	Meters	Lgth., Ft.	Wt., Lbs.	NET
98 C 318	139-010	10	18	3	5.23
98 C 319	139-020	20	35	3	5.88
98 C 320*	139-040	40	70	4	7.64
98 C 321	139-080	80	135	4 $\frac{1}{2}$	11.02

## Quality Amateur Code Equipment

### Johnson Speed-X Keys and Buzzers



**Fig. A. STANDARD MODEL 114-310.** Precision-built key. Die-cast base in black wrinkle. Nickel-plated mechanical parts.  $\frac{1}{4}$ " silver contacts. Adjustable spacing and tension. Shpg. wt., 2 lbs.  
76 P 055. NET ..... 2.60

**Fig. B. HEAVY-DUTY MODEL 114-320.** Deluxe key built to rigid specs. Large, chrome-plated key arm suspended from hardened steel bearings.  $\frac{1}{4}$ " silver contacts. Adjustable spacing and tension. Heavy brass connector concealed under base. Black die-cast base. Shpg. wt., 2 lbs.  
76 P 058. NET ..... 4.10

**Fig. C. PRACTICE MODEL 114-300.** General purpose key for the beginner. Brown bakelite base with knob. Holes for mounting. With beginners code card. Wt., 8 oz.  
76 P 053. NET ..... 1.75

**Fig. D. SEMI-AUTOMATIC MODEL 114-520.** Deluxe key with adjustable speed control. Chrome-plated hardware and reed. Locknut adjustments.  $\frac{1}{4}$ " silver contacts. Heavy, die-cast base finished in black wrinkle enamel. With circuit closing switch. Shpg. wt., 4 lbs.  
76 P 065. NET ..... 11.50

**Fig. I. THE "CHAMPION."** Inexpensive, semi-automatic key for radio-telegraph use. Chrome mechanism; black crackle finish base. Less cord, wedge. 4 lbs.  
76 P 036. NET ..... 12.95

**Fig. K. THE "BLUE RACER" STANDARD.** Small and lightweight. Rugged construction. Adjustable weights set speed. Chrome-plated mechanism. Black finish base. Non-slip rubber feet. With cord and wedge. 4 lbs.  
76 P 045. NET ..... 17.95

**"BLUE-RACER" DELUXE.** As above. With jeweled bearings. Chrome-plated base. Shpg. wt., 4 lbs.  
76 P 046. NET ..... 22.50

**Fig. E. HIGH-FREQUENCY BUZZER MODEL 114-400.** Use with key for code practice. Requires 3 v. battery. Wt., 5 oz.  
76 P 060. NET ..... 1.60

**Fig. F. CODE PRACTICE SET MODEL 114-450.** Code practice system for beginners. Consists of key and high-frequency buzzer on brown bakelite base. With binding posts. Req. 3 v. DC. (2— $1\frac{1}{2}$  v. batteries). Wt., 2 lbs.  
76 P 059. NET ..... 4.25

**Fig. G. LEARNER MODEL 114-110.** Morse code practice set. Brass sounding bar; lacquered steel sounder plate. Bar frame steel; black enamel bridge. Adjustable, nickel-plated key. Mahogany finished wood base. Brass binding posts. Complete with key and 4-ohm sounder. Shpg. wt., 2 lbs.  
76 P 066. NET ..... 9.50

**Fig. H. TELEGRAPH-SOUNDER MODEL 114-112.** High-quality telegraph sounder. Designed for instant response. Brass sounder provides strong, clear signal. Steel bar frame with black enamel finish. Brass bridge and adjustment screws with lacquer finish. Black lacquered steel sounder plate. On mahogany finished wood base. Non-slip rubber mounting feet. Sounder has 4 ohms resistance. Wt., 3 lbs.  
76 P 067. NET ..... 6.70

### Vibroplex Semi-Automatic Keys

**Fig. J. "ORIGINAL" VIBROPLEX.** A precision-built, semi-automatic key for all speeds. Minimum effort for smooth, rapid sending. Preferred and used by commercial operators. Chrome-plated mechanism. Black finish cast-iron base. Supplied with cord and wedge. Shpg. wt., 5 lbs.  
76 P 035. NET ..... 17.95

**DELUXE "ORIGINAL" VIBROPLEX.** Similar to above. With jeweled bearings and chrome base. Shpg. wt., 5 lbs.  
76 P 038. NET ..... 22.50

**CARRYING CASE.** Fits all Vibroplex keys except "Blue Racer." With lock and key. Shpg. wt., 1 lb.  
76 P 037. NET ..... 5.75

**Fig. L. BUD CPO-128A CODEMASTER.** Code practice oscillator; when used with RF pickup link, serves as CW or modulation monitor. Built-in speaker. Takes up to 20 pairs of earphones. Keys may be paralleled. Volume and pitch controls. External speaker may be plugged into headphone jack. Gray hammertone finish.  $6\frac{1}{2} \times 5\frac{1}{2} \times 3\frac{1}{2}$ ". For 115 v. AC or DC. 5 lbs.  
73 P 044. NET ..... 15.43

**BUD CPO-130A CODEMASTER.** (Not illustrated). Has same features as CPO-128 Codemaster, but less built-in speaker. Shpg. wt.,  $4\frac{1}{2}$  lbs.  
73 P 045. NET ..... 13.82

### Code Practice Oscillators

**Fig. M. ICA 4300 AUDIO OSCILLATOR.** Deluxe code practice set. Excellent as CW keying monitor and audio source for transmitter modulation tests. Has volume control and 3-position tone switch. Built-in speaker delivers adequate volume for group instruction. Keys and headphones can be connected in parallel for class instruction.  $8\frac{1}{2} \times 4\frac{1}{2} \times 4\frac{1}{4}$ ". With instructions. For 105-125 v. AC or DC. Wt.,  $3\frac{1}{2}$  lbs.  
73 P 430. NET ..... 15.43

**MODEL 4301 AUDIO OSCILLATOR.** Incorporates the deluxe features of model 4300, but without speaker.  $4\frac{1}{2} \times 4 \times 4$ ". Wt., 3 lbs.  
73 P 431. NET ..... 13.23

### Code Course Records

**Fig. N. ICA CODE COURSE.** Simple method of learning code at home. Consists of 5—10" high-quality, 78 rpm break-resistant vinyl records recorded on each side. Can be played on any 78 rpm phonograph. Speed progresses from 2 to 15 WPM in 10 lessons. Includes sturdy record album and instructions. Shpg. wt., 6 lbs.  
89 P 950. NET ..... 7.95

**Fig. O. AMECO CODE COURSE.** Use with any 78 rpm phonograph. Choice of two courses. *Jr. Code Course:* For Novice or Technician Amateur exams. 5—10" records (10 sides). Code speed from start to  $7\frac{1}{2}$  WPM. *Senior Code Course:* For Commercial or General Class Amateur exams. Includes 5 records of Jr. Course plus 6 additional records (22 sides total). Speeds to 18 WPM. With album and 28-page manual with FCC-type exams.

**JR. CODE COURSE.**  $3\frac{1}{2}$  lbs.  
77 P 616. NET ..... 7.95

**SENIOR CODE COURSE.** Wt., 5 $\frac{1}{2}$  lbs.  
77 P 617. NET ..... 12.95

**ADVANCED CODE COURSE.** Prepares Novice for General Class exam.  $8\frac{1}{2}$  to 18 WPM. 6 records. Shpg. wt., 4 lbs.  
77 P 619. NET ..... 6.95

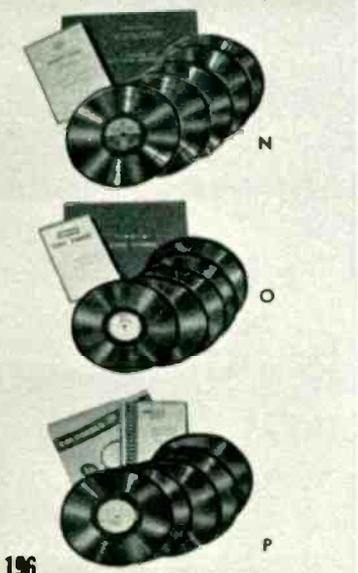
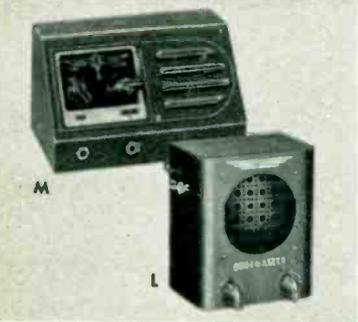
**Fig. P. ELDICO COMPLETE NOVICE COURSE.** Complete home study course for Novice license. Includes theory instructions plus 5—12" vinyl  $33\frac{1}{3}$  rpm code records. Records play  $2\frac{1}{2}$  hrs. Code speed gradually increases to 8 WPM. Lessons cover regulations, construction, operation and "on-the-air" procedure. Answer sheets mailed to ALLIED for correction. Wt., 8 lbs.  
77 P 615. Entire Course. NET ..... 25.00

**RECORDS ONLY.** 5—12"  $33\frac{1}{3}$  rpm vinyl code records from above. Wt., 6 lbs.  
77 P 645. NET ..... 17.00

**THEORY COURSE ONLY.** Lessons from Novice Course. Wt., 2 lbs.  
77 P 646. NET ..... 10.00

**INDIVIDUAL CODE RECORDS ONLY.** 12" vinyl. 3-speed, universal records. Code speeds shown are at  $33\frac{1}{3}$ , 45 and 78 rpm respectively.  $\frac{1}{2}$  hr. playing time at  $33\frac{1}{3}$  rpm per record. Shpg. wt., 1 lb.

77 P 630. 6, 9 and 14 wpm.	} NET EACH
77 P 631. 8, 13 and 21 wpm.	
77 P 632. 10, 15 and 23 wpm.	
77 P 633. 11, 16 and 26 wpm.	
77 P 634. 13, 17 and 30 wpm.	3.95



# Amateur Station Accessories

## Quality Frequency Meters

**Fig. A. TRIPLETT 3256 ABSORPTION FREQUENCY METER.** Bandswitching type. Covers 5 Amateur bands. Checks: fundamental freq. of oscillating circuits; parasitic oscillations; harmonics. Germanium crystal and DC milliammeter for sensitivity. Direct panel calibration. Mc bands: 3.5 to 4, 7 to 7.3, 14 to 14.4, 20 to 21.5, 28 to 30.  $7\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{4}$ ". Gray enamel finish. Shpg. wt., 1 lb. **66 F 005. NET..... 17.15**

**Fig. B. BUD FCC-90A FREQUENCY CALIBRATOR.** Determines band edges. Consists of 100 kc crystal oscillator and trimmer condensers. With power supply. Beat note gives 100 kc check points across all bands up to 30 mc. With on-off switch, stand-by switch, 117L7GT tube, 100 kc crystal.  $2\frac{1}{4} \times 1\frac{1}{4} \times \frac{1}{4}$ ". For 105-125 v., AC or DC. Shpg. wt., 2 lbs. **73 P 043. NET..... 16.90**

**Fig. C. MILLEN ABSORPTION FREQUENCY METERS.** Indicate frequency, harmonics, parasitics. Size:  $2\frac{1}{2} \times 1\frac{1}{2} \times 4$ ". Wt., 10 oz.

Stock No.	Type	Mc Range	EACH
72 H 142	90605	3-10	7.50
72 H 143	90606	9-23	
72 H 144	90607	23-60	
72 H 145	90608	50-140	

## 24-Hour Station Clocks

**Fig. D. TD-2400 24-HOUR STATION CLOCK.** For Amateur or commercial stations. Calibrated 0001 to 2400 (GMT). Sweep-second. Shows time in world zones. 10" dia. For 110-120 v., 60 cyc. AC. 3 lbs. **78 B 325. NET, incl. excise tax..... 13.75**

**Fig. E. 24-HOUR NUMERICAL STATION CLOCK.** Separate hour, minute and second scales  $4 \times 7\frac{1}{8} \times 3\frac{3}{8}$ ". Plastic case. For 110-120 v., 60 cyc. AC. 3 lbs. Prices include excise tax. **78 B 341. Ivory. NET..... 15.84**  
**78 B 340. Ebony. NET..... 14.85**

## Fig. F—Cesco Tel-O-Patch

Phone patches for feeding receiver output into telephone line. Feeds telephone output into transmitter. For receivers with output imp. of 500 to 5000 ohms.  $4 \times 4 \times 2$ ". With mounting plates.

**THE ORIGINAL.** Economy unit. Switch for telephone-to-transmitter, telephone-to-receiver. Shpg. wt.,  $\frac{1}{4}$  lbs. **98 S 717. NET..... 14.95**

**THE SUPREME.** Switch controls transmitter Off-On, receiver Off-On, telephone to receiver, phone to transmitter. Separate switch disconnects phone.  $1\frac{1}{2}$  lbs. **98 S 718. NET..... 24.95**

**THE REGENCY.** As above. For Collins 32V transmitters and 75A receivers.  $1\frac{1}{2}$  lbs. **98 S 719. NET..... 24.95**

## Amateur TVI Filters

**Fig. G. BARKER-WILLIAMSON LOW-PASS FILTERS.** Safely handles 1 kw RF when SWR is not excessive. Consists of 2 "M" derived end sections; 4 constant "K" type center sections. 85 db attenuation through TV channels. .25 db insertion loss to 35 mc.  $11 \times 3 \times 2$ ". Wt.,  $\frac{1}{2}$  lbs.  
**77 P 613. MODEL 425.** For 52 ohms imp. **77 P 614. MODEL 426.** For 75 ohms imp. **NET EACH..... 14.85**

**Fig. H. ELDICO LINE FILTERS.** Type TVL Bruce Force. 2-section filter for use in AC lines of Amateur transmitters. Helps prevent BCI and TVI. Shielded. With cord, plug and AC outlet. Wired or in kit form. \*Assembled and tested. †Kit.

Stock No.	Type	Rating	Lbs.	NET
77 C 610†	TVL-1 kw	1 kw	3½	11.95
77 C 562*	TVL-1 kw	1 kw	3½	15.95
77 C 609†	TVL-2.5 kw	2.5 kw	6	18.95
77 C 608*	TVL-2.5 kw	2.5 kw	6	24.95

**Fig. I. ELDICO TVR-300 FILTER KIT.** Easy-to-build high-pass filter. Installs at antenna coil of TV set. Reduces signal-type interference. 40 mc cut-off freq. Negligible insertion loss. 300 ohms. 8 oz.

**77 C 603. NET..... 1.98**  
**TYPE TVR-300. WIRED AND TESTED.** As above. Assembled and factory-tested. 8 oz. **77 C 561. NET..... 3.98**

**Fig. J. BUD LF-601 LOW-PASS FILTER.** For Amateur transmitters. Minimizes TVI-producing harmonics. For 52 or 72 ohm coax lines; handles 1 kw. Cut-off at 42 mc. Min. attenuation. 85 db on all freq. above 54 mc. 95 db above 70 mc. Uses variable capacitors; may be tuned externally.  $12 \times 2\frac{1}{2} \times 2\frac{1}{4}$ ". Shpg. wt.,  $\frac{1}{2}$  lbs. **73 C 047. NET..... 13.23**

**Fig. K. HF-600 HIGH-PASS FILTER.** Rejects signals to 42 mc. from receivers. 6 oz. **73 C 046. NET..... 3.50**

**Fig. L. DRAKE LO-PASS FILTERS.** Reduces TVI-producing Amateur harmonics. Handles 1 kw. 75 db TV channel attenuation. For 52-ohm coax or 300-ohm twin line.  $5 \times 4\frac{1}{2} \times 1\frac{1}{2}$ ". Shpg. wt., 2 lbs.  
**77 C 557. TV-52-40LP.** 52 ohm. 10-160 m.  
**77 C 558. TV-300-1P.** 300 ohm. 15-160 m. **NET..... 12.69**

**Fig. M. REGENCY HP-45 HI-PASS FILTER.** High-pass filter for attenuation of signals at frequencies below 55 mc. Simple and effective aid in eliminating TVI. Approximately 20 db attenuation at 29 mc; 40 db or more at frequencies of 14 mc and below. Signals above 55 mc are passed through filter without loss. Complete with mounting bracket.  $1\frac{1}{4} \times \frac{1}{4}$ ". 2 oz. **77 C 569. List, \$1.65. NET..... 97c**

## Components for Amateur Applications

**Fig. P. METEX TVI-20-S SHIELDING STRIP.** Flexible, knitted RF shielding material. For TVI-proofing transmitter enclosures. Can be used as channel-stripping gasket. Knitted mesh may be secured mechanically or "sewed" into place. In 20 ft. lengths.  $\frac{1}{2}$ " sq. cross-section. Shpg. wt., 8 oz. **42 P 089. NET..... 3.95**

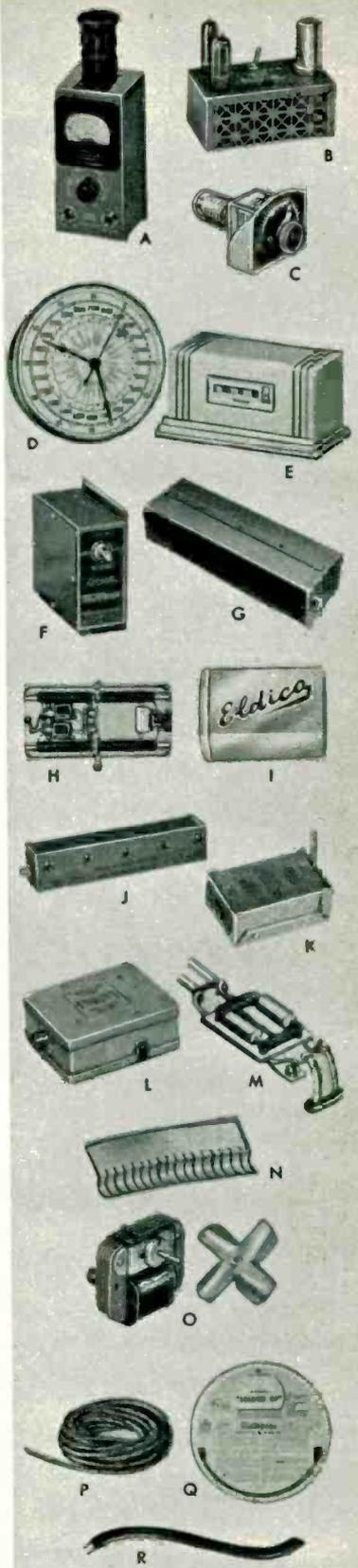
**Fig. Q. E-V'S "2ND OP" DX COMPUTER.** Aid for Amateur DX'ers. Rotary chart gives: Call letter prefixes; beam headings; DX zones, locations; QSO and QSL records; etc. Covers every country.  $10\frac{1}{2}$ " dia. **37 K 991. Postpaid in U.S.A..... 1.00**

**Fig. R. AMPHENOL 14-023 TRANSMITTING TWIN LINE.** 75 ohm type. Handles up to 1 kw RF power. 71% propagation factor. Attenuation per 100 ft. at 28 mc. 1.40 db. Shpg. wt., 100 ft., 4 lbs. **49 W 495. NET PER FOOT..... 5½c**  
100 feet or more, Per 100 ft..... 5.11

**Fig. N. EIMAC CONTACT FINGER STOCK.** Silver plated alloy stripping. Prevents RF leakage from doors on equipment cabinets. TVI-proofs transmitter enclosures. Secure mechanically or by soft-solder. 3 ft. strips in 3 widths. Wt., 12 oz.  
**42 P 086. 1½" wide. NET..... 4.95**  
**42 P 087. ¾" wide. NET..... 5.40**  
**42 P 088. 1¼" wide. NET..... 6.00**

**Fig. O. TUBE COOLING MOTOR AND FAN.** Repulsion-induction motor. 2400 rpm.  $2\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{4}$ ". 4-blade fan  $2\frac{1}{2}$ " dia. For 110 v., 50-60 cyc. Shpg. wt.,  $\frac{1}{2}$  lb. **72 P 715. Motor and Fan. NET..... 2.19**

**KNIGHT DELUXE 300-OHM TRANSMISSION TWIN LINE.** Heavy-duty, low-loss line. Ideal for Amateur transmitter use. Heavy polyethylene insulation. Rated at 1 kw. RF. Shpg. wt., per 100 feet, 4 lbs. **100 ft. minimum.**  
**49 T 493. 100' or more, per 100'..... 5.85**





H-73



G-93



H-173



H-93



AX-2



KV-3



MC-9



MC-7

## Complete Selection of Quality Crystals

### James Knights "Stabilized Crystals"

Unaffected by moisture, dust particles, vibrations, X-ray oriented, optically lapped and stabilized to insure high activity and very low drift. Very accurately calibrated. Average shpg. wt., 3 oz.

**TYPE H-73.** Crystals for Amateur frequencies. Pressure-mounted. Pin spacing, .486" (approx. 1/2"). Pin diameter, .093". In military-type FT-243 miniature phenolic holder. Only 1 1/4 x 1 3/16". Specify frequency. Supplied ±5 kc (except \*±30 kc) of frequency specified. Tolerance, ±.03%.

99 P 253. 1.8 to 2.0 mc.....	} EACH	2.95
99 P 266. 3.5 to 4.0 mc.....		
99 P 254. 6.25 to 6.82 mc (for mult. to 6 or 11 meters).....		
99 P 267. 7.0 to 7.5 mc.....		
99 P 259. 8.0 to 8.222 mc (for multiplication to 2 meters).....		
99 P 255. 13.48 to 13.615 mc (for mult. to 11 meters)*.....		
99 P 268. 14.0 to 14.8 mc*.....		

**TYPE G-93.** Stabilized glass-envelope type crystal. Frequency, 100 kc. Has military type HC-15/U holder. Standard octal base fits all octal tube sockets. Ideal as frequency standard. Size, 4x1.125" diameter.

99 P 293. NET.....	8.95
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**TYPE H-173.** High-quality crystals, silver-plated, hermetically sealed in metal holders. Dust and moisture-proof. Wire-mounted. Pin spacing, .486" (1/2"). Pin diameter, .050". 3/4 x 3/4 x 1/4". Designed for use in oscillator circuits with low crystal current. Available on special order only. Allow 30 days for delivery. Specify frequency.

99 P 263. 21 to 40 mc. (Tolerance, ±15 kc.) NET.....	4.95
99 P 264. 40 to 54 mc. (Tolerance, ±25 kc.) NET.....	5.95

**TYPE H-73 SPECIFIC AMATEUR FREQUENCY CRYSTALS.** Available on special order only in any specified frequency from 1800 kc to 20,000 kc. Pressure-mounted. Pin spacing, .486" (1/2"). Pin diameter, .093". In military type FT-243 miniature phenolic holder. Only 1 1/4 x 1 3/16". .03% tolerance. Specify frequency. Allow 30 days delivery.

99 P 257. NET EACH.....	4.80
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**TYPE H-73 NOVICE CRYSTALS.** For the Novice transmitter. Military type holder in black phenolic. Water- and dust-proof. Pressure-mounted, stainless steel electrodes. Pin spacing, .486" (1/2"). Specify frequency. Supplied ±5 kc of frequency specified. Tol., ±.03%.

99 P 294. 80 meters. 3.7 to 3.75 mc.....	NET
99 P 295. 40 meters. 7.175 kc to 7.200 kc.....	EACH 2.95

**TYPE H-93.** Highly stable crystals. Excellent for basic units of Secondary Frequency Standard. Wire mounted silver plated crystal with black phenolic base and aluminum can. Moisture-proof. 2x1 1/8" diameter. Tolerance, better than ±.005%. Pin spacing, .486" (1/2"). Pin diameter, .093".

99 P 284. 100 kc.....	NET
99 P 287. 1000 kc.....	EACH 6.95

### Popular Specialized Crystals

Special-purpose types for signal generators, radio control equipment, aircraft, etc. Type H-7 has .486" (1/2") pin spacing and .093" pin diameter. Size: 1 1/4 x 1 3/16 x 1/8". Pressure-type mounting. Types H-17, H-17L and H-17W are hermetically sealed; have wire-mounted, silver-plated crystals and metal holders measuring 3/4 x 2 3/4 x 1/8". H-17 has .486" (1/2") pin spacing and .050" pin diameter. H-17L has .486" (1/2") pin spacing and .093" pin diameter. H-17W has pigtail leads.

99 P 289. Type H-7. For aircraft transmitting equipment. 3023.5 kc. ±.005% tolerance. NET.....	4.95
99 P 290. TYPE H-17W. As above but pigtail leads. NET.....	6.95
99 P 286. TYPE H-17L. For TV alignment signal generators, such as Hickok 610A. 4.5 mc. ±.005% tolerance. NET.....	4.80
99 P 291. TYPE H-17. As above, except pin size. NET.....	4.80
99 P 265. TYPE H-17L. For test equipment. Available on special order, any frequency between 4501 kc and 32 mc. Allow 30 days delivery. Specify frequency. ±.01% tolerance. NET.....	7.95
99 P 292. TYPE H-17. As above except pin size. NET.....	7.95
99 P 258. TYPE H-17L. For radio control of model aircraft, etc. Frequency 27.255 mc on 3rd overtone. ±.03% tol. NET.....	4.95

ALLIED can supply any James Knights crystal on special order. When better than .01% tolerance is required, send diagram.

### Biiley High Grade Crystals

Biiley "Acid-Etched" crystals for Amateur and other uses. Incorporate all the important features developed through production of crystals for military service. These crystals provide highest temperature stability for maintenance of close frequency tolerances. All are encased in compact holders. Tested under simulated operating conditions. In all popular frequencies. Av. shpg. wt., 3 oz. **TYPE AX-2.** Popular type crystal for Amateur use. Acid-etched quartz in phenolic case; stainless steel electrodes, plates, springs and contact pins. Calibrated to ±500 cps; drift less than .0002%/°C. Size: 1 1/4 x 1 1/16 x 1/16". Pin spacing, 1/2". Pin diameter, .093". Specify frequency desired. †Available on special order only. Allow 30 days for delivery. Supplied to integral spot frequencies, as ordered (no fractions), except \*±10 kc.

99 P 163. 1.8 to 2.0 mc. NET.....	3.75
99 P 160. 3.5 to 4.0 mc. NET.....	2.95
99 P 161. 7.0 to 7.425 mc. NET.....	2.95
99 P 162. 8.0 to 8.222 mc (mult. to 2 meters). NET.....	2.95
99 P 139. 12.5 to 13.61 mc† (mult. to 6 or 11 mtrs). NET.....	3.95
99 P 140. 14.0 to 14.85 mc* NET.....	3.95

**TYPE KV-3.** For use in secondary frequency standards. Adjusts to exactly 100 kc at 25° C. in recommended circuit. Silver plated crystal is wire mounted. Holder size: 1 3/16 x 1". Pin spacing is .486" (1/2"). Pin diameter .093". Tested.

99 P 138. NET.....	8.50
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### Special Service Crystals

**TYPE MC-9. ALIGNMENT AND RADIO CONTROL CRYSTALS.** Designed for use in specific applications such as signal generators, radio control of model aircraft, boats, etc. Pressure-mounted crystals. Holders are molded phenolic. "Acid-etched" process prevents frequency change due to aging. Size: 1 1/4 x 1 3/16 x 1/8". Pin spacing .486" (1/2"). Pin diameter, .093". Av. shpg. wt., 4 oz. 5.0 mc. Frequency tolerance, ±.02%. For use as marker in sweep generators or for calibration purposes.

99 P 143. NET.....	3.95
10.7 mc. Frequency tolerance, ±.05%. For use in alignment of 10.7 mc IF's in TV or FM receivers.	
99 P 145. NET.....	3.95
4.5 mc. Frequency tolerance, ±.02%. For use in alignment of 4.5 mc IF's used in intercarrier type TV receivers.	
99 P 147. NET.....	3.95

13.6275 mc. Frequency tolerance, ±.04% from 0° to 50° C. Second harmonic is 27.255 mc. Used in equipment for radio control of model aircraft, cars, boats, trains, etc.

99 P 148. NET.....	5.50
<b>TYPE MC-7 SHIP-TO-SHORE CRYSTALS.</b> Available in ship-to-shore frequencies from 2.0 to 3.5 mc. Highest temperature stability for maintenance of extremely close tolerance of ±.02% from 0° to 50° C. Compact, precision holder measures 1 3/16 x 1 1/8 x 2 1/2". Pin spacing is .750" (3/4"). Pin diameter is .125" (1/8"). Specify particular frequency required or the geographical location of the shore station. Available on special order only. Allow 30 days for delivery.	
99 P 165. NET.....	7.50

### Popular Crystal Sockets and Adapters

**TYPE 33102. MILLEN SOCKET.** Ultra low-loss steatite base sockets for crystal holders with 1/2" (.486") pin spacing and .093" pin diameter. Also takes .095" banana-plug prongs. Silver-plated phosphor-bronze contacts. Tinned solder lugs. Takes two mounting screws. Shpg. wt., 2 oz.



72 H 035. NET..... 36c

**TYPE 33302. MILLEN SOCKET.** For JK type H-173 and H-17 crystal holders. Low-loss steatite body. Standard 1/2" (.486") pin spacing. For .050" pins. Tinned solder lugs. Shpg. wt., 2 oz.

72 H 075. NET.....	24c
<b>TYPE 33002. MILLEN SOCKET.</b> Low-loss steatite. For crystal holders having 3/4" (.750") pin spacing and 1/8" (.125") pin diameter. Wt., 2 oz.	
72 H 029. NET.....	36c

**MOSLEY CRYSTAL HOLDER ADAPTER.** Adapts crystal holders to sockets in crystal-controlled equipment. Polystyrene block. Low-contact-resistance pins on bottom, phosphor-bronze contacts in top holes. Type 75-5 takes 3/4" pin spaced crystal on top, bottom fits standard 1/2" crystal socket or octal tube socket. Type 75-7 takes 1/2" pin spaced crystal, fits 5-prong tube socket or standard 3/4" crystal socket. Shpg. wt., 2 oz.



72 H 707. Type 75-5. 3/4" to 1/2".	
72 H 708. Type 75-7. 1/2" to 3/4". NET EACH.....	35c



111



117



107



1068



108



501  
Clarkstan

### Radioactivity Detection and Counter Instruments

**PRECISION MODEL 111 SCINTILLATOR.** For the detection of radioactive sources such as a uranium deposit, 100 times more sensitive to gamma rays than the most sensitive Geiger Counter. For aerial surveys for uranium or for prospecting from a moving vehicle as well as for field use. Ranges: .025, .05, .25, .5, 2.5 and 5 milliroentgens per hour. Employs 1x1" Thallium activated Sodium Iodide crystal coupled to an RCA 6199 photomultiplier tube. Accuracy of 5% of 1/4 full scale reading. Circuit operates from 32° F. to 110° F. and is altitude independent to heights in excess of 15,000 ft. Very stable. Probe size and weight: 3x13", 2 1/2 lbs. Battery box size and weight: 3x 4 1/2x5 1/2", 4 lbs. With 4-flashlight cells. 2-67 1/2 v., 2-22 1/2 v. batteries, tubes, shoulder strap, calibrated radioactive sample and instructions. Wt., 10 1/2 lbs.  
77 PX 221. NET. 495.00

**PRECISION MODEL 117 "SPECIAL SCINTILLATOR."** Similar to Model 111 above, but not as sensitive. Suited for field use. Extremely rugged, compact and light weight. Same ranges as Model 111. Accuracy 5% on all ranges except 5 MR/HR range. 1x1/2" Thallium activated Sodium Iodide crystal coupled to an RCA 6199 photomultiplier tube. Detects gamma rays as low as .01 M.E.V. Only 2 controls: Range and time constant switch. Complete with 4-flashlight, 2-45 v., 1-22 1/2 v. batteries, calibrated sample ore, shoulder strap and instructions. Size, 4 1/2x7 1/4x7". Carrying wt., 6 1/2 lbs. Shpg. wt., 10 1/2 lbs.  
77 PX 222. NET. 299.50

**"CLARKSTAN" 501 ALPHA COUNTER.** Portable device sensitive to Alpha particles. Uses an optical system focused on a phosphor screen. Absolutely safe to use. With case, quencher, radioactive sources and instructions. Shpg. wt., 8 oz.  
77 P 062. NET. 7.35

**PRECISION MODEL 107 "PROFESSIONAL."** Meets AEC standards. 10% accuracy. Detects presence of beta particles as low as 160 K.E.V.; also gamma rays, x-rays and cosmic rays. Indicates radioactivity by neon flasher, by earphone, by 3-range meter with .2, 2 and 20 milliroentgens-per-hour full scale. Calibration control; 900-volt Geiger tube mounted in directional probe with 2-millimeter shield for discriminating between betas and gammas. Immersion proof tropicalized case. 3 1/2x4x6 1/2". With batteries, earphones, carrying belt, radioactive sample and instructions, 8 lbs.  
77 P 076. NET. 139.50

**PRECISION MODEL 1068 "LUCKY STRIKE."** Circuit features similar to above. Has Geiger tube with 30 mg. per sq. cm. window section built into carrying case, and less calibration control. 3 1/2x4x6 1/2". With batteries, earphone and carrying belt. Less calibrated sample, probe. 5 lbs.  
77 P 074. NET. 99.50

**PRECISION MODEL 108 "SNOOPER."** Low-cost detector. So small it fits into hip pocket, yet as sensitive as many larger instruments. Simple to operate. No experience needed. Reveals radioactivity by a series of loud clicks in headphones when brought near radioactive material. Number of clicks increases as the source is approached. Uses only one hearing aid type 22 1/2 volt battery (lasts 6 months to a year) and one flashlight cell. Includes headset, batteries, radioactive sample, and complete instructions. 1 1/2x3x5". 2 lbs.  
77 P 075. NET. 29.95

**"PROSPECTING FOR URANIUM."** Popular official publication of U. S. Atomic Energy Commission and Geological Survey. Fully explains uranium prospecting. 123 pages. Size, 4 1/2x5 1/4".  
37 K 892. Postpaid in U.S.A. 55c



2301



1613A

### Nuclear Instruments

**MODEL 2301 "SUPER SNIFFER."** Make money prospecting with this low-priced unit. Cash in on Government reward for finding radioactive minerals with this portable "Geiger Counter". Detects medium energy beta and gamma radiations. Built primarily for location of uranium ores, it can also be used in laboratories for detection of contaminated areas, and for training purposes. Only one control: Simple on-off switch. Clicking sound in headphones and flashing neon bulb increase in frequency as source is approached. No probe needed. Convenient belt clip. Size, 7 1/4x4 1/2x2 1/4". Built-in amplifier and high voltage vibrator supply. Powered by two flashlight cells. With tubes, headphones, government pamphlet, instructions, etc. Wt., 4 lbs.  
77 P 230. NET. 49.50

**MODEL 1613A RADIOACTIVITY DEMONSTRATOR.** Designed specifically for classroom demonstrations. Detects and measures intensity of beta and gamma radiation. With accessories to show how radioactivity is absorbed, how Geiger tubes function, how to determine intensity, etc. Meter indicates count rate. Speaker and neon light click and flash simultaneously. Counter tube in metal probe with three feet of cable. Includes demonstration board, radioactive sources, manual, and flat and cylindrical aluminum, lead and cardboard absorbers. Size, 14x10x10". For 115 v., 60 cycles AC. Wt., 32 lbs.  
77 PX 068. NET. 169.50

**RADIOACTIVE MATERIAL.** Radioactive source useful for testing radioactivity detection equipment. Embedded in plastic disc 2" in dia. Perfectly safe. Shpg. wt., 2 oz.  
77 P 069. NET. 1.00

### Perma-Power Radio-Controlled Door Opener for Garages

Automatically opens and closes doors. For overhead doors up to 18x8 feet only. Clearance required between ceiling and high arc of door travel, 2 1/2". For sectionalized or one-piece doors with horizontal roller track. To operate, depress push-button on auto dashboard. Closes "B" plus circuit on transmitter installed in car, sending signal to receiver installed in garage on door operating mechanism. Doors open, lights are turned on. After car is in garage, dash button is depressed. Keys are no longer needed to lock garage doors. Unit operates on 27.255 mc frequency, authorized by FCC. Crystal controlled.

Mechanism has an adjustable clutch which stops door travel in event an obstruction is in path of door travel. Should there be a power failure, doors may be manually operated. Transmitting unit is 6x6x5". Fits under hood. Antenna is hidden behind front bumper. Dash button attaches without drilling holes.

Complete system consists of door mechanism and motor with plug-in receiver for 110-120 v., 50-60 cycle AC; transmitter for 6 volt automobile battery operation (use converter cord below for 12 volt systems); antennas; 24 volt operated manual push-button (may be installed in garage, home, etc., for door operation without transmitter); all hardware, tubes, wire and easy-to-follow instructions. Shpg. wt., 100 lbs.  
77 PX 270. List. \$179.85 NET. 145.90

**TRANSMITTER ONLY.** For 2-car families—permits operation of above door opener from either car. Complete with antenna, hardware, etc. Shpg. wt., 8 lbs.  
77 PX 272. List. \$28.50 NET. 22.90

**ADAPTER CORD FOR 12-VOLT AUTO SYSTEMS.** Plug-in cord for transmitter in above system. Resistance type cord for 12-volt operation without wiring changes. 5 oz.  
77 P 271. List. \$2.20 NET. 1.79

ALLIED Radio Corporation, 100 N. Western Ave., Chicago 80, Illinois





## Photoelectric Systems and Accessories

### Worner Industrial "Fotoelectric" System

Consists of Electronically Operated Relay (either Model 63, 63-A or 63-B), Model 33 Exciter Lamp and Model 23 Photo-cell Receiver. Model 33 has general-purpose (interchangeable) lens which provides a straight, directional beam; may be placed up to 15 feet from Model 23 to detect objects of about 4" square or larger. Both exciter lamp and photo-cell units are housed in identical heavy-duty solid cast-metal case to withstand dampness. Lenses for specific applications are also available. ALLIED can supply the complete Worner "Fotoelectric" line. Free literature is available on request.

**Fig. A. MODEL 63 ELECTRONICALLY OPERATED SPDT RELAY.** Responds to current from photocell. Contacts rated at 5 amps, non-inductive; 2 amps inductive at 110 v., 50-60 cycles AC. Operates up to 600 times per minute on complete or partial change of light intensity. Steel case, 9 1/4 x 1 1/2 x 5". For operation from 110-120 v., 50-60 cycles AC. Shpg. wt., 22 lbs.  
**77 PX 085. NET. . . . . 73.50**

**MODEL 63-A.** As above, but with time delay circuit; variable from 0-45 seconds.  
**77 PX 084. NET. . . . . 110.25**  
**MODEL 63-B.** Same as Model 63, but extra sensitive to small changes in light.  
**77 PX 094. NET. . . . . 110.25**

**Fig. B. MODEL 33 EXCITER LAMP.** Light source. Projects beam 15 feet. Gray cast-iron case. Size, 4 1/4 x 2 3/4 x 2 1/4". For 6 v. operation. Takes power from Model 63 relay. Shpg. wt., 3 lbs.  
**77 P 087. NET. . . . . 9.93**

**MODEL 23 PHOTO-CELL RECEIVER.** Housed in same type of case as Model 33. Shpg. wt., 3 lbs.  
**77 P 090. NET. . . . . 14.34**

### Worner "Fotoelectric" Burglar Alarm System

**Fig. C. MODEL 5150 BURGLAR ALARM.** For interior use. Consists of light source (not illustrated) and receiver-amplifier (Fig. C). Has removable infra-red filter. Receiver-amplifier has on-off switch, lock-controlled warning signal and SPDT relay rated to 5 amps. Alarm can be turned off only by possessor of key. Beam may be reflected in a "V" pattern from a mirror (not supplied) on opposite wall. Range, 150 feet with infra-red. Steel cases, 7 x 6 1/4 x 4 1/4". For operation from 110-120 volts, 50-60 cycles, AC. Shpg. wt., 14 lbs.  
**77 PX 019. NET. . . . . 83.79**

**MODEL 301-A BELL ALARM.** 6 volts DC heavy-duty bell. Weather-proof housing, 18-gauge welded steel case. Size, 10 x 10 x 4". Shpg. wt., 9 lbs.  
**77 P 093. NET. . . . . 25.36**

**MODEL 301-M MIRROR.** For use with any photo-cell system. Adjustable mounting bracket. Size, 8 x 4 x 2 1/2". Shpg. wt., 2 3/4 lbs.  
**77 P 001. NET. . . . . 7.16**

### Worner Model 61 "Fotoelectric" Announcer

**Fig. D.** Sounds pleasant chime when light beam is intercepted. Announces entrance of persons or vehicles through doorways, passages, driveways, etc. System consists of "Fotoelectric" unit, mirror and chime. "Fotoelectric" unit has exciter lamp and sensitive photo-cell. Projects beam across passage and receives reflected beam from mirror; may be placed from 3 to 10 feet from mirror. Chime may be mounted wherever desired. Overall size of case, 10 1/4 x 7 1/2 x 2 3/4". Chime has attractive grey hammerloid finish. For operation from 110-120 volts, 50-60 cycles AC. Shpg. wt., 8 lbs.  
**77 P 028. NET. . . . . 23.52**

**REPLACEMENT BULB.** 32-candlepower, 2000-hour 6-volt bulb. For Model 33 Exciter Lamp, Model 5150 Burglar Alarm and Model 61 "Fotoelectric" Announcer. Shpg. wt., 5 oz.  
**77 P 023. NET. . . . . 44c**

**Fig. E. REPLACEMENT CHIME.** For Model 61 Announcer. May also be used with Detect-O-Ray photoelectric system at right or with any other 6-volt AC power supply. Excellent as warning device for home or store. Shpg. wt., 2 lbs.  
**77 P 035. NET. . . . . 2.58**

### Fig. F—Autotron Counting Eye

For industrial counting. Consists of light source and photoelectric control housed in rugged cast-aluminum cases. Light source unit is placed at one side of conveyor or passage and photoelectric control is mounted directly opposite (up to 6 feet apart). When used with electric counter (p. 201) will count anything intercepting beam. Provides dependable performance under continuous duty at high speeds. Built to heavy-duty industrial standards, these units feature splashproof and dustproof enclosures, rubber-based tube sockets, adjustable mounting brackets, and "fail-safe" circuit protection. SPDT relay; contacts rated at 5 amps, 115 v. AC. Each case, 5 x 3 1/4 x 3". For operation from 115/230 volts, 50-60 cycles AC. Shpg. wt., 6 lbs.  
**77 P 079. Complete System, Model 51ALL. NET. . . . . 53.05**

### Fig. G—Fisher-Pierce Beacon Light Control

For control of aircraft obstruction lights. Turns lighting systems on or off when outdoor light intensity changes. Has time delay of 7-10 seconds to prevent actuation by lightning, rotating beacons, or any short duration light source. Controls up to 3000 watts at 120 volts, 50-60 cycles. Rating applies to incandescent, mercury vapor, or sodium vapor lights. Tested for an inrush current to steady state current ratio of 10 to 1. Turns on lights at 35 foot-candles illumination and off at 55 foot-candles in accordance with CAA operating requirements. Turn-on point is adjustable from 25 to 45 foot-candles. Turn-off point is 20 foot-candles higher. Lights remain on in event of circuit failure. Shpg. wt., 9 1/2 lbs.  
**77 P 048. Model 63305C. NET. . . . . 53.90**

**FISHER-PIERCE STREET LIGHT CONTROL.** Same as above except turns on light at 0.5 to 5.0 foot-candles. Turn-off point 1.0 foot-candle above turn-on. Shpg. wt., 9 1/2 lbs.  
**77 P 054. Model 63300C. NET. . . . . 53.90**

### Fig. H—Fisher-Pierce Nitelighter

Photo-electronic automatic light switch, turns lights on at dusk or off at dawn. Operates completely automatically. Used to control home lights, it guarantees that you will never come home to darkness, and discourages prowlers during your absence. Simplest possible installation—just plug unit into 110-120 volt AC socket and plug lamp or appliance into Nitelighter adapter plug. Housed in attractive sturdy brown bakelite case. Has bracket for flat surface mounting if needed. Handles a maximum load of 300 watts. Size: 3 1/2" wide, 4 1/2" high, and 3 1/2" deep. Complete with 8 foot cord set with adapter plug. For interior use only. Excellent for use with store windows, garages, poultry houses, factory yards, electrical signs, and many other applications. Shpg. wt., 4 1/2 lbs.  
**77 P 055. Model 6501. NET. . . . . 15.63**

### Detect-O-Ray Equipment

**Fig. I. MODEL L-162C PHOTOELECTRIC SWITCH.** Universal photoelectric system useful as an "unseen light" burglar alarm, counter, sorter, annunciator; for motor and safety control, etc. Housed in a single small case, only 5 x 6 1/4 x 7 1/2". Includes: light which projects a conventional beam; a filter controlled by a lever which can be shifted to the front of the light if an "unseen" beam is desired; a photo-cell receiver; an amplifier, and a relay capable of actuating an alarm or similar device. Also built into the case is a switch to permit choice of intermittent or continuous operation of the actuated device. System is installed on one side of an area to be controlled, and an adjustable mirror (included) is installed on the opposite side. Range: 50 feet, white beam; 35 feet, "unseen" beam. Black wrinkle case. Terminals for any 5 or 6 volt AC device using up to 1/4 amp or to the heavy-duty relay listed below. For 110-120 v., 50-60 cycles, AC. Indoor use only. Shpg. wt., 6 lbs.  
**77 P 060. NET. . . . . 32.93**

**Fig. J. MODEL L-205C POWER RELAY.** For use with above when operating heavy-duty equipment that draws up to 1,000 watts on 110 volts AC. SPDT, 110 v., 60 cycle, AC switch with convenience outlets for normally on or normally off functions. Steel case. Black crackle finish. 4 1/4 x 2 1/2 x 2 1/2". Shpg. wt., 1 1/4 lbs.  
**77 P 061. NET. . . . . 8.17**

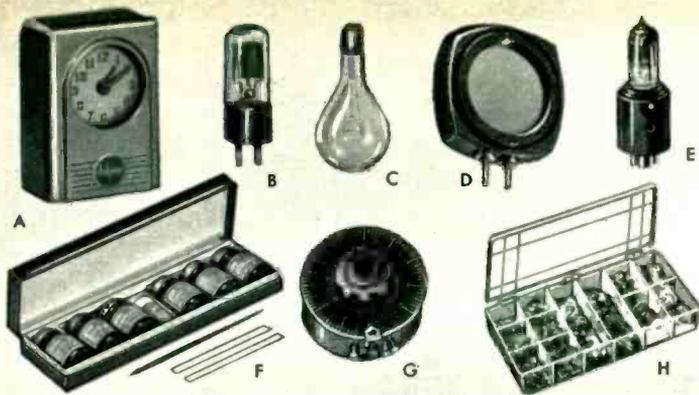


Fig. A—Montgomery Clocks

Provide dependable, automatic operation of bells, buzzers, horns or sirens according to preset schedule. Signals may be silenced during any desired 12 or 24 hour periods during week. Signal duration adjustable, 4-20 seconds. Program mechanism is geared directly to clock motor and is set by turning hands. May be manually operated without disturbing schedule. Two-circuit clocks operate two separate groups of signals independently. Contacts rated at 10 amperes for 120 volts, 60 cycles AC. With instructions. Gray finish. Size, 11x8x4". For 110-120 volts, 60 cycles AC. Shpg. wt., 10 lbs.  
**78 BX 350, M-12 SINGLE-CIRCUIT CLOCK** 2½ minute interval, 12-hour schedule.  
**78 BX 351, M-24 SINGLE-CIRCUIT CLOCK** 5 minute interval, 24-hour schedule.  
**NET EACH. 84.53**

**78 BX 352, L-12 TWO-CIRCUIT CLOCK** 2½ minute interval, 12-hour schedules.  
**78 BX 353, L-24 TWO-CIRCUIT CLOCK** 5 minute interval, 24-hour schedules.  
**NET EACH. 114.17**

**MODEL 100VA TRANSFORMER**. Reduces 115 v., 50-60 cycles AC to 4, 8, 12, 16 or 24 v. to operate bells, buzzers and horns. Sufficient capacity to operate all signals in average installation. Wt., 5 lbs.  
**78 B 365, NET 10.78**

**MODEL 577 BUZZERS**. For classroom use. Volume adjustment screw. Shpg. wt., 8 oz.  
**78 B 366, 6-12 volts, AC. NET 3.88**  
**78 B 367, 24 volts, AC. EACH. 3.88**  
**MODEL 161 4" BELLS**. Indoor use, 2 lbs.  
**78 B 368, For 6-12 volts, NET EACH 4.85**  
**78 B 369, For 24 volts, NET EACH 7.28**

**Fig. B—Cetron 23A Photo Tube Valve**  
 A highly sensitive gas-filled phototube for many electric eye applications. Reacts instantly to changing values of light intensity or color. Fits standard 4-prong socket. Sensitivity of .0135 microamps/microwatt. Average cathode current 3 microamps, 10 microamps peak, 90 volts peak AC or DC anode voltage. Shpg. wt., 4 oz.  
**77 P 003, NET 2.00**

**Fig. C—G. E. Tower Lights**  
 CAA-approved-type tower and obstruction lights. For 125 volts, 60 cycles AC. For either continuous or intermittent service. Mount in any position. Ruggedly built for long life under severe conditions.  
**PS40/45, 500 WATT**. For top and middle of tower. Mogul pre-focused base. 8 oz.  
**52 E 366, NET 1.55**  
**A-21/TS, 100 WATT**. For radio tower lighting, airfield border lights, etc. Medium screw base. Shpg. wt., 6 oz.  
**52 E 367, NET 40 c**

**Fig. D—Bradley Luxtron Photo-cell**  
**MODEL 1-1A**. Converts light into electrical energy without auxiliary voltage. Sensitive to ultra-violet, infra-red, and visible light rays. Fits standard 4-prong sockets. Size, 2½x2½x½". Wt., 8 oz.  
**77 P 040, NET 8.23**

**Fig. E—G. E. Binary Scaler**  
**TYPE 45N1A3**. For industrial counting, interval timing, repeat cycling, nucleonic applications, etc. A multivibrator having 2 stable states. Large numbers can be cascaded for binary scaling and counting to corresponding powers of 2; no intermediate stages required. Four may be used for decade operation by introducing feedback. Triggers up to 200 kc per second. Two pulse resolution is 4 microseconds. Input: 20-50 v. negative; duration, preferably 5 microseconds with rise time of 1.0 microsecond or less. Uses 5963 twin-triode with 10,000-hour heater. Fits octal socket. Requires 210 v. DC at 7 ma and 6.3 v. at 0.3 amp. Size, 3¼" long x 1½" D. With 5963 tube. Wt., 12 oz.  
**84 F 819, NET 16.95**

**Fig. F—Printed Circuit Kit**  
 Develop miniature equipment and paint your own radio circuits. Kit holds every thing required to apply "micro-circuit" techniques to your own circuits. Consists of silver conducting paint and low, medium, high and very high resistance paints, insulating lacquer, solvent and brush cleaner. Includes manual, "Design and Repair of Printed Circuits." With this kit you can make resistors, capacitors, connecting wires, chokes and coils. Actual working circuits can be made with the addition of a few standard radio parts. With brush applicator. Shpg. wt., 1½ lbs.  
**43 N 070, NET 9.11**  
**PRINTED CIRCUIT TECHNIQUES**. A general treatise on printed circuit techniques published by the United States Department of Commerce.  
**37 K 893, Postpaid in U.S.A. 35c**

**Fig. G—Selectohm Patentimeter**  
 100,000 ohm 25 watt, calibrated, wire-wound potentiometer of laboratory quality. An ideal precision resistance substitute for use as a decade box, voltage divider or a bridge circuit component. May be used individually or in groups. Dial plate accurately calibrated in 200 divisions. Over 15 inches of scale length for highly accurate readings. 15.8 ma current carrying capacity. Case is molded bakelite. Windings are thoroughly protected. Bench model, 6" dia. x 3¼" high. Shpg. wt., 2 lbs.  
**84 M 323, NET 7.35**

**Fig. H—Strat-O-Seal Kit**  
 Wiring terminals for hermetically sealed electrical components. Also suitable for high voltage leads through chassis and panels. No special tools needed for installation—simply insert in punched hole and seal with solder. Silicone insulation. Diameters range from ¼" to ½". Multiple headers available with up to seven terminals. Unlimited shelf life, resiliency to shock, and high dielectric strength. Kit contains 109 assorted terminals, a brief summary of technical information, and a clear plastic box. ALLIED can supply any quantity of any type of Strat-O-Seal terminal. Write for price. Shpg. wt., 1¼ lbs.  
**91 N 351, NET 19.85**



Electric Counters

**Mercury Moderate Duty Counters**  
 Small, low cost electric counters ideally suited for built-in applications on coin-operated equipment and industrial equipment where counting duty is moderate. Extensively used on coin-operated amusement equipment and vending machines, such as automatic phonographs, soft drink dispensers, and pin ball games. Also used for light duty production counting, laboratory counting, and photo-electric counting. Actuated by any type of switch or relay with minimum closed period of .04 second and minimum open period of .06 second. Tested at 600 counts per minute, 4 digits, except type MEA-N5, has 5 digits. Completely enclosed in tamper-proof case with plastic window. Approx. LWH, 1½x1½x2½". Power required, 3 watts. Operated on 60 cycles AC. Types are available for other voltages, and for DC operation. Also available with impregnated coils and other special features. Write for literature and prices. Av. shpg. wt., 1 lb.

Fig. I—TYPE MDB-S4 PANELMOUNT

Stock No.	Mfr's Type	Volts	NET
77 P 044	MDB-S4-6A	6 v. AC	13.50
77 P 098	MDB-S4-12A	12 v. AC	13.50
77 P 099	MDB-S4-24A	24 v. AC	13.50
77 P 049	MDB-S4-115A	115 v. AC	13.50

Fig. J—TYPE MEA-N5 NON-RESET

Stock No.	Mfr's Type	Volts	NET
77 P 032	MEA-N5-6A	6 v. AC	5.00
77 P 056	MEA-N5-12A	12 v. AC	5.00
77 P 057	MEA-N5-24A	24 v. AC	5.00
77 P 033	MEA-N5-115A	115 v. AC	5.00

Fig. K—TYPE MDA-S4 RESET

Stock No.	Mfr's Type	Volts	NET
77 P 042	MDA-S4-6A	6 v. AC	11.50
77 P 059	MDA-S4-12A	12 v. AC	11.50
77 P 097	MDA-S4-24A	24 v. AC	11.50
77 P 043	MDA-S4-115A	115 v. AC	11.50

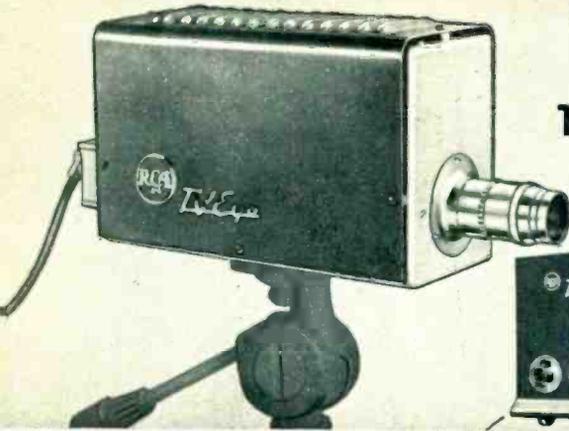
**Production Instrument Co. Units**  
**Fig. L WIZARD EC-9 HEAVY DUTY COUNTERS**. Six-digit industrial type for heavy duty service. Built to withstand the vibration and strain of large machinery. Any part, article, motion, or operation that can be made to operate an electrical switch or photo-electric relay can be counted with Wizards. May be grouped on panels and located at any distance from the machine to which attached. Tested at 600 counts per minute. Resets to zero by one complete turn of knob. All working parts completely enclosed. Has bakelite number wheels with large white figures on black background. Removable base for panel mounting. Operates satisfactorily in any position. For 115 volts, 60 cycles AC. Overall size, 3½"x4½"x5½". Shpg. wt., 3 lbs.  
**77 P 036, NET 38.50**

Types with proper impedances for direct connection into electronic switch plate circuits are available on special order; write for literature and prices.

THE AMAZINGLY USEFUL



TV EYE



**Low Cost TV Transmission System  
Extends Human Vision—Offers  
Unlimited Use In Industry, Com-  
merce, Business and Home**

An amazingly compact TV camera and an ingenious control unit—a closed-circuit television chain ready to serve in any application where extension of human vision is the goal.

**USES. Factories:** Remote observation of production processes and equipment; guarding plant entrances and exits. **Schools:** Remote viewing of lab experiments, microscope slides, etc., by large groups; up to now, such instructional material has been limited to individual viewing. **Transportation:** Remote railroad car checking; recording of car numbers at coal mine tipples; improvement of safety control in rail yards, at rail crossings, airports, piers, docks, etc. **Retail Stores:** Sales promotion, through increase of store traffic, graphic point-of-sale action demonstrations of merchandise. **Hospitals:** Observation of patients where continuous attendance is necessary; large-group viewing of surgery by interns, medical students and nurses. **Penal Institutions:** More effective surveillance by the untiring, ever-alert TV Eye. **Banks:** Instantaneous comparison of signatures with original in record room. **Homes:** Remote observation of the nursery, play-yard, swimming pool, estate entrances, etc.

**TYPE HA-1 "TV EYE" CAMERA.** Compact—only 10" long, 5" high and 3 3/4" wide. Connects to any standard TV receiver for remote viewing. No alteration of receiver required. Remote-controlled by operator at control unit chassis. With lens listed below, sensitivity is adequate to permit televising scenes with 100-200 foot-candle illumination. Base tapped for 1/4" -20 bolt—for mounting on tripod. Maximum distance between camera and control unit, 500 feet. Obtains power from control unit.

**MODEL HC-1 CONTROL UNIT.** Has all controls for adjusting camera signal contrast, brilliance and focus. TV Eye system can be cut out to permit operation of TV receiver for regular broadcast channels. Maximum distance from receiver, 300 feet. Size, 11x8x7 1/2". Cable requirements: 1—RG58/U, 1—RG59/U and 1—12-conductor cable (see below). Connects to TV receiver with any twin line or coax cable.

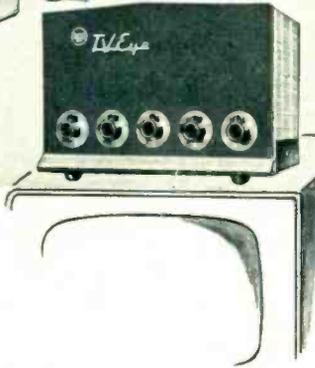
**TV EYE CAMERA AND CONTROL UNIT.** Must be used together. Supplied with all receiving-type tubes and cable connectors; less Vidicon tube, lenses, tripod and cable (see listings below). For 110-120 volts, 60 cycles AC. Power consumption, 90 watts. Shpg. wt., 20 lbs.  
98 SX 561. NET..... 635.00

**VIDICON CAMERA TUBE.** For HA-1 camera. Shpg. wt., 3 lbs.  
EX1-6198. NET..... 345.00

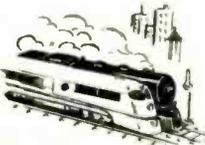
**WOLLENSACK "C" MOUNT f1.5 LENSES.** Shpg. wt., 8 oz.  
98 SC 555. 2" lens. NET..... 117.00  
98 SC 556. 1" lens. NET..... 84.00  
98 SC 557. 1/2" lens. NET..... 108.00

**TYPE HT-1 TRIPOD.** Fully adjustable. Shpg. wt., 7 lbs.  
98 SX 564. NET..... 47.00

**BELDEN TYPE 8282 CABLE.** Coaxial cable and 12-conductor line in same sheath. Shpg. wt., 100 ft., 10 lbs.  
47 W 556. Per Ft. .24c 100' or more, Per 100'. 21.60



**INDUSTRY:** Remote observation of production processes and equipment, guarding plant entrances and exits. An alert "eye."



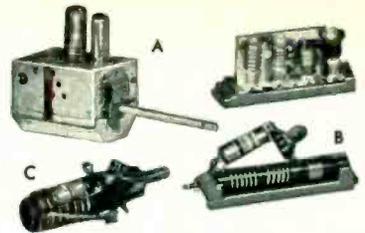
**TRANSPORTATION:** For remote railroad car inspection, recording of car numbers, safety control in railroad yards, piers, etc.



**INSTITUTIONS:** Used in schools and hospitals for remote viewing of lab experiments, microscope slides, surgery, etc.



**THE HOME:** For remote observation of play areas, swimming pools, child nurseries, estate entrances, and similar applications.



**Standard Coil TV Tuners**

**Fig. A. TYPE TV2232 "SUPER" CASCODE TUNER.** Improved VHF TV front-end tuner assembly. Particularly effective in fringe areas. Uses 6BQ7A or 6BZ7 for greater gain and 35-50% improvement in signal-to-noise ratio and 6J6 oscillator-converter. Direct replacement in sets with split-sound or inter-carrier IF systems. (For split-sound use XM-752 coil below.) Requires 250 volt supply for tubes. IF is factory set at 21.25 mc audio and 25.75 mc video. Instructions cover adjustment of IF to any frequency in the 19-26 mc range. Shielded to assure low oscillator radiation. New strips may be easily installed for coverage of UHF channels. Size, 5 1/4" H (2 1/4" above chassis), 3 1/2" W and 5" D. With set of VHF strips. Shpg. wt., 2 3/4 lbs.  
60 G 280. List. \$34.50. NET..... 24.01

**Fig. A. TYPE TV1532 "PENTODE" TUNER.** An excellent turret-type tuner for strong signal areas and exact TV replacement. Covers channels 2-13. VHF strips supplied. UHF coils (series H) may easily be installed. Balanced 300-ohm input circuit. IF outputs: 21.25 mc sound, 25.75 mc video. Oscillator adjustment screw for each channel permits alignment for maximum picture brilliance and definition. Supplied complete with 6J6 and 6BC5 tubes. Size, 4 3/4 x 3 1/4 x 6 1/4" high, 3" above chassis. With data sheet. Shpg. wt., 4 lbs.  
60 G 246. List. \$32.50. NET..... 22.49

**Fig. C. TYPE XM-752 SOUND TAKE-OFF COIL.** For use with above tuners in TV receivers having separate sound and video IF's. Shpg. wt., 2 oz.  
60 G 276. NET..... 1.12

**Fig. B. UHF TYPE 31G-200 TV TUNER STRIPS.** Permit reception of new UHF stations with VHF receivers using Standard Coil tuners. Replace unused VHF strips. Complete set for new UHF channel consists of one antenna strip and a matching oscillator segment to adapt Standard Coil tuner to new channels. \*Tuner Series in table below refers to identifying letter stamped on both oscillator and antenna strip of TV set tuner. These letters designate various tuner models made by Standard Coil Co. Specify new channel number and series letter of strips being replaced. With instructions. Wt., 6 oz.

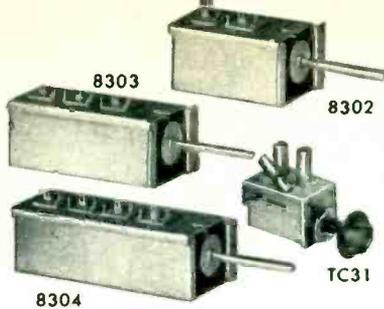
Stock No.	*For Tuner Series
60 G 232	Series F/G
60 G 234	Series K
60 G 235	Series Q
60 G 236	Series M/R
60 G 237	Series H

NET PER SET..... 7.35

**VHF TYPE 31A-213 TV TUNER STRIPS.** Direct replacements for original VHF strips used in Standard Coil tuners. Set includes antenna and oscillator strip. Available for any VHF channel, 2 to 13. For replacement of original strip sets which have been damaged or in which corroded contacts are causing poor picture or sound reproduction. When ordering, specify channel number required and tuner series letter stamped on original strips. Wt., 4 oz.

Stock No.	For Tuner Series
60 G 322	Series F
60 G 323	Series H
60 G 324	Series K
60 G 325	Series Q
60 G 326	Series R
60 G 327	Series Q/R
60 G 328	Series U

NET PER SET..... 1.47



### TV Tuners

#### Mallory VHF Spiral Inductors

Variable inductance units for TV, VHF and FM. Available in 2-, 3- and 4-gang assemblies. 2-gang units are used in TV boosters; 3- and 4-gang units are used in VHF-TV receivers. Continuous tuning from 52 to 216 mc in 6 turns of shaft without bandswitches, plug-in or turret coils. A single 1/4" shaft varies the inductance of each spiral wound coil simultaneously. Has automatic stops at maximum and minimum inductance positions. With rigid metal bracket for tuning dial. Behind panel size, 2-gang: 3 1/2 x 2 1/8"; 3-gang: 4 1/2 x 2 1/8"; 4-gang: 5 1/2 x 2 1/8". Shaft length, 2 1/2". Four 8-32 mounting holes. With specs and diagrams. Wt., 2 lbs.

TYPE 8302. 2-gang unit.  
60 G 264. List, \$12.00. NET..... 7.84

TYPE 8303. 3-gang unit.  
60 G 260. List, \$15.00. NET..... 9.80

TYPE 8304. 4-gang unit.  
60 G 261. List, \$18.00. NET..... 11.76

TYPE 8313 UHF SPIRAL INDUCTOR. Compact assembly of variable inductances in three sections. 3-gang unit gives continuous coverage of the UHF TV channels between the frequencies from 470 to 890 mc. Complete shielding between sections. Oscillator tracks for 82 mc IF, 270 degree rotation. Size, 4 1/2 x 2 1/8". Wt., 2 lbs.

60 G 266. List, \$15.00. NET..... 9.80

#### Dumont TC31 VHF TV Tuner

Latest version of the famous Dumont "In-tuner." Combines continuous tuning of TV and FM with detent selection of TV channels. Shaft is locked in at each TV channel, greatly simplifying tuning. Designed to mechanically and electrically replace most switchtype TV tuners having separate IF for sound. This includes all RCA 630 type chassis and many others. Has high gain and excellent sensitivity and stability. Uses the Mallory, 3-section spiral inductor plus antenna tuning to provide full, four-section performance without extending physical length of chassis to accommodate a four-section spiral inductor. Network matches IF of most chassis. For use with 21-25 mc sound IF; 25.75 mc video IF, 300-ohm input. Ready to install—just tune mixer plate coil and sound trap for sound IF of TV set. Size, 3 1/2 x 5 1/4 x 4 1/4". With 6J6 and 6BC5 (or 6CB6) tubes. Shpg. wt., 4 lbs.

77 G 651. List, \$52.50. NET..... 30.87

#### Standard Coil Tuner Replacement Parts Kit



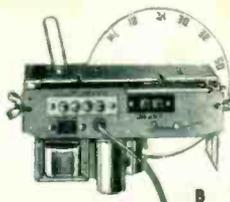
MODEL 1011. Provides one complete source of parts for Standard Coil Co. TV "front end" tuners (used in over 40% of all TV sets in use today). Includes most-often-needed parts required for series TV-

200, TV-1500, TV-2000 and TV-2200. All parts are in individually boxed cartons except the very smallest. Contains fine tuning parts, detent springs, rollers, IF coil assemblies, tuning slugs, sound traps, trimmer kits, etc. A total of 104 parts. Carton label gives parts description, number and quantity for quick reference. Size, 12x8 1/2 x 3 1/2". Shpg. wt., 2 1/4 lbs.

60 G 239. NET..... 22.05



A



B



C



D



E



F

### Fine Quality UHF Television Converters

#### Fig. A—Mallory 88 Converter

Converter for reception of UHF television stations on VHF receivers. Connects directly to antenna input of VHF TV sets. Range extends from 470 to 890 mc. Unit is entirely self-contained—complete and ready for immediate operation. Installation is simple, requiring no special tools. Large, 4" slide-rule dial for station selection. Front control turns TV set on and off, and permits instant changeover from UHF to VHF antenna. Broadband output permits use of channels 5 or 6 of TV set as IF. Input and output impedances, 300 ohms. Housed in a compact maroon plastic cabinet, designed to harmonize with all fine furniture and TV cabinets. Size, 7 1/2 x 4 1/2 x 5 1/2". Tubes: 6AF4 or 6T4, 6CB6; crystal diode and selenium rectifier. With instructions. For operation from 110-120 volts, 50-60 cycles AC. Shpg. wt., 6 1/2 lbs.

98 S 588. List, \$29.95. NET..... 22.46

#### Fig. B—Mallory 188 Converter

A new, high quality UHF converter featuring latest developments in Mallory engineering. For concealed mounting on inner sidewall, inner top-wall or back cover-board at rear of TV set. Makes an inconspicuous installation. Channel selector and function switch extend from rear edge of set. Provides continuous tuning from channel 14 to 83 (470-890 mc). Function switch selects UHF or VHF and turns TV set and converter on or off together. Output permits use of channel 5 or 6 as IF. Has 300-ohm inputs for UHF and VHF antenna leads and 300-ohm output for connection to VHF receiver. Supplied with chassis mounting bracket and adjustable chassis end brackets to facilitate mounting in any type cabinet. For 110-120 v., 60 cycle AC. Shpg. wt., 3 1/2 lbs.

98 S 587. List, \$29.95. NET..... 22.46

#### Fig. C—Blonder-Tongue BTU-2

New, high-gain, low noise UHF TV converter. Fully shielded, 3-gang continuous tuning on all UHF channels (470-890 mc). Easily and quickly connected—antenna lines and TV receiver connect into converter. Broadband output uses channels 5 or 6 of TV set as IF. Terminals provided for VHF and UHF antenna lines with 300 ohm input and output impedance. Accurate tuning with easy-to-read 330° dial. Compensated oscillator eliminates drift. Automatic "On-Off" operation through special thermo relay controlled by TV set power. Selector switch permits instant changeover from UHF to VHF. Self-contained with built-in power supply. Highly selective double tuned RF stage for interference rejection. In mahogany-finish plastic cabinet. With 1—6AB4, 1—6AF4 (or 6T4), selenium rectifier and 1—crystal diode. Size, 6 1/2 x 4 1/4 x 4 3/4". For 110-120 volts, 60 cycle AC. Shpg. wt., 5 lbs.

98 S 099. List, \$39.95. NET..... 27.44

#### Fig. D—Bogen UCT-1 Converter

High-efficiency UHF converter for reception of all UHF channels 14 to 83 on present VHF TV receivers. Completely self-contained—ready to use. Employs the famous Mallory spiral inductor in RF and oscillator stages for simple, full-band continuous tuning. Easy to attach—no special tools needed. Large, easily-read, rotating tuning dial provides station identification. Switch on front panel provides instant changeover from UHF to VHF channels. Converter has broadband output permitting use of VHF channel 5 or 6 as IF for UHF reception. Terminals provided for VHF and UHF antennas. Impedance, 300-ohms. Compact, brown plastic case. Size, 8 x 4 1/2 x 3 1/4". Tubes: 6AF4, 6BQ7A. Uses crystal detector and a selenium rectifier. Complete with instructions. For 110-120 volts, 60 cycle AC. Wt. 6 lbs.

98 S 576. List, \$42.50. NET..... 31.88

#### Fig. E—Granco LCU Converter

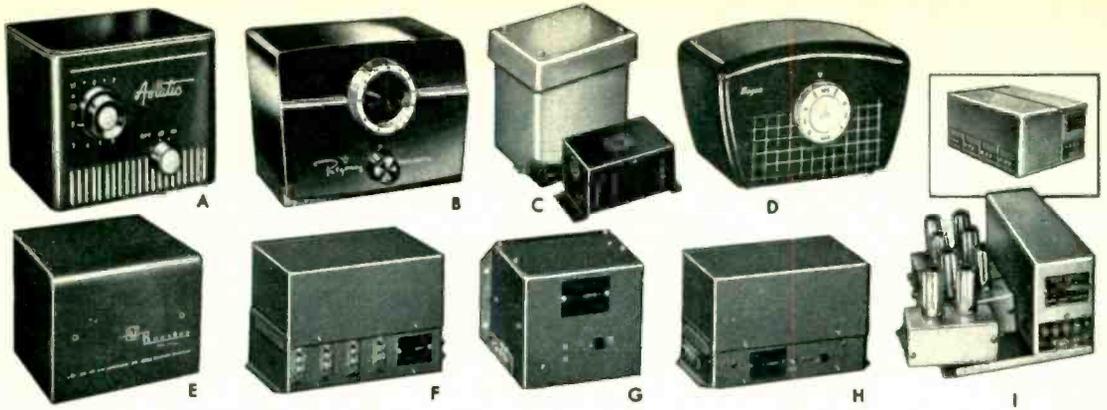
A highly stable UHF TV converter employing coaxial tuned cavity elements. Receives all UHF channels on standard VHF TV set. Coaxial cavity tuning provides high signal to noise ratio. Has excellent frequency stability for drift-free operation. Low noise level—high sensitivity. No moving contacts. Single knob tuning for channel selection and fine tuning adjustment. Selector switch turns TV set on and off. Instant changeover between VHF and UHF. Two coaxial tuned cavities—one is RF preselector, second is oscillator. Uses channels 5 or 6 as IF. Input and output impedances, 300 ohms. Mahogany plastic cabinet, 7 1/2 x 5 1/2 x 5 1/2". Has 6AF4 oscillator, 6CB6 IF amplifier, and crystal mixer. For operation from 110-120 v., 60 cycle AC. Shpg. wt., 5 lbs.

98 S 572. List, \$29.95. NET..... 22.45

#### Fig. F—Astatic CB-1-A Converter-Booster

Combination UHF converter and VHF TV booster. Permits continuous tuning through all UHF channels (14-83) on VHF TV sets and provides additional gain for greatly improved reception of the VHF channels (2-13). Consists of 2 tuned preselectors, a 6AF4 (or 6T4) oscillator and 1N82 diode mixer. Uses two-stage neutralized push-pull amplifier with 6J6 driving 6BQ7A grounded grid amplifier, 4-position control knob for "straight through VHF," boost on low VHF channels, boost on high VHF channels, and UHF operation. Converter output on VHF channels 3, 4, 5 or 6. UHF input is 300 ohms, VHF input and output 300 or 75 ohms. Terminal connections for UHF and VHF antennas. Housed in handsome brown and gold metal cabinet. Size, 9x6x5 1/4". Supplied complete with instructions. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 7 1/2 lbs.

98 S 098. List, \$59.50. NET..... 34.99



## Popular Television Boosters and Distribution Systems

**Fig. A—Astatic CT-1 VHF "Scanafar"**

Here's the latest version of the highly popular, very effective "Scanafar" 2-stage TV booster. Provides improved picture over 7 mc bandwidth on any of the 12 VHF television channels. Gives excellent results in primary areas with indoor antenna and in fringe areas with outdoor antenna. Features the new, high-gain, low-noise 6BQ7A tube, driven by a 6J6. Balanced, cascaded circuit provides an extremely high signal-to-noise ratio. Controls: Channel Selector, Off-Low Band-High Band. Can be used with either 72- or 300-ohm lines. Housed in smartly styled metal cabinet with mahogany wood grain finish. Size, 6½" wide x 4¼" high x 7¼" deep. For 105-125 volts, 60 cycle AC. Shpg. wt., 5 lbs.  
97 T 244. List, \$35.00. NET..... 20.58

**Fig. B—Regency VHF Booster**

Model DB-550. Expertly designed booster tremendously improves sensitivity and signal-to-noise ratio on all 12 VHF TV channels. Excellent for pepping up old TV sets and pulling in "fringe" stations. Provides an average boost in gain of 17.5 db. Simple single-knob tuning. Advanced, triple-tuned circuit employs two stages in cascade and features both capacitive and inductive neutralization for maximum stability. First stage uses 6J6 dual-triode in push-pull; second stage is 12AT7 grounded-grid, push-pull amplifier. Has self-contained power supply with power transformer for isolation of unit from power line. Off-on switch controls both booster and television set. Input and output impedance: 300-ohms. Housed in attractive, mahogany-finish plastic cabinet. Size, 4¼x 6x4½". With instructions. U.L. Approved. For operation from 105-125 volts, 60 cycles AC. Shpg. wt., 5 lbs.  
98 T 363. List, \$37.50. NET..... 22.05

**Fig. C—Electro-Voice "Tenna-Top" Booster**

Model 3010. Specially designed for VHF areas with high noise level. 4-tube booster mounts at antenna, thus insuring amplification of TV signal only and high signal-to-noise ratio. Operation is fully automatic; booster turns on and off with TV set switch. For use with up to 3000 ft. of twin-line. Low-voltage AC is carried to booster by twin-line. Separate high- and low-band 2-stage broadband amplifiers for very high uniform gain. Control unit housed in gray case, 6¼x3¼x4½", and is installed at set. Amplifier unit housed in moisture-proof case. Inputs for 150-300-ohm line. With 4-6J6 tubes. For 105-125 v., 60 cycle AC. Shpg. wt., 11 lbs.  
97 T 236. List, \$88.00. NET..... 51.74

**Fig. D—Bogen Model BB1-A VHF Booster**

Advanced circuit for improved picture and sound. Two 6J6 dual triodes for high and low bands—no hot lead switching. Push-pull circuits provide high gain (18 db) with broad bandwidth (6 mc) and high signal-to-noise ratio. One control tube continuously from channel 2 to 13. "Off" position connects TV set directly to antenna for chan-

**Blonder-Tongue VHF "Antensifiers"**

Two powerful TV boosters. Model HA-3 is for use with one TV receiver. Model CA-1 is for distribution systems and deluxe home installations. Both units are fully automatic.

**Fig. E. MODEL HA-3.** Broadband booster featuring an advanced 3-stage, push-pull cascade circuit. Designed primarily for home operation of single receivers. Signal boost of greater than 16 db on all 12 VHF channels. No knobs, no tuning and no channel switching. Booster switches on and off with TV set. Employs three 6J6 low-noise, dual-triode tubes. Excellent signal-to-noise ratio. Attenuator switch prevents overload on channels requiring no amplification. 5x5¼x4". For 105-125 v., 60 cycles AC. Shpg. wt., 4 lbs.  
98 T 221. List, \$39.50. NET..... 23.23

**Fig. F. MODEL CA-1.** Powerful commercial TV VHF preamp with gain of 27 db. May be used at any point of any distribution system. Ideal as line amplifier in master TV systems or community installations. Has precision-engineered matching transformers for use with 75 and 300 ohm lines. Dual-triodes used for best signal-to-noise ratio. Uniform response over entire TV band. Ventilated metal cabinet. 8x4½x5". For 105-125 v., 60 cycles AC. With 2-6J6's and 2-6BQ7A's. Shpg. wt., 6 lbs.  
98 T 218. List, \$77.50. NET..... 45.57

**Blonder-Tongue VHF-UHF Mixer-Amplifier, Channel Strips and Converter Strips**

**Fig. 1. MODEL MA4-1 MIXER-AMPLIFIER.** TV signal mixer for use with up to five separate antennas. Amplifies and mixes up to five input signals into a common output. For either individual or master antenna systems. Permits the use of four separate high-gain Yagi antennas and one broadband antenna. Requires no rotators or boosters. Provides maximum ghost-free reception because each antenna can be individually oriented to the particular TV station desired when installed. Output can be fed directly to TV receiver or to a distribution amplifier. May be connected in series for any number of antennas. Uses channel strips listed at right. New VHF and UHF antennas can be accommodated at any time with plug-in VHF strips and plug-in UHF converter strips. One input is broadband for signals requiring no preamplification. Remaining 4 single-channel inputs use separate plug-in strip assemblies with gain in excess of 17 db. Impedance: 75- and 300-ohms at all terminals. Size of chassis with self-contained power supply, 4x6x8¾". For 105-125 volts, 60 cycle AC. Less plug-in strips (see listing of VHF and UHF strips at right). Gray case. Shpg. wt., 7 lbs.  
98 T 305. List, \$52.50. NET..... 30.87

nels not requiring booster. Turns "on and off" automatically with the TV set. Gear-driven tuning assembly. Housed in brown plastic cabinet. 8x4¼x4½". For 105-125 volts, 60 cycle AC. U.L. Approved. Uses selenium rectifier. With 4 ft. of 300-ohm twin line. Shpg. wt., 4½ lbs.  
98 T 360. List, \$32.50. NET..... 19.50

**Blonder-Tongue VHF Distribution Systems**

Combination booster and isolation-distribution units. Two models—for either a two- or eight-outlet system. Both models provide full electronic isolation between outlets without any loss of gain. Units may be interconnected to serve from 2 to 2000 TV sets. All terminals have both 75- and 300-ohm connectors, except line output terminals, which are for 75-ohms only.

**Fig. G. MODEL DA2-1 2-OUTLET UNIT.** Provides two electronically isolated outlets from one antenna connection. Amplifies as it isolates—so that a full strength signal reaches each set. Fully automatic. Matches 75- and 300-ohm lines. Easily installed. Housed in shockproof metal cabinet, 4x5¼" high. With 2-6BC5 tubes. For 105-125 volts 60 cycles AC. Shpg. wt., 3 lbs.  
98 T 219. List, \$39.50. NET..... 23.23

**Fig. H. MODEL DA8-1 8-OUTLET UNIT.** Provides eight TV set outlets at lowest cost per outlet. Minimum of 35 db isolation between outlets. Amplifier with gain control assures full-strength signals. Correct impedance match for 75- and 300-ohm lines. Screw terminals assure faster installation. With 3-6J6's and 1-6BC5. Ventilated metal cabinet, 5¼x9x5½". For 105-125 volts, 60 cycles AC. Shpg. wt., 7 lbs.  
98 T 220. List, \$87.50. NET..... 51.45

**MODEL CS-1 VHF CHANNEL STRIPS.** Plug-in strips. For use with Model MA4-1 mixer-amplifier at left. One strip used for each channel, for gain exceeding 17 db. Each plug-in channel strip has its own 75 and 300 ohm input terminals. Carefully designed and rigidly constructed in fully enclosed sheet aluminum chassis. Polarized four-prong plug at one end for positive contact. Bakelite terminal strip at other end with binder-head screw terminals for antenna connections. Tubes fully shielded for reduction of noise pickup. Complete with tubes and two tinned spade lugs for low-resistance antenna connection. Tubes employed are 1-6AB4 and 1-6CB6, fixed-tuned for individual channels. Shpg. wt., 1 lb.

No.	Chan.	No.	Chan.
98 T 306	2	98 T 312	8
98 T 307	3	98 T 313	9
98 T 308	4	98 T 314	10
98 T 309	5	98 T 315	11
98 T 310	6	98 T 316	12
98 T 311	7	98 T 317	13

List, \$21.50. NET EACH..... 12.64

**MODEL UC-1 UHF CONVERTER UNITS.** Three-tube, high-gain, plug-in converter units. For UHF reception on VHF receivers using MA4-1 mixer-amplifier, at left. Converts UHF signals to VHF. Uses 2 input sockets to permit use of 3 additional antennas. Wt., 1½ lbs.

NOTE: Available on special order; when ordering, specify UHF channel and unused VHF channel to be used as IF.  
NET EACH..... 40.87



### Latest UHF Boosters

Fig. A—Electro-Voice Model 3400 Provides greatly improved reception of UHF TV channels in fringe and other low signal strength areas. It greatly increases sensitivity, improves signal-to-noise ratio, and sharpens front-end selectivity to minimize adjacent channel interference. This advanced-design booster employs a ground-ed-grid amplifier circuit using two push-pull 6AJ4 tubes. Carefully engineered to provide high, uniform gain over the entire UHF-TV range of 470 to 890 mc (channels 14-83). Input and output impedances, 300 ohms. Housed in handsome case with smooth operating slide-rule dial. Size, 5 1/4" high, 7 3/4" wide, and 6 1/4" deep. For operation from 105-125 volts, 60 cycles AC. Shpg. wt., 5 1/2 lbs.

98 T 353. List, \$44.75. NET..... 33.56

### Fig. B—Bogen Model UHF

Newly designed, highly efficient UHF TV booster covering channels 14 through 83. Excellent for UHF fringe areas and locations where heavy interference is encountered. Extremely high sensitivity and excellent signal-to-noise ratio. Offers 1 1/2 db gain on lower frequencies; 8 db on higher frequencies. Uses simple, single knob, continuous tuner over entire UHF band. Coaxial-type tuning system employs low-noise UHF 6AN4 amplifier tube. Booster automatically turns on and off with TV receiver—uses high-quality thermal-time relay. Has selenium rectifier power supply. Housed in attractive mahogany metal cabinet. Size, 4 1/2 x 8 x 5 1/4". For 110-120 v., 60 cycle AC. Wt., 8 lbs.

98 T 395. List, \$41.00. NET..... 24.60

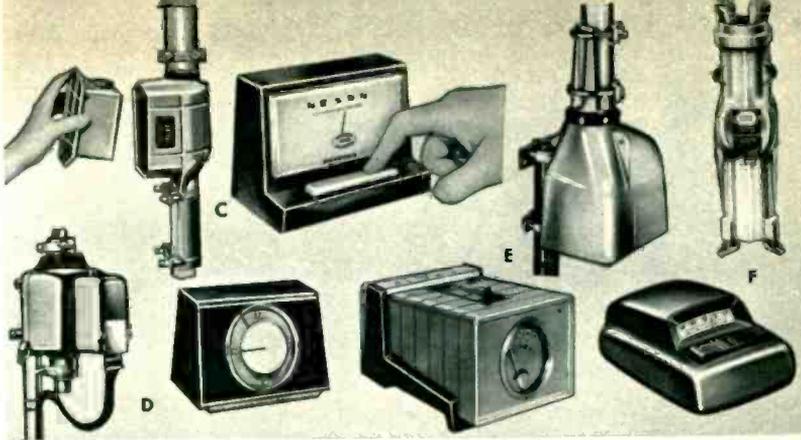


Waldom "Duo-Tenna" Distribution Amp Model DA-2000. New electronic TV distribution amplifier. Signal delivered to each set is an average of 3 db better than the signal available from the average antenna. 300-ohm inputs for both VHF antenna and UHF converter. Outputs; 2-300 ohm twin-lead connections to TV sets. Uses 2-6BK7A as separate and independent broad-band amplifiers. UHF distribution input converts both sets to UHF reception with a single UHF converter. Size, 8 x 5 1/4 x 2 3/4", in gray metal cabinet. For 110-120 v., 60 cycle AC. Wt., 8 lbs.

98 T 473. List, \$39.50. NET..... 23.23

MODEL DA-1010. "Ten-Tenna." Distribution amplifier similar to Model DA-2000 above but for use with up to 10 TV sets. Uses 1-6BK7A, 3-6J6 tubes. Size, 12 1/2 x 3 1/4 x 7 1/4". For 110-120 v., 60 cycle AC. Shpg. wt., 8 lbs.

98 T 494. List, \$89.50. NET..... 52.63



### Latest High-Quality Television Antenna Rotators

#### Fig. C—New JFD "Rotenna"

MODEL RT-100. New, carefully engineered antenna rotator featuring a pin-point control system accurate within .5 degree of rotation. Has smartly styled console direction indicator with finger-tip piano control tuning bar. Finely calibrated dial face gives clear, instant, error-free indication of antenna's exact position. No need to actuate rotator to read position. 390-degree continuous rotation in either direction permits station selection beyond end of normal 360 degree traverse.

Powerful balanced inline construction supports the heaviest multi-element TV antennas available, without extra thrust bearings. Instant, strain-free position stop at any desired point. Dynamic action friction brake prevents drift and over-travel in highest winds. With instantly reversible split capacitor type motor—lubricated for life. Compact, close-tolerance gear drive is machined within .002 of an inch for high efficiency power transmission. Motor and gear assembly housed in weather-sealed corrosion-resistant die-cast aluminum case to withstand the most severe climatic conditions. Readily accessible weather-sealed terminal board permits quick, neat cable hook-up.

Built-in guy-ring lugs permit secure 3- or 5-wire guying. Cartridge-type detachable drive unit is removable in seconds by simply loosening two screws—ideal for easy initial orienting of array to direction indicator. With complete instructions, less control cable; uses 4-conductor cable listed below. For 110-120 volts, 60 cycle AC. Shpg. wt., 12 lbs.

98 TX 416. List, \$49.95. NET..... 29.37

FOUR-CONDUCTOR CABLE. For above, 100 ft. minimum. Shpg. wt., 100 ft., 3 lbs.

97 T 365. 100 ft. or more, Per 100 feet. 2.70

#### Alliance Tenna-Rotors

MODEL U-83. Fig. D. Automatic control and improved rotator. Handles antennas up to 20 lbs. Rotator in die-cast zinc case, lubricated for life. To operate, pointer on control is moved to direction of station. Antenna automatically moves to position and stops. Less cable (see below). For 110-120 v., 60 cycle AC. Wt., 14 lbs.

98 TX 399. List, \$34.95. NET..... 25.69

MODEL T-10. Same rotator as 98 TX 399 but with "touch bar" control unit. Has compass dial to indicate antenna position. Shpg. wt., 12 lbs.

98 TX 398. List, \$29.95. NET..... 22.01

MODEL F-4. "Tenna-Rotor" with control unit, less Direction Indicator. Shpg. wt., 12 lbs.

97 TX 473. List, \$24.95. NET..... 18.34

FOUR-CONDUCTOR CABLE. For above, 100 ft. or more. Shpg. wt., 3 lbs./100 ft.

97 T 365. Per 100 ft..... 2.70

MODEL T88-2. THRUST BEARING BRACKET. Increases weight capacity to 300 lbs. Instructions. Shpg. wt., 3 lbs.

97 T 479. List, \$4.95. NET..... 2.91

#### Fig. E—Crown Model CAR-6A

Fine antenna rotator for quick, remote-control positioning of TV, FM, Amateur or other UHF-VHF antennas weighing up to 175 pounds. Makes one complete (365°) rotation in 60 seconds. Hardened steel shaft and machine-cut, long-life gears. Electrical brake stops antenna instantly—no coasting or over-travel. Permits complete accuracy at all times. Drive mechanism has cast aluminum weather-sealed housing. Will operate at full efficiency in all types of weather. Built-in end thrust ball bearing for smoothest movement. Streamlined remote-control unit has finger-tip switch for precision control. Illuminated dial is marked in points of the compass (N, E, S, W, N) and from 0-25. Indication is constant, needle movement steady and accurate. No fluctuation regardless of voltage changes—automatic indicator compensation. Push button on-off switch. Housed in sturdy, attractive mahogany bakelite cabinet. Rotator mechanism is factory lubricated for life. Antenna secured by U-bolts. For all antenna masts up to 2" in diameter. Supplied with complete, easy-to-follow installation instructions. Less four conductor cable (see listing below). For operation from 110-120 volt, 60 cycles AC. Shpg. wt., 11 lbs.

97 TX 488. List, \$44.95. NET..... 26.43

FOUR-CONDUCTOR CABLE. For use with above rotator, 100 ft. or more. Shpg. wt., 3 lbs./100 feet.

97 T 365. Per 100 ft..... 2.70

CROWN MODEL GR-1 ROLLER BEARING

GUY RING. For smooth rotation of guyed antenna masts up to 1 1/4" dia. With hardware. Shpg. wt., 2 lbs.

97 C 468. List, \$5.95. NET..... 3.50

#### Fig. F—Vee-D-X Model AR-M

An exceptionally rugged TV antenna rotator. Used to orient antenna in any direction for maximum signal strength on desired channel and to eliminate interference. Useful in VHF-UHF TV areas for improvement in picture quality. Features wide-faced, reinforced high pressure, die cast gears—long life and smooth operation. Sintered steel thrust bearing. Motor bearings are silicone-lubricated. Advanced in-line design for greater load handling capacity (up to 200 lbs), less strain on mast and guy wires and minimum wind resistance. Heavy duty 3-jaw chuck-type clamps on top and bottom, made of cold rolled steel, plated with weather resistant finish. Positive stop eliminates over-travel to permit pinpoint accuracy. Moves in forward or reverse directions—motor has automatic built-in mechanical braking action. Handsome mahogany-finish plastic control box with fingertip control lever. Dial scale marked N, E, S, W, N; also numerical reference points. Uses control cable below. Rotation speed; 1 1/2 rpm. With instructions. For 110-120 volts, 60 cycles AC. Shpg. wt., 11 lbs.

98 TX 293. List, \$49.95. NET..... 29.37

4-CONDUCTOR CABLE. For above, 100 ft. or more. Shpg. wt., 100 ft., 3 lbs.

97 T 365. Per 100 ft..... 2.70



## C-D-R Television Antenna Rotators

Latest model TV antenna rotators by Cornell-Dubilier-Radiart

**Figs. A and B—Model TR-2**

Heavy-duty remote control antenna rotator for clear, sharp pictures and dependable performance. Orients antenna in any direction. Aids in receiving maximum signal strength on desired channel. Has built-in thrust bearing to handle installations weighing as much as 150 lbs. Uses 12 heavy-duty bearings in 2-6½" dia. ball bearing races. Accommodates upper and lower antenna masts from ½" to 2" in diameter.

Control box with compass-type dial turns antenna in any direction. As antenna rotates, the letters N, E, S, W light up to show antenna direction. 375° rotation with positive stops at ends. Heavy-duty, smooth operating motor for instantaneous stop, start, reverse. Uses heavy-duty, long life precision gears. The entire mechanism is enclosed in a weather-proof die-cast aluminum housing—featuring life-time sealed lubrication.

Mast brackets have convenient guy wire lugs. Less cable; uses 8-conductor cable listed below. Quick, simple installation. With complete installation instructions. For operation from 110-120 volts 60 cycle AC. Shpg. wt., 16 lbs.

97 TX 463. List, \$44.95. NET..... 26.43

8-CONDUCTOR CABLE. For above, 100 feet minimum. Shpg. wt., 5 lbs.

47 T 586. 100' or more, Per 100' .... 4.25

**Figs. A and D—Model TR-4**

Highly efficient, heavy-duty remote control antenna rotator and control box unit for best TV picture quality and minimum interference. Orientates antenna in any desired direction for pin-point reception of any individual channel. Simple operation. Merely depress control lever and watch directional letters on meter until pointer indicates position desired; then release lever. Ruggedly constructed; provides long-life, dependable performance. Built-in thrust bearing of super-strength handles antenna arrays weighing as much as 150 lbs. Accommodates any antenna mast up to 2" O.D. and as small as ¾" O.D. Rotates on 12 heavy-duty bearings in two 6½" diameter ball bearing races. 375° rotation with positive stops—no drift or coast. Employs rugged, sturdy motor for start, stop and reverse.

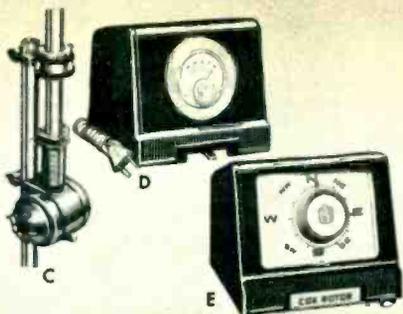
Remote unit housed in attractive plastic cabinet with instant finger-tip control lever. Letters N, E, S, W and N on meter light up to indicate antenna direction. Mechanism is enclosed in weather-proof die-cast aluminum housing. Factory-sealed, lifetime lubricated. Mast brackets fitted with convenient guy wire lugs.

Supplied complete with thrust bearing and cabinet control unit. Less only cable; uses 4-conductor cable listed below. Extremely simple installation. Supplied with easy-to-follow installation instructions. For operation from 110-120 volts, 50-60 cycle AC. Shpg. wt., 16 lbs.

98 TX 393. List, \$48.95. NET..... 28.78

4-CONDUCTOR CABLE. For above rotator. 100 feet minimum. Shpg. wt., 3 lbs.

97 T 365. 100' or more, Per 100' .... 2.70



**Figs. C and D—Model TR-12**

Exceptionally rugged, highly efficient remote control unit and rotating mechanism with powerful thrust bearing. Turns antenna to proper position for best TV reception. Will support and turn any antenna array—even 4-stack types. Makes complete revolution in 45 seconds. Instant-locking—will not drift. Takes antenna masts up to 1½" O.D.; fits standard towers. Remote unit housed in plastic cabinet, with simple finger-tip lever control. Letters N, E, S, W and N on meter show antenna direction. Heavy-duty motor and long-life gears. Rotating mechanism enclosed in water-proof die-cast housing; factory-lubricated for life. Less cable; uses 4-conductor cable listed below. With thrust bearing and control unit. With instructions. For 110-120 v., 50-60 cycle AC. Wt., 12 lbs.

98 TX 392. List, \$42.95. NET..... 25.25

MODEL TR-11. As above, but less thrust bearing bracket. For antennas weighing up to 20 lbs. Shpg. wt., 10½ lbs.

98 TX 390. List, \$39.95. NET..... 23.49

**Figs. C and E—Model AR-2**

New, completely automatic antenna rotator quickly, accurately positions antenna for maximum performance. Extremely accurate positioning of antenna. Very simple to operate. Place pointer on control unit to desired position. Antenna begins traverse to proper position selected. Dial is lighted while rotation takes place. When antenna reaches predetermined position, entire unit automatically turns itself off.

Control unit housed in attractive cabinet, designed to blend with any modern motif. Features clock-wise and counter-clockwise rotation. Unique brake design prevents drifting and coasting. Accommodates antenna masts up to 1½" O.D. Mounts on pipe up to 2" O.D.

Powerful thrust bearing permits use of largest TV arrays available. Mechanism factory-sealed and life-time lubricated. 360° rotation makes complete revolution in 45 seconds. Rotating mechanism enclosed completely in aluminum housing of water-proof design for long, dependable service. Complete with attractive, plastic cabinet control unit and thrust bearing. Less cable; uses 4-conductor cable listed below. Complete instructions. For 110-120 v., 50-60 cycle AC. Wt., 13½ lbs.

98 TX 414. List, \$47.95. NET..... 28.19

MODEL AR-1. Complete rotor, similar to above. Less thrust bearing bracket. Will accommodate antenna arrays up to 20 lbs. See below for Type TA-6 thrust bearing. With installation instructions. Less cable; uses 4-conductor cable listed below. For 110-120 v., 50-60 cycle AC. Wt., 12 lbs.

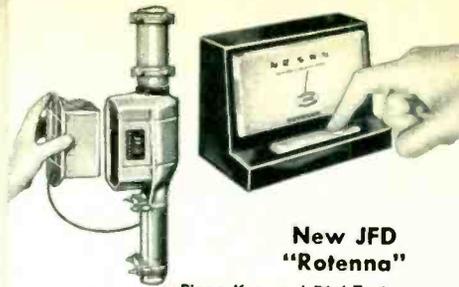
98 TX 415. List, \$44.95. NET..... 26.43

TYPE TA-6. THRUST BEARING. For use with Model TR-11 and Model AR-1 rotators to increase weight capacity equal to that of TR-12. Shpg. wt., 2 lbs.

98 T 391. List, \$4.95. NET..... 2.91

4-CONDUCTOR CABLE. For use with TR-12, TR-11, AR-1 or AR-2 rotator above. 100 ft. minimum. Shpg. wt., 3 lbs.

97 T 365. 100' or more, Per 100' .... 2.70



## New JFD "Rotenna"

Piano Key and Dial Tuning

MODEL RT100. New antenna rotator of unique design. Features piano key and panoramic dial indicator tuning. N, E, S, W and N printed on dial for quick, easy reference to antenna direction at all times. Highly accurate—rotates antenna to proper position for clearer, sharper TV pictures on all UHF and VHF channels. Straight in-line construction permits carrying antenna arrays of any size. Dynamic action friction brake prevents drift and overdrive even in high winds. Cartridge-type detachable power drive unit can be removed without dismantling antenna. 390 degree rotation in either clockwise or counter-clockwise direction. Remote control unit housed in attractive "panoramic" style cabinet—matches modern or period decor. Mechanism enclosed in weather-sealed, aluminum housing. Readily accessible terminal board. Oversized heavy-gauge steel U-channel clamps. With complete instructions. Less cable; uses 4-conductor cable below. For 110-120 v., 50-60 cycle AC. Shpg. wt., 12 lbs.

98 TX 416. List, \$49.95. NET..... 29.37

4-CONDUCTOR CABLE. For use with above rotator. 100 feet minimum. Shpg. wt., 100 ft., 3 lbs.

97 T 365. 100' or more, Per 100' .... 2.70

## New JFD Type M "Zoom-Up" Antenna Masts

MODEL TM-12345. Heavy-duty antenna mast. Ideal for any UHF-VHF antenna array. Simplifies installation. Husky thumb screws engage tube nuts. Lock sections at any height. Pre-assembled. Constructed of 16-gauge telescoping tubing with .003" hot-dip zinc galvanizing inside and out. Consists of: Base section #1-10 foot 1¼" OD; base section #2-10 foot 1½" OD; base section #3-10 foot 1¾" OD; base section #4-10 foot 2" OD; base section #5-10 foot 2¼" OD. With guy rings, clamps and necessary hardware. Instructions. Maximum height, 50 feet. Wt., 57 lbs.

92 CX 103. List, \$34.75. NET..... 20.43

MODEL TM-1234. Consists of base sections nos. 1, 2, 3 and 4. Height, 40 feet. Wt., 41 lbs.

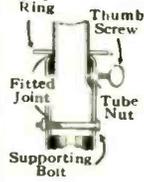
92 CX 102. List, \$26.65. NET..... 15.67

MODEL TM-123. Consists of base sections numbers 1, 2 and 3. Total maximum height, 30 feet. Wt., 28 lbs.

92 CX 101. List, \$18.60. NET..... 10.94

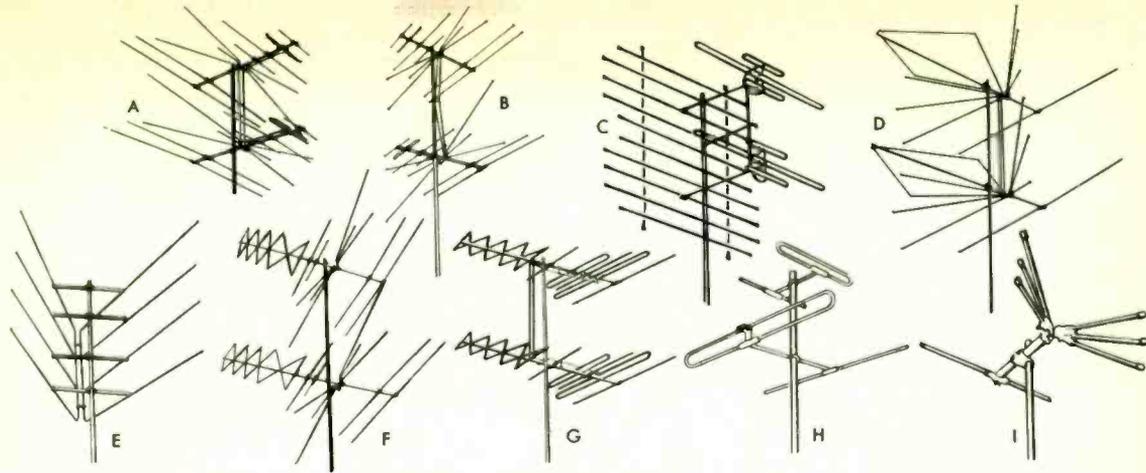
MODEL TM-12. Consists of base sections numbers 1 and 2. Height, 20 feet. Shpg. wt., 18 lbs.

92 CX 100. List, \$11.10. NET..... 6.53



MODEL ZUB—2¼". UNIVERSAL BASE AND ROOF MOUNT. Swivel base mount for above "Zoom-Up" masts. For any surface—flat, slanted and peak roofs or walls. Heavy-gauge weather-proofed steel. Simple installation. Wt., 2½ lbs.

97 C 120. List, \$3.05. NET..... 1.79



**Latest JFD UHF-VHF and VHF Antennas**

**Fig. A—Model 2135 UHF-VHF Antenna**

New, 2-bay, all-channel UHF-VHF stacked array for fringe areas. Provides exceptionally high gain on all TV channels 2 to 13. Dual reflectors provide flat response on low channels. Conical-type driven elements for broad bandwidth. High band sections consist of 2 driven elements and 2 directors each—spaced and phased for peak performance. Supplied complete with half-wave stacking bars. Entirely pre-assembled for easy installation. 1" square, rugged aluminum boom. Less mast and 300-ohm line. Shpg. wt., 18 lbs.

98 CX 465. List. \$38.35. NET..... 22.55

MODEL 213. Same as Model 2135 antenna, above, but single-bay array. Shpg. wt., 8½ lbs.

98 CX 464. List. \$18.70. NET..... 11.00

**Fig. A—Model 5135 UHF-VHF Antenna**

2-bay antenna. High gain and directivity. Each high-band section has 2 driven elements and 2 directors. Features "Jet-action" pre-assembled construction. Heat-treated solid aluminum dowels. Economically priced, easy to install, yet powerful in performance. Ideal for fringe areas. Less mast and 300-ohm line. Shpg. wt., 13 lbs.

92 CX 104. List. \$25.95. NET..... 15.26

MODEL 513. Same antenna as above, but single bay. Less mast and 300-ohm line. Shpg. wt., 7 lbs.

92 CX 105. List. \$12.65. NET..... 7.44

**Fig. B. MODEL 2135-5.** This exceptional one-half wave wide-stacked Super-Power-Jet antenna provides extra high gain on all UHF-VHF TV channels. Excellent for the deep fringe areas where all the antenna gain possible is needed. Up to .5 db more gain on the low bands and 2 db more gain on the high bands over conventional ¼ wave antenna arrays. Precision construction assures maximum performance. Complete with properly spaced mast supported stacking transformers. Less 300-ohm twin line and 1½" mast. Wt., 18 lbs.

92 CX 106. List. \$39.95. NET..... 23.49

**Fig. C—"Super Dodo" Deep Fringe VHF**

MODEL SC3025. Popular "Super Dodo" high-gain VHF antenna. New, stacked array antenna for exceptional reception and sharp directivity in deep fringe areas. Employs 6-dipole construction, with 15 reflector elements and ½-wave matching jumpers. Provides peaked gain on channels 2 to 6; excellent gain on all VHF channels in deep fringe areas. High front-to-back ratio. Pre-assembled, all-aluminum construction. Takes masts to 1¾". Less mast and 300-ohm twin line. Shpg. wt., 17 lbs.

98 CX 467. List. \$46.40. NET..... 27.28

MODEL C3025 FRINGE ANTENNA. Similar to above, with 3 dipoles (1 low-band, 2 high-band), and 10 reflector elements. Less mast; twin line. Shpg. wt., 14 lbs.

98 CX 466. List. \$35.40. NET..... 20.82

**Fig. D—JET 454 UHF-VHF Antenna**

An excellent value in the highly popular combination rhombic and conical antenna. Provides high-gain coverage of VHF and UHF channels 2 to 83. Features improved matching section for very low loss operation from single lead-in. Has 1" square aluminum crossarm. Excellent for primary to moderate signal areas. Less mast and 300-ohm line. Shpg. wt., 8½ lbs.

98 CX 368. List. \$16.50. NET..... 9.70

JET 454S. 2-bay, stacked array with stacking transformers. Up to 14 db VHF and 10 db UHF gain. Wt., 18 lbs.

98 CX 369. List. \$34.50. NET..... 20.29

**Fig. E—Model UN-104 UHF-VHF**

Newly designed all-channel UHF-VHF antenna array. Double stacked for extra gain on channels 2 to 83 without any loss-producing coupler. Features Redwood cross-arms plus economy and simplicity. Factory pre-assembled. Simply swing sections open and tighten. Has anti-rust, anti-corrosion protection of finest all-aluminum construction. Power-packed for added signal sensitivity needed in fringe areas and bad signal areas. Less twin line and mast. Shpg. wt., 5½ lbs.

92 CX 107. List. \$8.75. NET..... 5.14

MODEL UN-102. Same fine construction as antenna above, but single stack. Mechanical compactness of a single unit with the gain of a stacked array. Complete high gain coverage on all channels from 2 to 83. No loss-producing coupler. Only one lead to TV set. Less 300-ohm twin lead and mast. Shpg. wt., 3 lbs.

92 CX 108. List. \$4.20. NET..... 2.47

**Fig. F—Model JET 9135-5 UHF-VHF**

One of the most powerful signal-sensitizing UHF-VHF antenna arrays. Excellent performance in the deep fringe and other bad signal areas. Consists of 2 wide-spaced bays incorporating the sensational new flat plane helical concept with flat plane conical design. Flat no-dip gain varies less than ½ db across any channel. High directivity minimizes ghosts and reduces co-channel interference. Pre-assembled, all-aluminum construction. With aluminum mast supported jumper harness. Less 300-ohm line and mast. Shpg. wt., 9 lbs.

92 CX 109. List. \$55.00. NET..... 32.34

**Fig. F—MODEL JET 9135.** Excellent stacked 2-bay deep fringe antenna array. New flat plane helical coupled with flat plane conical design gives superior performance on low- and high-band VHF. Has fine response on UHF as well. Pre-assembled. All-aluminum construction. Fits masts up to 1½" O.D. Less 300-ohm twin line and mast. Shpg. wt., 9 lbs.

92 CX 110. List. \$52.50. NET..... 30.87

MODEL JET 913. Same construction as Model 9135 above, but single bay only Shpg. wt., 5 lbs.

92 CX 111. List. \$25.50. NET..... 14.99

**Fig. G—Model CC2835 UHF-VHF Antenna**

Highly efficient UHF-VHF stacked 2-bay antenna array. Incorporates the flat plane helical concept coupled with new improved broad band Yagi design. High front to back and front to side signal ratios. Equipped with new JFD AC20 coupler for extremely low-loss. Finest all-aluminum construction. With matching network. Factory pre-assembled. Less 300-ohm line and mast. Shpg. wt., 9 lbs.

92 CX 112. List. \$55.00. NET..... 32.34

MODEL CC283. Same fine construction as antenna above, but single bay. Less 300-ohm line and mast. Shpg. wt., 5 lbs.

92 CX 113. List. \$27.25. NET..... 16.02

**Fig. H. MODEL Q5 VHF HI-LOW ARRAY.**

"Piggy-Back" all-channel antenna. High-band and low-band elements can be oriented separately for best reception. Less mast and 300-ohm twin line. Wt., 4½ lbs.

97 CX 078. List. \$10.25. NET..... 6.03

**Fig. I—Model TP Jet 160 Tenna-Pak**

"JeTenna" conical Tenna-Pak for VHF. Complete installation kit and antenna. Consists of: 1—JeTenna all-aluminum Jet 160 single conical VHF antenna (Listed separately below); 2—2" long x ¼" OD seamless electro-galvanized fitted-joint tubing; 1—all-angle base mount; 60' 300-ohm twin line; 4—insulated screweye stand-offs; and 2—insulated stand-offs. Wt., 8 lbs

98 CX 158. List. 17.35. NET..... 10.20

MODEL TP JET 161. Same as above, but with all-aluminum stacked JeTenna conical (Jet 161 listed below) and 4—2" 7" electro-galvanized masts. Wt., 13 lbs.

98 CX 157. List. \$32.40. NET..... 19.05

**MODEL JET 160 SINGLE CONICAL JETENNA.**

Pre-assembled all-channel fan conical features "umbrella" action—elements literally pop into place in guided keys. Aluminum elements and fiberglass inserts. Less mast and 300-ohm line. Wt., 3 lbs.

98 CX 183. List. \$11.55. NET..... 6.79

MODEL JET 161 2-BAY CONICAL JETENNA. Same antennas as above, stacked for greater gain. Up to 12.5 db gain on all VHF channels. For fringe locations or remote areas. For masts up to 1½" O.D. Less mast and 300-ohm twin line. Wt., 6 lbs.

98 CX 184. List. \$24.75. NET..... 14.55

MODEL JET 164 4-BAY CONICAL JETENNA. With 4 jumper bars and mast-supported harness. Fits masts to 1¾" O.D. Less mast and 300-ohm line. 15 lbs.

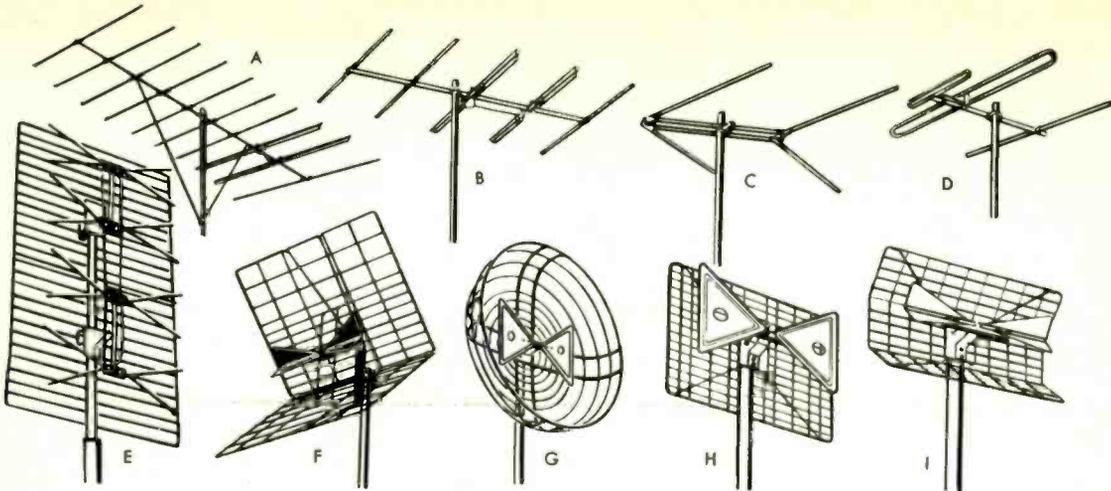
98 CX 185. List. \$53.60. NET..... 31.52

MODEL JET 660 SINGLE CONICAL JETENNA For standard masts to 1¾" O.D. Less mast and 300-ohm line. Wt., 3 lbs.

98 CX 168. List. \$9.05. NET..... 5.32

MODEL JET 661 2-BAY CONICAL JETENNA. For masts to 1¾" O.D. Less mast and 300-ohm twin line. Shpg. wt., 6 lbs.

98 CX 169. List. \$19.30. NET..... 11.35



## Famous JFD UHF-VHF Television Antennas

### JFD Yagi Antennas

Yagi antennas are noted for their excellent fringe area gain characteristics and exceptionally sharp directivity. Low weight and minimum wind resistance make them excellent for rotator use. All antennas listed below have seamless, aluminum 1" O.D. crossarms. Single arrays use a single-driven element. To stack any series of yagi antennas listed below, order two bays; all necessary balune transformers, stacking bars, and components will be included. Less mast and 300-ohm twin line.

Fig. A. MODEL 10B BALUNE 10-ELEMENT YAGIS. Provide 52% more signal gain than conventional 5-element types. Very sharp directivity in all fringe areas. Av. wt., 9 lbs.

#### SINGLE ARRAYS

No.	Type	Chan.	List	EACH
98 CX 231	10B2	2	\$30.55	17.96
98 CX 232	10B3	3	29.20	17.17
98 CX 233	10B4	4	27.80	16.35
98 CX 234	10B5	5	27.10	15.93
98 CX 235	10B6	6	25.00	14.70
98 CX 236	10B7	7		
98 CX 237	10B8	8		
98 CX 238	10B9	9		
98 CX 239	10B10	10	13.95	8.20
98 CX 240	10B11	11		
98 CX 241	10B12	12		
98 CX 242	10B13	13		

Fig. B. MODEL 5B VHF BALUNE YAGIS. Wide-spaced, 5-element, single-driven yagis. Precision dipoles and wide spacing. Each array has 3 directors, 1 reflector, and folded dipole driven element.

No.	Model	Chan.	Wt., lbs.	List	EACH
98 CX 322	5B2	2	7	\$17.60	10.35
98 CX 323	5B3	3	6	17.60	10.35
98 CX 324	5B4	4	6	16.65	9.79
98 CX 326	5B5	5	6	16.65	9.79
98 CX 327	5B6	6	6	15.85	9.32
98 CX 328	5B7	7	3		
98 CX 329	5B8	8	3		
98 CX 331	5B9	9	3		
98 CX 332	5B10	10	3	6.95	4.09
98 CX 333	5B11	11	3		
98 CX 334	5B12	12	3		
98 CX 335	5B13	13	3		

### "Cascade" Broadband Series

"Cascade" yagis have twin-driven elements for broadband high gain and uni-directional forward response. Feature exclusive "No-Dip Booster Director" which eliminates the dip usually found in broadband yagis.

Fig. A. MODEL 10B26. 10 element balune for channels 2 through 6. Wt., 9 lbs.  
98 CX 455. List, \$40.95. NET..... 24.08

Fig. A. MODEL 10B713. 10 element balune for channels 7 through 13. Wt., 9 lbs.  
98 CX 459. List, \$20.85. NET..... 12.26

Fig. B. MODEL 5B26. 6-element wide-spaced balune for channels 2 through 6. Excellent performance in areas of medium signal strength. Wt., 7 lbs.  
98 CX 450. List, \$22.05. NET..... 12.97

### Fig. C—Q800 Single Vee-Beam VHF

Engineered for increased gain, especially on upper band. "Quick-Rig" pre-assembled design—entire array slides out of package ready for flip-assembly and tightening. Features aircraft aluminum construction throughout. With dowelled elements and 1/4" seamless boom. Less mast and twin line. Shpg. wt., 3 1/2 lbs.

98 CX 166. List, \$6.25. NET..... 3.67

MODEL Q801 STACKED VEE-BEAM. Two bays for additional 3 db gain. Includes half wavelength, mast-supported jumper harness. Less mast, twin line. Wt., 7 lbs.

98 CX 167. List, \$13.50. NET..... 7.94

### Fig. F—TPUHF415 Corner Reflector

Carefully engineered antenna for channels 14 through 83. Gain averages 8 to 12 db across the UHF spectrum. Braced 5 ways for maximum rigidity. Large channel-type heavy-gauge steel anchor bracket. Extra-large grid reflectors provide optimum beam width for peak fringe reception. Neatly and compactly pre-assembled. Flips open like a book for quick, easy installation. Elements cadmium plated against corrosion. With complete "Tenna-Pak"; includes 5 ft. seamless fitted-joint mast, all-angle base mount, 60 ft. 300-ohm twin lead, 4 screw-eye standoff insulators, and 2 clip-on mast insulators. Shpg. wt., 7 lbs.

92 CX 117. List, 17.10. NET..... 10.05

MODEL UHF415 CORNER REFLECTOR. Same fine antenna as TPUHF 415, but less mast tubing, twin lead, and Tenna-Pak accessories. Shpg. wt., 3 lbs.

92 CX 118. List, \$9.60. NET..... 5.64

### Fig. D—In-line Hi-Lo Antennas

MODEL TPQ-150 IN-LINE TENNA-PAK. Unique in-line folded dipole design provides powerful all-channel reception. Has elements for both high and low bands and reflector. Elements made of 1/2" aircraft aluminum alloy. Pre-assembled "Quick-Rig" construction. Unfolds and locks in exact alignment for easy installation. Complete with 5 ft. of seamless fitted-joint mast tubing, all-angle base-mount, 60 feet of 300-ohm twin line, 4 screw-eye stand-off insulators, and 2 clip-on mast stand-off insulators. Shpg. wt. 9 lbs.

92 CX 114. List, \$15.85. NET..... 9.32

MODEL Q150 VHF IN-LINE ANTENNA. Compact, Hi-Lo folded dipole array as described in TPQ-150. Less mast, twin line, and Tenna-Pak accessories. Shpg. wt., 5 lbs.

97 CX 075. List, \$10.00. NET..... 5.88

STACKING BARS. For stacking two Q150 or TPQ-150 In-line antennas for greater gain and directivity. Shpg. wt., 1 lb.

97 CX 388. NET..... 75c

MODEL TPQ-151 STACKED IN-LINE TENNA-PAK. Similar to TPQ-150, but two-bay array for greatly increased gain. Complete with aluminum jumpers and twin-lead phasing harness. With 10 ft. seamless fitted-joint mast and complete Tenna-Pak accessory kit. Shpg. wt., 17 lbs.

92 CX 115. List, \$29.05. NET..... 17.08

MODEL Q151 STACKED IN-LINE ANTENNA. Same as TPQ 151, less mast, twin line, and accessories. Shpg. wt., 11 lbs.

97 CX 085. List, \$21.40. NET..... 12.58

### Fig. G—UHF900 Para-Bow

Combination giant UHF bowtie dipole antenna and radar-type parabolic screen reflector. Up to 14 db. gain on channels 14 through 83. Single-unit assembly for quick, easy installation. Less mast and twin line. Shpg. wt., 6 1/2 lbs.

98 CX 460. List, 12.95. NET..... 7.61

### Fig. H—TPUHF600 Bow-Flector

Excellent for high and medium signal strength areas, has giant bowtie and reflector array with an average of 6.5 db. gain across the UHF spectrum. Large, rugged grid reflector, bowtie, and all hardware and brackets heavily cadmium plated for maximum corrosion resistance. Features unique "Custom-Calibrator" bracket for peaking desired UHF channels. With 5 ft. seamless fitted-joint mast tubing, all-angle base mount, 60 ft. 300-ohm twin-lead, 4 screw-eye stand-off insulators, and 2 clip-on mast stand-off insulators. Shpg. wt., 7 1/2 lbs.

92 CX 119. List, 12.50. NET..... 7.35

UHF600 BOW-FLECTOR. Same as TPUHF-600 described above, but less mast, twin-lead, and accessories. Wt., 3 1/2 lbs.

92 CX 120. List, \$5.00. NET..... 2.94

### Fig. I—UHF633 Mini-Cor

Budget-priced corner reflector for channels 14 through 83. Features a tri-grid reflector that concentrates signal power on the bowtie dipole element from top, bottom, and rear, giving an average gain across the UHF spectrum of 7.5 db. 20-to-1 front-to-back ratio for strong forward response and minimum sensitivity to noise and reflected signals. Completely pre-assembled. Heavy cadmium plating. Fits standard masts up to 1 1/4" O.D. Includes free stacking transformer for addition of another bay to obtain average gain of 9 to 11 db for fringe locations. Less mast and twin line. Shpg. wt., 3 lbs.

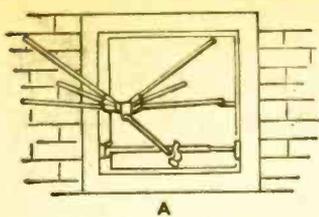
92 CX 121. List, \$5.50. NET..... 3.23

### Fig. E—UHF204 Four-Bow

Excellent 4-bow array with screen-grid reflector for high gain and reduction of snow and troublesome reflections. Features new "Custom-Channel" calibrator for peaking antenna to the particular channels you want. Completely pre-assembled. Precision-spaced phasing network for minimum signal transfer loss. Complete with screw-eye insulator which secures lead-in to dipole bracket. For masts up to 1 1/2" O.D. Less mast and twin line. Shpg. wt., 6 lbs.

92 CX 116. List, \$10.45. NET..... 6.14

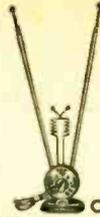
# Television Antennas



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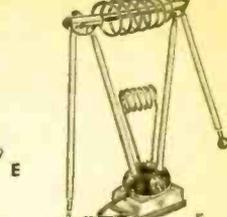
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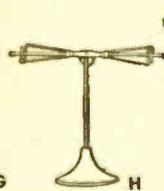
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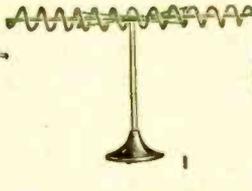
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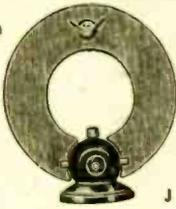
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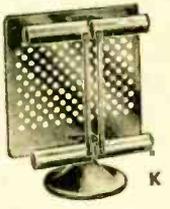
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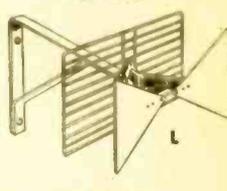
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## JFD TV ANTENNAS AND ACCESSORIES

Fig. A—C119 VHF WINDOW ANTENNA

Low-cost, all-aluminum conical window antenna for strong signal reception in medium and high signal strength areas on channels 2-13. Ideal for apartment buildings, hotels, etc., or wherever rooftop installations are not allowed or impractical. Two low-band conical dipoles give powerful reception on channels 2 to 6. One high frequency dipole provides excellent reception on channels 7 to 13. Aluminum elements slide easily into place.

Antenna is provided with window extension which acts as a horizontal jack. Fully adjustable from 32° to 42° in width. Easily fits on outer frames of most windows. Anchor brackets of antenna fit snugly and slide smoothly along extension bar. Antenna can be tilted to best receptive position. With complete mounting and installation instructions—less 300-ohm twin line. Shpg. wt., 7 lbs.  
97 CX 084, List, \$8.95. NET ..... 5.26

Fig. B—TA139 UHF INDOOR ANTENNA

Economy-priced, "Ultra-Loop" UHF indoor antenna for clear signal reception on channels 14-83. Circular, wide loop dipole provides flat, high gain response across entire UHF band. Patterned after short-wave radio direction finding loop antenna, with adaptations for UHF. Fully adjustable for highest gain—dipole can be moved from vertical to horizontal angles for peaking any point in the UHF spectrum. Rust and corrosion-proof. Red-gold, anodized aluminum dipole, with mahogany bakelite base, harmonizes with period or modern decor. Tip-proof, weighted base construction. Complete with attached 4-ft. length of 300-ohm twin line including solderless lugs. Ht., 9 1/4"; dia., 9". Shpg. wt., 1 1/2 lbs.  
98 CX 376, List, \$4.95. NET ..... 2.03

Fig. C—TA145 UHF-VHF INDOOR ANTENNA

New, highly improved "Tune-O-Matic" UHF-VHF indoor antenna. Minimizes ghosts and interference for sharp, clear picture. Provides good signal reception on all channels, 2 to 83. Features unique 6-position electronic phasing switch for matching impedance of television receiver. Electrically adjusts antenna for maximum efficiency on channel being received.

With three section brass dipoles. Two full length dipoles adjust for best picture reception on all channels. Handsome, ruby-tipped Q-driver phasing section adds decorative touch to any room decor. Tip-proof, weighted base design.

Dipoles and phasing section in gold finished brass. Ratchet grip construction holds dipoles securely in any position. Complete with 4-foot length of 300-ohm twin line, tipped with spade lugs for quick, simple attachment to TV set. Shpg. wt., 2 lbs.  
98 CX 468, List, \$9.95. NET ..... 3.43

Fig. D—AS3 ANTENNA SWITCH

Provides maximum use of fringe-area multiple Yagi installations by permitting instant switching to desired antenna. Can be used with up to 3 antennas. Employ's constant impedance rotary switch with low-resistance silver-to-silver contacts. Optimum signal energy transfer. Size, 1 1/2x2x5". Screw terminals. Shpg. wt., 2 lbs.  
71 C 540, List, \$5.95. NET ..... 3.50

AS4 Antenna Switch, As above, but for 4 antennas.  
71 C 541, List, \$6.95. NET ..... 4.09

Fig. E—MODEL AC ANTENNA COUPLERS

New antenna crossover networks for matching all 3 TV bands (low VHF, high VHF and UHF) to a single transmission line. Prevents interaction between antennas. Terminals are clearly marked for rapid connection. Couplers fasten to antenna mast by means of ring bolt. Maintain effective isolation between sets; no loss of signal strength on UHF or VHF frequencies. May be connected between separate VHF and UHF antenna systems. Provide excellent impedance match. In plastic case. All necessary hardware for mounting included. Shpg. wt., 1/4 lb.

Model AC10, 6 terminals. Couples 2 antennas, low and high VHF.  
51 C 269, List, \$3.50. NET ..... 2.06

Model AC20, 6 terminals. Couples 2 antennas, VHF and UHF.  
51 C 266, List, \$3.75. NET ..... 2.20

Model AC30, 8 terminals. For coupling 3 antennas; low and high VHF, and UHF.  
51 C 267, List, \$4.50. NET ..... 2.65

## SELECTED INDOOR ANTENNAS

Fig. F—DELTA BEAM VHF-UHF INDOOR ANTENNA

Newly redesigned, extremely powerful all-channel indoor antenna. Features six-position fingertip tuning; on matching impedance switch. Matches line impedance and resonates antenna to match receiver input circuit. Has triple-rod, telescopic dipoles on each side of delta-match transformer—dipoles snap out for extra gain. Combines engineering principles of the helix coil, folded dipole, straight dipole and delta-match transformer. Plastic half-ball swivel on clear crystal base revolves 360 degrees. Permits antenna to be beamed in direction of strongest signal of each channel. Greatly reduces ghosts and interference. Base has rubber pod; protects finish of receiver cabinet. Strikingly snarnt gold finish complements any room interior. With 6-foot length of 300-ohm twin line. 10" high; arms extend to 48". Shpg. wt., 2 1/2 lbs.  
92 CX 010, List, \$9.95. NET ..... 5.85

Fig. G—KNIGHT VHF INDOOR ANTENNA

A very effective VHF TV antenna at surprisingly low cost. Employs 3-section, chrome-plated telescoping elements designed for convenient adjustment to a wide variety of receiving conditions. Serrations in base hold elements securely in desired position. Bakelite base is weighted to prevent tipping; felt bottom protects TV cabinet. Supplied with 3-foot length of 300-ohm twin line. Arms extend 36". Shpg. wt., 2 lbs.  
97 CX 357, NET ..... 1.49

## HI-LO TV INDOOR ANTENNAS

Fig. H, Model 303. Attractively styled, "Twin-Arrow" UHF indoor antenna at moderate cost. Carefully engineered construction insures excellent gain characteristics over the entire UHF spectrum, channels 14-83. Incorporates new "Twin-Arrow" element design to permit precise adjustment for best results in different reception areas. Crossbar and upright have handsome gold finish. Large, heavy brown plastic base—prevents tipping. Supplied complete with 6 feet of 300-ohm twin line. Simple, rapid installation. Shpg. wt., 1 1/2 lbs.  
98 CX 448, List, \$5.95. NET ..... 3.50

Fig. I, Model 202. Popular Hi-Lo "Spiral-Tenna", re-designed to accommodate all-channel UHF-VHF reception. Covers channels 2-13; 14-83. Provides high signal gain—minimizes ghosting and interference. Requires no adjustment. Gleaming gold appearance. Height, 20"; width (span), 32". With 6-foot length of 300-ohm twin line, tipped with spade lugs. Shpg. wt., 2 lbs.  
98 CX 449, List, \$9.95. NET ..... 5.85

Fig. J—RADION UHF-VHF INDOOR ANTENNA

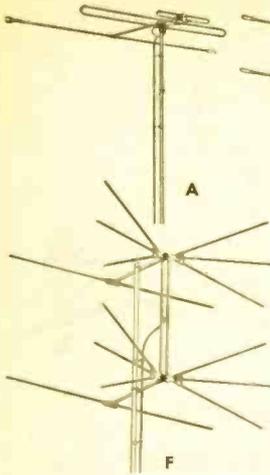
Model UVTA-2. Efficient "Super-Bullseye" UHF-VHF antenna for indoor use in metropolitan installations or primary-to-moderate areas. Highly efficient, yet compact and attractive. Employs phased loop for excellent all-channel reception. Only ten inches high; weighs less than one pound. Attaches in a jiffy to any television set or converter. Antenna is then turned until the best reception angle is found. Smartly styled in rose-gold colored, anodized aluminum with mahogany phenolic base. Blends with any interior motif. Base is weighted and felt-padded—won't tip or scratch. Can be placed on or near the set. A low-cost unit that combines handsome styling, exceptional performance and quick, simple installation. Complete with 5-ft. length of 300-ohm twin line, 10" high; 9" dia. Shpg. wt., 1 lb.  
98 C 443, List, \$6.95. NET ..... 4.09

## TSELCO INDOOR ANTENNAS

Fig. K, Model 350. New, high gain UHF indoor "Can-Tenna". Combines distinctively different styling with excellent signal reception characteristics. Provides clear picture reception in metropolitan areas or other primary signal areas, over the entire UHF band. Gold finish suits any interior decorative scheme. Unusually wide, non-tilt plastic base with non-scratching rolled edge. Overall height, 16". Size of reflector screen, 12x12". Supplied complete with 4-foot length of 300-ohm twin line for quick, simple installation. Shpg. wt., 3/2 lbs.  
98 CX 489, List, \$7.75. NET ..... 4.56

Fig. L, Model 9056. New, four-way UHF "Window-Tenna". Easily installed, high-gain. Excellent for apartments, hotels, offices, etc., and anywhere a rooftop installation is impractical or impossible. Employs bowtie dipole and screen reflector for high gain and directivity on all channels. Features 4-way position for top performance in any location; can be adjusted to point up, down, to right or to left. Two-screw mounting bracket for quick, simple installation on any wooden window sash. Sturdy, weather-resistant construction throughout. Supplied with mounting hardware and complete instructions. Less 300-ohm twin line. Shpg. wt., 3/2 lbs.  
98 CX 490, List, \$7.25. NET ..... 4.26

# Amphenol UHF-VHF & FM Antennas



**FIG. A—INLINE VHF ANTENNA**

**Model 114-005.** Covers all 12 VHF channels. Unusually broad frequency response. Unidirectional pattern and excellent impedance match on high and low-bands reduces stray reflections and "ghosts." Unique design permits large folded dipole (for 54-88 mc band) to operate as reflector for the smaller dipole (174-216 mc band). Includes one 5'x3/4" mast, guy ring, mounting bracket, all necessary hardware, stand-off insulators, 75 feet of 300-ohm twin line, and assembling and orientating instructions. Less guy wires and lightning arrester. Shpg. wt., 7 lbs.  
**97 CX 438. List. \$19.50. NET. 11.47**

**Model 114-009.** Same antenna as above but less 300-ohm line. Shpg. wt., 6 lbs.  
**97 CX 439. List. \$17.00. NET. 10.00**

**Model 114-040.** Similar to 114-005 but less mast, twin line or stand-off insulators. Universal mounting bracket included. Shpg. wt., 5 lbs.  
**97 CX 492. List. \$13.50. NET. 7.94**

**Model 114-301. Stacking Kit.** For stacking above antennas. Includes additional bay, all hardware, 2-5'x1 1/4" masts and instructions. Shpg. wt., 5 lbs.  
**97 CX 424. List. \$20.50. NET. 12.05**

**FIG. B—INLINE STACKED ARRAY**

**Model 114-322.** Properly phased for all 12 VHF channels. Each bay consists of 2 folded dipoles and low-band reflector element. Low-band folded dipole of each bay acts as reflector for high-band dipole. Matching section has correct impedance for 300-ohm twin line. Easily installed. With all elements, hardware and instructions. 100 feet of 300-ohm twin line and 2-5' masts. Shpg. wt., 20 lbs.  
**97 CX 261. List. \$38.50. NET. 22.64**

**Model 114-324.** Same as 114-322, but less masts. Shpg. wt., 13 1/2 lbs.  
**98 CX 422. List. \$32.50. NET. 19.11**

**Model 114-302.** Same as 114-322, but less 300-ohm twin line. Shpg. wt., 15 lbs.  
**97 CX 422. List. \$35.00. NET. 20.58**

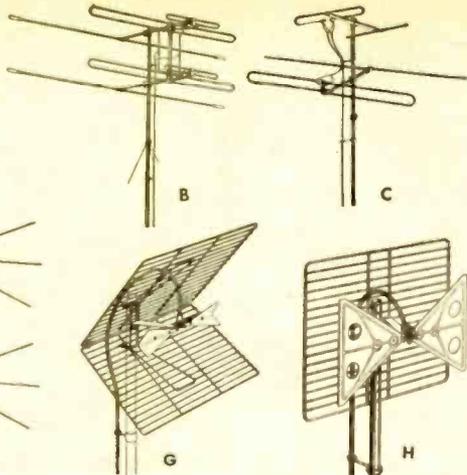
**Model 114-314.** Same as 114-322, but less twin line and masts. Shpg. wt., 12 lbs.  
**97 CX 454. List. \$29.00. NET. 17.05**

**Model 114-291. Steel Extension Mast.** For above antenna. 5'x1 1/4" diameter. Shpg. wt., 3 lbs.  
**97 CX 421. List. \$3.00. NET. 1.76**

**FIG. C—"PIGGY-BACK" VHF ANTENNA**

**Model 114-026.** Separate high-band and low-band antennas permit independent orientation for best signal reception. One folded dipole and reflector is tuned to 54-88 mc band and one folded dipole and reflector tuned to 174-216 mc band. Each antenna consists of a folded dipole and reflector. Steel mast, 5'x3/4" O.D. With antenna elements, clamps, guy ring, isolating transmission harness, mounting support, stand-off insulators and 75 feet of 300 ohm twin line. Includes assembly and orientation instructions. Shpg. wt., 10 lbs.  
**97 CX 360. List. \$19.50. NET. 11.47**

**Model 114-029.** Same as 114-026 above but less 300-ohm twin line. Shpg. wt., 9 lbs.  
**97 CX 361. List. \$17.00. NET. 10.00**



**FIG. D—FM DIPOLE ANTENNA**

**Model 114-008.** Excellent FM dipole and reflector for optimum reception of 88-108 mc band. Light weight durable tubular aluminum construction. Easily installed unit consists of dipole, reflector, 5'x3/4" O.D. steel mast, 75 feet of 300-ohm twin line, low-loss insulators, universal mounting bracket, all necessary hardware, assembly and installation instructions. Less guy wires. Shpg. wt., 7 lbs.  
**97 CX 433. List. \$16.25. NET. 9.55**

**FIG. E—FM DOUBLE DIPOLE**

**Model 114-010.** Highly desirable all-direction FM dipole for reception of FM broadcasts. Provides crystal clear reception over the entire FM broadcast band without rotating antenna. Furnished with quarter-wave phasing stub for maximum signal gain. Consists of two folded dipoles matched to give a circular radiation pattern. Ruggedly constructed of light weight durable tubular aluminum. Hinged mounting plate supplied permits mounting on flat or sloping roofs. With 75 feet of 300-ohm twin line, all hardware, 5'x3/4" O.D. steel mast, assembly and installation instructions. Less guy wires. Shpg. wt., 7 lbs.  
**97 CX 434. List. \$16.25. NET. 9.55**

**Model 114-300. Extension Mast.** Sturdily constructed of steel, 5' length, 1/4" O.D. May be stacked by means of one tapered end and one flared end. Shpg. wt., 2 1/2 lbs.  
**97 CX 423. List. \$3.00. NET. 1.76**

**FIG. F—CONICAL VHF ANTENNAS**

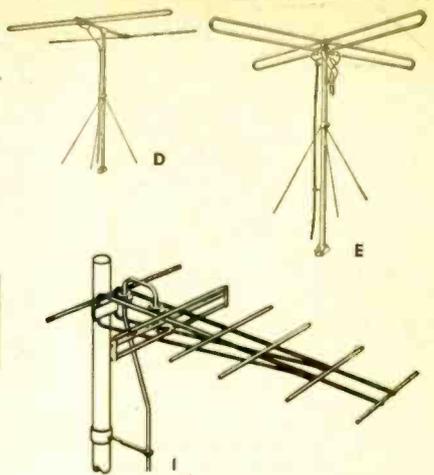
**Model 114-077.** Two-bay VHF antenna of superior design and construction for long distance TV signal reception. Covers all 12 present VHF TV channels. Average signal gain, 11 db. Extremely fine directivity. An excellent choice for use in fringe areas. 2 two-bay antennas may be stacked for ultimate TV reception by using model 114-092 stacking harness listed below. Supplied pre-assembled—ready for installation. Complete with stacking harness. Less mast and 300-ohm line. Shpg. wt., 12 lbs.  
**98 CX 423. List. \$25.95. NET. 15.26**

**Model 114-092. Two-Bay Stacking Harness.** For stacking two model 114-077 conical antennas. Provides best possible fringe area reception over entire VHF TV band. With installation instructions. Shpg. wt., 1 lb.  
**98 CX 427. List. \$4.85. NET. 2.85**

**Model 114-076.** Single-bay conical antenna of exceptional gain. Broadband coverage of all 12 VHF channels. Lightweight all-aluminum construction. Antenna is entirely pre-assembled ready for installation. Supplied complete with installation kit: Lightning arrester; mast; stand-off insulators, 300-ohm twin line; twin line connectors. With instructions. Shpg. wt., 10 lbs.  
**98 CX 425. List. \$19.50. NET. 11.47**

**Model 114-068.** Same antenna as model 114-076 above but does not have installation kit. Seamless aluminum tubing construction. Complete with instructions. Shpg. wt., 6 lbs.  
**98 CX 424. List. \$12.50. NET. 7.35**

**Model 114-078. Two-Bay Stacking Harness.** For stacking Model 114-068 or 114-076 single-bay conical antennas (listed above). With installation instructions. Shpg. wt. 8 oz.  
**98 CX 426. List. \$2.75. NET. 1.62**



**FIG. G—UHF CORNER REFLECTOR**

**Model 114-058.** Designed for high gain over channels 14 to 83. Excellent horizontal and vertical directivity characteristics reduce "ghosts" and interference. Ascending signal gain of 8 to 13 db across the entire UHF range. Impedance matches 300-ohm twin line. Electro-galvanized steel reflectors designed for maximum efficiency. Takes mast up to 1 1/2" O.D. Complete with full instructions and two mounting U bolts. Less mast and 300-ohm twin line. Shpg. wt., 8 lbs.  
**97 CX 263. List. \$12.50. NET. 7.35**

**Model 114-067. Stacking Harness.** For vertically stacking two Model 114-058 corner reflectors. Gain increases from 12.9 db at 470 mc to 17.3 db at 890 mc. Shpg. wt., 1/4 lb.  
**98 CX 409. List. \$1.95. NET. 1.15**

**FIG. H—BO-TY UHF ANTENNA**

**Model 114-062.** Redesigned and improved high-gain UHF antenna. New, larger aluminum elements and dielectric material produce sharp pictures and excellent sound in primary and fringe areas. Signal gain average 8.3 db across entire UHF spectrum. Pre-assembled. Takes up to 1 1/2" masts. Each Bo-Ty supplied with one stacking rod; 2 antennas contain all parts for two-bay array. Less mast and 300-ohm twin line. Shpg. wt., 4 lbs.  
**97 CX 262. List. \$5.75. NET. 3.38**

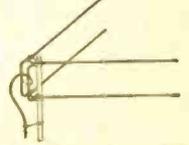
**FIG. I—UHF YAGI ANTENNA**

**Model 114-054.** These highly efficient Yagi antennas provide excellent UHF reception in fringe and weak-signal areas. Employ 6 elements for extremely high gain and directivity; 10 db gain over standard, tuned folded dipole antenna. Designed to provide a very close impedance match to 300-ohm UHF twin line. Rugged, lightweight construction to withstand severe weather conditions. Supplied pre-assembled, ready for quick, easy installation. For use with any mast from 1/4 to 1 1/2" O.D. With installation instructions; less mast and 300-ohm UHF twin line. Available for all UHF channels from 14 to 83. Average shpg. wt., 4 lbs. When ordering, give stock number below and specify the channel for which antenna is to be used.  
**98 CX 412. List. \$5.00. NET EACH. 2.94**

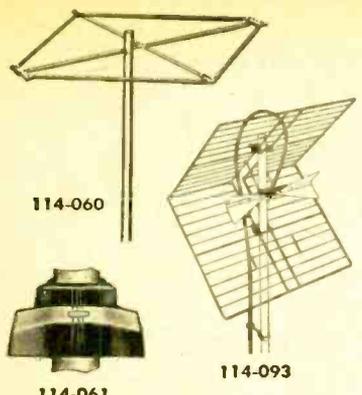
**Model 114-066. Stacking Harness.** For above. When ordering specify channel for which it is to be used. Shpg. wt., 1/2 lb.  
**98 CX 413. List. \$1.00. NET. 59c**

**ADJUSTABLE STACKED V ANTENNA**

**Model 114-059.** Designed to receive all UHF-VHF channels from 2 to 83. Angle between elements can be adjusted to 3 positions to permit reception of UHF, VHF or a combination of both. Good directivity. Elements and spacers are aluminum for maximum weather protection and long trouble-free service. Completely pre-assembled for quick installation on any 3/4" to 1 1/2" O.D. mast. Supplied with 2 U-bolts. With installation instructions. Less mast and lead-in. For tubular 300-ohm twin line. Shpg. wt., 2 1/2 lbs.  
**98 CX 411. List. \$9.75. NET. 5.73**



# UHF-VHF Antennas & Accessories



## AMPHENOL TV ANTENNAS

**MODEL 114-060 UHF RHOMBIC**  
High gain, broadbanded, UHF TV antenna. Superior mechanical design and construction for long life. Offers excellent coverage of all UHF channels from 14 to 83. Provides very narrow horizontal directivity. Ideal for areas troubled by reflections. Ascending gain characteristic for good reception of high frequencies. Signal gain over a tuned folded dipole ranges from 6.2 db at 470 mc to 13.8 db at 890 mc. Elements made of non-corrosive, seamless aluminum tubing. Terminating resistor to match antenna to lead-in line; mounted under insulator as added protection against adverse weather conditions. Factory-assembled into three parts which can be quickly installed on any mast 3/4" to 1 1/4" O.D. Supplied with instructions. Less mast and 300-ohm lead-in line. Shpg. wt., 5 lbs.  
98 CX 410, List, \$13.50. NET.....7.94

**MODEL 114-093 UHF CORNER REFLECTOR**  
New, UHF corner reflector type, high-gain antenna. Gain of 8 to 12 1/2 db across the UHF channels. Completely pre-assembled for easy installation. One-piece construction; antenna swings open when screens are extended. Full length elements; resonated for maximum signal pickup. Steel reflectors are electro-galvanized to withstand severe weather conditions. For masts up to 1 1/2" O.D. Can be stacked for added gain. Use 114-067 harness (below). Less 300-ohm line. Wt., 3 3/4 lbs.  
98 CX 445, List, \$9.85. NET.....5.79

**Model 114-067 Stacking Harness.** For above.  
98 C 409, List, \$1.95. NET.....1.15

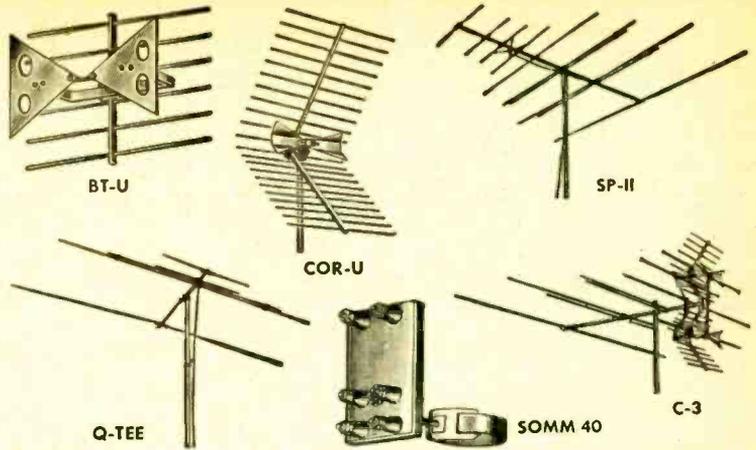
**MODEL 114-061 "ISONET"**  
VHF-UHF antenna matching network. Eliminates antenna switching and separate lead-in lines. Permits using a single 300-ohm line to separate VHF and UHF antennas. Installs easily on antenna mast. Consists of an efficient isolation filter; no interaction between antennas. Housed in weather resistant plastic case. With instructions. Wt., 1 1/2 lbs.  
51 C 273, List, \$3.95. NET.....2.32

**Model 114-074 "Trisones"** As above, but couples 3 antennas (low VHF, high VHF and UHF) to one 300-ohm lead-in. Wt., 1 1/2 lbs.  
51 C 277, List, \$4.95. NET.....2.91



**ICA 6481 VHF "BI-CON"**  
All-aluminum, 2-bay array for fringe area reception. High gain and good impedance match over a wide frequency range. Antenna consists of a broad band central beam array combined with a stacked high-band dipole array with reflectors. Has very good front-to-back ratio. Provides high forward gain and directivity on channels 2-13—especially on the most critical. Minimizes "ghosts". Supplied complete. Less mast and transmission line (75, 150 or 300-ohms). Requires 10 ft. mast. Shpg. wt., 15 lbs.  
97 CX 482, NET.....19.99

**STACKING KIT, Type 6550.** Complete set of parts for stacking two Type 6481 "Bi-Con" antennas to make one 4-bay antenna. With instructions and hardware. Shpg. wt., 1 1/2 lbs.  
97 CX 484, NET.....5.30



## VEE-DX TV ANTENNAS AND ACCESSORIES

**MODEL BT-U UHF ANTENNA**  
Here is an outstanding, easy-to-install "Bow Tie" TV antenna for UHF reception. It provides an average gain of 6 1/2 db over a tuned, folded dipole throughout the entire UHF band. Installs easily with familiar U-bolt connection. Orientation is simple; just loosen U-bolt and move antenna up or down or around mast to position giving optimum results. Rugged aluminum boom supports reflector elements. Weather-resistant, all aluminum elements to withstand high winds. Stacking provides an extra 50% gain. Each "Bow Tie" is supplied with a stacking harness. Less mast and 300-ohm twin line. Shpg. wt., 3 lbs.  
98 CX 294, List, \$3.35. NET.....1.97

**MODEL COR-U CORNER REFLECTOR**  
A high quality, low cost UHF antenna offering fine performance and quality of construction. Gives broadband, extremely high, uniform gain across the entire UHF spectrum, channels 14-83. Has excellent directivity with high front-to-back signal ratio. Considerably higher gain than single "Bow Tie", and equals or betters the gain of 2-bay "Bow Tie" array. Lightweight, yet very sturdily constructed. Small diameter, solid aluminum elements are very rigid and resist corrosion and icing. Aluminum boom assembly is practically indestructible. Each element has separate clamp with locking screw. Shipped completely pre-assembled and folded to speed installation. Simply open it up, insert two screws, tighten wing nuts and it's ready to be installed. Fastens to mast with U-bolt and special clamp. Easily oriented to position on mast which affords best reception. An excellent antenna for use in areas where reflections and noise present a receiving problem. Less mast and 300-ohm twin line. Shpg. wt., 3 lbs.  
98 CX 296, List, \$8.25. NET.....4.85

**MODEL SP-II VHF ANTENNA**  
New, high gain all-channel VHF antenna. Combines the desirable features of yagi type antennas with complete VHF channel coverage in a single antenna. Offers high forward gain and sharp directivity. Extremely high front-to-back signal ratio aids in eliminating interference from unwanted stations. Eight-element high-low yagi design; four elements cut for optimum reception of VHF channels 7 to 13, and four elements cut for coverage of low-band channels 2 to 6. High efficiency "T" matching of driven elements. High and low sections are maintained in proper phase by low-loss isolation circuit. Lightweight, all-aluminum construction for long service. One-piece drawn aluminum boom. Pre-assembled for quick, easy installation. Special clamp and U-bolt mounting secure antenna assembly to mast. This single, combination high-low yagi type, antenna eliminates the need for separate yagis in many locations. Also eliminates need for individual transmission lines and switches. Excellent directivity minimizes "ghost" pickup and co-channel interference. Less mast and 300-ohm twin line. Shpg. wt., 7 lbs.  
97 CX 168, List, \$24.65. NET.....14.49

**Model SP-II Two-Bay Array.** Consists of two SP-II single-bay arrays (described above) and stacking harness for proper spacing and phasing. Two-bay array gives 40% average increase in gain over single-bay array. Less mast and 300-ohm twin line. Shpg. wt., 16 lbs.  
97 CX 169, List, \$49.95. NET.....29.37

**MODEL C-3 VHF-UHF SUPER-CHIEF ANTENNA**  
Newest and latest design combination VHF-UHF TV antenna of the popular Vee-DX line. Employs "dynam-phase" element arrangement for increased efficiency. This new phasing technique permits extremely high gain over the entire VHF-UHF band. Excellent directivity for pin-point station orientation and very high front-to-back ratio for reducing co-channel station interference. This new phasing technique also allows use of a single 300-ohm lead-in line for reception of either VHF or UHF signals. No dual lead-in lines or antenna matching networks are required. Produces sharp pictures and excellent sound in primary and fringe areas. Supplied completely pre-assembled for quick, easy installation. All-aluminum construction featuring "squeeze lok" tubing on all elements—doubly reinforced at stress points with swaged aluminum sleeve and braced to boom with "trilad" lock hardware for rugged dependability. Less mast and 300-ohm line. Shpg. wt., 10 1/2 lbs.  
98 CX 421, List, \$29.95. NET.....17.61

**MODEL C-2 VHF-UHF CHIEF ANTENNA**  
New, combination VHF-UHF TV antenna for high, uniform gain over all channels from 7 to 83 and satisfactory performance on channels 2 to 6 in primary areas. Same rugged construction as Super-Chief (above). Pre-assembled for quick installation. Uses single 300-ohm lead-in for both VHF and UHF. Less mast and 300-ohm line. Shpg. wt., 6 1/2 lbs.  
98 CX 420, List, \$19.95. NET.....11.73

**Q-TEE VHF ANTENNA**  
**Model Q-Teo Single.** One-bay array for high-gain reception in primary areas. Consists of a half-wave dipole and reflector for the low-frequencies, and a full-wave dipole with a half-wave director for the high-frequencies. Perfect 300-ohm match on channels 2 through 13. Improved directivity and higher front-to-back ratio minimizes adjacent channel interference and noise pickup. Rugged construction. Uses dur-aluminum alloy elements. Less mast and 300-ohm twin line. Wt., 2 1/2 lbs.  
98 CX 286, List, \$9.25. NET.....6.35

**Model QT Double.** Two-stack array for near fringe areas. Gives up to 40% increase in gain. Less mast and twin line. Wt., 4 lbs.  
98 CX 287, List, \$19.55. NET.....12.97

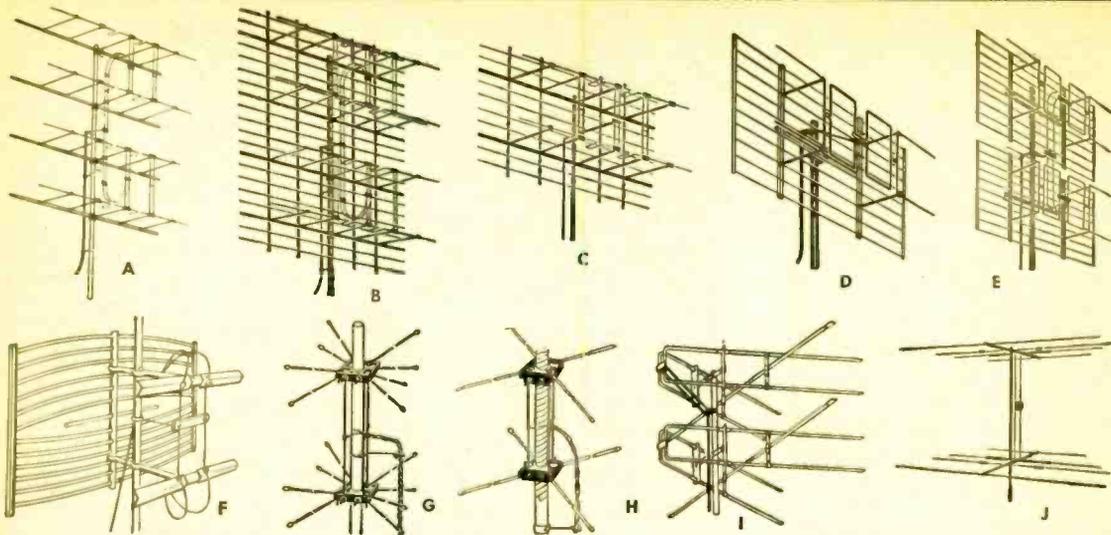
**Model QTH Harness.** For use with Q-Teo, Single when additional gain is needed. Use 2 single units and harness to make 2-bay arrays for higher gain in fringe areas. Shpg. wt., 1/2 lb.  
98 C 430, List, \$1.25. NET.....1.06

**Model QTHQA Stacking Harness.** For use with QT Double for making 4-stack array for fringe areas. Will give up to 100% increase in gain over single bay. Shpg. wt., 1/2 lb.  
98 C 288, List, \$2.85. NET.....1.68

**MODEL SOMM ANTENNA COUPLERS**  
**Type SOMM-40 VHF-UHF.** Permits using single 300-ohm line with separate VHF and UHF antennas. Multi-section isolation filters using printed circuits. Has polystyrene case 3/4"x2 1/4"x1/4". Shpg. wt., 1 lb.  
51 C 295, List, \$3.50. NET.....1.27

**Type SOMM-25—FOR VHF.** As above, but permits use of a low and high antenna on the VHF band. 3/4"x2 1/4"x1/4". Wt., 1 lb.  
97 C 284, List, \$3.50. NET.....1.27

# UHF-VHF Television Antennas



## FINCO UHF-VHF ANTENNAS

**Fig. A. Model 400-A.** An outstanding double co-lateral UHF-VHF antenna. Features 32 driven elements providing remarkably high gain and directivity and superior signal-to-noise ratio. Superb fringe area performance on all UHF and VHF television channels. Thoroughly dependable for use wherever exceptional distances must be covered. Provides excellent reception on VHF at distances of 135 miles and more under average receiving conditions. Lightweight construction simplifies installation on high towers and masts—weighs only 8 pounds. Rugged and corrosion-proof. Requires 10' mast. Less mast and 300-ohm twin line. Shpg. wt., 14 lbs.

97 CX 104. List, \$55.00. NET..... 32.34

**Model 12, UHF Conversion Kit.** Converts old Model 400 to new Model 400-A. Wt., ¾ lb.

98 CX 134. List, \$3.15. NET..... 1.85

**Model 14S, "Fro-Bac" Screen Reflector Kit.** Use with Model 400 or 400-A antennas. Produces 80 sq. ft. of reflector surface. Wt., 5 lbs.

98 CX 389. List, \$15.00. NET..... 8.82

**Fig. B. Model 400-SA.** Same as Model 400-A but with "Fro-Bac" full screen reflector. Special screen results in maximum signal gain plus extremely high front-to-back ratio. Eliminates rear interference signals and "ghosting" in fringe areas. Requires 10' mast. Less mast and 300-ohm twin line. Shpg. wt., 16½ lbs.

98 CX 388. List, \$67.50. NET..... 39.69

**Fig. C. Model 200-SA.** Same design as Finco 400-SA with "Fro-Bac" reflector screen, but has 16 driven elements. This 2-bay unit provides maximum signal gain and extremely high front-to-back ratio in close-in and semi-fringe areas. Features 40 sq. ft. of reflector surface. Less mast and 300-ohm twin line. Wt., 10 lbs.

98 CX 488. List, \$33.25. NET..... 19.55

**Model 200-A.** As above, but without "Fro-Bac" screen reflector. Shpg. wt., 7 lbs.

98 CX 487. List, \$27.00. NET..... 15.88

**Fig. D. 2-Bay UHF Antennas.** Co-lateral type with screen reflector. High gain for low-signal fringe areas. High front-to-back ratio. Max. gain on channel ranges specified; high gain on other channels. Less mast, twin line. Shpg. wt., 3½ lbs.

No.	Model	Channels	List	NET
98 CX 474	502-A	14 thru 35	\$13.50	7.94
98 CX 475	502-B	29 thru 52	12.75	7.35
98 CX 476	502-C	47 thru 83	11.50	6.91

**Fig. E. 4-Bay Antennas.** As above, but stacked for ultra-high gain. Shpg. wt., 7½ lbs.

98 CX 477 504-A 14 thru 35 28.50 16.76

98 CX 478 504-B 29 thru 52 26.50 15.58

98 CX 479 504-C 47 thru 83 25.00 14.70

**Stacking Kits.** For stacking 2 of Model 502. Shpg. wt., 5 oz.

No.	Type	Used with	List	NET
98 CX 385	13-A	502-A	\$2.25	1.32
98 CX 386	13-B	502-B	2.25	1.32
98 CX 387	13-C	502-C	2.25	1.32

## Fig. F—DAVIS UHF-VHF ANTENNA

**Model SV-ZR-1 "Zip-Rig."** An excellent UHF-VHF antenna. Provides outstanding fringe area VHF reception; excellent UHF reception in primary signal areas. Delivers 12 db or more average gain on high channels. Features electronic dipole separators. Extremely directive pattern minimizes "ghosting". With 2 sets of matching harness—enables user to peak antenna on weakest channel and still maintain excellent all-channel coverage. With instructions. Less mast and 300-ohm line. Shpg. wt., 12 lbs.

92 CX 210. List, \$39.95. NET..... 23.49

**Model SK-1 Stacking Kit.** For horizontal or vertical stacking of SV-ZR-1. 1½ lbs.

51 C 054. List, \$3.25. NET..... 1.91

## ALL-CHANNEL UHF-VHF ANTENNAS

**Fig. G. The Riviera.** Newest version of these extreme powerful UHF-VHF antennas. Receives perfect pictures up to 200 miles from VHF stations. For clear signal reception in outer and deep-fringe areas. Features 9-position, ceramic switch at set for electronically "rotating" antenna without moving it. Switch selects the proper element combination for best reception from channel desired. Excellent signal-to-noise ratio. Construction utilizes 616 elements—each element of ½" aluminum tubing (with dowel inserts), 60" long, 4 solid aluminum stacking bars, 45" long. Low loss, pre-assembled switch-to-set coupler. Insulators are triple-strength to support the unusually heavy aluminum elements. With 2 7/8" stand-off insulators and instructions. Less mast and 4-conductor cable. (See below.) Shpg. wt., 10 lbs.

98 CX 495. List, \$49.50. NET..... 29.70

**Model Ultra 150.** As above, but broadband UHF-VHF antenna. Covers all channels, 2 to 83, and any future station changes. Very sharp picture and sound reception—on VHF, to 100 miles; on UHF, 50 miles. Features two 8-element antennas on common mast. Less mast and 4/C cable. (See below.) Wt., 6 lbs.

98 CX 496. List, \$43.50. NET..... 26.10

**Fig. H. New Super 60.** Newest, re-designed version of previous Model 60. Features extremely high gain. Design changes include increase in size of elements from ½" aluminum tubing to ¾" (with dowel inserts); length of elements increased from 45" to 60". Provides very sharp picture and sound reception—receives UHF for distances to 60 miles; VHF, up to 100 miles. With 9-position selector switch for electronic rotation of antenna without physical movement. Highly directive response in each of the nine switch positions. Stacking bars made of solid aluminum rod for extra strength. Complete with all parts, selector switch, coupler and stand-off insulators. Less mast and 4-conductor cable. (See below.) Shpg. wt., 6 lbs.

98 CX 497. List, \$36.75. NET..... 22.05

**Four-Conductor Cable.** For use with All-Channel antennas. Low-loss polyimide line with matched impedance of 300 ohms. 100-ft. minimum. Wt., 100 ft. 2 lbs.

47 TX 589. 100' or more. Per 100'..... 8.90

## BRACH UHF-VHF ANTENNAS

**Fig. I. Model 556 Stacked Delta V-Beam.** Two-bay array featuring unique Delta matching design. Provides excellent reception in fringe areas and weak signal locations. Highly directional characteristic reduces reflective effects which cause "ghosts." Eliminates need for mixers, couplers, networks, etc., to combine UHF and VHF signals on a common transmission line. Assures maximum transfer of signal energy with little or no attenuation. Very good front-to-back ratio. Pre-assembled construction—elements simply swing out for rapid assembly. Triangular stacking harness simplifies installation. Special lightweight design minimizes climatic hazards such as icing, high winds, etc. All elements made of corrosion-resistant aluminum. Takes mast to 1¼" O.D. Less mast and 300-ohm twin line. Shpg. wt., 5¼ lbs.

98 CX 429. List, \$22.62. NET..... 13.30

**Model 555 Delta V-Beam.** As above but employs single-bay array. Ideal for high gain UHF-VHF reception in medium and primary signal areas. An excellent antenna at a moderate price. Less mast and 300-ohm twin line. Shpg. wt., 3 lbs.

98 CX 428. List, \$10.56. NET..... 6.21

## NEW TRICRAFT ANTENNAS

**Fig. J. Model P-238 Two-Bay VHF Antenna.** New, two-stacked, fringe area, Yagi-type antenna. Features 14 active elements—6 for channels 2-6; 12 for channels 7-13. With separate matching network for both stacks. Fourteen-element array is not a multiple of the single unit, but individually designed antennas with their own matching networks for closer matches to 300 ohms than can be obtained by merely stacking two arrays with stacking bars. Flat response—gains are nearly uniform across whole high VHF band as well as low VHF band. Produces sharp, clear pictures and sound. Includes high band impedance matcher with stacking bars for higher channel 7-13 gain. Durable, molded polystyrene insulators resist weathering. Hard aluminum tubular construction insures lasting efficiency. Takes mast to 1¼" O.D. Complete with mounting instructions, impedance matcher and stacking bars. Less mast and 300-ohm twin line. Shpg. wt., 13 lbs.

98 CX 444. List, \$41.75. NET..... 24.55

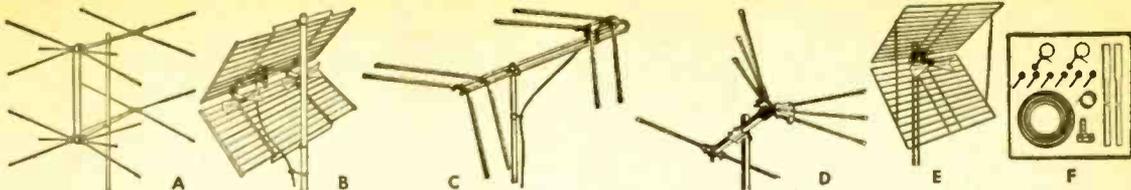
**Model P-38 Single-Bay VHF Antenna.** (Not illustrated.) Same design features as above, but single-bay array. Excellent for use in moderate and primary signal areas. Maintains highly directive response pattern; reduces stray reflections that produce "ghosts." High front-to-back ratio. Low loss insulators of molded polystyrene. Less mast, 300-ohm line. Shpg. wt., 7 lbs.

98 CX 446. List, \$19.95. NET..... 11.73

**Model P-438, Four-Bay VHF Antenna.** (Not illustrated.) Employs 28 elements in 4-bay array for unusually high gain in ultra-fringe areas. Includes high impedance matcher with stacking bars for greater channel 7-13 gain. Excellent impedance match assures extremely efficient signal transfer. Highly directive. With stacking harness, bars and impedance matcher. Less mast, 300-ohm line. Shpg. wt., 26½ lbs.

98 CX 447. List, \$85.95. NET..... 50.54

# TV Antennas and Accessories



## A SELECTION OF QUALITY UHF-VHF TV ANTENNAS

**Fig. A—WALSCO 2-BAY ANTENNA**  
 Type 4062-A. Extremely popular "Imperial" 2-bay VHF conical antenna for very high gain on all TV channels from 2 to 13. Re-designed insulator prevents soot, moisture, salt, corrosion, etc., from affecting gain. Excellent directivity. Simple assembly. Front end elements pre-assembled to holding plates which fasten to insulator with one wing nut. Fastest, most positive assembly possible. Less 300-ohm line and mast. Shpg. wt., 8 lbs.  
 98 CX 404. List. \$19.85. NET..... 11.67  
 Type 4060-A. Same antenna as above, but single bay. Shpg. wt., 4 lbs.  
 98 CX 405. List. \$9.25. NET..... 5.44  
 Type 4005-7. Two-bay stacking kit for Type 4060-A antenna. Shpg. wt., 1/4 lb.  
 98 CX 406. List. \$1.50. NET..... 88c  
 Type 4005-5A. Four-bay stacking kit for Type 4060-A antenna. Shpg. wt., 1/4 lb.  
 98 CX 407. List. \$5.60. NET..... 3.29

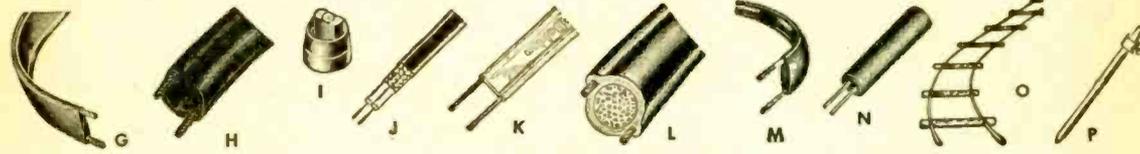
**Fig. B—WALSCO UHF REFLECTOR**  
 Type 4452-A. Corner reflector antenna for the UHF bands. Features extra high gain. New molded insulator with outstanding and lasting dielectric properties—practically unbreakable. All steel hardware plated for long, corrosion free service. Constructed of high conductivity aluminum alloy. Sharp directivity. Simple installation. Less 300-ohm twin line and mast. Shpg. wt., 5 lbs.  
 98 CX 408. List. \$19.95. NET..... 11.73  
 Type 4450. Same as above antenna, but single bay. Shpg. wt., 3 lbs.  
 98 CX 400. List. \$9.95. NET..... 5.85

**Fig. C—WARD UHF-VHF ANTENNA**  
 Type TV-132. "Trombone". Features high gain and directivity. Cuts ghosts and reduces interference. Can be stacked. Elements adjustable to 30°, 60° or 90° angles. Dowel-reinforced seamless aluminum elements. Completely pre-assembled. Less 300-ohm twin line and mast. Shpg. wt., 5 lbs.  
 98 CX 380. List. \$15.95. NET..... 9.38  
 Type TV-133. Stacking Harness. For stacking 2 Trombone antennas. Shpg. wt., 1 lb.  
 98 CX 381. List. \$3.50. NET..... 2.06

**Fig. D—KNIGHT VHF ANTENNAS**  
 Knight VHF Conical. Single-bay, conical type antenna for high gain reception in medium and primary signal areas. Easy to assemble—no special tools required. Elements simply swing out. An excellent antenna at moderate price. All elements made of corrosion-resistant aluminum. For masts to 1 1/4" O.D. Lbs mast and 300-ohm twin line. Shpg. wt., 3 lbs.  
 97 CX 398. NET..... 3.43  
 Knight 2-Bay Stacked Conical. An excellent antenna for fringe area operation. Provides added gain necessary for fringe area reception. With hardware and complete instructions. Shpg. wt., 8 lbs.  
 97 CX 399. NET..... 7.10  
 Stacking Kit. For 2 Knight single-bay conicals. Complete. Wt., 8 oz.  
 97 CX 389. NET..... 56c  
 Stacking Kit. For 2 Knight 2-bay conicals. Complete. Wt., 1 1/4 lbs.  
 97 CX 387. NET..... 1.52

**Fig. E—KNIGHT UHF ANTENNA**  
 All-channel, single-array antenna designed for high gain across entire UHF spectrum. Provides good reception in low signal areas; excellent for use in "ghost" areas. Highly directional characteristic. Pre-assembled—easily installed. Built to stand up under high winds and inclement weather. Less mast and 300-ohm twin line. Wt., 5 lbs.  
 98 CX 492. NET..... 5.33  
 Stacking Harness. For above. Wt., 1 lb.  
 51 C 053. NET..... 1.39

**Fig. F—ANTENNA INSTALLATION KITS**  
 2-Mast Kit. Designed for use with any TV antenna. Mast sections are electro-galvanized to resist corrosion. Low-loss UHF-VHF lead-in line, lightning arrester, No. 8 aluminum ground wire and insulators. Contains: 2—3 1/2" mast sections; 60' tubular twin line; 1—lightning arrester; 2—mast standoffs; 6—screw-type standoffs; and 4' ground wire. Wt., 4 lbs.  
 98 CX 372. List. \$10.60. NET..... 6.23  
 4-Mast Kit. Same as kit above, but with 4—3 1/2" mast sections instead of 2. Shpg. wt., 6 1/2 lbs.  
 98 CX 373. List. \$13.05. NET..... 7.67  
 Guided Base Mount Accessory Kit. Designed for masts up to 1 1/4" in diameter. Contains: 1—universal foot mount; 1—1 1/4" guy ring; 2—guy wire hooks; and 50' 4/30 guy wire. All materials of the finest quality, ruggedly constructed for maximum service. Shpg. wt., 2 1/2 lbs.  
 98 C 374. List. \$1.00. NET..... 59c



## TWIN LINE ACCESSORIES

**AMPHENOL TWIN LINE**  
 Fig. G. Type 14-056. Flat 300-ohm twin line. Low-loss dielectric. Jacket of 60 mil web thickness, extruded of virgin brown polyethylene. Finest quality stranded copper conductors. 100 ft. min. Wt., 100 ft., 2 lbs.  
 49 T 441. 100' or more. Per 100'..... 2.15  
 Type 14-100. Top quality flat twin lead. 100 mil web extruded finest polyethylene. 100 ft. minimum. Wt., 100 ft., 2 1/2 lbs.  
 49 T 413. 100' or more. Per 100'..... 2.65  
 Type 14-185. Heavy-duty 300-ohm flat twin line. 185 mil web thickness. 7/26 bare stranded copper conductors. 100 ft. min. Shpg. wt., 100 ft., 5 lbs.  
 49 T 414. 100' or more. Per 100'..... 6.23  
 Type 14-298. Four-Conductor Rotator Cable. Heavily ribbed for ease of handling in the field. Extruded of finest brown virgin polyethylene. Stranded copper conductors. 100 ft. minimum. Wt., 100 ft., 3 lbs.  
 49 T 415. 100' or more. Per 100'..... 2.82  
 Fig. H. Type 14-271. Tubular 300-ohm twin line. Low-loss air core spacing. 100 ft. min. Shpg. wt., 100 ft., 3 lbs.  
 49 T 444. 100' or more. Per 100'..... 3.76  
 Type 14-076. 300-ohm air core tubular twin line. Heavy-duty 7/26 bare copper conductors. 100 ft. minimum. Wt., 100 ft., 3 1/2 lbs.  
 49 T 416. 100' or more. Per 100'..... 6.23  
 Fig. I. Type 66-213. Tubular Lead End Seal. Polyethylene plug. Prevents entry of rain and snow in tubular twin line. Wt., 2 oz.  
 71 C 563. 100 for 2.70. EACH..... 3C  
 Fig. J. Federal Shielded 300-Ohm Line. Weatherproof. For high-interference areas. Wt., 100', 8 1/2 lbs.  
 49 W 499. Per Foot  
 100 ft. or more. Per 100 ft..... 10.80

**BELDEN TWIN LINE**  
 Fig. K. Type 8226. 300-ohm twin line. Finest quality 7/28 stranded copper conductors. 70 mil web thickness. Lengths under 100' available only in coil lengths listed below. Shpg. wt., 100 ft., 2 lbs.  
 49 T 385. 50-foot coil. Wt., 1 lb..... 1.18  
 49 T 386. 75-foot coil. Wt., 1 1/2 lbs..... 1.76  
 49 T 389. 100' or more. Per 100'..... 2.16  
 Type 8230. Weldohm transmission line. 300-ohm. 70 mil web thickness. 7/28 stranded copper-coated steel wire. 50ft. minimum. Shpg. wt., 100 ft., 2 lbs.  
 49 T 387. 50-foot coil. Wt., 1 lb..... 1.18  
 49 T 388. 75-foot coil. Wt., 1 1/2 lbs..... 1.76  
 49 T 394. 100' or more. Per 100'..... 2.16  
 Type 8224. 150-Ohm Twin Line. Brown polyethylene. 70 mil web. 100' minimum. Wt., 100 ft., 1 1/2 lbs.  
 49 T 391. 100' or more. Per 100'..... 1.99  
 Type 8222. 72-Ohm Twin Line. 70 mil web thickness. 100' minimum. Shpg. wt., 100 ft., 1 1/2 lbs.  
 49 T 392. 100' or more. Per 100'..... 1.47  
 Fig. L. Type 8275. 300-ohm UHF-VHF cellulene. Has cellular plastic core, inert gas-filled. Brown polyethylene-plastic jacket. 100 ft. minimum. Shpg. wt., 100 feet. 2 1/2 lbs.  
 49 T 395. 100' or more. Per 100'..... 4.41  
 Fig. M. Type 8235. 300-ohm line. UHF-VHF low-loss twin line. Copper-coated steel wire. 185 mil web. Specify length (100 ft., minimum). Shpg. wt., 100 ft., 5 lbs.  
 49 T 393. 100' or more. Per 100'..... 4.41  
 Fig. N. Anaconda ATV-270-Foam 270-Ohm UHF-VHF Line. Foamed polyethylene dielectric. Copper conductors. 100 ft. minimum. Wt., 100 ft., 2 1/2 lbs.  
 49 T 427. 100' or more. Per 100'..... 7.74

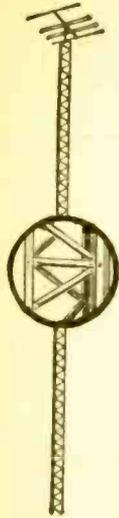
**KNIGHT TWIN LINE**  
 Fig. O. UHF-VHF Open Line. 300-ohm. Loss 0.5 db per 100 ft. at 200 mc. Finest copper conductors. In coil lengths listed below only. Shpg. wt., 100 ft., 2 1/2 lbs.  
 47 T 578. 100-ft. coil. NET..... 2.84  
 47 TX 579. 250-ft. coil. NET..... 5.93  
 UHF-VHF Tubular Twin Line. 300-ohm cable. 100' min. Wt., 100 ft., 2 lbs.  
 49 T 429. 100' or more. Per 100'..... 3.72  
 Knight UHF-VHF Twin Line. Heavy-duty 300-ohm twin line. 100 ft. minimum. Shpg. wt., 100' 5 1/2 lbs.  
 49 T 493. 100' or more. Per 100'..... 5.85  
 Fig. P. Copperweld Ground Rod. Ground lead connector has 1/4" bolt. Size, 4"x3/4". Shpg. wt., 2 1/2 lbs.  
 97 CX 418. NET EACH..... 75c  
 Copperweld Ground Rod. Size, 6"x1/2". Shpg. wt., 4 lbs.  
 97 CX 199. NET EACH..... 1.99  
 Aluminum Ground Wire. No. 8 solid aluminum wire. For all grounding applications.

No.	Coil Length	Wt., Lbs.	NET
49 T 653	50-ft.	1 1/2	.70
49 T 650	100-ft.	2 1/4	1.30
49 TX 652	1000-ft.	26	12.25

Galvanized Guy Wire. 6-strand, No. 20 galvanized steel wire. 100-ft. rolls only. 2 lbs.  
 58 T 312. 100 feet for..... 58c  
 1000-ft. Roll. Shpg. wt., 20 lbs.  
 71 TX 513. NET..... 5.26  
 Lightweight Guy Wire. 7x26. 4-strand monel; 3-strand copper. 100-ft. rolls only. Shpg. wt., 2 lbs.  
 49 T 070. 100 feet for..... 19c

# TV Towers and Accessories

## ALPRODCO ALUMINUM TOWERS AND STEEL SLIP-UP MASTS



Lightweight, easy-to-install, 6-ft. triangular tower sections. Ruggedly made of high-grade spring-tempered aircraft aluminum alloys and aluminum aircraft rivets. 6-foot sections can be quickly and easily bolted together permitting installation of TV antennas as high as 120 feet—greatly increasing range of reception. Ideal for extreme fringe area installations, or where unusual height is required. Light and strong—weighs slightly over 1 lb./ft. 120-foot maximum height tower will carry vertical static load of 300 lbs. and over 200 lbs. top loading in 100 mph wind. Tower has extremely low wind resistance of only 6 lbs./ft. in 100 mph wind. Utilizes built-in ladder bars for easy climbing. Tower requires guying every 24' with  $\frac{3}{16}$ " thick galvanized 7-strand steel wire or equivalent in strength.

### 6-Foot Tower Section

**MODEL T-6W.** Standard triangular 6-foot antenna tower section. Units are shipped two-thirds factory pre-assembled. Tower measures  $11\frac{1}{4}$ " wide on each side. Supplied with special impact rivets for final assembly—can be completed in five minutes. Built-in ladder steps. Wt., 8 lbs.  
97 CX 072. NET ..... 7.74

### Standard Mast Kit

**MODEL MK-1W.** Consists of three top angle trim pieces and two sets of adjustable mast pole brackets (clamps) for attaching standard antenna masts to tower top. Wt.,  $2\frac{1}{2}$  lbs.  
97 C 073. NET ..... 1.55

### Guying Bracket

**MODEL GB-1.** Bracket for attaching guy wire to tower—three required per guying station. One guying station is required for every 24 feet of tower. Shpg. wt., 2 oz.  
97 C 381. NET EACH ..... 9c

### Rotor Adapter Kit

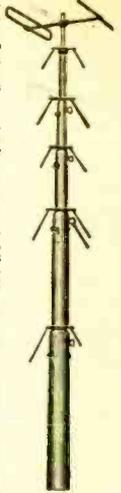
**MODEL RK-1W.** Includes all parts necessary for installing a rotor in tower listed at left. Permits rotor to be placed down inside the tower, thereby placing wind thrust load on tower instead of rotor. Consists of: 10 foot,  $1\frac{1}{4}$ " steel mast pole; 24" long mast pole bearing; rotor adapter mounting plate (pre-drilled plate to mount most popular in line or off-set type rotators); and Model MK-1W mast kit. Shpg. wt., 10 lbs.  
97 CX 067. NET ..... 7.10

### Base Plates

**MODEL B-1W.** Hinged aluminum. For vertical, horizontal or sloping surfaces. Shpg. wt., 3 lbs.  
97 C 074. NET ..... 1.70

**MODEL B-1WS.** Self-supporting base of heavy galvanized steel. With flat feet that pivot at any angle. With hardware. Shpg. wt., 18 lbs.  
97 CX 161. NET ..... 5.50

New, telescoping slip-up masts of heavy-gauge, tempered steel tubing. Can be easily and rapidly installed by one man. Have finger-tight locking feature—special thumb bolts engage curved tube nuts. Automatic joint locking clips. Notched bottoms on mast sections for alignment.



**Type M-30.** 30-foot slip-up mast. Three sections of tubing:  $1\frac{1}{2}$ ",  $1\frac{1}{2}$ " and  $1\frac{1}{4}$ " O.D. Includes three rotating guy rings. Permits accurate antenna orientation. Less base. Wt., 22 lbs.  
97 CX 162. NET ..... 9.90

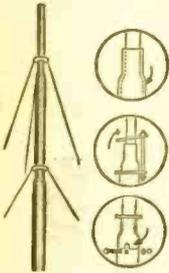
**Type M-40.** 40-foot slip-up mast. Four sections of steel tubing: 2",  $1\frac{1}{2}$ ",  $1\frac{1}{2}$ " and  $1\frac{1}{4}$ ". Mast includes all accessories, (guy rings, hardware) except base. Shpg. wt., 32 lbs.  
97 CX 163. NET ..... 13.82

**Type M-50.** 50-foot slip-up mast. Five sections;  $2\frac{1}{4}$ ", 2",  $1\frac{1}{2}$ ",  $1\frac{1}{2}$ " and  $1\frac{1}{4}$ ". Mast includes all accessories except base. Shpg. wt., 42 lbs.  
97 CX 164. NET ..... 19.13

### Type MB-1 Base

Standard base for any of the above masts. All angle, full swivel for flat, sloping or peak roofs. Wt.,  $1\frac{1}{2}$  lbs.  
97 C 165. NET ..... 50c

## WARD TELESCOPIC MASTS



**Model ME-30.** 30-foot telescopic mast. Completely foolproof telescopic TV antenna mast—zips up in minutes to a full 30 feet. Made of corrosion-proof, 16-gauge electric welded steel. Reverse swedging prevents pulling apart—sections are locked in to stay. Self-Lok guy rings automatically lock and hold section in place while mast is being erected. Inner section pulls up to clear bolt holes. Bolt is inserted, section dropped and rotated until groove rests on bolt, then bolt is simply tightened. Guy

rings clip for easy pulling as mast is being raised. positively hold against collapse. Floating guy rings permit orienting antenna after installation. Guy rings suitable for 3 or 4 guy wires. Consists of three sections:  $1\frac{1}{4}$ ",  $1\frac{1}{2}$ " and  $1\frac{1}{2}$ " in diameter. With guy rings and hardware. Less base. Shpg. wt., 32 lbs.  
98 CX 378. List, \$19.75. NET ..... 11.61

**Model ME-50.** 50 foot telescopic mast. Has 5 sections:  $1\frac{1}{4}$ ",  $1\frac{1}{2}$ ",  $1\frac{1}{2}$ ", 2" and  $2\frac{1}{4}$ " in diameter. Less base. Shpg. wt., 56 lbs.  
98 CX 379. List, \$36.95. NET ..... 21.66

**Model C-34 Base.** All-angle heavy-duty base. Holds  $1\frac{1}{4}$ " to  $2\frac{1}{2}$ " O.D. masts. Shpg. wt.,  $2\frac{1}{2}$  lbs.  
98 C 377. List, \$2.85. NET ..... 1.68

## KUEHNE 50 FT. ANTENNA TOWER SELF-SUPPORTING—NO GUYING

Incorporates "controlled sway" lateral load bearing joints. Does not require guying. Tower sections are joined by a bolt through welded-on-load-bearing sleeves parallel to tubing at joints. These relieve joints of entire load and eliminate bolt holes in tubing. Also eliminate "jammed-in" joints providing space for proper moisture drainage. No trapping of moisture—eliminates corrosion! Vertical sections are of tough, 16-gauge tubular steel. Number of cross-tie braces in each section is determined by its position in the tower, assuring proper number of braces per section. One-piece cross-ties are welded to, and encircle outside of, vertical tubing. Horizontal stress is eliminated. Anti-rust undercoating; baked-on aluminum enamel finish. Cadmium-plated hardware. Complete with 5 sections and special base for mounting in concrete. Takes masts up to  $1\frac{1}{2}$ " O.D. Shpg. wt., 178 lbs. Shipped from factory in Mattoon, Illinois.

97 CX 299.50 ft. Tower. NET, f.o.b. Mattoon, Ill. 77.75

Write for literature on other Kuehne Towers—from 20 to 100 ft. Contains engineering data, charts, full description of all models. Give us your requirements—we'll recommend the correct tower.

## JFD TM ZOOM-UP MASTS

"Sky-Lok" telescoping tubing of 16-gauge, galvanized steel. Interlocked sections won't pull out from each other—bell-shaped bottoms and curled tops lock snugly in place. Oversize thumb bolts engage heavy nuts for locking sections at any height. Masts are complete with all guy rings, clamps and hardware. Less base. In 10-foot sections.

**Type TM-12.** 20-ft. mast. 2 sec.;  $1\frac{1}{2}$ " and  $1\frac{1}{4}$ " O.D. Wt., 18 lbs.  
92 CX 100. NET ..... 6.53

**Type TM-123.** 30-ft. mast. 3 sec.;  $1\frac{3}{4}$ ",  $1\frac{1}{2}$ ",  $1\frac{1}{4}$ " O.D. Shpg. wt., 28 lbs.  
92 CX 101. NET ..... 10.94

**Type TM-1234.** 40-ft. mast. 4 sections; 2",  $1\frac{3}{4}$ ",  $1\frac{1}{2}$ " and  $1\frac{1}{4}$ " O.D. Shpg. wt., 41 lbs.  
92 CX 102. NET ..... 15.67

**Type TM-12345.** 50-ft. mast. Five sections;  $2\frac{1}{4}$ ", 2",  $1\frac{1}{2}$ ",  $1\frac{1}{2}$ " and  $1\frac{1}{4}$ " O.D. Fool-proof installation. Shpg. wt., 57 lbs.  
92 CX 103. NET ..... 20.43

### TYPE ZUB $\frac{1}{4}$ BASE MOUNT

Swivel base mount for use with masts listed above. Works on any surface—flat roof, slant roof, peak roof or wall. Made of heavy-gauge, weather-proofed steel. With hardware. Shpg. wt.,  $2\frac{1}{2}$  lbs.  
97 C 120. NET ..... 1.79



BMA-138



PRA-148

## PENN TV MAST MOUNTS

TV mast mounts for flat and sloping roofs and side walls. Permit one-man installation of tall, fringe area antennas. Lock in any position. Made of "Pennalloy," an aluminum alloy.

**BMA-138.** Universal roof mount. Will swing into any position. Locked securely by special bearing. Adjustable top supports masts from 1" to 2" O.D. Shpg. wt., 2 lbs.  
97 C 176. NET ..... 2.50

**BMA-136.** Similar to above but for use with masts from 1" to  $1\frac{1}{4}$ " O.D. Shpg. wt., 1 lb.  
97 C 175. NET ..... 2.09

**PRA-148.** Universal peak roof mount with patented bearings for adjustment and locking at any angle. "Pennalloy" body. Adjustable top for masts from 1" to 2" O.D. 2 lbs.  
97 C 177. NET ..... 3.09



## PENN FLOATING GUY RINGS

Illustration at left above shows assembled guy wire ring. Center figure shows collar. Ring for guy wires is shown at the right.

**GRA-140.** Cast aluminum (Pennalloy) guy ring and collar. Allows mast to be rotated after guy wires have been fastened. Universal slotting for 3-guy or 4-guy assembly. For masts up to  $1\frac{1}{2}$ " O.D. Shpg. wt., 8 oz.  
97 C 178. NET ..... 1.06

### FOR $1\frac{1}{4}$ " MASTS

**GRA-141.** Same as GRA-140 but for masts up to  $1\frac{3}{4}$ " O.D. Shpg. wt., 9 oz.  
97 C 179. NET ..... 1.12

### FOR 2" MASTS

**GRA-142.** Same as GRA-140, but for masts up to 2" O.D. Shpg. wt., 10 oz.  
97 C 180. NET ..... 1.47

## TV MAST INSULATOR CLAMPS

Consist of metal strap and nut block, threaded to accept 10-32 machine screw type television lead-in standoff insulators. (See page 216.) Eliminate need for drilling hole in mast. Speeds antenna installation; handy toolbox item for servicemen. Shpg. wt., per pkg., 5 oz.  
71 C 822. Pkg. of 3 clamps for 1" masts.  
71 C 823. Pkg. of 3 clamps for  $1\frac{1}{4}$ " masts.



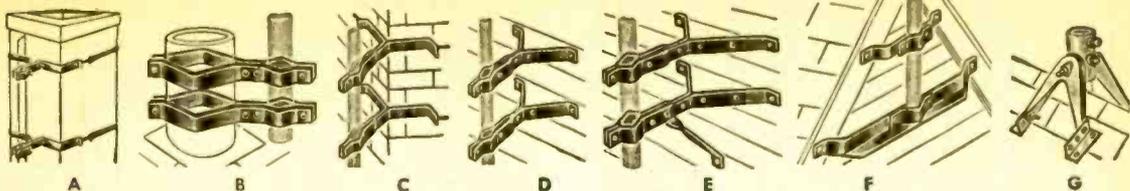
PER PKG. OF 3 ..... 14c  
10 or more pkgs., EACH ..... 12c

## ANTENNA MAST SECTIONS

(Not illustrated.) May be used as regular masts or to extend existing masts. Made of heavy-wall steel with electro-galvanized finish. Treated to prevent corrosion. \*Seamless type; others are seamed. All have outside diameter of  $1\frac{1}{4}$ ". Require no external couplings.

No.	Ht.	Wall	Wt.	NET
97 CX 137	5 ft.	.035"	3 lbs.	.90
98 CX 366*	5 ft.	.035"	3 lbs.	1.20
97 CX 138	10 ft.	.035"	5 lbs.	1.80
98 CX 367*	10 ft.	.051"	7 lbs.	2.64

# TV Mounts and Accessories



## TELCO (GC) TV ANTENNA MOUNTS

**Fig. A—LOW-COST CHIMNEY MOUNT**

**Type 8005.** A chimney bracket for low-cost installation that can be installed in a few minutes. Only one piece to handle with a minimum of loose parts. Made of extra heavy gauge steel. Zinc-plated and dichromate-dipped for long life. Will support masts up to 1 3/4" diameter. 12' straps and hardware included. Shpg. wt., 4 lbs. 97 C 065. List, \$2.25. NET **1.32**

**Fig. B—VENT PIPE MOUNT**

**Type 8803.** A new, easy-to-use vent pipe mount that will clamp on any pipe or vent from 4" to 6" in diameter. Simple and easy to use. Only two pieces to clamp on with bolts. Made of extra heavy gauge steel. Doubly protected against rust. Zinc plating and dichromate dipping provide protection from vent fumes. Shpg. wt., 3 lbs. 98 C 480. List, \$2.25. NET **1.32**

**Fig. C—SNAP-IN CHIMNEY MOUNT**

**Type 8930—WITH STAINLESS STEEL STRAPPING.** An excellent chimney mount for quick, easy installation. Simply snap the mast into the brackets and tighten the bolts. Easy to handle—no loose pieces. Fits masts up to 1 1/4" diameter. 12' stainless steel strapping for long rust-free life. Brackets of extra heavy steel, zinc-plated and dichromate dipped for maximum protection. Shpg. wt., 4 lbs. 97 C 027. List, \$3.95. NET **2.32**

**Fig. C—ECONOMY SNAP-IN CHIMNEY MOUNT**

**Type 8610.** Same brackets as 97 C 027 listed above, but with 1/4" galvanized steel strapping. Fits masts up to 1 1/4" diameter. Brackets doubly protected against rust. Holds mast 4" from corner of chimney. Complete with 12' straps and all hardware. Shpg. wt., 4 lbs. 97 C 028. List, \$2.85. NET **1.68**

**Fig. D—SNAP-IN WALL MOUNT**

**Type 8306.** For firmly mounting antenna mast to any flat vertical surface. Simply snap the mast in and tighten. Holds mast 6" from wall. Of heavy-gauge steel, well protected against rust. Shpg. wt., 2 1/2 lbs. 98 C 481. List, \$2.00. NET **1.18**

**Type 8308.** Similar to 98 C 481 listed above, but longer bracket holds mast 8" from wall. Shpg. wt., 4 lbs. 98 C 482. List, \$3.25. NET **1.91**

**Fig. E—DELUXE SNAP-IN WALL MOUNT**

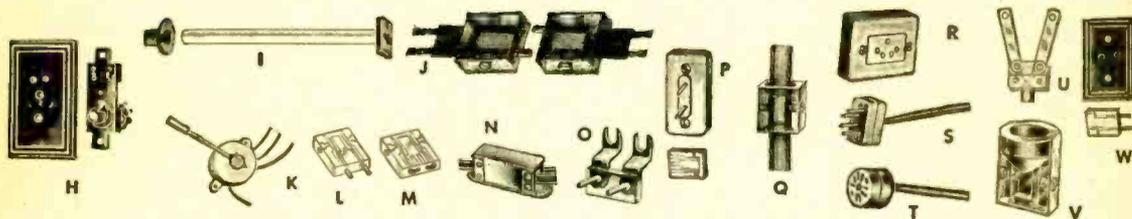
Extra sturdy brackets with 16" spacing to match studs of homes. Heavy gauge steel prevents side-sway. Vertical support eliminates sag. 98 C 483, 8312. 12" clearance. Wt., 5 lbs. List, \$3.50. NET **2.06**  
98 CX 484, 8318. 18" clearance. Wt., 7 lbs. List, \$4.50. NET **2.65**  
98 CX 485, 8324. 24" clearance. Wt., 10 lbs. List, \$6.10. NET **3.59**

**Fig. F—EAVE MOUNT**

**Type 8933.** Designed for mounting mast at peaks of buildings. Lower bracket made of angle iron for maximum strength. Zinc-plated and dichromate-dipped. Lower bracket 48" long. With all hardware. Shpg. wt., 7 lbs. 98 CX 486. List, \$5.95. NET **3.50**

**Fig. G—"NO-GUY" ROOF MOUNT**

**Type 9060.** A combination steel and cast iron base for mounting over the ridge of a roof or on a flat roof. Legs adjustable to roof angle. Will support average antenna on mast up to 10 feet without requiring guy-wires. Takes masts up to 1 1/4" diameter. Shpg. wt., 5 lbs. 98 C 493. List, \$4.40. NET **2.59**



## POPULAR MOSLEY TWIN LINE ACCESSORIES

**Fig. H. TYPE F-10. 3-WAY SWITCH AND LEAD-IN SOCKET.** Switch, single twin-line socket in one flush mounted unit. With face-plate. Wt., 12 oz. 40 C 336. With Brown plate. 40 C 335. With Ivory plate. NET EACH **2.20**

**Fig. K. TYPE F-20. 3-WAY ANTENNA SWITCH.** Selects any of 3 antennas in a yard array. Constant impedance all positions. Mounts on back of TV set. Shpg. wt., 12 oz. 40 C 338. Brown Plastic Case. 40 C 423. Ivory Plastic Case. NET EACH **2.20**

**Fig. I. TYPE 625. WALL-THRU INSULATOR.** For twin line or RG-59/U coax. Fits any wall up to 1 1/2" thick. Includes polystyrene tube 1 1/4" long, inside plate and outside cap. Shpg. wt., 1 lb. 40 C 430. NET **1.15**

**Type 625PK.** As type 625 above, but with universal TV lead-in socket for inside wall plate. Shpg. wt., 1 lb. 40 C 441. NET **1.76**

**Fig. J. TYPE 321. POLARIZED CONNECTOR.** Efficient twin-line connector consisting of 2 polystyrene plugs, each with one male and one female. Assures proper polarization. 1 1/2" long. Shpg. wt., 2 oz. 72 H 711. PER PAIR **35c**

**Fig. P. TYPE 344-PK. UNIVERSAL TRANSMISSION LINE RECEPTACLE.** Provides constant impedance connection for 300 ohm twin-line. Can be used as tap or terminal receptacle. Sturdy plastic case can be mounted on baseboard or wall. With solderless twin-line socket and screws. Wt., 2 oz. 40 H 411. Brown Plastic Case. 40 H 410. Ivory Plastic Case. NET EACH **62c**

**TYPE 343-PK. UNIVERSAL TRANSMISSION LINE SOCKET.** Similar construction to Fig. P. With solderless twin line plug and mounting screws. Shpg. wt., 2 oz. 40 H 413. Brown Plastic Case. 40 H 412. Ivory Plastic Case. NET EACH **62c**

**Fig. Q. TYPE 27-S. FLAT-LINE POLYSTYRENE SPLICER.** Strip wires, insert, and tighten set screws for positive electrical contact. Size, 1/2"x1/4"x1/2". Wt., 2 oz. 72 H 706. NET EACH **11c**  
10 for **99c** 100 for **8.91**

**Fig. R. SOLDERLESS BASE SOCKETS.** Precision molded polarized multi-wire connectors for 4, 5 and 8 wire flat or round cable. Use with plugs listed at right. With screws. Wt., 2 oz.

Stock No.	Type	Description	NET
40 C 437	354	For 4-wire cable	.80
40 C 438	355	For 5-wire cable	.88
40 C 439	358	For 8-wire cable	1.03

**Fig. L. TYPE 301. PLUG.** Ideal for connecting TV antenna lead-in to set or booster. Made of polystyrene. 1/2" pin spacing (fits socket below). Shpg. wt., 2 oz. 72 H 705. NET **18c**

**Fig. M. TYPE 311. SOCKET.** For use with twin-line plug above. Standard 1/2" spacing. Polystyrene insulation. Shpg. wt., 2 oz. 72 H 709. NET **18c**

**Fig. N. TYPE 902. DUAL-MATCH TV COUPLER.** Operates 2 TV sets from 1 antenna. For 300-ohm line. Wt., 3 oz. 40 C 424. NET **2.32**

**Fig. O. TYPE 304. MOSLEY ANTENNA CONNECTOR.** For connection of lead-in to TV antenna terminal. Fits 72 H 709 socket. Shpg. wt., 2 oz. 40 H 339. NET **18c**

**Fig. S. LINE PLUGS.** Solderless; for 4, 5 and 8 wire; flat or round cable. 2 oz.

No.	Type	Description	NET
40 C 431	374	For 4-wire cable	44c
40 C 432	375	For 5-wire cable	48c
40 C 433	378	For 8-wire cable	59c

**Fig. T. LINE SOCKETS.** Polystyrene; for connecting or terminating multi-wire cable. 2 oz.

40 C 434	364	For 4-wire cable	56c
40 C 435	365	For 5-wire cable	61c
40 C 436	368	For 8-wire cable	73c

**Fig. U. Type 263S. New "Y-TV"** for connecting all types of transmission lines to TV antenna elements. Solderless, screw connections. Shpg. wt., 6 oz. 40 C 443. 4" max. width. NET **47c**  
40 C 444. 263L. 6" max. width. NET **47c**

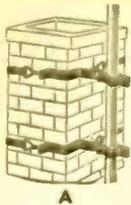
**Fig. V. Type 29-S. TUBULAR TO FLAT-LINE SPLICER.** For joining tubular or oval 300 ohm lines to standard flat lines. Clear polystyrene. Shpg. wt., 3 oz. 40 C 442. NET **12c**

**Fig. W. Type F-1PK. FLUSH SOCKET AND WALL PLATE.** For 300-ohm twin-line. Fits standard outlet box. Plastic plate. With plug and mtg. bracket. Wt., 6 oz. 40 H 419. Brown. 40 H 418. Ivory. NET EACH **1.15**

**TYPE F-11PK. DUAL FLUSH SOCKET AND WALL PLATE.** Similar to above, but has two sockets. Shpg. wt., 6 oz. 40 H 417. Brown. 40 H 416. Ivory. NET EACH **1.57**

**TYPE F-14PK. COMBINATION FLUSH SOCKET AND WALL PLATE.** Similar to above, but for 300-ohm twin-line and rotator cable. Plastic plate. Wt., 6 oz. 40 H 415. Brown. 40 H 414. Ivory. NET EACH **2.07**

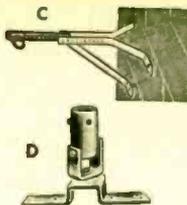
# JFD Antenna Accessories



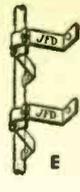
**Fig. A. BR2. Economy Chimney Mount.** Ruggedly built of corrosion-resistant steel. Holds masts up to 1 1/2" O.D. With two 12' galvanized steel straps and all hardware. Shpg. wt., 3 lbs. 71 C 600. NET PER SET..... 1.91



**Fig. B. BR11. Adjustable Wall Brackets.** Anchors 3/4" to 1 1/2" (O.D.) masts 10-15" off walls. Heavy steel. Set of 2 brackets, with U-bolts and hdwe. Shpg. wt., 7 lbs. 97 CX 122. NET PER SET..... 4.41



**Fig. C. BR11X. Extension Bars.** Extend BR11, above, for 24" clearance. Shpg. wt., 1 1/2 lbs. 97 C 123. NET PER PAIR..... 1.76



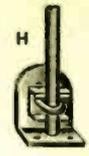
**Fig. D. ZUB2 1/4. Base mount.** Takes masts up to 2 1/4" (O.D.). Mounts anywhere. Heavy-gauge steel. With hardware. Shpg. wt., 3 lbs. 97 C 120. NET EACH..... 1.79



**Fig. E. BR46. Economy Wall Mount.** Holds 1-1 1/2" (O.D.) masts securely. Heavy steel. For vertical surface mtg. Includes 2 brackets, all hdwe. Sizes below are distances brackets hold mast from wall. Av. shpg. wt., per set, 1 1/2 lbs. 97 C 124. 3". NET PER SET..... 1.00  
97 C 125. 4". NET PER SET..... 1.06  
97 C 126. 7". NET PER SET..... 1.21



**Fig. F. BR9. Vent Pipe Mount.** For mounting 1/2" to 1 1/2" (O.D.) masts on most type vents. Made of rust-resistant steel. Set of two brackets, with all hardware. Shpg. wt., 3 lbs. 97 C 128. NET PER SET..... 2.12



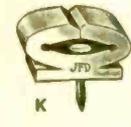
**Fig. G. BR-46-10. Eave mount for peak roof homes.** With all hardware. Wt., 4 lbs. 71 CX 601. NET PER SET..... 2.32



**Fig. H. BR13. All-angle Mount.** For 1/2" to 1 1/4" (O.D.) masts. With mount frame, U-bolt and hdwe. Shpg. wt., per 12, 1 lb. 97 C 129. 12 for 3.78. EACH..... 35¢



**Fig. I. BR36. Lag Bolts.** 1/4" dia. shank. Square head. Av. shpg. wt. per 10, 5 oz. 71 C 604. 1". Pkg. of 10 for..... 53¢  
71 C 605. 1 1/2". Pkg. of 10 for..... 53¢  
71 C 606. 2". Pkg. of 10 for..... 59¢  
71 C 607. 3". Pkg. of 10 for..... 65¢



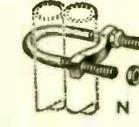
**Fig. J. BR14-1 1/4. New pivot base mount.** Fastens anywhere. Excellent for installations where speed and economy count. Takes masts up to 1 1/4" dia. Shpg. wt., 1/2 lb. 71 C 602. NET..... 38¢



**Fig. K. MB100. Wall Stand-Off Insulator.** For securing twin lead to baseboards, walls, etc. Tack-in type. Shpg. wt., per 10, 10 oz. 71 C 608. Pkg. of 10 for..... 59¢



**Fig. L. BR25. Ring Clamp.** Easily adjustable. Supports guy wire ring, etc. High-quality, corrosion-resistant steel. Fits mast diameters (O.D.) shown below. Shpg. wt., per 5, 3 oz. 71 C 609. 3/4". Pkg. of 5 for..... 34¢  
71 C 610. 1 1/4". Pkg. of 5 for..... 34¢



**Fig. M. BR37. U-Bolt.** Galvanized steel. With nuts and washers in place. Fits up to 1 1/2" (O.D.) masts. Shpg. wt., per 2, 4 oz. 71 C 611. Pkg. of 2 for..... 29¢



**Fig. N. BR40. Mast Clamp.** Serrated retaining yoke. Clamps together 2 masts with max. O.D. of 1 1/2" each. Galvanized steel. Wt., per 2, 4 oz. 71 C 612. Pkg. of 2 for..... 47¢



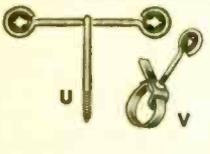
**Fig. O. BR24. Universal Guy Rings.** Rest unanchored on ring clamp. Fit mast O.D. below. Shpg. wt., per 5, 10 oz. 71 C 613. 1". Pkg. of 5 for..... 44¢  
71 C 614. 1 1/2". Pkg. of 5 for..... 44¢  
71 C 615. 1 3/4". Pkg. of 5 for..... 44¢  
71 C 616. 1 1/2". Pkg. of 5 for..... 44¢  
71 C 617. 2". Pkg. of 5 for..... 59¢  
71 C 618. 2 1/2". Pkg. of 5 for..... 59¢



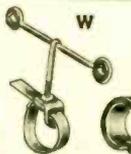
**Fig. P. BR32. Guy wire hook eye.** Anchors guy wires firmly. Galvanized steel. Wt., 10 oz. 71 C 619. Pkg. of 5 for..... 24¢



**Fig. Q. BR33-5. Hook Eye.** Provides an anchoring point for guy wires. Screws into wood. 3" long. Wt., per 5, 8 oz. 71 C 620. Pkg. of 5 for..... 26¢



**Fig. R. BR18TL. Wood Screw Stand-Off Insulators. Universal.** For flat, oval, tubular and coaxial TV lead-ins. Av. wt., per 5, 10 oz. 71 C 622. 3 1/2". Pkg. of 5 for..... 14¢  
71 C 623. 5 1/2". Pkg. of 5 for..... 24¢  
71 C 624. 7 1/2". Pkg. of 5 for..... 26¢  
71 C 625. 12 1/2". Pkg. of 5 for..... 59¢



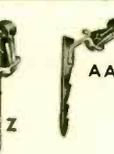
**Fig. S. NT100. Drive-In Stand-Off Insulators.** Universal. For flat, oval, tubular and coaxial TV lead-ins. Shpg. wt., per 5, 5 oz. 71 C 626. 3 1/2". Pkg. of 5 for..... 26¢



**Fig. T. HN100. Hot Nails.** Universal, drive-in type. For flat, oval, tubular or coaxial lead-in. 3 1/2" long. Wt., per 5, 4 oz. 71 C 627. Pkg. of 5 for..... 34¢



**Fig. U. DBR18TL. Double Stand-Off Insulators.** Wood screw type. For flat, oval, tubular and coaxial lines. Wt., per 5, 10 oz. 71 C 628. 3 1/2". Pkg. of 5 for..... 71¢  
71 C 629. 5 1/2". Pkg. of 5 for..... 79¢  
71 C 630. 7 1/2". Pkg. of 5 for..... 84¢  
71 C 631. 12 1/2". Pkg. of 5 for..... 1.34



**Fig. V. Type NUT. Threaded universal stand-offs.** For flat, oval, tubular and coaxial lines. Mount on any mast. Shpg. wt., per 3, 6 oz. 71 C 654. 3 1/2". Pkg. of 3 for..... 33¢  
71 C 655. 5 1/2". Pkg. of 3 for..... 42¢  
71 C 656. 7 1/2". Pkg. of 3 for..... 44¢  
71 C 657. 12 1/2". Pkg. of 3 for..... 81¢



**Fig. W. Type D NUT. T Type. Double Universal Stand-Off Insulators.** As above. For flat, oval, tubular and coaxial lines. Wt. per 3, 8 oz. 71 C 633. 3 1/2". Pkg. of 3 for..... 62¢  
71 C 634. 7 1/2". Pkg. of 3 for..... 71¢  
71 C 635. 12 1/2". Pkg. of 3 for..... 97¢



**Fig. X. SPT. Snap-on Stand-Off Insulators.** For flat, oval, tubular and coaxial lines. 3 1/2" long. Fit masts (O.D.) below. Wt., per 3, 8oz. 71 C 636. 1". Pkg. of 3 for..... 18¢  
71 C 637. 1 1/4". Pkg. of 3 for..... 18¢  
71 C 638. 1 1/2". Pkg. of 3 for..... 18¢

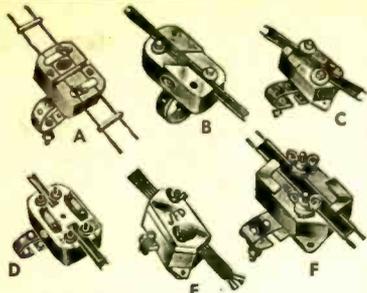


**Fig. Y. Type PAL Single.** Screw-type stand-off insulators. For any type lead-in. Hinged insulator swings out for insertion of lead-in. Snaps shut with finger pressure. Design assures isolation of lead-in from metal holder for minimum loss. Av. wt., per 5, 9 oz. 71 C 639. 213. 3 1/2". Pkg. of 5 for..... 26¢  
71 C 640. 215. 5 1/2". Pkg. of 5 for..... 29¢  
71 C 641. 217. 7 1/2". Pkg. of 5 for..... 34¢  
71 C 642. 2112. 12 1/2". Pkg. of 5 for..... 64¢



**Fig. Z. Type PAL Double.** Screw-type stand-off insulators as above, but with two insulators for two lead-in lines. Keeps lead-ins well separated to eliminate cross-coupling. Holds securely without crimping. Wt., per 5, 11 oz. 71 C 643. Type 2177. 7 1/2". Pkg. of 5..... 88¢

# TV Antenna Accessories



## JFD LIGHTNING ARRESTERS

**Fig. A. AT107.** Lightning Arrester. For protection of all TV sets using open wire transmission lines. Makes positive contact. Stainless steel strap. With 4-ft. ground wire. Size, 2x3x1 1/2". Shpg. wt., 15 oz.  
71 C 529. List, \$3.50. NET.....2.06

**Fig. B. AT102.** Regular Flat Line Lightning Arrester. Underwriters' Laboratories Approved. Complete with stainless steel hanger strap, 4 ft. aluminum ground wire and hardware. Shpg. wt., 15 oz.  
71 C 479. List, \$2.25. NET.....1.32

**Fig. B. AT103.** Lightning Arrester. Like type AT102, described above, but for open-jumbo and tubular twin lead-in line. Shpg. wt., 15 oz.  
71 C 517. List, \$2.25. NET.....1.32

**Fig. C. AT105S.** Universal Arrester. U. L. Approved for outdoor use. Connections are made by saw-toothed screw terminals. For flat and open wire lead. With stainless steel hanger strap. Wt., 13 oz.  
71 C 530. List, \$1.50. NET.....88c

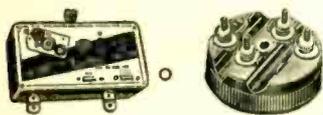
**Fig. C. AT105.** As above, less hanger strap. With ground lug and screws. Wt., 12 oz.  
71 C 518. List, \$1.25. NET.....73c

**Fig. D. AT120.** Lightning arrester. New, fused lightning arrester. For use with ribbon, tubular, and open wire lead-ins. Features patented strain-relief retainers. With ground wire and strap. Easily installed. Wt., 6 oz.  
71 C 536. List \$4.75. NET.....2.79

**Fig. E. AT104.** Lightning Arrester. For antenna rotator installations. Handles 4-wire lead-ins. 8 precision-spaced teeth make positive contact with conductors. Plastic case. With ground lug and hardware. Wt., 15 oz.  
71 C 519. List, \$1.50. NET.....88c

**Fig. F. AT110.** For flat or open type transmission lines. Features exclusive strain-relief lip for protecting both types of lead-in. Mounts on outside wall or window sill. Complete with ground-lug. Shpg. wt., 15 oz.  
71 C 531. List, \$1.50. NET.....88c

**Fig. F. AT110S.** Similar to the type AT110 described above, but supplied with a stainless steel hanger strap. Wt., 15 oz.  
71 C 532. List, \$1.75. NET.....1.03



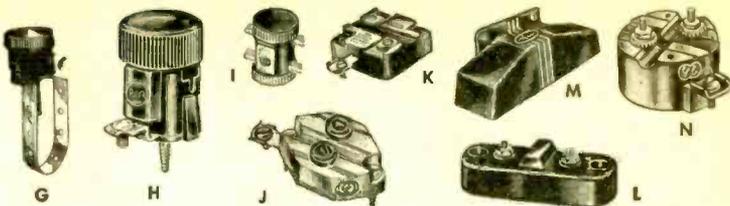
## JFD COUPLERS

**Fig. O. "Tele-Plex"** TV Set Couplers. For operation of 2 to 4 TV receivers from a single antenna. Simply plug 300-ohm antenna lead-in into coupler input and plug in 300-ohm lead from each set. Bakelite case with built-in lightning arrester. \*Less arrester. Size, 6x3x3". With mounting screws and complete instructions. Wt., 1 lb.

No.	Type	Used For	NET
98 C 140	TC2L	2 sets	7.03
71 C 658	SC2*	2 sets	6.44
98 C 141	TC4L	up to 4 sets	7.61
71 C 659	SC4*	up to 4 sets	7.03

**Model TT2. Economy Coupler.** 2-set TV coupler for low-cost jobs. As above, but has screw terminals. Less arrester. Wt., 1 lb.  
98 C 143. List, \$5.95. NET.....3.50

**Fig. P. Model RA-2.** Delivers full signal strength on all VHF or UHF channels to 2 TV sets. Very compact. Complete with mounting screws. Shpg. wt., 3 oz.  
71 C 660. List, \$1.65. NET.....97c



## POPULAR LIGHTNING ARRESTERS AND COUPLERS

### RCA ARRESTERS AND COUPLERS

**Fig. G. Type 235A1.** New, low loss UHF-VHF lightning arrester for installation without splicing, stripping, or soldering. Screw cap type forces antenna line against staple contacts which pierce insulation and make contact with conductors. Underwriters Laboratory Approved. Strap type for mounting on mast or water pipe. Shpg. wt., 8 oz.  
51 C 229. List, \$1.40. NET.....82c

**Fig. H. Type 234A1.** As above, but screw-in type. For mounting on windowsills, etc. Standing wave ratio less than 2:1 at 800 mc. Resistance elements are made of a conductive rubber that is non-corrosive and impervious to moisture. Will accommodate almost all tubular, round, and oval UHF transmission lines without splicing. Shpg. wt., 8 oz.  
51 C 228. List, \$1.53. NET.....90c

**Fig. I. Type 240A1.** Set Coupler. For operating two or more TV sets from one antenna having a 300-ohm transmission line. Utilizes resistance elements only—does not affect impedance characteristics of transmission line. Reduces oscillator interference between sets. Easily installed. Save cost of additional antenna for that second set. Wt., 6 oz.  
51 C 246. List, \$1.95. NET.....1.15

### Fig. L—PORCELAIN ARRESTER

General purpose gap-type arrester. Designed for single-wire lead-in of radios, etc. Made of high quality glazed porcelain. With barrier between terminals for maximum leakage path. Hex nut terminals and countersunk mounting holes. U.L. Approved. Wt., 6 oz.  
51 C 280. NET.....21c

### AMPHENOL ARRESTERS AND COUPLERS

**Fig. J. Type 114-328.** UHF-VHF arrester. New, universal lightning arrester. For flat, tubular, or open line. Knife-edge contacts, cut through insulation to make contact. Low loss, phenolic body. With screws for mounting. U.L. Approved. Wt., 5 oz.  
51 C 247. List, \$1.50. NET.....88c

**Fig. K. Type 155-338.** Combination spark-gap and shunt resistor type. No wire stripping. U.L. Approved. Shpg. wt., 5 oz.  
51 C 245. List, \$1.50. NET.....88c

**Fig. M. Amphenol Telescoper.** Employs lumped circuit constants filter network for minimum loss of signal strength on UHF or VHF. Provides effective isolation between sets. In dove-srey plastic case. Shpg. wt., 1/2 lb.  
Type 114-088. 2 set Telescoper.  
51 C 272. List, \$3.75. NET.....2.20

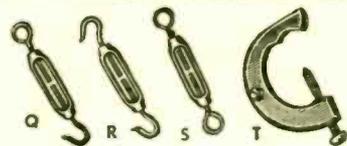
Type 114-089. For 2 sets, with ground lug.  
51 C 290. List, \$4.75. NET.....2.79

Type 114-090. Up to 4 set coupler.  
51 C 274. List, \$5.75. NET.....3.38

Type 114-091. For 4 sets, with ground lug.  
51 C 291. List, \$6.75. NET.....3.97

### Fig. N—TELCO LIGHTNING ARRESTER

**Type 8642.** An all-weather lightning arrester. For use with round, oval, flat, or open lines without stripping insulation. Toothed circular contacts make firm contact. U.L. Approved. Mounts on walls. Wt., 6 oz.  
51 C 242. List, \$1.25. NET.....73c



## TURNBUCKLES AND CLAMPS

**Guy Wire Turnbuckles.** Galvanized turnbuckles for use on guy wires. Malleable iron, clean-cut threads. Av. shpg. wt., 1/2 lb.

Stock No.	Flg.	Length Closed	Length Open	EA.	12 For
44 C 790	Q	5 1/4"	7 3/4"	15¢	1.59
44 C 791	O	6 1/4"	9 1/4"	25¢	2.65
44 C 792	O	7 1/4"	10 1/4"	38¢	3.97
44 C 793	R	5 1/4"	7 3/4"	15¢	1.59
44 C 794	R	6 1/4"	9 1/4"	25¢	2.65
44 C 795	R	7 1/4"	10 1/4"	38¢	3.97
44 C 796	S	5 1/4"	7 3/4"	15¢	1.59
44 C 797	S	6 1/4"	9 1/4"	25¢	2.65
44 C 798	S	7 1/4"	10 1/4"	38¢	3.97

**Fig. T. MUELLER TYPE 58 GROUND CLAMP.** Positive contact, rustproof ground clamp. Maximum opening, 1 1/4". 4 oz.  
51 C 310. EACH.....16c  
10 for.....1.10 100 for.....9.80

## JFD WAVE TRAPS



Eliminate TV interference and images from adjacent channels. For channel FM broadcasting stations and signals from 14 to 28 mc Amateur stations. Have ceramic condensers and powdered iron-core slug-tuned coils to eliminate interfering frequencies. 5" twin line connecting ribbon with tinned lugs. Bracket, 2 1/4 x 1 1/2". With instructions. Shpg. wt., 4 oz.  
77 C 550. BR105. 10-30 mc. 300 ohms.  
77 C 551. BR106. 80-110 mc. 300 ohms.  
NET EACH.....1.62



## AMPHENOL ANTENNA ACCESSORIES

**STAND-OFF INSULATORS.** Wood-screw type, except \*10-32 machine-screw, and #fraction in type. †Not exceeding 1/2" in diameter. ‡Also RG/58/U and RG/59/U. Shpg. wt., 8 oz.

FOR FLAT TWIN LINE‡				
Stock No.	Mfr's Typo	Flg.	Size	Pkg. of 5, Per Pkg.
71 C 850	66-202	U	3 1/2"	14c
71 C 851	66-209	V	3 1/2"	22c
71 C 852	66-204	U	3 1/2"	17c
71 C 853	66-210	U	7 1/2"	24c
71 C 854	166-211	W	3 1/2"	19c

FOR COAXIAL CABLE§				
71 C 855	66-201	V	3 1/2"	14c
71 C 856	66-208	V	7 1/2"	22c
71 C 857	*66-203	V	3 1/2"	19c
71 C 858	166-212	W	3 1/2"	22c
71 C 859	66-909	X	1 1/2"	22c

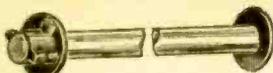
FOR TUBULAR TWIN LINE§				
71 C 860	66-214	V	7 1/2"	22c
71 C 861	66-215	V	7 1/2"	12c
71 C 862	*66-210	V	3 1/2"	24c
71 C 863	*66-217	V	3 1/2"	17c
71 C 864	166-218	W	3 1/2"	19c

**Fig. Y. SILICONE COMPOUND. TYPE 53-307.** Maintains constant impedance on wet, solid dielectric lines. 1-oz. tube. Wt., 4 oz.  
43 N 135. List, \$2.00. NET.....1.18

## UNIVERSAL GUY LOCK

For tightening and locking guy wires on antenna masts. Mounts in any position. Cannot slip. Size, 2x1 1/2 x 1 1/4". Wt., 5 oz.  
71 C 550. NET.....34c

# Television Accessories



## TELCO LEAD-IN TUBES

**Type 8641.** New combination plastic lead-in tube and lightning arrester. Fits walls to 16" in thickness. Has lightning arrester on outside end; wall plug on inside. Simple installation—lead-in wire is fastened under teeth of lightning arrester and contact is made to inside. Requires 3/4" mounting hole. Shpg. wt., 1 lb. 51 C 100. List, \$3.95. NET. . . . . 2.32

**Type 8958.** As above, less arrester and wall plug. Universal type lead-in tube for all types of UHF-VHF lead-in lines. Ideal for terminating open line outside and bringing standard line into house. Wt., 1/2 lb. 71 C 559. List, \$1.95. NET. . . . . 1.15

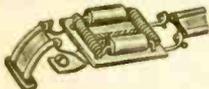


## WALSCO 1551 LEAD-IN TUBE

Accommodates all types of TV lead-in wires, coaxial or twin line. 15" length, fits walls to 1 1/2" thickness. Provision for terminating open line on outside of bushing and connecting twin line. 3/4" mtg. hole. Shpg. wt., 1 lb. 51 C 110. List, \$1.95. NET. . . . . 1.15

**Type 1552-B-R Wall Outlets.** For any type of lead-in or rotor cable. Also fit over and fasten to inside flange of feed-thru bushing 1551 above. For 2/cond. wires. With matching plug. Brown finish. Shpg. wt., 5 oz. 51 C 111. List, \$1.05. NET. . . . . 62c

**Type 1553-BR.** As above, for 5/cond. wires. 51 C 112. List, \$1.50. NET. . . . . 88c



## REGENCY HP-45 HIGH-PASS FILTER

Regency HP-45 high-pass filter for attenuation of signals at frequencies below 55 mc. Provides simple but effective aid in elimination of TVI. Consists of constant "K" type filter with cutoff frequency of 45 mc in a 300 ohm balanced line. Approximately 20 db attenuation at 29 mc; 40 db or more at frequencies of 14 mc and below. Signals above 55 mc are passed through filter without loss. Simple installation; complete with mtg. bracket. 1 1/4 x 7/8". Wt., 2 oz. 77 C 569. List, \$1.65. NET. . . . . 97c



## VIDAIRE "KINE TEST"

Tester for checking electro-magnetic TV picture tubes by substitution method. No need to remove either picture tube or chassis from cabinet. Just remove socket and 2nd anode lead from picture tube and plug "Kine Test" into picture tube socket. Uses 6AR6G electron ray tube to give constant voltage and moving signal, etc. With tube, instructions. 4 1/4 x 1 1/4". Shpg. wt., 6 oz. 84 F 017. NET. . . . . 4.85



## VIDAIRE "ELIM-A-TRACE"

New device for eliminating vertical retrace lines in the picture when brightness control is turned up. Provides clearer picture on weak tubes. Installed in minutes without removing tube or chassis from cabinet. Includes complete instructions for simple, rapid installation. No cutting of leads. Shpg. wt., 1/2 lb. **Model TE-1.** For TV sets with brightness control in cathode circuit of CRT. 51 C 076. List, \$3.25. NET. . . . . 1.91

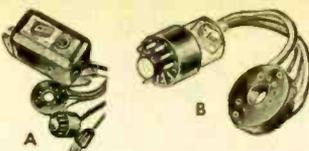
**Model TE-2.** For TV sets with video signals injected in cathode circuit of CRT. 51 C 077. List, \$3.25. NET. . . . . 1.91



## CLAROSTA REGULATORS

**Type TVA.** Protects TV sets from line voltage surges. Reduces surge of 140 v., down to 110 v. Plug-in type. For sets using 200-300 watts. Shpg. wt., 5 oz. 31 E 085. NET. . . . . 1.46

**Type TVB.** For sets having a power consumption of 300 to 375 watts. Diameter, 1 1/8"; length, 3 1/4". Av. shpg. wt., 5 oz. 31 E 086. NET. . . . . 1.76



## PERMA-POWER TUBE BRITENERS

Increase cathode emission, improving brightness level and extending useful life of picture tubes. Transformer types also isolate filament from cathode, permitting continued use of picture tubes with cathode-to-filament shorts. Fully automatic—turn on and off with TV set. For use with any tube 10" or larger, having duo-decal base as 10BP4, 16RP4, 20CP4, etc. Easily installed—no soldering required.

**Fig. A. Model C-101 Transformer Type.** 3 booster positions. Also has 6.3 v. position. For use in sets having either series or parallel-wired filaments. Shpg. wt., 1 1/4 lbs. 80 G 179. List, \$9.75. NET. . . . . 5.73

**Model C-301 Transformer Type.** As above, but has only one (7.8 v.) position, plus normal 6.3 v. position. Shpg. wt., 10 oz. 80 G 184. List, \$4.45. NET. . . . . 2.49

**Fig. B. Model C-201 Autoformer Type.** For use only in sets having parallel-wired filaments. 7.8 v. booster tap. Does not relieve cathode-filament shorts. Shpg. wt., 8 oz. 80 G 181. List, \$3.45. NET. . . . . 1.92

## PERMA-POWER REGULATOR

**Model D101.** TV voltage regulator. Designed to insure maximum performance of any TV set by returning full height and width of picture when decreased by low line voltage. Eliminates intermittent sync and oscillator drift caused by low voltage. Automatic operation—turns on or off with TV set. Selector switch for boosting or lowering voltage. 300-watt rating. Size, 4 1/4 x 4 1/4 x 2 1/4". Wt., 2 1/4 lbs. 80 G 186. List, \$6.75. NET. . . . . 3.97



## STANCOR TV TUBE BOOSTER

**Model P8192.** Self-contained unit adds life to aging picture tubes when dimness is due to low cathode emission. For all electro-magnetic pix tubes with parallel-connected filaments. Easily installed; mounts anywhere in set without soldering. Hi-Lo switch for two levels of tube brilliance. 15" leads between autoformer and connector plug. Simply remove tube connector, attach to booster. Connector plug of booster attaches to picture tube. 3 1/2 x 1 1/4". Shpg. wt., 8 oz. 80 G 182. List, \$4.90. NET. . . . . 2.88



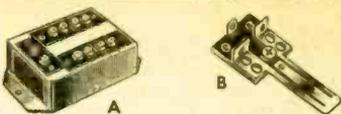
## J. W. MILLER HI-PASS FILTER

**Model 6168.** For use at the television receiver to reduce interference from medical, industrial, commercial and Amateur radio frequency signals below 40 mc. Insures clear pictures with a minimum of streaks or tearing. Passes all TV signals above 40 mc with practically no attenuation. Install at TV set antenna terminals. No tuning required. In aluminum case, 1 1/8 x 1 1/8 x 3 1/4". Shield has convenient L-type bracket for mounting. For 300-ohm twin line. Shpg. wt., 1/2 lb. 70 G 191. NET. . . . . 3.23



## TECH-MASTER KEYED AGC KIT

TV engineering feature in kit form—for easy installation on 630 type chassis. Keyed to horizontal sync pulse for improved picture stability. Reduces airplane "flutter". Complete with 6AU6 tube, mounting bracket and socket, AGC coil, all parts and instructions. For use with RCA Type 211T5 flyback transformer. Shpg. wt., 8 oz. 83 S 086. NET. . . . . 4.45



## BLONDER-TONGUE LINE SPLITTER

**Fig. A. Model LS-4.** Provides low-cost means of dividing a single 300 ohm transmission line into four branches from one input. Enables signal to be distributed to four TV sets. Maintains 300 ohm impedance match. Flat response on all channels. Negligible internal loss. Excellent for multiple installations such as in apartments, etc. Size, 2 1/4 x 1 1/4". Wt., 8 oz. 51 C 287. List, \$7.50. NET. . . . . 4.41

**Model LS-1.** As above, but for 75 ohm lines. 51 C 288. NET. . . . . 4.41

## BLONDER-TONGUE THERMO RELAY

**Fig. B. Model TR-3.** Replacement in boosters and converters which automatically turn on and off with TV set. Bi-metal element is mounted on fiberglass board. Silver contacts adjustable for time delay of .1 to 4 seconds; will handle up to .5 amp @ 117 v. or 1/4 amp @ 220 v. AC. Unit's operation over current range of .1-3 amps. 2 1/4 x 1 1/4". Wt. 2 oz. 51 P 210. List, \$1.85. NET. . . . . 1.10

## PRECISION CLARIFIER

Television picture "Clarifier." Easily adjusted to remove any antenna-fed interference causing picture distortion: FM, diathermy, SW, ignition, Amateur adjacent channel, etc. Does not attenuate signal. Actually tunes out unwanted signal by means of control knobs. Matches any antenna. Brown metal case, 4 x 3 1/4 x 1 1/4". 7 oz. 77 G 566. List, \$7.50. NET. . . . . 4.41



## R. L. DRAKE TVI FILTERS

Feed-through, high-pass type interference filters for use at antenna terminals of TV receiver. Attenuate interference from 0 to 50 mc as much as 60 db. Effectively reduces signal from diathermy, radio stations, industrial equipment, etc. TV-72 for 72-ohm lines. TV-300 for 300-ohm lines. \*For sets with 20 mc IF's. †For 44 mc IF's. Metal case 3 3/8 x 1 1/4". Shpg. wt., 1/2 lb.



No.	Type	Ohms	NET
77 C 567	†TV-300-HP	300	3.50
77 C 555	†TV-300-SOHP	300	2.91
77 C 556	†TV-72-HP	72	3.50

## TV POWER CORDS AND CONNECTORS



**Fig. A. TV Power Cord and Connector.** Identical to original equipment on most TV sets. Size 18 conductor; rubber-covered; 6 feet long. Soft rubber plug. U.L. Approved. Shpg. wt., 8 oz. 49 T 237. NET. . . . . 36c

Same as above, but 9 feet long. 49 T 234. NET. . . . . 44c

**TV Power Cord and Connector.** (Not illustrated.) Identical to original equipment on Zenith model TV sets. Size 18 conductor; rubber-covered cord 6 feet long. Durable, molded-on rubber plug. U.L. Approved. Shpg. wt., 10 oz. 49 T 239. NET. . . . . 38c

**Fig. B. Male Connector.** Flush mounting; used on most TV sets. Wt., 2 oz. 49 N 238. NET. . . . . 14c

## G-C 8744 ANTENNA CLIP

For servicemen. Clips 300-ohm lead-in to the antenna terminals of TV sets. Plastic clip, screw terminals. 3 3/4" long. Wt., 2 oz. 41 H 132. NET. . . . . 29c



# Television Accessories

## PERFECTION TV COMPONENTS



### BEAMAJUSTER

Simplified control to permit quick, easy centering of television picture. Fits back cover of any type of standard yoke for any size tube. Constructed of aluminum with Alnico V ring magnet. Helps to eliminate neck shadows. Shpg. wt.,

4 oz.  
41 G 126. NET..... 1.03



### BARKHAUSEN ELIMINATOR

Very effective in eliminating Barkhausen oscillations. These oscillations appear as dark vertical lines. Fits around the horizontal output tube. For use on 6BQ6, 6AU5.

6AV5, etc. Wt. 3 oz.  
41 G 129. NET..... 73c

## MILLER ADJUSTABLE ION TRAP



Model 6295. Universal single-magnet ion trap. Screw adjustment allows magnetic field to be varied between 32-55 gauss. Replaces any single-magnet trap within this gauss range. Greatly reduces your inventory. Extension spring permits easy installation. Shpg. wt., 6 oz.

60 H 796. List, \$1.25. NET..... 73c

## CRT HI-VOLTAGE CONNECTOR



Second anode connector. Silver plated, snap-button plug; makes perfect contact with picture tube. Well-insulated by 1 1/2" diameter rubber cap.

With 18" heavily insulated wire lead. Shpg. wt. 4 oz.  
41 H 347. NET..... 29c

## CINCH 3A1 CRT HI-V CONNECTOR



For diheptal-based, glass tubes such as 10CP4, 12JP4, 12QP4, 12RP4, 15AP4, 15DP4, etc. Cadmium-plated brass contact. Rubber insulator. 3/4x1 1/2". Fits .096" pin. Wt.,

2 oz.  
40 H 800. NET..... 56c

## MILLER ANTENNA TRANSFORMERS



Permit use of low-loss 52 or 72 ohm coaxial cable on 300 ohm receiver inputs. 2 required; one at antenna, and one at receiver. Excellent where long 300-ohm line gives poor picture because of excessive line loss. Transformers are housed in impregnated, weather-proof aluminum shields and may be used outdoors. Size, 1 1/2x 3/4". Tinned solder-jug terminals. 2 oz.

77 G 516. Type 6161. 52 Ohms.  
77 G 517. Type 6162. 72 Ohms.  
NET EACH..... 1.62



## CINCH-JONES TV WALL PLATE

For terminating TV lead-in and rotator cables in standard wall outlet. Wall plates are chrome-plated. S-302 for antenna lead-in. S-302-4 for lead-in plus 4 rotor wires; S-302-8 for lead-in and 8 rotor wires. Wt., 7 oz.

WPC Style TV Wall Plates  
41 H 646. S-302-4. NET..... 1.12  
41 H 647. S-302-8. NET..... 1.36  
41 H 648. S-302-8. NET..... 1.47

## CCT Style Plugs for Above

40 H 802. P-302 antenna plug. NET..... 39c  
40 H 804. P-304 4-wire rotor plug..... 46c  
40 H 808. P-308 8-wire rotor plug..... 56c

## TELEVISION FILTERS



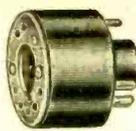
Scientifically tinted to protect eyes. Effective in minimizing glare and improving picture contrast. These television filters may be used with

any type of picture tube. All have square corners and may easily be cut as required. Av. shpg. wt., 1 lb.

No.	Used With	Size	NET
71 S 807	10" sets	8x11"	.69
71 S 808	12 1/2"-14" sets	10x13"	1.17
71 SX 814	16-17" sets	13x17"	2.19
71 SX 821	19-21" sets	16x21"	2.79
71 SX 821	24" sets	20x26"	4.35

## PERMA-POWER TV HORIZONTAL

### BAR GENERATOR



Type B101. New, easy-to-use horizontal bar generator. Provides a series of equally spaced horizontal lines on TV pix tubes to indicate picture linearity. Simple to use—merely remove picture tube socket and plug on horizontal bar generator. Completely self-

contained. Ideal for TV servicing—provides precise setting of yoke; accurate adjustment of focus coil or magnet; quick adjustment of vertical linearity, height and centering. Size, 1 1/2x1 1/2". With directions. A handy accessory for servicemen's kits. Wt., 5 oz.

51 C 212. NET..... 1.91

## WALSCO CLEAN-O-MATIC



New, efficient, permanent contact cleaner for keeping tuners clean and free from oxidation and noise. Quick and simple to install. The brass cover reduces radiation on all tuners in sets originally produced without tuner cover (1952 and earlier models). Wiping action as tuner is rotated during operation maintains clean contacts and noise-free service. Individually boxed. Each unit supplied with tube of WalSCO "Tunerlub" and a piece of crocus cloth (for badly oxidized contacts). Complete instructions. Shpg. wt., 4 oz.

41 H 344. Type 1200. NET..... 1.47

## G-C TV TUNER KLEENER



Set of 4 cleaners for installation on any Standard Coil Co. TV tuner. Extremely simple installation. Plastic pair fastens to outer frame of tuner; phenolic pair inserted in place of unused channel coils.

Wiper-cloth of nylon is then soaked in any contact cleaning solution. As channels are tuned, wipers clean dirt and grease from both rotary and stationary contact points continuously. Shpg. wt., 4 oz.

60 G 277. Type 9132. NET..... 98c

## "CLEAR-PIX" TELEVISION INTERFERENCE FILTERS

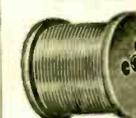


Designed to minimize or eliminate the common types of TV interference.

Effective against 21 mc Amateur transference, diathermy machines, strong FM stations, ignition, and other high frequency sources. Do not affect signal strength. Quickly and easily installed with only a screwdriver. No soldering or internal adjustments necessary. Mount at TV receiver antenna terminals. Brass lugs attach to same screws that hold antenna connections. These filters may be used with any model TV set using 300-ohm twin lead transmission line. Shpg. wt., 5 oz.

Stock No.	Mfr's Type	Interference Used For	NET EACH
51 C 043	CPH	21 mc Amateur	1.17
51 C 044	CPD	Diathermy machine	
51 C 046	CPF	Strong FM station	
51 C 045	CPI	Ignition or similar	

## COPPERWELD ANTENNA WIRE



High-quality, extremely dependable copperweld antenna wire. Features copper outer conductor and steel core for conductivity as well as very high tensile strength. May also be used for guying antenna towers.

Stock No.	Gauge	Feet	Wt. Lbs.	NET EACH
49 T 133	12	100	2	2.40
49 T 134	12	250	5	5.73
49 T 140	14	100	1 1/2	2.15
49 T 141	14	250	3	4.65
58 T 318	18	250	2	1.50
58 T 317	18	500	3	2.30
58 T 315	18	3000	18	12.32

## NEW WALSCO WINDOW-THRU



Type 1555. Capacitor discs for TV twin-line; eliminate need for lead-in feed-through holes in wall, window, etc. Discs on both sides of window to install. With cement and hardware. Wt., 2 oz.

51 C 101. NET..... 58c

## E-Z-I LIGHT AND TELEVISION CLOCK

Combination TV light and accurate electric clock. Placed on top of TV cabinet the E-Z-I Lite Clock provides proper amount of background light for tele-viewing. Accurate, rotating numeral type clock. Walnut finish plastic case. For 105-125 v., 60 cycle AC only. Shpg. wt., 2 1/2 lbs.



Size, 5x5 3/4x3 3/4".  
78 B 328. NET, including excise tax... 8.14

## TV TUBE PLASTIC MASKS

Solid, optically clear, 1/4" thickness plastic safety masks for round and rectangular television picture tubes. Unbreakable—prevents tube breakage and guard against "implosion" and shattering. Beige metal luster finish border. Easy to install. Av. shpg. wt., 1 1/4 lbs.

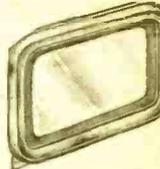


Stock No.	For Tube	Size	NET
97 S 919	14" Rect.	10 1/2 x 13 1/2"	4.55
97 SX 920	16" Rect.	13 1/2 x 16 1/2"	5.65
97 S 923	17" Rect.	13 1/2 x 16 1/2"	5.65
97 SX 924	20" Rect.	15 1/2 x 21 1/2"	7.50
97 S 913	21" Rect.	15 1/2 x 21 1/2"	8.25
97 SX 912	24" Round	19 1/2 x 19 1/2"	13.50
98 SX 592	24" Rect.	19 1/2 x 24 1/2"	14.25
98 SX 593	27" Rect.	19 1/2 x 25 1/2"	15.00

## CRONAME TV MASK

### CONVERSION ASSEMBLIES

Ideal for custom TV installations. Have attractive gold-finished escutcheon, green-sprayed aluminum frame and protective glass. UL Approved 1/4" tempered glass. 2 1/2" assembly has 3 1/2" tilt to eliminate glare and light reflections. Av. shpg. wt., 7 lbs.



Stock No.	For Tube	Overall Size	NET
97 SX 916	16" Rect.	13 1/2 x 17 1/2"	9.70
97 SX 917	17" Rect.	13 1/2 x 17 1/2"	9.70
97 SX 918	20" Rect.	17 1/2 x 21 1/2"	14.61
97 SX 914	21" Rect.	17 1/2 x 21 1/2"	17.35

## PLASTIC SLEEVE AND RIM SET

Mechanically strong, high-dielectric plastic insulating sleeves and rims. For use on metal-cone television picture tubes. Remove hazards of dangerous high-voltage shock. Make servicing safer. Each kit includes heavy rubber band for holding rim in place until mounted on chassis. Available for 16-27" picture tubes.



No.	For Tube	Lbs.	NET
40 SX 200	16" Round	1 1/2	3.65
40 SX 203	17" Rect.	1 1/2	4.74
40 SX 251	21" Rect.	2	6.23
40 SX 250	24" Round	2	7.28
40 SX 259	24" Rect.	2	7.28
40 SX 260	27" Rect.	2	8.36

## UNIVERSAL BRACKET ASSEMBLY

Set of universal brackets for mounting any size kinescope. 12" or 24" round or rectangular, on 630 type chassis. Rubber cushioned front bracket. Rear bracket for deflection coils adjustable to various heights and depths. Adjusts quickly and easily. Includes webbing to hold kinescope in place. Complete with simplified instructions. Shpg. wt., 2 lbs.

40 SX 202. NET..... 4.95

## EBY CRT EXTENSION HARNESS KIT

Model K302. Consists of 3 ft. anode extension harness. 4 ft. CRT socket harness for both electrostatic and magnetic tubes; 3 ft. yoke extension harness for sets using octal plug; and socket for extension. In plastic case. Wt., 10 oz.



41 H 348. List, \$6.00. NET..... 3.53

# Belden Cables



## SHIELDED MICROPHONE CABLES

### SINGLE CONDUCTOR

High quality Belden cables for all microphone requirements. Single tinned stranded conductor covered with cellulose acetate yarn braid, polyethylene insulation, tinned copper shield and chrome plastic jacket. \*Has rubber insulation and black rubber jacket. No. 25—3x33 copper and 4x33 steel stranded conductor. Lengths under 100 ft. available only in coil sizes listed below.

Mfr's Type	O.D.	15 ft. Coll.		25 ft. Coll.		50 ft. Coll.		100 ft. or More		Wt., 100 ft.
		Stk. No.	EA.	Stk. No.	EA.	Stk. No.	EA.	Stk. No.	100'	
8401	.200"	47 T 561	.81	47 T 562	1.25	47 T 563	2.35	47 T 560	4.41	3 lbs.
8410*	.245"	47 T 447	1.25	47 T 448	2.06	47 T 449	3.77	47 T 446	7.15	4 lbs.
8411	.144"	47 T 601	.67	47 T 602	1.03	47 T 603	1.91	47 T 600	3.53	2 1/2 lbs.

### TWO-CONDUCTOR

Type 8422 is No. 22 stranded (16x34) tinned copper with polyethylene insulation and chrome plastic outer jacket. Type 8412 is No. 20 stranded (26x34) cotton wrap, rubber insulation, black rubber jacket. 8428 is No. 18 Stranded (41x34) cotton wrap, black rubber jacket. Lengths under 100 ft. available only in coil sizes listed below.

Mfr's Type	O.D.	15 ft. Coll.		25 ft. Coll.		50 ft. Coll.		100 ft. or More		Wt., 100 ft.
		Stk. No.	EA.	Stk. No.	EA.	Stk. No.	EA.	Stk. No.	100'	
8428	.295"	47 T 465	1.57	47 T 466	2.35	47 T 467	4.56	47 T 454	8.82	13 1/2 lbs.
8412	.268"	47 T 457	1.18	47 T 458	1.86	47 T 459	3.67	47 T 453	7.02	5 lbs.
8422	.231"	47 T 451	1.00	47 T 452	1.62	47 T 455	3.18	47 T 450	6.03	4 lbs.

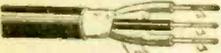
Unshielded, Weatherproof 2-Conductor Cable. For intercoms, speaker ext., etc. 8205 is No. 22 stranded (7x30), rubber ins., black cotton braid; 8204 is No. 18 (7x26), white cotton braid.

8205	.165"	47 T 861	.73	47 T 860	2.50	47 T 860	2.50	47 T 860	2.50	2 lbs.
8204	.220"	47 T 640	1.06	47 T 639	3.38	47 T 639	3.38	47 T 639	3.38	3 lbs.

### MULTIPLE CONDUCTOR

For microphone and interconnecting power cable requirements. No. 20 stranded (26x34), tinned copper conductor, with cotton wrap and color-coded conductors. All have tinned copper braid shield, rubber insulation and black rubber outer jacket. Types 8423 and 8424 for all low impedance mikes. Lengths under 100 ft. available only in coil sizes listed below.

Mfr's Type	Conductors	Mmf. per foot	O.D.	15 ft. Coll.		50 ft. Coll.		100 ft. or More		Shpg. wt., 100 ft.
				Stk. No.	EACH	Stk. No.	EACH	Stk. No.	Per 100'	
8423	3	85	.277"	47 T 461	1.42	47 T 462	4.12	47 T 460	8.08	5 1/2 lbs.
8424	4	95	.295"	47 T 471	1.62	47 T 472	4.95	47 T 470	9.55	7 1/2 lbs.
8425	5	58	.323"	47 T 481	1.86	47 T 482	5.68	47 T 480	11.02	8 lbs.
8426	6	60	.349"	47 T 491	2.16	47 T 492	6.91	47 T 490	13.52	10 1/2 lbs.
8427	7	56	.360"	47 T 507	2.30	47 T 508	7.45	47 T 510	14.70	10 1/2 lbs.



## MULTI-CONDUCTOR CABLES

### RUBBER-COVERED CABLE

Rubber-jacketed, flexible cord for extension speakers, public address systems, analyzer test equipment, remote control circuits, press-to-talk intercom circuits, etc. Uniform quality. Bare copper flexible stranding; cotton wrap; rubber insulation; color-coded conductors; black rubber jacket. Lengths under 100 ft. available only in coil sizes listed below.

Mfr's Type	O.D.	Cond.	Wire Size	15 ft. Coll.		50 ft. Coll.		100 ft. or More		Wt., 100 ft.
				Stk. No.	EACH	Stk. No.	EACH	Stk. No.	Per 100'	
8453	.265"	3	18 (41x34)	47 T 421	.96	47 T 422	2.79	47 T 420	5.14	5 1/2 lbs.
8454	.265"	4	18 (41x34)	47 T 431	1.13	47 T 432	3.33	47 T 430	6.27	5 1/2 lbs.
8455	.280"	5	3-22 (16x34)	47 T 441	1.25	47 T 442	3.49	47 T 440	6.61	5 1/2 lbs.



### VINYL-COVERED PLASTIC-INSULATED CABLE

For permanent installation of speakers, etc. Conductors are tinned copper flexible stranded wire, with plastic insulation; gray vinyl plastic jacket overall. \*1 and 2 conductors of No. 18 stranded (16x30); the rest are No. 22 stranded (7x30). All conductors are color coded. Lengths under 100 ft. available only in coil sizes listed below.

Mfr's Type	Cond.	Outside Diam.	15 ft. Coll.		25 ft. Coll.		100 ft. or More		Wt., 100 ft.
			Stk. No.	EACH	Stk. No.	EACH	Stk. No.	Per 100'	
8443	3	.140"	47 T 361	.73	47 T 360	2.35	47 T 360	2.35	2 lbs.
8444	4	.158"	47 T 371	.88	47 T 370	2.79	47 T 370	2.79	2 1/2 lbs.
8445	5	.170"	47 T 381	.96	47 T 380	3.38	47 T 380	3.38	2 1/2 lbs.
*8446	6	.212"	47 T 311	.88	47 T 310	5.14	47 T 310	5.14	4 lbs.
*8447	7	.230"	47 T 321	.96	47 T 320	5.59	47 T 320	5.59	4 1/2 lbs.
*8448	8	.235"	47 T 331	1.03	47 T 330	6.03	47 T 330	6.03	4 1/2 lbs.
*8449	9	.245"	47 T 341	1.13	47 T 340	6.61	47 T 340	6.61	5 lbs.



### PAIRED VINYL-COVERED CABLE

For intercom and telephone wiring. Size 22 solid tinned copper; color-coded vinyl plastic insulation. Conductors are cabled in twisted pairs; gray vinyl plastic overall.

Stock No.	Mfr's Type	Conductors	O.D.	Shpg. Wt., 100 ft.	PER FOOT	100 Ft.
48 W 890	8740	2	.145"	1 1/2 lbs.	2 1/2¢	2.06
48 W 891	8741	4	.190"	2 1/2 lbs.	4¢	3.48
48 W 892	8742	6	.230"	3 1/2 lbs.	5 1/2¢	4.70
48 W 893	8743	12	.265"	4 1/2 lbs.	7¢	6.27
48 W 894	8744	18	.320"	6 1/2 lbs.	10¢	9.11
48 W 898	8753	22	.360"	9 lbs.	13¢	12.05
48 W 895	8745	30	.390"	10 lbs.	17 1/2¢	16.17
48 W 896	8746	54	.510"	16 1/2 lbs.	30¢	26.46



### COPPER BRAID SHIELDING

Flexible tinned copper for shielding and bonding. Av. shpg. wt., per 50 ft. in 1 1/2 lbs. Lengths under 50 ft. available only in coil sizes listed below.

Mfr's Type	Inside Dia.	10 ft. Coll.		50 ft. or More	
		Stk. No.	EACH	Stk. No.	Per 50'
8660	1 1/4"	49 T 351	.29	49 T 350	1.40
8668	1 1/4"	49 T 356	.47	49 T 355	2.16
8661	1 1/4"	49 T 361	.53	49 T 360	2.16
8669	1 1/4"	49 T 366	.97	49 T 365	4.41
8662	2 1/2"	49 T 381	1.32	49 T 380	6.27

## SPECIAL PURPOSE CABLES

### 3 AND 4-WIRE INTERCOM CABLE

Type 8734, No. 22 tinned copper stranded (7x30) with plastic insulation, 3 cond.; 1 tinned copper shield, 2 unshielded, gray vinyl plastic jacket overall. For station-to-station and extension wiring. .184" O.D. Wt., 100 ft., 2 1/2 lbs.



48 W 875. 100 ft. for 4.41. PER FOOT. 5¢

Type 8732, No. 22 tinned copper, stranded (7x30) with polyethylene insulation, 4 conductors; 1 pair tinned copper braid shield, 1 pair unshielded. Gray vinyl plastic jacket overall. Oval. .168"x.276" O.D. Shpg. wt., 100 ft., 3 lbs.

48 W 897. 100 ft. for 4.70. PER FOOT. 5 1/2¢

Type 8669, High voltage cable for CR tubes, power supplies, etc. No. 20 single conductor stranded (7x28) tinned copper, with flame retardant polyethylene insulation, .035" thick, .108" O.D., 10,000 volts. Wt., 100 ft., 1 1/4 lbs. Lengths under 100' available only in 25 ft. coils.

47 T 893. 25 ft. Coll. EACH ..... 59¢  
47 T 895. 100 ft. Spool. EACH ..... 1.76

Type 8688. As above but with .065" flame retardant polyethylene insulation; rated at 20,000 volts. .168" O.D. Shpg. wt., 100 ft., 2 1/2 lbs.

47 T 897. 25 ft. Coll. EACH ..... 88¢  
47 T 896. 100 ft. Spool. EACH ..... 3.09

Type 8688. As above but with .065" flame retardant polyethylene insulation; rated at 20,000 volts. .168" O.D. Shpg. wt., 100 ft., 2 1/2 lbs.

47 T 897. 25 ft. Coll. EACH ..... 88¢  
47 T 896. 100 ft. Spool. EACH ..... 3.09

Type 8688. As above but with .065" flame retardant polyethylene insulation; rated at 20,000 volts. .168" O.D. Shpg. wt., 100 ft., 2 1/2 lbs.

47 T 897. 25 ft. Coll. EACH ..... 88¢  
47 T 896. 100 ft. Spool. EACH ..... 3.09

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47 T 896. 100 ft. Spool. EACH ..... 3.09

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47 T 897. 25 ft. Coll. EACH ..... 88¢  
47 T 896. 100 ft. Spool. EACH ..... 3.09

Type 8688. As above but with .065" flame retardant polyethylene insulation; rated at 20,000 volts. .168" O.D. Shpg. wt., 100 ft., 2 1/2 lbs.

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47 T 896. 100 ft. Spool. EACH ..... 3.09

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47 T 897. 25 ft. Coll. EACH ..... 88¢  
47 T 896. 100 ft. Spool. EACH ..... 3.09

Type 8688. As above but with .065" flame retardant polyethylene insulation; rated at 20,000 volts. .168" O.D. Shpg. wt., 100 ft., 2 1/2 lbs.

47 T 897. 25 ft. Coll. EACH ..... 88¢  
47 T 896. 100 ft. Spool. EACH ..... 3.09

Type 8688. As above but with .065" flame retardant polyethylene insulation;

# Belden Wire and Cable

## BROADCAST AUDIO CABLES



Have 2 copper conductors (except \*3-conductor) color-coded cabling and tinned copper braid shield. Other features: 1—bare, 2—tinned, 3—solid, 4—stranded, 10x30, 5—baked enamel film, 6—cotton wrap, 7—cellulose acetate wrap, 8—paper wrap, 9—rubber insulation, 10—cotton braid, 11—waxed, 12—acetate braid, 13—lacquer coating, 14—extra No. 22 tinned copper ground wire, 15—vinyl jacket, A—gray; B—black.

Stock No.	Mfr's Type	Construction (See Keys Above)	Ga. No.	O. D.	Lbs. 100 Ft.	Per Foot	100 Feet
48 W 882	8738	2, 3, 15	22	.130"	2	3	2.50
48 W 883	8739	2, 3, 15A	22	.170"	2 1/2	4	3.38
48 W 884	8432	2, 4, 8, 9, 10, 13	20	.215"	3 1/2	5 1/2	4.85
48 W 865	8789	2, 15 (7x26)	18	.180"	3	4	3.87
48 W 885	8799	1, 3, 5, 6, 10, 11	18	.165"	3 1/2	5 1/2	5.00
48 W 886	8437	2, 3, 5, 7, 10, 11, 14, 15B	22	.220"	5 1/2	7 1/2	6.32
48 W 866	8433	2, 4, 8, 9, 10, 13	20	.230"	5 1/2	7 1/2	6.32
48 W 887	8438	2, 3, 5, 6, 10, 11	20	.130"	2 1/4	4	3.38
48 W 888	8439	2, 3, 7, 12, 13	20	.150"	2 1/2	5	4.07
48 W 878	8482	1, 3, 15 (Unshielded)	19	.115"	3 1/2	1 1/2	1.09
48 W 879	8483	1, 3, 15 (Unshielded)	19	.132"	3 1/2	2 1/2	1.59
48 W 877	8737	2, 4, 15A	22	.190"	3 1/2	4 1/2	3.67
48 W 889	8440	2, 3, 5, 6, 10, 11, 15A	22	.195"	3	5	4.56

## RUBBER SERVICE CORDS



Two conductor flexible, stranded copper wire, in cotton wrap. Conductors are black and white, rubber insulated, 1/2" black and rubber outer jacket. Types 848 and 8452 are No. 18 stranded (41x34), 347 is No. 16 stranded (65x34). \*S.I. SV. Wt., 100 ft., 5 1/2 lbs. Lengths under 100 ft. available only in coil sizes listed below.

Mfr's Type	O. D.	25 ft. Coil		50 ft. Coil		100 ft. or More	
		Stk. No.	EACH	Stk. No.	EACH	Stk. No.	Per 100
8452*	.245"	47 T 411	1.32	47 T 412	2.35	47 T 410	4.26
8478*	.299"	47 T 401	1.41	47 T 402	2.65	47 T 400	4.85
8472*	.325"	47 T 406	1.70	47 T 407	3.09	47 T 403	5.98

## SHIELDED WIRE

For long runs in speaker installations. 8209 and 8208 are 2/cond.; 8206, 1/cond.; 8735, 3/cond. All No. 18 stranded (7x26) copper conductor except 8735, No. 22 (7x30) cotton or paper wrap rubber insulation (8735 plastic insul.) copper shield, 8209 in white weatherproof cotton outer jacket, 8208, 8735 gray vinyl plastic; 8206 in copper braid. Lengths under 100 ft. available only in coil sizes below.

Mfr's Type	O. D.	15 ft. Coil		50 ft. Coil		100 ft. or More		Lbs. Per 100 ft.
		Stk. No.	EACH	Stk. No.	EACH	Stk. No.	Per 100	
8206	.155"	47 T 831	.16	47 T 832	1.65	47 T 830	2.94	2
8208	.260"	47 T 852	1.58	47 T 853	3.33	47 T 851	6.17	4
8209	.235"	47 T 847	1.06	47 T 848	2.94	47 T 850	5.59	3
8735	.189"	48 T 872	.81	48 T 873	2.35	48 T 876	4.65	3

## JUKE BOX CABLES

High quality speaker and control cable for all juke box applications. Type 8782 oval is No. 24 stranded (7x32) 1 bare conductor, 1 tinned copper cond., gray vinyl plastic insulation, 8783 is 3 cond., color-coded, 1-No. 20 (10x30), 2-No. 16 (26x30) vinyl plastic insulation, chrome vinyl plastic jacket. Type 8785 oval is 5/cond., color-coded, No. 22 stranded (7x30) tinned copper with copper braid shield over 3 conductors, twisted pair unshielded, gray vinyl plastic outer jacket.

Stock No.	Mfr's Type	O. D.	NET Per ft.	NET Per 100 ft.	Wt. 100 ft.
48 W 867	8783	.240"	5c	4.56	4 lbs.
48 W 868	8782	.058" x .115"	1 1/2c	1.54	10 oz.
48 W 869	8785	.195" x .300"	6c	5.29	3 lbs.

## RUBBER-COVERED LEAD-IN

No. 18 Stranded—Type 8200

Flexible, tinned copper wire covered with .040" live rubber insulation. Very easy to solder. Overall diameter, .126". Average shipping wt., per 100-ft. coil, 1 1/2 lbs.

47 T 745	100 ft. coil. NET	1.25
47 T 746	500 ft. coil. NET	5.00

## NEW NYLONCLAD HEAVY MAGNET WIRE

Type HNC. New, heavy-duty Nylonclad copper magnet wire. Combines the most desirable features of Formvar wire with the toughness and solvent resistance of nylon enamel. Unexcelled for difficult and exacting windings of any type. Outstanding features include: ability to withstand winding abuse and forming operations; resistance to solvent action of insulating varnishes and all other types of thinners; resistance to softening and brittleness at extremes of temperature; high dielectric strength and remarkably easy to wind; infinite resistance to moisture.

1/2 lb. Spool				1 lb. Spool			
Stk. No.	Size	Feet	EACH	Stk. No.	Size	Feet	EACH
48 T 036	14	40	.52	48 T 086	14	80	.93
48 T 037	16	63	.52	48 T 087	16	126	.94
48 T 038	18	100	.53	48 T 088	18	199	.97
48 T 039	20	157	.56	48 T 089	20	315	1.03
48 T 040	22	250	.59	48 T 090	22	501	1.11
48 T 041	24	396	.62	48 T 091	24	793	1.18
48 T 042	26	630	.70	48 T 092	26	1260	1.34
48 T 043	28	995	.76	48 T 093	28	1990	1.49
48 T 044	30	1570	.88	48 T 094	30	3140	1.70
48 T 045	32	2440	1.03	48 T 095	32	4880	1.99
48 T 046	34	3930	1.06	48 T 096	34	7860	1.99
48 T 047	36	6200	1.29	48 T 097	36	12400	2.35
48 T 048	38	9700	1.70	48 T 098	38	19400	2.90
48 T 049	40	16050	2.72	48 T 099	40	32100	4.31

## CELLULOSE ACETATE HOOK-UP WIRE

Belden

Single, tinned copper conductor, with heavy cellulose acetate yarn wrap and cellulose yarn braid. Fungus and flame resistant lacquer coating. Breakdown voltage, 1000 volts AC. DC insulation resistance is 200 meg ohms or better. Stranded type conductor (Type 8943) is No. 20 (10x30) with O.D. of .076". Solid type conductor (Type 8941) has O.D. of .072". Especially suited for hook-up and lead-wire applications in receivers, transmitters, amplifiers, aircraft radio and other types of RF circuits where low loss properties are required. Ideal for servicemen, Amateurs, experimenters, etc. Average shpg. wt., 12 oz. per 100 ft.



Type 8941—20 Solid

Length	Red	Black	Blue	Green	Yellow	EACH
25 Ft.	48 T 351	48 T 330	48 T 332	48 T 333	48 T 334	38
100 Ft.	47 T 920	47 T 921	47 T 922	47 T 923	47 T 924	1.25
1000 Ft.	48 T 351	48 T 350	48 T 352	48 T 353	48 T 354	10.00

Type 8864 Assorted Wire Kit. Contains six, 25-ft. coils of Type 8941 hook-up and lead-wire. Size 20 solid tinned copper conductor in heavy cellulose acetate yarn wrap and cellulose acetate yarn braid. Fungus and flame resistant lacquer coating. Coils are one each: Black, Blue, Green, Red, White and Yellow. Shpg. wt., 1 lb.

48 T 846, NET..... 2.29

Type 8943—20 Stranded

25 Ft.	48 T 361	48 T 360	48 T 362	48 T 363	48 T 364	.40
100 Ft.	47 T 940	47 T 941	47 T 942	47 T 943	47 T 944	1.35
1000 Ft.	48 T 381	48 T 380	48 T 382	48 T 383	48 T 384	10.81

Type 8865 Assorted Wire Kit. Contains six, 25-ft. coils of Type 8943 hook-up and lead wire. Size 20 stranded (10x30) tinned copper conductor in heavy cellulose acetate yarn wrap and cellulose acetate yarn braid. Fungus and flame resistant lacquer coating. Coils are one each: Black, Blue, Green, Red, White and Yellow. Shpg. wt., 1 lb.

48 T 847, NET..... 2.38

Type 8945—18 Solid

47 T 900, Red.	100 FOOT ROLLS	47 T 910, Red.	100 FOOT ROLLS
47 T 901, Blue.	NET EACH	47 T 911, Black.	NET EACH
47 T 902, Blue.		47 T 912, Blue.	
47 T 903, Green.	1.52	47 T 913, Green.	1.58
47 T 904, Yellow.		47 T 914, Yellow.	

Type 8942—16 Stranded

47 T 916, Black.	100-Foot Rolls	47 T 935, Red.	100-Foot Rolls.
47 T 917, Red.	NET	47 T 936, Black.	NET
47 T 918, Green.	EACH 1.88		EACH 2.35

## RUBBER INSULATED PUSH-BACK WIRE

Type 8838, #20-Stranded. General-use hook-up wire. Also used as leads for transformers, etc. Shpg. wt., 100 ft., 13 oz.

Length	Red	Black	Blue	Green	Yellow	EACH
100 Ft.	48 T 245	48 T 246	48 T 247	48 T 248	48 T 249	1.62

## TYPE JAN-C-76 SRIR THERMOPLASTIC HOOK-UP WIRE

New general purpose, thermoplastic insulated hook-up wire for applications at 1000 volts rms or less. Made to conform to stringent government specifications. Feature high dielectric strength, stability at high temperatures, flexibility at low temperatures and very low moisture absorption. Flame and fungus resistant. Vinyl thermoplastic insulation is virtually impervious to damage from solvents. Nominal diameters: Type 8530, .062"; Type 8529, .069"; Type 8524, .066"; Type 8523, .075". Vinyl thermoplastic insulation is .018" thick. All are tinned copper conductors. No. 22 insulation is 7x30; No. 20 stranded is 10x30. Average shpg. wt., 100-ft. coil, 1 1/2 lbs. Average shpg. wt., 1000-ft. coil, 14 lbs.



100 FOOT COILS

Color	Type 8530 22 Solid	Type 8524 22 Stranded	Type 8529 20 Solid	Type 8523 20 Stranded
Black	49 T 800	49 T 820	49 T 810	49 T 830
Brown	49 T 801	49 T 821	49 T 811	49 T 831
Red	49 T 802	49 T 822	49 T 812	49 T 832
Orange	49 T 803	49 T 823	49 T 813	49 T 833
Yellow	49 T 804	49 T 824	49 T 814	49 T 834
Green	49 T 805	49 T 825	49 T 815	49 T 835
Blue	49 T 806	49 T 826	49 T 816	49 T 836
Violet	49 T 807	49 T 827	49 T 817	49 T 837
Gray	49 T 808	49 T 828	49 T 818	49 T 838
White	49 T 809	49 T 829	49 T 819	49 T 839

NET EA. 68c 82c 81c 94c

1000 FOOT COILS

Color	Type 8530 22 Solid	Type 8524 22 Stranded	Type 8529 20 Solid	Type 8523 20 Stranded
Black	49 T 850	49 T 870	49 T 860	49 T 880
Brown	49 T 851	49 T 871	49 T 861	49 T 881
Red	49 T 852	49 T 872	49 T 862	49 T 882
Orange	49 T 853	49 T 873	49 T 863	49 T 883
Yellow	49 T 854	49 T 874	49 T 864	49 T 884
Green	49 T 855	49 T 875	49 T 865	49 T 885
Blue	49 T 856	49 T 876	49 T 866	49 T 886
Violet	49 T 857	49 T 877	49 T 867	49 T 887
Gray	49 T 858	49 T 878	49 T 868	49 T 888
White	49 T 859	49 T 879	49 T 869	49 T 889

NET EA. 4.21 5.44 5.29 6.61

# Hook-Up & Magnet Wire—Cable

## BELDEN WIRE AND CORDS



### POPULAR ANTENNA WIRE

High conductivity copper wire. Ideal for all antenna requirements. Maximum tensile strength assures minimum stretch. \*Nylclad insulation protects wire from corrosion. Stranded type supplied in continuous lengths up to 1,000 feet; solid nylclad, up to 500 feet. Av. wt., per 100 ft. coil, 1 lb.

### STRANDED BARE COPPER

Type 8000—7x22			Type 8002—7x24		
No.	Length	NET	No.	Length	NET
47 T 680	50 ft.	.68	47 T 654	50 ft.	.49
47 T 681	75 ft.	.99	47 T 655	75 ft.	.67
47 T 682	100 ft.	1.25	47 T 656	100 ft.	.95
47 T 683	1,000 ft.	11.76	47 T 657	1,000 ft.	7.72

### SOLID NYLCLAD COPPER\*

Type 8008 No. 12			Type 8009 No. 14		
No.	Length	NET	No.	Length	NET
47 T 670	100 ft.	1.79	47 T 740	100 ft.	1.25
47 T 735	200 ft.	3.46	47 T 741	500 ft.	5.59
47 T 736	500 ft.	8.31			



### ANTENNA ROTOR CABLE

Types 8464, New, flat 4-conductor antenna rotor cable. No. 20 stranded copper (7x28) conductor. 1 outer conductor tinned for polarity—has ridged insulation for identification. 4 conductors laid parallel, O.D., .070"x.390". In gray vinyl plastic insulation. Shpg. wt., 100 ft., 2 3/4 lbs.

- Type 8464, 4-cond. No. 20 stranded (7x28), color-coded, vinyl plastic insulation, gray vinyl plastic outer jacket, O.D., .170", 100', 3 lbs. 47 T 697, 100 ft. or More. PER 100-ft. Coil. 3.04
- Type 8488, 8-cond. No. 22 stranded (7x30), color-coded, vinyl plastic insulation, gray vinyl plastic jacket, O.D., .205", 100', 3 1/2 lbs. 47 T 698, 100 ft. or More. PER 100-ft. Coil. 4.41



### REPLACEMENT CORDS

- Type 1765B, SP-1, 6-Foot, No. 18 wire. Brown, rubber-covered cord. Extra-flexible. Supplied with Belden unbreakable, soft rubber plug on one end; other end stripped. Ideal as a replacement cord for electric clocks, lamps, fans, radio sets and similar small electric appliances. Shpg. wt., 6 oz. 49 T 211, NET. 32c
- Type 1765K, SP-1. Same as above, but 12 feet long. Shpg. wt., 8 oz. 49 T 236, NET. 53c
- Type 1750K, SJ, 10-Foot Replacement Cord, No. 16 wire. For washing machines, heavy home workshop tools, etc. With soft, unbreakable rubber plug. Opposite end is stripped and tinned ready for easy attachment. Provides long service life and dependable performance. U.L. Approved. Wt., 1/2 lb. 49 T 213, NET EACH. 81c
- Type 1754K, SJ, 8-Foot Replacement Cord, No. 18 wire. Specially designed for refrigerators, small home workshop tools, etc. Type SJ flexible black cord, unbreakable rubber plug. U.L. Approved. Shpg. wt., 1/2 lb. 49 T 215, NET EACH. 60c
- Type 1749K, SV, 6 1/4-Ft. Replacement Cord, No. 18 wire. Type SV cord used in mixers, sewing machines, small appliances, etc. Gray satin finish, non-marking and non-staining. Unbreakable plug. U.L. Approved. Wt., 1/2 lb. 49 T 212, NET EACH. 50c



### APPLIANCE-GROUNDING CORD

Type 1766B, SJ, 8-Foot Replacement Cord. No. 18 wire. Used for tools, neon signs and other small appliances requiring grounding. Type SJ flexible 3-conductor black portable cord with unbreakable rubber plug and 4-inch grounding lead. Opposite end stripped and tinned, ready for easy attachment. U.L. Approved. Shpg. wt., 1/2 lb.

- 49 T 219, NET EACH. 84c



### HEAVY DUTY EXTENSION CORDS

Type 1751K, SV, 20-Foot Extension Cord. No. 18 wire. Type SV extra-flexible gray cord with unbreakable soft rubber plug and molded-on rubber connector. Specifically designed for vacuum cleaners and small household appliances such as irons, toasters, waffle irons, deep fryers, etc. In natural gray; will not mark or stain floors. Handsomely styled to match the finest appliances or electric tools. Convenient, safe and dependable to use. Grip prongs insure long service life regardless of wall outlet deterioration. U.L. Approved. Shpg. wt., 1 lb.

- 49 T 214, NET EACH. 1.28
- Type 1756K, SJ, 10-Foot Extension Cord, No. 16 wire. For general purpose use. Unbreakable rubber plug and connector. U.L. Approved. Wt., 1 lb. 49 T 216, NET EACH. 1.11
- Type 1791K, SJ, 50-Foot Extension Cord, No. 16 wire. Designed for electric lawn mowers, yard extensions, etc. U.L. Approved. Wt., 3 3/4 lbs. 49 T 217, NET EACH. 3.74
- Type 1792K, SJ, 100-Foot Extension Cord, No. 16 wire. Extra-flexible, black rubber. U.L. Approved. Unbreakable plug. Shpg. wt., 6 1/2 lbs. 49 T 218, NET EACH. 6.24

## HOOK-UP AND MAGNET WIRE

### THERMOPLASTIC HOOK-UP WIRE

Underwriters' Approved. Thermoplastic insulated hook-up wire. Strips clean. Easy to handle. Voltage breakdown test, 10,000 volts. Oil and acid resistant. Withstands temperatures up to 80° C. Suitable for high voltage circuits where low loss and proper insulation is essential. Shpg. wt., per 25 ft. coil, 4 oz.



20 SOLID		25 FOOT COIL		20 STRANDED		25 FOOT COIL	
48 T 455, Black.	33c EACH	48 T 460, Black.	41c EACH	48 T 461, Red.	41c EACH	48 T 462, Blue.	41c EACH
48 T 456, Red.		48 T 463, Green.		48 T 464, Yellow.			
48 T 457, Blue.							
48 T 458, Green.							

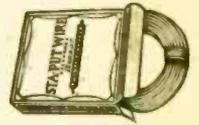
### COLORED RUBBER STRANDED HOOKUP WIRE

No. 18 tinned soft drawn copper wire. Cotton wrap and colored rubber insulation overall. Shpg. wt., 25 ft., 5 oz.

Length	Black	Red	Blue	Green	White	EACH
25 ft.	48 T 200	48 T 201	48 T 202	48 T 203	48 T 205	41c

### PUSH-BACK HOOK-UP WIRE

Highest quality tinned push-back hook-up wire. No. 20. Only evenly-drawn pure copper wire is used. Available in both solid and stranded type. Stranded wire is made up of carefully twisted strands of high tensile strength. Unusually flexible and durable. Double-cotton covered with paraffin-treated damp-proof braid. 5 different colors. Shpg. wts.: 25 ft., 4 oz.; 100 ft., 1 lb.



### Stranded Type, 10x30

Length	Red	Black	Yellow	Blue	Green	EACH
25 ft.	48 T 442	48 T 440	48 T 444	48 T 441	48 T 443	.32
100 ft.	48 T 447	48 T 445	48 T 449	48 T 446	48 T 448	1.32

### Solid Type

Length	Red	Black	Yellow	Blue	Green	EACH
25 ft.	48 T 472	48 T 470	48 T 474	48 T 471	48 T 473	.30
100 ft.	48 T 477	48 T 475	48 T 479	48 T 476	48 T 478	1.11

### HIGH-GRADE MAGNET WIRE ON SPOOLS

Insulated copper wire of highest quality for all purposes. Supplied on handy spool as shown—saves time, prevents wire from tangling. Standard B. & S. Gauge. We can supply magnet wire in all sizes and types in larger quantities than listed below. Table below represents a listing of the more commonly used sizes and types. Write for quantity prices. Shpg. wts.: 1/2 lb. spool, 14 oz.; 1 lb. spool, 1 1/2 lbs.



### PLAIN ENAMELED 1/2 LB. SPOOLS

Stock No.	Size	Feet	NET	Stock No.	Size	Feet	NET
48 T 100	14	38	.61	48 T 111	26	640	.73
48 T 102	16	63	.61	48 T 112	28	1013	.75
48 T 104	18	101	.61	48 T 113	30	1602	.78
48 T 106	20	159	.64	48 T 114	32	2543	.81
48 T 108	22	248	.65	48 T 115	34	4042	.87
48 T 109	24	402	.70	48 T 116	36	6410	1.06

### SINGLE COTTON ENAMELED 1 LB. SPOOLS

Stock No.	Size	Feet	NET	Stock No.	Size	Feet	NET
48 T 020	14	78	1.28	48 T 028	22	490	1.65
48 T 022	16	124	1.35	48 T 029	24	772	1.84
48 T 023	17	156	1.38	48 T 030	25	936	1.97
48 T 024	18	198	1.43	48 T 031	26	1209	1.99
48 T 025	19	248	1.52	48 T 032	28	1876	2.23
48 T 026	20	312	1.56	48 T 033	30	2780	2.53

### HEAVY FORMVAR MAGNET WIRE IN 1 POUND SPOOLS

Copper magnet wire covered with Formvar, tough, sturdy, abrasion-resisting film. Stable dielectric is maintained under the cumulative drying and aging effects of heat; does not fail after two hours at 105° C. Completely impervious to the deteriorating effects of petroleum solvents; resists acid and alkali. Takes up less winding space. Infinite resistance to moisture. Spools can be stored indefinitely without corroding. Ideal for servicemen, experimenters, Amateurs, etc. Replaces enamel, paper, cotton, silk, and double cotton and double silk wire. Shpg. wt., per spool, 1 1/2 lbs.

Stock Number	Size	Feet	NET EACH	Stock Number	Size	Feet	NET EACH
48 T 180	14	78	1.21	48 T 187	28	1999	1.70
48 T 137	15	99	1.22	48 T 144	29	2780	1.76
48 T 181	16	124	1.23	48 T 188	30	3200	1.81
48 T 138	17	156	1.25	48 T 145	31	4410	1.88
48 T 182	18	198	1.25	48 T 189	32	4900	2.00
48 T 139	19	246	1.31	48 T 146	33	6441	2.02
48 T 183	20	313	1.32	48 T 190	34	7950	2.02
48 T 140	21	397	1.35	48 T 147	35	9002	2.25
48 T 184	22	501	1.35	48 T 191	36	12,800	2.25
48 T 141	23	628	1.43	48 T 148	37	15,898	2.71
48 T 185	24	798	1.49	48 T 192	38	20,000	2.72
48 T 142	25	941	1.54	48 T 149	39	25,188	3.58
48 T 186	26	1200	1.58	48 T 193	40	31,700	3.62
48 T 143	27	1583	1.65				

# Wire-AM & SW Antennas

## POSJ AND POT TYPE LAMP CORD



Two conductors, No. 18 stranded copper wire. POSJ has color-coded cotton wrap with heavy rubber-jacket. POT has vinyl plastic insulation. Widely used for appliances. Lengths under 100 feet available only in coil sizes listed below. Approx. shpg. wt., 3 lbs. per 100 ft.

Mfr's Type	Color	25 ft. Coil		100 ft. or more	
		Stk. No.	EACH	Stk. No.	Per 100 ft.
POSJ	Brown	48 T 761	65c	48 T 760	2.40
POSJ	Black	48 T 771	65c	48 T 770	2.40
POT	Brown	48 T 765	62c	48 T 764	2.30
POT	White	48 T 768	62c	48 T 769	2.30

## LACQUERED TUBING ON SPOOLS

Flexible tubing, heavily varnished. Average dielectric strength, 5000 volts. For No. 10 to No. 18 wire. In 20-foot spools. Shpg. wt., 5 oz.

No.	Color	No.	Color	No.	Color	EA.
49 T 279	Red	49 T 281	Brown	49 T 283	Black	82c
49 T 280	Yellow	49 T 282	Green			

## SPAGHETTI ASSORTMENT

Highly popular with experimenters and builders alike. Handy assortment of 26 pieces of canbrix spaghetti tubing in various colors and diameters. In 8' lengths. Shpg. wt., 3 oz.  
49 T 220. NET.....20c

## GIANT SPAGHETTI

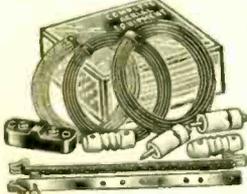
For insulating power transformer, electrolytic condenser, etc., leads. Black canbrix tubing. 1200 volts. 1/4" I.D. 36' long. 2 oz.  
49 T 210. NET.....18c  
10 or more, EA.....1.62

## VARNISHED SPAGHETTI TUBING

Widely used in industrial and electronic research laboratories, radio and television service shops, experimental laboratories, etc. Cut in handy 36' lengths, and five lengths to a package. Listed below are the most commonly used sizes, for practically all wire used in electronics. Standard grade varnished tubing. 4,000 volt av. dielectric strength. Meets V.T.S. and A.S.T.M. specifications. Shpg. wt., 2 oz.

Stock No.	Color	For Wire Size	Pkg. of 5 EACH PKG.	For More Pkgs. EACH PKG.
49 T 164	Black	20		
49 T 165	Yellow	20	54c	49c
49 T 166	Red	20		
49 T 167	Green	20		
49 T 169	Black	18		
49 T 170	Yellow	18	57c	51c
49 T 171	Red	18		
49 T 172	Green	18		
49 T 174	Black	16		
49 T 175	Yellow	16	58c	52c
49 T 176	Red	16		
49 T 177	Green	16		
49 T 179	Black	14		
49 T 180	Yellow	14	62c	56c
49 T 181	Red	14		
49 T 182	Green	14		
49 T 184	Black	12		
49 T 185	Yellow	12	67c	62c
49 T 186	Red	12		
49 T 187	Green	12		
49 T 189	Black	10		
49 T 190	Yellow	10	73c	66c
49 T 191	Red	10		
49 T 192	Green	10		

## DELUXE BC-SW ANTENNA KIT



Includes 100 ft. 7x26 bare copper antenna wire; 40 ft. rubber covered lead-in; 25 ft. rubber covered ground wire; 2 porcelain insulators; 1 window lead-in; 1 lightning arrester; 2 porcelain nail knobs; 1 ground clamp and full instructions. Shpg. wt., 2 1/2 lbs.  
83 C 101. NET.....1.70

Standard BC-SW Antenna Kit. 50 ft. 7x26 bare copper wire; 25 ft. lead-in; 2 antenna insulators; 2 nail knob insulators; 1 window lead-in and 1 ground clamp. 1 1/2 lbs.  
83 C 100. NET.....81c

## WINDOW LEAD-IN

Fully weather resistant. 12" long by 1/2" wide. Ducco varnished covering. Clips at both ends. Shpg. wt., 2 oz.  
51 C 050. NET.....9c

## BELDEN INDOOR AERIAL WIRE



Type 8014. 25-ft. bank. No. 25 (13x36) extra flexible stranded. Plastic insulation. Wt., 2 oz.  
47 T 930. NET.....24c  
47 T 933. 500 ft. Shpg. wt., 2 lbs.....2.43

## AMPHENOL RG COAXIAL CABLE



Amphenol RG coaxial cable is designed to meet the most rigid commercial and military specifications. Highest quality material and strict production control assure the utmost in efficiency and dependability. Have flexible, low-loss polyethylene inner jacket covered by copper shield, with tough vinyl or polyethylene outer jacket. Impervious to acids, alkalis, oils and gasoline. Easily installed—can even be buried in ground. RG-54A/U is excellent low-loss mike cable. RG-11/U and RG-59/U are widely used as TV antenna lead-in; these two types and RG-8/U and RG-58/U are very popular for transmitting applications. Max. RF power at 30 mc: RG-8/U, 2000 watts; RG-11/U, 1400 watts; RG-59/U, 680 watts; RG-58/U, 430 watts. RG-22/U is 2-conductor type. See pages 151, 152, 155 and 160 for coaxial connectors. Write for special prices on 1000 ft. reels.

Stock No.	RG	Mfr's Type	Imp.	Mmf Per Ft.	O.D.	NET Per Ft.	100 Ft. For
49 W 460	8/U	21-004	52.0	29.5	.405	13 1/2c	12.84
49 W 469	9/U	21-005	51	30.0	.420	32c	31.00
49 W 470	11/U	21-007	75.0	20.5	.405	13c	12.00
49 W 465	22/U	21-038	95.0	16.0	.405	16 1/2c	15.54
49 W 480	54A/U	21-022	58.0	26.5	.250	8c	7.78
49 W 485	58/U	21-024	53.5	28.5	.195	8c	6.87
49 W 487	58A/U	21-199	50	29.0	.195	8 1/2c	7.60
49 W 490	59/U	21-025	73.0	21.0	.242	8c	6.94
49 W 488	62/U	21-026	93	13.5	.242	8c	7.21
49 W 489	71/U	21-029	93	13.5	.250	13 1/2c	12.94

Write for free Amphenol Catalog, 37 K 006.

## TELEPHONE WIRE



Twisted pair No. 19 solid tinned-copper wire, with 1/2" insulation and glazed-cotton braid. For extension speakers, intercoms, and similar types of applications. Shpg. wt., per 100 ft. 2 1/2 lbs.

2-CONDUCTOR		3-CONDUCTOR	
48 W 810. Per foot.....	4c	48 W 820. Per foot.....	6c
100 ft. or more. Per 100 ft.	3.3c	100 ft. or more. Per 100 ft.	5.00

3-CONDUCTOR EXTERIOR		R. C. TWISTED PAIR	
No. 19 solid 3-conductor inter-communication and telephone wire. For interior or exterior use. Two wires tinned, one wire black enameled for coding. Shpg. wt., 100 ft., 4 lbs.	5 1/2c	Low-cost lead-in. Excellent for noise-reducing doublet antenna systems. No. 18 twisted rubber-covered stranded wire, with 1/2" insulation. Shpg. wt., per 100 ft., 3 lbs.	3c
48 W 825. Per ft. NET.....	5 1/2c	48 W 850. Per ft. NET.....	3c
100 ft. or more, Per 100 ft.	4.53	100 ft. or more, Per 100 ft.	2.27

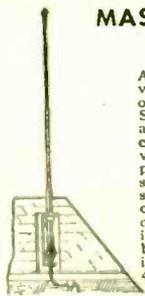
## TINNED SOLID COPPER WIRE

Fine quality, soft-drawn copper wire, tinned for easy soldering. For transmitting and receiving antennas. In 100' rolls. Wt., 2 1/4 lbs.

Stock No.	Gauge	NET	Stock No.	Gauge	NET
47 T 520	14	1.27	47 T 540	10	3.39
47 T 530	12	1.83			

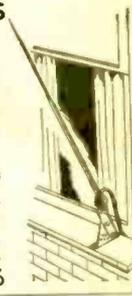
## MAST TYPE AM BROADCAST ANTENNAS

### UNIVERSAL MAST



A complete, 4-section, 12-foot vertical antenna for mounting on roof, window sill, or wall. Sturdily made of rust-proof admiralty brass. For broadcast or short-wave sets. Universal bracket permits permanent and convenient installation on soil pipe, window sill, chimney, roof, gables, cornices, etc. Includes all accessories for universal mounting: lead-in wire, ground wire, brackets, lightning arrester, insulators, and hardware. Wt., 4 1/2 lbs.  
97 CX 425. NET.....4.09

### WINDOW MAST



Easily installed window antenna. Sturdily made of rust-proof admiralty brass. Provides good reception for homes, apartments, hotels, etc. Adjustable base bracket for installing antenna in any position for best results. Telescope design—extends to 96". Three sections. Supplied ready to install. Includes mounting flange, insulator, and lead-in strip. Antenna is completely assembled, ready for use. Wt., 3 lbs.  
97 CX 452. NET.....2.06

### REPLACEMENT ANTENNA LOOP



Wound on rigid fiberboard form. Has lug terminals. Replaces antenna coil in battery and midjet sets or portables. Turns may be removed to match loop being replaced.  
Overall size, 6x8 1/4". Shpg. wt., 8 oz.  
51 C 040. NET EACH.....53c  
10 for.....4.75

### MINIATURE ANTENNA LOOP

For use where space is limited. Covers standard broadcast band with midjet variable capacitor sets. 9x38 Litz wire for low loss. 214 microhenries; high Q of over 230. Two 4" leads. Overall size, 3 1/2 x 5 1/4". Shpg. wt., 8 oz.  
51 C 035. 10 for 3.60.  
NET EACH.....40c

### CABLE LACING CORD

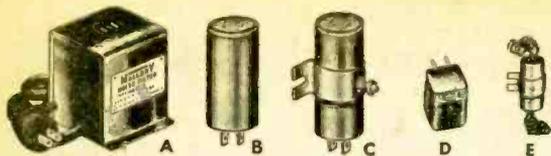


Genuine Barbour's waxed linen twine. Hard-twist gray 8-cord twine. 50 lb. test. For binding cables in switchboards, transmitters, etc. Makes tracing of circuit simpler, and appearance of unit more professional. Ideal for industry and lab—as well as experimenter and builder. 1 pound spool—approximately 450 yards. Shpg. wt., 1 1/4 lbs.  
49 T 245. NET.....3.08

### BELDEN LITZ WIRE

Type 8817. 5x44 Celenamel with one nylon wrap. For rewinding antenna primaries, hand-winding RF coils, and similar applications. Outside diameter; .008". 100 ft. spool. Shpg. wt., 1 oz.  
48 T 981. NET.....23c

# Interference Filters



## MALLORY INTERFERENCE FILTERS HEAVY-DUTY TYPES

**Type LC5, Fig. A.** Inductance-capacity filter for eliminating extremely severe interference. Has terminal for grounding to frame of motor or appliance. Rated 115-220 volts AC-DC, 5 amps. In rectangular housing with mounting flanges. Size, 2 1/4 x 3 1/4 x 3 3/4". Shpg. wt., 1 1/4 lbs. 70 B 328. List Price, \$11.25. NET **6.61**

**Type LC10, Fig. A.** Inductance-capacity filter as above but rated for motors and appliances drawing up to 10 amps. Size, 2 1/4 x 3 1/4 x 3 3/4". Shpg. wt., 2 1/2 lbs. 70 B 320. List Price, \$15.00. NET **8.82**

### PLUG-IN TYPES

**Type X3, Fig. B.** Capacitor type filter for use at radio or appliance. For eliminating light interference from electric fans, food mixers and grinders, etc. Plugs into any AC or DC outlet; has receptacle for appliance plug. Rated 110-220 volts AC or DC, 5 amps. Size, 1 1/4" dia. x 2 3/4". Shpg. wt., 5 oz. 70 B 331. List, \$1.80. NET **1.06**

**Type X6, Fig. D.** Single capacity filter of special low impedance design for light interference. Housed in molded plastic case. To be used on cord plug of appliance causing interference. Rated at 125 volts AC or DC, 15 amps. Size, 1 1/4 x 2 1/4". Shpg. wt., 6 oz. 70 B 332. List, \$1.60. NET **94c**

### WIRE LEAD TYPES

**Type W7SP, Fig. E.** Dual capacity filter designed for mounting directly on appliance. For suppression of interference from drink mixers, electric drills, calculating and bookkeeping machines, cash registers, etc. Size, 1/2" dia. x 2". With 6" insulated leads. For 110-220 volts AC or DC. Shpg. wt., 4 oz. 70 B 325. List, \$1.80. NET **1.06**

**Type 28A, Fig. E.** Dual inductance-capacity filter for suppressing severe interference from electric fans, diathermy machines, fluorescent lamps, neon signs, etc. 6" wire lead connections. Size, 1 1/2" dia. x 1 7/8". Rated 110-220 volts AC or DC, 3 amps. Shpg. wt., 8 oz. 70 B 330. List, \$3.00. NET **1.76**

## MEISSNER FILTERS AND WAVE TRAPS

### LINE FILTER



**Type 15-7515.** Combination inductor-capacitor type filter, which filters both sides of the line. Components selected for selective elimination of most types of radio interference. Rated at 110 volts AC or DC. Handles up to 3 amperes. For most radios and phono combinations, food mixers, electric razors, vacuum cleaners, office machines, etc. To be used at source of interference. Size, 4 1/2 x 3 1/2 x 2". Shpg. wt., 8 oz. 60 G 242. List, \$7.60. NET **4.47**

### WAVE TRAPS



High-Q tunable resonant circuits for elimination or reduction of signals interfering with FM or TV reception. Connect in antenna transmission line, at the receiver. "Tune out" unwanted signals from FM, taxicab, Amateur, commercial telephone, and other transmitters. When selecting wave trap from listing below, choose the type whose range includes the frequency of the interfering signal. All are designed for use with receivers having following balanced or unbalanced antenna inputs: 50, 72, 300, 400, and 500 ohms. 4 3/4 x 3 1/2". Wt., 4 oz. 60 C 203. Type 15-7510. 6-13 mc. | 60 C 208. Type 15-7513. 54-108 mc. 60 C 204. Type 15-7511. 13-27 mc. | 60 C 210. Type 15-7514. 108-216 mc. Shpg. wt., 8 oz. 60 C 208. Type 15-7512. 27-54 mc. | List, \$6.00. NET EACH **3.53**

### GENERAL ELECTRIC TV-FM WAVE TRAPS



**Type RLW-007.** IF wave trap designed to reduce or eliminate interference on TV sets caused by signals at frequencies from 41 to 47 mc—such as police, fire and other mobile radios. Such interference can be recognized by herringbone or cross-hatch pattern on screen, which cannot be tuned out. For IF of 41-47 mc. Size, 3 1/4 x 2 1/4 x 1 1/4". Shpg. wt., 8 oz. 60 C 243. List, \$4.50. NET **2.65**

**Type RLW-005.** FM wave trap designed especially to reduce television interference caused by strong FM broadcasting stations operating in the 88 to 108 mc channel. A complete unit, it is readily installed without special tools or equipment. Can be used on all TV sets having a 300 ohm input system. Size, 3 x 2 x 2". Shpg. wt., 8 oz. 60 C 244. List, \$4.25. NET **2.50**



## CORNELL-DUBILIER "QUIETONE" FILTERS FOR INSTALLATION AT RADIO

**Type IF-18, Fig. A.** An all-wave capacitive-inductive type filter for suppression of severe interference. Rated at 115 volts AC-DC, 5 amps. Bakelite case, 6 x 3 1/4 x 2 1/4". With cord and plug. Shpg. wt., 4 lbs. 70 B 120. List, \$9.20. NET **5.41**

**Type IF-4, Fig. D.** For medium interference caused by fluorescent lights, electric shavers, and similar devices on small receivers such as AC-DC midset sets, etc. Rated at 115 volts AC-DC, 5 amps. Connects between power line and radio set. 1 1/2" dia. x 2". Shpg. wt., 3 oz. 70 B 125. List, \$1.25. NET **.73c**

### FOR INSTALLATION AT APPLIANCE

**Type IF-6, Fig. D.** Plug type filter for moderate interference. Especially suitable for fluorescent lights, and similar sources of interference. Connects between power line and receiver. Rated at 115 volts AC-DC, 5 amps. Size, 1 1/4" dia. x 2". Shpg. wt., 6 oz. 70 B 126. List, \$1.95. NET **1.15**

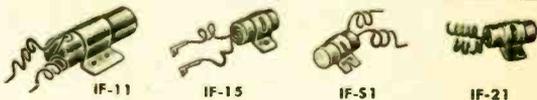
**Type IF-19, Fig. C.** Capacitive-inductive type filter for use where interference is severe. Rated 115 volts AC-DC, 5 amps. Bakelite case, 4 1/2 x 2 1/4". Terminal for ground connection. Shpg. wt., 1 1/2 lbs. 70 B 121. List, \$7.70. NET **4.53**

### FOR INDUSTRIAL APPLICATIONS

**Type IF-24, Fig. E.** Dual unit capacitive filter for eliminating noise from fluorescent lights. 115 v., AC-DC. Shpg. wt., 8 oz. 70 B 122. List, \$1.25. NET **.73c**

**Type IF-54, Fig. F.** General purpose capacitive-inductive filter for circuits of 2 amps or less. Rated 110-220 v., AC-DC. Wt., 8 oz. 70 B 114. List, \$2.50. NET **1.47**

**Type IF-7A, Fig. B.** Capacitive-inductive filter for severe interference caused by motors, oil-burners, etc. For single phase 110-220 v., AC-DC. 5 amps. Size, 6 x 6 x 4". Shpg. wt., 9 lbs. 70 B 124. List, \$13.75. NET **8.08**

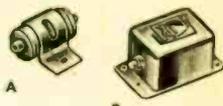


### SPRAGUE INTERFERENCE UNITS

**Type IF.** Compact multi-section interference filters for suppressing man-made radio and TV interference. Small and completely self-contained. \*For use on motors over 1 horsepower and up to 220 volts AC or DC. Easily installed. Average shpg. wt., 8 oz.

Stock No.	Mfr's Type	*Volts	Dia. x Length	Sections	List	NET EACH
70 B 100	IF-15	220	1 x 2 3/4"	Triple	\$2.60	1.53
70 B 104	IF-11	220	1 1/4 x 3 1/2"	Dual	7.80	4.59
70 B 105	IF-21	220	1 1/4 x 3 1/2"	Dual	1.75	1.03
70 B 113	IF-51	220	3/4 x 2 1/2"	Single	1.15	.68
70 B 112	IF-37	220	1 x 2 3/4"	Triple	2.25	1.32

**Type Filterol.** Designed for connection in series with power supply lines of interference-producing industrial devices. A 3-terminal network of matched chokes and coils with the case as one terminal. Filter should have higher rating than the continuous operating current of the device. Type 4 utilizes "By-pass" capacitor, provides added attenuation at frequencies above 5 mc. Type 1, 2, 3, fig. B. Type 4, fig. A. Average shpg. wt., 1 lb.



Stock No.	Mfr's Type	Amps	Volts	Size	List	NET EACH
70 B 091	1	1	115	7/8 x 1 1/4 x 1 3/4"	\$13.50	7.94
70 B 092	2	10	115	1 1/4 x 2 x 2"	14.80	8.70
70 B 093	3	35	115	1 7/8 x 2 1/4 x 3 1/4"	27.40	16.11
70 B 094	4	20	115	1" dia. x 1 1/2" long	3.05	1.79

### MILLER TV AND FM WAVE TRAPS

New high-Q series-resonant wave traps for elimination of interference and undesirable images in TV and FM receivers. Tune to the frequency of the interfering signal to reduce herringbone patterns, streaks, or tearing of the picture. With FM receivers, greatly reduces cross-talk from strong interfering station. Shpg. wt., 13 oz. Size, 1 1/2" wide x 1 1/4" long x 3/8" high.



Stock No.	Mfr's Type	Freq. Range	List	NET EACH
60 H 211	6163	150-250 mc.	\$4.40	
60 H 212	6164	75-80 mc.	4.40	2.59
60 H 213	6165	40-80 mc.	4.40	
60 H 214	6166	20-40 mc.	4.40	

# Waldom Speaker Cones

## ALLIED OFFERS COMPLETE SPEAKER SERVICE

### EXACT DUPLICATE CONES

ALLIED supplies replacement cones, accurately designed to match the originals. One-piece material and precise forming provide good tone quality. Voice coils are exact duplicates. Cones not listed may be ordered by sending old cone and voice coil. Include make and model number of set and speaker, speaker size, and identifying marks. Send remittance (including postage) with order. Delivery 30 days. Shpg. wt., 2 lbs.

Speaker Size	Cone	Speaker Size	Cone
4" to 6"	1.00	14" to 15"	3.00
6 1/2" to 9"	1.50	4"x6" oval	1.30
10"	2.00	5"x7" oval	1.50
11" to 12"	2.20	6"x9" oval	1.70

### SPEAKER REPAIR SERVICE

Skilled technicians will completely rebuild all your old speakers for the small charges listed below. Ship speaker to us prepaid and send remittance (including postage) with order. Allow 30 to 45 days for delivery. Additional charges for field coil repair or replacement are as follows: \$1.25 for 4" to 9" speakers; \$2.25 for 10" to 12" speakers. Field coils welded into speaker frames cannot be repaired or replaced.

Speaker Size	Complete Repair Service	Speaker Size	Complete Repair Service
4" to 9"	1.55	14" to 15"	3.85
6 1/2" to 9"	2.55	4"x6" oval	2.00
11" to 12"	3.05	5"x7" oval	2.55
		6"x9" oval	2.55



**HOW TO ORDER STOCK CONES BELOW.** To determine correct replacement cone for your speaker, measure your old cone and select the cone you require from the listings below. "O.D." is the outside diameter of the speaker; "V.C.I.D." is the inside diameter of the voice coil. All dimensions are in inches. Spider type: \*Flat, †cup, ‡point. ††Use original spider. With flexible voice coil leads.

### 3 1/2" to 5 1/4" Cones

Stock No.	Mfr's Type	O.D.	V.C. I.D.	Cone Depth	Spider O.D.
82 D 655	15W98	3 1/4	3/8	2 3/4	1 1/2*
82 D 708	18W94	3 1/2	3/8	2 3/4	1 1/2*
82 D 588	18W05	4	3/8	1	1 1/2†
82 D 709	18W69	4	3/8	1 1/2	1 1/2†
82 D 707	19W16	4	3/8	1 1/2	1 1/2†
82 D 502	16W23	4	3/8	1 1/2	1 1/2†
82 D 505	15W28	4	3/8	1 1/2	1 1/2†
82 D 650	15W55	4	3/8	1 1/2	1 1/2†
82 D 503	16W16	4	3/8	1 1/2	1 1/2†
82 D 500	16W19	4	3/8	1 1/2	1 1/2†
82 D 507	18W32	4	3/8	1 1/2	1 1/2†
82 D 508	17W68	4	3/8	1 1/2	1 1/2†
82 D 509	17W38	4	3/8	1 1/2	1 1/2†
82 D 533	17W26	4	3/8	1 1/2	1 1/2†
82 D 620	15W42	4	3/8	1 1/2	1 1/2†
82 D 622	16W14	4	3/8	1 1/2	1 1/2†
82 D 532	17W62	4 1/2	3/8	1 1/2	1 1/2†
82 D 710	18W34	4 1/2	3/8	1 1/2	1 1/2†
82 D 711	18W50	4 1/2	3/8	1 1/2	1 1/2†

ABOVE CONES, NET EACH..... 71c

82 D 657	17W18	5	3/8	1 3/4	2 1/2*
82 D 525	15W89	5	3/8	1 3/4	2 1/2*
82 D 517	14W91	5	3/8	1 3/4	2 1/2*
82 D 510	17W10	5	3/8	1 3/4	2 1/2*
82 D 530	14W73	5	1/2	1 1/2	2 1/4*
82 D 519	16W26	5	3/8	1 1/2	2*
82 D 697	16W99	5	3/8	1 1/2	2*
82 D 526	15W84	5	3/8	1 1/2	1 1/2*
82 D 583	17W04	5	3/8	1 1/2	1 1/2*
82 D 529	15W07	5	3/8	1 1/2	2*
82 D 531	16W85	5	3/8	1 3/4	2 1/2*
82 D 599	18W67	5	3/8	1 3/4	1 1/2†
82 D 619	18W23	5	3/8	1 3/4	1 1/2†
82 D 623	18W74	5	3/8	1 3/4	1 1/2†
82 D 630	15W34	5	3/8	1 1/2	1 1/2*
82 D 516	15W03	5 1/4	3/4	1 1/2	2 1/4*
82 D 633	15W29	5 1/4	3/4	1 1/2	2 1/4*
82 D 634	14W89	5 1/4	3/4	1 3/4	2 1/2*
82 D 584	16W73	5 1/4	3/4	1 3/4	1 1/2†

ABOVE CONES, NET EACH..... 88c

### SPEAKER CONE CEMENT



Cements speaker cones, spiders, paper rings and felt to speaker frames. Dries quickly; vibration-proof. In handy, flexible-metal 2-oz. tube. Shpg. wt., 6 oz.

43 N 101. NET..... 35c

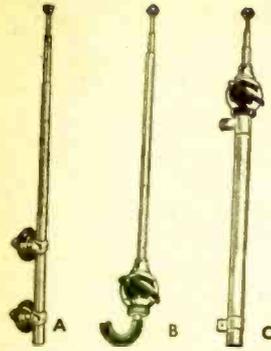
### CENTERING SHIMS



For use when replacing or centering speaker cones. Following sizes (4 each): .005; .01; .0125; .015; .0175; .02; .025; .03125; .0375; .04375; .05; .05625; .0625; .06875; .075; .08125; .0875; .09375; .1; .10625; .1125; .11875; .125; .13125; .1375; .14375; .15; .15625; .1625; .16875; .175; .18125; .1875; .19375; .2; .20625; .2125; .21875; .225; .23125; .2375; .24375; .25; .25625; .2625; .26875; .275; .28125; .2875; .29375; .3; .30625; .3125; .31875; .325; .33125; .3375; .34375; .35; .35625; .3625; .36875; .375; .38125; .3875; .39375; .4; .40625; .4125; .41875; .425; .43125; .4375; .44375; .45; .45625; .4625; .46875; .475; .48125; .4875; .49375; .5; .50625; .5125; .51875; .525; .53125; .5375; .54375; .55; .55625; .5625; .56875; .575; .58125; .5875; .59375; .6; .60625; .6125; .61875; .625; .63125; .6375; .64375; .65; .65625; .6625; .66875; .675; .68125; .6875; .69375; .7; .70625; .7125; .71875; .725; .73125; .7375; .74375; .75; .75625; .7625; .76875; .775; .78125; .7875; .79375; .8; .80625; .8125; .81875; .825; .83125; .8375; .84375; .85; .85625; .8625; .86875; .875; .88125; .8875; .89375; .9; .90625; .9125; .91875; .925; .93125; .9375; .94375; .95; .95625; .9625; .96875; .975; .98125; .9875; .99375; 1; 1.00625; 1.0125; 1.01875; 1.025; 1.03125; 1.0375; 1.04375; 1.05; 1.05625; 1.0625; 1.06875; 1.075; 1.08125; 1.0875; 1.09375; 1.1; 1.10625; 1.1125; 1.11875; 1.125; 1.13125; 1.1375; 1.14375; 1.15; 1.15625; 1.1625; 1.16875; 1.175; 1.18125; 1.1875; 1.19375; 1.2; 1.20625; 1.2125; 1.21875; 1.225; 1.23125; 1.2375; 1.24375; 1.25; 1.25625; 1.2625; 1.26875; 1.275; 1.28125; 1.2875; 1.29375; 1.3; 1.30625; 1.3125; 1.31875; 1.325; 1.33125; 1.3375; 1.34375; 1.35; 1.35625; 1.3625; 1.36875; 1.375; 1.38125; 1.3875; 1.39375; 1.4; 1.40625; 1.4125; 1.41875; 1.425; 1.43125; 1.4375; 1.44375; 1.45; 1.45625; 1.4625; 1.46875; 1.475; 1.48125; 1.4875; 1.49375; 1.5; 1.50625; 1.5125; 1.51875; 1.525; 1.53125; 1.5375; 1.54375; 1.55; 1.55625; 1.5625; 1.56875; 1.575; 1.58125; 1.5875; 1.59375; 1.6; 1.60625; 1.6125; 1.61875; 1.625; 1.63125; 1.6375; 1.64375; 1.65; 1.65625; 1.6625; 1.66875; 1.675; 1.68125; 1.6875; 1.69375; 1.7; 1.70625; 1.7125; 1.71875; 1.725; 1.73125; 1.7375; 1.74375; 1.75; 1.75625; 1.7625; 1.76875; 1.775; 1.78125; 1.7875; 1.79375; 1.8; 1.80625; 1.8125; 1.81875; 1.825; 1.83125; 1.8375; 1.84375; 1.85; 1.85625; 1.8625; 1.86875; 1.875; 1.88125; 1.8875; 1.89375; 1.9; 1.90625; 1.9125; 1.91875; 1.925; 1.93125; 1.9375; 1.94375; 1.95; 1.95625; 1.9625; 1.96875; 1.975; 1.98125; 1.9875; 1.99375; 2; 2.00625; 2.0125; 2.01875; 2.025; 2.03125; 2.0375; 2.04375; 2.05; 2.05625; 2.0625; 2.06875; 2.075; 2.08125; 2.0875; 2.09375; 2.1; 2.10625; 2.1125; 2.11875; 2.125; 2.13125; 2.1375; 2.14375; 2.15; 2.15625; 2.1625; 2.16875; 2.175; 2.18125; 2.1875; 2.19375; 2.2; 2.20625; 2.2125; 2.21875; 2.225; 2.23125; 2.2375; 2.24375; 2.25; 2.25625; 2.2625; 2.26875; 2.275; 2.28125; 2.2875; 2.29375; 2.3; 2.30625; 2.3125; 2.31875; 2.325; 2.33125; 2.3375; 2.34375; 2.35; 2.35625; 2.3625; 2.36875; 2.375; 2.38125; 2.3875; 2.39375; 2.4; 2.40625; 2.4125; 2.41875; 2.425; 2.43125; 2.4375; 2.44375; 2.45; 2.45625; 2.4625; 2.46875; 2.475; 2.48125; 2.4875; 2.49375; 2.5; 2.50625; 2.5125; 2.51875; 2.525; 2.53125; 2.5375; 2.54375; 2.55; 2.55625; 2.5625; 2.56875; 2.575; 2.58125; 2.5875; 2.59375; 2.6; 2.60625; 2.6125; 2.61875; 2.625; 2.63125; 2.6375; 2.64375; 2.65; 2.65625; 2.6625; 2.66875; 2.675; 2.68125; 2.6875; 2.69375; 2.7; 2.70625; 2.7125; 2.71875; 2.725; 2.73125; 2.7375; 2.74375; 2.75; 2.75625; 2.7625; 2.76875; 2.775; 2.78125; 2.7875; 2.79375; 2.8; 2.80625; 2.8125; 2.81875; 2.825; 2.83125; 2.8375; 2.84375; 2.85; 2.85625; 2.8625; 2.86875; 2.875; 2.88125; 2.8875; 2.89375; 2.9; 2.90625; 2.9125; 2.91875; 2.925; 2.93125; 2.9375; 2.94375; 2.95; 2.95625; 2.9625; 2.96875; 2.975; 2.98125; 2.9875; 2.99375; 3; 3.00625; 3.0125; 3.01875; 3.025; 3.03125; 3.0375; 3.04375; 3.05; 3.05625; 3.0625; 3.06875; 3.075; 3.08125; 3.0875; 3.09375; 3.1; 3.10625; 3.1125; 3.11875; 3.125; 3.13125; 3.1375; 3.14375; 3.15; 3.15625; 3.1625; 3.16875; 3.175; 3.18125; 3.1875; 3.19375; 3.2; 3.20625; 3.2125; 3.21875; 3.225; 3.23125; 3.2375; 3.24375; 3.25; 3.25625; 3.2625; 3.26875; 3.275; 3.28125; 3.2875; 3.29375; 3.3; 3.30625; 3.3125; 3.31875; 3.325; 3.33125; 3.3375; 3.34375; 3.35; 3.35625; 3.3625; 3.36875; 3.375; 3.38125; 3.3875; 3.39375; 3.4; 3.40625; 3.4125; 3.41875; 3.425; 3.43125; 3.4375; 3.44375; 3.45; 3.45625; 3.4625; 3.46875; 3.475; 3.48125; 3.4875; 3.49375; 3.5; 3.50625; 3.5125; 3.51875; 3.525; 3.53125; 3.5375; 3.54375; 3.55; 3.55625; 3.5625; 3.56875; 3.575; 3.58125; 3.5875; 3.59375; 3.6; 3.60625; 3.6125; 3.61875; 3.625; 3.63125; 3.6375; 3.64375; 3.65; 3.65625; 3.6625; 3.66875; 3.675; 3.68125; 3.6875; 3.69375; 3.7; 3.70625; 3.7125; 3.71875; 3.725; 3.73125; 3.7375; 3.74375; 3.75; 3.75625; 3.7625; 3.76875; 3.775; 3.78125; 3.7875; 3.79375; 3.8; 3.80625; 3.8125; 3.81875; 3.825; 3.83125; 3.8375; 3.84375; 3.85; 3.85625; 3.8625; 3.86875; 3.875; 3.88125; 3.8875; 3.89375; 3.9; 3.90625; 3.9125; 3.91875; 3.925; 3.93125; 3.9375; 3.94375; 3.95; 3.95625; 3.9625; 3.96875; 3.975; 3.98125; 3.9875; 3.99375; 4; 4.00625; 4.0125; 4.01875; 4.025; 4.03125; 4.0375; 4.04375; 4.05; 4.05625; 4.0625; 4.06875; 4.075; 4.08125; 4.0875; 4.09375; 4.1; 4.10625; 4.1125; 4.11875; 4.125; 4.13125; 4.1375; 4.14375; 4.15; 4.15625; 4.1625; 4.16875; 4.175; 4.18125; 4.1875; 4.19375; 4.2; 4.20625; 4.2125; 4.21875; 4.225; 4.23125; 4.2375; 4.24375; 4.25; 4.25625; 4.2625; 4.26875; 4.275; 4.28125; 4.2875; 4.29375; 4.3; 4.30625; 4.3125; 4.31875; 4.325; 4.33125; 4.3375; 4.34375; 4.35; 4.35625; 4.3625; 4.36875; 4.375; 4.38125; 4.3875; 4.39375; 4.4; 4.40625; 4.4125; 4.41875; 4.425; 4.43125; 4.4375; 4.44375; 4.45; 4.45625; 4.4625; 4.46875; 4.475; 4.48125; 4.4875; 4.49375; 4.5; 4.50625; 4.5125; 4.51875; 4.525; 4.53125; 4.5375; 4.54375; 4.55; 4.55625; 4.5625; 4.56875; 4.575; 4.58125; 4.5875; 4.59375; 4.6; 4.60625; 4.6125; 4.61875; 4.625; 4.63125; 4.6375; 4.64375; 4.65; 4.65625; 4.6625; 4.66875; 4.675; 4.68125; 4.6875; 4.69375; 4.7; 4.70625; 4.7125; 4.71875; 4.725; 4.73125; 4.7375; 4.74375; 4.75; 4.75625; 4.7625; 4.76875; 4.775; 4.78125; 4.7875; 4.79375; 4.8; 4.80625; 4.8125; 4.81875; 4.825; 4.83125; 4.8375; 4.84375; 4.85; 4.85625; 4.8625; 4.86875; 4.875; 4.88125; 4.8875; 4.89375; 4.9; 4.90625; 4.9125; 4.91875; 4.925; 4.93125; 4.9375; 4.94375; 4.95; 4.95625; 4.9625; 4.96875; 4.975; 4.98125; 4.9875; 4.99375; 5; 5.00625; 5.0125; 5.01875; 5.025; 5.03125; 5.0375; 5.04375; 5.05; 5.05625; 5.0625; 5.06875; 5.075; 5.08125; 5.0875; 5.09375; 5.1; 5.10625; 5.1125; 5.11875; 5.125; 5.13125; 5.1375; 5.14375; 5.15; 5.15625; 5.1625; 5.16875; 5.175; 5.18125; 5.1875; 5.19375; 5.2; 5.20625; 5.2125; 5.21875; 5.225; 5.23125; 5.2375; 5.24375; 5.25; 5.25625; 5.2625; 5.26875; 5.275; 5.28125; 5.2875; 5.29375; 5.3; 5.30625; 5.3125; 5.31875; 5.325; 5.33125; 5.3375; 5.34375; 5.35; 5.35625; 5.3625; 5.36875; 5.375; 5.38125; 5.3875; 5.39375; 5.4; 5.40625; 5.4125; 5.41875; 5.425; 5.43125; 5.4375; 5.44375; 5.45; 5.45625; 5.4625; 5.46875; 5.475; 5.48125; 5.4875; 5.49375; 5.5; 5.50625; 5.5125; 5.51875; 5.525; 5.53125; 5.5375; 5.54375; 5.55; 5.55625; 5.5625; 5.56875; 5.575; 5.58125; 5.5875; 5.59375; 5.6; 5.60625; 5.6125; 5.61875; 5.625; 5.63125; 5.6375; 5.64375; 5.65; 5.65625; 5.6625; 5.66875; 5.675; 5.68125; 5.6875; 5.69375; 5.7; 5.70625; 5.7125; 5.71875; 5.725; 5.73125; 5.7375; 5.74375; 5.75; 5.75625; 5.7625; 5.76875; 5.775; 5.78125; 5.7875; 5.79375; 5.8; 5.80625; 5.8125; 5.81875; 5.825; 5.83125; 5.8375; 5.84375; 5.85; 5.85625; 5.8625; 5.86875; 5.875; 5.88125; 5.8875; 5.89375; 5.9; 5.90625; 5.9125; 5.91875; 5.925; 5.93125; 5.9375; 5.94375; 5.95; 5.95625; 5.9625; 5.96875; 5.975; 5.98125; 5.9875; 5.99375; 6; 6.00625; 6.0125; 6.01875; 6.025; 6.03125; 6.0375; 6.04375; 6.05; 6.05625; 6.0625; 6.06875; 6.075; 6.08125; 6.0875; 6.09375; 6.1; 6.10625; 6.1125; 6.11875; 6.125; 6.13125; 6.1375; 6.14375; 6.15; 6.15625; 6.1625; 6.16875; 6.175; 6.18125; 6.1875; 6.19375; 6.2; 6.20625; 6.2125; 6.21875; 6.225; 6.23125; 6.2375; 6.24375; 6.25; 6.25625; 6.2625; 6.26875; 6.275; 6.28125; 6.2875; 6.29375; 6.3; 6.30625; 6.3125; 6.31875; 6.325; 6.33125; 6.3375; 6.34375; 6.35; 6.35625; 6.3625; 6.36875; 6.375; 6.38125; 6.3875; 6.39375; 6.4; 6.40625; 6.4125; 6.41875; 6.425; 6.43125; 6.4375; 6.44375; 6.45; 6.45625; 6.4625; 6.46875; 6.475; 6.48125; 6.4875; 6.49375; 6.5; 6.50625; 6.5125; 6.51875; 6.525; 6.53125; 6.5375; 6.54375; 6.55; 6.55625; 6.5625; 6.56875; 6.575; 6

# Auto Antennas

## WARD AUTO RADIO ANTENNAS



### SIDE COWL MOUNTS

Fig. A—MODEL SC-6

"Air Queen." Chrome-plated, admiralty brass, side cowl antenna. Three sections—extends to 66". Low-loss 2-stanchion mount with bakelite and chrome insulators. Silver-to-silver contacts. New positive shielding eliminates use of shield can. High signal to noise ratio. Detachable 36" polyethylene insulated, vinylite covered, high "Q" lead-in, with bayonet adapter. Includes complete conversion kit for irregular type car bodies. Shpg. wt., 2 lbs. 97 CX 215. List \$5.45. NET

3.20

Fig. A—MODEL SC-8

"Long Ranger" side cowl antenna. Popular in low signal areas where its extra length provides high sensitivity for better reception. Telescopes into four sections and extends to 100". 2-stanchion mount has admiralty brass insulators with chrome caps. Silver-to-silver contacts. 36" vinylite-covered high "Q" lead-in is polyethylene insulated and has bayonet adapter. With conversion kit for irregular type car bodies. Wt., 2 lbs. 97 CX 216. List, \$7.65. NET

4.50

Fig. A—MODEL SC-3A

"Master" side cowl antenna with "Ex-On" installation feature. Has three telescoping sections which extend to 66". Heavy-wall, chrome-plated brass tubing construction. Two-stanchion mounting with molded bakelite insulators assure permanent, non-rattle fixture. Rubber pads keep out dirt and moisture. 34" vinylite-covered, shielded coaxial lead-in. Ball-tip design greatly reduces possibility of interference from static charges. Complete with mounting instructions. Shpg. wt., 1 1/4 lbs. 97 CX 225. List, \$4.05. NET

2.38

### TOP COWL AND FENDER MOUNTS

Fig. B—MODEL TCF-3B

"Eight Ball" design top cowl antenna. Good sensitivity for low signal areas. Quickly and easily installed completely from outside the car. Will fit any model or type of car perfectly. Has three sections—extends to 56". Constructed of sturdy, chrome-plated brass tubing for attractive appearance. 36" polyethylene-insulated, vinylite covered, high "Q" lead-in—includes coaxial connector for 100% shielding, and bayonet adapter. Complete with mounting instructions. Shpg. wt., 1 1/4 lbs. 97 CX 221. List, \$5.90. NET

3.47

TCF-3C, identical to the Model TCF-3B "Eight Ball" auto antenna described above, but furnished with 54" lead-in.

97 CX 213. List, \$6.15. NET

3.62

Fig. B—MODEL TA-3

The utmost in auto antenna economy! This new Ward high-quality, top-cowl auto antenna offers very attractive appearance and delivers exceptionally fine performance—at a price that makes it a value sensation. Fits top cowl of any model of car. Designed for quick, easy installation completely from outside of car. Has three sections; telescopes to 56". Constructed of sturdy, highly durable tubing; chrome plating provides high resistance to dust, grit and humidity. Has "Eight Ball" mounting insulator. Supplied with 36" polyethylene-insulated, vinylite-covered, high "Q" lead-in with coaxial-type connector. Wt., 1 lb. 92 CX 000. List, \$3.95. NET

2.32

Fig. B—MODEL TB-3

Some as above, but supplied with 54" lead-in. With installation instructions. Shpg. wt., 1 1/4 lbs. 92 CX 001. List, \$4.15. NET

2.54

Fig. C—MODEL DCF-3

"Phantom" type antenna with universal split-ball design for top cowl or fender mounting. Has three telescoping sections which extend to 56". When telescoped, antenna shortens to only 3 1/2". Sturdily constructed of gleaming, chrome-plated brass tubing for handsome appearance. 36" polyethylene-insulated coaxial lead-in is vinylite covered. Complete with coaxial lead connector and bayonet adapter. Universal mounting bracket supplied for easy, non-slip attachment. May be mounted on any model car. Shpg. wt., 2 lbs. 97 CX 222. List, \$7.65. NET

4.50

### ANTENNA LEAD EXTENSION

Type C-8, 12' shielded extension cable for Ward auto radio antennas. For use with Models TCF-3B, DCF-3 and other fender-mounting models. Shpg. wt., 5 oz. 49 C 555. List, 90c. NET

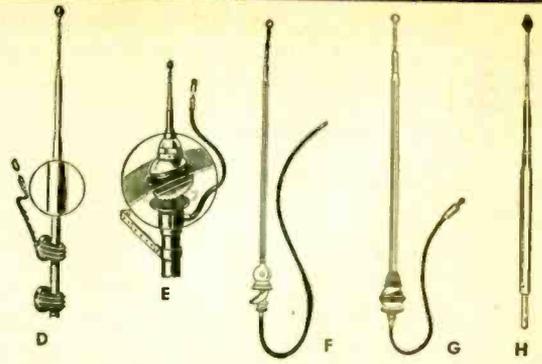
53c



### SNYDER REAR-8 DUAL ANTENNA KIT FOR REAR FENDER INSTALLATION

New, high-efficiency dual auto antennas designed for installation on rear fenders. Remote location of antennas from ignition system improves reception and allows unobstructed vision through windshield. Kit consists of 2 complete, telescoping antenna staffs—13 1/2" long collapsed and 27" long extended—and high "Q" coaxial cable harness with connectors attached. Harness has 15' length from rear to radio and 7' length for interconnecting dual antennas. 7' section has T-connector for lead to radio. No splicing or taping is required. 5 body cable clips for securing cable to car. Antennas have swivel type bases to permit mounting at any angle. Beautiful chrome finish and modern styling. Shpg. wt., 3 lbs. 92 CX 020. NET

5.82



## NEMCO (ICA) AUTO RADIO ANTENNAS

Nemco auto antennas listed below feature chrome-plated Admiralty brass tubing, rattleproof construction, and low-loss shielded leads. They are equipped with both Delco and Motorola auto radio fittings.

Fig. D—HEAVY-DUTY SIDE COWL ANTENNA

Type NCP63. 4-section telescopic type. Extends from 36" to 100". Extra large brass tubing, with heavy triple-chrome plating. Ideal 6 and 10-meter Ham antenna. Requires two holes for mounting. With 36" shielded cable. Shpg. wt., 2 lbs. 97 CX 021. NET EACH

4.09

10 or more, EACH

3.68

Fig. E—DISAPPEARING TYPE ANTENNA

Type NF32. Streamlined "disappearing" antenna. Can be used on all model cars. 6 1/4" exposed antenna extends to 56". Swivel base permits angle adjustment to match contours of car. Triple-chrome-plated brass. With shielded cable. Shpg. wt., 1 1/4 lbs. 97 CX 023. NET EACH

4.09

10 or more, EACH

3.68

Fig. F—AUTO RADIO "BALL-TENNA"

This exceptionally versatile auto antenna can be mounted anywhere on any car, entirely from the outside. Universal application greatly simplifies mounting problems. Unique swivel-ball joint revolves in almost a complete circle. Quickly and easily installed. Simply insert, adjust rod to desired position, and secure. Rattle-proof performance and excellent reception in all types of weather. Sturdily constructed. Compact, graceful design has custom-made look that harmonizes with the lines of any car. Tubing of lustrous chrome-plated brass. Complete with 36" of low-loss, polyethylene-insulated cable. Type NSF26. 2-Section. Extends to 49". Shpg. wt., 1 lb. 97 CX 017. NET EACH

2.91

10 or more, EACH

2.62

Type NSF27. 3-Section. Extends to 62". Shpg. wt., 1 lb. 97 CX 018. NET EACH

3.50

10 or more, EACH

3.15

Fig. G—TOP FENDER AND COWL MOUNT ANTENNAS

New top fender or cowl mount antenna designed for quick and easy installation on all types and makes of cars—old or new. Complete installation can be made by one man. Mounts entirely from the outside. Swivel base permits tilting to conform to car body lines. Ruggedly constructed of sturdy, heavy chrome-plated Admiralty brass. Snug fitting sections can be adjusted to desired height for maximum signal pickup. Mounts securely—once fastened in desired position will not vibrate loose. Complete with 36" weather-proof shielded lead-in cable. Type NT60. 2-Section. Extends to 46". Wt. 1 lb. 92 CX 050. NET EACH

2.56

10 or more, EACH

2.30

Type NT65. 3-Section. Extends to 60". Wt. 1 1/2 lbs. 92 CX 051. NET EACH

3.00

10 or more, EACH

2.70

Type NT43. 4-Section. Extends to 88". Wt. 2 lbs. 92 CX 052. NET EACH

4.09

10 or more, EACH

3.68

Fig. H—REPLACEMENT ANTENNA ROD

Type NA1500. Replaces windshield-mount antennas. In 3 telescopic sections. Extends 15" to 36". Chrome-plated brass. Shpg. wt., 14 oz. 97 C 024. For Buicks, Hudsons, Packards. NET

1.73

10 or more, EACH

1.56

### UNIVERSAL EXTENSION CABLES

Type NL715. 12' lead-in extension for above antennas. Wt., 4 oz. 97 C 033. NET

50c

Type NL716. 18' lead-in extension for above antennas. Wt., 5 oz. 92 C 053. NET

68c

Type NL717. 24' lead-in extension for above antennas. Wt., 6 oz. 97 C 034. NET

88c

Type NL718. 36' lead-in extension for above antennas. Wt., 8 oz. 92 C 054. NET

1.09

# Vibrators - Auto Accessories

## MALLORY REPLACEMENT VIBRATORS

Mallory precision vibrators, backed by years of outstanding performance, offer the dependability, the long life and the trouble-free service required for all vibrator applications. These carefully designed, precision units provide the lowest cost-per-hour of actual use. Their springs are fabricated of high-grade clock-spring steel; held in perfect alignment by a rugged frame.

105-strand lead wire virtually defies vibration—connections stay firmly intact. If Mallory type number is not known, refer to **Vibrator Guide** listed below, or order from ALLIED, stating make, model, tube line-up of set, and part number of original vibrator. Average shpg. wt., 8 oz.



Stock No.	Mfr's Type	Volts	Size	List	NET EACH
56 P 000	4-4	6	1 1/2 x 2 1/2	\$ 2.50	1.47
56 P 020	245	6	1 1/2 x 3 1/2	7.70	4.53
56 P 042	273C	6	2 x 1 1/2	9.15	5.38
56 P 054	294	6	1 1/2 x 3 1/2	4.90	2.88
56 P 116	298	6	1 1/2 x 2 1/2	6.35	3.73
56 P 070	505P	6	1 1/2 x 3 1/2	4.90	2.88
56 P 120	509P	6	1 1/2 x 2 1/2	4.15	2.44
56 P 077	716	6	1 1/2 x 3 1/2	7.70	4.53
56 P 079	725C	6	1 1/2 x 3 1/2	8.55	5.03
56 P 080	G725C	12	1 1/2 x 3 1/2	9.95	5.85
56 P 082	742	6	1 1/2 x 2 1/2	7.70	4.53
56 P 112	748	6	1 1/2 x 2 1/2	7.70	4.53
56 P 123	W759	4	1 1/2 x 2 1/2	8.25	4.85
56 P 085	825C	6	1 1/2 x 3 1/2	6.90	4.06
56 P 110	826C	6	1 1/2 x 3 1/2	6.35	3.73
56 P 086	F826C	32	1 1/2 x 3 1/2	7.70	4.53
56 P 111	G826C	12	1 1/2 x 3 1/2	7.70	4.53

Stock No.	Mfr's Type	Volts	Size	List	NET EACH
56 P 092	854	6	1 1/2 x 3 1/2	\$ 4.90	2.88
56 P 113	859	6	1 1/2 x 2 1/2	4.70	2.76
56 P 118	W859	4	1 1/2 x 2 1/2	4.90	2.88
56 P 094	870	6	1 1/2 x 3 1/2	4.90	2.88
56 P 121	903M	6	1 1/2 x 2 1/2	4.15	2.44
56 P 103	953W	6	1 1/2 x 3 1/2	7.70	4.53
56 P 104	954	6	1 1/2 x 3 1/2	7.70	4.53
56 P 114	1100	6	1 1/2 x 2 1/2	4.90	2.88
56 P 127	T4002	2	1 1/2 x 1 1/2 x 2 1/2	10.70	6.29
56 P 128	T4003	2	1 1/2 x 2 1/2	9.80	5.76
56 P 135	4501	6	1 1/2 x 2 1/2	6.35	3.73
56 P 130	G874	12	3 1/4 x 1 1/2	4.90	2.88
56 P 131	G4501	12	1 1/2 x 2 1/2	6.90	4.06
56 P 136	4502	6	1 1/2 x 2 1/2	6.90	4.06
56 P 137	4546	6	1 1/2 x 3 1/2	7.70	4.53
56 P 138	4548	6	1 1/2 x 3 1/2	7.70	4.53
56 P 139	4549	6	1 1/2 x 3 1/2	7.70	4.53

### SK-1 SOCKET KIT

Set of five assorted vibrator sockets. Made of laminated bakelite with solid riveted construction for sturdy support of the heaviest vibrators. With perforated solder lug terminals for low resistance connections. Shpg. wt., 4 oz.

56 P 152. NET.....1.22

### TYPE GC7 GROUND CUP

For use with 1 1/2" diameter vibrators. Affords excellent low impedance connection between shield can of vibrator and car frame for suppression of hash radiation. Shpg. wt., 2 oz.

56 P 151. NET.....26c

### MALLORY VIBRATOR GUIDE

Complete guide for vibrator replacement information. Includes full listings by receiver name, model number, buffer capacitor reference circuit, auto radio service notes, and Mallory replacement vibrator specifications. With cross references by original equipment number. FREE with Mallory vibrator order. 50 pages. 8 oz.

37 P 012. NET.....15c

### 4-4 6-VOLT VIBRATOR

One of the most popular, widely used replacement vibrators available. Incorporated as original equipment by many automobile radio manufacturers and an exact replacement for many others. Built to deliver long life and maximum current-carrying capacity. Every unit is individually tested under load conditions for output, starting voltage, etc.

4-prong. Size, 1 1/2 x 2 1/2". Shpg. wt., 5 oz.  
56 P 000. List, \$2.50. NET EACH, 1.47. 5 or more, EACH, 1.32



### G874 12-VOLT VIBRATOR

A new vibrator for 12-volt automotive systems. An exact replacement for the 1953 and 1954 Buicks, Oldsmobiles, Cadillacs and GMC trucks equipped with 12-volt electrical systems. Features heavy-duty contacts and quick-starting action. Size, 3 1/4 x 1 1/2". Shpg. wt., 5 oz.

56 P 130. List, \$4.90. NET.....2.88

### ANTI-STATIC POWDER



Anti-Static Powder minimizes auto radio static interference caused by rotation of car wheels, brake drums and tires. Eliminates contact shocks. Easy to apply. Powder effective for life of tube.

Static Powder Packet, 5 individual packs; sufficient for 5 tires. Wt., 2 oz.

56 B 687. NET.....48c

Static Powder Injector. Shpg. wt., 10 oz.

56 B 686. NET.....74c

### ANTENNA CONNECTOR



Bayonet type connector for terminating auto antenna leads.

With spring-loaded contact to insure low resistance connection and elimination of intermittent open. Matching caps prevent cable fraying. Measures 1 1/2" long x 3/8" diameter. Shpg. wt., 2 oz.

41 B 740. NET EACH.....8c

10 or more, EACH.....7c



### FUSE HOLDERS

Metal container. Fits 1 1/4" 3AG Fuses. Spring-loaded contacts for firm, sure contact. Designed for quick access and simplest possible fuse replacement. Lightweight, does not require additional support bracket. Die-stamped for easy identification. Size, 2 1/2 x 1/2". Wt., 2 oz.

41 B 735. NET EACH.....11c

10 or more, EACH.....10c

### AUTO RADIO LEAD-IN ADAPTERS



Convenient fittings for terminating auto radio antenna lead-in cables and all other metal-braid shielded coaxial conductors. Fit 1/4" cable. Av. shpg. wt., 2 oz.

Fig. A. Converts Delco bayonet fitting to Motorola type fitting. 46 N 215. NET EACH.....28c

Fig. B. Converts Motorola pin-plug to Delco bayonet fitting. 46 N 217. NET EACH.....7c

### ATR COMMUNICATIONS TYPE SUPER SERVICE VIBRATORS



Precision engineered, ruggedized vibrators, specifically designed to give long, dependable service in communications equipment. Ideal for police, taxi, fire engine, and industrial communications sets. Power capacity up to 15 amperes. With ceramic stack-spacers for moisture proof insulation, 1/4" power contacts, special reed hinge and wiring, and driver type coil construction. Heavily reinforced to withstand vibration and road-shock. Shpg. wt., 8 oz.

Stock No.	Mfr's Type	Input Voltage	NET EACH
82 P 765	344	6	5.03
82 P 766	348	6	5.26
82 P 767	349	6	5.26
82 P 768	548	6	5.03
82 P 769	549	6	5.26
82 P 770	574	6	5.26
82 P 771	575	6	5.26
82 P 772	1344	12	5.85
82 P 773	1348	12	5.85
82 P 774	1548	12	5.85

### INVERTER VIBRATORS

For exact replacement in ATR Radio Inverters: 11010 for Model (110) RSA, RSB, RSC, RSD, R11A, R11B; 11011 for 110A, R11C, 610 for (6) RSA, RSB; 611 for (6) RSC, RSD; 3210 for (32) RSA, RSB, RSC, RSD, R11A, or R11B. Av. shpg. wt., 8 oz.

Stock No.	Mfr's Type	Input Voltage	NET EACH
82 P 760	11010	110	6.30
82 P 761	11011	110	
82 P 762	610	6	
82 P 763	3210	6	
82 P 764	3210	32	

### JFD AUTO BODY PLUGS

To neatly conceal holes left in auto body or instrument panel when accessories are removed. Fits snugly and permanently in hole. Chrome-plated brass. Large flat-head screw with lock-washer, rubber spacer and nut. 5 oz.

46 N 317. Type 2045 for 1/8" holes. 46 N 318. Type 2048 for 1/2" holes. NET EACH.....33c

### CORNELL-DUBILIER "AUTRONIC EYE" & 12 VOLT VIBRATORS



Cornell-Dubilier replacement type vibrators for use in late model automobiles and for replacement in Autronic Eye circuits. Sturdily constructed to provide long, dependable service. Mounted in sponge rubber for quiet operation. Heavy-duty contacts for fast starting. Built to withstand severe roadshock and vibration. Shpg. wt., 8 oz.

Type 6326. Replacement for Philco radio Models 822 and 823. Used in Chrysler Crown Imperial automobiles. For 12-volt operation. Have 4-prong bases. Size, 1 1/2 x 3/4". 56 P 265. List, \$5.50. NET.....3.23

Type 6330. Replacement for Delco radio Models 8550 and 120155. For Oldsmobile, Buick, Cadillac, and GMC trucks. For 12-volt operation. Have 3-prong. Size, 1 1/2 x 3/4". 56 P 266. List, \$4.90. NET.....2.88

Type 6370. Replacement in Guide Lamp unit. No. 5943300. Especially designed for use in Autronic Eye circuits. Have 4-prong bases. For 12-volt operation. Size, 1 1/2 x 3/4". 56 P 267. List, \$4.70. NET.....2.76

Type 5370. Replacement unit in Guide Lamp unit. No. 5943336. Supersedes No. 5520-4. Used in Autronic Eye circuits. Have 4-prong bases. For 6-volt operation. Size, 1 1/2 x 3/4". 56 P 268. List, \$4.90. NET.....2.88

### INVERTER VIBRATORS

Custom-built replacement vibrators. Exact replacements for the interrupter vibrators used in the following equipment: 3077 for Cornell-Dubilier Powercon, 110RT15; 3079 for 110RT-35; 1315H for 110RT25; 4123 for 6R10; 6V 60 for Knight 25-watt mobile amplifier, 935N, 330; 2522 for 110PA5 and 110PB5 11028 for many early model Electronic Laboratory units. Av. shpg. wt., 8 oz.

Stock No.	Mfr's Type	Input Voltage	NET EACH
82 P 750	3077	110	8.56
82 P 751	3079	110	11.41
82 P 752	11028	110	7.19
82 P 753	6V 60	6	7.19
82 P 754	4123	45	5.09
82 P 756	4123	6	10.05
82 P 757	1315H	110	8.29

# Bud Relay Racks and Cabinets

## STURDY RELAY RACKS FOR ALL PURPOSES

Ruggedly constructed, up-to-date racks. Deluxe racks (Fig. A) are 16-gauge steel with 1/2" panel supports. Have sturdy bottom supports for fastening casters direct to base. Sides and back are well ventilated. All racks have chassis-type base, except 1/2" iron angles and brackets for bolting to floor. Finish on open racks, black wrinkle; enclosed racks are gray wrinkle. High-quality units. Drilled and tapped for 19" panels. With panel mounting screws and cup washers.

### OPEN RACKS AND DELUXE ENCLOSED RACKS

Stock No.	Fig.	Type	Overall Size	Panel Height	Wt., Lbs.	NET
98 PX 843	A	CR-1771	47 1/2"x22x17 1/2"	42"	95	36.70
98 PX 844	A	CR-1772	66 1/2"x22x17 1/2"	61 1/4"	122	47.63
98 PX 845	A	CR-1773	82 1/2"x22x17 1/2"	77"	150	57.33
98 PX 808	A	CR-1774	42 1/2"x22x17 1/2"	36 1/4"	90	32.05
98 PX 840	B	RR-1263	35 1/2"x20x22"	31 1/2"	38	17.25
98 PX 841	B	RR-1264	70 1/2"x20x22"	66 1/2"	53	19.66
98 PX 809	B	*RR-1265	72 1/2"x20 1/2"x15"	66 1/2"	100	43.52
98 PX 848	C	RR-1248	24x20 1/2"x12"	21"	15	6.58
98 PX 849	C	RR-1249	31x20 1/2"x12"	28"	17	8.21

### SUPER DELUXE CABINET RACKS

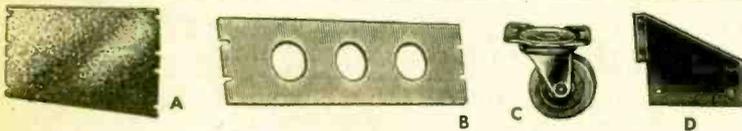
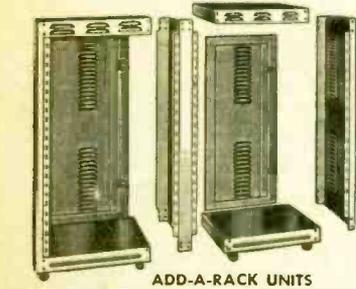
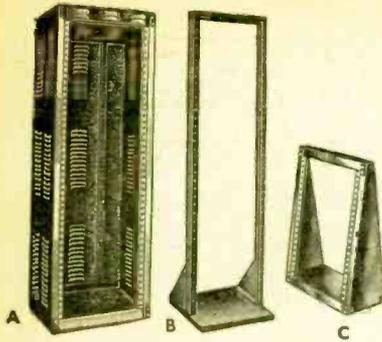
Styling similar to Deluxe Cabinet Racks above, but feature adjustable panel mounting supports; can be positioned from 1" to 6" behind the cabinet front, at 1" intervals. Front and rear doors. Extended shafts, large knobs, and other components may be mounted on panel with no interference to door operation. 16-gauge steel with 1/2" panel supports. Welded bottom supports permit fitting casters direct to base. Attractive gray wrinkle finish. With hardware. (Not illustrated.)

Stock No.	Type	Overall Size	Panel Height	Wt., Lbs.	NET
98 PX 856	CR-2174	42 1/2"x22x17 1/2"	36 1/4"	108	43.61
98 PX 857	CR-2171	47 1/2"x22x17 1/2"	42"	117	49.98
98 PX 858	CR-2172	60 1/2"x22x17 1/2"	61 1/4"	146	63.80
98 PX 859	CR-2173	82 1/2"x22x17 1/2"	77"	191	77.37

### ADD-A-RACK SERIES

For easy addition of rack cabinets to deluxe, enclosed racks (Fig. A, above) without adding a complete new cabinet. Units consist of four sections: top, bottom, door and coupling panel. Replace either left or right side panel of deluxe racks with coupling panel; add new top and bottom; attach original side panel to new top and bottom. Placing new door in position on back completes assembly of dual one-piece rack. Additional racks can be added at any time for a continuous one-piece assembly. Bud RC7756 casters (not included) fit these racks. Same sizes and construction as deluxe racks. Gray wrinkle finish. With hardware.

98 PX 816.	Type AR-1778 for CR-1774.	Shpg. wt., 75 lbs.	NET	30.38
98 PX 817.	Type AR-1775 for CR-1771.	Shpg. wt., 77 lbs.	NET	35.28
98 PX 818.	Type AR-1776 for CR-1772.	Shpg. wt., 100 lbs.	NET	44.10
98 PX 819.	Type AR-1777 for CR-1773.	Shpg. wt., 127 lbs.	NET	53.90



### RELAY RACK ACCESSORIES

Fig. A—STEEL RACK PANELS

Attractive relay rack panels with standard RETMA notching. Made of high grade steel, 1/4" thick. All panels are 19" wide. Available in either black or gray wrinkle finish. Give equipment a professional appearance.

Black	Gray	Height	Lbs.	NET
98 PX 723	98 PX 738	1 3/4"	2	.65
98 PX 724	98 PX 739	3 1/2"	4	.91
98 PX 725	98 PX 740	5 1/4"	6	1.06
98 PX 726	98 PX 741	7"	7	1.27
98 PX 727	98 PX 742	8 3/4"	8	1.52
98 PX 728	98 PX 743	10 1/2"	9	1.81
98 PX 729	98 PX 744	12 1/4"	10	2.11
98 PX 733	98 PX 745	14"	12	2.40
98 PX 734	98 PX 746	15 1/4"	13	2.65
98 PX 735	98 PX 747	17 1/2"	14	2.94
98 PX 736	98 PX 748	19 1/4"	15	3.23
98 PX 737	98 PX 749	21"		

Fig. B—ALUMINUM RACK PANELS

High quality aluminum panels. Standard RETMA notching. Made from 1/2" thick aluminum. All panels are 19" wide. Lightweight—excellent for portable equipment. Easy to cut, drill, machine. Black or gray wrinkle finish.

Black	Gray	Height	Lbs.	NET
98 PX 864	98 PX 895	1 3/4"	1	.73
98 PX 865	98 PX 896	3 1/2"	2	1.06
98 PX 866	98 PX 897	5 1/4"	2	1.35
98 PX 867	98 PX 898	7"	2	1.76
98 PX 868	98 PX 899	8 3/4"	3	2.06
98 PX 869	98 PX 877	10 1/2"	3	2.44
98 PX 889	98 PX 878	12 1/4"	4	2.79
98 PX 890	98 PX 879	14"	4	3.12
98 PX 891	98 PX 880	15 1/4"	5	3.51
98 PX 892	98 PX 882	17 1/2"	5	3.91
98 PX 893	98 PX 883	19 1/4"	6	4.26
98 PX 894	98 PX 803	21"	7	4.56

Fig. C—STEEL RACK PANELS

Neat-appearing rack panels speed construction. 2 1/2" dia. holes to fit 3" meters. 5/16" high, 1 1/2" wide, 1/4" thick. Shpg. wt. 3 1/2 lbs.

Black	Gray	Type	Holes	NET
86 PX 210	86 PX 211	PS-442	3	1.27
86 PX 212	86 PX 213	PS-443	5	1.81

Fig. C—SWIVEL TRUCK CASTERS

Type RC-7756. Heavy-duty type, for relay racks, 4 will carry 400 pounds. Hard rubber composition. Ball-bearing mounted. Wt., 10 oz. 86 P 264. NET EACH.....88¢

### CHASSIS SUPPORTING ANGLES

Type SA-1349. Relay rack chassis runners 1 1/2" long, 3" wide. Afford ample support for a standard 17" width chassis or shelves below. Black finish. Shpg. wt., 5 lbs. 86 P 235. NET PER PAIR.....1.71

### HEAVY GAUGE STEEL RACK SHELVES

Slide in from rear of cabinet. Require chassis support angles above. Black wrinkle finish.

Type CB-1976. 19" wide by 1" high by 15" deep. Shpg. wt., 7 lbs. 86 PX 231. NET.....3.04

Type CB-1977. 19" wide by 1" high by 12" deep. Shpg. wt., 6 lbs. 86 PX 232. NET.....2.30

Fig. D—CHASSIS MOUNTING BRACKETS

Mount against rack. Formed of heavy gauge steel cut away at bottom to provide clearance for flush mounting of chassis. Black enamel finish. \*For chassis height of 4."

No.	Type	Ht.	Depth	Lbs.	PAIR
86 P 219	MB-458	6 1/2"	8"	2	.83
86 P 220	MB-448	6 1/2"	10"	3	1.18
86 P 218	MB-459	6 1/2"	11"	3	1.18
86 P 221	MB-449	6 1/2"	12"	3	1.42
86 P 224	MB-460	6 1/2"	13"	3	1.32
86 P 222	MB-450	8 1/2"	10"	3	1.57
86 P 223	MB-451	8 1/2"	13"	4	1.67

### TRIANGULAR PANEL BRACKETS

Panel mounted chassis support. Heavy steel.

No.	Type	Ht.	Depth	Lbs.	PAIR
86 P 226	MB-1266	5"	5"	1	.78
86 P 227	MB-1267	7"	7"	2	.89
86 P 228	MB-1268	9"	9"	2	1.08

### STEEL DOOR RACK PANEL

Type PS-616. 1/2" high-grade sheet steel. Black wrinkle enamel. Door opening, 15 1/2" x 7 1/2". Size, 19x12 1/2". Shpg. wt., 10 lbs. 86 PX 175. NET.....4.85

### DELUXE CABINET RACKS

Attractive, ruggedly constructed 16-gauge steel cabinet racks. Welded joints assure rigidity. Neat, professional styling enhances appearance of equipment. Cabinets have rounded corners and smart, red inlaid chrome trim. All have recessed, hinged top doors equipped with smooth-operating snap locks. Models CR1743, CR1744 and CR1745 also have hinged back doors equipped with twist locks. Models CR1740, CR1741 and CR1742 have welded back panels. All panel mounts are drilled for standard RETMA notched panels and tapped for 10-32 screws. Supplied with panel mounting screws and cup washers. Units are 14 1/2" in depth and 22" wide. Black wrinkle finish.

Stock No.	Mfr's Type	Ht.	Panel Space	Wt. Lbs.	NET EACH
98 PX 835	CR-1741	10 3/4"	8 3/4"	28	11.76
98 PX 804	CR-1740	12 3/4"	10 1/2"	30	13.43
98 PX 836	CR-1742	14 1/4"	12 1/2"	32	14.26
98 PX 837	CR-1743	19 3/4"	17 1/2"	38	18.82
98 PX 838	CR-1744	28 1/2"	26 1/2"	48	22.05
98 PX 839	CR-1745	36 1/4"	35"	60	24.40

### RELAY RACK SLIDE DRAWER

Drawer for extra utility of your rack or cabinet equipment. Excellent as a record player mounting base for portable typewriter, writing table, or handy drawer space. Easily and quickly assembled and installed in any standard rack or cabinet. Can't fall out or tilt. Chassis formed from one-piece 14-gauge aluminum, electrowelded. Support brackets of 1/2" aluminum. Slide rail fastens securely to chassis, slides easily on ball bearings in channel. Will support up to 50 pounds. Stop screw on slide rail prevents drawer from falling out of channel. Chassis and slide rail finished in gold-tone. Support brackets and channel finished in etched aluminum. Accurately punched to conform with standard panel mounting holes. Chassis size, 16 1/2"x14x3", with 1/2" flange top and bottom. Less drawer plate. Shpg. wt., 5 lbs. 86 PX 256. List, \$17.75. NET.....10.44

**DRAWER PLATE.** For above assembly. Size 16 1/2"x14". Gold-finished aluminum. Shpg. wt., 1 1/2 lbs. 86 PX 257. List, \$3.65. NET.....2.15

# Bud Metal Products



## HEAVY-DUTY CHASSIS BASES

Ruggedly constructed chassis bases for heavy duty applications. Formed of one-piece heavy  $\frac{1}{2}$ " steel. Corners are spot welded and sides are folded over at bottom. Electro-zinc plated. Complete with bottom plates and mtg. screws.

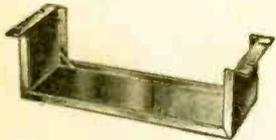
Stock No.	Type	Size	Lbs.	NET
86 PX 945	CB-1764	2x17x 8"	6 1/2	2.84
86 PX 240	CB-1765	3x17x 8"	8	3.09
86 PX 241	CB-1766	2x17x11"	9	3.23
86 PX 242	CB-1767	3x17x11"	9 1/2	3.58
86 PX 243	CB-1768	2x17x13"	10	3.92
86 PX 244	CB-1769	3x17x13"	10 1/2	4.31
86 PX 946	CB-1770	4x17x13"	11 1/2	4.74

## SLOPING PANEL CABINETS



Very attractive, professionally styled, sloping panel steel cabinets. Hinged top for easy access to tubes and other top-of-chassis components. Removable front panel. Excellent for amplifiers, oscillators, etc. Handsome black-wrinkle finish.

Stock No.	Type	H. W. D.	Lbs.	NET
86 P 900	C-1584	6 1/2 x 7 1/4 x 7 1/4"	3	3.09
86 P 901	C-1585	6 1/2 x 9 1/4 x 7 1/4"	3 1/2	3.51
86 P 902	C-1586	6 1/2 x 11 1/4 x 7 1/4"	4	3.88
86 P 903	C-1892	8 x 13 1/4 x 8 1/4"	5 3/4	4.65
86 PX 904	C-1893	10 x 18 1/4 x 10 1/4"	9	6.53



## PANEL MOUNTING CHASSIS

Open-side aluminum chassis designed for mounting on standard 19" telephone-type relay racks, or horizontal mounting on panels. Made of .062" aluminum with reinforced corners. 1" flange on ends, with 4 elongated holes for mounting. All other edges have  $\frac{1}{2}$ " flanges. Etched aluminum finish. All models are 17" wide, excluding flange, and 5 1/2" deep.

Stock No.	Type	Height	Lbs.	NET
86 PX 185	CB-1370	1 1/4"	1	1.86
86 PX 186	CB-1371	3 1/4"	1 1/2	2.11
86 PX 187	CB-1372	5 1/4"	1 3/4	2.21
86 PX 188	CB-1373	7"	2 1/4	2.55
86 PX 189	CB-1374	8 3/4"	2 1/2	2.99
86 PX 190	CB-1375	10 1/2"	3	3.23
86 PX 191	CB-1376	12 1/4"	3 3/4	3.63
86 PX 192	CB-1377	14"	3 1/2	3.92

## METAL UTILITY CABINETS

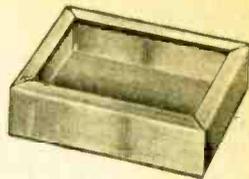


General-purpose cabinets. Welded steel construction assures rigidity. Two removable sides provide ready access. Sides attached to flange of cabinet frame with self-tapping screws. Excellent for receivers, monitors, frequency meters, VFO's, transmitters, etc. Well adapted for shelving of high-gain preamplifier stages, RF sections and other special circuits which must be isolated from other stages. Handsome, durable black-wrinkle finish.

Stock No.	Mfr's Type	Size L. W. H.	Wt. Lbs.	NET
86 P 200	CU883	4x4x2"	1 1/4	.83
86 P 201	CU728	4x5x3"	1 1/2	.93
86 P 202	CU729	6x5x4"	2 1/2	1.18
86 P 203	CU1098	6x6x6"	3	1.27
86 P 204	CU1099	9x6x5"	4	1.82
86 P 205	CU879	10x8x7"	5	2.25
86 P 207	CU880	10x10x8"	8	2.84
86 P 206	CU1124	12x7x6"	5	2.41
86 P 208	CU881	12x11x8"	9	3.53
86 P 209	CU882	15x9x7"	9	4.02

## STANDARD CHASSIS BASES

High-quality, sturdily constructed chassis bases. Available in electro-zinc-plated steel and lightweight, etched-finish aluminum types. Carefully formed, one-piece construction; corners are reinforced and spot-welded. The four sides are folded at bottom to provide extra strength; bottom fold also permits easy addition of bottom plate. Aluminum types are spot-welded with government approved equipment, same as used for welding aluminum aircraft parts. Steel chassis gauges: \*No. 22; †No. 20; ‡No. 18. Aluminum chassis gauges (aluminum gauge): †No. 18; \*\*No. 16; ††No. 14. Less bottom plates (see page 230).



Size, Inches	Zinc-Plated Steel				Aluminum			
	Stock No.	Type	Lbs.	NET	Stock No.	Type	Lbs.	NET
2x6x4	86 P 277	CB-629*	1 1/8	.88	86 P 930	AC-431†	3/4	1.00
2x7x5	86 P 905	CB-645*	1 1/2	.83	86 P 112	AC-402†	3/4	.82
2 1/2 x 9 1/2 x 5	86 P 906	CB-776*	1 1/4	.78	86 P 113	AC-403†	3/4	.97
3x6x4					86 P 932	AC-430†	1	1.00
3x7x5					86 P 933	AC-429**	1 1/4	1.03
3x9 1/2 x 5					86 P 114	AC-421†	1	1.15
3x10x5	86 P 271	CB-605*	1 1/2	1.03	86 P 127	AC-404†	1	1.18
3x13x5	86 P 907	CB-756†	2	1.24	86 P 934	AC-422†	1	1.23
3x14x6					86 PX 935	AC-433**	1 1/2	1.85
3x17x6	86 P 272	CB-1191*	1 3/4	.88	86 P 115	AC-405†	1 1/4	.97
2x7x7	86 P 273	CB-1193*	1 1/4	1.03	86 P 116	AC-406†	1 1/4	1.06
2x9x7	86 P 274	CB-1193†	1 3/4	1.08	86 P 117	AC-407†	1	1.18
2x11x7					86 P 118	AC-408†	1 1/4	1.38
3x12x7	86 P 275	CB-793†	2	1.22	86 P 119	AC-409†	1 1/4	1.23
2x13x7	86 P 276	CB-1194†	2 1/4	1.18				
2 1/2 x 13 1/2 x 5	86 P 908	CB-1198†	2	1.27				
3x15x7	86 PX 909	CB-1189†	2 1/4	1.42	86 PX 936	AC-411**	1 3/4	2.00
3x15x8 1/2	86 PX 910	CB-660†	2 1/4	1.62				
3x17x4	86 PX 911	CB-1066†	2 1/2	1.27	86 PX 937	AC-432**	1 1/2	1.79
2 1/2 x 17x7	86 PX 912	CB-1199†	2 3/4	1.52				
3x17x7	86 PX 913	CB-758†	2	1.54	86 PX 938	AC-423**	1 1/4	1.79
2 1/2 x 10x8	86 P 914	CB-702†	2 1/4	1.39				
2 1/2 x 12x8	86 P 915	CB-704†	2 3/4	1.47				
3x12x8	86 P 916	CB-760†	2	1.40	86 P 939	AC-424**	1 1/2	1.68
2x17x8	86 PX 917	CB-774†	2 3/4	1.42	86 PX 940	AC-425**	1 3/4	1.85
3x17x8	86 PX 918	CB-775†	3 1/4	1.52	86 PX 120	AC-412**	2	2.18
3x12x10	86 P 919	CB-1195†	3 1/2	1.47	86 P 121	AC-413**	1 1/4	1.85
3x14x10	86 P 920	CB-779†	4 1/4	1.57	86 P 941	AC-414**	2	2.35
2x17x10	86 PX 278	CB-769†	3 1/2	1.57	86 PX 942	AC-415**	1 1/2	2.23
3x17x10	86 PX 921	CB-1196†	5 1/2	1.81	86 PX 943	AC-416**	2 1/4	2.53
3x23x10	86 PX 922	CB-1197†	6	2.39				
2x17x11	86 PX 923	CB-771†	4 3/4	1.96	86 PX 122	AC-426**	2 1/2	2.32
3x17x11	86 PX 924	CB-771†	4 3/4	2.16	86 PX 123	AC-417††	3	2.94
2x17x12	86 PX 925	CB-661†	4 1/2	1.67				
3x17x12	86 PX 268	CB-662†	5 1/4	1.96	86 PX 128	AC-418†	3	3.12
4x17x13	86 PX 269	CB-772†	5 1/2	2.30	86 PX 944	AC-419†	2 3/4	2.76
3x17x13	86 PX 270	CB-773†	6	2.50	86 PX 124	AC-420†	3	3.29
4x17x10	86 PX 926	CB-641†	7	2.00	86 PX 125	AC-427†	3 3/4	2.91
4x17x13	86 PX 927	CB-643†	8	2.94	86 PX 126	AC-428††	4	3.76
5x17x10	86 PX 928	CB-624†	8	3.58				
5x17x13	86 PX 929	CB-626†	8 1/2	3.92				

## QUALITY METAL SPEAKER ENCLOSURES

### "SILVER SONANCE" UNIVERSAL TYPES

Bud acoustically designed metal speaker enclosures—at very moderate cost. Offer exceptional versatility when used with adjustable, swivel-type mounting brackets listed below. Enclosures may be swiveled to any direction in the horizontal plane to assure optimum sound coverage. An unusually fine choice for sound systems in hospitals, schools, factories, auditoriums, railroad stations, airports, restaurants, etc. May also be installed without mounting bracket; holes in cabinet permit direct mounting on wall or outlet box. Bi-lateral feature permits sound distribution from front and back of enclosure; provides excellent results in corridors and narrow rooms. Heavy-gauge steel construction. Special sound-deadening compound eliminates resonance effects. Available with beautiful silver-gray hammertone finish; or with primer coat only, for easy finishing to match walls. With hardware for installation of speaker. Less adjustable mounting bracket, listed below.



Stock No.	Type	Finish	Speaker	H. W. D.	Lbs.	NET
86 P 820	CS-2241	Hammertone	5" 5 1/2" or 6"	8 1/4 x 7 1/4 x 4"	3 1/4	4.06
86 P 821	CS-2242	Hammertone	6" or 8"	10 1/4 x 9 1/2 x 5 1/4"	5	7.35
86 PX 822	CS-2243	Hammertone	10" or 12"	15 1/2 x 13 1/2 x 7 1/4"	9 1/2	9.40
86 P 823	CS-2271	Primer coat	5", 5 1/2" or 6"	8 1/4 x 7 1/4 x 4"	3 1/4	3.82
86 P 824	CS-2272	Primer coat	6" or 8"	10 1/4 x 9 1/2 x 5 1/4"	5	7.06
86 PX 825	CS-2273	Primer coat	10" or 12"	15 1/2 x 13 1/2 x 7 1/4"	9 1/2	8.97

### BRACKETS FOR UNIVERSAL-TYPE ENCLOSURES

Permit versatile, swivel-type, wall mounting of above enclosures. Also permit ceiling mounting. Hole for 1/2" conduit. May be mounted on outlet box; see CP-2255 cover plate below.

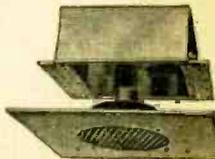
Stock No.	Type	Used with	Wt. Lbs.	NET
86 P 826	AB-2251	CS-2241, CS-2271	1 1/4	1.12
86 P 827	AB-2252	CS-2242, CS-2272	1 1/2	1.38
86 P 828	AB-2253	CS-2243, CS-2273	3	1.62

86 P 829. CP-2255 OUTLET BOX COVER PLATE. For installing brackets (above) directly on outlet box. 4 1/4 x 2 1/4". Shpg. wt., 1/2 lb. NET.....73c

### "SILVER SONANCE" CEILING AND WALL ENCLOSURES

Low-cost, expertly designed enclosures for recessed installation of 8" speaker in ceiling or wall. Have adjustable mounting brackets for simple installation. Only 4" deep. Mount in practically any wall; and in any ceiling. Grille plate is 14" square; perfectly covers space in ceiling from which 12" acoustical tile has been removed. Heavy-gauge steel. Sound-deadening compound eliminates resonance effects. Two models. One with handsome silver-gray hammertone finish; the other with primer coat, ready for easy finishing. Overall size, 14x14x4 1/4". Shpg. wt., 10 lbs.

TYPE CS-2244. Hammertone grille. Primer-coated housing. 8.82  
86 PX 830. NET  
TYPE CS-2274. Primer coating on grille and housing. 8.67  
86 PX 831. NET



# ICA Metal Chassis



## STEEL AND ALUMINUM CHASSIS BASES

One-piece steel chassis bases with reinforced welded corners. Sides have folded lips on the bottom for added strength and rigidity. Lips are drilled for attaching bottom plates listed below. Chassis bases up to and including 10x17x3" are 20 gauge; others, 18 gauge, except 6x14x3", 16 gauge. Aluminum bases are 16 gauge. \*U-shaped chassis; two ends are open. Size is WxLxH.



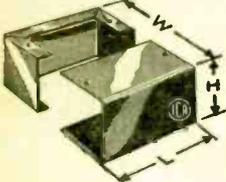
Size, W. L. H.	Zinc-Plated				Black Ripple				Wt., Lbs.	Aluminum			
	Stock No.	Type	NET	Stock No.	Type	NET	No.	Type		NET	Wt., Lbs.		
4 1/2 x 8 x 1 1/2	86 P 500	1560	.75	86 P 650	4000	.75	1 1/2	86 P 463	29002	1.15	3/4		
5 x 9 1/2 x 1 1/2	86 P 501	1530	1.06	86 P 651	4001	.76	1 1/2	86 P 472	29003	1.23	1		
5 x 9 1/2 x 3	86 P 502	1565	1.06	86 P 652	4002	1.06	2	86 P 483	29004	1.40	1		
5 x 13 x 3	86 P 504	1566	1.30	86 P 654	4003	1.37	2 1/4	86 P 448	29034	1.76	1 1/4		
5 1/2 x 10 x 3	86 P 503	1582	1.15	86 P 653	4032	1.15	2						
6 x 14 x 3	86 P 546	1518	1.23	86 P 677	4043	1.23	2 1/4						
7 x 7 x 2	86 P 505	1526	.88	86 P 655	4024	.88	1 1/4	86 P 464	29005	.97	1/2		
7 x 9 x 2	86 P 506	1569	1.06	86 P 656	4004	1.06	2 1/4	86 P 473	29006	1.06	3/4		
7 x 11 x 2	86 P 507	1570	1.10	86 P 657	4005	1.10	2 1/2	86 P 474	29007	1.18	1		
7 x 12 x 3	86 P 508	1527	1.24	86 P 658	4006	1.24	2 1/4	86 P 465	29008	1.38	1 1/4		
7 x 13 x 2	86 P 509	1571	1.18	86 P 659	4007	1.18	3	86 P 466	29009	1.23	1		
7 x 17 x 3	86 P 510	1528	1.54	86 P 660	4009	1.54	3 1/2	86 P 489	29011	1.79	1 1/4		
8 x 12 x 3	86 P 522	1567	1.59	86 P 672	4013	1.40	3 1/2	86 P 427	29012	1.68	1 1/4		
8 x 17 x 2	86 P 512	1573	1.42	86 P 662	4014	1.42	3 1/4	86 P 432	29013	1.85	1 1/4		
8 x 17 x 3	86 P 523	1575	1.45	86 P 673	4035	1.55	3 1/4	86 P 467	29014	2.18	1 1/4		
10 x 12 x 3	86 P 514	1520	1.47	86 P 664	4016	1.47	3 1/4	86 P 470	29015	1.85	1 1/4		
10 x 14 x 3	86 P 515	1568	1.55	86 P 665	4017	1.55	3 1/2	86 P 428	29016	2.05	1 1/4		
10 x 17 x 3	86 P 516	1583	1.60	86 P 666	4033	1.60	4 1/4	86 P 429	29017	2.53	2		
10 x 17 x 4	86 P 520	1580	1.99	86 P 670	4030	1.99	4 1/4	86 P 430	29025	2.91	2 1/4		
10 x 23 x 3	86 P 517	1522	2.38	86 P 667	4019	2.28	6	86 P 433	29018	3.25	2 1/4		
11 x 17 x 2	86 P 524	1577	2.13	86 P 674	4027	1.96	4 1/4	86 P 468	29019	2.32	1 1/2		
11 x 17 x 3	86 P 544	1519	2.16	86 P 675	4023	2.16	5 1/4	86 P 469	29020	2.94	2		
12 x 17 x 3	86 P 519	1523	1.98	86 P 669	4028	1.98	4	86 P 434	29022	3.12	2 1/4		
13 x 17 x 3	86 P 545	1579	2.30	86 P 671	4029	2.42	5 1/4	86 P 470	29023	3.29	2 1/4		
13 x 17 x 3	86 P 518	1524	2.50	86 P 668	4021	2.50	6	86 P 471	29024	3.76	2 1/4		
13 x 17 x 4	86 P 521	1581	2.94	86 P 671	4031	2.94	7	86 P 431	29026	3.76	2 1/2		

43 N 620. Volume Control Bracket. Punched right-angle bracket for mounting volume and tone controls above the chassis. NET.....6¢

### BOTTOM PLATES FOR CHASSIS BASES

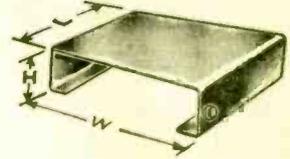
Bottom plates to fit the chassis bases listed above. In zinc-plated or black corners to prevent marring and scratching. Drilled for No. 6 self-tapping ripple heavy-gauge steel plate and aluminum. Four raised bosses in

Size Inches	Zinc-Plated				Black Ripple				Wt., Lbs.	Aluminum			
	Stock No.	Type	NET	Stock No.	Type	NET	Stock No.	Type		NET	Wt., Lbs.		
5 x 9 1/2	86 P 525	1601	.39	86 P 625	4051	.39	1	86 P 580	8702	.78	1/4		
5 x 13	86 P 527	1602	.56	86 P 627	4052	.56	1	86 P 581	8725	.72	1/4		
5 1/2 x 10	86 P 526	1625	.49	86 P 626	4075	.49	1	86 P 582	8723	.72	1/4		
7 x 7	86 P 528	1623	.59	86 P 628	4053	.59	1	86 P 583	8703	.75	1/4		
7 x 9	86 P 529	1603	.64	86 P 629	4054	.64	1	86 P 584	8704	.85	1/4		
7 x 11	86 P 530	1604	.64	86 P 630	4054	.64	1	86 P 585	8705	.90	1/4		
7 x 12	86 P 531	1605	.67	86 P 631	4055	.67	1	86 P 586	8706	1.06	1/4		
7 x 13	86 P 532	1606	.67	86 P 632	4056	.67	1	86 P 587	8708	1.11	1/4		
7 x 17	86 P 533	1608	.76	86 P 633	4058	.76	1	86 P 588	8712	1.06	1/2		
8 x 12	86 P 543	1612	.76	86 P 643	4062	.76	1 1/2	86 P 589	8713	1.22	1/2		
8 x 17	86 P 534	1613	.80	86 P 634	4063	.80	1 1/2	86 P 590	8715	1.20	1/2		
10 x 12	86 P 535	1615	.80	86 P 635	4065	.80	1 1/2	86 P 591	8716	1.10	1/2		
10 x 14	86 P 536	1616	.83	86 P 636	4066	.83	1 1/2	86 P 592	8717	1.44	1/2		
10 x 17	86 P 537	1617	.98	86 P 637	4067	.98	1 1/2	86 P 593	8718	1.71	1/2		
10 x 23	86 P 538	1618	1.37	86 P 638	4068	1.37	2	86 P 594	8727	1.71	1/2		
11 x 17	86 P 539	1622	1.08	86 P 639	4072	1.08	2	86 P 595	8719	1.83	1/2		
12 x 17	86 P 540	1619	1.06	86 P 640	4069	1.06	2						
13 x 14	86 P 542	1624	1.15	86 P 642	4074	1.15	2						
13 x 17	86 P 541	1620	1.39	86 P 641	4070	1.39	2	86 P 596	8720	1.93	3/4		



### "FLEXI-MOUNT" ALUMINUM CASES

Two-piece aluminum cases designed especially to provide the maximum degree of accessibility. "Flexi-mount" cases offer the solution to numerous builder's problems demanding installation of many elements in a limited space. Highly practical for oscillators, phono preamplifiers, microphone mixers, amplifiers, power supplies, transmitting and receiving equipment, and other equipment requiring easy accessibility to parts. These cases provide complete protection from mechanical injury and are dust-proof. Accurately formed of 16 gauge aluminum. Supplied with hardware. Available in gray Hammertone or natural aluminum finish in sizes listed below.



### MINIATURE OPEN-END ALUMINUM CHASSIS

Miniature open-end aluminum chassis are available in a wide variety of sizes and shapes to accommodate nearly every possible construction requirement. Ideally suited for small power supplies, oscillators, amplifiers, transmitting and receiving equipment, and other Amateur and experimental work. They are formed to accurate dimensions; have flat surfaces and square corners. Precision-made of quality 16-gauge aluminum. Made with flange on bottom for attaching bottom plate or securing chassis to cabinet. Highly desirable for beginning or experienced builder alike. Units are so designed as to fit most ICA metal cabinets (see page 232 for cabinets). Aluminum is easily punched and drilled.

Gray Hammertone				Natural Aluminum			
No.	Type	H. W. L.	Wt. NET	No.	Type	H. W. L.	Wt. NET
86 P 435	29435	1 1/2 x 2 1/4 x 2 1/4	4 oz. .62	86 P 835	29335	1 1/2 x 2 1/4 x 2 1/4	4 oz. .56
86 P 436	29436	1 3/4 x 2 1/4 x 3 1/4	4 oz. .62	86 P 836	29336	1 3/4 x 2 1/4 x 3 1/4	4 oz. .56
86 P 437	29437	1 3/4 x 2 1/4 x 4	6 oz. .65	86 P 837	29337	1 3/4 x 2 1/4 x 4	6 oz. .59
86 P 438	29438	2 1/4 x 2 1/4 x 4	6 oz. .85	86 P 838	29338	2 1/4 x 2 1/4 x 4	6 oz. .76
86 P 439	29439	2 1/4 x 2 1/4 x 5	6 oz. .88	86 P 839	29339	2 1/4 x 2 1/4 x 5	6 oz. .82
86 P 440	29440	3 1/4 x 3 1/4	8 oz. .97	86 P 840	29340	3 1/4 x 3 1/4	8 oz. .91
86 P 441	29441	2 1/2 x 3 1/2 x 5 1/4	8 oz. .94	86 P 841	29341	2 1/2 x 3 1/2 x 5 1/4	8 oz. .88
86 P 442	29442	4 x 5 x 6	1 lb. 1.21	86 P 842	29342	4 x 5 x 6	1 lb. 1.12
86 P 443	29443	3 x 5 x 7	1 lb. 1.15	86 P 843	29343	3 x 5 x 7	1 lb. 1.23
86 P 444	29444	3 1/2 x 6 x 8	1 lb. 1.97	86 P 844	29344	3 1/2 x 6 x 8	1 lb. 1.65
86 P 445	29445	3 1/2 x 6 x 10	1 1/4 lbs. 2.44	86 P 845	29345	3 1/2 x 6 x 10	1 1/4 lbs. 2.03
86 P 446	29446	4 x 7 x 12	2 lbs. 2.88	86 P 846	29346	4 x 7 x 12	2 lbs. 2.59
86 P 447	29447	4 x 5 x 17	2 lbs. 3.38	86 P 847	29347	4 x 5 x 17	2 lbs. 3.00

### "CHANNEL-LOCK" ALUMINUM BOXES

Latest type two-piece boxes with special "channel-lock" feature for snug and firm fit. These new aluminum boxes are so designed that all mounting space is easily accessible. They are readily assembled and disassembled by means of two set screws. Excellent for oscillators, power supplies, phono preamplifiers, amplifiers, etc. Fabricated out of 16-gauge aluminum.



Size H. L. W.	Shpg. Wt.	Black Wrinkle		Gray Hammertone		Natural Aluminum	
		No.	Type	No.	Type	No.	Type
1 1/2 x 2 1/4 x 4	6 oz.	86 P 314	29300	86 P 324	29400	86 P 850	29200
2 1/4 x 2 1/4 x 5	6 oz.	86 P 315	29305	86 P 325	29405	86 P 851	29205
2 1/4 x 3 x 5 1/4	8 oz.	86 P 316	29310	86 P 326	29410	86 P 852	29210
3 x 4 x 3	8 oz.	86 P 317	29315	86 P 327	29415	86 P 853	29215
5 x 4 x 3	1 lb.	86 P 318	29320	86 P 328	29420	86 P 854	29220
2 1/2 x 4 x 10	1 1/2 lbs.	86 P 319	29325	86 P 329	29425	86 P 855	29225

Stock No.	ICA Type	Size H. L. W.	Shpg. Wt.	NET
86 P 475	29075	1 1/2 x 2 1/4 x 2 1/4	4 oz.	29c
86 P 476	29076	1 3/4 x 2 1/4 x 3 1/4	4 oz.	32c
86 P 477	29077	2 1/4 x 2 1/4 x 4	4 oz.	35c
86 P 478	29078	1 1/2 x 2 1/4 x 2 1/4	2 oz.	35c
86 P 479	29079	1 3/4 x 2 1/4 x 4	2 oz.	35c
86 P 480	29080	1 1/2 x 2 1/4 x 3 1/4	4 oz.	41c
86 P 481	29081	1 1/2 x 2 1/4 x 5 1/4	6 oz.	44c
86 P 482	29082	1 3/4 x 2 1/4 x 4	2 oz.	35c
86 P 483	29083	1 3/4 x 2 1/4 x 4	4 oz.	38c
86 P 484	29084	1 x 5 x 4	4 oz.	41c
86 P 485	29085	1 x 5 x 4	6 oz.	44c
86 P 486	29000	1 1/2 x 8 x 4 1/2	8 oz.	88c
86 P 487	29001	1 1/2 x 9 1/2 x 5 1/2	12 oz.	97c

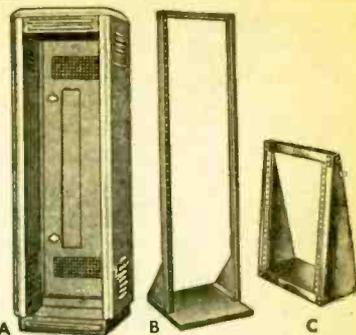
# ICA Metal Products

## STURDY RELAY RACKS FOR ALL PURPOSES

Well-built, modern transmitter and public address equipment racks. Strong, heavy-duty construction. Deluxe, enclosed cabinet (fig. A) is made of 1/8" cold rolled steel with 1/2" pressed steel panel mounting angles. Screen ventilators on rear door and louvers on sides at top and bottom. Attractive marine-gray ripple finish. Open-faced racks (fig. B) made of 1/4" steel with vertical and top sections welded for added strength. Has black ripple finish. Table type racks (fig. C) with chassis type base. Black ripple finish. All panel mounting angles are pre-drilled for standard RETMA 19" panels and are tapped for 10-32 screws. Racks are shipped knocked down and with all necessary hardware.

### OPEN RACKS AND DELUXE ENCLOSED RACK CABINETS

Stock No.	Fig.	Mfr's. Type	Overall Size	Panel Space	Wt., Lbs.	NET EACH
98 PX 880	A	3865	43 1/4 x 22 x 18"	36 1/4 x 19"	85	42.51
98 PX 881	A	3866	67 1/4 x 22 x 18"	61 1/4 x 19"	130	52.87
98 PX 882	A	3867	83 1/2 x 22 x 18"	77 x 19"	153	63.06
98 PX 885	B	3912	73 1/2 x 20 x 20"	71 1/2 x 19"	58	21.91
98 PX 886	B	3913	38 1/2 x 20 x 18"	36 1/2 x 19"	39	18.76
98 PX 887	C	3914	25 x 21 x 12"	21 x 19"	17	6.47
98 PX 883	C	3911	32 x 21 x 12"	28 x 19"	20	8.08



### DELUXE CABINET RACKS



Handsome black ripple enamel finish steel cabinets. Streamlined design features rounded front corners, chrome trim molding and side louvers. Formed from heavy sheet steel, welded for added strength. Notched for standard 19" panels. Have hinged, nickel-brass snap lock door on top and rear. Ideal for receivers, transmitters, and many other radio and electronic applications. Shipped assembled.

hinged, nickel-brass snap lock door on top and rear. Ideal for receivers, transmitters, and many other radio and electronic applications. Shipped assembled.

Stock No.	Mfr's. Type	Size	Panel Space	Wt. Lbs.	NET EACH
98 PX 870	3880	10 1/4 x 21 x 15"	8 1/4 x 19"	29	11.76
98 PX 875	3885	12 1/4 x 21 x 15"	10 1/4 x 19"	30	13.23
98 PX 871	3881	14 x 21 x 15"	12 1/4 x 19"	32	14.29
98 PX 876	3886	15 1/4 x 21 x 15"	14 x 19"	34	15.88
98 PX 872	3882	19 1/4 x 21 x 15"	17 1/4 x 19"	36	18.78
98 PX 873	3883	28 x 21 x 15"	25 1/4 x 19"	50	22.04
98 PX 874	3884	36 1/4 x 21 x 15"	35 x 19"	60	24.50



### HANDLE-LOCK SET

Attractive handle and lock sets to dress up cabinets. Zinc handle with nickel-plated finish. Spring snap lock of durable steel for long service. Complete with hardware. Shpg. wt. 2 oz.

86 P 398. Type 3532. NET..... 59c

### CHROME VENTILATING LOUVER PLATE



Adds attractive touch to any receiver, transmitter, amplifier, etc. Polished chrome-plated steel. Five ventilating louvers. Overall size, 5 7/8" x 3".

Length of louvers, 4 1/4". Mounts behind panel cut-out. Shpg. wt., 3 oz. 86 P 281. Type 3525. NET..... 66c



### CHROME HANDLES

For cabinet, chassis, etc. Chrome finished. With mtg. screws. Shpg. wt., 4 oz. Type 3500. 4" long, 1 1/8" wide. 2 1/4" mtg. ctrs. 42 H 520. NET EA. 57c

Type 3501. 6 1/4" L. 3/8" W. 4 1/8" mtg. ctrs. 42 H 521. NET EACH..... 75c

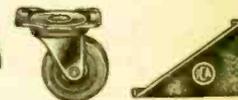
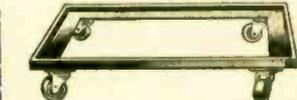
### CHROME TRIM MOLDING

Adds a decorative professional appearance to any cabinet, chassis, receiver, etc. Average shpg. wt., 4 oz. Double-Stripe Trim. Attractive all-chrome molding with a wide double stripe running lengthwise. Molding is 3/4" wide.

86 P 366. Type 3513. 8" long. NET..... 1.05  
86 P 367. Type 3514. 12" long. NET..... 1.21  
86 P 368. Type 3515. 17" long. NET..... 1.47

Type 3510. Chrome trim molding with single lengthwise stripe. 1/2" wide; 4" long. 86 P 365. NET EACH..... 66c

Type 3505. All-chrome trim molding in a unique bullet shape, tapered at ends. 1/4" wide, overall length, 6". 86 P 369. NET EACH..... 66c



### RELAY RACK ACCESSORIES

#### Fig. A—STEEL RACK PANELS

Series 3600 RS. Handsome relay rack panels with standard RETMA notching. Width 19"; 1/8" thick. Black or slate-gray baked crackle enamel finish. Support up to 200 lbs. \*Also fits Western Electric type racks.

Black	Gray	Height	Lbs.	NET
*86 PX 100	*86 PX 130	1 1/2"	2	.66
*86 PX 101	*86 PX 131	3 1/2"	3	.73
*86 PX 102	*86 PX 132	5 1/2"	4	.91
*86 PX 103	*86 PX 133	7 1/2"	6	1.06
*86 PX 104	*86 PX 134	8 1/2"	7	1.25
*86 PX 105	*86 PX 135	10 1/2"	8	1.55
*86 PX 106	*86 PX 136	12 1/2"	9	1.84
*86 PX 107	*86 PX 137	14 1/2"	10	2.13
*86 PX 108	*86 PX 138	15 1/2"	12	2.35
*86 PX 109	*86 PX 139	17 1/2"	13	2.65
*86 PX 110	*86 PX 140	19 1/2"	14	2.94
*86 PX 111	*86 PX 141	21 1/2"	15	3.23

#### Fig. B—RACK DOLLY

ICA Type 4086. Heavy-gauge, all welded steel. Free-moving casters. Black wrinkle finish. With reinforcing gussets. 21x22". Shpg. wt., 9 lbs. 86 PX 282. NET..... 9.41

#### STEEL RACK SHELVES

Heavy duty steel shelves designed to provide additional support of heavy rack mounted units such as power supplies. Easily installed in rack. Standard RETMA rack width. Made of heavy gauge steel. In black wrinkle. 2 lbs. 86 PX 338. Type 3854. 19x11 1/2". NET 3.04  
86 PX 339. Type 3855. 19x11 1/2". NET 2.30



#### SPEAKER CASES

Fig. A. Composite. Neatly designed cabinet to house either a 4- or 5-inch speaker. Skillfully fabricated of heavy sheet steel. Beautifully finished in gray ripple with attractively embossed grille. Removable back plate has key-hole slots for hanging. Size, 7x4 1/2" x 3 1/2". 86 P 394. Type 3988. NET..... 3.26

Fig. B. Midgett Type Speaker Cases. Speaker mounts on special removable internal chassis, already punched for proper opening. This unit fastens to side of cabinet with no visible screws to mar front. Gray ripple finish. Size, 4 1/4 x 4 3/4 x 4 1/2". Type 3985. For 2" speakers. Hole diameter, 2 3/8". Shpg. wt. 1 1/2 lb. 86 P 392. NET..... 1.47  
Type 3987. For 3" speakers. Hole diameter, 2 1/4". Shpg. wt., 1 1/2 lb. 86 P 393. NET..... 1.47

#### Fig. A—ALUMINUM RACK PANELS

Series 8600 RS. Lightweight panels made of hard aluminum. Ideal for portable equipment. Standard RETMA notching. Size, 1/4" thick, 19" wide; heights given below. \*Fits RETMA or Western Electric type racks.

Black	Gray	Height	Lbs.	NET
*86 PX 400	*86 PX 450	1 1/2"	1	.73
*86 PX 401	*86 PX 451	3 1/2"	2	1.06
*86 PX 402	*86 PX 452	5 1/2"	2	1.34
*86 PX 403	*86 PX 453	7 1/2"	2	1.76
*86 PX 404	*86 PX 454	8 1/2"	3	2.06
*86 PX 405	*86 PX 455	10 1/2"	3	2.44
*86 PX 406	*86 PX 456	12 1/2"	4	2.79
*86 PX 407	*86 PX 457	14 1/2"	4	3.12
*86 PX 408	*86 PX 458	15 1/2"	5	3.53
*86 PX 409	*86 PX 459	17 1/2"	5	3.91
*86 PX 410	*86 PX 460	19 1/2"	6	4.26
*86 PX 411	*86 PX 461	21 1/2"	7	4.56

#### Fig. C—SWIVEL TRUCK CASTERS

ICA Type 3209. Swivel casters for heavy-duty work. Recommended for relay racks. Steel mounting plate, 1 1/2 x 2 1/2". 4 mounting holes. Load, 500 lbs. Wt., 7 oz. 86 P 283. NET EACH..... 88c

#### Fig. D—RELAY RACK BRACKETS

Heavy-duty, triangular design brackets. For reinforcing racks and for mounting of panels, shelves, chassis, etc. Black wrinkle finish. 8 oz. 86 P 335. Type 3950. 5" base. NET PER PAIR..... 78c

86 P 336. Type 3951. 8" base. NET PER PAIR..... 90c

86 P 337. Type 3952. 11" base. NET PER PAIR..... 1.08

#### DELUXE METER CASES

Designed to harmonize with the trend of modern streamlined equipment. Finished in marine-gray ripple enamel, trimmed with an attractive chrome band. Case has neat rounded top. Available for 2" and 3" meters. Dependable construction for maximum strength. 4 1/2" high by 4 3/4" wide by 4 1/4" deep. Wt., 1 1/4 lbs. 86 P 390. Type 3995. 2 3/8" diameter hole. 86 P 391. Type 3996. 2 1/8" diameter hole. NET EACH..... 93c

#### SLOPING FRONT CHASSIS

Steel chassis with sloping front for meters. Inclined at proper angle for best visibility. Black ripple. Ht., 3 1/2".

No.	Type	Top	Bottom	Lbs.	NET
86 PX 347	3320	7x17"	10x17"	4	2.48
86 PX 348	3321	10x14"	13x14"	5	2.77
86 PX 349	3322	10x17"	13x17"	5	3.20

# ICA Metal Cabinets



## DELUXE AMPLIFIER FOUNDATION UNITS

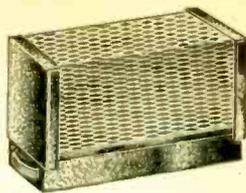
### LOW-COST FOUNDATION UNITS

Cleverly designed and styled. Top covers have rounded corners and fronts have chrome-plated Air Gate ventilators. Screened openings on the top and louvers on sides and back for more ventilation. Handsome gray ripple finish with striped, chrome-plated moldings and handles. Cover height, 6", chassis, 3". Accurately cut for easy assembly. Less bottom plate.

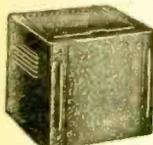
Stock No.	Type	Chassis Size	Wt., Lbs.	NET
86 P 370	3971	10x5 1/2"	6	3.82
86 PX 371	3972	12x8"	7	4.90
86 PX 372	3973	17x7"	9	5.39
86 PX 373	3974	14x10"	9	5.56
86 PX 374	3975	17x10"	11	6.20

### AMPLIFIER FOUNDATION UNITS

A new line of amplifier foundation units. Features a criss-cross grille-type metal cover that provides maximum ventilation and excellent protection from mechanical damage. Grille is spot-welded to heavy-gauge steel end plates. Includes sturdy chrome-plated handles in modern fluted design. Finished in handsome marine-gray ripple enamel. Chassis bases arc 3" in height.



Stock No.	Type	Overall Size	Wt., Lbs.	NET
86 PX 570	3965	5 1/2 x 10 x 9"	5	3.82
86 PX 571	3966	8 x 12 x 9"	7	4.90
86 PX 572	3967	7 x 17 x 9"	9	5.39
86 PX 573	3968	10 x 14 x 9"	9 1/2	5.56
86 PX 574	3969	10 x 17 x 9"	10	6.20



### STEEL CABINETS WITH HINGED COVERS

Modern cabinets for amplifiers, transmitters, test equipment, etc. Front edges are rounded. Louvers in sides and grille ventilators in rear panel. Flush-fitting front panel. Top cover has hinge at rear. Rear panel has opening at bottom for leads, etc. Finished in beautiful marine-gray ripple enamel. Illustration shows a deluxe cabinet with its chrome-plated side ventilators and front trim.

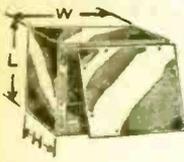
### DELUXE MODELS

Stock No.	ICA Type	NET	Size H. W. D.	Panel Size	Wt., Lbs.	Use Chassis
86 PX 300	3860	4.07	8x10x8"	8x8"	6	86 P 655
86 PX 301	3861	4.58	8x12x8"	8x10"	6	86 P 656
86 PX 302	3862	4.85	8x14x8"	8x12"	11	86 P 657
86 PX 303	3863	10.45	12x20x12"	12x18"	17	86 P 666

### STANDARD MODELS

Stock No.	ICA Type	NET	Size H. W. D.	Panel Size	Wt., Lbs.	Use Chassis
86 PX 310	3925	3.53	8x10x8"	8x8"	6	86 P 655
86 PX 311	3926	3.82	8x12x8"	8x10"	7	86 P 656
86 PX 312	3927	4.49	8x14x8"	8x12"	11	86 P 657
86 PX 313	3928	9.76	12x20x12"	12x18"	17	86 P 666

### METAL UTILITY CABINETS



Popular utility cabinets for amplifiers, monitors, input stages, meters, transceivers, etc. Excellent for the Amateur, experimenter and builder. Removable front and back covers may be fastened to cabinet with self-tapping screws provided. Available in steel with black ripple finish and in aluminum with gray Hammer-tone finish. Shipped knocked down—ready for quick, easy assembly. Supplied complete with hardware.

### STEEL BLACK RIPPLE

No.	Type	Lbs.	NET	L.W.H.	No.	Type	Lbs.	NET
86 P 350	3810	1 1/4	.83	4x4x2"	86 P 304	29810	1 1/4	1.00
86 P 351	3811	1 1/2	.93	5x4x3"	86 P 305	29811	1 1/2	1.15
86 P 352	3812	2 1/2	1.19	6x4x5"	86 P 306	29812	1 1/2	1.44
86 P 353	3800	3	1.27	6x6x6"	86 P 308	29801	1 1/4	2.20
86 P 354	3801	4	1.83	6x9x5"				
86 P 355	3802	5	2.25	7x10x8"				
86 P 356	3804	8	3.53	8x12x11"				
86 P 357	3803	8	2.84	10x10x8"				

### SLIP COVER ALUMINUM BOXES



Aluminum boxes suitable for housing a wide variety of electronic devices. Excellent for low-level high-gain amplifiers, frequency multipliers and many other applications requiring complete shielding. Slide cover permits easy accessibility to mounted parts and dust. Cover is secured to ends by screws. Aluminum construction assures easy drilling and punching. For the Amateur, experimenter and set builder. Gray Hammer-tone finish.

No.	Type	H. W. L.	Shpg. Wt.	NET
86 P 424	29130	2 5/8 x 3 1/2 x 1 3/8"	1 lb. 2 oz.	3.55
86 P 425	29135	2 5/8 x 5 1/2 x 1 3/8"	1 lb. 4 oz.	3.84
86 P 426	29140	2 5/8 x 3 x 1 7/8"	1 lb. 12 oz.	3.67



### PORTABLE STEEL CABINET

An excellent portable cabinet with a secure handle for a variety of test or operating equipment which must be thoroughly protected while being carried. Ideal for transceivers, field strength meters, etc. Both front and back panels are removable and are held in place with self-tapping screws which are supplied. The entire cabinet is very sturdily built of metal and has reinforced corners and edges. Supplied with a strong leather carrying handle, attached with steel "D" rings. Size: 7 1/2" wide, 7" deep, available in two heights as listed. Finished in durable black ripple enamel. Gives home-built equipment professional appearance and protection.

Stock No.	Mfr's. Type	Height	Weight, Pounds	NET EACH
86 P 395	3850	12"	7	2.84
86 PX 396	3851	15"	8	3.56

### DELUXE SLOPING PANEL CABINETS

Top has rounded corners and chromium trim. Rear and side panels louvered for adequate ventilation. Opening at rear for cable connections. Front panel is removable so that the chassis can be attached to it and used as one unit. Cabinets and chassis are of heavy-gauge metal. Finished in gray ripple enamel. Excellent for amplifiers, test equipment and ham gear. Cabinets complete with bottom plates, but less chassis bases.



No.	Type	NET	H. W. D.	Lbs.	Chassis
86 PX 320	3990	4.78	8x8x8"	5	86 P 655
86 PX 321	3991	5.63	8x10x8"	6	86 P 656
86 PX 322	3992	6.86	8x14x8"	11	86 P 659
86 PX 323	3993	9.22	12x18x12"	17	86 PX 666

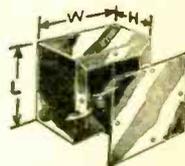
### CHASSIS BASES FOR ICA CABINETS

No.	Type	Size	NET	For Cabinets	Lbs.
86 P 655	4024	7x 7x2"	1.88	86PX300, 86PX310, 86PX320	2
86 P 656	4004	7x 9x2"	1.06	86PX301, 86PX311, 86PX321	2
86 P 657	4007	7x13x2"	1.18	86PX322	3
86 P 666	4033	10x17x3"	1.60	86PX303, 86PX313, 86PX323	5
86 P 657	4005	7x11x2"	1.10	86PX302, 86PX312	3

### UTILITY CABINETS

#### WITH BUILT-IN CHASSIS

Multi-purpose small cabinets ideal for VFO assemblies, pre-amplifiers and units requiring enclosed cabinets. Front and rear panels are attached by self-tapping screws. Built-in chassis is welded to front panel. Constructed of sturdy steel in black ripple finish. Accurately formed for perfect fit. Handy for the Amateur, builder and experimenter.



Stock No.	ICA Type	Cabinet Size W. H. L.	Chassis Size W. H. L.	Wt., Lbs.	NET
86 P 416	3816	4x2x4"	2 1/2 x 1 1/2 x 1 1/2"	1 1/4	1.03
86 P 417	3817	4x3x5"	3 x 2 x 1 1/2"	1 1/2	1.13
86 P 418	3818	5x3x4"	3 1/2 x 2 1/2 x 1 1/2"	1 1/2	1.10
86 P 419	3819	4x5x6"	2 1/2 x 4 x 1 1/2"	2 1/4	1.40
86 P 421	3821	6x5x4"	4 x 4 x 1 1/2"	2 1/4	1.40
86 P 423	3823	6x6x6"	4 x 5 1/2 x 1 1/2"	3 1/2	1.47

### HINGED COVER CABINETS

Sturdy metal cabinets with piano-hinged lids for instant accessibility. Front panel, back panel or bottom can be removed separately. Easy to assemble with self-tapping screws supplied. Finished in handsome, durable black ripple enamel. Available in six sizes to accommodate a wide variety of uses. Ideal for the construction of experimental and test equipment.



Stock No.	Type	H. W. D.	Weight, Pounds	NET EACH
86 P 340	3825	6x9x5"	4	3.23
86 P 343	3826	7x10x8"	6	3.84
86 P 344	3828	7x12x8"	6	4.37
86 P 345	3829	8x12x11"	8	5.19
86 P 346	3830	7x14x8"	7	5.19
86 PX 346	3831	9x18x12"	15	6.50

### SLOPING PANEL CABINETS

Professional type, new streamlined sloping panel metal cabinets. Ruggedly built, small and compact, they are ideally suited for any type of equipment which is to be used on the top of an operating desk or work bench. Offers maximum visibility to meters with a minimum of parallax. With rounded corners, finished in durable marine-gray ripple enamel. Size, 4 1/2" high x 4 1/4" deep. Less rear cover. See below.



Stock No.	Mfr's. Type	Width	Wt. Lbs.	NET EACH
86 P 380	3905	4 1/2"	1 1/2	.98
86 P 381	3906	7 1/2"	2	1.64

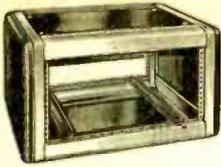
### CABINET REAR COVERS

Type 4166. For 86 P 380 cabinet above. Size: 4 1/2 x 4 1/4".  
86 P 678. NET EACH..... 29c

Type 4156. For 86 P 381 cabinet above. Size: 7 1/2 x 7 1/4".  
86 P 679. NET EACH..... 41c

# Builders' Supplies

## EMCOR DELUXE METAL CABINET

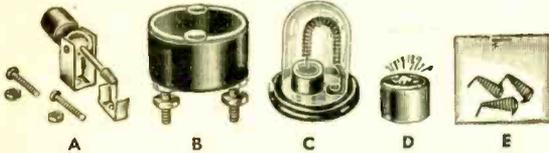


**Type INS-S-8.** An extremely versatile, unusually rugged cabinet, handsomely finished in two-tone gray. Customizing adds professional appearance to equipment. Top, bottom, back and ends removable with screwdriver. Chassis need not be removed for servicing. Tough, bonderized finish is highly scratch- and chip-resistant. Front panel will take any 8 3/4" rack panel with RETMA or WE notching. Adjustable mounting brackets accommodate any size chassis up to 17" wide by 15" deep. Two or more cabinets may be bolted together for vertical or horizontal stacking. Top and bottom panels are solid, formed steel. Back panel is 5/4" high; perforated to provide adequate ventilation. Complete with all hardware and four rubber feet. Less front panel; see below. Shpg. wt., 32 lbs. **86 PX 810. NET 23.03**

**Type SFP-8.** Front panel for above. Matching finish. Four mounting holes. Size, 8 3/4"x19". Shpg. wt., 3 1/2 lbs. **86 PX 811. NET 3.70**

**Type HDW-61-371.** Set of two satin chrome handles. Shpg. wt., 8 oz. **86 P 812. NET 1.47**

## CRYSTAL DETECTORS



**Fig. A—DETECTOR MOUNT KIT**  
Crystal holder, cat-whisker and hardware. Less crystal. Uses No. 52 S 005 or 52 S 006, right. 3 oz. **52 S 003. NET EACH 15c**

**52 S 004.** As above, but on fiberboard base. Fahnestock clips. 5 oz. **NET EACH 21c**

**Fig. B—FIXED DETECTOR**  
Permanently adjusted, sensitive, meter-tested crystals. In bakelite case. Shpg. wt., 3 oz. **52 S 001. NET EACH 66c**

**Fig. C—ENCLOSED DETECTOR**  
Dustproof glass enclosed detector. With crystal. Wt., 3 oz. **52 S 002. NET EACH 38c**

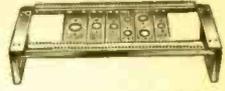
**Fig. D—MOUNTED CRYSTAL**  
Highly sensitive, very dependable, galena crystal, securely mounted in lead. Wt., 2 oz. **52 S 005. NET EACH 6c**

**METER-TESTED CRYSTALS**  
Laboratory tested and selected to assure excellent performance. Has greater sensitivity than 52 S 005 above. (Not illustrated). Wt., 3 oz. **52 S 006. NET EACH 12c**

**Fig. E—CAT WHISKERS**  
Set of three. Correctly designed of tested spring steel. Proper tension for all detectors. Wt., 3 oz. **52 S 011. PER SET 12c**

## "SPECIFIC" MODEL 8-140 SPEED CHASSIS

Versatile chassis for lab and experimental use. Has tapped holes for variety of plated sockets. Perfect for temporary experimental circuits. Three tie-point strips: 2 insulated, 1 grounded, each 14" long. Cadmium-plated 20-ga. steel. Size: 16 1/2" L, 5" D, 5 1/4" H. Shpg. wt., 1 1/4 lbs. **86 PX 680. NET 5.88**

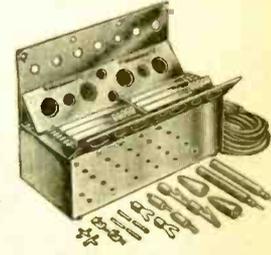


**MOUNTING PLATES.** Cadmium-plated, 20-ga. steel. Quickly and easily installed or removed from Speed Chassis. Pre-punched for sockets and other parts. 4 3/4" deep. Av. shpg. wt., 2 oz.

Stock No.	Description	Width	NET EACH
86 P 681	Single 7-pin min. socket	1 1/2"	20c
86 P 682	Double 7-pin min. socket	1 1/2"	24c
86 P 683	Single 7-pin Vector socket	1 1/2"	34c
86 P 684	Double 7-pin Vector socket	1 1/2"	39c
86 P 685	Triple 7-pin Vector socket	1 1/2"	44c
86 P 686	Single 9-pin min. socket	1 1/2"	23c
86 P 687	Double 9-pin min. socket	1 1/2"	28c
86 P 688	Single 9-pin Vector socket	1 1/2"	34c
86 P 689	Double 9-pin Vector socket	1 1/2"	39c
86 P 690	Triple 9-pin Vector socket	1 1/2"	44c
86 P 685	Single octal socket; 1 1/2" ctrs.	2 1/2"	25c
86 P 686	Double octal socket; 1 1/2" ctrs.	2 1/2"	30c
86 P 687	Single octal socket; 1 3/4" ctrs.	2 1/2"	25c
86 P 688	Double octal socket; 1 3/4" ctrs.	2 1/2"	30c
86 P 689	Universal transformer (2 supplied)	1 1/2"	34c
86 P 688	Volume control	1 1/2"	15c
86 P 689	Blank	1 1/2"	18c
86 P 690	Blank	2 1/2"	21c

## UNICHASSIS BREADBOARD

All-metal "breadboard type" chassis permits rapid assembly of circuits. For electronic research labs and experimenters. Scientific layout uses all space without crowding. 8 holes for miniature and 8 for standard sockets cut in two sections of chassis top. Angled at 45 degrees to permit using large tubes or other components without sacrificing lower shelf space. Heavy components can be mounted on lower shelf. Chassis is made of heavy-duty aluminum alloy, ruggedly constructed for long use. Chassis-length, plated, grooved rods serve as bus bars. 22 leads of assorted lengths from 6" to 42". Leads are rubber covered number 18 wire. Each end has insulating sleeve fitted with socket for interchanging assorted connectors which are supplied. Overall size: 11x7 1/2x 8 1/4". Shpg. wt., 3 1/2 lbs. **86 PX 575. NET 19.50**



## WALDOM PLASTIC CASES AND PANELS



Sturdy, molded, black plastic cases and panels. For housing test instruments, receivers, transmitters, transistor amplifiers, oscillators, pre-amplifiers, and similar equipment. Recessed corner bosses for flush mounting panels. Case walls and panels are 1/8" thick. Av. shpg. wt., cases: 1 1/2 lbs.; panels: 1 lb.

### INSTRUMENT CASES

Stock No.	Mfr's Type	Size (O.D.)	NET
86 P 286	BC-138	6 1/4"x3 3/4"x2"	.79
86 P 287	BC-140	6 1/4"x3 3/4"x2 3/8"	1.23

### MATCHING PANELS

Stock No.	Mfr's Type	Size	NET
86 P 288	BP-137	6x3 1/4"	.41
86 P 289	BP-139	6 1/2"x3"	.59

### SPEAKER GRILLE CLOTH

Beautiful new patterns in high quality, durable cloth. Perfect for modernizing old cabinets and for construction of new custom enclosures. Supplied neatly folded in plastic bags.

### MAHOGANY

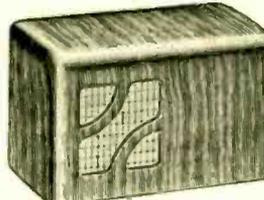
43 N 605.	12x12"	Wt., 3 oz.	NET 41c
43 N 606.	13x24"	Wt., 3 oz.	NET 79c
43 N 607.	36x36"	Wt., 6 oz.	NET 3.70

### IVORY

43 N 608.	12x12"	Wt., 3 oz.	NET 41c
43 N 609.	13x24"	Wt., 3 oz.	NET 79c
43 N 610.	36x36"	Wt., 6 oz.	NET 3.70
43 N 123.	Walsco Non-Penetrating Cloth and Fabric Cement.	1 1/4" oz. tube.	NET 38c

### FLOCK-COATED GRILLE SCREENING

Galvanized wire mesh, flocked on both sides. Soft, brown color. Durable and attractive. **86 N 060.** 8x11" Wt., 6 oz. NET 56c  
**86 NX 061.** 18x24" Wt., 12 oz. NET 1.88  
**86 NX 062.** 36x36" Wt., 2 lbs. NET 5.82



## TABLE RADIO CABINETS

Use one of these handsomely-finished table model wood radio cabinets to house your favorite home-built set. Ideal for replacement, radio servicings, etc. Attractive, modern styling. Walnut-finished. Furnished with blank panels (except for speaker cut-out as shown) for making lid and control cut-outs to suit individual requirements. Speaker grilles neatly fitted with attractive cloth. Sizes given are height, width and depth. Shpg. wt., 5 lbs.

Inside measurements: 8 1/2"x5 1/2"x4 1/4". Overall size: 9 3/4"x6x4 1/4". **98 S 932. NET 2.63**

Inside measurements: 10 3/4"x6 3/4"x5 1/2". Overall size: 11x7x5 3/4". **98 S 930. NET 3.23**

Inside measurements: 12 1/4"x7 1/4"x6 1/4". Overall size: 13 1/4"x7 1/2"x6 1/2". **98 SX 931. NET 4.05**

Inside measurements: 13 1/4"x7 3/4"x6 1/4". Overall size: 14 1/4"x8 1/2"x6 1/2". **98 SX 929. NET 4.28**

For plastic grille cloth, metal ornamental grilles and fiberglass acoustic insulation material, see page 32.



## RADIO PANELS

A complete line of general utility Masonite and steel panels for all radio and electronic purposes. Use for supporting equipment or as blank panels. Steel panels are finished in black wrinkle enamel. 1/8" masonite panels have smooth black finish; 3/8" masonite panels have black ripple finish. Only the types and sizes shown below are available. Sizes are standard to meet most specific needs.

### 1/8" STEEL

Stock No.	Size	Wt., Lbs.	NET
86 P 740	7x10"	1	.64
86 P 741	7x12"	1	.71
86 P 742	7x14"	1	.82
86 P 747	8x18"	2	1.09
86 P 748	9x15"	2	1.06

### 3/8" SMOOTH BLACK MASONITE

Stock No.	Size	Wt., Lbs.	NET
86 P 750	7x10"	1	.32
86 P 751	7x12"	1	.36
86 P 752	7x14"	1	.41
86 PX 755	7x21"	2	.56
86 P 757	8x18"	2	.55
86 P 758	9x15"	2	.54

### 3/8" BLACK RIPLE MASONITE

Stock No.	Size	Wt., Lbs.	NET
86 P 770	7x10"	1	.50
86 P 771	7x12"	1	.54
86 P 772	7x14"	1	.61
86 P 775	7x21"	2	.85
86 P 777	8x18"	2	.89

# Headphones & Accessories

## AMERICAN-BELL HEADPHONES



### STANDARD DUAL HEADSETS

Double headband with firmly gripping yokes. 1 7/8" diaphragm. Cords are mercerized cotton-covered copper tinsel. Shpg. wt., 12 oz.

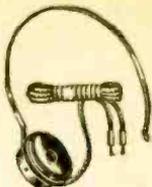
59 J 110, 2000 ohms. NET.....1.67  
59 J 111, 3000 ohms. NET.....1.80

### INSTITUTIONAL DUAL HEADSETS

Especially designed for schools, prisons, hospitals and other institutions where fool-proof, lightweight headphones are essential. Also ideal for use with crystal sets, battery radios and low-cost hearing aids. Every feature required for institutional use has been incorporated: metal cases and durable bakelite caps which are easily cleaned; inside terminal connections, to prevent shocks and tampering; 4 1/2" braided cord. Wt., 12 oz.

59 J 100, 2000 ohms. NET.....1.96  
59 J 101, 3000 ohms. NET.....2.15

Sensitive headphones with all terminals inside to avoid shocks or damaging shorts. Produced by one of America's leading manufacturers. Noted for their remarkable tonal fidelity and sensitivity. Lightweight. Have adjustable flexible headbands to provide utmost wearing comfort and long life. Magnets are of high permeability alloy, providing exceptional power and stability. Solenoid coils are well insulated and firmly mounted in headphone shell. Metal case; bakelite caps. Supplied with 4 1/2 foot extra-flexible cord of mercerized cotton covered tinsel. With standard phone tip terminals. Ideal for use with crystal or battery sets as well as for all general-purpose headphone requirements.



### SINGLE HEADPHONES

Improved inside-terminal type. Suitable for hard-of-hearing installations. Spring-metal headband. With cord. Shpg. wt., 8 oz.

59 J 112, 1000 ohms. NET.....96c  
59 J 113, 1500 ohms. NET.....1.06

### HEADPHONE REPLACEMENT PARTS

For American-Bell Headphones.

59 J 104, Diaphragm only. Shpg. wt., 2 oz. Pkg. of 2.....11c

59 J 106, Bakelite cap only. Wt., 2 oz. NET EACH.....12c

59 J 107, Double headband only, less yokes. Shpg. wt., 6 oz. NET EACH.....59c

59 J 108, Yoke only for double headband. Shpg. wt., 3 oz. NET EACH.....10c

## PERMOFLUX HIGH-FIDELITY DYNAMIC HEADSETS

Type HD-1. Moderately priced popular Permoflux high-fidelity dynamic headphones. Newly developed type PIR-1 earphone unit makes possible true distortionless high-fidelity performance in a headset light enough in weight for comfortable wearing—moderate in cost. Essentially flat frequency response from 50-8000 cps. Extremely low distortion and freedom from adverse room reverberation effects make this range highly desirable for high-fidelity music reproduction. Incorporates new comfortable, lightweight headband and a specially designed ear cushion for maximum coupling to the ear.



Power rating, 75 milliwatts. Impedance, 8 ohms; may be matched to either 600 ohm or 50,000 ohm sources with plug-in transformers listed below. Rugged five-foot cord constructed of rubber-covered cadmium-bronze wire for long life, high flexibility. Cord is terminated in a two-circuit plug for convenience in connecting to a tuner or communications receiver. Shpg. wt., 12 oz.

59 J 387, NET.....27.34

### TYPE HD-100 PROFESSIONAL MODEL

Developed to provide broadcast engineers, recording engineers, orchestra directors and other professional users with the ultimate in headset performance. Uses new PMR-10 earphone unit. New lightweight headband and ear cushion assembly add to its comfort and utility. Excellent frequency response from 40-12,000 cps. Power rating, 100 milliwatts. Distortion is practically non-existent. 5" rubber-covered cadmium bronze cord; terminated in standard two-circuit plug. Impedance, 8 ohms. May be used with separate plug-in transformers below. (Not illustrated.) Shpg. wt., 14 oz.

59 J 388, NET.....44.10

Matching Transformers. Plug-in type for HD-1 and HD-100 headsets. Match 8 ohm headset to 600 or 50,000 ohm output. High-quality—sturdy construction. Shpg. wt., 4 oz.

59 J 389, 600 ohm.....7.35  
59 J 390, 50,000 ohms. NET EACH.....7.35

### HIGH-FIDELITY BINAURAL MODEL

Type B-DHS-17B. Dynamic high-fidelity binaural headset. Impedance, per phone, 300 ohms. With Type 1505 earcushions; 5-foot cord with PL-68 plug. Shpg. wt., 1 1/4 lbs.

59 J 370, NET.....49.00

Ear Cushions, Type 1505.

59 J 372, NET PER PAIR.....5.88

### BMA-1 BINAURAL TO MONAURAL HEADSET ADAPTER

Permits any Permoflux binaural headset to be used for monaural service. Input end of adapter has jack to receive the PL-68 type, 3-circuit plug of binaural headset. Output end is standard 2-circuit PL-55 type plug which can be plugged into any conventional headset jack. L, 2 1/4"; Dia., 1 1/2". Shpg. wt., 2 oz.

59 J 385, NET EACH.....2.21



### FEN-TONE HI-FI "ADAPHONE"

Model M-3. Hearing-aid earphone for radio and TV. Weighted straps on control unit provide convenient armchair installation. Automatic volume compression prevents "blasting." Choice of response; "normal" response, or "high" response for accentuation of treble. Low impedance ear phone has ear mould for snug fit.



3-foot cord, and plug. Control unit has 15 feet of 2 conductor cable with complete instructions for connection to loudspeaker. Size, 3x2x1 1/4". Wt., 1 lb.

59 J 333, NET.....13.40

Model MS-2. Additional carset for above. Permits usage by two persons at same time. With cord and plug. Shpg. wt., 5 oz.

59 J 334, NET.....5.15

## C. F. CANNON HEADPHONES AND ACCESSORIES



Fig. A. Brandes "Supiorior" Phones. A high quality, ruggedly-built headset which has been a favorite for years. Outside terminal type, with metal cases and bakelite caps. Diaphragm diameter is 2 1/2". Has double coils, two in each receiver. Flexible metal split headband is easily adjustable for maximum comfort. Supplied complete with 4 1/2-foot cotton-covered cord. Magnets of high retentivity are 1/2" square. Resistance, 2000 ohms per pair. Shpg. wt., 13 oz.

59 J 130, Type BS-2, NET.....2.20

Fig. A. "Admiral" Phones. Sturdy, lightweight phones similar to "Superior" type described above but with terminal connections inside case. With molded bakelite caps, double-coil magnets, 4 1/2-ft. cotton-covered cord, etc. Housed in durable metal cases. Shpg. wt., 13 oz.

59 J 135, BA-2, 2000 ohms. NET.....2.35

59 J 136, BA-3, 3000 ohms. NET.....2.65

59 J 137, BA-5, 5000 ohms. NET.....3.53

CAPS AND DIAPHRAGMS

59 J 138, Caps, Wt., 2 oz. EACH.....18c

59 J 140, Diaphragms, 2 oz. Pkg. of 2.....11c

Fig. B. Master Phones. High-resistance headset. Splendid for use in multiple installations. Cases are metal with bakelite caps and inside terminals to prevent shock. Chrome-steel magnets, 2 1/2" dia. diaphragm. Headband adjusts by spring clips. 4 1/2-foot cotton-covered cord. Wt., 14 oz.

59 J 215, MC-2, 2000 ohms. NET.....2.20

59 J 125, MC-3, 3000 ohms. NET.....2.50

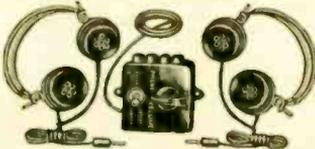
59 J 126, MC-5, 5000 ohms. NET.....3.38

59 J 127, Replacement bakelite cap for above headsets, 2 oz. NET EACH.....18c

59 J 129, Replacement diaphragm for above headsets, 2 oz. Pkg. of 2.....11c

Fig. C. Alnico V Phones. Small, lightweight phones featuring powerful Alnico V permanent magnets. Two durable coils in each phone. DC resistance, 2000 ohms. Diaphragm diameter is 1 1/2". Inside terminal connections to prevent shock. Case and caps are molded black plastic. With 4 1/2-foot black braided cord. Shpg. wt., 11 oz.

59 J 132, Type-15-2, NET.....2.35



### CANNON TV HEADPHONE KIT

Consists of volume control, adapter box and phones. Permits listening to TV through phones alone or phones and speaker. Diaphragm dia. 1 1/4". Inside terminals. Black molded plastic. 4 1/2 ft. braided cord with pin tips. 15 ft. plastic cord connects control box to TV set. With 2 pairs of phones. 2 lbs.

59 J 175, NET.....9.70

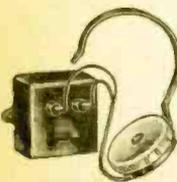
TV headphone kit with headset. Wt., 1 1/2 lbs.

59 J 176, NET.....6.61

Control box only for TV kit. Wt., 9 oz.

59 J 177, NET.....4.41

### "CANNON-BALL" RADIO HEARING AID



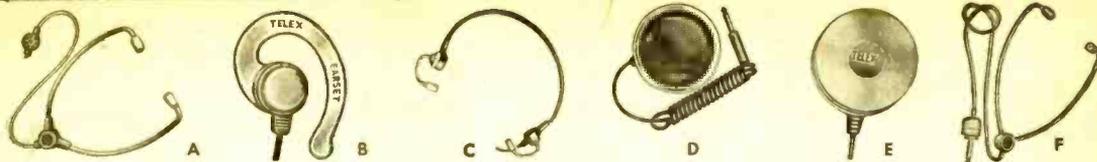
Popular, low priced Cannon-Ball hearing aid for any radio set. Can be attached to any speaker. Consists of a specially constructed low resistance headphone which matches the voice coil of the speaker, and a function selector switch; permits listening with speaker only, with phone only, or with phone and speaker.

Complete with simple, easy-to-follow wiring diagram and Instructions. Shpg. wt., 1 lb.

59 J 118, NET.....3.38

Depend on ALLIED for Complete Stocks, Low Prices, Friendly Service

# Headphones and Accessories



## LATEST TELEX QUALITY HEADSET EQUIPMENT

All of the Telex headsets listed below are under *less cord* (except either the standard cord or the volume control cord for any headset. Cords are listed in the right hand column.

### Fig. A—LIGHTWEIGHT MONOSET

For use wherever individual listening is desired. Weighs only 1.2 oz.; ends ear pressure and head fatigue. Magnetic type. Made of tough, durable tenite. White plastic ear plugs remove easily for cleansing. Amateurs, studio engineers, pilots appreciate their featherweight, under-the-chin convenience. Wt., 8 oz.  
59 J 281. Type 4626. 2000 ohms.  
59 J 280. Type 4601. 128 ohms.  
List Each, \$9.00 NET EA., *Less cord* 5.29

### Fig. B—MIDGET EARSET

Midget earpiece receiver that slips onto the ear. Weighs only 1/2 ounce! Flat plastic frame fits either ear. Frequency response from 50 to 4000 cycles. Inconspicuous when worn. Single cord connection provides for complete freedom of movement. Wt., 5 oz.  
59 J 265. Type 4650. 128 ohms.  
59 J 266. Type 4660. 2000 ohms.  
List Each, \$7.80. NET EA., *Less cord* 4.59  
Type 4652, Telex Plastic Earframe. For Type 4650, 4660 midget earsets only. Shpg. wt., 4 oz.  
59 J 297. List, 80¢. NET 47¢  
Type 4642. Same as Type 4650 but with metal ear bow instead of plastic. 128 ohms. Wt., 5 oz.  
59 J 274. List, \$8.40. NET 4.94  
Type 4644. Same as Type 4660 but metal ear bow instead of plastic. 2000 ohms. Wt., 5 oz.  
59 J 275. List, \$8.40. NET 4.94

### Fig. C—TWINSET

An innovation in headset design. Nothing touches the ears with Telex Twinset. Receivers rest lightly at the temples. Tubular sound arms pipe signal into ears. Weighs only 1.6 oz. Approved by C.A.A. for pilots; each receiver stamped "C.A.A.T.C. 32R1 Type Approved." Shpg. wt., 8 oz.  
59 J 285. Type 3776. 1000 ohms.  
59 J 286. Type 3781. 64 ohms.  
List Each, \$13.05. NET EA., *Less cord* 7.68

### Fig. D—DYNAMIC PILLOW SPEAKER

Model 8110. Wide frequency range and great power handling ability. Rich, full tone. For individual or institutional use. Stainless steel, for moistureproof housing. 32 ohm voice coil. With 5 ft. cord and standard phone plug. 3 3/4" dia. 1 1/2" thick. Wt. 12 oz.  
59 J 276. List, \$10.20. NET 6.00  
Type 8130. Comfortable reception without tiring listener. Smooth, mellow tonal quality. For institutional or individual use. Impedance, 10,000 ohms. With 5 ft. cord. Dia. 3 3/4", thickness, 1 1/2". Wt., 6 oz.  
59 J 277. List, \$12.10. NET 7.12

### Fig. E—PILLOW SPEAKER

Only 3/4" thick by 2 1/4" diameter. Red waterproof plastic. Shpg. wt., 6 oz.  
59 J 290. Type 4531. 2000 ohms.  
59 J 291. Type 4501. 128 ohms.  
List Each, \$7.20. NET EA., *Less cord* 4.23

### Fig. F—HI-FI "DYNASET"

Model D-7. Excellent wide-range, under-the-chin dynamic headset. A midget 3/4", 6-ohm speaker is built right into the plug. Extremely sensitive. Response, 50-8000 cycles to 25 mw. Speaker diaphragm directs sound through a 60" flexible plastic tube to the headset. Light-gray finish. 6 ohms. Shpg. wt., 6 oz.  
59 J 239. List, \$15.60. NET 9.17

### Cords and Extra Tips

5-ft. cord with standard phone plug. \*Have built-in volume controls, with pocket clips. For use with Telex units listed on this page. Average shpg. wt., 4 oz.

No.	Description	For Use With	NET
59 J 270	Type 3280 standard cord	All Telex sets except Dynaset	2.47
59 J 272*	Volume Control Cord w/5,000 ohm pot.	Twinset 59 J 285	5.88
59 J 245*	Volume Control Cord w/20,000 ohm pot.	59 J 281, 59 J 266 59 J 290	6.12
59 J 246*	Volume Control Cord w/1,000 ohm pot.	59 J 280, 59 J 265 59 J 286, 59 J 291	5.88
59 J 295	Ear Tips	All Twinsets	.09
59 J 296	Ear Tips	All Monosets	.09



### HEADPHONE CORDS

Copper tinsel inner conductor covered with closely woven cotton braid. For phones on this page and page 234. Shpg. wt., 2 oz.

#### 4 1/2 Ft. Double Cords

No.	Description	For Use With	EACH
59 J 220	With spade lugs on one end; tips on other. For inside terminals.	59 J 100, -101, -110, -111, -125, -126, -132, -135, -136, -137, -215	44¢
59 J 205	Same as above with tips on both ends	59 J 130 Govt. and military types	44¢
59 J 206	Same as above with tips on both ends	59 J 070	
59 J 002	Phone tip ends		

#### 5 Ft. Double Cords

59 J 006		59 J 020, -021	1 49¢
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#### 6 Ft. Double Cords

59 J 004		59 J 000, -001	53¢
59 J 007		59 J 040	53¢

#### 8 Ft. Double Cords

59 J 221	With spade lugs on one end; tips on other	Same as type 59 J 220 above	71¢
59 J 218	Same as above	59 J 130 Govt. and Military type	
59 J 219	With tips on both ends		

#### Single Cords

59 J 200	4 1/2 ft. cord. Spade lugs on one end; tips on other.	59 J 112, -113	31¢
59 J 003	4 1/2 ft. cord with phone tips	59 J 072	31¢
59 J 182	6 ft. phone cord	59 J 157	97¢

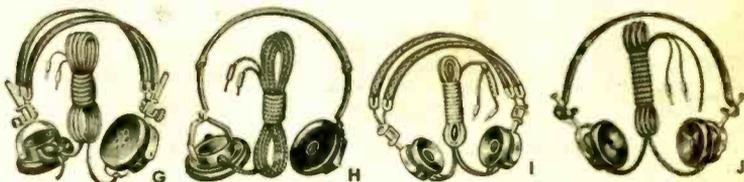
### ICA RUBBER PHONE CUSHIONS

Type 195. Finest quality ear cushions. Used by leading airlines. Fit all types of phones. Shpg. wt., 6 oz.  
59 J 122. PER PAIR. 82¢  
10 PAIRS FOR..... 7.35

### BRUSH LORGNETTE PHONE TYPE BA202



Single type. A high impedance, crystal headphone receiver, attached to telescoping lorgnette handle—adjustable from 12" to 17". For use in churches, theaters, etc. 5-ft. cord. Wt. 10 oz.  
59 J 157. List, \$14.50. NET 8.53



## TRIMM HEADPHONES AND ACCESSORIES

### Fig. G—"MILITARY" TYPE

Model 29. Very sensitive headphones of highest quality. Constructed to meet military headphone specifications. Impedance, 20,000 ohms; 2,200 ohms DC resistance. Metal shell with heavy-duty bakelite cap. Supplied with 6 ft. waterproof cord. Inside terminals. Bipolar magnets. Leather-covered band. Wt., 1 lb.  
59 J 040. NET 10.35

59 J 041. Replacement Cap. For above and for Western Electric headphones. EACH. 59¢  
59 J 042. Extra Diaphragms. For above. EACH..... 15¢

### Fig. H—"FEATHERWEIGHT" TYPE

Very light, compact set of headphones weighing less than 5 ounces. Ideal for Amateurs, electronic testing apparatus, etc. Black bakelite caps and shells. Forged magnets, pole pieces of permalloy. Impregnated coils. 1 ft. moistureproof cord. 2 3/4" dia. Shpg. wt., 9 oz.  
59 J 000. 4,000 ohm Standard.  
59 J 001. 24,000 ohm Special.  
NET EACH..... 6.47

59 J 045. Extra Diaphragms. EACH. 15¢  
59 J 013. Replacement Caps. EACH. 44¢

### Fig. I—"PROFESSIONAL" TYPE

A high-quality, medium priced pair of standard magnetic headphones for general purpose duty. Bakelite caps and shells. Forged magnets of chrome steel, impregnated coils. 5 ft. cord. Inside terminals. Has plastic covered headband. Shpg. wt., 1 lb.  
59 J 020. 3,000 ohms. NET 3.41  
59 J 021. 4,000 ohms. EACH.....  
59 J 030. Replacement Caps. EACH. 38¢  
59 J 031. Extra Diaphragms. EACH. 12¢

### Fig. J—"ACME DELUXE" PHONES

Sensitive and practical phones for every headset use. "Light as a feather." Each unit weighs less than 1 1/2 ounces, total weight is only 6 ounces. Recommended especially for code training classes, communications and multiple phone installations. Cap and shell are molded of bakelite with light-tension flexible headband. Cord is 4 1/2 ft.; braid-covered. Phone tip terminals. Shpg. wt., 8 oz.  
59 J 070. 2000 ohms. NET 1.97

### "ACME" SINGLE HEADSETS

A lightweight single unit headphone. With headband as described above. Wt. 4 oz.  
59 J 072. 1000 ohms. NET 1.18

### EXTRA DIAPHRAGMS

59 J 012. Replacement diaphragms for Acme Deluxe phones. 1 oz. NET EACH..... 12¢

### "LORGNETTE" TYPE

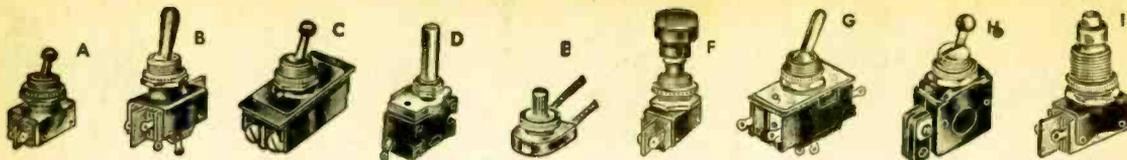
Type 120. Has same construction as "Featherweight" headphones described at left. Earphone extends to 14". Impedance, 4,500 ohms; DC resistance, 1,000 ohms. 6-foot braided cord, less phone plug. Wt., 10 oz.  
59 J 036. NET 4.85

### INDIVIDUAL VOLUME CONTROLS



Phone jack and volume control in a compact box. Permits adjustment of volume to suit individual needs. Resistance, 10,000 ohms. Corners of case are rounded. Available in either glossy ivory, suitable for theaters, or brown wrinkle for churches, schools, etc. Size, 1 1/2 x 3". Shpg. wt., 1 lb.  
59 J 056. Brown.  
59 J 057. Ivory.  
NET EACH..... 2.59

# H and H Toggle Switches



## POPULAR HART & HEGEMAN APPLIANCE SWITCHES

**Fig. A—BALL HANDLE TOGGLE SWITCHES**

Popular, high-quality Hart and Hegeman ball handle toggle switches. Underwriters' Laboratories Approved. Built for long, dependable service. SPST type rated at 3 amps, 250 volts. All others 3 amps at 125 volts or 1 amp at 250 volts. 34B127 is momentary contact type. All have bakelite insulation. Shank,  $\frac{1}{2}$ " diameter. Supplied with mounting nuts. Solder lug terminals. Shpg. wt., each, 2 oz.; per 20, 2 lbs.

Stock No.	Mfr's Type	Poles	Shank Length	NET EACH	20-39 EA.	40-99 EA.
34 B 100	20994-BF	SPST	$\frac{1}{2}$ "	.43	39¢	35¢
34 B 101	21518-B	SPST	$\frac{1}{2}$ "	.53	48¢	44¢
34 B 102	21615-RD	SPST	$\frac{1}{2}$ "	.55	50¢	46¢
34 B 110	21350-B	SPDT	$\frac{1}{2}$ "	.55	50¢	46¢
34 B 111	80023-B	SPDT	$\frac{1}{2}$ "	.67	62¢	56¢
34 B 112	21661-B	SPDT	$\frac{1}{2}$ "	.67	62¢	56¢
34 B 127	21827	DPDT	$\frac{1}{2}$ "	.81	74¢	68¢
34 B 120	20902-AM	DPST	$\frac{1}{2}$ "	.79	73¢	66¢
34 B 121	20902-AZ	DPST	$\frac{1}{2}$ "	.93	85¢	78¢
34 B 122	20902-Q	DPST	$\frac{1}{2}$ "	.91	83¢	75¢
34 B 130	20905-Z	DPDT	$\frac{1}{2}$ "	.91	83¢	75¢
34 B 131	20905-BT	DPDT	$\frac{1}{2}$ "	1.00	92¢	84¢
34 B 132	20905-C	DPDT	$\frac{1}{2}$ "	1.03	94¢	86¢

**Fig. B—BAT HANDLE TOGGLE SWITCHES**

Ruggedly built H and H bat handle toggle switches. Underwriters' Laboratories approved. All have bakelite insulation. Silver-plated lug terminals. Shank,  $\frac{1}{2}$ " diameter.  $\frac{1}{2}$ " long. Supplied with mounting nuts. Solder lug terminals. Shpg. wt., each, 2 oz.; per 20, 2 lbs.

Stock No.	Mfr's Type	Poles	Amps.	Volts	NET EACH	20-39 EA.	40-99 EA.
34 B 195	20994-EW	SPST	3	125	52¢	49¢	43¢
34 B 196	21350-BP	SPDT	3	125	61¢	56¢	51¢
34 B 197	20902-DN	DPST	3	125	85¢	77¢	71¢
34 B 198	20905-GA	DPDT	3	125	97¢	89¢	81¢

**Fig. C—POWER TYPE TOGGLE SWITCHES**

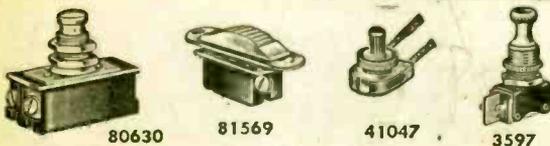
Compact, toggle-operated power switches for motors and appliances; 34B135 and 34B136 are rated at 6 amps 250 volts; 12 amps at 120 volts; 34B136 is also rated 1 HP, 250 volts. 34B137 is rated at 3 amps, 250 volts; 12 amps, 125 volts. U.L. Approved. Bakelite case. Screw terminals. Shank,  $\frac{1}{2}$ " dia.  $\frac{3}{8}$ " long. With mtg. nuts. Shpg. wt., 2 oz.; 20, 2 lbs.

Stock No.	Mfr's Type	Poles	NET EACH	20-39 EA.	40-99 EA.
34 B 135	80607	SPST	96c	88c	80c
34 B 136	80600	DPST			
34 B 137	80618	DPDT			

**Fig. D—HIGH-QUALITY ROTARY SWITCHES**

Positive contact rotary switches. U.L. Approved. All switches 125/250 volts. Bakelite insulation. Silver-plated lug terminals. Threaded shank,  $\frac{1}{2}$ " dia.,  $\frac{3}{8}$ " long. Shaft,  $\frac{1}{4}$ " dia.,  $\frac{1}{2}$ " long. Wt., 2 oz.

No.	Type	Poles	Amps.	Volts	NET EACH	20-39 EA.	40-99 EA.
34 B 141	81715-G	SPST	6/3	1.06	.98	.88	.75
34 B 142	81721-G	SPDT	6/1	1.14	1.05	.95	.82
34 B 143	81724-G	DPST	6/3	1.42	1.29	1.18	1.04
34 B 144	81727-G	DPDT	6/3	1.54	1.41	1.28	1.14



### GENERAL-PURPOSE SWITCHES

Type 80630 Push-Button Switch. Momentary contact. DPST, normally open. Can be used as interlock in heavy-duty applications. Metal button, 6 amp, 250 V., 12 amp, 125 V., U.L. Approved. Screw terminals. Size,  $1\frac{1}{2}$ " x  $\frac{3}{4}$ ". Sleeve length,  $\frac{1}{2}$ ". Dia.,  $\frac{1}{2}$ ". Wt., 2 oz.; 20, 1  $\frac{1}{4}$  lbs. 147

Type 81569 Slide Switch. SPST. Indicating switch, screw terminals. Requires  $\frac{1}{4}$ " x  $\frac{3}{8}$ " cutout for mounting. 3 amp at 250 V.; 6 amp at 125 V. Size,  $2\frac{1}{4}$ " x  $\frac{1}{2}$ ". Bakelite case. Wt., 2 oz.; 20, 1  $\frac{1}{4}$  lbs. 82c

Type 41047 Rotary Canopy Switch. Rated 1 amp, 250 V.. SPST.  $\frac{3}{8}$ " stem;  $\frac{1}{2}$ " dia. Deluxe brass finish; metal handle. 6' leads. Shpg. wt., each, 2 oz.; 20, 1  $\frac{1}{4}$  lbs. 32c

Type 3597 Push-Pull Midget Switch. SPST. Metal button, laminated fibre base. Solder lug terminals. 3 amps at 250 volts. U.L. Approved. Requires  $\frac{1}{2}$ " mtg. hole. Size,  $1\frac{1}{2}$ " x  $1\frac{1}{8}$ ". Wt., 2 oz.; 20, 1  $\frac{1}{4}$  lbs. 75c

34 B 154. 20-99, EA. 64¢ EACH

Special prices available on H & H switches in quantities greater than those listed on this page. Write for quotations.

**Fig. E—CANOPY-TYPE ROTARY SWITCH**

Type 41044. Rated 3 amps 125 volts; 1 amp 250 volts. U.L. Approved. Bakelite base. Threaded shank,  $\frac{1}{2}$ " dia.  $\frac{3}{8}$ " long. Fluted shaft,  $\frac{1}{8}$ " dia.,  $\frac{3}{8}$ " long. 6' wire leads. With mtg. nuts. Shpg. wt., 2 oz. 24c

**Fig. F—PUSH-BUTTON SWITCHES**

Type 86710-C. SPST push-button switch with snap-on bakelite button in red or black. Press button to close circuit; press again to open. Rated at 3 amps, 250 volts; 6 amps, 125 volts. U.L. Approved. Threaded shank,  $1\frac{1}{2}$ " x  $\frac{3}{8}$ " long. With mtg. nuts. Shpg. wt., each, 2 oz.; 20, 1  $\frac{1}{4}$  lbs. 1.07

34 B 161. Red. 90c

34 B 162. Black. 20-99, EA. .89¢ EACH

Type 86710. As above, but less snap-on bakelite button. Shpg. wt., each, 2 oz.; 20, 1  $\frac{1}{4}$  lbs. 90c

34 B 160. 20-99, EA. .75¢ EACH

Type 3391-GL. Momentary contact. SPST normally open. 1 amp., 125 volts. U.L. Approved. Threaded shank,  $1\frac{1}{2}$ " x  $\frac{3}{8}$ ". With mtg. nuts, lug and bakelite button. Shpg. wts., each, 2 oz.; 20, 1  $\frac{1}{4}$  lbs. 66c

34 B 159. 20-99, EA. .55¢ EACH

### INDUSTRIAL TYPE SWITCHES

Underwriters' Laboratories Approved. All have  $\frac{1}{2}$ " shank diameter, except 34B107, 34B108 with  $\frac{3}{4}$ " diameter. With mounting nuts.

**Fig. G—BAT HANDLE TOGGLE SWITCHES**

Shank lengths:  $1\frac{1}{2}$ ", except  $1\frac{1}{4}$ ";  $1\frac{3}{4}$ ". 34B103 is center-off type 34B117 is 2-circuit type. Shpg. wt., 4 oz.; per 20, 5 lbs. Lug terminals.

Stock No.	Mfr's Type	Poles	Amps	Volts	NET EACH	20-39 EA.	40-99 EA.
34 B 103	80607-B	SPST	12/6	125/250	.99	.90	.82
34 B 113	80601-BD	SPST	15/10	125/250	1.51	1.38	1.26
34 B 106	80602-CA	DPST	6/3	125/250	1.51	1.38	1.26
34 B 103A	82024-D	DPDT	6/3	125/250	1.23	1.14	1.04
34 B 117	82021-CD	SP2	6/3	125/250	1.16	1.06	.97

**Fig. H—BALL HANDLE TOGGLE SWITCHES**

Shank lengths:  $\frac{1}{2}$ ";  $\frac{1}{4}$ ";  $\frac{3}{8}$ ". 34B114 is positive action, two-circuit unit. All are center-off type, except 34B104. Screw terminals. Wt., 7 oz.

Stock No.	Mfr's Type	Poles	Amps	Volts	NET EACH	20-39 EA.	40-99 EA.
34 B 104*	80323-BU	SPST	10/5	125/250	.77	.70	.65
34 B 107*	80638	DPDT	10/5	125/250	2.96	2.71	2.47
34 B 108*	80983	3PDT	10/5	125/250	4.50	4.13	3.75
34 B 114*	82021-C	SP2	6/3	125/250	1.16	1.06	.97

**Fig. I—PUSH-BUTTON SWITCHES**

Momentary contact. Metal base, and  $\frac{1}{2}$ " shank, except bakelite base and  $\frac{1}{2}$ " shank. \*Two-circuit type.  $\frac{1}{2}$ " as 3392 but with black bakelite button. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Poles	Amps	Volts	NET EACH	20-39 EA.	40-99 EA.
34 B 118	3502	SPST	3	2	.91	.83	.75
34 B 119	3392*	SP2	1	2	.66	.58	.52
34 B 124	3392-AE*	SP2	1	2	.80	.73	.70
34 B 123*	82152-SL	SPST	12/6	125/250	1.42	1.30	1.18

34 B 125. Type 3391-194 R. Red button. AE switch only. 15c

34 B 126. Type 3391-194 B. Black button. AE switch only. 15c

### INDICATING SWITCH PLATE

Type 20590-1. For Toggle Switches. Nickel-plate stamping. Keyed to prevent rotation.  $\frac{1}{2}$ " center hole.  $\frac{1}{2}$ " dia. shank. Shpg. wt., per pkg. of 2, 2 oz.

34 B 157. Pkg. of 2. 7c

60 Pkgs. or More, Per Pkg. 7c

As above, but reads: "For-Rev." 7c

34 B 166. Pkg. of 2. 7c

For Toggle or Rotary Switches.  $\frac{1}{2}$ " diameter polished aluminum plate for use with toggle or rotary switches.  $\frac{1}{2}$ " center hole. Etched design on black background. Wt., 2 oz.

34 B 151. NET EACH 8c

20-99, EA. 16c

### NEW LOCK SWITCH

Type 81715-L. Lock switch with key. SPST, 3 amps at 250 V., 6 amps at 125 V. Sleeve dia.,  $\frac{1}{2}$ ". Fits panels to  $\frac{1}{4}$ " thick. Size,  $1\frac{1}{2}$ " x  $1\frac{1}{2}$ ". Black phenolic case. Switch must be open to remove key. Shpg. wt., 2 oz.; 20, 2 lbs. 1.34

34 B 156. EACH 1.13

20-99, EA. 1.13

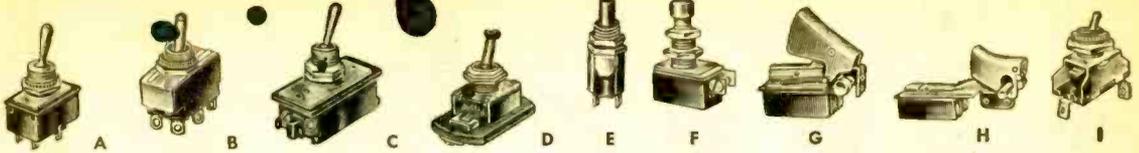
### STEVENS-WALDEN SPINTITE SWITCH WRENCHES

Specially designed deep recess to accommodate even bat-handle switches. Knurled surface is tapered. Wood handle. Shpg. wt., 6 oz.

46 N 056. Type 6337. For H&H switches only. 46 N 167. Type 7225. For Cutler Hammer switches. NET EACH 2.20

46 N 167. Type 7225. For Cutler Hammer switches. NET EACH 2.20

# Toggle and Knife Switches



## SELECTION OF POPULAR CUTLER-HAMMER TOGGLE SWITCHES

Fig. A—GENERAL-PURPOSE AC-DC TYPE

AC-DC switches. Bakelite case. \*Screw terminals; all others have solder lugs.  $\frac{1}{2}$ " diameter threaded stem. U.L. Approved. Use with on-off plate at right below. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Stem Lgth.	Type	Amperes		NET Each	20-39 Each	40-99 Each
				125V	250V			
34 B 500	8280-K16	$\frac{1}{2}$ "	SPST	3	3	43c	40c	36c
34 B 527	8280-K14	$\frac{1}{2}$ "	SPST	3	3	43c	40c	36c
34 B 508	8381-K8	$\frac{1}{2}$ "	SPST	6	3	49c	54c	49c
34 B 509	8396-K8*	$\frac{1}{2}$ "	SPST	3	1	55c	51c	46c
34 B 501	8282-K14	$\frac{1}{2}$ "	SPDT	3	1	55c	51c	46c
34 B 528	8282-K12	$\frac{1}{2}$ "	SPDT	3	1	55c	51c	46c
34 B 502	8360-K7	$\frac{1}{2}$ "	DPST	3	3	79c	73c	66c
34 B 529	8360-K6	$\frac{1}{2}$ "	DPST	3	3	79c	73c	66c
34 B 530	8363-K6	$\frac{1}{2}$ "	DPDT	3	3	91c	83c	76c
34 B 503	8363-K7	$\frac{1}{2}$ "	DPDT	3	3	91c	83c	76c

Fig. B—HEAVY-DUTY AC TYPE\*

Slow-make, slow-break mechanism for long, dependable use.  $\frac{1}{2}$ " diameter threaded stem.  $\frac{1}{2}$ " long. \*Center off. †Screw terminals; others have solder lug terminals. U.L. Approved. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Type	Amperes		NET Each	20-39 Each	40-99 Each
			125V	250V			
34 B 534	7501-K13	SPST	15	10	.54	.49	.45
34 B 591	7500-K14†	SPST	15	10	.63	.58	.53
34 B 535	7503-K13†	SPDT	15	10	.61	.56	.51
34 B 592	7502-K13†	SPDT	15	10	.75	.69	.63
34 B 536	7505-K4	SPDT	15	10	.61	.56	.51
34 B 593	7504-K4†	SPDT	15	10	.75	.69	.63
34 B 537	7567-K4	DPST	15	10	.82	.75	.69
34 B 594	7560-K5†	DPST	15	10	1.01	.92	.84
34 B 538	7565-K5	DPDT	15	10	.94	.86	.78
34 B 595	7564-K6†	DPDT	15	10	1.22	1.12	1.02
34 B 539	7563-K4*	DPDT	15	10	.94	.86	.78
34 B 596	7562-K4†	DPDT	15	10	1.22	1.12	1.02
34 B 543	7611-K2	3PST	15	10	1.55	1.42	1.29
34 B 597	7610-K2†	3PST	15	10	1.83	1.69	1.53
34 B 523	7613-K2*	3PDT	15	10	1.91	1.75	1.60
34 B 598	7612-K2†	3PDT	15	10	2.33	2.14	1.94
34 B 544	7691-K1†	4PST	5 hp	10	3.27	3.00	2.83
34 B 599	7690-K7†	4PST	3 hp	10	3.40	3.12	2.83

Fig. B—AIRCRAFT TYPE.

Meet aircraft requirements. †Screw terminals; all others have solder lug terminals.  $\frac{1}{2}$ " threaded stem.  $\frac{1}{2}$ " long. Size  $\frac{1}{4}$ " x  $\frac{3}{8}$ ". \*Have center-off position. Tested 10,000 operations at maximum ratings indicated. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Gov't No.	Type	Amperes		NET Each	20-39 Each	40-99 Each
				30V DC	125V AC			
34 B 551	8803-K6	ST42A	SPST	20	8	.88	.81	.73
34 B 526	8801-K13†	ST40A	SPDT	20	8	1.16	1.06	.97
34 B 552	8816-K5	ST42D	SPDT	20	8	1.05	.96	.87
34 B 553	8810-K12†	ST40D	SPDT	20	8	1.39	1.28	1.17
34 B 553	8802-K6*	ST42E	SPDT	20	8	1.05	.96	.87
34 B 558	8800-K13†	ST40E	SPDT	20	8	1.39	1.28	1.17
34 B 554	8823-K5	ST52K	DPST	30	20	1.06	.97	.88
34 B 559	8822-K8†	ST50K	DPST	30	20	1.55	1.42	1.29
34 B 555	8825-K5	ST52N	DPDT	30	20	1.19	.09	.99
34 B 576	8824-K5	ST50N	DPDT	30	20	1.86	1.71	1.56
34 B 556	8821-K5	ST52P	DPDT	30	20	1.19	1.09	.99
34 B 577	8820-K10†	ST50P	DPDT	30	20	1.86	1.71	1.56

Type 8864 Plastic Box. Designed to keep water and dust out of above switches. Shpg. wt., 3 oz.  
34 B 557. NET ..... 54c

Special prices are available on Cutler-Hammer switches in quantities of 100 or more. Write for quotations.

Fig. B—MOMENTARY, HEAVY-DUTY AC TYPE

Slow-make, slow-break.  $\frac{1}{2}$ " x  $\frac{1}{2}$ " dia. threaded stem. \*Normally open. †One side normally open; other side normally closed. ‡Screw terminals; others solder lug. U.L. Approved. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Type	Amperes		NET Each	20-39 Each	40-99 Each
			125 V	250 V			
34 B 512	7506-K3*	SPST	5 hp	10	.86	.77	.65
34 B 578	7506-K4†	SPST	3 hp	10	1.00	.90	.75
34 B 541	7510-K6†	SPDT	3 hp	10	.96	.86	.72
34 B 579	7510-K7†	SPDT	3 hp	10	1.16	1.04	.86
34 B 514	7566-K4*	DPST	3 hp	10	1.25	1.13	.94
34 B 589	7566-K5†	DPST	3 hp	10	1.66	1.49	1.24
34 B 542	7570-K4†	DPDT	3 hp	10	1.40	1.26	1.06
34 B 590	7570-K5†	DPDT	3 hp	10	1.94	1.74	1.46

Fig. C—STANDARD AC-DC INDUSTRIAL TYPES

Standard duty switches. Suitable for motors. Mechanism enclosed in bakelite case. Insulating barrier between terminals.  $\frac{1}{2}$ " threaded stem.  $\frac{1}{2}$ " long. Screw terminals. U.L. Approved. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Type	Amperes		NET Each	20-39 Each	40-99 Each
			125 V	250 V			
34 B 545	7320-K3	DPST	12	6	.96	.88	.80
34 B 520	7321-K3	SPST	12	6	.96	.88	.80
34 B 516	7360-K8	DPST	15	10	1.51	1.38	1.26
34 B 546	8680-K2	DPDT	10	5	2.74	2.51	2.28
34 B 517	7402-K4	DPST	2 hp	20	1.99	1.82	1.67

Fig. D—CENTER-OFF TYPE

Type 7140-K6. SPDT switch. 3 amps 125 volts AC or 10 amps 24 volts DC. Screw terminals.  $\frac{1}{2}$ " x  $\frac{1}{2}$ " dia. U.L. Approved. Wt., 2 oz.  
34 B 522. 20-99, EACH ..... 36c • Single Lots EACH ..... 43c

### ON-OFF PLATE

Type 827-228F3. For Cutler-Hammer toggle switches. Wt., 2 oz. 8c  
34 B 504. Per Pkg. of 2

Fig. E—DOOR-OPERATED AC-DC TYPE

Door-operated switch. Momentary.  $\frac{1}{2}$ " shank. Solder lug terminals. \*Normally open. †Normally closed. U.L. Approved. Wt., 3 oz.

Stock No.	Mfr's Type	Poles	Amperes		NET Each	20-39 Each	40-99 Each
			125 V	250 V			
34 B 548	8411-K4	SPST*	.75	.25	36c	33c	30c
34 B 547	8411-K8	SPST†	.65	.25	25c	23c	21c
34 B 549	8440-K2	SPST*	3	1	61c	56c	51c

Fig. F. Type 7190-K1 AC-DC Push Button Switch. SPST momentary contact, normally open. Rated 5 amps 250 v., 6 amps 125 v. Solder lugs. U.L. Approved.  $\frac{1}{2}$ " shank. Shpg. wt., 2 oz.  
34 B 518. 20-99, EACH ..... 80c • Single Lots EACH ..... 97c

Fig. F. Type 7208-K2 AC-DC Push-Push On-Off Switch. Rated 3 amps, 250 v., 6 amps, 125 v. Screw type terminals.  $\frac{1}{2}$ " diameter threaded stem;  $\frac{1}{4}$ " long. U.L. Approved. Shpg. wt., 2 oz.  
34 B 519. 20-99 EACH ..... 82c • Single Lots EACH ..... 99c

### REPLACEMENT DPST AC-DC TYPES FOR TOOLS

For replacement in hand drills, grinders, etc. Quick make and break. Momentary. \*Can be locked in "On" position. U.L. Approved. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Fig.	Amperes		NET Each	20-39 Each	40-99 Each
			125 V	250 V			
34 B 524	8232-K3*	H	8	6	1.51	1.38	1.26
34 B 525	8232-K5*	H	15	10	2.01	1.84	1.68
34 B 531	8235-K8	G	8	6	1.46	1.36	1.22
34 B 532	8255-K5	G	15	10	2.01	1.84	1.68

Fig. I—SPST Midget Switch

Type 8098-K3. 3 amps 125 v. AC. Screw term  $\frac{1}{2}$ " long. 2 oz.  
34 B 510. 20-99 EACH ..... 34c • Single Lots, EACH ..... 40c

## ICA MINIATURE AND STANDARD KNIFE SWITCHES

### MINIATURE TYPE



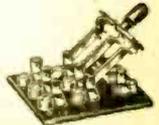
Sturdily constructed miniature-type knife switches for mounting on non-conducting base or panel. Excellent for limited-space applications. Hardware is heavily nickel-plated brass. Highly polished, black bakelite bases. Insulated handles. Have screw-type terminals on underside of base for neat, concealed wiring;

terminals also serve as mounting screws. Contacts are perfectly aligned to assure smooth, dependable action. Types 2223 and 2224 are  $\frac{1}{2}$ " x  $\frac{1}{4}$ ". Av. shpg. wt., 2 oz.

Stock No.	Mfr's No.	Type	NET EACH	Stock No.	Mfr's No.	Type	NET EACH
34 B 800	2223	SPST	24c	34 B 802	2226	DPST	49c
34 B 801	2224	SPDT	41c	34 B 803	2225	DPDT	52c

### STANDARD TYPE

High-quality, easy-action standard knife switches. Hardware is heavily nickel-plated brass. All except Type 238 are mounted on  $\frac{1}{8}$ " thick, highly polished black bakelite bases. Type 238 is mounted on moisture-proof porcelain base; an excellent switch for outdoor applications. Perfect alignment of contacts assures smooth dependable action. Av. shpg. wt., 5 oz.



Stock No.	Mfr's No.	Type	Size	EACH
34 B 840	1216	SPST	1 1/2" x 1 1/2"	.54
34 B 841	1217	SPDT	2 1/2" x 1 1/2"	.59
34 B 842	1218	DPST	1 1/2" x 1 1/2"	.73
34 B 843	1219	DPDT	2 1/2" x 1 1/2"	.88
34 B 844	1220	3PDT	2 1/2" x 2 1/2"	1.30
34 B 823	238	DPDT	1 1/2" x 2 1/2"	.53

# General Purpose Switches

## SWITCHCRAFT SWITCHES

### LEV-R TYPE SWITCHES



Ultra-compact lever action switches. Silver contacts, rated at 3 amps, 120 volts, non-inductive load. Length, 3 1/4"; width 3/4"; 3 n.o. means normally open; n.c., normally closed. \*3-position type. †Types 3034 and 3034L are operated to close either of two circuits keeping the other open. ‡Types 3035 and 3035L are operated to open one of two circuits keeping other closed. Require 1/8" mtg. hole. Shpg. wt., 3 oz.

Spring Return		Locking		Action ‡		NET EACH
No.	Type	No.	Type	Poles	Diag.	
34 B 465	3001	34 B 471	3001L	SPST, n.o.	I	1.15
34 B 454	3002	34 B 455	3002L	SPST, n.c.	II	1.15
34 B 466	3003	34 B 472	3003L	SPDT	III	1.32
34 B 467	3004	34 B 473	3004L	DPST, n.o.	IV	1.47
34 B 456	3005	34 B 457	3005L	DPST, n.c.	V	1.47
34 B 468	3006	34 B 474	3006L	DPDT	VI	1.62
34 B 485	3009	34 B 484	3009L	3PDT	VII	2.00
34 B 469	*3033	34 B 459	*3033L	SPDT, n.o.	VIII	1.47
34 B 458	*3034	34 B 475	*3034L	DP 2-Ckt †	IX	1.53
34 B 464	*3035	34 B 477	*3035L	DP 2-Ckt †	X	1.53
34 B 478	*3036	34 B 479	*3036L	DP 2-Ckt †	XI	1.71
34 B 470	*3037	34 B 476	*3037L	DPDT, n.o.	XI	1.73

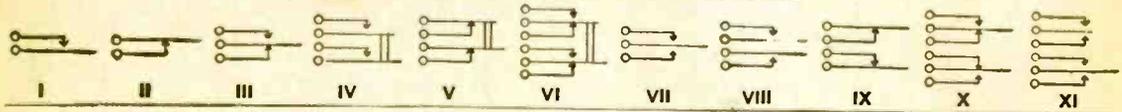
### ROTARY TYPE SWITCHES



Dependable rotary type switch. Available in wide variety of circuits. Fibre cam actuates long springs for easy action. Self-wiping contacts. Conventional spring stack assembly with bakelite spacers. Press fit, hard rubber tubing through stack assures correct contact alignment and gives high insulation resistance. Silver contacts rated at 3 amperes, 120 volts AC, non-inductive load. 1/4" diameter shaft, 3/8" long 2034L close either of two circuits keeping the other open. ‡2035 and 2035L open either of two circuits keeping the other closed. \*2036 and 2036L transfer either of two SP circuits keeping the other closed. Less knob. Shpg. wt., 3 oz. Mount in 1/4" diameter hole. For panels up to 1/4" thick. Require only 1" depth behind panel.

Spring Return		Locking		Action ‡		NET EACH
No.	Type	No.	Type	Poles	Diag.	
34 B 976	2001	34 B 982	2001L	SPST, n.o.	I	59c
34 B 977	2002	34 B 983	2002L	SPST, n.c.	II	59c
34 B 978	2003	34 B 984	2003L	SPDT	III	71c
34 B 979	2004	34 B 985	2004L	DPST, n.o.	IV	73c
34 B 980	2005	34 B 986	2005L	DPST, n.c.	V	73c
34 B 981	2006	34 B 987	2006L	DPDT	VI	97c
34 B 988	*2034	34 B 991	*2034L	DP 2-Ckt. †	VIII	73c
34 B 989	*2035	34 B 992	*2035L	DP 2-Ckt. †	IX	73c
34 B 990	*2036	34 B 993	*2036L	DP 2-Ckt. Tr. **	X	97c

## SWITCHCRAFT SCHEMATIC DIAGRAMS



## CARLING TOGGLE SWITCHES

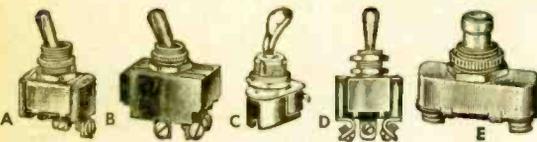


Fig. A—SINGLE POLE SWITCHES

Toggle-actuated, AC switches. Rugged bakelite base with metal covering for added strength. Slow make and break mechanism minimizes pitting of contacts. Screw-type terminals with No. 6-32x3/8" binding head screws. Stem length, 1 1/2". Bat handle type toggle 1 1/2" long. †Has center-off position. ‡Momentary action on either side and center-off. 3/8" dia. threaded shank. With locknut and ring-type panel nut. Body dimensions (11WD): 1 1/4"x1 1/2"x1". Av. shpg. wt., 2 oz. Write for quantity prices.

Stock No.	Mfr's Type	Action	Amperes		NET EACH	20-39 EACH	40-99, EACH
			125V	250V			
34 B 385	2FA54	SPST	15	10	59c	54c	49c
34 B 386	2FB54	SPDT	15	10	71c	66c	60c
34 B 387	12FC54	SPDT	15	10	71c	66c	60c
34 B 388	16FC54	SPDT	15	10	89c	82c	74c

Fig. B—DOUBLE POLE SWITCHES

Double pole, AC switches. Same construction as above. Screw type terminals with No. 6-32x3/8" binding head screws. Stem length, 1 1/2". Bat-type toggle, 1 1/2" long. †Center-off position. ‡Center-off and momentary spring return contact on one side. 3/8" dia. threaded shank. With lock-nut and ring-type panel nut. Contacts rated 15 amps 125 v. AC and 10 amps, 250 v. AC. Wt., 2 oz. Write for quantity prices.

Stock No.	Mfr's Type	Action	Amperes		NET EACH	20-39 EACH	40-99, EACH
			125V	250V			
34 B 389	2GK54	DPST	15	10	.96	.88	.80
34 B 390	2GL54	DPDT	15	10	1.11	1.02	.93
34 B 391	2GM54	DPDT	15	10	1.11	1.02	.93
34 B 392	16GM58	DPDT	15	10	1.36	1.24	1.14

### TELEVER TYPE SWITCHES



A rugged telephone-type lever switch. Nylon rollers actuate nickel-silver springs. Solder lug terminals. Palladium contacts rated at 3 amps, 120 v. AC (non-inductive). Insulated black knob; chrome-plated brass actuator; stainless steel pivot pin. Tapped for 3-48 screws (not supplied); standard telephone mtg. ctrs., 1 1/2"x3/4". Depth behind panel 3". \*3-position type. Shpg. wt., 6 oz.

Spring Return		Locking		Action		NET EACH
No.	Type	No.	Type	Poles	Diag.	
34 B 726	6006	34 B 734	6006L	DPDT	VI	2.94
34 B 727	6008	34 B 735	6008L	4PST	4 sec. I	3.29
34 B 729	60012	34 B 736	6009L	3PDT	3 sec. III	3.53
		34 B 737	60012L	4PDT	4 sec. III	4.00
34 B 738	*6036	34 B 742	*6036L	DPDT	X	2.94
34 B 739	*6038	34 B 743	*6038L	4PST	4 sec. I (2 each side)	3.29
34 B 740	*60312	34 B 744	*60312L	4PDT	4 sec. III (2 each side)	4.00
34 B 741	*60324	34 B 745	*60324L	8PDT	8 sec. III (4 each side)	5.88

Type 630 Escutcheon. For Telever switches. With 4 mtr. screws. 3 oz. 34 B 486. NET .35c

### NON-LOCKING PUSH-BUTTON TYPE SWITCHES

FF Switches. Flat frame construction provides frame adaptable to any stack of contact springs. Simple, direct action movement. Conventional spring stack assembly with bakelite spacers. Silver contacts rated at 3 amperes, 120 volts AC. One piece, black, button and shaft. 3/8" diameter threaded shank, 3/4" long. With locknut and washer. Shpg. wt., 3 oz. † n.o. means normally open. n.c. means normally closed.



Stock No.	Mfr's Type	Button Color	Action ‡		NET EACH
			Poles	Diag.	
34 B 994	1001		SPST, n.o.	I	.56
34 B 995	1002		SPST, n.c.	II	.56
34 B 996	1003	Black	SPDT	III	.65
34 B 997	1004		DPST, n.o.	IV	.71
34 B 998	1005		DPST, n.c.	V	.71
34 B 999	1006		SPDT	VI	.86
34 B 969	1009		3PDT	.....	1.18

Littel Switches. For limited space applications. One piece, black or red, button and shaft. Nickel silver spring contacts. 3/8" threaded shank, 3/4" long. With mtg. hdwe. Shpg. wt., 3 oz. (Not illustrated.)

34 B 944	101		SPST, n.o.	I	.50
34 B 945	102	Red	SPST, n.c.	II	.50
34 B 946	103		SPDT	III	.53
34 B 947	201	Black	SPST, n.o.	I	.50
34 B 948	202		SPST, n.c.	II	.50
34 B 949	203		SPDT	III	.53

Fig. E—PUSH-BUTTON SWITCHES

Heavy-duty, push-type, momentary contact switches. Rated 10 amps, 125-250 v. AC. 3 n.o. normally open; n.c., normally closed. Screw terminals. 1/8" dia. stem; 3/8" long. Shpg. wt., 2 oz. Write for quantity prices.

Stock No.	Mfr's Type	Action ‡	NET EACH	20-39 EACH	40-99, EACH
34 B 398	172	SPST, n.o.	59c	54c	49c
34 B 397	170	SPST, n.c.			

Fig. B—PROGRESSIVE TWO-CIRCUIT SWITCHES

New, bat-handle, toggle-type, progressively shorting switches. Built to exacting standards. 3/8" stem, 1 1/2" long. On type 2GG53, "down" is off, "center" is one circuit on, and "up" is both circuits on. On 6GG58 "down" is off, "center" is first circuit on, and "up" is first circuit on and second circuit on momentarily, spring return to "center". Circuit one of these switches rated at 6 amps, 125V or 250V; circuit two is rated at 15 amps 125V, 10 amps, 250V. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Action	NET EACH	20-39, EACH	40-99, EACH
34 B 393	2GG53	2-SPST	.88	.81	.73
34 B 394	6GG58	2-SPST	1.32	1.22	1.11

Fig. C—MOMENTARY TOGGLE SWITCH

Type 110-M-NO 93. Normally open, SPST action. 3/8" dia. shank. 1 1/2" long. Trigger bat handle. Bakelite body. Lugs are silver-plated. Rated 3 amps, 250 volts; 6 amps, 125 volts. Wt., 2 oz.

34 B 149. NET .68c  
Lots of 20-99. Each .57c

Fig. D—CENTER-OFF SPRING RETURN SWITCHES

3-position, momentary contact switches with center-off position. Bakelite housing. Solder lugs; except \*have screw-type terminals. 3/8" dia., threaded stem. 1 1/2" long. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Action	Amperes		NET EACH	20-39 EACH	40-99 EACH
			250V AC	125V AC			
34 B 505	6FC53	SPDT	10	15	.68	.62	.57
34 B 506	6GM53	DPDT	10	15	1.12	1.03	.93
34 B 395	*6GM54	DPDT	10	15	1.29	1.19	1.08

# Special Purpose Switches

## CENTRAL LAB SPECIAL-PURPOSE SWITCHES

### MINIATURE PHENOLIC SWITCHES

Miniature phenolic-insulated switches. 30° indexing, adjustable stop. 1 1/2" x 1 3/4" dia. Shaft, 1 1/4" long. Silver-plated clips and contacts, double-wiping. Metal parts withstand 50-hr. salt spray test. Wt., 5 oz.

Shorting		Non-Shorting		Sec-tions	Total Poles	Pos. per Pole	NET EA.
No.	Type	No.	Type				
35 B 050	PA-1000	35 B 065	PA-1001	1	1	2-11	1.32
35 B 051	PA-1002	35 B 066	PA-1003	1	2	2-5	1.32
35 B 052	PA-1004	35 B 067	PA-1005	2	2	2-11	1.76
35 B 053	PA-1006	35 B 068	PA-1007	1	3	2-3	1.32
35 B 054	PA-1008	35 B 069	PA-1009	3	3	2-11	2.20
35 B 055	PA-1010	35 B 070	PA-1011	1	4	2	1.32
35 B 056	PA-1012	35 B 071	PA-1013	2	4	2-5	1.76
35 B 057	PA-1014	35 B 072	PA-1015	4	4	2-11	2.65
35 B 058	PA-1016	35 B 073	PA-1017	5	5	2-11	3.09
35 B 059	PA-1018	35 B 074	PA-1019	2	6	2-3	1.76
35 B 060	PA-1020	35 B 075	PA-1021	3	6	2-5	2.20
35 B 061	PA-1022	35 B 076	PA-1023	6	6	2-11	3.53
35 B 062	PA-1024	35 B 077	PA-1025	2	8	2	1.76
35 B 063	PA-1026	35 B 078	PA-1027	4	8	2-5	2.65
35 B 064	PA-1028	35 B 079	PA-1029	3	12	2	2.20

### UNIVERSAL AND INTERCOM SWITCHES

34 B 088, Type 1443, SP, 23 pos. switch. Shorting contacts. 15° positive indexing. Continuous rotation 1 off pos. Cadmium-plated metal parts. Shaft 1 1/4" L. 1" behind panel. With knob, mounting nut, dial plate. 8 oz. NET... 1.91

34 B 085, Type 1450, 4PDT rotary switch having universal application. Bakelite insulating wafer. Non-shorting. Shaft 1 1/4" L. 1/4" behind panel. With bar knob, locknut and washer. Shpg. wt., 8 oz. NET... 59¢

34 B 087, Type 1451, 4PDT rotary switch. Shaft 1 1/4" L. 1/4" behind panel. Non-shorting. Long-life construction. 2 1/4" long. Spring-return type. Bakelite wafer. With bar knob. Wt., 8 oz. NET... 1.03

34 B 071, Type 1448, 6P, 3 pos. rotary switch for intercom circuits. Spring-return type. Non-shorting contacts. Shaft 1 1/4" L. 1" behind panel. With knob, mounting nut and lock washer. Wt., 8 oz. NET... 1.32

34 B 072, Type 1449, 6P, 3 pos. rotary switch for intercoms. Positive in 2 pos., spring return in third. Non-shorting. Shaft 1 1/4" L. 1" behind panel. With knob, mounting nut and lock washer. Wt., 8 oz. NET... 1.32

### STONE SWITCHES

Step-type. Rated 1 amp, at 6 v. Shaft, 1/4" dia., 2 1/4" long. Shorting contacts except \*non-shorting (for intercoms). Has "saw-tooth" index action.

No.	Type	Description	Wt.	NET EA.
34 B 080	1460	SPDT or SPST phono-radio sw	4 oz.	44c
34 B 081	1461†	SP 3-pos. selector	5 oz.	
34 B 082	1462	DPDT 1 wave-band switch	5 oz.	
34 B 083	1463*	SPDT spring return	4 oz.	
34 B 084	1464*	DPDT spring return	4 oz.	59¢



4000



2000



5000 (Single Deck)



23-1

Multi-Deck

### GRAYHILL MINIATURE SWITCHES

#### PUSH-BUTTON MOMENTARY CONTACT SWITCHES

Series 4000. Have snap, momentary contact. SPST switch. Housing and button of molded phenolic. Rated at 1/2 amp, 115 v. AC (non-inductive). (When used at 1 amp, life is about 100,000 operations.) Single hole panel mount. Bushing is 1/8" long; 1/16" x 32 thread. Solder type 1/4" terminals. Body, 3/8 x 3/8". Shpg. wt., 4 oz.

Series 2000. As above, except snap type, rated @ 10 amps, 115 v. AC (non-ind.). Body dia., 1/2". With 2 hex nuts. Shpg. wt., 4 oz.

No.	Type	Contacts	No.	Type	Contacts
34 B 870	4001	Normally open	34 B 872	2201	Normally open
34 B 871	4002	Normally closed	34 B 873	2202	Normally closed

Type 4000, NET EACH... 69¢ Type 2000, NET EACH... 1.62

### MINIATURE ROTARY TAP SWITCHES

Series 5000. Switch housing is high arc-resistant molded Melamine. Contacts and rotor silverplated. Rated to break 1 amp @ 115 v. AC (non-ind.). to carry 5 amps. Most popular types listed below. Others available in up to 10 contacts and up to 6 decks (on spec. order). 10-position switches have continuous rotation. All others have stops. Switches of 5 decks or oversupplied with rear studs for end mounting. Bushings, 3/8" x 32 x 1/4". Shaft dia. 1/4". Sizes: \*1-deck type, 1 1/2" dia. x 1 1/2"; †2-deck types, 1 1/2" dia. x 1 1/4". Shpg. wt., 5 oz.

No.	Type	Pos.	EACH	No.	Type	Pos.	EACH
34 B 875	5002*	2	.73	34 B 894	5007*	7	.98
34 B 876	5003*	3	.78	34 B 895	5008*	8	1.03
34 B 891	5004*	4	.83	34 B 878	5010*	10	1.13
34 B 892	5005*	5	.88	34 B 879	5202†	2	2.60
34 B 893	5006*	6	.93	34 B 880	5210†	10	2.92

Series 23-1. Tiny push-button switch designed for miniaturized equipment. When used at factory rating, has an extremely long life. Momentary contact. SPST, non-snap action switch. Solder type terminals. Rating, 1/4 amp, 115 v. AC, non-inductive. Normally open. Length, 1"; diameter at widest point, 1/2". 3/8" x 32 thread. Wt., 2 oz.

34 B 890, NET EACH... 73c

### MINIATURE STEATITE SWITCHES

Compact rotary switches, excellent r-f characteristics. Double wiping type contacts. 30° index, adjustable stop. \*1 off, up to 9 progressively shorting positions. Shaft 1 1/4" long. Av. wt., 5 oz.

Shorting		Non-Shorting		Gangs	Total Poles	Pos. per Pole	NET EA.
No.	Type	No.	Type				
34 B 900	PA-2000	34 B 921	PA-2001	1	1	2-12	1.47
34 B 901	PA-2002	34 B 922	PA-2003	1	2	2-6	1.53
34 B 902	PA-2004	34 B 923	PA-2005	2	2	2-12	2.20
34 B 903	PA-2006	34 B 924	PA-2007	1	3	2-5	1.62
34 B 904	PA-2008	34 B 925	PA-2009	3	3	2-12	2.94
34 B 905	PA-2010	34 B 926	PA-2011	2	4	2-6	2.29
34 B 906	PA-2012	34 B 927	PA-2013	4	4	2-12	3.67
34 B 907	PA-2014	34 B 928	PA-2015	1	5	2-3	1.68
34 B 908	PA-2016	34 B 929	PA-2017	5	5	2-12	4.41
34 B 909	PA-2018	34 B 930	PA-2019	1	6	2	1.68
34 B 910	PA-2020	34 B 931	PA-2021	2	6	2-5	2.35
34 B 911	PA-2022	34 B 932	PA-2023	3	6	2-6	3.09
34 B 912	PA-2024	34 B 933	PA-2025	6	6	2-12	5.14
34 B 913	PA-2026	34 B 934	PA-2027	4	8	2-6	3.82
34 B 914	PA-2028	34 B 935	PA-2029	3	9	2-5	3.09
34 B 915	PA-2030	34 B 936	PA-2031	2	10	2-3	2.50
34 B 916	PA-2032	34 B 937	PA-2033	5	10	2-6	4.56
34 B 917	PA-2034	34 B 938	PA-2035	2	12	2	2.50
34 B 918	PA-2036	34 B 939	PA-2037	6	12	2-6	5.29
34 B 919	PA-2038	34 B 940	PA-2039	3	15	2-3	3.38
34 B 920	PA-2040	34 B 941	PA-2041	3	18	2	3.38
35 B 095	PA-2042*			1	1	2-10	1.47

Type PA-2043, Miniature rotary switch with 60° indexing. Single pole. 2-6 positions. Steatite insulation. Av. wt., 2 oz. NET... 1.47

Type PA-2045, Miniature rotary switch with 60° indexing. Two section two pole, 2-6 positions. 1/4" spacing between sections. Av. wt., 2 oz. NET... 2.20

### SEPARATE ASSEMBLIES FOR MAKING MINIATURE SWITCHES

Phenolic Sections Only. Shorting and non-shorting sections for assembling custom or standard miniature switches. Carry the same ratings as above switches. Excellent RF characteristics. Adjustable stop. Hardware includes spacers, tie rods, nuts, lockwashers, etc. Shpg. wt., 2 oz.

Shorting		Non-Shorting		Total Poles	Pos. per Pole	NET EACH
No.	Type	No.	Type			
35 B 080	PA-30	35 B 085	PA-31	1	2-11	.44
35 B 081	PA-32	35 B 086	PA-33	2	2-5	.44
35 B 082	PA-34	35 B 087	PA-35	3	2-3	.44

Steatite Sections Only. Custom and standard miniature steatite switches can be assembled by using these shorting and non-shorting sections. Hardware includes spacers, tie rods, nuts, lockwashers, etc. 2 oz.

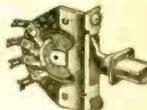
Shorting		Non-Shorting		Total Poles	Pos. per Pole	NET EACH
No.	Type	No.	Type			
35 B 040	PA-0	35 B 045	PA-1	1	2-12	79¢
35 B 041	PA-2	35 B 046	PA-3	2	2-6	79¢
35 B 042	PA-4	35 B 047	PA-5	3	2-5	88¢
35 B 043	PA-6	35 B 048	PA-7	5	2-3	88¢
35 B 044	PA-8	35 B 049	PA-9	6	2	88¢

Shaft and Index Assemblies. Hardware for miniature switches. 3 oz.

Stock No.	Type	Indexing	Shaft	Sections	EACH
35 B 092	PA-300	30°	2"	1 or 2	.88
35 B 093	PA-301	30°	4"	3 or 4	1.18
35 B 094	PA-302	30°	6"	5 or 6	1.47

### LEVER-ACTION SWITCHES

Low capacity. For use singly or in groups. \*Shorting type; others non-shorting. Long-life construction. Front plate and lever cadmium-plated. Indexing: †Positive; ‡Spring-Return; others Positive and S-R. 1 1/2" x 1 1/2". Mtg. ctrs., 1 1/2". Knob and mounting screws. Av. shpg. wt., 3 oz.



No.	Type	No.	Type	Poles	Positions	EACH
34 B 021	1452*†	34 B 026	1454†	2	3	73c
34 B 022	1453*†	34 B 027	1455†	2	2	
34 B 025	1458*†	34 B 030	1457†	4	2	
34 B 024	1459*†	34 B 029	1458†	4	2	
34 B 023	1466*	34 B 028	1467	2	3	

MOUNTING PLATES. For single or multiple mounting of lever-action switches. Black wrinkle finish steel. \*Chrome-plated. Av. shpg. wt., 4 oz.

No.	Type	Switches	Size	EACH
34 B 050	P1755	1	1 1/2 x 2 1/2"	21c
34 B 051	P1756	2	1 1/2 x 2 1/2"	24c
34 B 052	P1757	3	2 1/2 x 2 1/2"	29c
34 B 053	P1758	4	3 x 2 1/2"	35c
34 B 060	P221*	2	2 1/2 x 4 1/2"	44c
34 B 061	P222*	1	2 1/2 x 4 1/2"	35c

### AUTO RADIO SPEAKER SWITCH

Type PK300. Switch Kit. Contains a complete assembly for switching between dual speakers such as auto rear seat and front seat. Etched dial-mounting plate; dual speaker switch. Pointer knob is white, split knurl. With screws, instructions. Shpg. wt., 2 oz.

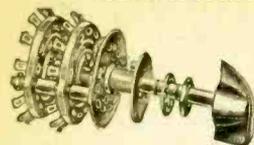
34 B 077, NET... 88c



34 B 086, Type 1483 Switch. SP 3-pos. switch for rear deck auto radio speaker. 1 amp @ 6 v. Silver-plated contacts. 4 oz. NET... 44c

# Mallory Switches

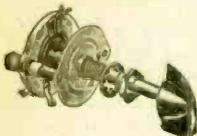
## CERAMIC-SECTION SELECTOR SWITCHES



Multi-contact ceramic-section Circuit Selector Switches. Minimize RF losses in high frequency circuits and eliminate effects of moisture absorption. Have adjustable stop which can be adjusted without removing switch completely from panel. Impregnated ceramic stators, rotors. Have silver plated, double-wiping, self-cleaning contacts to insure low contact resistance over an extended temperature range. 2 gang spaced 1/4"; 3 gang, 1" 30° spacing; 1 1/2" base diameter; use plates below, at right. With 2" grooved shaft, knob, and mtg. hdwe. Shpg. wt., 7 oz.

Stock No.	Mfr's Type	Gangs	Circuits per Gang	Positions per Circuit	NET EACH
34 B 327	177C	1	1	11	1.32
34 B 328	173C	1	2	3	
34 B 329	174C	1	3	3	
34 B 331	176C	2	1	11	2.06
34 B 332	177C	2	2	3	
34 B 333	178C	2	3	3	
34 B 335	180C	3	1	11	2.94
34 B 336	181C	3	2	5	

## 160C CERAMIC-SECTION "HAMBAND" SWITCHES



Four position, continuously rotating switches for band switching. Rated for use in plate circuits up to 1,000 volts DC with power up to and including 100 watts. Impregnated magnesium-silicate ceramic provides low losses at high frequencies. Low-resistance, self-cleaning, silver-plated contacts, 90° indexing. Complete with 2" grooved shaft, 1/2" bushing, knob, nut and lockwasher. Shpg. wt., 8 oz.

Stock No.	Mfr's Type	Gangs	Positions per Gang	Circuits per Sw.	NET EACH
34 B 337	161C	2	4	1	1.32
34 B 338	162C	2	4	2	2.06
34 B 339	163C	3	4	3	2.94
34 B 340	164C	4	4	4	3.53
34 B 341	165C	5	4	5	4.41

Type 484 Dial Plate, For 160C switches, above. Shpg. wt., 2 oz.  
34 B 688, NET..... 12c



## PUSH-BUTTON SWITCHES

The "2000" Push Button Switch Series provides a choice of many different combinations for use in laboratories—on test panels, in meter circuits, etc. Ideal for a wide variety of applications requiring momentary or permanent contact.

Steel cadmium-plated frame and nickel-plated brass bushing. Low resistance silver-plated contacts. Nickel-plated phosphor-bronze contact springs. "L" denotes locking type; others have spring-return to normal position. Mount in 3/8" diameter holes on panels up to 1/4" thick. Switch body extends 1 1/4" behind panel. Has flanged lug type terminals. With mtg. hdwe. Shpg. wt., 4 oz.

No.	Type	Action	EA.	No.	Type	Action	EA.
34 B 560	2001	SPST-make	.76	34 B 569	2005-L	DPST-break 2	.94
34 B 561	2001-L	SPST-make	.76	34 B 570	2006	DPDT	
34 B 562	2002	SPST-break	.76	34 B 571	2006-L	DPDT	1.15
34 B 563	2002-L	SPST-break	.82	34 B 572	2007	DP-make 2 break 1	1.03
34 B 564	2003	SPDT	.82	34 B 573	2007-L	DP-make 2 break 1	1.03
34 B 565	2003-L	SPDT	.82	34 B 574	2008	DPDT-make before break	1.29
34 B 566	2004	DPST-make 2	.94	34 B 575	2008-L	DPDT-make before break	1.29
34 B 567	2004-L	DPST-make 2	.94				
34 B 568	2005	DPST-break 2					

## LEVER-ACTION SWITCHES



Positive or spring-return indexing—shorting or non-shortng contacts. Indexing in two, three or four positions with 20° spacing between positions. 6000 and 7000 series have mounting brackets with round holes spaced for 1 1/2" centers. 5000 series have elongated mounting holes in the bracket, spaced 2 1/4" to 2 1/2" apart. High-grade phenolic resin insulation. Can be mounted in multiples with 1/4" spacing between levers on conventional rack and panel installations. For PA, test equipment and industrial applications. With knob and mtg. hdwe. Shpg. wt., 4 oz.

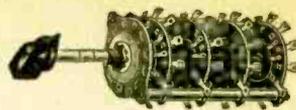
### WITH POSITIVE ACTION INDEX

SHORTING		NON-SHORTING		Poles	Positions	NET EACH
No.	Type	No.	Type			
34 B 382	5124	34 B 383	5224	2	4	88c
34 B 365	6142	34 B 367	6242	4	4	73c
34 B 366	6143	34 B 368	6243	4	3	73c

### WITH SPRING RETURN INDEX

SHORTING		NON-SHORTING		Poles	Positions	NET EACH
No.	Type	No.	Type			
34 B 369	7122L	34 B 374	7222L	2	2	73c
34 B 370	7123C	34 B 375	7223C	2	3	
34 B 371	7142L	34 B 376	7242L	4	2	
34 B 372	7143C	34 B 377	7243C	4	3	
34 B 373	7162L	34 B 378	7262L	6	2	

## 1200L AND 1300L MULTI-GANG SWITCHES



Well-constructed and versatile multi-gang switches for all servicing and industrial applications. Have one fixed and one adjustable stop, silver-plated contacts, solid silver rotor contact springs, and phosphor-bronze slugs. 3- and 4-gang spaced 1", all others, 1/2", 2" notched shaft. Shorting-type make before break. Require 3/8" mtg. hole. With bar knob and mounting hardware, less mounting plate. Use 34 B 600 dial plate below. \*Provided with additional "off" positions with all circuits open. Av. shpg. wt., 8 oz.

Shorting		Non-Shorting		Gangs	Total Poles	Pos. per Pole	NET EACH
Stock No.	Type	Stock No.	Type				
34 B 201	1211L	34 B 251	1311L	1	1	11	.91
34 B 202	1215L	34 B 252	1315L*	1	2	5	.97
34 B 203	1213L*	34 B 253	1313L*	1	3	3	1.06
34 B 204	1212L*	34 B 254	1312L*	1	4	2	1.12
34 B 206	1221L	34 B 256	1321L	2	2	11	.35
34 B 207	1225L*	34 B 257	1325L*	2	4	5	1.53
34 B 208	1223L*	34 B 258	1323L*	2	6	3	1.65
34 B 209	1222L*	34 B 259	1322L*	2	8	2	1.73
34 B 211	1231L	34 B 261	1331L	3	3	11	1.82
34 B 212	1235L*	34 B 262	1335L*	3	6	5	1.94
34 B 214	1241L	34 B 264	1341L	4	4	11	2.32
34 B 215	1245L*	34 B 265	1345L*	4	8	5	2.70
34 B 216	1251L	34 B 266	1351L	5	5	11	2.88
34 B 217	1256L	34 B 267	1356L	5	10	6	3.56
34 B 218	1261L	34 B 268	1361L	6	6	11	3.41
34 B 219	1266L	34 B 269	1366L	6	12	6	4.35

## 3100J—3200J SINGLE GANG SWITCHES

Compact, enclosed, low-voltage switches. Have 2" notched shaft; 3/8" threaded bushing, 3/4" long. With bar knob and nut. All 1 1/2" base dia. types have adjustable stops. For mounting switches, etc. Use plates listed below. Shpg. wt., 4 oz.



Shorting		Non-Shorting		Poles	Positions	Base Dia.	NET EACH
Stock No.	Type	Stock No.	Type				
34 B 300	3115J	34 B 350	3215J	1	5	1 1/2"	68c
34 B 301	3112J	34 B 351	3212J	2	12	1 1/2"	
34 B 302	3121J	34 B 352	3221J	2	6	1 1/2"	
34 B 303	3121J	34 B 353	3221J	2	6	1 1/2"	
34 B 304	3126J	34 B 354	3226J	2	6	1 1/2"	
34 B 305	3134J	34 B 355	3234J	3	4	1 1/2"	.71
34 B 306	3142J	34 B 356	3242J	4	2	1 1/2"	.71
34 B 307	3143J	34 B 357	3243J	4	3	1 1/2"	.71
34 B 308	3117J	34 B 358	3217J	1	17	1 1/2"	1.06
34 B 309	3129J	34 B 359	3229J	2	9	1 1/2"	1.06
34 B 310	3136J	34 B 360	3236J	3	6	1 1/2"	1.15
34 B 311	3163J	34 B 361	3263J	6	3	1 1/2"	1.15

## 1400L CIRCUIT OPENING SWITCH

34 B 290. Opens any one of 12 "lines" for insertion of current reading meter while "through" circuit is maintained on other 11 lines. Multiplying resistors can be wired to switch so that it not only opens line, but also cuts in proper resistor. For test sets, tube checkers, analyzers and wherever it is desirable to use only one meter. With bar knob, dial plate and mounting hardware. Shpg. wt., 6 oz. NET..... 3.47

## 13124L 24-POINT TAP SWITCH

34 B 295. Single circuit, 24 position, non-shortng switch. Continuous rotation. 1/2" bushing. 2" grooved shaft. Particularly useful in test equipment. 15° indexing action between positions. With bar knob, dial plate and mtg. hardware. Shpg. wt., 6 oz. NET..... 2.06

## DIAL PLATES

Types 372 to 390 for switches 1200L, 1300L and 1 1/2" base 3100J and 3200J. Others for 1 1/2" base 3100J and 3200J. Etched aluminum. Black background. 1 1/2" dia. 3/8" hole. Shpg. wt., 2 oz.



## 30° SPACING FOR 1 1/2" BASE SWITCHES

Type	Marking	Type	Marking	Type	Marking	Type	Marking
372	1 to 2	384	Off 1 to 4	453	1 to 3	474	Off 1 to 4
373	1 to 3	385	Off 1 to 5	454	1 to 4	475	Off 1 to 5
374	1 to 4	386	Off 1 to 6	455	1 to 5	476	Off 1 to 6
375	1 to 5	387	Off 1 to 7	456	1 to 6	477	Off 1 to 7
376	1 to 6	388	Off 1 to 8	457	1 to 7	478	Off 1 to 8
377	1 to 7	389	Off 1 to 9	458	1 to 8	479	Off 1 to 9
378	1 to 8	390	Off 1 to 10	459	1 to 9	480	Off 1 to 10
379	1 to 9			460	1 to 10	481	Off 1 to 11
380	1 to 10			461	1 to 11	482	Off 1 to 12
381	1 to 11			462	1 to 12	483	Off 1 to 13
382	1 to 12			467	1 to 17	484	Off 1 to 14
383	Off 1 to 3			468	Off 1 to 3	486	Off 1 to 16

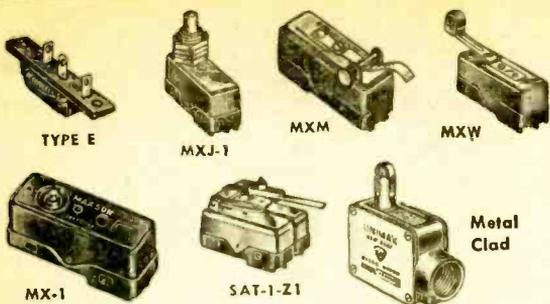
34 B 600. Specify Type. | 34 B 650. Specify Type. NET EACH..... 12c

34 B 670. Type 369. 0-100 plate for volume control. EACH... 15c  
34 B 620. Type 391. Increase type plate for vol. control. EACH... 9c  
34 B 622. Type 393. 0-10 plate for rheostats and pots. } EACH... 15c  
34 B 624. Type 396. 0-10 plate for wire-wound controls. }

## RB254 UNIVERSAL MOUNTING BRACKET

"L" shaped Universal Mounting Bracket for baseboard or rear support mounting of all Mallory circuit selector switches, volume controls and jacks. Shpg. wt., 2 oz.  
34 B 420. NET..... 15c

# All-Purpose Switches



## UNIMAX SNAP-ACTION SWITCHES

Snap-action AC switches for a wide variety of industrial and laboratory use. Highly dependable actuators are attached to stainless steel "Adaptaplates." Operating force, approx. 8 oz. Rated at 15 amperes, 125/250/460 volts, 60 cycle non-inductive AC. 1 1/2 x 1 1/2 x 1 1/2". Average shpg. wt., 3 oz.

Stock No.	Mfg. Type	Actuator	Action	EACH
34 B 750	MX-1	Basic pin type	SPDT	1.35
34 B 751	MX-1	Leaf spring type	SPDT	1.45
34 B 752	MXW-1	Same, with roller	SPDT	1.90
34 B 755	MX-1	Leaf spring, hinged	SPDT	1.70
34 B 759	MXA-1	Same, with roller	SPDT	2.10
34 B 764	MXM-1	Safety interlock	SPDT	2.45
34 B 775	SAT-1-Z1	Dual switch	DPST	4.40
34 B 753	MXQ-1	Plunger, small	SPDT	1.65
34 B 754	MXJ-1	Plunger, large	SPDT	3.00
34 B 756	MXO-1	Plunger, top reset	SPST	2.00
34 B 776	MXR-1	Plunger, with roller	SPDT	4.40
34 B 777	MB-1	Pin, low force	SPDT	1.35
34 B 778	KMXR-2EE	Plunger, metal clad	SPDT	7.05
34 B 781	KMXJ-2EE	Plunger, metal clad	SPDT	3.95

## SPST UNIVERSAL AC-DC SWITCHES

Versatile snap-action switches. Focused-flux arc blowout, and non-carbonizing case. Silver contacts. Beryllium copper flat spring for instant traverse. 1" mtg. ctrs. 10 amps, 125 volts DC or AC (non-ind.) Av. wt., 3 oz.

Stock No.	Type	Actuator	Size	EACH
34 B 771	DMXW-1	Leaf, with roller	1 1/2 x 1 1/2 x 1 1/2"	4.40
34 B 772	DMXQ-1	Plunger, small	1 1/2 x 1 1/2 x 1 1/2"	4.20

## TYPE E SNAP-ACTION SWITCH

Control of loads up to 10 amps. Rated at 10 amps, 125 v., or 5 amps, 250 v. Operating force, 3-10 ounces. U.L. Approved. Wt., 3 oz. 34 B 782. NET. 60c

## UNIMAX DESIGN KIT

Unimax kit of standard interchangeable parts. Permits assembly of exact switch required. Wt., 12 oz. 34 B 760. NET. 3.50

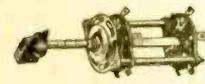
## MALLORY "2100" PUSH-BUTTON SWITCHES



For automatic station selector tuning, intercom, or any application requiring a switch for making, breaking, or transferring multiple circuits in any desired sequence. Brown bakelite knobs, bronze escutcheon plate, blank designation inserts, and transparent strip for windows. †Shorting. \*Non-shorting. Av. shpg. wt., 11 oz.

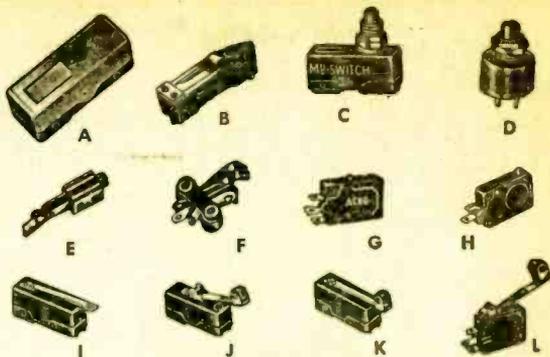
Stock No.	Type	Buttons	Description	NET
34 B 580	2164	4	DP, Circuit Closing	3.09
34 B 581	2165	4	DP, Circuit Closing	3.85
34 B 582	2168	8	DP, Circuit Closing	4.65
34 B 583	2184	4	†DPDT, Circuit Transfer	3.09
34 B 584	2186	6	†DPDT, Circuit Transfer	3.85
34 B 585	2188	8	†DPDT, Circuit Transfer	4.65
34 B 586	2194	4	*DPDT, Circuit Transfer	3.09
34 B 587	2196	6	*DPDT, Circuit Transfer	3.85
34 B 588	2198	8	*DPDT, Circuit Transfer	4.65

## MALLORY "HAMSWITCHES"



Type 151L. Two-section, 5-position switch. Non-shorting type. For switching meter circuits. 2 1/4" spacing between sections. Rated at 1000 volts AC (rms) or 1500 volts DC. 60° indexing between positions. With brass bushing 1/4" long, 3/8" dia., and 2" long, 1/4" dia. shaft. With knob, nut and lock washer. Shpg. wt., 6 oz.

34 B 318. NET.	1.62
Type 162L. Two-section, 2-circuit, 6-position switch. Shorting type. Spacing 1/2" between sections. For bandswitching or meter-switching uses. 60° indexing between positions. Phenolic resin insulation used in the 2-section assembly. Supplied with same accessories as Type 151L above. Shpg. wt., 6 oz.	
34 B 319. NET.	1.91



## ACRO SNAP-ACTION SWITCHES

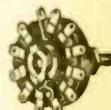
### Feature Lightweight "Rolling Spring" Positive Action

Precision made for laboratory and industrial requirements. Snap-action switches are ideal for use in safety, limiter, counting, signaling and many other applications. Positive snap-action switches. Feature "Rolling Spring" construction—provides low pressure "make" with fast "break". Lightweight "Rolling Spring" and its friction-free action assure extra long life and dependability. Enclosed types have thermosetting plastic cases. In listing below NC means normally closed; NO normally open. Ampere ratings given at 125 volts. Type 1CMD1-2AXX-A22 and 2CMD1-2AXX-A24 are light pressure switches for coin applications. All have solder lug terminals. Sizes: 1—1 1/2" x 1 1/2" x 1 1/2", 2—1 1/2" x 1 1/2" x 1 1/2", 3—3/4" dia. x 1/2", 4—1 1/2" x 1 1/2" x 1 1/2", 5—1 1/2" x 1 1/2" x 1 1/2". \*Operating force in grams. \*\*For use with A18 mtr. bracket below. †With wire leaf actuator; ‡With A18 bracket. †With flat leaf actuator. Av. shpg. wt., 4 oz.

Stock No.	Fig.	Type	Action	Operating Force Oz.	Pre-travel Max. In.	Size	Amps	NET EACH
35 B 002	A	RD-1A	SPDT	8-10	.025	1	10	1.30
35 B 010	A	XD-1A	SPDT	2-3	.040	1	10	1.30
35 B 013	J	RD-5L	SPDT	4-5	1/16	1	10	1.40
35 B 014	K	RD-2M	SPDT	4-5	1/16	1	10	1.80
35 B 015	J	TD-48L	SPDT	12*	3/32	1	10	1.80
35 B 017	J	XD-63L	SPDT	1	1/8	1	10	1.70
35 B 018	G**	2MD1-1A	SPDT	6-10	1/32	2	10	1.40
35 B 019	G**	2MD1-2A	SPDT	6-10	1/32	2	10	1.40
35 B 020	H**	1CMD1-2AXX	SPDT	20-27*	.040	2	3	1.40
35 B 021	H**	2CMD1-2AXX	SPDT	33-44*	.030	2	3	1.40
35 B 024	G**	1CMD1-2AXX-A22	SPDT	20-27*	.040	2	3	1.70
35 B 028	D	3N05-SP	SPST-NO	10-15	.070	3	12	1.65
35 B 029	D	3NC5-SP	SPST-NC	10-15	.070	3	12	1.65
35 B 030	G**	2CMD1-2AXX-A24	SPDT	33-44*	.040	2	10	1.70
35 B 031	E	M-S1-P0BD-R	SPDT	1-2	.188	2	10	1.10
35 B 032	A	RO-1A	SPST-NO	8-10	.025	1	20	3.00
35 B 033	C**	MPB-312	SPST-NO	14	.020	1	10	1.80
35 B 034	F**	1M0B0	SPST-NO	3-6	.020	4	3	.85
35 B 035	B	G04-1A	SPST-NO	4-6	.020	5	10	1.70
35 B 036	B	G04-1A	SPDT	4-6	.020	5	10	1.70
35 B 037	L1**	1M01-1A-A18M	SPST-NO	3-6	.020	2	10	2.00
35 B 038	L1**	1M01-1A-A18M	SPDT	3-6	.020	2	10	2.00
35 B 022		A18 flat leaf actuator mtg. bracket						.40

## OHMITE POWER TAP SWITCHES

All-ceramic, high-current, power tap switches, non-shorting, single pole type. †Slow-break, quick-make† action. Silver contacts. The 111 is rated at 10 amps, 150 volts, AC. Dia., 1 1/4". The 212 is rated at 15 amps, 150 volts, AC. Dia., 2 1/4". Model 312 is rated at 25 amps, 300 volts, AC. 150 v. between taps. Dia. 3 1/2". \*Two-in-tandem types; rated same as single types. Insulated 1/4" dia. shafts and for panels up to 1/4". 312 mounts with three 10-32 machine screws, others have 1/4"-32 threaded bushing and hex nut. Shpg. wt., 111, 5 oz.; 212, 10 oz.; 312, 1 lb. All are U.L. Approved.



MODEL 111				MODEL 212			
Stock No.	Taps	Rotation	NET	Stock No.	Taps	Rotation	NET
34 B 225	2	30°	2.39	34 B 237	2	30°	5.96
34 B 226	3	30°	9.34	34 B 324*	2	30°	16.69
34 B 227	3	60°	2.39	34 B 238	3	60°	5.96
34 B 222*	3	60°	9.34	34 B 323*	3	60°	16.69
34 B 228	4	90°	2.39	34 B 239	4	90°	5.96
34 B 221*	4	90°	9.34	34 B 322*	4	90°	16.69
34 B 229	5	120°	2.46	34 B 240	5	120°	6.19
34 B 220*	5	120°	9.54	34 B 241	6	150°	6.19
34 B 230	6	150°	2.46	34 B 321*	6	150°	17.15
34 B 231	7	180°	2.59	34 B 242	7	180°	6.44
34 B 232	8	210°	2.57	34 B 320*	7	180°	17.62
34 B 233	9	240°	2.67	34 B 243	8	210°	6.44
34 B 234	10	270°	2.67	34 B 244	9	240°	6.65
34 B 235	11	300°	2.74	34 B 245	10	270°	6.65
				34 B 246	11	300°	6.88
				34 B 247	12	330°	6.88

MODEL 312			
Stock No.	Taps	Rotation	NET
34 B 280	2	30°	8.72
34 B 278	3	60°	8.72
34 B 277	4	90°	8.72
34 B 276	5	120°	8.94
34 B 275	6	150°	8.94
	7	180°	9.18
34 B 274	8	210°	9.18
34 B 273	9	240°	9.41
34 B 272	10	270°	9.41
34 B 271	11	300°	9.62
34 B 270	12	330°	9.62

See page 240 for 30° type switch plates.

# All-Purpose Switches

## J-B-T MOLDED ROTARY SWITCHES



Molded bakelite, non-short- ing, rotary selector switches. All moving contacts fully enclosed to minimize wear and corrosion. Sturdily constructed with rigid 3-post deck suspension instead of usual 2; rectangular drive shaft through double grip collector arms and precision indexing. All current-carrying parts are brass or phosphor bronze, heavily plated with pure silver to meet 100-hour salt spray test. Positive indexing. Large area silver contacts insure low contact loss, average contact resistance of .007 or less. AC-DC current carrying capacity (not make or break): normal 1 amp; maximum 5 amp. Max. rms volts between contacts and ground 1000. Between decks and ground 2000. With knobs. Av. wt., 6 oz.

**Continuous Rotation Switches, Type MS-14.** 13 circuits and "off" per deck in 2<sup>nd</sup> circle for compactness. Angular indexing 25° 43'.

**Type MS-20.** 19 circuits and "off" per deck in 2<sup>nd</sup> circle for compactness. Angular indexing 18°.

No.	Type	Gangs	Depth	EACH
34 B 950	MS-14-1	1	1 1/4"	1.47
34 B 951	MS-14-2	2	1 1/4"	1.76
34 B 952	MS-14-3	3	1 1/4"	2.20
34 B 953	MS-14-4	4	1 1/4"	4.16
34 B 954	MS-14-6	6	2 1/2"	4.16
34 B 955	MS-20-1	1	1 1/4"	1.91
34 B 956	MS-20-2	2	1 1/4"	2.35
34 B 957	MS-20-3	3	1 1/4"	3.18
34 B 958	MS-20-4	4	1 1/4"	3.87
34 B 959	MS-20-6	6	2 1/2"	5.49

**Type MAS-14 Adjustable Stop Rotary Switches.** Include all the features of the MS series. 13 circuits and "off" per deck in 2<sup>nd</sup> circle. Have enclosed adjustable stop mechanism on panel side of switch. Indexing, 25° 43'.

No.	Type	Description	EACH
34 B 970	MAS-14-1	1	1.91
34 B 971	MAS-14-2	2	2.20
34 B 972	MAS-14-3	3	2.65
34 B 973	MAS-14-4	4	3.28
34 B 974	MAS-14-6	6	4.61

**Eetched Dial Plates.** For MS-14, MS-20 and MAS-14 rotary switches. Dull black finish with raised bright metal numerals. Angular indexing EP-13 and EP-14 is 25° 43'. EP-19 and EP-20 is 18°. Diameter, 2 1/4".

No.	Type	Description	EACH
34 B 960	EP-13	Off thru 13	21c
34 B 961	EP-14	1 thru 14	
34 B 962	EP-19	Off thru 19	
34 B 963	EP-20	1 thru 20	

## NEW J-B-T LEVER SWITCH

**Type MS-20-1L5A-1.** 5-position lever switch, fully enclosed in molded housing. 2 circuits, each 5 positions. With knob and hdlw. 34 B 975. NET.....2.20

## GENERAL FOOT CONTROL SWITCHES



**Fig. A. Type MI-25.** Treadle-type, SPDT, one each normally open and closed contacts. First Press transfers contacts; second press restores. Adjustable throw. Set for 5 lbs. BX connector. Black wrinkle finish. 12 amps @ 125 v., 6 amps @ 250 v. Shpg. wt., 3 1/2 lbs. 78 B 370. NET.....11.25

**Type MI-23.** As above, but spring return. 20 amps @ 125 v., 15 amps @ 250 v. 78 B 371. NET.....9.80



Cadmium-plated steel housing. Black bakelite buttons. Size, 3/8" wide x 1 1/2" long. Mounting centers, 1 1/4". All switches listed below rated at 125 volts AC-DC. Type S-110-S is heavy duty; 10 amps at 125 volts; 5 amps at 250 volts. Type SS-6 has 3/8" bevel trigger with prong guide, solder lug terminals, spring return. For prices in quantities over 50 write for quotation. Underwriters Laboratory Approved. Average shpg. wt., 3 oz.

## SLIDE SWITCHES

Stock No.	Manufacturer	Mfr's Type	Poles	Amps.	NET EACH	10-24 EACH	25-49 EACH
34 B 491	Wirt	SW724	SPDT	.75	18c	16c	14c
34 B 492	Wirt	SW725	DPST	.5	22c	20c	17c
34 B 148	Carling	S-110-S	SPST	10	59c	53c	49c
34 B 421	Carling	S-516	SP2 Cir.	3	53c	48c	44c
34 B 422	Carling	S-516	SPST	4	9c	8c	7c
34 B 423	Carling	S60B	SPDT	4	10c	9c	8c
34 B 424	ICA	1260	DPDT	...	24c	22c	20c
34 B 496	Stackpole	SS-6	3PDT	5	30c	27c	24c

## AUTOMATIC ELECTRIC TYPE 110

### PROTABLE TIME SWITCH

Fully enclosed, portable synchronous time switch. Automatically turns electrical equipment "on" or "off" at specific times. On-off dial is calibrated in 15-minute intervals. Requires minimum of 45 minutes between settings. For use with appliances. Capacity of 10 amperes or 100 watts. 7 1/2 x 4 1/2 x 3 1/2". With 5-foot cord. For 110-120 volts, 60 cycle AC. Shpg. wt., 4 lbs. 78 B 310. List, \$12.65. NET.....9.65



## SANGAMO TIME SWITCHES

**Type SJ.** Will automatically turn equipment "on" and "off" at any pre-set time, once every 24 hours. Calibrated in 15 minute intervals. Requires 30 minute interval between settings. May be hand operated. 10-amp. capacity. Self-starting synchronous motor. Plug-in for use for appliances, lights, etc. Has 6-foot cord and receptacle. Ivory. For 120 volts, 60 cycle AC. Size, 3x5 1/2x3". Shpg. wt., 2 1/4 lbs. 78 B 335. List, \$15.75. NET.....11.81



**Type SR.** Similar to above. 15 amp capacity. Has two "on" and "off" operations every 24 hours. Not plug-in type. Brown. Wt., 1 1/4 lbs. 78 B 333. List, \$13.50. NET.....10.13

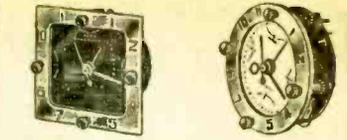
## AMPHENOL TAP SWITCHES

8-position single pole continuous switches with white numerals clearly visible in window caps. Type 36-1 has markings 1-2-3-4-5-6-7-8. Type 36-2 has impedance markings 0-2-4-8-16-250-500. Set screw locks switch-arm. Shpg. wt. 5 oz. 34 B 090, 36-1. Numerals 1 to 8. 34 B 091, 36-2. Impedance markings. NET EACH.....53c



## FEDERAL ANTI-CAPACITY SWITCHES

Quick make-and-break type, positive action switches. All normally open. Springs and contacts are of silver-plated phosphor bronze. Cam-roller. Graphited bearings. Aluminum frame. 2 1/2 x 5 1/4". Wt., 5 oz. 34 B 480, 1427 DPST. NET.....2.53  
34 B 481, 1425 DPDT. NET.....2.53  
34 B 482, 1424 4PDT. NET.....2.86  
34 B 483, 1424 8PDT. NET.....6.20

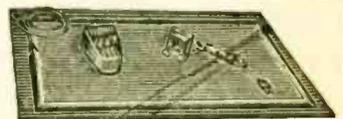


## SESSIONS UNMOUNTED TIME SWITCHES

Automatically turns on radios, television sets, toasters, coffee-makers and virtually hundreds of other electrical devices—at any pre-set time within a 12-hour period. Also serves as an extremely accurate, highly attractive time-piece. Converts any AC operated radio to a modern clock-radio—an excellent musical alarm. Also an ideal service replacement for clock-radios. May be installed in a small case with an AC outlet line cord for the Amateur station to "warm-up" transmitters and receivers for schedules. All controls, "Sleep-Selector," off-automatic-on, time adjust and timer set, are conveniently located on outer dial face at 1/4-hour points. "Sleep-Selector" switch permits bedtime listening by turning radio off at any pre-set time up to 90 minutes.

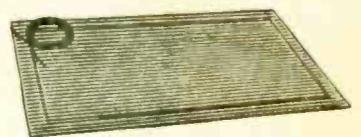
Outer dial face and sweep second hand are of beautiful, highly polished brass. Excellent low-speed motor is silent in operation. Easy to install. Require 3 1/2" diameter round hole. Depth behind dial face, 2 1/4". Built-in single-pole switch handles up to 15 amperes at 125 v. AC. With mounting bracket and instructions. U. L. Approved. For 105-125 v., 60 cycles AC only. Shpg. wt., 1 1/4 lbs.

78 B 375, Model TF-583, Square Face.  
78 B 376, Model TF-682, Round Face.  
NET EACH.....6.50



## SWITCHMAT "ANNOUNCEMAT" CHIME ALARM SYSTEM

Low-cost, practical alarm system for stores, offices, homes and industry. Excellent for medical office waiting rooms. Operates by visible "area switch" (Switchmat). Rugged Switchmat is 3/8" thick, heavily ribbed brown vinyl plastic. Completely protected—sealed between layer of plastic and rubber. Resistant to cleaning and sweeping compounds. Lies completely flat on floor—will not slip or slide even on polished floors. No installation problems—simply plugs into wall outlet. Operates on extremely low voltage. Complete with 18x30" commercial-type Switchmat, transformer with 6 ft. cord and plug, 25 ft. low voltage cable and chime signal alarm. For 110-120 v., 60 cycle AC. Shpg. wt., 1 1/2 lbs. 78 BX 358; List, \$27.95. NET.....21.91



## INDUSTRIAL "STEP-ON" SWITCH

Stepping on Switchmat closes circuit which may be used to ring bells, turn on lights, actuate electric counters, open doors, etc. Attractive vinyl plastic carpet conceals SPST switch (normally off). Waterproof. Controls 110-watt circuit with non-inductive loads up to 100 watts. Has power handling capacity of up to 1,000 watts when used with Switchmat control box listed below. Brown color; two sizes. 1/2" thick. With 10-ft. leads. 78 BX 355, 14x23", 6 1/2 lbs. NET...14.90  
78 BX 356, 18x30", 9 1/2 lbs. NET.....21.17

## RELAY CONTROL BOX

Relay control unit for Switchmat or other switch. Handle up to 1,000 watts at 110-120 v., 60 cycles AC. Provides 6 v. AC for switch circuit. Outlets for normally "on" and normally "off" operation. With plug, socket and 6' cord. 4x4x2". 2 1/2 lbs. 78 B 357. NET.....9.80



# Time Switches—Interval Timers



TS60SP



TS65SP



TS66



T675



A-211

## TYPE TS60SP TIME SWITCH

Inter-Matic SPST time switch turns equipment "on" and "off" once in 24 hours. With extra trippers (see bottom of next column) will operate up to 12 times a day. Trippers can be added without removing the dial. Minimum time between settings is 1 hour. Manual operation does not interfere with settings. 35 amp contacts will handle a 4000 watt load at 125 v., 60 cyc. Gray steel case with knockouts. Size, 5x4x7/8". U.L. approved. Operates on 105-125 volts, 60 cycle AC. Shpg. wt., 4 lbs. 78 B 322, List, \$10.95. NET ..... 7.12

Type TS60DP. As above, but DPST. 78 B 321, List, \$12.95. NET ..... 8.42  
Adapter Kit. Handy adapter kit makes the above unit portable. Consists of 6 ft. cord, plug, etc. 15 ampers. Shpg. wt., 1 lb. 78 B 323, NET ..... 98c

## TYPE TS65SP TIME SWITCH

Portable type, SPST plug-in time switch. Simple to install. Improved version carries a much heavier load than earlier models. Will handle any appliance that plugs into regular outlets. Provides a great variety of uses in the shop, store, or home. Switch can be easily set for from 1 to 12 on-off operations per day. Minimum "on" or "off" time, 1 hr.; maximum, 23 hrs. Can be used to control lamps, electric roasters, radios, TV sets, shortwave transmitters and receivers, etc. Precision-built to give many years of dependable service without attention or adjustment. Made of finest quality materials. Can be used with up to twelve extra trippers. Manual operation does not interfere with settings. Capacity, 15 amps at 125 volts (1650 watts). Size, 5x4x7/8". For 105-125 v., 60 cycles AC. Wt., 4 lbs. 78 B 314, List, \$12.95. NET ..... 8.42

## "SKIPPER" TIME SWITCHES

Permits "skipping" control cycle on Saturdays, Sundays, holidays, etc. The "Skipper" has 2 dials: a time dial and a day dial. To skip any days, small skipping screws are inserted into the proper holes in the day dial. "On" and "off" trippers are set in the usual manner on the time dial. Special "cutout" tripper advances day dial every 24 hours. From 1 to 11 on and off operations per day can be obtained by adding extra trippers. Timing range: Minimum "on" or "off" time, 1 hour; maximum, 23 hours. Switch may be turned on or off manually—regardless of the time settings. Automatic reset resumes time cycle. Silver, snap-action switch contacts are rated 35 amps at 125 volts (4000 watts). Gray, drawn steel case. Size, 7/8x5x3/4". With 1 set of "on and off" trippers, cut-out tripper, 3 skipping screws and instructions. For 110-120 volts, 60 cycle AC. U.L. Approved. Shpg. wt., 4 lbs.

Type TS66SP. SPST. Skips "on" operation. 78 B 315, List, \$16.95. NET ..... 11.02

Type TS66DP. DPST. Skips "on" operation. 78 B 316, List, \$18.95. NET ..... 12.32

Type TS66SPDT. SPDT. Skips either "on" or "off" operation. 78 B 317, List, \$18.95. NET ..... 12.32

## TRIPPERS AND SKIPPING SCREWS

Type 107T7GR. Cutout Trippers. For "Skipper" types only. Shpg. wt., 3 oz. 78 B 319, List, 30c. NET EACH ..... 20c

Type 79T2. Skipping Screws. For "Skipper" types only. Shpg. wt., 3 oz. 78 B 318, List, 5c. NET EACH ..... 3c

Type 107T8A. Set of "on and off" Trippers. For Inter-Matic switches (except T675). 2 oz. 78 B 324, List, 40c. NET PER SET ..... 26c

## TYPE T675 TIME SWITCH

Unusually versatile switch that provides up to 14 complete "on-off" cycles. Each cycle is independently controlled and can vary from 5 to 60 min. Minimum interval between cycles, 1 1/4 hrs. Can be used as SPST normally open; SPST normally closed; or SPDT. Perfect for any application requiring more than one "on-off" cycle in a 24-hour period. Each cycle is easily adjusted for minutes desired; set screw on tripper selects any period from 5-60 min. Trippers are easily changed or added. Large, silver, snap-action contacts; rated 35 amps, 125 volts, AC. Synchronous timing motor is slow-speed, high-torque type. Gray steel case, 7/8x5x3/4". With 3 trippers (for 3 "on-off" cycles). For 110-120 volts, 60 cycle AC. Shpg. wt., 4 lbs. 78 B 313, List, \$16.95. NET ..... 11.02

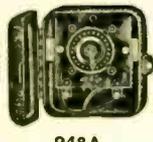
Extra Trippers. For above. One tripper required for each "on-off" cycle. Wt., 4 oz. 78 B 336, NET EACH ..... 75c

## TYPE A-211 UTILITY MODEL

Time control switch for office, store or home. Ideal for: converting radios to clock-radios, defrosting refrigerators, controlling lights or home appliances, etc. Has manual control with automatic reset. Unique feature permits manual control without automatic reset, for continuous "off" or "on." To revert to control cycle, release manual control from "permanent" position. Min. "on" time, 15 min.; max., 23 hrs.; 45 min. Plug-in receptacle for equipment to be controlled. Attractive gray plastic case. Size, 5x4x2 1/4". Handles 15 amps, 1650-watt load. With 6-ft. cord, plug, instructions. For operation from 110-120 v., 60 cycle AC. Shpg. wt., 2 lbs. 78 B 311, List, \$11.95. NET ..... 7.97



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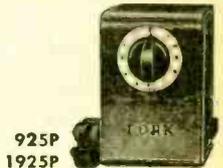
948A



801



919



925P  
1925P

## TORK SWITCHES—INTERVAL TIMERS

### MODEL 191—"LITTLE GIANT"

Automatically turns electrical equipment "on" and "off" at any pre-set time, once every 24 hours. For timed operations in stores, offices, shops and the home. On-off dial calibrated in 15-minute intervals. 45 minutes required between settings. May be manually operated without disturbing settings. Handles 20 amps at up to 2200 watts lighting load (2000 watts heating load) or 1/2 h.p. single-phase motor. Free turning ratchet dial. Requires no tools to set or adjust—may be operated by hand at any time. Self-starting oil-sealed, Telechron clock motor drives the precision timing gears to operate the switching mechanism. For operation from 110-120 volts, 60 cycles AC. Steel case with hinged cover. Size, 8 1/4x4 3/4x4 1/2". Shpg. wt., 5 lbs. 78 B 302, List, \$13.95. NET ..... 9.80

### MODEL 948A—"THE TORKMASTER"

Automatically turns electrical equipment "on" and "off" once over a 24-hour period. Two hours required between settings. Dial calibrated in 15-minute intervals. Switch is single pole with current rating of 30 amps. Ideal for window lights, display signs, porch lights, hallways, yard lights, oil burners, coal stokers, defrosters, pumps and many other shop and home applications. Switch may be opened by hand without disturbing pre-set adjustments. Size: 5 1/4x4 3/4x3 1/4". With conduit knockout holes. Blue-gray finished steel case with hinged cover. Telechron motored; precision timing gears. For operation from 110-125 volts, 60 cycles. With instructions. Shpg. wt., 3 lbs. 78 B 308, List, \$10.95. NET ..... 7.67

### TORK 801 PROGRAM TIMER

Highly versatile, new program switch with a total of 40 spring-type tabs for "on" or "off" intermittent operation. Requires no tools to set or adjust—tabs can be easily inserted at any quarter-hour period to provide 15-minute operation. Adjoining tabs keep the operation continuous. Enables users to set up almost any desirable timing combination for 15 minutes or longer, day or night. Provides a multitude of timed operations for stores, offices, shops and the home. Ideal for controlling fans, heating systems, blowers, lights or signs, bells, etc. Amazingly accurate and dependable. Minimum time between settings, 15 minutes; maximum, 24 hours. Timer employs rugged 10-ampere, single pole Unimax switch. Telechron clock motor. Size, 8 1/4x4 3/4x4 1/4". For 110 volts, 60 cycle AC. Shpg. wt., 5 lbs. 78 B 337, List, \$19.95. NET ..... 13.97

### MODEL 919—PORTABLE PLUG-IN

New, portable plug-in time switch, 24-hour, fully automatic. Numerous applications: operates window air conditioners, burglar alarms, portable heaters, etc. Simple turn of dial to set "on" time. On-off levers for manual use. Adjustable "off" tripper. Minimum time between settings, 45 min. Powered by oil-sealed, self-starting Telechron clock motor. 96 adjustment slots, 15 min. each. Capacity, 15 amps, 1650 watts. Hangs up or sets flat on 4 rubber feet. Size, 5 1/2x4 1/4". For 110 v., 60 cycles AC. Shpg. wt., 3 1/4 lbs. 78 B 304, List, \$13.95. NET ..... 9.80  
Extra trippers for above, Pair, 3 oz. 78 B 309, NET PER PAIR ..... 35c

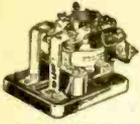
### MODEL 925P—HOUSEHOLD TIMERS

New timers that will accurately control electric mixers, coffee-makers, blenders, hotplates, lamps, ozone lamps, fans, radios, window ventilators and numerous other appliances. Model 925-1P will automatically shut off most electrical appliances at the end of any pre-selected time interval from 1 to 59 minutes; adjustable in one minute intervals. For longer periods up to 4 hours use Model 925-4P. Telechron-motored. For 110-120 volts, 60 cycle AC. Rating 660 watts. White enamel finish. Size, 4 1/2x3x3". Shpg. wt., 3 lbs. 78 B 306, Model 925-1P, 1 Hr. 78 B 307, Model 925-4P, 4 Hr. List, \$10.95. NET EACH ..... 7.67

### NEW 1925-P MODELS

New single set interval timers, similar in appearance to Model 925P, above. Can be manually set for any interval less than stated maximum settings. Provide automatic time control where short interval operations are repeated continuously, or for definite periods during the day or night. Exclusive selector wheel permits switching operations to close every second, third or sixth time the dial rotates. All are 15 amp capacity, single pole normally open. Telechron-motored, with receptacle. Size, 4 1/2x3 1/2x3". For 110-125 v., 60 cyc. AC. Wt., 2 lbs. Model 1925-4P, Max. setting, 4 hrs. 78 B 347, List, \$11.95. NET ..... 8.37  
Model 1925-12P, Maximum setting, 12 hours. 78 B 348, List, \$11.95. NET ..... 8.37  
Model 1925-24P, Maximum setting, 24 hours. 78 B 349, List, \$11.95. NET ..... 8.37

# Potter and Brumfield Relays



## PR HEAVY-DUTY POWER RELAYS

For motor starting up to 1 HP, heater loads up to 20 amps, remote break-in control of transmitters, etc. Clean wiping contacts. Operating power required, 7 to 10 wpt-amps. Sizes: PR1, 3.5; 2 1/2 x 2 1/2 x 2 1/2; PR7: 2 1/2 x 2 1/2 x 2 1/2; PR11: 3 1/2 x 2 1/2 x 2 1/2. Average shpg. wt., 12 oz. \*Double-break contact. †Suffix A indicates 50-60 cycle AC. D indicates DC.

Stock No.	Model No.†	Type	Normal Position	Coil Volts	Rated Amps.	NET EACH
75 P 845	PR1A	SPST	Open	6	15	3.50
75 P 846	PR3A	SPST*	Open	6	20	3.60
75 P 847	PR7A	SPDT	Open	6	15	3.80
75 P 848	PR7A	DPST	Open	6	15	4.25
75 P 849	PR11A	DPDT	Open	6	15	5.70
75 P 960	PR1A	SPST	Open	24	15	3.50
75 P 961	PR3A	SPST*	Open	24	20	3.60
75 P 962	PR7A	SPDT	Open	24	15	3.80
75 P 963	PR7A	DPST	Open	24	15	4.25
75 P 964	PR11A	DPDT	Open	24	15	5.70
75 P 660	PR1A	SPST	Open	115	15	3.50
75 P 600	PR3A	SPST*	Open	115	20	3.60
75 P 602	PR5A	SPDT	Open	115	15	3.80
75 P 603	PR7A	DPST	Open	115	15	4.25
75 P 663	PR11A	DPDT	Open	115	15	5.70
75 P 965	PR1A	SPST	Open	230	15	4.15
75 P 962	PR3A	SPST*	Open	230	20	4.25
75 P 966	PR5A	SPDT	Open	230	15	4.40
75 P 964	PR7A	DPST	Open	230	15	4.90
75 P 965	PR11A	DPDT	Open	230	15	6.35
75 P 967	PR1D	SPST	Open	110	15	4.15
75 P 968	PR3D	SPST*	Open	110	20	4.25
75 P 969	PR5D	SPDT	Open	110	15	4.45
75 P 970	PR7D	DPST	Open	110	15	4.90
75 P 971	PR11D	DPDT	Open	110	15	6.35



## MR MEDIUM-DUTY POWER RELAYS

Compact relays. Silver contacts. Floating armature for fast action. Wiping action assures good contact. Size: SP units, 2 1/2 x 1 1/2 x 1 1/2; DP units, 2 1/2 x 2 1/2 x 1 1/2. AC coils draw 4-5 VA; DC, 1.5 watts. Av. shpg. wt., 8 oz. \*Double-break contact. †A in Model No. indicates 50-60 cycle AC; D indicates DC.

Stock No.	Model No.†	Type	Normal Position	Coil Volts	Rated Amps.	NET EACH
75 P 615	MR1A	SPST	Open	115	8	2.25
75 P 665	MR3A	SPST*	Open	115	10	2.40
75 P 614	MR5A	SPDT	Open	115	8	2.40
75 P 617	MR7A	DPST	Open	115	8	2.40
75 P 616	MR11A	DPDT	Open	115	8	3.65
75 P 972	MR14A	3PDT	Open	115	8	4.40
75 P 656	MR1A	SPST	Open	230	8	2.70
75 P 973	MR3A	SPST*	Open	230	8	3.35
75 P 657	MR5A	SPDT	Open	230	8	2.85
75 P 658	MR7A	DPST	Open	230	8	3.65
75 P 659	MR11A	DPDT	Open	230	8	4.10
75 P 974	MR14A	3PDT	Open	230	8	4.85
75 P 611	MR1A	SPST	Open	6	8	2.25
75 P 615	MR3A	SPST*	Open	6	10	2.90
75 P 610	MR5A	SPDT	Open	6	8	2.40
75 P 613	MR7A	DPST	Open	6	8	3.20
75 P 612	MR11A	DPDT	Open	6	8	3.65
75 P 976	MR14A	3PDT	Open	6	8	4.40
75 P 977	MR1A	SPST	Open	24	8	2.25
75 P 978	MR3A	SPST*	Open	24	10	2.90
75 P 979	MR5A	SPDT	Open	24	8	2.40
75 P 980	MR7A	DPST	Open	24	8	3.20
75 P 981	MR11A	DPDT	Open	24	8	3.65
75 P 982	MR14A	3PDT	Open	24	8	4.40
75 P 919	MR1D	SPST	Open	6	8	2.25
75 P 918	MR3D	SPST*	Open	6	10	2.90
75 P 917	MR5D	SPDT	Open	6	8	2.40
75 P 984	MR7D	DPST	Open	6	8	3.20
75 P 985	MR11D	DPDT	Open	6	8	3.65
75 P 986	MR14D	3PDT	Open	6	8	4.40
75 P 987	MR1D	SPST	Open	24	8	2.25
75 P 988	MR3D	SPST*	Open	24	10	2.90
75 P 989	MR5D	SPDT	Open	24	8	2.40
75 P 990	MR7D	DPST	Open	24	8	3.20
75 P 991	MR11D	DPDT	Open	24	8	3.65
75 P 992	MR14D	3PDT	Open	24	8	4.40



## SP SHOCKPROOF RELAYS

Heavy-duty relays. Highly resistant to vibration and shock. Balanced armature construction permits mounting in any position. Thick molded base and contact supports. DPDT contacts rated at 5 amps, 115 volts AC. Large copper shading ring eliminates AC chatter. Contact arms are phosphor bronze and are silver plated.

1 1/2 x 1 1/2 x 2 1/2. 1/8" mtg. ctrs. Av. wt., 10 oz.

75 P 924.	Type SP11D.	6 volts DC.	NET	4.30
75 P 925.	Type SP11D.	24 volts DC.	NET	4.30
75 P 926.	Type SP11A.	115 volts AC.	NET	4.75



## SU LEAF TYPE RELAYS

Leaf type relays for multiple circuit switching of power loads. Long powerful coil provides fast, positive action and firm contact. Av. power required, DC models, 2 1/2 watts; AC models, 12 VA. 3/4" silver dome contacts rated at 5 amps, 115 volts AC. 2 1/2 x 1 1/2 x 2 1/2. 8 oz.

No.	Model	Coil	Contacts	NET
75 P 927	SU11D	6 volts DC	DPDT	2.95
75 P 928	SU17D	6 volts DC	4PDT	4.00
75 P 929	SU11D	24 volts DC	DPDT	2.95
75 P 930	SU17D	24 volts DC	4PDT	4.00
75 P 931	SU11A	115 volts AC, 60 cps	DPDT	2.95
75 P 932	SU17A	115 volts AC, 60 cps	4PDT	4.00

## LM PLATE CIRCUIT RELAYS

Quality medium-cost plate circuit relays. For photo-electric control, counting, and similar circuits. Armature spring tension adjustment and adjustable resilient screw permits settings for specific voltages or currents. Has 1/2" fine silver contacts rated at 5 amperes, 115 volts, 60 cycles, non-inductive load. Sizes: LM5, 2 1/2 x 1 1/2 x 2 1/2; LM11, 2 1/2 x 2 1/2 x 2 1/2. Av. shpg. wt., 9 oz.



Stock No.	Model	Type	Coil Ohms	Oper'g Ma	NET EACH
75 P 673	LM5	SPDT	2500	6.3	2.80
75 P 674	LM5	SPDT	5000	4.5	2.95
75 P 675	LM5	SPDT	10,000	3.2	3.30
75 P 682	LM11	DPDT	2500	9.0	4.20
75 P 683	LM11	DPDT	5000	6.3	4.35
75 P 684	LM11	DPDT	10,000	4.5	4.70

## LS PLATE CIRCUIT RELAYS

Small, fast-acting units designed for dependable operation in any circuit supplying only a few milliwatts of DC. Coils are baked varnish impregnated and fitted with molded bakelite bobbins, breakdown 500 v. rms min. Pure silver contacts rated at 5 amperes, 28 volts, DC, with non-inductive load. Size, 2 1/2 x 1 1/2 x 1 1/2. Adjusted by bending tail-spring hook. For DC only. Shpg. wt., 5 oz.



Type LS-6.	With 2500 ohm coil. SPDT. Operating current, 9.0 ma.	75 P 625.	NET	2.25
Type LS-5.	With 5000 ohm coil. SPDT. Operating current, 6.3 ma.	75 P 626.	NET	2.35
Type LS-5.	With 10,000 ohm coil. SPDT. Oper. current, 4.5 ma.	75 P 774.	NET	2.55

## ASSORTMENT OF MOLDED BAKELITE COIL BOBBINS For Winding Special Relay Coils

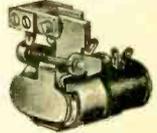
Wind special coils for Potter & Brumfield relays. Ideal for experimenters and project engineers who prefer to calculate and wind coils to meet specific circuit requirements. Assortment consists of 24 molded coil bobbins. Easily installed in any of the following P&B relays: Types MR, LS, SP, FR, LM, KR, LK, KL, PR and MH. Bobbins are one-piece molded general-purpose bakelite—withstand 50° C. rise above ambient temperature. Breakdown 500 volts. Shpg. wt., 8 oz.

75 P 240. NET PER BOX OF 24 ..... 1.50

## TYPE 555D SUPER-SENSITIVE DC RELAY

An ultra-sensitive 1 ma relay. SPDT contacts are pure silver. Rated at 2 amps 115 V. AC or 28 V. DC non-inductive load. Balanced armature and pin hinge assembly pivot in needle-point bearings. Coil resistance, 10,000 ohms. Varnish-impregnated coil windings. Mounting is by 2 tapped 6-32 holes on 2 1/2" centers. Size 1 1/2" long, 1 1/2" wide and 1 1/2" high. Shpg. wt., 8 oz.

75 P 844. NET ..... 9.90



## LK LATCHING RELAYS

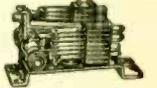
Relays designed and engineered for multiple circuit switching of power loads. Act as electrical latch and 50G shock while operating. Minimum contact pressure 35 grams. Contacts 1/2" dia. fine silver rated at 5 amps. Molded bakelite bobbins with 500 v. breakdown. Size, 2 1/2 x 1 1/2 x 1 1/2. Shpg. wt., 10 oz. \*50-60 cycle AC, †DC only.



Stock No.	Model	Type	Coil Volts	NET EACH
75 P 943	LK17A	4PDT	115	6.90
75 P 944	LK17A	4PDT	24	6.90
75 P 945	LK17A	4PDT	6	6.90
75 P 946	LK17D	4PDT	110†	8.55
75 P 947	LK17D	4PDT	24†	6.75
75 P 948	LK17D	4PDT	6†	6.75

## AP RATCHET OR IMPULSE RELAYS

Shortest engineered to actuate on impulses as short as 20 ms. Exclusive P&B stop mechanism assures accurate operation on each impulse regardless of speed. Contacts are 1/2" fine silver, rated 5 amps. Coils are wound on molded bobbins with 500 v. rms minimum breakdown. Phenolic cams, hardened steel pawl and ratchet with pin hinged armature. Size, 3 1/2 x 2 1/2 x 2 1/2. Shpg. wt., 12 oz. \*50-60 cycle AC, †DC only.



Stock No.	Model No.	Type	Coil Volts	NET EACH
75 P 993	AP11A	DPDT	115	7.50
75 P 994	AP17A	4PDT	115	9.00
75 P 995	AP17A	4PDT	24	7.50
75 P 996	AP17A	4PDT	24	9.00
75 P 997	AP11A	DPDT	6	7.50
75 P 998	AP17A	4PDT	6†	9.00
75 P 999	AP11D	DPDT	24†	7.50
75 P 778	AP17D	4PDT	24†	9.00

## FR PHOTOFLASH RELAYS

Designed especially for use in photoflash relays using a high voltage discharge through a gas-filled tube. Extremely high voltage breakdown insulation. Contacts withstand high surge of current without sticking or pitting when bulb is flashed. Coil power 1.5 to 2 watts DC and 3 to 4 VA AC. Breakdown 3000 volts minimum. Withstand severe conditions of temperature, humidity and shock. Size, 2 1/2 x 1 1/2 x 1 1/2. Wt., 6 oz.



Stock No.	Model No.	Type	Coil Volts	NET EACH
75 P 691	FR5A	SPDT	6V. AC	3.60
75 P 692	FR11A	DPDT	6V. AC	4.70
75 P 690	FR5D	SPDT	2V. DC	3.60
75 P 693	FR11D	DPDT	2V. DC	4.70

# P & B and Leach Relays

## POTTER & BRUMFIELD RELAYS

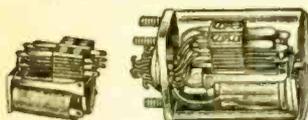
### TYPE PW MINIATURE SPDT RELAYS



New, extremely dependable SPDT miniature relays. Virtually unaffected by shock and vibration. Hermetically sealed in brass cans. Plug into miniature 7-pin tube socket. Withstand 10G vibration to 500 cps; 10G minimum shock. Operating temperature range, -55 to +85°C. 1/2" silver contacts; rated (non-inductive) 2 amps @ 28 v. DC or 115 v. 60 cycle AC. 1 1/2 x 1/4" dia. \*Voltage actuated. †Current actuated. Av. wt., 7 oz.

Stock No.	Type	VDC	Ohms	Ma	NET
75 P 221	PWSDS*	6			9.25
75 P 222	PWSDS*	24			9.70
75 P 223	PWLSL†		5000	2.8	9.55
75 P 224	PWLSL†		10000	2.0	9.95

### TYPE MH MINIATURE 4PDT TELEPHONE RELAYS



Open

Sealed

Telephone-type relays. Break-before-make contacts. 1/2" silver contacts rated at 5 amps. Stack insulation, laminated phenolic. Bakelite bobbin, 500 v. RMS breakdown. Size 1 1/2 x 1/2 x 1 1/4". Types with M suffix are hermetically sealed in metal housing. Header is glass with solder terminals; min. leakage resistor terminals. Open type, 1 1/2 x 1 1/2 x 1 1/4". Sealed type, 1 1/2 x 1 1/2 x 1 1/4". Av. shpg. wts.: Open type, 5 oz.; sealed type, 6 oz.

Stock No.	Type	Description	NET EACH
75 P 933	MH17A	6 volts AC	5.15
75 P 937	MH17D	6 volts DC	4.85
75 P 934	MH17A	24 volts AC	5.30
75 P 936	MH17D	24 volts DC	4.95
75 P 938	MH17A	115 volts AC	5.40
75 P 940	MH17AM	6 volts AC, Sealed	12.45
75 P 935	MH17DM	6 volts DC, Sealed	12.10
75 P 941	MH17AM	24 volts AC, Sealed	12.55
75 P 939	MH17DM	24 volts DC, Sealed	12.20
75 P 942	MH17AM	115 volts AC, Sealed	12.65

### TYPE MB3D MINIATURE DC POWER CONTACTORS



Small, rugged, power contactors. High current capacity. SPST, double-make type; normally open. Contacts and shorting bar are 1/2" solid silver. Rated 60 amps non-inductive load at 28 v. D.C. Contact arms are brass with solder terminals. Coils wound on molded bobbins. Varnish impregnated against moisture. Breakdown 500 v. RMS minimum. Mounts by four 3-48 tapped holes on 1/2" centers. Size: 1 1/4" high, 1 1/2" long, 2 1/2" wide. Av. wt., 4 oz.

Stock No.	Volts DC	Ohms	Av. Ma	Wire Size	NET EACH
75 P 816	6	13.3	450	30	4.00
75 P 817	12	62.3	193	33	4.00
75 P 818	24	245.	98	36	4.00
75 P 819	110	3670.	30	42	4.40

### TYPE MC CERAMIC-INSULATED RELAYS



New, ruggedly built, ceramic-insulated SPDT relays. Specifically designed for highly critical applications where inter-contact capacitance and leakage must be kept at a minimum. Have ceramic contact spacers. Inter-contact capacitance, only 1.5 mmf. maximum. Excellent for use in high-frequency circuits. Pure palladium contacts. Contact rating (non-inductive): 1 amp @ 28 volts DC or 115 volts 60 cycle AC. Available in types for operation from 6 volts, 50-60 cycle AC; 115 volts, 50-60 cycle AC; 6 volts DC; 24 volts DC. DC types withstand 10G vibration at up to 300 cps; and 25G shock. Size, 1 1/2 x 1 1/4". Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Description	NET EACH
75 P 225	MCSA	6 volts AC	3.80
75 P 226	MCSA	115 volts AC	3.90
75 P 227	MCSD	6 volts DC	3.50
75 P 228	MCSD	24 volts DC	3.60

### LEACH AMATEUR RELAYS MODEL 327—MIDGET ANTENNA RELAY



Unusually compact relay for switching antenna between transmitter and receiver. DPDT contacts spaced 1/2" apart to assure minimum impedance change when using 300-ohm twin-lead transmission lines. Has 1/4" diameter silver contacts. Rated at 2 amps at 115 volts, non-inductive, but handles up to 500 watts of RF in transmission lines having low standing wave ratio. Coil operates from 115 volts, 50-60 cycle AC. Single 6-32 screw mounting for quick, simplified installation. Size, 1 1/2 x 1 1/4". Shpg. wt., 4 oz.

75 P 650, NET ..... 2.88

### MODEL 1157-T TIME DELAY RELAY



Highly dependable thermo-element time delay relay. Designed primarily for transmitting equipment, but has many other uses. Protects tubes in transmitters and industrial equipment by assuring proper filament warm-up before application of plate voltage. DPDT contacts can be used either normally open, normally closed or as DT. Heavy-duty 1/4" pure silver contacts are rated 12.5 amps at 115 volts, 50-60 cycles, non-inductive. Thermo-element provides a continuously variable delay from 20 to 60 seconds. Size, 3/4 x 2 1/4 x 1 1/4". For operation from 110-120 volts, 50-60 cycles AC. Shpg. wt., 10 oz.

75 P 651, NET ..... 10.58

### SUPER-MIDGET SPDT RELAYS



Subminiature relays weighing less than 1 oz. SPDT silver-rhodium contacts rated 1/2 amp, 24 v. DC for 50,000 operations or 25 amp, 115 volts 60 cycles AC for 1,000,000 operations. Non-inductive load. Units are hermetically sealed in deep-drawn steel tubes. Have standard 7-pin miniature tube type bases. Size, 1/4" dia., 1 1/4" high above socket. Av. shpg. wt., 3 oz.

No.	Type	Description	NET
75 P 915	SM5DS	6 volt DC, 80 ohms	4.35
75 P 916	SM5DS	24 volt DC, 80 ohms	4.30
75 P 917	SM5LS	5000 ohms, 3.8 ma	4.75
75 P 949	SM5LS	10,000 ohms, 2.7 ma	5.55

### TYPE KR AND KRP MIDGET RELAYS

Ideal for applications where weight and space are prime factors. 1/4" silver dome shaped contacts. Rated 5 amps at 115 volts, 60 cycles (non-inductive load). Single stud mount with locking stud. Solder lugs. Size, 1 1/4 x 1 1/4 x 1 1/4". Type KR relays have clear polystyrene, dustproof cover fitted with standard octal plug. Size, 2 x 1 1/2 x 1 1/4". Av. shpg. wt., 4 oz.



KR



KRP

No.	Type	Action	Description	NET
75 P 205	KR5A	SPDT	6 volts AC	2.20
75 P 207	KR5D	SPDT	6 volts DC	2.10
75 P 202	KR5A	SPDT	24 volts AC	2.20
75 P 210	KR5D	SPDT	24 volts DC	2.10
75 P 200	KR5A	SPDT	115 volts AC	2.25
75 P 628	KR11A	DPDT	6 volts AC	2.70
75 P 208	KR11D	DPDT	6 volts DC	2.65
75 P 203	KR11A	DPDT	24 volts AC	2.75
75 P 211	KR11D	DPDT	24 volts DC	2.65
75 P 629	KR11A	DPDT	115 volts AC	2.75
75 P 206	KR14D	3PDT	6 volts AC	3.50
75 P 209	KR14D	3PDT	6 volts DC	3.40
75 P 204	KR14A	3PDT	24 volts AC	3.50
75 P 212	KR14D	3PDT	24 volts DC	3.40
75 P 201	KR14A	3PDT	115 volts AC	3.50
75 P 214	KRP5A	SPDT	6 volts AC, enclosed	5.50
75 P 217	KRP5D	SPDT	6 volts DC, enclosed	5.40
75 P 215	KRP5A	SPDT	24 volts AC, enclosed	5.50
75 P 213	KRP5A	SPDT	115 volts AC, enclosed	5.50
75 P 920	KRP11A	DPDT	6 volts AC, enclosed	6.05
75 P 922	KRP11D	DPDT	6 volts DC, enclosed	5.95
75 P 916	KRP11A	DPDT	24 volts AC, enclosed	6.05
75 P 921	KRP11D	DPDT	24 volts DC, enclosed	6.05

### TYPE KCP ENCLOSED PLATE CIRCUIT RELAYS

Plug-in type plate circuit relays; enclosed in transparent dust-proof and weather-proof polystyrene cases. Deliver highly dependable service in photocell control circuits and similar applications. Plug into standard octal tube socket. Silver contacts; rated 2 amps @ 115 volts 60 cycle AC, non-inductive load. Size, 1 1/2 x 1 1/4 x 2" high. Average shpg. wt., 5 oz.



No.	Type	Action	Ohms	Ma	NET
75 P 287	KCP5	SPDT	2500	7.2	5.85
75 P 288	KCP5	SPDT	5000	5.0	5.95
75 P 289	KCP5	SPDT	10,000	3.6	6.35
75 P 290	KCP11	DPDT	2500	10.0	6.30
75 P 291	KCP11	DPDT	5000	7.2	6.40
75 P 292	KCP11	DPDT	10,000	5.0	6.80

AMPHENOL TYPE 146-103 SOCKET FOR KRP AND KCP RELAYS. Barrier-type octal socket. Meets N.E.M.A. and U.L. requirements. Has screw-type tie-points separated by insulating barriers. Size, 3/4 x 1 1/4 x 2 1/4". Mtg. ctrs., 1 1/8". Shpg. wt., 5 oz.

40 H 180, NET ..... 93c

### TYPE AF 400-CYCLE AC RELAY

Top-quality 400-cycle AC relay. DPDT contacts. Manufactured to rigid specifications; carefully assembled and ruggedly constructed to assure smooth, quiet operation and exceptionally dependable service. Designed for replacement use and original equipment applications in aircraft, government and industrial experimental laboratories, manufacturing plants, and other installations employing 400-cycle AC power source. Withstands better than 10G shock. Has pure silver contacts; rated 5 amperes @ 115 volts, 60 cycle AC, non-inductive load. Heavy cast mounting foot. For operation from 115 volts, 400 cycle AC. Size, 1 1/4 x 1 1/4 x 1 1/4" high. Shpg. wt., 4 oz.

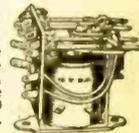
75 P 229, NET ..... 7.60



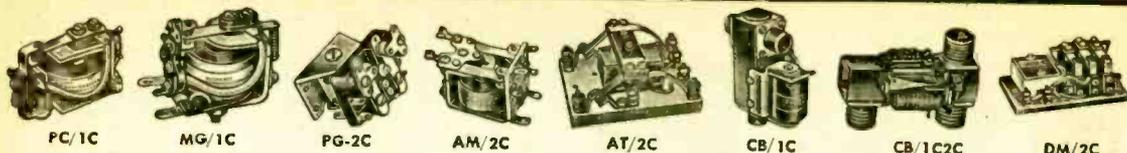
### TYPE KL MULTIPLE-CONTACT 4PDT RELAYS

Similar to type KR midget relays above, but actuating coil approximately twice as long. Permits double the ampere turns providing more power to actuate additional contacts and maintain 25 grams hold-down pressure. High dielectric phenolic insulation. Fine silver contacts; rated 5 amperes @ 115 volts, 60 cycle AC, non-inductive load. Size, 1 1/4 x 1 1/4 x 1 1/4". Average shpg. wt., 4 oz.

No.	Type	Description	NET
75 P 219	KL17A	24 volts AC	5.80
75 P 220	KL17D	24 volts DC	5.50
75 P 218	KL17A	115 volts AC	5.80



# Special Purpose Relays



## ADVANCE ALL-PURPOSE RELAYS

### PC POWER CONTROL TYPES

Sturdy, compact relays. Phenolic insulation, 1000 V, rms test. Pure silver  $\frac{1}{4}$ " contacts rated 15 amps, at 115 v, AC non-inductive. ST contacts are normally open. DC coils require 2½ watts, AC coils 4-7 VA. Mount by 2, 6-32 holes on 2" cntrs. SP units: 1½x1½x2½"; DP units: 1½x1½x2½"; 3P units: 1½x2½x3". Av. wt., 8 oz.

Stock No.	Mfr's Type	Action	Coil Voltage	NET EACH
76 P 200	PC/1C/115VA	SPDT	115 V. AC	3.01
76 P 201	PC/2A/115VA	DPDT	115 V. AC	4.07
76 P 202	PC/2C/115VA	DPDT	115 V. AC	4.30
76 P 203	PC/3C/115VA	3PDT	115 V. AC	5.16
76 P 204	PC/1C/24VA	SPDT	24 V. AC	3.01
76 P 205	PC/2A/24VA	DPST	24 V. AC	4.07
76 P 206	PC/2C/24VA	DPDT	24 V. AC	4.30
76 P 207	PC/3C/24VA	3PDT	24 V. AC	5.16
76 P 208	PC/1C/6VA	SPDT	6 V. AC	3.01
76 P 209	PC/2A/6VA	DPST	6 V. AC	4.07
76 P 210	PC/2C/6VA	DPDT	6 V. AC	4.30
76 P 211	PC/3C/6VA	3PDT	6 V. AC	5.16
76 P 212	PC/1C/24VD	SPDT	24 V. DC	3.01
76 P 213	PC/2A/24VD	DPST	24 V. DC	4.07
76 P 214	PC/2C/24VD	DPDT	24 V. DC	4.30
76 P 215	PC/3C/24VD	3PDT	24 V. DC	5.16
76 P 216	PC/1C/6VD	SPDT	6 V. DC	3.01
76 P 217	PC/2A/6VD	DPST	6 V. DC	4.07
76 P 218	PC/2C/6VD	DPDT	6 V. DC	4.30
76 P 219	PC/3C/6VD	3PDT	6 V. DC	5.16

### TYPE MG MIDGET RELAYS

Compact relays for use where space is limited. Beryllium armature hinge assures positive contact in any mtg. position. Laminated phenolic insulation. Pure silver  $\frac{1}{4}$ " contacts rated at 2 amps, 115 V, AC non-inductive, 6-32 stud mtg.; lug terminals. DC coils require 2 watts—AC coils 4-7 VA. 1½x1½x1½". Av. wt., 3 oz.

Stock No.	Mfr's Type	Action	Coil Voltage	NET EACH
76 P 220	MG/1C/115VA	SPDT	115 V. AC	2.54
76 P 221	MG/2C/115VA	DPDT	115 V. AC	2.73
76 P 222	MG/3C/115VA	3PDT	115 V. AC	3.13
76 P 223	MG/1C/24VA	SPDT	24 V. AC	2.54
76 P 224	MG/2C/24VA	DPDT	24 V. AC	2.73
76 P 225	MG/3C/24VA	3PDT	24 V. AC	3.13
76 P 226	MG/1C/6VA	SPDT	6 V. AC	2.54
76 P 227	MG/2C/6VA	DPDT	6 V. AC	2.73
76 P 228	MG/3C/6VA	3PDT	6 V. AC	3.13
76 P 229	MG/1C/24VD	SPDT	24 V. DC	2.54
76 P 230	MG/2C/24VD	DPDT	24 V. DC	2.73
76 P 231	MG/3C/24VD	3PDT	24 V. DC	3.13
76 P 232	MG/1C/6VD	SPDT	6 V. DC	2.54
76 P 233	MG/2C/6VD	DPDT	6 V. DC	2.73
76 P 234	MG/3C/6VD	3PDT	6 V. DC	3.13

### PJ AND PG POWER TRANSFER RELAYS

Compact, power transfer relays for motor starting, heater loads, transmitter control, etc. Withstand vibration and shock. Molded bakelite insulation, heavily plated parts, impregnated coils. Operating power DC 4 watts max., AC 8 VA max. Contact ratings: PJ type, 30 amps; PG type, 15 amps. 1½x1½x1½". Av. wt., 6 oz.

Stock No.	Mfr's Type	Action	Coil Volts	NET EACH
76 P 235	PJ/1C/230VA	SPDT	230 V. AC	5.63
76 P 236	PG/2C/230VA	DPDT	230 V. AC	5.63
76 P 237	PJ/1C/115VA	SPDT	115 V. AC	4.98
76 P 238	PG/2C/115VA	DPDT	115 V. AC	4.98
76 P 239	PJ/1C/24VA	SPDT	24 V. AC	4.98
76 P 240	PG/2C/24VA	DPDT	24 V. AC	4.98
76 P 241	PJ/1C/6VA	SPDT	6 V. AC	4.98
76 P 242	PG/2C/6VA	DPDT	6 V. AC	4.98
76 P 243	PJ/1C/115VD	SPDT	115 V. DC	5.95
76 P 244	PG/2C/115VD	DPDT	115 V. DC	5.95
76 P 245	PJ/1C/24VD	SPDT	24 V. DC	4.98
76 P 246	PG/2C/24VD	DPDT	24 V. DC	4.98
76 P 247	PJ/1C/6VD	SPDT	6 V. DC	4.98
76 P 248	PG/2C/6VD	DPDT	6 V. DC	4.98

### AT HEAVY-DUTY ANTENNA RELAY

Type AT/2C/115VA. For continuous heavy-duty operation at 1 KW RF power. DPDT  $\frac{1}{2}$ " silver contacts, rated at 10 amps, 115 v, AC non-induc. or 1 KW RF. 115 v, AC coil. 1½x2½x3¾". 14 oz. 75 P 641. NET 7.74

### DM TIME DELAY RELAY

Type DM/2C/115VA. Provides adjustable 10-60 sec. delayed make of controlled circuit after actuation. For pre-heating tube filaments, etc. DPDT  $\frac{1}{4}$ " silver contacts, rated at 15 amps, 115 v, AC non-inductive. Coil for 115 v, AC operation, 12 oz. 75 P 642. NET 9.20

### TYPE CB COAXIAL RELAYS

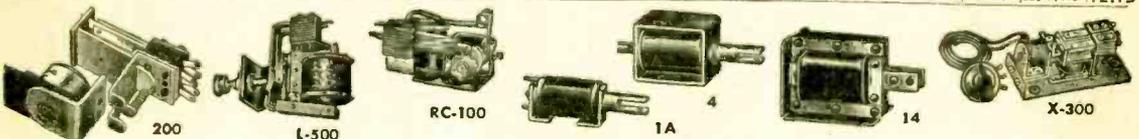
Designed for use with 52-ohm RG cables at RF outputs of up to 880 watts on lines with low SWR. Has SWR of less than 1.02:1.00 at 116 mc. SPDT internal contacts directly connected to Amphenol 83-1R connector. Inspection port for cleaning. 8 SPDT with external DPDT contacts for control of auxiliary circuits. 3½x1½x3¾". 11 oz.

Stock No.	Mfr's Type	Action	Coil Volts	NET EACH
76 P 250	CB/1C/6VD	SPDT	6 V. DC	9.78
76 P 251	CB/1C/24VD	SPDT	24 V. DC	9.78
75 P 645	CB/1C/115VA	SPDT	115 V. AC	9.78
76 P 252	CB/1C2C/6VD	SPDT*	6 V. DC	12.13
76 P 253	CB/1C2C/24VD	SPDT*	24 V. DC	12.13
76 P 254	CB/1C2C/115VA	SPDT*	115 V. AC	12.13

### TYPE AM MIDGET ANTENNA RELAYS

Compact, DPDT antenna relays. Silicone-glass insulated. For transmitters with up to 500 watts input. Spaced to maintain impedance of 300-ohm twin-line. DC coils require 2 watts, AC coils 4 VA. Single 6-32 stud mtg. 1½x1½x1½". 6 oz.

Stock No.	Mfr's Type	Coil Volts	NET EACH
76 P 248	AM/2C/6VA	6 V. AC	3.20
76 P 249	AM/2C/6VD	6 V. DC	3.20
75 P 644	AM/2C/115VA	115 V. AC	3.20



## GUARDIAN ALL-PURPOSE RELAYS

### UNIVERSAL "200" SERIES

For each custom relay required select 1 coil assembly and 1 contact assembly. Use contact switch parts to add poles. Silver contacts, rated for 60 cyc. AC non-inductive loads. Av. shpg. wt., 4 oz.

AC Coil Types			DC Coil Types		
No.	Volts	NET	No.	Volts	NET
75 P 709	6	1.59	75 P 713	6	1.59
75 P 710	12	1.59	75 P 714	12	1.59
75 P 711	24	1.59	75 P 715	24	1.59
75 P 712	115	2.00	75 P 716	32	1.59
			75 P 717	110	2.00

Type 200-5000D. Plate Circuit Coil.	2.09
75 P 779. NET	
Type 200-1. SPDT contact assembly. 8 amps.	1.32
75 P 707. NET	
Type 200-2. DPDT contact assembly. 8 amps.	1.79
75 P 708. NET	
Type 200-4. DPDT contact assem. 12.5 amps.	2.09
75 P 724. NET	
Type 200-3. Contact switch parts. For adding poles to 200-1 and 200-2. Makes combinations up to 4PDT. With instructions.	1.32
75 P 730. NET	
Type 200-M1. Midget contact assembly, SPDT, 8 amps.	1.29
75 P 718. NET	
Type 200-M2. Midget contact assembly, DPDT, 8 amps.	1.59
75 P 719. NET	
Type 200-M3. Midget contact switch parts. For adding poles to 200-M1 and 200-M2.	1.32
75 P 725. NET	
Type 200-M5. Midget contact assembly, 4PDT, 8 amps.	2.76
75 P 826. NET	

### LOCKING AND OVERLOAD RELAYS

Type RC-100-AR. Locking relay for transmitter break-in control, phone-to-CW switching, etc. Momentary coil energization locks contacts. 4PST. Each impulse reverses contacts.  $\frac{1}{4}$ " silver contacts—can handle up to 1500 watts at 115 v, 60 cyc., non-inductive AC; 1 KW inductive loads at 115 v, 60 cyc. Size, 1½x2½x3¾". For 115 v, 50-60 cyc. AC. Shpg. wt., 12 oz. 75 P 827. NET 5.12

Type RC-101-BR. Locking control relay. Same as above but three pole. One pole, double throw; two pole, single throw. Coil energization locks contacts. Each impulse reverses contacts. Shpg. wt., 12 oz. 75 P 828. NET 5.32

Type RC-100-GR. Locking control relay. Has same specifications as above, but double pole, double throw. Circuit to coil needs energization just long enough to close armature; contacts lock automatically. Each impulse reverses contacts. Wt., 12 oz. 75 P 887. NET 5.03

Type X-300-ER. Adjustable overload relay. Positive protection against surges or continuous overloads. Remote electrical reset and overload adjustment. Adjustable from 250-750 ma., DC. 3000-volt insulation. Size, 4¾x1½x2". Shpg. wt. 1¼". 75 P 640. NET 6.59

Type L-500. Overload relay. Breaks supply circuit when load current exceeds 500 ma. Protects transmitting tubes, industrial equipment, etc. Manual reset. Silver contacts rated 1500 watts non-inductive, 1 KW inductive, at 115 v, 60 cyc., 2000 v, insulation. Max. coil drop, 3 v. 1½x2½x3¾". Wt., 1 lb. 75 P 726. NET 7.64

### AC SOLENOIDS

For either continuous or intermittent operation. To fit most industrial and commercial needs. Intermittent-duty coils are for applications that do not require energization of coil for more than 5 consecutive minutes with sufficient time between cycles for cooling. Continuous-duty solenoids are constructed not to exceed a maximum temperature rise of 85° C above ambient under continuous operation at rated load. Sizes and shipping weights: 1A—1½x1½x2¼", 4 oz. 4—1½x1½x3¾", 14 oz. 12—1½x1½x2½", 5½ oz. 14—2½x1½x2½", 18½ oz. 16—1½x1½x1½", 7 oz. 18—2½x1½x2½", 1 lb. \*Intermittent. †Continuous. 110-120 v., 60 cyc. AC.

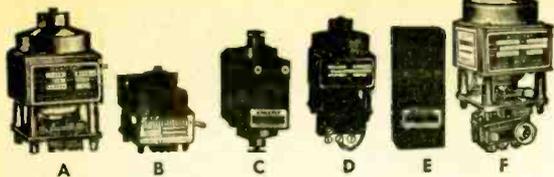
Stock No.	Mfr's Type	Ohms	Amps	Stroke	Lift In. oz.	NET EACH
75 P 890	1A*	300	.17 ½-½"	8-2	2.15	
75 P 891	1A†	375	.07 ½-½"	3-1	2.15	
75 P 892	4*	67	.64 ½-1½"	24-19	2.68	
75 P 893	4†	133	.14 ½-1½"	4-4	2.68	
75 P 898	12*	100	.27 ½-1"	32-3	3.32	
75 P 829	12†	150	.15 ½-1"	22-0	3.32	
75 P 894	14*	111	.4 ½-1½"	110-68	4.79	
75 P 895	14†	18	.52 ½-1½"	24-0	4.79	
75 P 885	16†	85	.21 ½-1"	60-25	3.38	
75 P 886	18†	20	.39 ½-1"	145-70	4.32	

### MODEL T-110 TIME DELAY RELAY

(Not illustrated.) Resistance wound thermosetting delay unit adjustable from 10 to 60 sec. Laminated SPST relay has 1500 volt breakdown resistance. Oversize silver contacts rated 13 amps at 115 volts 60 cycle non-ind. AC. Insulated mtg. legs. Size, 5¾x3x2¼". Shpg. wt., 1¼ lbs. 75 P 796. NET 9.20

# Relays and Regulators

## AGASTAT TIME DELAY RELAYS



Renowned, heavy-duty, precision time-delay relays. Provide adjustable delays—down to 1/10th second, or delays up to 10 minutes, varied by outside screw adjustment on enclosed timing head. Consist of sealed timing head, solenoid assembly, snap-action switch with hardened silver contacts and terminals. Contact ratings based on 115 v., 60 cycle resistive loads. \* DB suffix indicates double-break type with 10 amp contact rating; SB indicates single-break, with 5 amp rating.

"Use" column numbers mean that time delay starts when (1) coil is energized, (2) coil is de-energized, (3) lever is released manually, (4) coil is energized and de-energized, (5) delay starts on main contacts when coil is energized, but no delay on auxiliary contacts. NED-11 is double-head type for adjustable time delay in both directions. NEH-11 is remote push-button control type with hold-in switch. NED mounts from front or back; all others rear mounting. NET relays provide 2-step time delay or momentary impulse. First delay period from 0 to 15 sec. or more—2nd period provides delay range from .01 sec. to 10 min. or more. NET-11, NET-12, NET-21 and NET-22 consist of standard Agastat switch plus single pole, double throw auxiliary switch at bottom of terminal block. NEU-11 is UL Approved. Type G is dust-proof metal enclosure; fits all Agastat types listed. Coil voltage shown are 60 cyc. AC. Av. size, 2 1/2 x 2 1/2 x 4 1/4", except 2 1/2 x 2 1/2 x 6". Av. shpg. wt., 2 1/4 lbs.

No.	Type	Fig.	Use	Contacts*	Coil Volts	EACH	EA., 2 or More
75 P 735	NE-11	A	1	SPDT-DB	115	31.80	28.62
75 P 740	NE-12	A	1	DPDT-SB	115	32.86	29.57
75 P 734	NE-11	A	1	SPDT-DB	230	31.80	28.62
75 P 741	NE-12	A	1	DPDT-SB	230	32.86	29.57
75 P 729	NE-11	A	1	SPDT-DB	440	31.80	28.62
75 P 731	NE-12	A	1	DPDT-SB	440	32.86	29.57
75 P 736	NE-21	.....	2	SPDT-DB	115	31.80	28.62
75 P 742	NE-22	.....	2	DPDT-SB	115	32.86	29.57
75 P 732	NE-21	.....	2	SPDT-DB	230	31.80	28.62
75 P 743	NE-22	.....	2	DPDT-SB	230	32.86	29.57
75 P 733	NE-21	.....	2	SPDT-DB	440	31.80	28.62
75 P 744	NM-21	B	3	SPDT-DB	Manual	19.61	17.65
75 P 746	NM-22	B	3	DPDT-SB	Manual	20.61	18.55
75 P 747	NED-11	C	4	SPDT-SB	115	60.95	54.75
75 P 748	NED-12	C	4	DPDT-SB	115	61.95	55.75
75 P 737	NEH-11	D	3	SPDT-SB	115	37.10	33.39
75 P 728	NEU-11	.....	1	SPDT-DB	115	34.98	31.48
75 P 230	NET-11	F	1	SPDT-DB	115	42.10	37.89
75 P 841	NET-12	F	1	DPDT-SB	115	43.10	38.79
75 P 231	NET-21	F	2	SPDT-DB	115	42.10	37.89
75 P 842	NET-22	F	2	DPDT-SB	115	43.10	38.79
75 P 739	G	E	Enc.	.....	.....	5.00	4.50



## EBERT MERCURY-PLUNGER RELAYS

Fast-acting mercury-plunger relays. For industrial control applications. Only moving part is plunger in evacuated, hermetically sealed mercury chamber. AC coils rated at 115 volts, 60 cycles. Tungsten contacts rated at 35 amps at 115 volts AC, or 25 amps at 220 volts AC, or 2 1/2 H.P. Type EM-4 is rated at 3 H.P. and Type EM-7 is rated at 4 H.P.—both at 440 volts AC. EM-8 is a sensitive relay with instrument contacts rated at 8 ma., 100 volts; used for thermo-regulators, etc. NO indicates normally open; NC, normally closed. Flickerproof—have 35 millisecond "make" and 55 millisecond "break." All U.L. Approved except\*. Wt., 2 lbs. Express only.

No.	Type	Contacts	NET	No.	Type	Contacts	NET
75 P 950	EM-1	SPST-NO	11.50	75 P 954	EM-7	3PST-NO	23.00
75 P 951	EM-2	SPST-NC	12.75	75 P 956	EM-8*	SPST-NO	15.00
75 P 952	EM-4	DPST-NO	17.50	75 P 957	EM-8*	SPST-NC	15.00

Type EM-10, 3-Wire Latching Relay. Normally closed. Input line goes to two isolated output circuits when contact is closed. For lock-up relay service, traffic lights, etc. Same current rating as above. Coil, 115 v., 60 cycles. Shpg. wt., 2 lbs. Express only.

75 P 959, NET EACH..... 19.00

## EBERT HEAVY-DUTY MERCURY-PLUNGER RELAYS

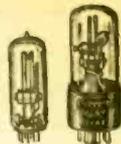
New, heavy duty mercury relays, similar to above. Feature moisture-proof coils, alloy-steel plunger, tempered glass envelope. Types HD-1 and HD-2 are rated at 60 amps for 115 volts AC and 35 amps for 230 volts AC. 60 cycle. DC rating is 12 amps at 120 volts and 7 amps at 240 volts. Type HD-4 2-pole relay: Each tube controls 60 amps at 115 volts AC and 35 amps at 230 volts AC. 60 cyc. DC rating for each tube is 12 amps at 120 volts and 7 amps at 220 volts. Type HD-7 3-pole relay: Each of the 3 tubes can control up to 60 amps at 115 volts AC and 35 amps at 230 volts AC. 60 cycle. DC rating for each tube is 12 amps at 120 volts and 7 amps at 220 volts. All UL Approved. NO: normally open; NC: normally closed. Shipped by express only.

No.	Type	Description	Size	Lbs.	NET
75 P 232	HD-1	Single pole, NO	2 1/2 x 5 1/4 x 3 3/4"	2	13.00
75 P 233	HD-2	Single pole, NC	2 1/2 x 5 1/4 x 3 3/4"	2	14.25
75 P 234	HD-3	2-pole, both NO	2 1/2 x 5 1/4 x 3 3/4"	2	20.50
75 P 235	HD-4	2-pole, both NC	2 1/2 x 6 3/4 x 1/2"	2	23.50
75 P 236	HD-4	2-pole, 1 NO/1 NC	2 1/2 x 6 3/4 x 1/2"	2	22.00
75 P 237	HD-7	3-pole, all NO	3 1/2 x 6 3/4 x 1/2"	3	37.50
75 P 238	HD-7	3-pole, all NC	3 1/2 x 6 3/4 x 1/2"	3	32.00
75 P 239	HD-7	3-pole, 2 NO/1 NC	3 1/2 x 6 3/4 x 1/2"	3	29.00
75 P 241	HD-7	3-pole, 1 NO/2 NC	3 1/2 x 6 3/4 x 1/2"	3	30.50

Ebert Mercury-Plunger Relays are available in a wide variety of coil voltages. Write for detailed literature and quotations.

## AMPERITE THERMOSTATIC DELAY RELAYS

Heater-actuated time-delay relays. Can be used on AC, DC or pulsating current. Hermetically sealed in glass envelope with octal base. Unaffected by altitude, moisture, or other atmospheric conditions. Contact action is SPST. Heater draws only 2 watts and may be operated continuously. Contact rating, 3 amps at 115 v. AC, 1 amp at 220 v. AC. Voltage Breakdown: Contacts, 1000 v.; Heater-to-contact, 1500 v., except\*, 250 v. and 500 v. Ambient temperatures from -55° to +70° C. Size: Max. dia., 1 1/2"; max. height, less prongs, 2 1/4". Av. shpg. wt., 4 oz. When ordering be sure to specify type number as well as stock number.



Delay Seconds	Type No. Normally Open		Type No. Normally Closed	
	8.3 V	115 V	8.3 V	115 V
2*	6N02	115N02	6C2	115C2
2**	6N05	115N05	6C5	115C5
10*	6N010	115N010	6C10	115C10
15	6N015	115N015	6C15	115C15
20	6N020	115N020	6C20	115C20
30	6N030	115N030	6C30	115C30
45	6N045	115N045	6C45	115C45
60	6N060	115N060	6C60	115C60
75	6N075	115N075	6C75	115C75
90	6N090	115N090	6C90	115C90
120	6N120	115N120	6C120	115C120

75 P 295, NET EACH..... 2.35

New Miniature Relays. All types above in miniature size, 9-pin, 1/2 x 2 1/2", 3 oz. When ordering, specify type no., adding letter "T" following type number.

75 P 296, NET EACH..... 2.35

## AMPERITE REGULATOR TUBES

For Replacement Use in Industrial Electronic Equipment

Amperite regulator tubes have achieved wide acceptance for current-voltage regulating applications in industrial electronic equipment. Built to rigid specifications. Listed below are special purpose ballast tubes used in original industrial equipment and identified by Amperite type numbers. All units are stocked for prompt delivery. Av. shpg. wt., 4 oz.



Stock No.	Type	EACH	Stock No.	Type	EACH
9 E 981	1H22		9 E 987	6H6	
9 E 984	3-4		9 E 991	9-4	
9 E 985	6-4	1.76	9 E 993	10-25	
9 E 986	6-11		9 E 995	12-4	

## DOW COAXIAL RELAYS

Type DKC-G. New, precision-built coaxial antenna relays. Re-designed magnet provides thrust pressure in excess of 200 grams—prevents intermittent failure in closing of receiver circuit. Shielded magnet. AC type completely free of hum or chatter. Contacts rated 1000 watts. Negligible change in SWR up to 300 mc. Built-in automatic receiver antenna shorting device. Grounds contact leading to receiver before tongue makes contact with transmitter—prevents RF from reaching receiver circuit. Breakdown voltage: over 1000 volts from reaching receiver circuit. For operating B+ of receiver. Connectors, relay tongues and brass parts silver plated. Power consumption: DC, 3 watts; AC, 5 watts. 4 1/2 x 3". Wt., 9 oz.



75 P 148, For 110 v. AC. NET..... 11.50

75 P 147, For 6 v. DC. NET..... 10.50

SPDT Switch. For above relays. Actuated by plunger on relay. 2 oz. 75 P 799, NET..... 1.00

Type DKM. Smaller coaxial 6v. DC relay without external SPDT switch and receiver shorting device. For mobile use. 3 1/4 x 2 1/2". Wt., 7 oz. 75 P 149, NET..... 9.50

## BARBER-COLMAN TYPE "O" SUPER-SENSITIVE RELAYS

Ultra-sensitive, DC-polarized relays. Feature 100 microwatt sensitivity without loss of stability or inherent ruggedness. Ideal for use wherever power supply is limited. Widely used in plate circuits. High-speed response; can be operated in excess of 100 cps. Fine silver contacts are SPDT, with floating neutral position. Polarity of signal determines which contact closes. Sensitivity is adjustable for precise setting. Two Alnico magnets are used for polarizing field. Balanced armature is mounted on torsional supports in air gap, assuring high resistance to shock. \*Double coil; adjusted for 250 µw pull-in. All others, single-coil, 100µw pull-in. Both units have octal plug-in bases. Wt., 10 oz. We can supply the complete Barber-Colman line of micropositioners. Write for literature.



Stock No.	Mfr's Type	Coil Ohms	Pull-in Volts	Pull-in Amps	# Watt Input	NET
75 P 250	AVLZ-2804S	8200	.970	.00011	106.0	18.00
75 P 251	AVLZ-3192S	3800	.950	.00025	237.0	19.00
75 P 252	AVLZ-2-2542S	215	.150	.00070	100.0	18.00
75 P 253	AVLZ-3188S	5	.033	.0067	221.0	19.00
75 P 254	AVLZ-3353S	240	.240	.001	240.0	19.00
75 P 255	AVLZ-4436S	13	.035	.0026	90.0	18.00

## SIGMA 4F RELAY

For the experimenter. Amateur or builder. Used in "Ultimate" electronic key described in recent magazine articles. Low friction, clock-type pivot. Concentric, non-loading, torsion-type spring. For use in vacuum-tube or other low-power DC circuits providing 20 milliwatts or more, and requiring a compact, high quality relay. Has wide range of precision adjustments. SPDT; silver contacts rated 2 amp @ 24 v. DC or 115 v. AC. 8000 ohm coil. Operating current 1.6 ma; releases at 0.75 ma. 1 1/2 x 1 1/2 x 1 1/2". Shpg. wt., 8 oz. 75 P 285, NET..... 7.00



# Mallory Power Supply Equipment

## BATTERY CHARGERS

### PORTABLE 6 AND 12 VOLT TYPES



Highly efficient and dependable storage battery chargers using selenium rectifiers. Also serve as power supplies for electroplating, model trains, telegraph systems, vending machines, relays and solenoids, etc. On all units except 6SAC4, charging rate decreases as battery becomes charged; protect battery plates. All except 6SAC4 have pilot light; dims as battery becomes charged and blinks if charger connections are shorted or reversed. DC output terminates in universal socket for use with R670 or R675 cords below. With heavy-duty AC cable and plug. \*For 12-volt batteries; others for 6-volt batteries. For 105-125 volts, 60 cycle AC.



Stock No.	Mfr's Type	DC Amps		Max DC Amps Continuous	Size H. W. D.	Wt. Lbs.	Fig.	List	NET EACH
		Max	Taper						
80 P 086	6SAC4	4	4	3	4 3/4 x 4 1/4 x 4 3/4	5 1/2	A	\$16.95	11.07
80 P 093	6SAC6	4	4	3	6 1/2 x 4 1/2 x 4 1/2	6	B	19.95	13.03
80 P 094	6SAC10	10	7	3	7 1/2 x 6 1/2 x 5 1/2	9	B	29.95	19.57
80 P 087	12SAC5*	5	3	4	7 1/2 x 6 1/2 x 5 1/2	9	B	29.95	19.57

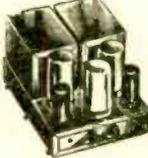
## BATTERY CHARGING ACCESSORIES

**Type R670 Charging Cord.** DC cord assembly for use with any of the battery chargers listed above. Equipped with heavy-duty polarized battery clips which attach directly to terminals of battery being charged. 6-ft. long. Shpg. wt., 6 oz. **1.27**

**Type R675 Charging Cord.** For convenient charging of battery through the cigarette lighter socket of any make car. May be inserted in either of two ways to properly polarize the charger for battery charging. Shpg. wt., 6 oz. **1.46**



VP-553



VP-557H  
VP-557



VP-552  
VP-G556

## TYPE VP VIBRAPACKS

### PORTABLE AND MOBILE HIGH-VOLTAGE POWER SUPPLIES

Flexible, heavy-duty vibrator power supplies. Designed to provide low-cost high-voltage DC from low-voltage storage batteries. Compact, lightweight, and rugged. Easy to install. Widely used for furnishing "B" power for portable radios, aircraft and marine transmitters and receivers, farm radios, police mobile two-way equipment, mobile PA systems and other electronic applications where regular commercial power is not available. All are dependable, trouble-free units developed through years of research. They are equipped with effective hash-filters to prevent vibrator noise from entering the power supply circuits. Both tube-rectifying and self-rectifying models are available. Circuits having B-negative grounded may use either type. In circuits where self-bias is obtained through a resistor or choke between B-negative and ground tube-rectifying models should be used. VP-540 has built-in low-frequency filter. VP-557 has input filter condenser only. All except VP-540 have rubber shock-mounting grommets; VP-540 is completely enclosed in steel cabinet with universal mounting brackets. \*Require external filter circuit. †Indicates maximum output current. ‡Tube rectifier; all others are self-rectifying. Units with multiple outputs have switch for voltage selection.

Stock No.	Mfr's Type	Input	Output Voltage†	Mat	Wt. Lbs.	List	NET EACH
80 P 100	VP-551*	6	125-150-175-200	100	4 1/2	\$31.00	18.23
80 P 101	VP-552*	6	225-250-275-300	100	6 1/2	34.50	20.29
80 P 102	VP-553*	6	125-150-175-200	100	4 1/2	38.00	22.34
80 P 103	VP-554H†‡	6	225-250-275-300	100	6 1/2	40.00	23.52
80 P 104	VP-555H†‡	6	300	200	13	79.95	47.01
80 P 106	VP-557*	6	400	150	13 1/2	79.95	47.01
80 P 105	VP-G556*	12	225-250-275-300	100	6 1/2	36.00	21.17
80 P 107	VP-F558*§	32	225-250-275-300	100	7	48.00	28.22



IB12CJ



IB8R

## DRY-DISC RECTIFIERS

Magnesium-copper sulphide rectifiers for low-voltage, medium- and high-current applications. All are single phase, full-wave bridge type rectifiers. Used in battery chargers, battery eliminators, electroplating, service bench power supplies, vending machine power supplies, welding, engine starting, circuit breaker reclosing, solenoid and relay operation, etc. Types IB8R and IB12R are for model railroad reversing. Contain no temperature-sensitive film or layers. All metal in construction, these units are assembled under high pressure and will withstand severe vibrations and shock. Unaffected by extremes of temperature (-90° to +265° F.). Constant output without circuit adjustments. \*Self-healing† rectifying film. ‡At full load. Type of mounting: \*Insulated bolt; †grounded foot; ‡flange stud. Types with J suffix indicates universal construction to permit foot, bolt or stud replacement mounting.

Stock No.	Type	Max. ACV Input†	DC Volts Output†	Cont. Duty Amps	Size H. W. D.	Replacement In Equipment	Wt. Lbs.	List	NET EACH
56 P 174	IB4R*	3.2	1.7	1.5	3/4 x 1/2 x 1"	GTC Battery Eliminator	1/4	\$2.40	1.57
56 P 175	IB8R*	6.4	3.4	1.5	3/4 x 1/2 x 1 1/2"	GTC Battery Eliminator	1/4	2.85	1.86
56 P 176	IB12R*	9.7	5.2	1.3	3/4 x 1/2 x 2"	Electric Fence Supplies	1/4	3.25	2.12
56 P 179	IB12L*§	9.7	5.0	4.5	2 1/4 x 2 1/4 x 2 1/2"	Mallory 6AC4-2 Charger	1/2	5.85	3.82
56 P 180	IB12CS*	9.7	5.0	5.3	2 1/4 x 2 1/4 x 3"	Mallory 6AC6-3 Charger	1/2	7.40	4.83
56 P 170	IB12CJ†	9.8	5.1	3.2	1 1/4 x 1 1/4 x 2 1/4"	Mallory 3C, 6AC4 Booster	1/4	6.55	4.27
56 P 177	IS16087*	12.8	6.6	6.0	3x2 1/2 x 3 1/2"	Mallory 5355B, 6AC6, IS16087M	1 1/2	10.20	6.65
56 P 181	IS1607*	12.8	6.5	8.3	3x2 1/2 x 5 1/2"	6-AC10-2, 107, IS1607M	2	11.25	7.34
56 P 182	IS1609*	12.7	6.4	11.6	4 1/4 x 3 1/2 x 5 1/2"	Mallory 6AC10	3	12.80	8.35
56 P 171	F1603†	13.0	6.8	3.9	2 1/4 x 1 1/2 x 2 1/2"	Mallory 5355	1	12.75	8.32
56 P 184	F2007†	16.2	8.4	4.8	3 1/4 x 2 1/4 x 4 1/4"	ATR Battery Eliminators	1	12.75	8.32
56 P 186	IS247J†	19.4	10.1	4	3 1/4 x 2 1/4 x 4 1/4"	Mallory 12-AC-5-2	2 1/2	12.60	8.23

## POWER SUPPLIES



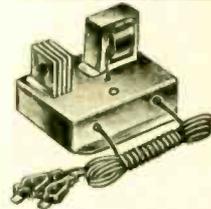
### BENCH POWER SUPPLY

**Model 12RS6D.** Versatile dual-range power supply for the radio service bench; permits servicing of 6 and 12 volt automobile and truck radios. Range "A" supplies 0-16 volts at 6 amperes continuously, or 14 amperes intermittently. Range "B" provides 0-8 volts at 10 amperes continuously or 20 amperes intermittently. 2 1/2" DC voltmeter and DC ammeter read 0-10 v. and 0-20 amps. Automatic overload protection is provided. Size, 6 1/2 x 10 1/2 x 5 1/2". For 105-125 volts, 60 cycles AC. Shpg. wt., 12 1/2 lbs. **39.15**



### HEAVY-DUTY POWER SUPPLY

**Model 6RS25-1.** Heavy-duty bench unit. For testing medium-power 2-way mobile phone equipment and similar units. Control permits selection of 0-8 volts DC at up to 25 amperes. Intermittently, it will supply 40 amperes at 6 volts. Has 0-10 DC voltmeter and 0-40 DC ammeter. Less than .5 volt ripple. Automatic overload protector and self-resetting circuit breaker. Voltage stabilizer for no-load to full-load conditions provides protection for electronic equipment. Steel case, 11x10 1/2 x 8 1/2". For 105-125 volts, 60 cycles, Shpg. wt., 33 1/2 lbs. **87.71**



### KNIGHT BATTERY CHARGER KIT

**Model 780.** An exceptional battery charger value. This high-quality, easy-to-build kit is carefully designed to safely and dependably charge standard 6-volt automobile batteries. May be used with accessory kit (below) to permit charging of 2-volt batteries. Incorporates bridge-type circuit using efficient magnesium-copper sulphide dry-disc rectifiers. Charging rate tapers from 4 to 2 amperes. Protects batteries by automatically compensating for state of battery charge. Pilot light indicates correct connection of cables to battery; lights if cables are connected correctly. Primary of transformer is fused. Kit supplied with all parts; includes rectifiers, transformer, punched chassis, battery clips and leads. Instructions include pictorial diagram, wire and solder. For 110-120 v., 60 cycle AC. 3 1/2 x 6 1/2 x 5". Shpg. wt. 6 lbs. **8.45**

**83 S 780, NET**

**Two-Volt Adapter Kit.** Permits using above for charging 2-volt wet-type batteries, such as used in portable radios and electronic photo-flash equipment. Shpg. wt., 6 oz. **1.19**

**83 S 781, NET**

**DC Adapter Kit.** Permits using above charger as 6.3-volt DC supply for photo preamps, etc. Rated, 4 amps. Shpg. wt., 6 oz. **1.49**

**83 S 782, NET**

# Converters and Chargers



610-ELID



610C-ELID

## ATR 6-12 V. DC POWER SUPPLY

**Type 610-ELID.** DC supply for low voltage equipment. Specially designed for auto radio testing. Operates equipment at maximum efficiency at all times. Features: 4-point voltage regulator; 8-position voltage selector switch; voltmeter; heavy-gauge steel gray Hammerloid case with leather handle; full-wave dry disc selenium rectifier for noiseless, interference-free operation; on-off switch and fuse. May be connected in series for higher voltage or parallel for higher current. Rated 6 volts @ 10 amps continuous. For 105-125 volts, 50-60 cycles AC. Size, 6½x9½x8½". Wt. 22 lbs. 80 PX 233. NET..... 35.64

**Type 610C-ELID.** Features either 6 volts @ 10 amperes continuous, or 12 volts @ 6 amperes continuous. Has voltmeter and ammeter. Toggle switch selects 6 or 12 volts output. Switch has locking catch to prevent accidental change of output voltage and possible damage to equipment. Heavy-gauge gray Hammerloid case with leather handle. For operation from 105-125 v., 50-60 cycles AC. 6½x9½x8½". Shpg. wt., 22 lbs. 80 PX 243. NET..... 39.95

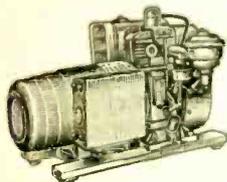
**Type 620C-ELIR.** Heavy-duty model. Used dual rectifiers—full-wave assures noiseless operation. Rated output: simple output switch with locking device selects 6 volts at 20 amperes or 12 volts at 10 amperes. Fully metered—has both voltmeter and ammeter. Steel gray Hammerloid case with leather handle. On-off switch and fuse. 8-position voltage selector control. Size, 6½x12½x8½". For 105-125 volts, 50-60 cycles AC. Shpg. wt., 33 lbs. 80 PX 234. NET..... 56.34

## G.E. EMCACT 6-VOLT CHARGERS



**Model 6RS937A1.** Charges normally run down battery in 24 hours or less without removal from car. Selenium rectifier type. Charging rate automatically adjusted. 7 amp charge tapers to 4 amps. Pilot light indicates battery being charged. With AC cord and plug, DC leads. For 105-125 v., 50-60 cycles AC. Size, 4½x6x6½x5¾". Shpg. wt., 7½ lbs. 80 P 028. List, \$21.50. NET..... 15.80

**Model 6RS937A2.** "Overnite" charger especially designed to keep farm batteries charged. Will charge average discharged battery in 12 hours or less. Same as above, but tapers from 12 to 7 amps. Shpg. wt., 10½ lbs. 80 P 029. List, \$30.00. NET..... 22.05



## KATOLIGHT POWER PLANTS

**Model 23HAB4.** Gas-electric power plant designed to provide a continuous source of AC power. Delivers 115 volts, 60 cycles, AC at 500 watts. Runs 6½ hours on 1 gallon of gasoline. Furnishes 12 volts DC for battery charging. Has push button start and stop, ammeter, charge control resistor and cable. Requires 12 volt DC for self-starting. Size, 26x13x19". Complete with instructions. Less battery. Shpg. wt., 185 lbs. 241.60 98 PX 521. NET.....

**Model 17HAB4.** 700 watt, 12 volt starting. Size, 24x17x17". Shpg. wt., 220 lbs. 269.60 98 PX 524. NET.....



6-RSE

## ATR DC TO AC INVERTERS

For use in DC districts, autos, boats, etc. Units are designed especially for standard tape recorders, wire recorders, dictating machines, radios, record players, PA systems, electric razors, etc. Units are not recommended for large motor driven appliances such as refrigerators, washing machines, etc. All units are fused for added protection. On-off switch. Filtered to suppress "hash" and "ripple". Feature 4-point voltage regulator. Housed in metal case with leather carrying strap. Sizes: Models RSE, 8½x9x5½"; models RHF, 6½x11½x8½"; models HSH, 6½x12½x8½".



6T-HSH

Stock No.	Mfr's Type	Input DC Volts	Output 60 Cycle	Watts		Wt. Lbs.	List	NET EACH
				Cont.	Inter.			
80 P 220	6-RSE	6	110 v.	65	80	19	\$ 59.95	35.97
80 P 221	12-RSE	12	110 v.	100	125	19	59.95	35.97
80 PX 235	6-HSH	6	110 v.	125	150	36	109.50	65.70
80 PX 233	32B-RHF	32	110 v.	180	200	30	89.50	53.70
80 P 222	110-RSE	110	110 v.	150	250	19	59.95	35.97
80 P 239	220-RSE	220	110 v.	150	250	19	69.50	41.70

## ATR TELEVISION INVERTERS

Specially designed for operation of TV sets in DC districts, autos, boats, etc. Well filtered for interference free reception. 4-point voltage regulator. Fused for added protection, on-off switch. AC receptacle, leather carrying handle. Metal case. 6½x12½x8½".

Stock No.	Mfr's Type	Input DC Volts	Output 60 Cycles	Watts		Wt. Lbs.	List	NET EACH
				Cont.	Inter.			
80 PX 242	6T-HSH1	6	110 v.	125	150	36	\$119.50	71.70
80 PX 236	12T-HSH	12	110 v.	100	250	36	119.50	71.70
80 PX 237	32T-HSH	32	110 v.	225	325	36	135.00	81.00
80 PX 238	110T-HSH	110	110 v.	400	600	36	135.00	81.00

## ATR INDUSTRIAL INVERTERS WITH BUILT-IN-FILTER

**Type 6 LIG.** Permits operation of phono motors and small AC devices from DC source. Inverts 6 volts DC to 110 volts, 60 cycles AC. Rated, 40 watts continuous. Size, 5½x4x6¼". Shpg. wt., 8 lbs. 21.45 80 P 240. List, \$35.75. NET.....



**Type 110 LIG.** As above but 110 volts, 60 cycles AC from 110 volts DC. Rated, 65 watts continuous; 80 watts intermittent. 23.70 80 P 241. List, \$39.50. NET.....

## CORNELL-DUBILIER DC TO AC CONVERTERS

Vibrator-type converters for operating AC appliances from DC sources. All Choice of 8 different sizes to meet wide variety of applications. All units have output of 110 volts, 60 cycle AC. Type 6R10 operates from 6-volt storage battery; all others operate from 110 volts DC. Output has complete RF filtering for clear TV, short-wave, AM and FM broadcast reception. Instant starting under load, no warm-up or waiting period. Absolute frequency stability regardless of load. Large-size impregnated transformers give cool, stable and reliable operation. All units undergo rigid individual tests, including radio and TV reception where applicable. Intermittent overloads are rated for 80-100% power factor. Type 110P25 is plug-in model with slide switch. Type 110PA5 requires wiring. \*Approved for TV sets. †Adjustable frequency vibrator can be set at precisely 60 cycles for picture synchronization. ‡For wire and tape recorders of 80 watts or less.

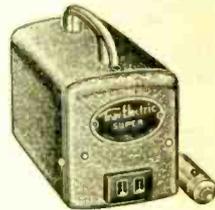


Stock No.	Mfr's Type	Typical Applications	Watts		Size	Wt. Lbs.	List	NET EACH
			Cont.	Inter.				
80P 260	110P85	Small AC radios, phonos	50	75	3¼x 6¼x2¼"	2	\$ 28.88	16.98
80P 259	110PA5	Small AC radios, phonos	50	75	3¼x 6¼x2¼"	2	27.25	16.02
80P 257	110R10	AM-FM receivers	100	150	6¼x 7¼x5¼"	11	45.95	27.02
80PX 255	110RT15*†	Radio and TV sets	150	250	6¼x12¼x7½"	17	74.75	43.95
80PX 261	110WR15*†	Wire and tape recorders	150	200	6¼x12¼x7½"	17	90.75	59.32
80PX 256	110RT35*†	TV, PA systems, small motors	350	500	7¼x14 x8¾"	40½	143.50	84.38
80PX 252	6R10‡	Mobile radio, PA systems	100	125	7 x12¼x7½"	19	68.45	40.25
80PX 262	110T22	Radio, TV, and PA systems	225	275	6½x12½x8½"	23	78.85	46.36

## TERADO 6 AND 12 V. DC TO 110 V. AC CONVERTERS

### TRAV-ELECTRIC SUPER CONVERTER

Convenient. DC-to-AC miniature converters for operating 110 volt electrical appliances from automobile batteries. Equipped with plug which fits cigarette lighter socket. Converts 6 to 12 volts DC to 110 volts, 60 cycle AC. Capacity 60 watts continuous, 75 watts intermittent. Has completely filtered output to avoid radio interference. Operates tape recorders, soldering irons, fluorescent and incandescent lights, electric razors, and many other appliances. A great convenience for travelers. Size, 6¼" long, 3¼" wide, and 4" high. Fused. Shpg. wt., 8 lbs. 25.30 80 P 270. Type 6-71160. For 6 volt batteries. NET..... 28.63 80 P 271. Type 12-71160. For 12 volt batteries. NET.....



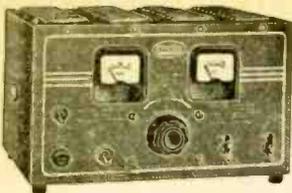
### TRAV-ELECTRIC SENIOR CONVERTER

Ultra-compact. 60 cycle converter that changes 6 volts DC to 110 volt AC. Capacity: 35 watts continuous, 40-45 watts intermittent. Simply plugs into automobile cigarette lighter. Permits use in vehicles of broadcast and short-wave radios, small dictating machines, recorders, or any other appliance within its capacity. Operates fluorescent lamps. Fully filtered. Size, 2½x2½x4". Shpg. wt., ¾ lbs. 10.63 80 P 272. Type 6-1160. For 6 volt batteries. NET..... 11.97 80 P 273. Type 12-1160. For 12 volt batteries. NET.....



**TRAV-ELECTRIC JUNIOR CONVERTER.** As above, except 115 cycle output, and rated at 30 watts continuous; 40 watts intermittent. (For radios and lights only.) Wt., 3 lbs. 8.64 80 P 274. Type 6-110. For 6 volt batteries. NET..... 9.97 80 P 275. Type 12-110. For 12 volt batteries. NET.....

# Converters and Power Supplies



D 612



NF

## ELECTRO-PRODUCTS POWER SUPPLIES

### MODEL D612 DC POWER SUPPLY

New, moderately priced power supply. Designed for operation of 6 to 12 volt units such as auto radios, 2-way marine and aircraft radio, etc. May be used for battery charging, electroplating and model railroad systems. Two ranges, both continuously variable: 0-8 volts and 0-16 volts at 10 amperes, continuous duty. Up to 20 amperes intermittent duty. Less than 5% ripple. Superior choke-input filter circuit. Twin-metered: 0-10 amperes, DC, and 0-20 volts, DC. Four heavy-duty bridge-type selenium rectifiers.

Readily accessible fuseholder on front panel. On-off switch and selection switch (0-8 or 0-16 volts). Terminal connector clips furnished. Patented Electro Products Labs conduction cooling provides large margin of safety; assures longer rectifier life and greater current carrying capacity. Built to withstand high overloads.

Rugged 18 gauge steel cabinet with baked-on blue Hammerloid finish. Rubber feet. Size, 12x7x8 1/2". For operation from 105-125 volts AC. Shpg. wt., 22 lbs.  
80 PX 211, NET..... 39.15

### MODEL NF HEAVY-DUTY

High-quality filtered DC power unit for continuously variable-duty operation. Output is continuously variable from 0-28 volts for loads to 15 amperes and 0-36 volts for loads to 6 amperes, continuous duty. Handles intermittent loads up to 25 amperes. With 2% D'Arsonval movement meters for highly accurate readings. Extremely low AC ripple—1% @ 15 amperes. Choke-input filter circuit uses 2 chokes and 3-2000 mfd. 50 volt capacitors. Bridge-type selenium rectifiers. Standard 8 ampere fuse. Fuseholder on front panel. Toggle type power switch is rated at 15 amperes. Power drain: 730 watts at 28 volts, 15 ampere output. Heavy-duty, wear-resistant blue Hammerloid steel cabinet. Size, 14 1/2 x 14 1/2 x 9 3/4". For 105-125 v., 60 cycle AC. Shpg. wt., 86 lbs.  
80 PX 208, NET..... 191.10

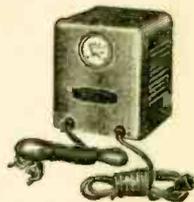
Model N. Same unit as Model NF above, but has ripple content of 8% @ 15 amperes; ripple content of 5% @ 10 amperes. Filter circuit consists of one choke and one capacitor. Size, 14 1/2 x 14 1/2 x 9 3/4". Shpg. wt., 75 lbs.  
80 PX 209, NET..... 171.50



## SCHAUER CHARGERS

### TYPE AX-2—4 AMPERE

Small, highly efficient over-night battery charger. 4 ampere charging rate tapers to 2 amperes as the battery becomes fully charged. Built with quality electrical components throughout to assure long-life and dependable performance. Periodical charge at a few cents cost for current will keep battery operating at maximum. Equipped with "Charger-Guard" which provides instantaneous and full automatic protection against short circuits and overloads. Has full-wave charging output which makes possible higher efficiency of operation. Rectifiers are selenium for long life and dependable service. All-steel case 4 1/4" long, 4 1/4" wide, 6 1/2" high. With cables. For 110-115 v., 60 cycle AC. Shpg. wt., 10 lbs.  
80 P 161, List, \$13.95, NET..... 10.46



### TYPE BX-2—6 AMPERE

Highly dependable 6 ampere charger. Will fully charge the average run-down battery in 7 to 9 hours. For autos equipped with P.A. systems, two-way radio communications, etc., this unit is ideal for restoring battery to full charge over-night. Equipped with "Charger-Guard" for positive protection against damage through short circuits and overloads. No manual resetting of a circuit breaker or replacing of a blown-out fuse. Because of this feature, charger may be left connected to battery when starting the car. Unit has accurate numeral dial meter that shows exact charging rate into battery. With cords and battery clips. Steel case. Size, 6 1/4" long, 6" wide and 7 1/2" high. For 110-115 v., 60 cycle AC. Shpg. wt., 8 lbs.  
80 P 162, List, \$18.95, NET..... 12.63

### TYPE CX-2—10 AMPERE

As above, but heavy-duty unit for higher capacity batteries such as are used in farm equipment, taxi, trucks and tractors. 10 ampere charge tapers to finishing charge at a safe rate automatically as battery becomes fully charged. Features "Charger-Guard" for dependable protection against overloads. Numeral type meter accurately shows charging rate. With cords and clips. 6 1/4" long, 6" wide and 7 1/2" high. For 110-115 v., 60 cycle AC. Wt. 10 lbs.  
80 P 163, List, \$24.95, NET..... 16.63

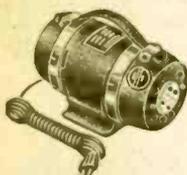
Type CX2-12. Same as Type CX-2 above but for either two 6 volt batteries or one 12 volt battery.  
80 P 164, List, \$31.95, NET..... 21.30

### TYPE AB410 CHARGER PLUG

Handy charger accessory eliminates clipping charger leads to battery. Plugs into standard cigarette lighter socket. Wt., 7 oz.  
80 P 165, List, \$1.50, NET..... 1.00

## EDI SAV-A-BATTERY

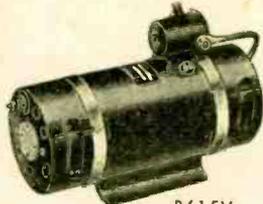
ED1 battery saver and rejuvenator for portable radios. Permits operating portable radios using single 1 1/2" A and single 67 1/2" v. B batteries from AC outlet—converts portables into house radios. Fits into battery compartment. Also used as rejuvenator to extend life of B battery. Size, 3 3/4" x 2 1/4" x 1 1/4". Easily installed. For 105-125 v., 60 cycles AC. Shpg. wt., 1 1/4 lbs.  
80 P 190, NET..... 5.85



A1060CW



450AS



B615V

## CARTER CONVERTERS & POWER SUPPLIES

### SUPER CONVERTERS FOR WIRE & TAPE RECORDING

Type A1060CW, 6 v. DC to 115 v. AC, 60 watts. For: Air King 750, Ampro 730-731, Crescent H22A1, Knight wire, Webcor 80-180-228-18, Wilcox-Gay 8U12, Wireway. Convenient carrying handle. Has bracket for permanent installation. Convenient plug-in AC receptacle, DC connecting cord. Power drain 29 amperes. Size, 8 1/4" length, 4 1/2" width, 5" height. Shpg. wt., 13 lbs.  
80 P 079, List, \$72.00, NET..... 52.92

Type D1080CW, 115 v. DC to 115 v. AC, 80 watts. For Knight Tape Recorders; Bell Record-O-Phone RT-50, RT-65B; Crestwood CP201; Dukane; Eicor 1000, 15, 115; Gray Autograph; Gen. Ind. Found'n Unit\*; Peirce 55B; Masco D37, LD37, DC37; Pentron T-3, 9T3, 9T3C; RCA; Revere T-100, T-500, TR200; Sales-O-Matic LR-1; Tapemaster Fndtn. Unit Web-Cor 210-1; Wilcox-Gay IC10, 2C10, 3P10, 8 1/4 x 4 1/2 x 7 1/2", 15 lbs.  
80 P 066, List, \$71.50, NET..... 52.55

\*Including average recorder amplifier.  
†Including preamplifier only.

Type B1080CW, 12 v. DC to 115 v. AC, 80 watts. For same units as above.  
80 P 058, List, \$72.50, NET..... 53.28

Type A1080CW, 6 v. DC to 115 v. AC, 80 watts. For same units as above.  
80 P 068, List, \$72.50, NET..... 53.28

Type BR1021CP, Frequency-controlled converter, 12 v. DC to 115 v. AC, 210 watts. For Ampex 401A and Magnecord Binaural. 11 1/2 x 6 1/2 x 10 1/2". Wt., 50 lbs.  
80 PX 049, List, \$255.00, NET..... 187.43

### CHANGE-A-VOLT DYNAMOTOR

Type B615V. For operation of 6 volt DC equipment from a 12 volt DC source, 30 watts. Delivers 15 amperes continuously for receiver and 45 amperes for transmit. Regulation from 15 amperes to 45 amperes is 1.3 volts. Unit is supplied complete with starting switch and relay, 12 volt fuse block and wiring to directly convert a 12 volt battery to a 6 volt radio supply. Size, 10 1/4" long, 4 1/2" wide, 5" high. Shpg. wt., 25 lbs.  
80 P 043, List, \$88.95, NET..... 65.39

### GENEMOTORS

Type 450AS. For mobile communications. New 3 1/2" frame units for intermittent duty, 150 watts. Continuous duty, 90 watts. Ratings: Input, 6 volts DC, 29 amperes; output, 400 volts AC @ 250 ma. Size, 7 1/4 x 4 1/2 x 3 1/2". Shpg. wt., 10 lbs.  
80 P 044, List, \$67.00, NET..... 49.24

Type 520AS. Same size and weight as above unit. Rating: Input, 6 v. DC @ 28 amps; output, 500 v. AC @ 200 ma.  
99 S 032, List, \$67.00, NET..... 49.24

# RCA Batteries

## RCA PORTABLE RADIO BATTERIES

All RCA Radio Batteries are designed to give maximum radio performance. Dependable, long-play RCA Batteries are radio-engineered for extra listening hours. All batteries are rigidly inspected to maintain uniform high quality. There is an RCA Battery type to fit all leading

portable radio models in use today. New-design batteries offer the convenience of balanced battery life in small portables. Due to rapid turnover, ALLIED'S stock of RCA batteries is always fresh, assuring you of full-rated, efficient service. \*Sealed in steel.

### PORTABLE "A" BATTERIES

Stock No.	RCA Type	Std. Pkg.	List Price	NET EACH		Volts	Size	Wt. Each Lbs.	NEDA	Interchangeable with	
				Single	Std. Pkg.					Burgess	Eveready
80 J 903	VS036*	48	\$0.15	.11	.10	1	1 3/8 x 2 3/8"	1/2	13	2R	950
80 J 940	VS035*	25	.125	.09	.08	1 1/2	1 3/8 x 2 3/8"	1/2	14	1	935
80 J 993	VS070	20	.30	.22	.20	1 1/2	1 3/8 x 4 1/8"	1/2	23	8R	1060
80 J 901	VS004	6	1.15	.89	.81	1 1/2	2 3/8 x 2 3/8 x 4 1/8"	1	4	4F	742
80 J 904	VS073	24	.075	.06	.05	1 1/2	3/8 x 1 1/8"	1/2	910	21R	910
80 J 912	VS236*	12	.30	.22	.21	1 1/2	1 3/8 x 4 1/8"	1/2	20	21R	964
80 J 966	VS069	12	.65	.49	.45	1 1/2	2 3/8 x 1 3/8 x 2 3/8"	1	18	2D	720
80 J 967	VS072	6	.75	.58	.53	4 1/2	3 1/8 x 1 1/8 x 2 1/8"	1	19	D3	726
80 J 963	VS067	6	.90	.69	.63	4 1/2	4 x 1 3/8 x 4 1/8"	1	3	F3	736
80 J 902	VS009	6	1.15	.89	.81	6	2 3/8 x 2 3/8 x 4 1/8"	1 1/2	6	F4P1	744
80 J 965	VS068	12	.75	.58	.53	6	1 3/8 x 1 1/8 x 2 3/8"	1 1/2	2	Z4	724
80 J 962	VS065	12	1.00	.77	.70	7 1/2	2 3/8 x 1 1/8 x 3 1/8"	1 1/2	9	C5	717



VS016



VS067

### PORTABLE "B" BATTERIES

80 J 969	VS086	6	2.65	2.04	1.85	45	1 1/8 x 9/16 x 3 3/8"	1/4	213	U30	415
80 J 906	VS013	6	2.50	1.92	1.75	45	3 3/8 x 1 1/8 x 5 1/8"	1 1/4	202	M30	482
80 J 907	VS014	6	2.50	1.92	1.75	45	3 3/8 x 2 1/8 x 4 3/8"	1 1/4	206	A30	482
80 J 908	VS015	10	3.50	2.69	2.45	45	3 x 2 1/8 x 4"	1 1/2	205	Z30	738
80 J 910	VS055	6	1.95	1.45	1.32	45	2 1/8 x 1 x 3 1/8"	1/4	201	XX30	455
80 J 999	VS218	12	2.35	1.82	1.65	67 1/2	1 1/8 x 1 x 5 3/8"	1	211	P45	477
80 J 909	VS016	6	2.75	2.12	1.93	67 1/2	2 3/8 x 1 1/8 x 3 1/8"	1	200	XX45	467
80 J 932	VS216	6	3.25	2.53	2.30	67 1/2	1 1/8 x 1 x 5 3/8"	1	211	P45	477
80 J 968	VS217	1	3.25	2.28	2.11	75	1 1/8 x 1 3/8 x 6 1/8"	1	212	XX50	437
80 J 911	VS090	6	3.60	2.77	2.52	90	3 1/8 x 1 1/8 x 3 3/8"	1	204	N60	490

### PORTABLE "AB" BATTERIES

80 J 918	VS043	1	6.13	4.26	.....	1 1/2-90	5 1/2 x 2 1/8 x 7 1/8"	5	409	5DA60	.....
80 J 927	VS054	1	6.25	4.36	.....	1 1/2-90	10 x 2 3/8 x 4 1/8"	5	410	Ray-O-Vac A B64	.....
80 J 921	VS050	1	5.50	3.85	.....	6-7 1/2-75	8 3/8 x 2 1/8 x 3 1/8"	4	403	TSZ50	755
80 J 919	VS046	1	5.95	4.09	.....	6-75	12 5/8 x 2 1/8 x 4 1/8"	6	422	G4B50	755
80 J 916	VS019	1	6.25	4.38	.....	7 1/2-90	9 3/8 x 2 1/8 x 4 3/8"	6	401	Zenith Z675	753
80 J 933	VS057W	1	5.95	4.17	.....	7 1/2-90	8 1/8 x 2 3/8 x 3 3/8"	4	405	T6Z60	756
80 JX 934	VS119	1	8.29	6.20	.....	7 1/2-90	8 1/8 x 4 1/2 x 1 3/8"	21 1/2	415	S6D60	Philco P-326
80 J 917	VS038	1	4.50	3.15	.....	7 1/2-63	8 3/8 x 2 3/8 x 4 1/8"	5	408	G5A42	752
80 J 920	VS047	1	6.65	4.65	.....	9-90	13 3/8 x 2 1/8 x 4 3/8"	8	400	G6B60	Zenith Z985
80 J 928	VS058	1	6.25	4.38	.....	9-90	9 1/2 x 2 3/8 x 4 1/8"	5	406	F6A60P	Zenith Z909

### INDUSTRIAL BATTERIES

80 J 930	VS022	1	7.95	5.96	.....	1 1/2	15 1/4 x 4 1/8 x 6 1/8"	20	413	17GD60	759
80 J 947	VS034	120	10	.07	.065	1 1/2	3/8 x 2"	1/4	15	Z	915
80 J 986	VS101	5	.96	.72	.65	1 1/2	2 3/8 x 1 3/8 x 3 3/8"	1	700	2FBP	735
80 J 957	VS106	10	.90	.67	.61	1 1/2	2 1/8 x 2 1/8 x 4 3/8"	1 1/2	900	4FH	735
80 J 941	VS006S	12	.90	.66	.60	1 1/2	2 5/8 x 6 3/8"	2 1/2	905	6	761T
80 J 959	VS130	10	.96	.73	.66	1 1/2-3-4 1/2	3 1/8 x 1 3/8 x 3"	1	712	2370ST	761T
80 J 938	VS029	10	1.08	.86	.77	1 1/2-7 1/2	3 1/8 x 2 1/8 x 3 3/8"	1 1/2	713	5540	773
80 J 997	VS138	5	1.45	1.10	1.00	3	3 1/8 x 2 1/8 x 5 3/8"	3	901	713	773
80 J 985	VS100	5	.96	.72	.65	3	2 5/8 x 1 3/8 x 3 3/8"	1	701	FZBP	778
80 J 965	VS131	5	2.30	1.74	1.58	3-22 1/2	4 1/8 x 2 1/8 x 3 3/8"	2	708	5156SC	781
80 J 937	VS028	10	.69	.49	.45	4 1/2	2 3/8 x 1 3/8 x 2 1/8"	1 1/2	714	5360	781
80 J 987	VS133	10	.60	.43	.39	4 1/2	2 3/8 x 1 3/8 x 2 1/8"	1 1/2	706	532	703
80 J 992	VS040C	10	.90	.67	.61	6	2 1/8 x 2 1/8 x 4 3/8"	1 1/4	908	F4BP	781
80 J 950	VS040S	10	.90	.67	.61	6	2 1/8 x 2 1/8 x 4 3/8"	1 1/4	915	F4BP	781
80 J 998	VS139	5	4.52	3.48	3.16	7 1/2	7 1/8 x 4 x 6 3/8"	1	903	4156	763
80 J 951	VS102	10	1.97	1.53	1.39	22 1/2	3 1/8 x 2 1/8 x 2 3/8"	1 1/4	710	5308	762S
80 J 952	VS112	5	3.35	2.54	2.31	22 1/2-45	4 1/8 x 2 3/8 x 5 3/8"	3 1/4	709	3108	762S
80 J 988	VS114	10	3.07	2.35	2.14	22 1/2-45	3 x 1 1/8 x 4 1/8"	2	711	Z30NX	762S
80 J 913	VS084	20	1.15	.88	.80	22 1/2	1 3/8 x 2"	1/2	215	U15	412
80 J 914	VS085	20	1.40	1.06	.96	30	1 3/8 x 2 3/8"	1/2	210	U20	413
80 J 994	VS126	5	3.53	2.71	2.45	45	8 1/8 x 3 1/8 x 7 3/8"	8 1/4	723	.....	.....
80 J 995	VS127	5	4.86	3.99	3.63	45	8 x 3 x 7 3/8"	11	716	.....	.....
80 J 996	VS157	5	5.22	4.29	3.90	45	8 1/8 x 4 3/8 x 7 1/8"	12	715	2130SC	.....
80 J 942	VS039	4	3.75	2.76	2.51	6	10 3/8 x 2 7/8 x 7 3/8"	11	907	5461	1461
80 J 989	VS093	1	11.00	7.70	.....	300	2 5/8 x 2 3/8 x 3 1/8"	1 1/4	722	U200	.....



VS050



VS019



VS040S



VS112

### MALLORY MERCURY "A" BATTERIES



Features extremely long shelf life and uniform discharge voltage. Unique design permits indefinite storage. Voltage approximately 1.345 v. through entire life. Unaffected by temperatures as high as 250° F. or pressure ranging from a high vacuum to thousands of pounds per square inch. Resistant to humidity. Ideal for use as a secondary voltage standard.  
\*Diameter x height. Shpg. wt., 2 oz.

Stock No.	Mfr. Type	Size	Std. Pkg.	NET EACH	
				Single	Std. Pkg.
80 J 878	RM1R	5/8 x 3/8"	10	.33	.30
80 J 879	RM3R	1 x 5/8"	4	.46	.42
80 J 880	RM4R	1 1/8 x 3/8"	4	.59	.54
80 J 881	RM12R	5/8 x 1 1/8"	2	.72	.65
80 J 882	RM502R	1 1/2 x 1 3/8"	2	.66	.60
80 J 883	RM625RT	5/8 x 1/2"	4	.31	.28
80 J 884	RM401R	7/8 x 1 1/8"	5	.35	.32

### RCA TRANSISTOR BATTERIES

Two amazing, new alkaline battery assemblies, specifically designed for transistor use. Ideal for commercial or private experimental uses. Power requirements from 1.4 to 21 volts can be quickly obtained by slicing off a section of the battery containing the necessary number of cells. For example, to obtain a 7-volt power supply, simply slice 5 cells from the 21 volt battery stack. Designed to meet the flexible power needs of circuit designers and experimenters in miniaturized equipment. Permit rapid assembly of power supplies not readily available in standard batteries. Both batteries are 21-volt types. Each contains 15, individual 1.4 volt sections.



**Type VS087. (NEDA 769).** Designed for circuits where current drain is no more than 2 ma. Dia., 3/8", height, 3 3/8", 1.2 oz. **80 J 943. In lots of 6, EACH. 1.52. NET EACH.....1.67**

**Type VS088. (NEDA 760).** Designed for circuits where current drain is no more than 10 milliamperes. Dia., 1/2", height 3 3/8". Wt., 4.2 oz. **80 J 944. In lots of 6, EACH. 2.06. NET EACH.....2.27**

# Batteries and Eliminators

## BURGESS PORTABLE RADIO BATTERIES—THE COMPLETE LINE

Highest quality batteries to meet every battery, portable radio or commercial need. Built to exacting standards. Extremely rapid turnover always assures you of fresh stocks at ALLIED. If you are not able to find the bat-

teries which meet your requirements in the listing below, give the make and type number of the original batteries, make and model number of your set, and we will supply the equivalent in Burgess batteries.

### PORTABLE "A" BATTERIES

Stock No.	Burgess Type	Std. Pkg.	List Price	NET EACH			Volts	Uses Plug Fig.	Size	Shpg. Wt. Lbs.	Noda	Replaces		
				Single Lots	Std. Pkg.	Volts						Eveready	RCA	
53 J 069	2D	12	\$0.65	.50	.45	1 1/2	D	2 3/4 x 1 1/2 x 2 1/2	3/4	18	720	VS069		
53 J 003	2R	48	.15	.11	.10	1 1/2	D	2 1/4 x 1 1/4" dia.	1/2	13	950	VS036		
53 J 002	2F	1	.75	.52	.52	1 1/2	D	2 1/4 x 1 1/4 x 4 1/4	1	11	4	VS141		
53 J 003	4F	6	1.15	.89	.81	1 1/2	D	2 1/4 x 2 1/4 x 4 1/4	1 1/2	4	742	VS004		
80 J 629	6F	3	1.75	1.29	1.17	2	D	4 1/4 x 2 1/4 x 4 1/4	3	5	743			
53 J 006	8F	1	2.22	1.29	1.17	2	D	4 1/4 x 2 1/4 x 4 1/4	3	5	743			
80 J 641	21R	24	.30	.23	.21	1 1/2	D	2 1/4 x 2 1/4 x 3 1/2	3	17	741			
53 J 070	D3	6	.75	.58	.53	4 1/2	F	3 7/8 x 1 1/2 x 2 1/4	3 oz.	1	19	964	VS236	
80 J 624	F3	6	.87	.66	.60	4 1/2	F	4 1/4 x 1 1/2 x 4 1/4	1	7	746	VS067		
53 J 013	G3	6	.95	.74	.67	4 1/2	F	4 1/4 x 1 1/2 x 4 1/4	1 1/2	7	746	VS002		
53 J 011	F4P1	6	1.15	.89	.81	6	A	2 1/4 x 2 1/4 x 4 1/4	1 1/2	6	718	VS019		
53 J 001	Z4	1	2.60	1.74	1.6	6	A	4 x 2 1/4 x 5 1/2	3	1	718	VS010		
80 J 625	Z4	12	.75	.58	.53	6	A	1 3/4 x 1 3/4 x 2 1/4	1/4	2	724	VS068		
53 J 042	B5	6	1.10	.85	.77	7 1/2	G	3 3/4 x 2 1/4 x 2 1/4	3/4	8	713	VS129		
53 J 043	C5	6	1.00	.77	.70	7 1/2	G	2 3/4 x 1 1/2 x 3 1/2	3/4	9	717	VS065		
53 J 071	T5	3	1.38	1.06	.96	7 1/2	G	2 1/4 x 2 1/4 x 3 1/2	1 1/2	10				

### PORTABLE "B" BATTERIES

80 J 535	A30	2	2.85	2.16	1.96	45	B	3 3/4 x 2 1/4 x 4 3/4	2	206		VS014
80 J 536	B30	2	3.25	2.16	1.96	45	B	3 3/4 x 2 1/4 x 4 3/4	2	207	484	VS012
80 J 537	Z30	2	3.50	2.70	2.49	45	B	3 3/4 x 2 1/4 x 4 3/4	1 1/2	205	738	VS015
80 J 546	M30	6	2.50	1.93	1.75	45	B	3 1/2 x 2 1/4 x 4 3/4	2	202	482	VS013
80 J 539	W30P1	6	2.45	2.11	1.92	45	B	2 1/4 x 1 1/2 x 4 3/4	1	201	455	VS055
80 J 545	XX30	6	1.95	1.45	1.32	45	B	2 1/4 x 1 1/2 x 4 3/4	1	213	415	VS086
80 J 646	U30	6	2.00	1.54	1.40	45	B	2 1/4 x 1 1/2 x 4 3/4	1	211	417	VS216
80 J 645	P45M	6	2.95	2.26	2.06	67 1/2	Snapon	1 1/2 x 1 1/2 x 3 1/2	1	213	415	VS086
80 J 631	K45	6	2.50	1.90	1.75	67 1/2	Snapon	2 1/4 x 1 1/2 x 3 1/2	1	203	457	VS082
80 J 544	XX45	6	2.75	2.12	1.93	67 1/2	Snapon	2 1/4 x 1 1/2 x 3 1/2	1	200	467	VS016
80 J 642	P45	6	2.35	1.82	1.65	67 1/2	Snapon	1 1/2 x 1 1/2 x 3 1/2	1	211	477	VS216
80 J 613	XX50	6	3.25	2.51	2.28	75	Snapon	1 1/2 x 1 1/2 x 3 1/2	1	212	437	VS217
80 J 632	N60	6	3.60	2.77	2.52	90	Snapon	3 1/4 x 1 1/2 x 4 3/4	1	204	490	VS090
80 J 588	XX69	6	5.38	3.96	3.60	103 1/2	Snapon	1 1/2 x 1 1/2 x 1 1/2	1 1/2	209		

### COMBINATION "AB" PACKS FOR PORTABLES

Stock No.	Burgess Type	Std. Pkg.	List Price	NET EACH			Volts	Uses Plug Fig.	Size	Shpg. Wt. Lbs.	Noda	Replaces		
				Single Lots	Std. Pkg.	Volts						Eveready	RCA	
80 J 594	2TX X40	1	\$3.75	2.60	2.40	60B	H	2 1/2 x 1 1/2 x 7 3/4	2	412				
80 J 551	4GA42	1	5.10	3.42	3.12	63B	H	9 1/4 x 2 1/4 x 4 1/2	5	407			VS053	
80 J 555	6TA60	1	6.25	4.36	4.06	90B	E	9 1/4 x 2 1/4 x 4 1/2	5 1/2	410			VS054	
80 J 595	F4A50	1	6.25	4.36	4.06	90B	K	9 1/4 x 2 1/4 x 4 1/2	5	411				
80 J 615	TS250	1	5.50	3.85	3.64	7 1/2 A, 75B	I	8 1/2 x 3 1/2 x 2 1/4	4	403	755		VS050	
80 J 614	T6Z60	1	5.95	4.17	3.94	90A, 90B	I	7 1/2 x 8 1/2 x 3 1/4	4 1/2	405			VS057	
80 J 584	F6A60	1	6.25	4.38	4.08	90A, 90B	I	9 1/4 x 2 1/4 x 4 1/2	7	401	753		VS019	
80 J 585	G6M60	1	6.75	4.73	4.43	90A, 90B	I	10 1/4 x 2 1/4 x 4 1/2	7 1/2	402	754		VS018	
80 J 643	T6Z60P	1	5.95	4.17	3.94	90A, 90B	I	2 1/4 x 8 1/2 x 3 1/4	4 1/2	406			VS058	
80 J 616	F6A60P	1	6.25	4.38	4.08	90A, 90B	I	9 1/4 x 2 1/4 x 4 1/2	6 1/2	406			VS058	
80 J 570	G6B60	1	6.65	4.65	4.35	90A, 90B	L	13 1/2 x 2 1/4 x 4 1/2	10	400	752		VS047	

### FARM RADIO PACKS

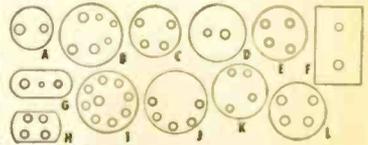
80 JX572	17GD60	1	7.95	5.96	5.45	1 1/2 A, 90B	C	15 1/4 x 4 3/4 x 7 1/4	17	413	759		VS022
80 J 635	4SD60	1	7.95	5.96	5.45	1 1/2 A, 90B	C	10 1/4 x 4 3/4 x 6 1/4	16	414	758		VS121
80 J 636	5SD60	1	10.95	8.21	7 1/2 A, 9A, 90B	I	9 1/4 x 4 1/4 x 7 3/4	18	415	776			VS119

### EVEREADY NO. 6 DRY CELL

Standard No. 6 dry cell. Output, 1 1/2 volts. For industrial use, battery-operated ignition systems, farm lanterns, etc. Size, 6 x 2 1/4 diameter. Screw terminals. Shpg. wt., 7 lbs. 80 J 767. List, 90c. NET EACH **66c** Lots of 12, EACH **60c**

### EVEREADY GEIGER COUNTER 300 VOLT BATTERY

300-volt battery especially designed for low-drain, high-voltage applications such as: Geiger counters, photoflash units (gas discharge type), multiplier-photo cells, and small light-weight insulation testers. 2 1/4 x 2 3/4 x 3 3/4". Shpg. wt. 1 1/4 lbs. 80 J 759. NET EACH **7.70**



### PLUGS FOR BATTERIES ABOVE

Bakelite Battery Plugs. †With 3 small prongs only. \*5 prong plug, 19 prong. \*\*Female plug. Av. shpg. wt., 1 oz.

Stock No.	Fig.	For Burgess Battery	For RCA Battery	Pkg. of 2
54 J 021	A	F4P1, 2F4, 2F4L	VS009, VS010, VS011	9c
54 J 034	B	A30, B30, M30, W30P1, Z30	VS014, VS013, VS017, VS015	9c
54 J 022	B†	A60, W20P1	VS022, VS021, VS043, VS064	11c
54 J 023	C	17GD60, 4SD60, 4T260, 5DA60	VS069, VS004	11c
54 J 024	D	2D, 2F, 20F, 4F, 4FL, 6F, 8F	VS024, VS0005	9c
54 J 025	E	F4A60, 6TA60	VS054	9c
54 J 026	F	D3, F3, G3	VS072, VS067, VS002	9c
54 J 027	G	B5, C5, T5	VS129, VS065	11c
54 J 028	H	2TX X40, 4GA42	VS053	9c
54 J 029	I*	G5A42	VS038	15c
54 J 031	I†	F6A60, G6M60, 5SD60, T6Z60, T6Z60P, 15Z50, F6A60P	VS050, VS057, VS019, VS018, VS064	19c
54 J 030	J	F4B60	VS048	17c
54 J 032	K**	F4A50	VS051	17c
54 J 033	L**	T6Z60P, 5SD60, F6A60P, G6B60	VS064, VS058	17c

Snap-on Type Plugs. For Burgess XX30, XX45, K45, N60, XX50, P45, etc., and Eveready equivalents. Shpg. wt., 2 oz. 54 J 067. Male. Pkg. of 54 J 068. Female. 3, NET **11c**

### PERMA-POWER RADIO BATTERY ELIMINATORS

Convert Battery Radios to All-Electric Operation

#### 1 1/2-VOLT PORTABLE TYPE

Compact unit, for use in portables and farm radios. "A" power, 1.35 volts to 1.5 volts depending upon current; max. current, 350 ma. "B" power—90 volts, 13 ma. For any 4, 5, or 6 tube, 1 1/2 volt filament radio. 2 1/4 x 4 1/2 x 6 1/4". With line cord. For 105-125 volts, 50-60 cycles. AC. Shpg. wt., 4 lbs. 80 P 176. List \$18.95. NET **11.90**

#### 2-VOLT TYPE

Will fit any farm battery radio compartment. "A" power—2 volts, 750 ma. "B" power—135 volts, 25 ma, tapped at 112, 90 and 67 volts. For any 4 or 8 tube, 2 volt farm radio. Screw terminals. Size, 2 1/4 x 4 1/2 x 6 1/4". With line cord, switch and plug. For 105-125 volts, 60 cycles, AC. Shpg. wt., 4 lbs. 80 P 178. List \$20.75. NET **13.03**

#### 6-VOLT TYPE

Converts most 6-volt battery radios. Two isolated 6-volt, 1 1/2-amp power sources for vibrator and for filaments. May be parallel-connected for 6 volts, 3 amps. Useful as a trickle charger. With line cord. For 105-125 volts, 50-60 cycles. AC. Size, 3 3/4 x 6 1/2 x 5 1/2". Shpg. wt., 7 lbs. 80 P 177. List \$23.45. NET **14.73**



Change your battery-operated farm or portable radio set to all-electric operation. Eliminate forever all battery worries. Provide many years of trouble-free, dependable service. Eliminators quickly pay for themselves in battery savings. No expensive rectifier tubes to replace; use selenium rectifiers which have no warm-up period. Well-filtered output. Variety of sockets to handle all types of radios. Noiseless, interference-free operation. Fully automatic; foolproof. Maintain rated output under varying loads. Now—enjoy the convenience and economy of all-electric operation. Make your selection from the battery eliminators listed at right. All U.L. Approved.

# Burgess Quality Batteries



## STANDARD DRY BATTERIES

Suitable for all radio and laboratory requirements. ALLIED's stock of Burgess Batteries is always fresh, assuring you of full-rated efficient service. Burgess quality construction and insulators allow use of very active ingredients, providing maximum useful life. Letters following battery type numbers denote terminals: P.1.—plug-in; S.C.—spring clips. Others have screw terminals except \*spring clips where S.C. is not included in Type No.; heavy-duty, industrial type.

### STANDARD "B" BATTERIES

Stock No.	Burgess Type	Volts	Size	Shpg. Wt. Lbs.	NET EACH	
					Std. Pkg.	Single Lots
80 J 501	21308SC	45	8 1/2 x 4 1/2 x 7 3/4"	11 1/2	6	4.30 3.91
80 J 504	10308P1	45	8 3/4 x 4 1/2 x 7 1/2"	11 1/2	6	3.91 3.55
80 J 505	10308SC	45	8 3/4 x 4 1/2 x 7 1/2"	11 1/2	6	3.91 3.55
80 J 507	2308SC	45	8 3/4 x 2 1/2 x 7 1/4"	9	6	2.70 2.45
80 J 508	5309	45	4 1/2 x 3 5/8 x 1 1/2"	3 1/2	5	2.54 2.31
80 J 519	W30BPX	45	3x1 1/4 x 3 3/4"	1	6	2.01 1.83
80 J 633	Z30BP	45	3 1/2 x 2 1/2 x 3 3/4"	1 1/2	6	4.97 4.52
80 J 524	Z20NX	45	1 7/8 x 3 1/2 x 4 1/2"	1 1/2	5	2.37 2.15
80 J 634	Z60BP	90	3 3/4 x 2 1/2 x 5 1/4"	2 1/4	6	9.79 8.90
80 J 511	5156P1	22 1/2	4 1/2 x 2 1/2 x 2 5/8"	1 1/2	5	1.69 1.54
80 J 512	5156SC	22 1/2	4 1/2 x 2 1/2 x 2 5/8"	1 1/2	5	1.74 1.58
80 J 510	4156	22 1/2	4 1/2 x 2 1/2 x 2 5/8"	1 1/2	5	1.53 1.39

### STANDARD "C" BATTERIES

Stock No.	Burgess Type	Volts	Size	Shpg. Wt. Lbs.	NET EACH	
					Std. Pkg.	Single Lots
80 J 623	A9BP	1 3/4	2 3/4 x 2 3/4 x 2 3/8"	3/4	3	2.65 2.41
80 J 514	5540	7 1/2	4 7/8 x 2 3/4"	1 1/2	6	1.85 1.77
80 J 521	W5BP	7 1/2	2 1/2 x 2 1/2 x 1 3/4"	1 1/2	6	1.42 1.29
80 J 516	B5P	7 1/2	4 3/4 x 1 1/2 x 2 1/2"	1 1/2	6	2.13 1.94
80 J 515	5360	4 1/2	2 1/2 x 2 1/2 x 2 1/4"	1 1/2	5	.51 .45
80 J 517	Z170P1	4 1/2	4 1/4 x 1 7/8 x 2 3/4"	1 1/2	5	.73 .66
80 J 593	2370	4 1/2	3 1/2 x 1 1/2 x 2 1/4"	1	5	.73 .66

### STANDARD "A" BATTERIES

Stock No.	Burgess Type	Volts	Size	Shpg. Wt. Lbs.	NET EACH	
					Std. Pkg.	Single Lots
53 J 016	F4BP	6	2 3/4 x 2 5/8 x 4"	1 1/2	10	.67 .61
53 J 035	432	4 1/2	2 1/4 x 1 3/4 x 2 1/2"	1 1/2	10	.43 .39
53 J 017	F2H	3	2 1/4 x 2 3/4 x 1 1/4"	1 1/4	5	.74 .67
53 J 018	F2BP	3	2 1/2 x 2 1/2 x 1 1/4 x 1 1/4"	1 1/4	5	.72 .65
80 J 591	B2BP	3	1 1/4 x 1 3/4 x 2 1/4"	1 1/2	6	1.03 .94
80 J 604	Z2ZP1	3	1 1/2 x 1 1/2 x 2 1/4"	1 1/2	12	.55 .50
80 J 038	422	3	2 3/4 x 1 1/2 x 2 1/4"	1 1/4	10	.35 .32
53 J 037	Z2BP	3	2 1/4 x 1 3/4 x 4 3/4"	1 1/2	10	1.74 1.58
53 J 036	2FBP	1 1/2	2 1/2 x 1 1/2 x 4 3/4"	1	5	.72 .65
80 J 621	ZBBP	1 1/2	1 1/2 x 2 3/4 x 2 3/4"	1 1/4	10	1.03 .94
53 J 023	44	1 1/2	1 1/2 dia. x 4 3/4"	1 1/4	10	1.05 .95

### No. 6 LINE

Stock No.	Burgess Type	Volts	Size	Shpg. Wt. Lbs.	NET EACH	
					Std. Pkg.	Single Lots
80 J 638	6	1 1/2	2 1/2 x 6 3/8"	1 1/4	12	.66 .60
80 J 639	6*	1 1/2	2 1/2 x 6 3/8"	1 1/4	12	.65 .59
80 J 644	6S	1 1/2	2 1/2 x 6 3/8"	2	12	.73 .66
80 J 640	S461	6	10 1/2 x 2 1/4 x 7 1/2 x 3/4"	8 1/4	6	2.76 2.51

## WILLARD RECHARGEABLE BATTERIES



Compact rechargeable batteries. Excellent for portable equipment. Non-spill construction. In lightweight polystyrene containers immune to corrosion by electrolyte. Fibrite insulation retards plate shedding. Built-in charge indicator. For 2-volt power supplies, but can be connected in series for higher voltages.

**Type 25-2, For Portable Radios.** Supplies 2 volts for 21 ampere-hours. Plug-in terminals. Original equipment in GE Models 250 and 260. Size, 2 1/2 x 4 1/4". Wt., 3 1/4 lbs. **7.23**

**Type ER 6-2B, Photo-Flash Battery.** Supplies 2 volts for 6 ampere-hours. Deliver 125 to 250 flashes per cycle of charge. Gives maximum peak current for positive bulb flash and split-second shutter synchronization. Has plain post terminals. Size, 1 1/2 x 2 1/4 x 4 1/4". Shpg. wt., 1 1/2 lbs. **4.93**

**Type ER-34-2, For Portable Radios.** Supplies 2 volts for 34 ampere-hours. Battery has plain posts. Original equipment in RCA model 65BR. Length, 4 1/2"; width, 3 1/2"; height, 4 1/2". Shpg. wt., 5 1/4 lbs. **9.64**

98 J 025, List, \$13.80. NET

## BURGESS BATTERIES FOR TRANSISTORS

Engineered to meet exacting specifications of transistor operation. Hermetically sealed in film. Maintain uniform sustained voltage for long periods under low drain. Retain power over long periods of non-usage. Features: compact size; capped with polythene seal to lock in water vapor; uniform voltage during service life; inner cell connections of silver. Av. shpg. wt., 3 oz.



Stock No.	Type	Volts	Size	Std. Pkg.	Single Lots, EA.	Std. Pkg., EA.
53 J 082	N	1 1/2	1 1/4 x 3/4 x 7/8"	24	.06	.05
53 J 079	Y20	30	1 1/2 x 1 3/4 x 1 1/2"	12	1.06	.96
53 J 080	Y10	15	1 1/2 x 1 3/4 x 1 1/2"	12	.72	.65
53 J 081	Y15	22 1/2	1 1/2 x 1 3/4 x 1 1/2"	12	.88	.80

## BURGESS FLASHLIGHT BATTERIES

These top-quality, long-life cells deliver highly dependable performance in all popular sizes of flashlights. Type 2—for large standard flashlights; Type 1—for small standard flashlights; Type Z—for standard penlights; Type 7—for slim penlights. All types are thoroughly sealed to prevent electrolyte leakage.



Stock No.	Burgess Type	Size	Wt. Oz.	Std. Pkg.	LIST	NET EACH	
						Single Lot	Std. Pkg.
53 J 009	2	2 3/4 x 1 1/4"	6	4	15c	11c	10c
53 J 029	1	1 1/2 x 6 3/8"	4	12	12 1/2c	9c	8c
53 J 031	Z	1 3/4 x 3 3/4"	3	24	10c	7c	6 1/2c
78 J 243	7	1 1/4 x 1 1/4"	3	24	10c	7c	6 1/2c

## IGNITION AND TELEPHONE BATTERIES

Stock No.	Burgess Type	Volts	Size	Shpg. Wt. Lbs.	Std. Pkg.	NET EACH	
						Single Lots	Std. Pkg.
53 J 033	4F6H	6	8 1/2 x 3 3/4 x 5 1/4"	10	4	3.98	3.62
53 J 034	4F5H	7 1/2	1 1/4 x 3 3/4 x 5 1/4"	8	4	3.44	3.13
53 J 025	4F4H	6	8 1/2 x 2 1/2 x 5 1/4"	7	6	2.69	2.45
53 J 027	4F2H	3	3 3/4 x 2 1/2 x 4 5/8"	3	8	1.20	1.09
53 J 024	4FH	1 1/2	2 3/4 x 2 3/4 x 4"	1 1/2	12	.66	.60

## LANTERN BATTERIES

For use with railroad type lanterns. 4F2H is replacement for Burgess No. TW2 lantern used by farmers and sportsmen. 4FH with coilspring and wing contacts is a favorite of railroadmen.

Stock No.	Burgess Type	Volts	Size	Wt. Lbs.	Std. Pkg.	NET EACH	
						Single Pkg.	Std. Pkg.
53 J 028	F4H	6	2 3/4 x 2 5/8 x 3 1/4"	1 1/2	12	.67	.61
53 J 016	F4BP	6	2 3/4 x 2 5/8 x 4"	1 1/2	10	.67	.61
53 J 027	4F2H	3	3 3/4 x 2 1/2 x 4 5/8"	3	8	1.20	1.09

## PHOTO-FLASH AND GEIGER BATTERIES

†Photo-flash types; designed for high initial current discharge. U200 is high-voltage, small size battery for Geiger counters, etc.

Stock No.	Type No.	Description	Size	Std. Pkg.	Wt.	NET EACH	
						Single Pkg.	Std. Pkg.
53 J 039	220†	15 Amp Flash	2 3/4 x 1 1/2"	12	6 oz.	1 1/2	10c
53 J 040	120†	High Amp Cell	1 1/2 x 1"	12	4 oz.	1 1/2	10c
53 J 041	920†	High Amp Cell	1 1/2 x 3/4"	24	4 oz.	9c	8 1/2c
53 J 044	U15P†	22 1/2 Volt	1 1/2 x 3/4 x 1 3/4"	20	4 oz.	87c	79c
80 J 626	U200	300 Volt	2 1/4 x 2 3/4 x 3 3/4"	1	2 lb.	7.95	

## STANDARD BATTERY PLUGS

626 has 3 prongs and Fahnestock clips. 596 has 5 prongs, 5 Fahnestock clips; 612 has 3 prongs. 5A2 has 2 prongs.

54 J 600	Type 626. For all 45-volt batteries. 5 oz. EACH	13c
54 J 051	Type 596. For 22 1/2-volt batteries. 5 oz. EACH	15c
54 J 053	Type 612. For 4 1/2-volt batteries. 4 oz. EACH	10c
54 J 005	Type 5A2. For 3-volt "A" batteries. 2 oz. EACH	5c

## MINIATURE HEARING AID AND INDUSTRIAL BATTERIES

Compact type "A" and "B" batteries. Designed especially for industrial and laboratory uses, as well as hearing aid units and transistor circuits. Ideal where size and uniform sustained discharge voltage are important. Top quality construction throughout. New design feature of tight polythene seal allows hydrogen to escape, locks in essential water-vapor. Retains fresh power over long periods of non-usage. Inner cell connections of silver keep internal contact resistances at a minimum.



### "A" BATTERIES

All with metal cap type terminals, except 8R has two-hole socket.

Stock No.	Type	Volts	Size	REPLACES				Wt., Oz.	Std. Pkg.	NET EACH	
				Ever-ready	Zenith	Sono-tone	Acoustic			Single Lot	Std. Pkg.
53 J 045	8R	1 1/2	4 3/4 dia. x 2 1/4"					2	12	11 1/2	.094
53 J 046	8R	1 1/2	1 3/4 dia. x 3 1/4"	1052P	Z15	X800	34G	6	24	.26	.24
53 J 047	9R	1 1/2	1 3/4 dia. x 1 1/2"	1015E	Z8	451	115MB	2	12	.12 1/2	.10 1/2
53 J 048	2Z	1 1/2	1 1/4 x 1 3/4 x 1 1/4"	1016E		452	116MB	3	10	.30	.27

### "FEATHERWEIGHT" "B" BATTERIES

All XX types have 3-hole sockets; rest have flat contact terminals

53 J 072	XX15	22 1/2	1 1/2 x 3 1/2 x 3 3/4"	425P		922	22EW	8	24	1.23	1.12
53 J 073	XX22	33	2 1/2 x 1 1/2 x 3 3/4"	433P		930	32EW	9	10	1.54	1.40
53 J 074	XX30P1	45	2 1/2 x 1 1/2 x 2 1/4"	455P	230	945	45EW	11	24	1.54	1.40
53 J 075	K20	30	1 1/2 x 1 1/2 x 2 1/4"					11	20	1.30	1.18
53 J 076	U10	15	1 1/2 x 1 1/2 x 1 1/4"	411	211	311	711G	13	20	.72	.65
53 J 077	U15	22 1/2	1 1/2 x 1 1/2 x 2 1/4"	412	212	312	712G	4	20	.88	.80
53 J 078	U20	30	1 1/2 x 1 1/2 x 2 1/4"	413	213	313	713G	4	20	1.06	.96



## RIDER PUBLICATIONS AND SERVICE MANUALS

### ESSENTIAL RADIO AND TELEVISION PUBLICATIONS

**TV MANUFACTURERS' RECEIVER TROUBLE CURES. Volume 1.** Gives specific TV receiver troubles and cures as specified by set manufacturers. Includes improvements incorporated in later assembly runs. Describes solutions to manufacturers' production problems. Covers complete details on TV sets produced by manufacturers from Admiral to DuMont. 115 pages. 8x5". 37 K 520. Postpaid in U.S.A. .... 1.76

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**TELEVISION BROADCASTING.** By Howard Chinn (McGraw-Hill). Practical, technical guide to equipment, systems, facilities, engineering practices, and operating techniques of television broadcasting. Typical chapters: Image Orthicon Camera; Field Pickup Techniques; Field Equipment; Studio Equipment; Studio Lighting; Staging; Camera Technique; Projectors; Motion Picture Film; Recording; Transmitters; Studio Building Planning; Equipment Installation Practices; Measurements; Color Broadcasting Equipment; Program Transmitting Systems; Camera Chains; Synchronizing Waveform Generators; Television System Fundamentals; etc. 695 pages. 6x9".  
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**BETTER TV RECEPTION.** By W. W. Smith and R. L. Dawley (Editors and Engineers). Written for the professional installer and amateur experimenter. Tells how to get better TV reception. Contains an evaluation of common TV antennas under low-signal conditions; Discusses boosters and receivers, how to reduce TV interference, etc. Gives methods of eliminating ghosts. Paper-bound. 128 pages. 6x9".  
37 K 944. Postpaid in U.S.A. .... 2.50

**TELEVISION SERVICING.** (2nd edition.) By Walter H. Buchsbaum (Prentice-Hall). A manual for TV servicemen written by the Chief Engineer of Vision Research Laboratories. No knowledge of higher mathematics needed. Serving as both a self-instructor and a classroom text, this book is divided into three parts. Section 1 covers general television theory. Section 2, the installation and alignment of TV receivers, and Section 3, trouble-shooting. Well illustrated. 416 pages. 6x9".  
37 K 945. Postpaid in U.S.A. .... 5.83

**TV TUBE LOCATOR.** By H. G. Cisin (Cisin Pub.). Contains charts showing location of tubes in hundreds of TV receivers. Also codes each tube as to its function in the set. Speeds servicing. Tabulates picture faults. Paper bound. 25 pages. 8½x11".  
37 K 328. Postpaid in U.S.A. .... 1.00



## PRACTICAL REFERENCE BOOKS

**REFERENCE DATA FOR RADIO ENGINEERS.** Federal Telephone and Radio Corp. Covers all phases of radio engineering, including radar fundamentals, pulse modulation methods, servo mechanism fundamentals, etc. Contains numerous tables, formulas, charts, etc., including electromagnetic frequency spectrum diagram. Typical chapters: Bridges and Impedance Measurements; Fourier Waveform Analysis; Radio Noise and Interference. 675 pages. 5¼x8¼".  
37 K 644. Postpaid in U.S.A. .... 3.75

**MOBILE RADIO HANDBOOK.** By M. B. Sleeper (FM-TV Magazine). A complete, authoritative handbook on mobile radio. Typical chapters: Basic System Planning; Rules and Allocations; License Application; Guyed Tower Erection; Radio Relay Systems; System Maintenance; Operator Licenses; General FM Theory; etc. Contains information of vital importance in planning 2-way radio communications systems. 184 pages. Paper bound. 8½x11½".  
37 K 595. Postpaid in U.S.A. .... 2.00

**RADIO'S MASTER.** (United Catalog Publishers). 1955 edition (19th). Official parts and equipment catalog of the radio, television and electronics industry. Larke, hard-cover volume listing over 85,000 items produced by major standard-brand manufacturers. Gives illustrations, descriptions, specifications and prices. Fully indexed by manufacturer and product. 1440 pages. 8x11½".  
37 K 204. Postpaid in U.S.A. .... 2.95

**ELEMENTS OF RADIO** (Prentice-Hall). By A. Marcus and Wm. Marcus. Prepared under the direction of Dr. Ralph E. Horton. New Third Edition. A simplified, practical course on the essentials of radio operation. Each chapter concludes with a number of problems for the student to solve. Includes over 500 diagrams and drawings, plus a glossary of terms. 800 pages. 5¼x8".  
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**RADIOMAN'S GUIDE.** (Theo. Audel & Co.) An authentic, clearly written book covering home, automotive, commercial, aircraft, and marine radio equipment. Also covers radio compasses, radio beacons, automatic radio alarms, radio control systems, and public address systems. Typical chapters: Radio Fundamentals and Ohm's Law; Measuring Instruments; Power Supply Units; Resistors, Inductors, and Condensers; Broadcasting Stations; Vacuum Tubes; Receivers; Circuit Diagrams; Radio Control Systems; Antenna Systems; Radio Pickups; Loudspeakers; Public Address Systems; Cathode Ray Oscillographs; Coil Calculation; Static Elimination; and Trouble Pointers. 880 pages. 5x6½".  
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**RADIO SERVICE ENCYCLOPEDIA** (Mallory). 1948 edition (6th). Lists replacement controls, filter condensers, and vibrators for radio receivers. Includes tube complement and volume control circuit for each receiver. Contains many notes, illustrations, and diagrams. 552 pages. Paper bound. 11x8".  
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2nd Supplement to Above. 1950 edition. Lists replacement parts for more recent sets. Has 204 pages. Paper bound. 8½x11".  
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**TAPE RECORDING IN BUSINESS EDUCATION.** By Louis A. Lesjé (MMM). How to use tape in teaching business subjects. 67 pages. 5¼x8¼".  
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**HANDBOOK OF CHEMISTRY AND PHYSICS.** By Hodgman and Lange. 35th edition. An excellent reference book containing a great many formulas and tables used throughout chemistry and physics. Includes radio, wire and mathematical tables, physics, chemistry and radio charts, etc. Over 3000 pages. Size, 4¼x7".  
37 K 995. Postpaid in U.S.A. .... 8.50

For additional television publications, see listings under Rinehart, Rider, RCA, Sams, Supreme, McGraw-Hill, Macmillan, etc., on pages 254-264.

# McGRAW-HILL COMMUNICATIONS AND ELECTRONICS PUBLICATIONS

## ELEMENTARY THEORY

**UNDERSTANDING RADIO.** 2nd Edition, revised and improved. By Watson, Welch and Eby. Simplified introduction to practical radio. 539 review questions. Typical chapters: Radio Waves and Wave Travel; Wave-form Pictures; Principles of the Vacuum Tube; Radio-Telephone Transmitters; Short-wave Sets; Aerials; Oscillators and Transmitters; etc. 700 pages. 5 1/2x8".

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**FUNDAMENTALS OF RADIO.** By F. E. Terman. Presents basic principles of radio communication in simplified form. An abridged version of the author's "Radio Engineering," listed under "Advanced Theory" books below. Chapters include: Circuit Elements; Vacuum-Tubes; Amplifiers; Power Amplifiers; Modulation; Vacuum-Tube Detectors; Acoustics; Antennas; Television; etc. 488 pages. 6x9".

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**ENGINEERING ELECTRONICS.** By G. E. Happel and W. M. Hesselberth. For engineering students beginning the study of electronics. Combines theoretical with practical treatment. Nearly all chapters have sets of problems and questions. Typical chapters: Electron Ballistics; Emission; Diode; Triode and Other Multi-element Tubes; Concepts Useful in Vacuum Tube Circuit Analysis; Voltage Amplifiers; Conduction Through Gases, etc. 475 illustrations. 508 pages. Size, 6x9".

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**ELECTRONICS MANUAL FOR RADIO ENGINEERS.** Edited by Vin Zelfuff and John Markus. Contains 289 radio articles originally published in Electronics Magazine. Practical radio engineering data selected for its permanent reference value. Includes circuit diagrams, formulas, graphs, etc., everything arranged and indexed for quick reference. 879 pages. 8 1/2x11".

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**RADIO ENGINEERING.** By F. E. Terman. Third Edition. Comprehensive text on all phases of radio. Includes theory and practice. Chapters include: Vacuum-tube Detectors and Mixers; Propagation of Radio Waves; Antennas; etc. 969 pages. 6x9".

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**THEORY & APPLICATION OF MICRO-WAVES.** By Bronwell and Beam. Step-by-step presentation of theory of microwave communication systems, plus description of modern microwave equipment. Chapters include: Magnetron Oscillators; Transmission-line Equations; Wave Guides; etc. Profusely illustrated. 470 pages. 6x9".

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**ELECTRONIC MEASUREMENTS.** By F. E. Terman and J. M. Pettit. Formerly "Measurements in Radio Engineering." Covers measurement fundamentals in many fields other than radio, including TV, radar and other pulsed systems, microwave, etc. Typical chapters: Voltage and Current; Amplifier Measurements; Antennas; Laboratory Oscillators; Resistance and Reactance Devices; etc. 683 pages. Size, 6x9".

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**TELEVISION ENGINEERING.** 2nd Edition, revised. By Donald G. Fink. Presents fundamental processes of TV reception and transmission, plus design data and descriptions of modern equipment. Covers television broadcasting completely—from the TV camera to the receiver. 733 pages. 6x9".

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**TELEVISION FUNDAMENTALS; THEORY, CIRCUITS & SERVICING.** By Fowler and Lippert. Non-mathematical presentation of basic principles for radio men advancing to installation and servicing of TV receivers. 6x9", 580 pages.

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**BASIC TV: PRINCIPLES & SERVICING.** By Bernard Grob. Highly valuable self-instruction course in TV servicing. Chapters present detailed data on pictures, tubes, light, and FM receivers. Technical points handled in simple language. Servicing problems explained by blocks of circuits. 592 pages. 407 illustrations. Size, 6x9".

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**DRAFTING FOR ELECTRONICS.** By L. F. B. Carini. Chapters include: Drawing Fundamentals; Industrial Electronics; Schematic Patent Drawing. 211 pages. 6x9".

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**MATHEMATICS FOR ELECTRICIANS AND RADIOMEN.** By N. M. Cooke, Lt. Commander, U. S. Navy. Teaches elementary algebra; quadratic equations; logs; trig; plane vectors; and elementary vector algebra as applied to electricity and radio. 3,000 problems and answers. Typical chapters: Exponents and Radicals; Simultaneous Linear Equations; Charts, tables, etc. 604 pages. 6x9".

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**PRACTICAL RADIO COMMUNICATION.** By Nilson and Hornung. For beginning or experienced radio operators. Topics include basic electricity, transmitters, receivers, FM and ultra-high frequencies. Typical chapters: Transmitting-circuit Principles; Electronic Power Supplies; Marine Radio Direction-finders; Antennas and Wave Propagation; Marine Automatic Radio Alarms; Frequency Modulation. 927 pages. 6x9".

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**PRINCIPLES & PRACTICE OF RADIO SERVICING.** By H. J. Hicks. Contains theory of radio and data required for efficient trouble-shooting. Chapters include: Test Equipment; Volume, Tone and Frequency Control; Antennas and the Elimination of Man-Made Static; The Business Side of Radio Servicing; etc. 391 pages. 6x9".

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**RADIO ENGINEERING HANDBOOKS.** By Keith Henney. Fourth Edition. Contains latest revisions. Covers everything in electronics. Chapters include: Radio Wave Propagation; Electron Tubes; Antennas; Wave Guides; Cavity Resonators; Mathematical and Electrical Tables; Electrical Measurements; etc. 1197 pages. 6x9".

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**RADIO ENGINEERS' HANDBOOK.** By F. E. Terman. A wealth of technical information for solving practical radio problems. Typical chapters: Fundamental Components of a Radio System; Circuit Elements; Resonant Circuits and Circuit Analysis; Fundamental Properties of Vacuum Tubes; Vacuum Tube Amplifiers; Oscillators; Power Amplifiers; Propagation of Radio Waves; Power Supply Systems; Antennas. 1,019 pages. 6x9".

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### INDUSTRIAL BOOKS

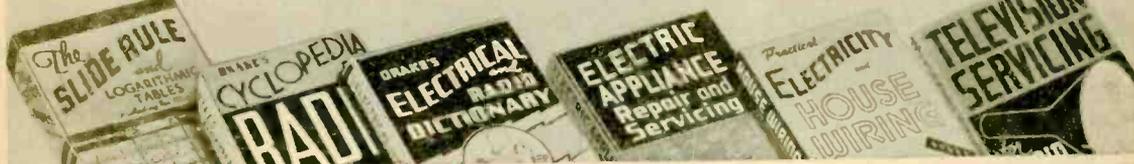
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**CYCLOPEDIA OF RADIO AND ELECTRONICS.** By Harold P. Manly and L. O. Gorder. Standard reference and instruction book for radio men. Covers radio, sound systems, television, photoelectricity, electronic tubes, microwaves, frequency modulation, electronics in industry, etc. Contains simple, easy-to-follow explanations, with reference to related articles. 967 illustrations, charts and graphs. 822 pages. 6 x 9".  
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**ELECTRIC APPLIANCE REPAIR AND SERVICING.** By Harold P. Manly. An instruction book on the maintenance and repair of electric home appliances, using the simplest testing apparatus and hand tools. One-third of the book is devoted to general servicing methods for all appliances; the remainder gives specific instructions for handling individual appliances. Typical chapters: Installing Signals and Alarms; Electric Toasters, Percolators, and Waffle Irons; Electric Flatirons, Roasters and Ranges; Electric Motors and Wiring; Food Mixers, Sewing Machines and Vacuum Cleaners; Electric Refrigerators. 250 pages, 5 1/2 x 7 1/2", 138 illustrations.  
37 K 662. Postpaid in U.S.A. .... 2.40

**ELECTRICAL AND RADIO DICTIONARY.** By Harold P. Manly. An ideal handbook for the radio and television student, as well as the engineer. Covers terms employed in electronics and industrial applications of electronic devices plus closely related electrical terms. A wealth of helpful information. Contains over 3800 definitions and 550 illustrations. 300 pages, 6 x 9".  
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**PRACTICAL ELECTRICITY AND HOUSE WIRING.** By H. P. Richter. A practical book of instruction covering in detail every branch of electrical work as applied to the wiring of small buildings. Includes basic circuits, wiring methods, polarizing, conduit, fuses, wire sizes, switches, Underwriters' and the National Electrical Codes, etc. Typical chapters: Wiring with Armored Cable; Circuit Breakers and Circuits; Wiring with Conduit; Polarizing and Grounding; Appliances—Home Repairs. 313 pages, 5 1/2 x 7 1/2", 277 illustrations.  
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37 K 550. Postpaid in U.S.A. .... 3.00

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37 K 566. Postpaid in U.S.A. .... 1.25

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37 K 552. Postpaid in U.S.A. .... 1.00

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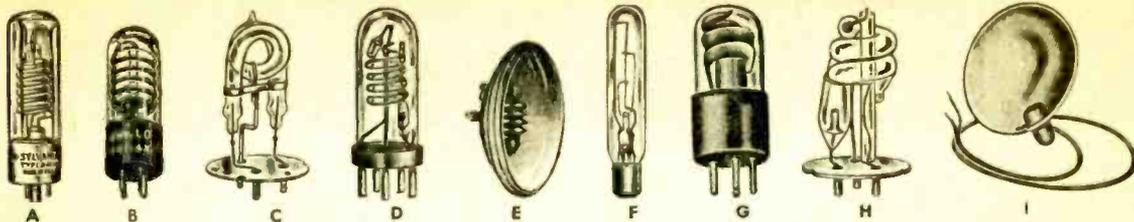
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**G.E. FLASH TUBES**

Used in amateur and professional photography. Provide flashes of exceedingly high intensity but of short duration, ranging from 1/1,000 to 1/1,000,000 second. Same tube can be flashed repeatedly—tens of thousands of times. Standard equipment in many units and popular for the home builder and experimenter. Tubes are helix-coiled, xenon-filled. \*60 watt incandescent modeling lamp. Capacity, 100 hours. Av. shpg. wt., 1 lb.

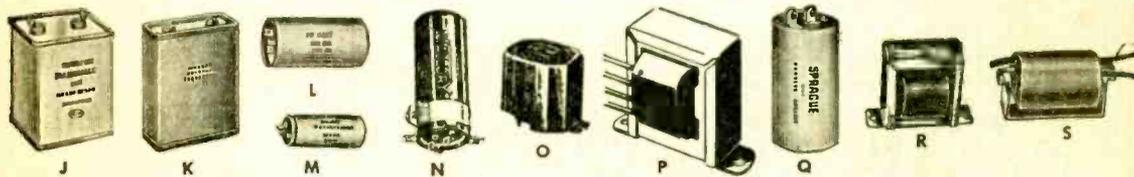
No.	Type	Fig.	W-S	Volts	Mfd.	NET
52 E 398	FT-218	C	200	1000	400	8.25
52 E 375	FT-118	C	125	500	1000	7.20
52 E 364	FT-214	D	200	2000	100	19.75
52 E 376	FT-220	E	200	2000	100	21.50
52 E 359	FT-403	E	480	2000	240	23.00
52 E 363	60T6½/1*	F		120		1.85
52 E 860	95X828		Socket for FT-403 & 60T6½/1			11.76
73 H 998	122-275		Socket for FT-214			1.31

**SPRAGUE & KEMLITE COMPONENTS**

Used in two new low-cost, portable, dry-cell powered photoflash units. Schematics, parts listings and instructions in Sprague Booklet C-703 below. Two models—one using Kemlite DX flashtube (same as FA-100), and one using Kemlite 5W flashtube (same as FA-104). For synchro shutters or solenoid synchronization. Uses two 450 volt capacitors (listed below) and five 90 volt Burgess N60 batteries (listed page 252). Flashes faster than 1/1000 second. Light output of 100 w.s. Flashtubes are Kenlite; reflectors and adapter are Sprague. All parts available from ALLIED. Write for free parts list. Av. shpg. wt., 1 lb.

No.	Type	Fig.	Descr.	W-S	V.	NET
78 E 700	DX	G	Flash Tube	100	450	12.00
78 E 710	5W	H	Flash Tube	100	500	7.50
78 E 703	FA-101	I	Reflector for DX			2.75
78 E 704	FA-105	I	Reflector for 5W			3.50
78 E 702	FA-102	I	Adapt. for Ed. bases			2.60

## Build Your Own High-Speed Photoflash Units With These Essentials



**C-D CAPACITORS**

**Fig. J. Cornell-Dubilier high dielectric strength capacitors.** Wax-impregnated and hermetically sealed in metal cases. Lightweight—for easy portability.

### TYPE GKGT-2000 VOLT DC WORKING

Stock No.	Mfr's Type	Mfd.	Watt-Seq.	Lbs.	NET EACH
14 L 480	1A01	25	50	4½	11.17

### TYPE GKGT-2500 VOLT DC WORKING

14 L 481	1A02	15	50	4½	10.00
14 L 482	103	25	80	5½	13.52
14 L 483	104	32	100	6	21.76

### LOW-VOLTAGE CAPACITORS

Shpg. wt., 1¼ lbs.

Stock No.	Mfr's Type	Fig.	Mfd.	Volts	NET EACH
14 L 841	RB100053	L	200	450	4.03
14 L 842	RW10005	M	200	500	6.17
14 L 843	FV10007	M	300	450	6.17

### RECTIFIERS, VIBRATORS, RELAYS

**Type 1013. Fed. Tel. & Radio Rectifier.** For storage battery chargers. Output, 700 ma at 18v. Shpg. wt., 4 oz. 4 A 604. NET.....65c

**Type 16V1. Radio Receptor Co. Selenium Rectifier.** For portable photoflash units. Current rating, 20 ma; input voltage, 260 rms. Size, 1½x2¼x¼. Shpg. wt., 8 oz. 4 A 645. NET.....1.26

**Type W859. Mallory Vibrator.** Interrupter type; 4 prong base. Replaces type W659. Shpg. wt., 8 oz. 56 P 118. NET.....2.88

**Type 5436. C-D Vibrator.** Shpg. wt., 6 oz. 99 P 706. NET.....4.53

**Type FA-108. Sprague Vibrator.** (Same as Oak V681S). For photoflash equipment. 4 volts; 1 amp. 2¼x1½x¼. Shpg. wt., 8 oz. 78 E 706. NET.....8.50

**Type FA-103. Sprague Delay Relay.** For 5-25 micro-second delay synchronization for operation with 3 to 4½ volt cell flashguns. Shpg. wt., 8 oz. 78 E 701. NET EACH.....3.50

**Fig. K. Type PQ Capacitors.** High insulation resistance. All rated at 2500 volts, except 15L728 (3000 v.) and 15L729 (4000 v.).

No.	Type	Mfd.	W-S	Lbs.	NET
15 L 730	2510	10	31	1½	10.00
15 L 731	2515	15	47	2½	11.76
15 L 732	2525	25	78	4½	15.53
15 L 733	2535	35	109	6	19.11
15 L 728	315	15	67	3	14.41
15 L 729	425	25	200	7½	24.99

**Type 2TM-55. Molded Tubular Capacitor.** 200 volts at .05 mfd. Size ½x1¼. Shpg. wt., 8 oz. 15 L 121. NET.....15c

### MALLORY LOW-VOLTAGE CAPACITOR

**Fig. N. Type HC 45003.** An excellent low-voltage electrolytic for use in photoflash units. Capacity, 300 mfd at 450 volts working. Size, 2½x4¼. Shpg. wt., 1 lb. 17 L 820. NET.....6.17

**Fig. O—UTC TRANSFORMERS**

**Type PF-1.** Primary for 115 volts. 50-60 cycles. Secondary supplies 2200 volts DC when used with proper rectifier, and condensers up to 100 mfd. Transformer is compound-sealed in 2½x2½x2½ case. Shpg. wt., 2½ lbs. 62 G 230. NET.....6.86

**Type PF-3.** Trigger transformer for electronically fired circuit. Shpg. wt., 6 oz. 62 G 232. NET.....4.90

**Fig. P—STANCOR TRANSFORMERS**

**Model P-6425.** Photoflash power transformer for AC-operated electronic photoflash units. Exact replacement in the Heiland Research Photoflash unit. The comparatively low output voltage (450 v.), permits lower construction cost, simplicity in design and a greater safety factor. Has a 105/115/125 volt primary. Charges up to 1050 mfd. to 450 volts DC, through a half-wave selenium rectifier. 2¾x2¾x2¾. Mtg. centers, 2¾". With diagram. Shpg. wt., 2 lbs. 64 G 445. NET.....3.09

**Type P-6426.** Trigger coil for P-6425 transformer. ¼" long, 3/8" diameter. Replaces G.E. 80 G 41 trigger coil. Shpg. wt., 3 oz. 64 G 144. NET.....1.47

### SPRAGUE CAPACITORS

**Fig. Q. Type FF-1. 525 Mfd. Capacitor.** 450 volts DC working. Energy storage capacitor. Low-leakage electrolytic for dry battery photo-flash service. Nominal rating 53 w.s. See Sprague Electronic Flash Handbook listed below for flash unit construction data. Two required. Wt., 1¼ lbs. 15 L 725. NET EACH.....13.23

**Electronic Flash Handbook (Latest Edition) C703.** Contains photos, drawings and instructions for building two new battery-operated high-speed electronic flash units as well as an AC operated unit. A handbook for the amateur or professional photographer. 37 K 078. Postpaid in U.S.A.....35c

### THORDARSON TRANSFORMERS

**Fig. R. T22R42.** Open frame type with leads. Pri.: 117 v., 60 cycle. AC. Sec. for supply delivering 2250 volts DC at 1.5 ma.; Sec. No. 2, 2.5 volts AC at 1.75 amps. Size, 4x2½x2½". 3½" mtg. centers. Shpg. wt., 2 lbs. 63 G 720. NET.....5.29

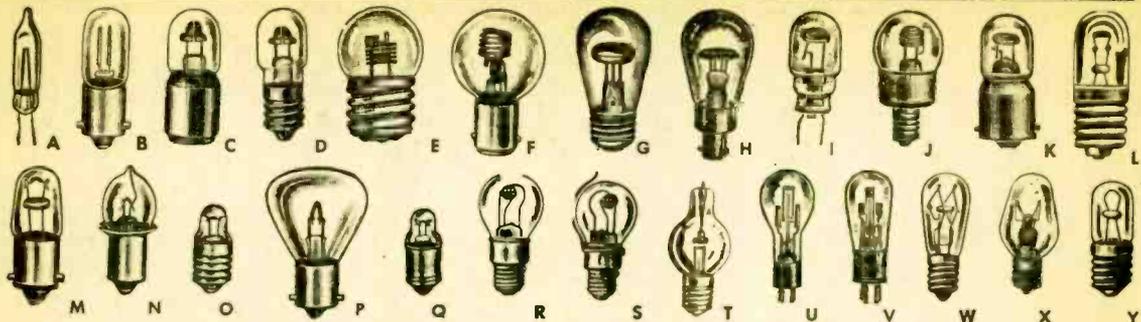
**Fig. R. T22R43.** Pri.: 117 volt, 60 cycle. AC, or 4 volt vibrator. Sec., 1100 volts AC at 1.5 ma. Delivers 2250 volts in voltage doubler circuit. Size, 3½x2x2¼". 3½" mtg. centers. Shpg. wt., 1½ lbs. 63 G 721. NET.....7.35

**Fig. S. Type T22R41.** Power transformer. Pri., 4 volts from vib. at 115 cyc. or higher. Sec., 450 volts DC or 900 volts DC at 15 ma. Mtg. ctrs., 2¾". Size, 3½x2x2". Shpg. wt., 1½ lbs. 63 G 723. NET.....2.94

**Fig. S. Type T22R44.** Ignition transformer. For high-pressure 3-electrode tubes. Pri., 200 volts DC discharge from .25 to .5 mfd condenser. Sec., 15,000 v. peak. Size, 2¼x1½x1½". Shpg. wt., 8 oz. 63 G 722. NET.....3.82

**Thordarson Booklet "Universal Power Pack for High-Speed Electronic Photoflash Tubes"** Shows how to build your own reliable high-speed photoflash tube power pack. For amateur and professional photographers. Versatile—may be operated from 117 v. A.C. or from self-contained batteries. Contains complete circuit diagram and parts list. 8 pages 7x9¼". Shpg. wt., 4 oz. 37 K 028. NET.....15c

# Neon & Miniature Lamps - Sockets



## GENERAL ELECTRIC NEON, ARGON AND MINIATURE LAMPS

For 105-600 volt operation except types marked † which are for 210-600 v. \*Indicates AC operation only and † indicates DC only. S.C. stands for single contact; D.C., double contact; Sk., skirted. Screw types have series resistor in base—for 105-125 v. operation; others require external resistor. AC starting voltage shown. DC starting voltage is 40% higher. †Red sprayed. Av. shpg. wt., 3 oz. Prices include Fed. Excise Tax.

Stock No.	Mfr's Type	Fig.	Volts	Watts	AC Volts	Bulb Style	Base	NET EACH	Box of 10
52 E 370	NE-2	A	1/25	65	T-2	Wire Term.		.09	.73
52 E 373	NE-51	B	1/25	65	T-3 1/2	S.C. Bay. Min.		.12	.98
52 E 374	NE-7	I	1/4	55	T-4 1/2	Wire Term.		.54	4.41
52 E 361	NE-57	D	1/4	55	T-4 1/2	Cand. Screw		.69	5.73
52 E 812	NE-48	C	1/4	65	T-4 1/2	D.C. Bay. Cand.		.52	4.28
52 E 807	NE-45	K	1/4	65	T-4 1/2	Cand. Screw		.64	5.28
52 E 822	NE-21	D	1/4	65	T-4 1/2	S.C. Bay. Cand.		.69	5.73
52 E 362	†NE-58	K	1/4	65	T-4 1/2	Cand. Screw		.64	5.28
52 E 826	†NE-16	C	1/4	67	T-4 1/2	D.C. Bay. Cand.		.62	4.10
52 E 827	†NE-17	C	1/4	55	T-4 1/2	D.C. Bay. Cand.		.66	5.37
52 E 813	†NE-29	F	1/4	105	G-10	D.C. Bay. Cand.		.73	6.02
52 E 860	†NE-56	E	1	60	G-10	Edison		.69	5.73
52 E 801	NE-30	E	1	60	G-10	Edison		.73	6.02
52 E 809	NE-31	J	1	60	G-10	Sk. Cand. Screw		.85	6.98
52 E 814	NE-32	J	1	60	G-10	D.C. Bay. Cand.		.64	5.28
52 E 803	NE-34	G	2	60	S-14	Edison		.73	6.02
52 E 805	†NE-34	G	2	60	S-14	Edison		.78	6.82
52 E 815	NE-36	H	2	60	S-14	Sk. D.C. Bay. Cand.		.73	6.02
52 E 806	NE-40	G	3	60	S-14	Edison		1.13	9.23
52 E 816	NE-42	H	3	60	S-14	Sk. D.C. Bay. Cand.		.98	8.03

### ARGON GLOW LAMPS

Characterized by small size and low operating temperature. Produce a pale blue-violet light—near-ultraviolet radiation. Clear glass. †Av. life, 3000 hrs.; †av. life, 1000 hrs. Wt., 3 oz.

52 E 811	†AR-3	D	1/4	80	T-4 1/2	Cand. Screw		.66	5.90
52 E 820	†AR-2	H	2	65	S-14	Sk. D.C. Bay. Cand.		.73	6.62
52 E 810	†AR-1	G	2	65	S-14	Edison		.73	6.62

### TUNGAR BULBS

General Electric tungar bulb type reflectors for replacement purposes. High quality units. Used in battery-charging equipment. Gas-filled, thermionic-emission types. Av. wt., 1 1/4 lbs.

Stock No.	GE Type	Fig.	Amps	NET EACH
9 E 900	12X825	R	2	4.04
9 E 901	206501	R	2	1.40
9 E 906	20X672	S	5	5.15
9 E 903	189048	T	6	4.41
9 E 904	189049	T	6	4.41
9 E 905	217283	T	15	8.88
9 E 907	16X897	U	2	11.03
9 E 908	45X674	V	6	13.23

### AC-DC PILOT LAMPS

Rated at 1500 hours, average use. All are enclosed in clear glass envelopes except 52 E 356, which is in white glass. Ideal for use behind small panel openings, as general purpose indicator lamps for dials, etc. \*Candelabra screw base. †Double contact candelabra bayonet base. ‡Herzog tubular lamp—all others, G.E. Av. shpg. wt., 4 oz.

No.	Type	Fig.	Volts	Watts	Length	NET EA.	Box of 10
52 E 349	*S6	W	115	6	1 1/2	18c	1.60
52 E 352	†S6	W	115	6	1 1/2	28c	2.50
52 E 354	†S6	W	115	3	1 1/2	27c	2.40
52 E 353	†10WS6	W	230	10	1 1/2	45c	4.00
52 E 355	*C7	X	115-125	7	2 1/2	15c	1.30
52 E 356	†C7	X	115-125	7	2 1/2	17c	1.50
52 E 357	†C7	X	115-125	10	2 1/2	17c	1.50
52 E 350	†C	Y	120	4	1 3/4	39c	3.50

### LAMP SOCKET REDUCERS



Receptacle opening receives base of bulb; plug end fits into socket desired. Enables user to convert to most commonly used types of bulb bases. Positive contact. Av. shpg. wt., 2 oz.

Stock No.	Fig.	Description	NET
52 E 606	AA	Edison-to-Candelabra	12c
52 E 639	BB	Candelabra-to-Miniature	13c
52 E 634	BB	Intermediate-to-Candelabra	6c
52 E 638	CC	Edison-to-Intermediate	15c

### GENERAL PURPOSE MINIATURES

Under Amps. c.p. means candlepower. Abbreviations under Base mean: S.C.—single contact; D.C.—double contact; Min.—miniature; Mid.—mid-rod. Under Bulb Style: G—globe; T—tubular; B—lemon shape; S.C. Min. Flanged; S.C. Min. Flanged; FE—flanged end; RP—reflector; TL—Lens end; tubular (pre-focus type); FE—flanged end; RP—reflector; pear shape; S—as in Fig. R. Weights: bulb, 2 oz.; box of 10, 4 oz. Prices include Federal Excise Tax. Deduct 10% from box prices for 10 or more boxes of 1 type of lamp.

Stock No.	Mfr's Type	Fig.	Volts	Amps	Base	Bulb Style	NET EA.	BOX of 10
52 E 344	PR-2	N	2.4	0.50	S.C. Min. Flanged	B-3 1/2	.17	1.05
52 E 345	PR-3	N	3.6	0.50	S.C. Min. Flanged	B-3 1/2	.17	1.05
52 E 337	PR-4	N	2.3	0.27	S.C. Min. Flanged	B-3 1/2	.17	1.05
52 E 336	PR-6	N	2.5	0.30	S.C. Min. Flanged	B-3 1/2	.17	1.05
52 E 335	PR-8	N	1.9	0.60	S.C. Min. Flanged	B-3 1/2	.19	1.18
52 E 328	PR-9	N	2.7	0.15	S.C. Min. Flanged	B-3 1/2	.18	1.12
52 E 300	13	..	3.7	0.30	Min. Screw	G-3 1/2	.12	.75
52 E 301	14	..	2.5	0.30	Min. Screw	G-3 1/2	.12	.75
52 E 303	27	..	4.9	0.30	Min. Screw	G-4 1/2	.15	.93
52 E 302	31	..	6.2	0.30	Min. Screw	G-4 1/2	.13	.80
52 E 305	40	L	6-8	0.15	Min. Screw	T-3 1/2	.12	.75
52 E 306	42	L	3.2	0.35	Min. Screw	T-3 1/2	.12	.75
52 E 308	43	M	2.5	0.50	Min. Bayonet	T-3 1/2	.12	.75
52 E 309	44	M	6-8	0.25	Min. Bayonet	T-3 1/2	.12	.75
52 E 310	45	M	3.2	0.35	Min. Bayonet	T-3 1/2	.13	.80
52 E 311	46	L	6-8	0.25	Min. Screw	T-3 1/2	.12	.75
52 E 312	47	M	6-8	0.15	Min. Bayonet	T-3 1/2	.12	.75
52 E 313	48	L	2.0	0.06	Min. Screw	T-3 1/2	.16	1.00
52 E 314	49	M	2.0	0.06	Min. Bayonet	T-3 1/2	.16	1.00
52 E 315	50	M	6-8	1 c.p.	Min. Screw	G-3 1/2	.12	.75
52 E 316	51	M	6-8	1 c.p.	Min. Bayonet	G-3 1/2	.11	.68
52 E 317	55	M	6-8	2 c.p.	Min. Bayonet	G-4 1/2	.17	.68
52 E 660	57	..	12-16	3 c.p.	Min. Bayonet	G-3 1/2	.14	.85
52 E 321	81	..	6-8	6 c.p.	D.C. Bayonet	G-6	.14	.85
52 E 317	82	..	6-8	6 c.p.	S.C. Bayonet	G-6	.14	1.00
52 E 325	112	O	1.2	0.22	Min. Screw	TL-3	.13	.80
52 E 327	151	..	1.3	0.60	Min. Screw	G-4 1/2	.15	.93
52 E 329	196	..	1.9	0.60	Min. Screw	G-3 1/2	.16	1.00
52 E 330	222	O	2.2	0.25	Min. Screw	TL-3	.13	.80
52 E 331	223	..	2.2	0.25	Min. Screw	FE-3 1/2	.12	.75
52 E 333	234	Q	2.15	0.22	Special	TL-2 1/2	.14	.86
52 E 334	233	..	2.2	0.27	Min. Screw	G-3 1/2	.12	.75
52 E 339	248	..	2.5	0.50	Min. Screw	G-5 1/2	.15	.93
52 E 319	313	M	28	0.17	Min. Bayonet	T-3 1/2	.30	2.75
52 E 322	327	..	28	0.04	S.C. Mid. Flanged	T-1 1/2	.80	4.95
52 E 658	428	..	12.5	0.25	Min. Screw	G-4 1/2	.14	.86
52 E 332	432	..	18.0	0.25	Min. Screw	G-4 1/2	.14	.86
52 E 652	433	..	18	0.25	Min. Bayonet	G-4 1/2	.14	.86
52 E 342	605	..	6.1	0.50	Min. Screw	G-4 1/2	.15	.93
52 E 650	1133	P	6-8	32 c.p.	S.C. Bayonet	RP-11	.33	2.94
52 E 651	1188	..	6-8	50/32c.p.	D.C. Bayonet	RP-11	.60	3.67
52 E 659	1446	..	12	0.20	Min. Screw	G-3 1/2	.15	.93
52 E 341	1447	..	18.0	0.15	Min. Screw	G-3 1/2	.19	1.18
52 E 661	1449	..	14	0.20	Min. Screw	G-3 1/2	.15	.93
52 E 662	1458	..	20	0.25	Min. Bayonet	G-5	.15	.93
52 E 653	1477	Y	24	0.17	Min. Screw	T-3	.40	2.47
52 E 654	1487	Y	12-16	0.20	Min. Screw	T-3 1/2	.17	1.05
52 E 655	1488	M	14	0.15	Min. Bayonet	T-3 1/2	.17	1.05
52 E 340	1490	M	3.2	0.16	Min. Bayonet	T-3 1/2	.12	.75
52 E 656	1493	..	6.5	2.75	D.C. Bayonet	S-8	.89	5.27
52 E 663	1718	..	6	1.5	D.C. Min. Bay.	S-11	1.55	9.61
52 E 657	1815	M	12-16	0.20	Min. Bayonet	T-3 1/2	.17	1.05
52 E 342	1820	..	28	1.0	Min. Bayonet	T-3 1/2	.32	1.98
52 E 343	1829	..	28.0	0.07	Min. Bayonet	T-3 1/2	.30	1.82

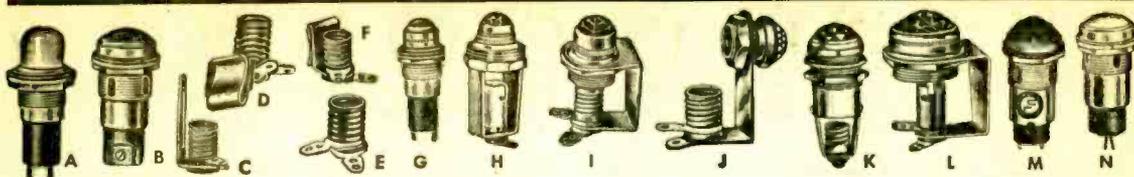
### SOCKETS FOR NEON, ARGON AND PILOT LAMPS



\*Hard rubber insert in metal shell. †For type NE-51 miniature lamp, with lug terminals and metal metal clip. Av. shpg. wt., 3 oz.

Stock No.	Fig.	Description	EACH	10 For
52 E 850	DD	Edison	13c	1.17
52 E 858	DD	Miniature screw	14c	1.26
52 E 852	EE	Candelabra screw	40c	3.60
52 E 855	DD	Candelabra screw	14c	1.26
52 E 853*	FF	Double-contact, bayonet candelabra	29c	2.61
52 E 856	GG	Double-contact, bayonet candelabra	58c	5.22
52 E 857	GG	Single-contact, bayonet candelabra	58c	5.22
52 E 403†	HH	Single-contact, bayonet miniature	8c	.72

# Dialco Pilot Light Assemblies



## NEON PANEL ASSEMBLIES

### PLASTIC CAP ASSEMBLIES

Fig. A. Series 95408. Enclosed neon pilot light assemblies. Built-in 56,000 ohm 1/2 watt resistor. For NE-51 neon lamps in 110-220 v. circuits. Plastic head, bakelite body. 2 1/4" long. 1/8" mtg. hole. Less NE-51 (see listing on page 266). U.L. Approved. Wt., each 3 oz.

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 555	931	Red	97c	87c
52 E 556	933	Amber		
52 E 557	935	White		
52 E 558	937	Clear		

### Replacement Plastic Caps for Above

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 565	95-931	Red	15c	13c
52 E 566	95-933	Amber		
52 E 567	95-935	White		
52 E 568	95-937	Clear		

### JEWEL CAP ASSEMBLIES

Fig. B. Series 31914. For NE-45, -57, -58, etc. Candelabra screw base neon lamps. 115 v. 2 1/4" long. 1" mtg. hole. Neon removable from front. Less lamp (see page 266). U.L. Approved. Wt., each, 4 oz.

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 559	111	Red	1.03	93c
52 E 560	113	Amber		
52 E 562	137	Clear		

### Replacement Jewel Caps for Above

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 575	31-111	Red	35c	31c
52 E 576	31-113	Amber		
52 E 578	31-137	Clear		

## PILOT LIGHT SOCKETS

Popular Dialco assemblies. Cadmium plating on all brackets. Terminal lugs of tinned brass to facilitate rapid soldering. Coil spring construction on all bayonet type sockets. Supplied with high-grade insulating washers. Refer to page 266 for complete selection of miniature screw (for Series 500), bayonet (for Series 700), and candelabra (for Series 600) lamps. Av. sbgp. wt., per 5, 6 oz.

### MINIATURE SCREW

Stock No.	Mfr's Type	Flg.	Pkg. of 5, Per Pkg.	5 Pkgs. or More, Per Pkg.
52 E 400	501	F	36c	32c
52 E 401	507	E		
52 E 402	504	D		
52 E 410	505	C		

### MINIATURE BAYONET

(Not Illustrated.)

Stock No.	Mfr's Type	Pkg. of 5, Per Pkg.	5 Pkgs. or More, Per Pkg.
52 E 404	701	39c	35c
52 E 405	707		
52 E 403	704		
52 E 406	705		

## CANDELABRA 115 VOLTS

Stock No.	Mfr's Type	Flg.	Pkg. of 5, Per Pkg.	5 Pkgs. or More, Per Pkg.
52 E 407	601	F	54c	49c
52 E 408	604	D		
52 E 409	605	C		

## PILOT LIGHT LENS CAPS

All purpose 3/8", 1/2", and 5/8" diameter smooth jewels in polished nickel-plated brass holders for up to 1/2" panels. Require 1/8", 3/8", and 1/2" holes, respectively, for mounting. Wt., 2 oz. Deduct 10% when ordering 10 or more.

Size	Red	Green	Amber	E.A.
3/8"	52 E 444	52 E 445	52 E 446	24c
1/2"	52 E 490	52 E 491	52 E 492	13c
5/8"	52 E 447	52 E 448	52 E 449	20c

## HALF-INCH ENCLOSED TYPE

### AVIATION TYPE SIGNAL ASSEMBLIES

Fig. G. Series 81410. Aviation type signal assemblies with smooth-faced jewels in 1/2" nickel-brass holder. Takes miniature bayonet base lamp, replaceable from front of unit. (See page 266 for bulb listing.) 2 1/4" long. Requires 1/8" mounting hole. For panels up to 3/4" thick. Less lamp. U.L. Approved. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 465	111	Red	80c	72c
52 E 466	112	Green		
52 E 467	135	White		
52 E 468	113	Amber		

### Replacement Jewel Caps Only for Above

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 535	81-111	Red	16c	14c
52 E 536	81-112	Green		
52 E 537	81-135	White		
52 E 538	81-113	Amber		

## HALF-INCH OPEN TYPES

Fig. H. Series 857B. Requires 1/8" mtg. hole. 1/2" lens. 2" long. Tinned solder terminals. For panels up to 1/4" thick. With mounting washer. Less lamp. Uses type 44, 47 or 51 listed on page 266. Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 545	431	Red	44c	40c
52 E 546	432	Green		
52 E 547	433	Amber		
52 E 548	434	Blue		

## MINIATURE TYPE

Fig. I. Series 810. Screw and bayonet type. 1/2" jewel. Requires 1/8" mtg. hole. Uses miniature bulbs. Tinned lugs. For PA equipment, recorders, etc. \*Indicates bayonet base. Less lamp; see page 266. Wt., 2 oz.

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 450	M-431	Red	32c	29c
52 E 451	M-432	Green		
52 E 452	M-433	Amber		
52 E 453	B-431	Red		
52 E 454	B-432	Green		
52 E 455	B-433	Amber		

Fig. J. Series 510, 610, and 710. Open type visual indicators. Choice of miniature screw, bayonet or candelabra. Faceted jewels. Lug terminals. Require 3/8" mounting hole. Less lamp. Shpg. wt., 2 oz.

### Series 510 Miniature Screw Type

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 475	431	Red	21c	19c
52 E 476	432	Green		
52 E 477	433	Amber		

### Series 610 Candelabra Type

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 540	431	Red	21c	19c
52 E 541	432	Green		
52 E 542	433	Amber		

### Series 710 Miniature Bayonet Type

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 480	431	Red	21c	19c
52 E 481	432	Green		
52 E 482	433	Amber		

## SITTLER PANEL LAMP AND MOUNT

Type 211007 Neon Indicating Lamp. Starting voltage: AC, 65; DC, 90. Rated at 1/25 watt. Bulb leads are securely soldered to press-fit type terminals. For use with panel mount listed below. Shpg. wt., 2 oz.  
52 E 380. NET..... 44c

Type 1414 1/2" Panel Mount. Bakelite housing. Clear plastic shield. Built-in 220K resistor. With mtg. hdwe. Wt., 2 oz.  
41 E 746. NET..... 1.01

## COLE-HERSEE

### DASH LAMP ASSEMBLY

Nickel-plated. Socket takes No. 51 or 55 bulb. 3/4" mtg. hole. 12" leads. Less switch and bulb. Shpg. wt., 2 oz.  
52 E 633. NET..... 44c

## ONE-INCH ENCLOSED TYPES

Fig. M. Series 31101. 115 volt. enclosed pilot lamp assembly. Black bakelite and brass. Faceted jewel in chrome-plated brass holder. Candelabra socket. Wt., 4 oz. \*Not for neon.

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 460	431	Red	1.03	93c
52 E 461	432	Green*		
52 E 462	433	Amber		
52 E 510	437	Clear		
52 E 511	434	Blue*		
52 E 512	435	White		

### Replacement Jewel Caps for Above

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 525	31-431	Red	35c	31c
52 E 526	31-432	Green		
52 E 527	31-433	Amber		
52 E 528	31-437	Clear		

## ASSEMBLIES WITH WIRE LEADS

Fig. N. Series 312901. Enclosed assembly. With 6" wire leads. Solid brass. Friction-fit, chrome-plated cap. 1" mtg. hole. U.L. Approved. Candelabra socket. Less S6 lamp (see page 266). Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 485	111	Red	1.13	1.02
52 E 486	112	Green		
52 E 487	113	Amber		
52 E 488	117	Clear		

### Replacement Jewel Caps for Above

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 575	31-111	Red	35c	31c
52 E 576	31-112	Green		
52 E 577	31-113	Amber		
52 E 578	31-117	Clear		

## ONE-INCH OPEN TYPES

Fig. K. Series 75. 115 volt open pilot lamp assembly with faceted jewel in chrome-plated brass holder. Candelabra socket. Solid brass construction. Friction-fit chrome-plated cap. 1" mounting hole. Less lamp. Shpg. wt., 5 oz.

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 500	C-431	Red	83c	75c
52 E 501	C-432	Green		
52 E 502	C-433	Amber		

### Replacement Jewel Caps for Above

Stock No.	Mfr's Type	Jewel Color	NET EACH	10orMore, EACH
52 E 525	31-431	Red	35c	31c
52 E 526	31-432	Green		
52 E 527	31-433	Amber		

## MINIATURE BAYONET SOCKETS

Fig. L. Series 910. Open type with chrome-plated brass jewel holders. 1 1/2" long. 1" mounting hole. Excellent for power panels, test instruments, etc. Less bulb. Shpg. wt., 3 oz.

Color	Min. Bay.	Min. Screw	Candelabra
Red	52 E 420	52 E 430	52 E 440
Green	52 E 421	52 E 431	52 E 441
Amber	52 E 422	52 E 432	52 E 442

NET EACH ..... 83c  
10 or more, EACH ..... 75c



## DRAKE NEON INDICATING LIGHTS

Fig. A. Type 110 "Fluohlite." Neon lite in translucent plastic base. For 110-125 v. AC. DC. 1/2 x 1/4 x 3/8". 1 1/2" mtg. centers. Wt., 2 oz.  
78 E 061. EA. .... 65c 10, EACH..... 58c

Fig. B. Type 106 "Post-lite." Panel lights for 65-130 v. AC or 90-130 v. DC. 2 1/4" long. Require 1/2" mtg. hole. With mtg. nut. 2 oz.  
78 E 062. EA. .... 75c 10, EACH..... 67c

## PILOT BULB REMOVER

Designed to expedite installation or removal of miniature and candelabra lamps. High-grade rubber. Wt., 2 oz.  
52 E 550. NET..... 26c

# Littelfuse Fuses and Mountings



## CARTRIDGE FUSES FOR RADIO, TV, INSTRUMENTS

### 3AG 250 VOLT FUSES

Series 312000. 3AG type. Quick to medium acting fuse for low time lag applications. Excellent for use in radios, auto radios, amplifiers, etc. Ratings marked on metal cap.  $\frac{1}{16}$  inch. Diagonal element position assures accurate alignment and calibration—even under heat expansion. U.L. Approved. Size,  $1\frac{1}{4} \times \frac{1}{4}$  inch. Shpg. wt., pkg. of 100, 14 oz.

Amp	Mfr's Type	Stock No.	Pkg. of 5	100 For	Amp	Mfr's Type	Stock No.	Pkg. of 5	100 For
1/16	312 062	52 B 242	44c	7.35	3/4	312 750	52 B 233	44c	7.35
1/8	312 125	52 B 230	44c	7.35	1	312001	52 B 234	21c	3.43
15/100	312 150	52 B 671	44c	7.35	1 1/2	312011	52 B 235	21c	3.43
1/5	312 175	52 B 672	44c	7.35	2	312021	52 B 236	21c	3.43
3/16	312 187	52 B 161	44c	7.35	3	312031	52 B 237	21c	3.43
1/4	312 250	52 B 231	44c	7.35	4	312041	52 B 238	29c	4.90
3/10	312 300	52 B 673	44c	7.35	5	312051	52 B 239	29c	4.90
3/8	312 375	52 B 243	44c	7.35	6	312061	52 B 240	29c	4.90
1/2	312 500	52 B 232	39c	6.86	8	312081	52 B 248	44c	7.35

### 3AG 125-VOLT SLO-BLO FUSES

Series 313000. Slo-Blo fuses with high time-lag to stand heavy surges. Designed for circuits having high inductive or capacitive surges. Also for circuits having heavy starting currents, such as motors and lamps. Anti-fatigue construction, consisting of compounded spring and resistor. All have 125 v. maximum rating, except  $\frac{1}{2}$  v. Dr. through 5 amps are U.L. Approved. Size:  $1\frac{1}{4}$  inch long and  $\frac{1}{4}$  inch diameter. Shpg. wt., pkg. of 100, 14 oz.

Amp	Mfr's Type	Stock No.	Pkg. of 5	100 For	Amp	Mfr's Type	Stock No.	Pkg. of 5	100 For
1/100	313 010	52 B 185	74c	12.25	1 1/4	313001	52 B 220	74c	12.25
1/32	313 032	52 B 186	74c	12.25	1 1/2	313011	52 B 253	59c	9.80
1/16	313 062	52 B 187	74c	12.25	1 3/4	313021	52 B 181	59c	9.80
1/10	313 100	52 B 212	74c	12.25	1 1/2	313011	52 B 254	59c	9.80
1/8	313 125	52 B 188	74c	12.25	2	313021	52 B 179	59c	9.80
15/100	313 150	52 B 189	74c	12.25	2 1/2	313021	52 B 257	59c	9.80
1/75	313 175	52 B 675	74c	12.25	3	313031	52 B 182	59c	9.80
3/16	313 187	52 B 190	74c	12.25	3 1/2	313031	52 B 227	59c	9.80
2/10	313 200	52 B 191	74c	12.25	4	313041	52 B 227	59c	9.80
1/4	313 250	52 B 921	74c	12.25	5	313051	52 B 223	59c	9.80
3/10	313 300	52 B 192	74c	12.25	6 1/4	3136.25	52 B 183	59c	9.80
3/8	313 375	52 B 193	74c	12.25	8	313081	52 B 184	59c	9.80
4/10	313 400	52 B 194	74c	12.25	10	313010	52 B 226	59c	9.80
1/2	313 500	52 B 922	74c	12.25	15	313015	52 B 244	59c	9.80
6/10	313 600	52 B 195	74c	12.25	20	313020	52 B 225	59c	9.80
3/4	313 750	52 B 196	74c	12.25	25	313025	52 B 676	59c	9.80
8/10	313 800	52 B 197	74c	12.25	30	313030	52 B 677	59c	9.80

Series 314000. 3AB type. 250V.  $\frac{1}{16}$  inch. Steatite enclosed, arc-quenching, powder filled fuses. Shatter-proof against quick shorts. Medium time lag. For use with amplifiers, rectifiers, small generators, etc. Size,  $1\frac{1}{2} \times \frac{1}{4}$  inch. Approved by U.L. thru 15 amps. Shpg. wt., pkg. of 100, 1 lb.

Amps	Mfr's Type	Stock No.	Pkg. of 5	100 For	Amps	Mfr's Type	Stock No.	Pkg. of 5	100 For
1	314001	52 B 678	44c	7.35	10	314010	52 B 244	44c	7.35
2	314002	52 B 679	44c	7.35	12	314012	52 B 245	44c	7.35
3	314003	52 B 680	44c	7.35	15	314015	52 B 246	44c	7.35
5	314005	52 B 681	44c	7.35	20	314020	52 B 247	44c	7.35
8	314008	52 B 241	44c	7.35	30	314030	52 B 682	44c	7.35

### 8AG INSTRUMENT FUSES

Series 361000. For high-speed action. Glass enclosed units.  $1\frac{1}{2}$  inch by  $\frac{1}{4}$  inch dia. For circuits not exceeding 32 volts AC or DC; all others for use up to 250 volts AC or DC. Av. shpg. wt., pkg. of 100, 10 oz.

Ampere Rating	Blow Point In MA	Mfr's Type	Stock No.	Pkg. of 5	100 For
1/500	3	361 002	52 B 199	2.04	34.30
1/200	8	361 005	52 B 200	89c	14.70
1/100	16	361 010	52 B 201	59c	9.80
1/32	40	361 031	52 B 202	59c	9.80
1/16	85	361 062	52 B 203	44c	7.35
1/8	155	361 125	52 B 205	44c	7.35
1/4	270	361 250	52 B 206	44c	7.35
3/8	380	361 375	52 B 207	44c	7.35
1/2	520	361 500	52 B 208	44c	7.35
3/4	800	361 750	52 B 209	44c	7.35
1	1300	361 001	52 B 210	29c	4.90
1 1/2	1950	361 01.5	52 B 212	29c	4.90
2	2600	361 002.	52 B 211	29c	4.90
3	3600	361 003.	52 B 213	29c	4.90
5*	6000	361 005.	52 B 214	29c	4.90



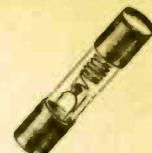
### TYPE 3AG PIGTAIL FUSES

For exact replacement in TV sets—with stand heavy voltage surges.  $1\frac{1}{4}$  inch pigtail leads. All U.L. Approved except\*.  $1\frac{1}{4} \times \frac{1}{4}$  inch. Shpg. wt., pkg. of 100, 1 lb.

Amps	Volts	Action	Mfr's Type	Stock No.	Pkg. of 5	100 For
15/100	125	Slo-Blo	315 150	52 B 280	87c	14.70
2/10	125	Slo-Blo	315 200	52 B 281	87c	14.70
1/4	125	Slo-Blo	315 250	52 B 216	87c	14.70
1/2	125	Slo-Blo	315 500	52 B 282	87c	14.70
2	125	Slo-Blo	315 002.	52 B 217	74c	12.25
2 1/2	125	Slo-Blo	315 02.5	52 B 218	74c	12.25
4*	125	Slo-Blo	315 004.	52 B 219	74c	12.25
5*	125	Slo-Blo	315 005.	52 B 229	74c	12.25
1/2	250	Fast	318 125	52 B 277	59c	9.80
3/8	250	Fast	318 250	52 B 215	59c	9.80
1/4	250	Fast	318 375	52 B 278	59c	9.80
1/2	250	Fast	318 500	52 B 279	59c	9.80

### TYPE 4AG SLO-BLO FUSES

Series 413000. Anti-vibration. 4AG slo-blo fuses designed to meet aircraft requirements. High time lag assures extra protection against sustained overloads by permitting lower amperage fuses to be used on inductive loads. Spring and link element structure. On short circuit, link blows instantly. \*32 v; rest, 250 v.  $1\frac{1}{4} \times \frac{1}{4}$  inch.



Amp	Mfr's Type	Stock No.	Pkg. of 5	100 For	Amp	Mfr's Type	Stock No.	Pkg. of 5	100 For
1/10	413 100	52 B 992	89c	14.70	2 1/2	41302.5	52 B 946	74c	12.25
15/100	413 150	52 B 993	89c	14.70	3	41303.5	52 B 947	74c	12.25
2/10	413 200	52 B 994	89c	14.70	3-2/10	41304.5	52 B 948	74c	12.25
1/4	413 250	52 B 985	89c	14.70	4*	41305.5	52 B 949	74c	12.25
3/10	413 300	52 B 995	89c	14.70	5*	41306.5	52 B 950	74c	12.25
4/10	413 400	52 B 996	89c	14.70	6 1/4*	4136.25	52 B 949	74c	12.25
1/2	413 500	52 B 986	89c	14.70	8*	41308.5	52 B 960	74c	12.25
6/10	413 600	52 B 997	89c	14.70	10*	41310.5	52 B 991	74c	12.25
3/4	413 750	52 B 987	89c	14.70	15*	413015	52 B 961	74c	12.25
6/10	413 800	52 B 988	89c	14.70	20*	413020	52 B 962	74c	12.25
1	413001	52 B 987	74c	2.25	25*	413025	52 B 963	74c	12.25
1 1/4	4131.25	52 B 999	74c	2.25	30*	413030	52 B 964	74c	12.25
1 1/2	41301.5	52 B 948	74c	2.25	35*	413035	52 B 965	74c	12.25
2	41302.5	52 B 949	74c	2.25	40*	413040	52 B 966	74c	12.25

### 4AG AND 5AG STRAIGHT-ELEMENT FUSES

Series 417000 and 517000. Medium-lag, heavy-duty fuses. 32 volts, except \*250 volts. 417000 series are  $1\frac{1}{4} \times \frac{1}{4}$  inch. 517000 series are  $1\frac{1}{2} \times \frac{1}{4}$  inch. Wt. per 100, 14 oz.

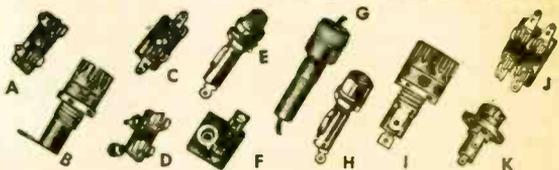
Amp	Mfr's Type	Stock No.	Pkg. of 5	100 For	Amp	Mfr's Type	Stock No.	Pkg. of 5	100 For
1	417001*	52 B 112	34c	5.88	1	517001*	52 B 136	44c	7.35
2	417002*	52 B 113	34c	5.88	2	517002*	52 B 137	44c	7.35
3	417003*	52 B 114	34c	5.88	3	517003*	52 B 138	44c	7.35
5	417005	52 B 115	29c	4.90	4	517004	52 B 139	44c	7.35
10	417010	52 B 134	29c	4.90	5	517005	52 B 140	44c	7.35
15	417015	52 B 135	29c	4.90	10	517010	52 B 141	44c	7.35
20	417020	52 B 117	29c	4.90	15	517015	52 B 142	44c	7.35
25	417025	52 B 118	29c	4.90	20	517020	52 B 143	44c	7.35
30	417030	52 B 119	29c	4.90	25	517025	52 B 144	44c	7.35
35	417035	52 B 118	34c	5.88	30	517030	52 B 145	44c	7.35
40	417040	52 B 132	34c	5.88					
50	417050	52 B 133	34c	5.88					

### SFE 32-VOLT AUTO FUSES

Series 307000. Medium-acting fuses. Made to sizes specified by S.A.E. 32 v. maximum rating. U.L. Approved. Wt., per 100, 14 oz.

Amps	Type	No.	Size	Pkg. of 5	100 For
4	307004.	52 B 250	$\frac{1}{8}$ dia. x $\frac{3}{16}$ "	14c	2.45
6	307006.	52 B 255	$\frac{1}{8}$ dia. x $\frac{3}{16}$ "	14c	2.45
10	307010.	52 B 260	$\frac{1}{8}$ dia. x $\frac{3}{16}$ "	13c	1.96
14	307014.	52 B 265	$\frac{1}{8}$ dia. x $\frac{3}{16}$ "	13c	1.96
20	307020.	52 B 270	$\frac{1}{8}$ dia. x $\frac{3}{16}$ "	9c	1.71
30	307030.	52 B 275	$\frac{1}{8}$ dia. x $\frac{3}{16}$ "	18c	2.94

New 7AG type 30307.5 fuse for 12 v. auto systems. Rated at 7 1/2 amps. 32 v. Used in new G.M. auto engine playing 12 v. batteries.  $\frac{1}{8} \times \frac{1}{4}$  inch. 52 B 165. PER PKG. OF 100.....1.96 Pkg. of 5.....13c



### LITTELFUSE MOUNTINGS—EXTRACTOR POSTS

Fuse holders and mounts for every application. \*With fuse. Wt., 3 ozs.

No.	Type	Fig.	For Fuses:	Description	Each
41 B 720	341001	H	3AG, 3AB	Panel mount, screw slot	.26
41 B 721	371001	H	8AG	Panel mount, screw slot	.26
41 B 729	442001	H	3AG	Panel mount, thumb knob	

# Buss Fuses and Fusetrons

## BUSS STANDARD AND FUSETRON FUSES



### TYPE MDL FUSETRON FUSES

Fusetron fuses feature thermal cutout. Long time-lag avoids needless surge blows. Link operates only on high overloads or shorts. Thermal cutout operates slowly on low overloads. Fit 3AG type and HKL holders.  $1\frac{1}{4} \times \frac{1}{4}$ ". 250 and 125 volt types are U.L. Approved. Shpg. wt., pkg. of 100, 15 oz.

#### 250 VOLTS

Amps	Stock No.	Pkg. of 5	100 For	Amps	Stock No.	Pkg. of 5	100 For
1/100	53 B 441	73c	12.25	3/10	53 B 452	73c	12.25
1/32	53 B 442	73c	12.25	4/10	53 B 453	73c	12.25
1/16	53 B 443	73c	12.25	5/10	53 B 454	73c	12.25
1/10	53 B 444	73c	12.25	6/10	53 B 455	73c	12.25
15/100	53 B 450	73c	12.25	8/10	53 B 456	73c	12.25
2/10	53 B 451	73c	12.25	10	53 B 461	73c	12.25

#### 125 VOLTS

1 1/4	53 B 462	59c	10.29	2 1/2	53 B 465	57c	9.80
1-6/10	53 B 463	59c	10.29	2-8/10	53 B 466	57c	9.80
2	53 B 464	59c	10.29				

#### 32 VOLTS

4	53 B 468	57c	9.80	8	53 B 471	57c	9.80
5	53 B 469	57c	9.80	10	53 B 472	57c	9.80
6 1/4	53 B 470	57c	9.80	15	53 B 473	57c	9.80

### TYPE MDX FUSETRONS

#### FAST-ACTING FUSES FOR PROTECTION OF INSTRUMENTS, ETC.

Similar to MDL above, but faster acting. Blowing time: At 200% load, 12 seconds; at 300% load, 3 seconds; at 500% load, 1/2 second. Thermal cutout will not blow on low surge, etc. However, protection is afforded on short-circuits and heavy overloads.  $1\frac{1}{4} \times \frac{1}{4}$ ". Fit 3AG and HKL holders. 125 v. U.L. Approved. Shpg. wt., per 100, 15 oz.

Amps	Stock No.	Pkg. of 5	100 For	Amps	Stock No.	Pkg. of 5	100 For
3-2/10	53 B 467	59c	10.29	6 1/4	53 B 505	59c	10.29
4	53 B 503	59c	10.29	7	53 B 506	59c	10.29
5	53 B 504	59c	10.29				

### TYPE MJB FAST-ACTING FUSES



Formerly called Type 8AG. Provide high speed action necessary to protect sensitive instruments. Test specifications: Will carry 100% load; open at 200% load within 5 seconds. Dimensions,  $\frac{1}{2} \times 1$ ". Fit Type HJM holder. Glass tube, metal end caps. For 250 volt or less. Shpg. wt., per 5, 3 oz.

Amps	Stock No.	Pkg. of 5	Amps	Stock No.	Pkg. of 5
1/500	53 B 507	2.06	1/100	53 B 509	49c
1/200	53 B 508	.73	1/32	53 B 510	49c

### TYPE MJW FAST-ACTING FUSES

Fast acting fuses to protect sensitive instruments from burn-out. Were formerly called Type 8AG. Test specifications: Will carry 100% load; open at 200% load within 5 seconds. Fit type HJM holder. For circuits handling 250 volts or less. Glass tube with metal ends. Type MJW are special low-resistance fuses. Available in sizes listed below only.  $\frac{1}{4} \times 1$ ". Shpg. wt., per 100, 13 oz.

53 B 511, Type MJW, 1/4 amp.	Pkg. of 5	37c	100 for	6.61
53 B 512, Type MJW, 1/2 amp.	Pkg. of 5	37c	100 for	6.61

### TYPE AGA GLASS TUBE FUSES

Very slow acting low-voltage fuses. Designed for use where equipment may have to operate at over-load for prolonged periods of time. Test specifications: Carry 100% load; open at 135% load within 1 hour. For 32 volts or less. Size,  $\frac{1}{4} \times \frac{1}{4}$ ". Straight line fuse element is clearly visible. Shpg. wt., per 100, 9 oz.

Amps	Stock No.	Pkg. of 5	100 For	Amps	Stock No.	Pkg. of 5	100 For
1	53 B 525	18c	3.43	7 1/2	53 B 530	13c	2.45
2	53 B 526	18c	3.43	10	53 B 531	13c	2.45
3	53 B 527	18c	3.43	15	53 B 532	13c	2.45
5	53 B 528	13c	2.45	20	53 B 533	13c	2.45
6	53 B 529	13c	2.45	30	53 B 534	13c	2.45

### LITTELFUSE ONE-CALL TV FUSE KIT



Type 094029. The fuses and mountings packed in the handsome plastic case have been carefully selected to cover 94% of all fuse replacements required by the service dealer. Simple to refill after a visual check, or may be used for other small parts, and entire kit replaced. Stock is visible at all times. Kit contains most often used types. Maximum voltage rating stamped on metal cap. U.L. Approved. Shpg. wt., 12 oz. Includes 6 TV snap-on fuse mountings and the following fuses:

Quantity	Type	Ampere Rating	Description	Size
1	312.005	5	Quick-acting	3AG
10	312.250	5	Quick-acting	3AG
5	312.500	1/2	Quick-acting	3AG
5	313.005	5	Slow-blow	3AG
10	313.250	5	Slow-blow	3AG
5	313.500	1/2	Slow-blow	3AG
5	362.250	1/2	Quick-acting	8AG

52 B 298. Complete Kit. NET ..... 5.05

### MBW, AGC, MTH BUSS FUSES

Precision manufactured. For use in circuits with up to 250 volts AC or DC. Carry 110% of rated current; open in one hour at 135%. \*Low resistance fuse providing high-speed action necessary to protect delicate instruments. U.L. Approved. Fit 3AG and HKL holders.  $1\frac{1}{4} \times \frac{1}{4}$ ". Wt., 100, 15 oz.



#### 250 VOLTS

Amps	Mfr's Type	Stock No.	Pkg. of 5	100 For	Amps	Mfr's Type	Stock No.	Pkg. of 5	100 For
1/4	MBW*	53 B 420	44c	7.35	1 1/2	AGC	53 B 427	18c	3.43
1/2	AGC	53 B 421	37c	6.08	2	AGC	53 B 428	18c	3.43
3/4	AGC	53 B 422	37c	6.08	3	AGC	53 B 429	18c	3.43
1	AGC	53 B 423	37c	6.08	4	MTH	53 B 430	24c	4.12
1 1/4	AGC	53 B 424	37c	6.08	5	MTH	53 B 431	24c	4.12
1 1/2	AGC	53 B 425	37c	6.08	6	MTH	53 B 432	24c	4.12
1	AGC	53 B 426	18c	3.43	8	MTH	53 B 433	37c	6.17

### TYPE AGC 32 VOLT BUSS FUSES

For circuits operating at 32 volts or less. Glass case. Fit 3AG and HKP holders. Size,  $1\frac{1}{4} \times \frac{1}{4}$ ". U.L. Approved. Shpg. wt., pkg. of 100, 15 oz.

Amps	Mfr's Type	Stock No.	Pkg. of 5	100 For	Amps	Mfr's Type	Stock No.	Pkg. of 5	100 For
5	AGC	53 B 434	13c	2.45	15	AGC	53 B 438	11c	1.96
6	AGC	53 B 435	13c	2.45	25	AGC	53 B 439	13c	2.45
7 1/2	AGC	53 B 436	13c	2.45	30	AGC	53 B 440	13c	2.45
10	AGC	53 B 437	11c	1.96					

### TYPE AGX FAST-ACTING FUSES

Glass enclosed with metal end caps. Capable of very high speed action for proper protection of valuable instruments. Formerly 8AG. Specifications: Will carry 100% load; open at 200% load within 5 seconds. U.L. Approved. 125 volt except \*250 volt.  $1\frac{1}{4} \times \frac{1}{4}$ ". Shpg. wt., per 5, 3 oz.

Amps	Stock No.	Pkg. of 5	Amps	Stock No.	Pkg. of 5
1/2	53 B 513*	37c	1/4	53 B 517	29c
3/4	53 B 514*	29c	1	53 B 518	24c
1	53 B 515*	29c	1 1/2	53 B 519	24c
1 1/2	53 B 516*	29c	2	53 B 520	24c

### FUSETRON TYPE FNM LONG TIME LAG FUSES

Avoid needless blows from starting currents or surges. Fuse link operates only on high overloads or short-circuits. Thermal cutout functions on low overloads. Thermal cutout cannot operate quickly on any load provides long time lag. Very protection is obtained against short circuits or continued overloads. Dual element type. Fiber tube. Specifications: Carry 110% load; open at 135% load within 1 hour. Approximate blowing time: at 200% load, 25 seconds; at 300% load, 8 seconds; at 500% load, 3 seconds. U.L. Approved.  $\frac{1}{4} \times 1\frac{1}{2}$ ". 250 v. except \*125 v. Wt. per 100, 2 lbs.



Amps	Stock No.	Pkg. of 5	100 For	Amps	Stock No.	Pkg. of 5	100 For
1	53 B 485	1.08	17.64	4	53 B 491	1.08	17.64
1 1/4	53 B 486	1.08	17.64	5	53 B 492	1.08	17.64
1-6/10	53 B 487	1.08	17.64	6 1/4	53 B 493	1.08	17.64
2	53 B 488	1.08	17.64	8	53 B 494	1.08	17.64
2 1/2	53 B 489	1.08	17.64	10	53 B 495	1.08	17.64
3-2/10	53 B 490	1.08	17.64	15*	53 B 496	1.08	17.64

### FUSETRON TYPE T15-30 AMP FUSES

New dual-element plug fuses. Provide an additional measure of protection against "blowing" with use of thermal element—element withstands surges of starting current, overloads and short circuits. 20, 25 and 30 ampere types are for use on appliance circuits or mains; 15 ampere type for smaller household appliances. For voltages up to 125 volts, AC or DC. Completely shockproof—top cap is insulated with porcelain and mica. Size of fuse is imprinted on cap of cap. Large, clear window with white background gives clear indication if fuse is blown. U.L. Approved. Shpg. wt. per pkg., 6 oz.



53 B 521, 15 amp. Pkg. of 5	49c	53 B 523, 25 amp. Pkg. of 5	49c
53 B 522, 20 amp. Pkg. of 5	34c	53 B 524, 30 amp. Pkg. of 5	49c

### FUSE MOUNTINGS



HCM  
HKP  
HJM

HKL  
MKR

4405

HPC

Provide a convenient way of mounting fuses on radio, TV, instrument, automobiles, etc. \*HKL neon indicator, 1H HKR, incandescent indicator. Fuse always easy to remove as it projects beyond holder body and is not held tight at inner end when knob is removed. Av. wt., 1 oz.

No.	Type	For Fuses	NET	No.	Type	For Fuses	NET
53 B 501	HKL*	1 1/4 x 1/4" 250 v.	88c	53 B 475	HKP	1/2 x 1/4"	21c
53 B 502	HKR†	1 1/4 x 1/4" 32 v.	1.41	53 B 478	HJM	1 1/4 x 1/4"	21c
53 B 500	HPC	1 1/2 x 1 1/2"	37c	53 B 480	4405	1 1/4 x 1/4"	9c
53 B 477	HCM	1 1/2 x 1 1/4"	34c	53 B 481	4408	Double 4405	15c

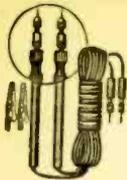
### TWIN CLIPS FOR 1/4" FUSES

For quick replacement of pistol-type TV fuses with standard snap-on type fuses. No cutting or soldering. Less fuse. Shpg. wt. per box, 10 oz.

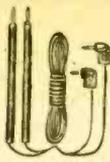


53 B 476. Per box of 10 ..... 45c

# Test Equipment Accessories



A



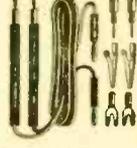
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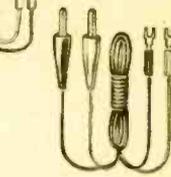
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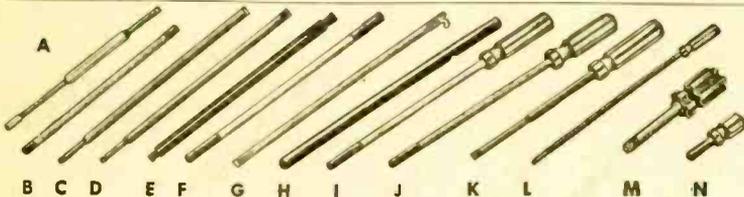
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## ICA TEST LEADS

Fig. A. Type 400 Heavy-Duty Leads. Extra-thin 6' red and black fenoline prods knurled at ends for easy finger grip. With removable phono needle type chuck. Other ends have phone tip terminals. 48' heavy-duty kinkless, flexible rubber leads. Shpg. wt. 1 lb. 42 N 200. NET PER PAIR. 1.18  
42 N 202. Type 388. Same as above but with alligator clips. NET PER PAIR. 1.11  
Fig. B. Type 332 Unbreakable Leads. 5' rubber-insulated red and black steel prods with pointed phone tip ends. Other ends have standard phone tips. 48' kinkless, rubber leads. Complete with non-insulated phone tips. Shpg. wt. 5 oz. 42 N 230. NET PER PAIR. 73c  
Fig. B. Type 331. Insulated phone tips. 42 N 231. NET PER PAIR. 82c

Fig. C. Type 329 Extra Long Handle Test Leads. 8' red and black polished hard rubber prods with sharp pointed penetrating tips. Other ends have gun-handle type phone tip plugs 48' rubber covered kinkless leads. Shpg. wt. 10 oz. 42 N 216. NET PER PAIR. 2.45  
Fig. D. Type 373 Pencil Test Leads. 5' sharp-pointed red and black prods. Other ends with gun-handle type phone tips. 48' leads. Shpg. wt. 5 oz. 42 N 240. NET PER PAIR. 1.32  
Fig. E. Type 438 Silm Line Test Leads. 7' red and black tenite prods with 3' vinyl-insulated shafts. Permit probing in closely wired circuits without danger of shorting. Other ends have gun-handle type molded phone tip plugs. 48' kinkless leads. Shpg. wt. 5 oz. 42 N 252. NET PER PAIR. 1.03

Fig. F. Type 312 All-Purpose Kit. 7 1/4' allm tenite red and black prods with pointed phone tips. Other ends banana plugs with interchangeable spade, alligator and phone tips. 48' rubber-covered kinkless leads. Wt. 6 oz. 42 N 220. NET PER PAIR. 1.79  
Fig. G. Type 382 Needle Point Test Leads. 4' allm tenite prods with needle points. Other ends phone tips. 48' leads. 6 oz. 42 N 210. NET PER PAIR. 72c  
Fig. H. Type 327 'Clip-On' Test Leads. Spade lugs one end, insulated clips other end. 48' red and black rubber leads. 8 oz. 42 N 215. NET PER PAIR. 1.18  
Fig. I. Type 304 Lucite Leads. 5' prods; phono needle chucks. Other ends gun-handle phone tip plugs. 48' leads. 6 oz. 42 N 217. NET PER PAIR. 1.62



## WALSCO TV ALIGNMENT TOOLS

Fig. A. For TV-FM IF. 5 1/2 x 3/8". Molded nylon tool. Shpg. wt. 3 oz. 42 N 294. Type 2526. NET. 32c  
Fig. B. Tuning wand. 6 x 1/4". Wt. 3 oz. 42 N 293. Type 2540. NET. 32c  
Fig. C. Duplex screwdriver. 7" long. 7/8" and 3/4". Shpg. wt. 3 oz. 42 N 292. Type 2520. NET. 32c  
Fig. D. For "K-Train" IF transformers. Other end has metal screwdriver tip. Wt. 3 oz. 42 N 289. Type 2516. NET. 47c  
Fig. E. "Slug Saver." Shoulder prevents turning Standard Coil slugs too far. 7 1/2". 3 oz. 42 N 297. Type 2528. NET. 62c  
Fig. F. For TV-FM IF. 7 x 3/8". For Nos. 4 and 6 studs. Shpg. wt. 3 oz. 42 N 286. Type 2519. NET. 62c  
Fig. G. Wire dressing and alignment tool. 7 x 3/4". Polystyrene. Shpg. wt. 3 oz. 42 N 288. Type 2512. NET. 35c

Fig. H. Neutralizing wrench. 7 1/2" long. 1/4" I.D. hex; 3/4" dia. Shpg. wt. 5 oz. 42 N 291. Type 2503. NET. 26c  
Fig. I. TV-FM IF alignment screwdriver. 8 x 1/4" for No. 6 studs. Shpg. wt. 5 oz. 42 N 284. Type 2516. NET. 65c  
Fig. J. TV-FM IF tool. 8 x 3/8". Slotted type; for No. 6 studs. Shpg. wt. 5 oz. 42 N 287. Type 2524. NET. 65c  
Fig. K. For Standard Coil front ends. 7 x 1/4". 42 N 283. Type 2522. NET. 65c  
Fig. L. For TV osc. alignment. 12 x 3/8". Replaceable nylon tip. Shpg. wt. 6 oz. 42 N 290. Type 2523. NET. 1.06  
42 N 295. Replacement tip. NET. 18c  
Fig. M. 2 1/4" long. For alignment of RCA and Zenith UHF tuners. Shpg. wt. 3 oz. 42 N 296. Type 2527. NET. 41c  
Fig. N. For IF's 2 x 3/8". No. 6 studs. 4 oz. 42 N 285. Type 2517. NET. 41c

## TEST LEAD ACCESSORIES



## ICA TEST PRODS

Fig. O. Heavy Duty. Tenite-insulated handles. Threaded heavy-duty phone tips. 5" long. 3 oz. 42 N 112. 387R. Red. 42 N 113. 387B. Black. NET EACH. 36c  
Fig. P. Solderless. 5 1/4 x 3/8" needle point prods. Solderless chuck. Threaded plastic handle. 3 oz. 42 N 110. Red. 42 N 111. Black. NET EACH. 26c  
Fig. Q. Lucite. Type 302. Threaded female insert. 5" red and black handles. Phone tip plugs. 10 KV. Shpg. wt. 3 oz. 42 N 114. Red and black. NET EACH SET. 88c  
Fig. Q—ICA PHONE TIP PLUGS  
Molded, hi-dielectric catalin insulation. Wire will not pull out. Brass phone tip fits all jacks. With nut and bolt. Wt. 4 oz. 41 H 203. 868. Red. 41 H 204. 869. Black. NET EACH. 26c

Fig. R—CORD TIPS FOR TEST PRODS  
Insulated-sleeve type tip. Fits any standard phone tip jack. Screw-on. 1 1/4" long. 2 oz. 41 H 250. Red. 41 H 255. Black. NET EACH. 14c  
KLIPZON MINIPRODS  
Fig. S. Type B Self-Gripping Tips. Unique self-gripping feature. Free both hands for soldering, adjustments, etc. Clip to any terminal, lug, or wire—and stay there! Needle points for piercing insulation. Solderless connection inside 1 1/4" plastic handle. Shpg. wt. 2 oz. 42 N 271. Red. 42 N 272. Black. NET EACH. 24c  
Type A Prod Set. 48" red and black, rubber-covered leads; Type B tips on one end; self-gripping tips with 3/4" handles on other end. Shpg. wt. 6 oz. 42 N 270. NET. 1.91

## RADIO CITY PRODUCTS HEAVY-DUTY TEST LEADS

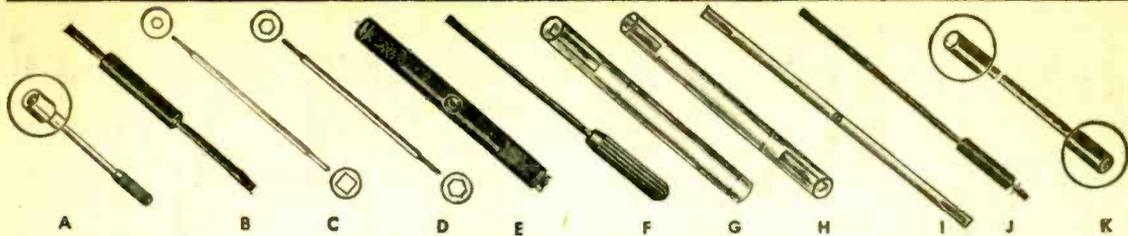
Model 930. Retracto Leads. Self-coiling retractable leads. An excellent choice for the service shop or laboratory—never clutter the bench, but always ready for instant use. Fine quality, heavily insulated stranded wire with a built-in permanent curl. Extends for use, then pulls back out of the way. Extended leads are 7 1/2' long. With insulated phone tips. Shpg. wt. 4 oz. 42 N 245. NET. 2.89  
Model 910. High Voltage Test Leads. Designed for use up to 30,000 volts with safety. Features 7" heavy-duty prod; hardened steel prod points; triple-barrier leakage guard; 54" kinkless leads. Shpg. wt. 6 oz. 42 N 246. NET. 3.53



## BELDEN TEST PROD WIRE

Rubber-covered wire, specially designed for high-voltage test applications. "Limp" type; extremely flexible. No. 18 stranded (65x36) tinned conductor. Type 8898 is 230" O.D.; working voltage, 10,000. Type 8899 is 140" O.D.; working voltage, 5,000. Shpg. wt. per 100': 8898, 4 lbs.; 8899, 2 lbs. Lengths under 100' available only in 10- and 25-ft. coils.  
TYPE 8898  
10-ft. Coils  
47 T 811. Red. 47 T 801. Black. NET PER COIL. 37c  
25-ft. Coils  
47 T 812. Red. 47 T 802. Black. NET PER COIL. 1.03  
100 ft. or More  
47 T 810. Red. 47 T 800. Black. NET PER 100 FT. 2.94  
TYPE 8899  
10-ft. Coils  
48 T 911. Red. 48 T 901. Black. NET PER COIL. 29c  
25-ft. Coils  
48 T 912. Red. 48 T 902. Black. NET PER COIL. 67c  
100 ft. or More  
48 T 910. Red. 48 T 900. Black. NET PER 100 FT. 1.91

# Alignment Tools



## ICA TOP QUALITY ALIGNMENT TOOLS

**Fig. A. TYPE 6161 SLIM ALIGNER.** Alignment tool for making adjustments of slot-end threaded rods. Excellent for cramped probing in television receivers. Has extra-thin metal shaft with recessed blade to prevent slip. Length 6 1/2" overall with fiber handle to reduce shock hazard. Especially suited to making adjustments on linearity, width, and horizontal oscillator controls. Shpg. wt., 4 oz. 42 N 178. NET. **65c**

**Fig. B. TYPE 978 ALIGNER.** Insulated tool for IF trans. One end milled, screwdriver at other. 6" long, 1/4" dia. Wt., 4 oz. 42 N 177. NET. **50c**

**Fig. C. TYPE 6171 HEX-SQUARE ALIGNER.** All bone fiber iron-core aligning tool especially designed for Raytheon-Belmont IF and similar type transformers. Has 3/8" hex head at one end, 1/4" square head at other end. Insulated shaft is 6" long overall x 3/16" diam. Shpg. wt., 4 oz. 42 N 166. NET. **73c**

**Fig. D. TYPE 6199 HEX-ALIGNER.** All bone fiber, iron-core slug aligning tool. Has 3/8" hex one end; 1/4" hex other end. 3/16" dia. shaft. 6" long. Shpg. wt., 4 oz. 42 N 167. NET. **81c**

**Fig. E. TYPE 6168 DUAL ALIGNER.** For trimmers, IF's, etc. Recessed screw nib on one end; screwdriver on other. 3/16" insulated shaft. 6 1/4" long. Wt., 4 oz. 42 N 181. NET. **51c**

**Fig. F. TYPE 6167 TV CHANNEL TUNER.** For tuning in deep, hard-to-reach places. Fiber. 7 3/8" long; 1/4" blade. Wt., 4 oz. 42 N 179. NET. **54c**

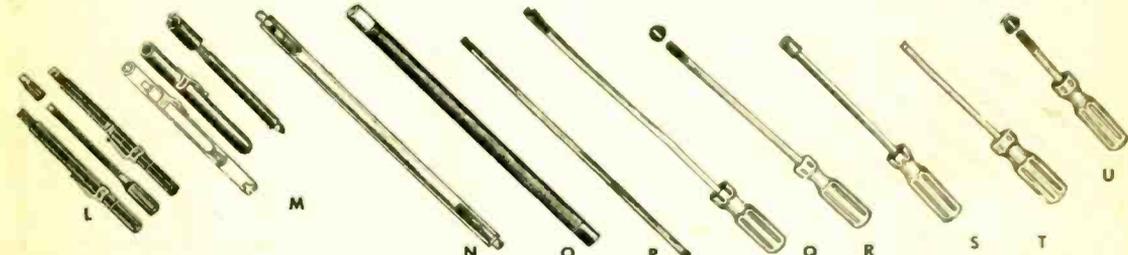
**Fig. G. TYPE 6192 PLASTIC ALIGNMENT TOOL.** Has recessed metal blade on one end; extended blade on the other. Ideal for adjusting IF's, trimmers, etc. Shaft 7" long, 3/16" diameter. Wt., 3 oz. 42 N 185. NET. **59c**

**Fig. H. TYPE 6193 PLASTIC ALIGNMENT TOOL.** Double end recessed alignment tool. Suitable for no. 4, 6, or smaller type screws. 7" long, 1/4" dia. Wt., 3 oz. 42 N 186. NET. **59c**

**Fig. I. TYPE 6158 ALIGNMENT TOOL.** A double-bladed, screwdriver type, aligning tool. Made of durable fiber for complete insulation. 1/4" dia. 7" long. Wt., 4 oz. 42 N 188. NET. **24c**

**Fig. J. TYPE 6162 BIG-STRETCH ALIGNER.** One end has screwdriver, other for nested iron cores. Bone fiber. Extra long and thin. 9" in length, 1/4" dia. Wt., 3 oz. 42 N 172. NET. **72c**

**Fig. K. TYPE 6163 TUNING WAND.** Flexible vinylite. 7 1/4" long, 3/8" dia. Brass insert at one end; iron core at other. Wt., 4 oz. 42 N 180. NET. **34c**



**Fig. L. TYPE 1022 5-IN-1 ALIGNMENT TOOL.** Consists of: 1/4" and 3/8" nut wrenches; miniature blade screwdriver; full size, heavy-duty, metal screwdriver and key-slot grip wrench. Fully insulated, durable Fenolite; 6 1/2" long, 3/8" dia. With pencil-type pocket clip. Shpg. wt., 6 oz. 42 N 125. NET. **98c**

**Fig. M. TYPE 1019 4-IN-1 ALIGNMENT TOOL.** Combined one each, 1/4" and 3/8" nut wrenches, insulated screwdriver, and key-slot grip wrench. Has sturdy, fully insulated Fenolite handle with pencil-type pocket clip. 5 1/4" long, 3/8" dia. Shpg. wt., 5 oz. 42 N 126. NET. **59c**

**Fig. N. TYPE 6247 DUAL-BLADE KLEER ALIGNER.** Extended blades each end. .018" and .025" thick. Plastic. 4 1/2" long. 3 oz. 42 N 192. NET. **72c**

**Fig. O. TYPE 6249 PRECISION TUNING WAND.** Iron and brass core for varying inductance of coils. 4 1/4" long. 1/4" dia. 4 oz. 42 N 193. NET. **88c**

**Fig. P. TYPE 6194 "SUPER STRETCH" KLEER ALIGNER.** Extended blade at one end; brass slotted insert at other end. Shaft is 12 1/4" long and 3/8" dia. Shpg. wt., 4 oz. 42 N 169. NET. **81c**

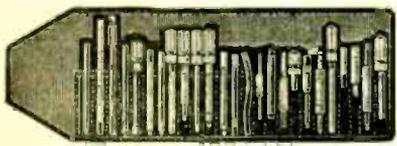
**Fig. Q. TYPE 6847 LONG ROD "KLEER ALIGNER."** All insulated extra length tool for reaching hard-to-get-at points. Clear plastic rod is 3/8" diameter. Has sure-grip amber plastic handle with positive non-slip hold on rod. Extended blade is 3/8" wide and fits a variety of slot tuned components. 12 3/4" overall. Shpg. wt., 4 oz. 42 N 195. NET. **88c**

**Fig. R. TYPE 6848 "KLEER TUNER."** Low-loss clear plastic rod, 3/8" diameter with insulated amber plastic handle. Recessed blade for No. 6 studs. 8 1/4" overall. 4 oz. 42 N 196. NET. **65c**

**Fig. S. TYPE 6849 THIN ALIGNER.** Has extra-thin recessed blade. Durable slim metal shaft for cramped probing. Sure-grip amber plastic handle. 6 1/4" overall. 4 oz. 42 N 197. NET. **65c**

**Fig. T. TYPE 6850 "ALIGNER TRAN."** Tough fiber with amber plastic handle. Excellent for "K-Tran" midgets. 6 1/2". 4 oz. 42 N 198. NET. **50c**

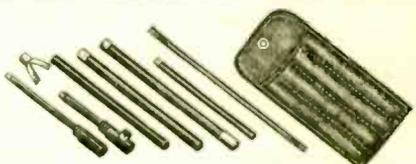
**Fig. U. TYPE 6846 DEEP-NIB "KLEER ALIGNER."** Flexible low-loss 3/8" dia. rod with metal nib for No. 6 studs. 4 1/4" long. Shpg. wt., 4 oz. 42 N 194. NET. **41c**



### G.C. ALIGNMENT TOOL KITS

**TYPE 8283 MASTER DELUXE TV TOOL KIT.** A super-deluxe kit in a superior leatherette roll type case. A complete service alignment tool kit for television repair work. Contains 25 high quality alignment tools not over 9" long. Flexible tool-case has heavily stitched edges and fold-over flap to prevent loss of tools. Heavy woven cloth strap with sure grip metal buckle and metal tip for easy fastening. Tools supplied includes: TV K-Tran tool, TV Core Aligner, TV Long Reach Aligner, TV Flexible Tuning Wand, TV Short Tool for RF and IF, etc. Shpg. wt., 1 lb. 42 N 005. NET. **12.26**

**TYPE 8280 DELUXE TELEVISION ALIGNMENT TOOL KIT.** Handy roll-type durable leatherette case with 16 specially engineered TV tools. The steel tips are all extra thin and are made of the best grade of hardened spring steel of accurate dimensions and high durability. Case lays flat when opened for complete accessibility to every tool. Includes TV "Shorty," Duplex Aligner, TV Tuning Wand, TV Core Aligner, TV Oscillator Tool, TV Long Reach Aligner, etc. Shpg. wt., 8 oz. 42 N 006. NET. **7.58**



### ICA NEUTRALIZING AND ALIGNING TOOL KITS

**Type 998.** Consists of 12 separate parts, including: No. 1039 screwdriver; No. 1026 balancing tool; No. 1024 fork-type neutralizing wrench and screwdriver; No. 1022 5-in-1 neutralizing wrench; etc. With carrying case. Wt., 1 1/2 lbs. 42 N 124. NET. **3.67**

**TYPE 6165 TV KIT.** Set of 9 TV alignment tools. Includes No. 978 tool for RF, IF and "K-Tran" transformers; No. 6161 slim tool; No. 6163 thin tuning wand; No. 6156 deep nib tool; No. 6157 narrow insulated screwdriver; No. 6162 extra thin and long tool and No. 6166 narrow-shaft dual tool, etc. Leatherette case. Wt., 2 lbs. 42 N 107. NET. **4.41**

### AMPHENOL POLYSTYRENE LO-LOSS NEUTRALIZER

**TYPE 55.** Polystyrene alignment tool having a minimum effect on critical circuits. For adjusting FM, TV, SW, and standard receivers. Made of Amphenol "912-A." With metal nib. 5 1/4" long. Wt., 2 oz. 42 N 143. NET EACH. **15c**

# Chemicals and Spray Paints

## WALSCO RADIO CHEMICALS



**43 N 124. WALSCOLUB B.** No. 22. A radio lubricant that prevents corrosion. Eliminates noise on switches, and other electrical contacts. 1 1/4 oz. tube. NET..... 38¢

**TUNERLUB.** No. 26. Prevents noisy operation of TV tuning units, etc. Cleans, lubricates and protects contacts from oxidation. 1 1/4 oz. tube. NET..... 44¢

**43 N 125. "LUBRIPLATE."** No. 23-A. For phonograph motors, record changers. Constant viscosity. Superior to ordinary greases. 2 oz. tube. NET..... 38¢

**43 N 167. NO-SLIP.** No. 402. Greatly increases the friction of pulley cords and belts. Stops any slippage of dial belts, dial cords, etc. 2 oz. bottle. NET..... 47¢

**43 N 172. RADIO DIAL OIL.** No. 72. A light-bodied lubricating oil for all electronic and electrical appliances. Free of corrosive acids. Prevents rusting of chassis, tools, machinery, etc. 2 oz. bottle. NET..... 29¢

**43 N 154. CARBON TETRACHLORIDE.** No. 214. Dissolves dirt and grease instantly. Dries rapidly. Is non-explosive and non-inflammable. 4 oz. bottle. NET..... 47¢

**"NO-OX."** Fast-acting, chemical contact and control cleaner. Cleans, protects and lubricates with a special corrosion-dissolving chemical action. Contains no harmful solvents.

**43 N 127.** No. 101. 1 oz. bottle. NET. 50¢

**43 N 128.** No. 102. 2 oz. bottle. NET. 94¢

**43 N 165. SCRATCH REMOVING POLISH.** Dark. No. 414. For walnut, mahogany, etc. Removes scratches as it polishes. 4 oz. bottle. NET..... 32¢

**43 N 175.** No. 434. As above, but Light Shade for maple, oak, etc. 4 oz. NET..... 32¢

**43 N 164. SUPER POLISH.** No. 412. Removes old polish, grease or dirt from cabinets. Forms a hard, dry and durable high gloss film. 4 oz. bottle. NET..... 32¢

**43 N 179.** No. 418. 8 oz. bottle. NET..... 47¢

### KRYLON PLASTIC SPRAYS



Hard, waterproof coating of tough Acrylic (Liquid Plexiglas) in Crystal Clear and Bright Aluminum sprays. High dielectric strength of Crystal Clear coating prevents corona and arcing. Bright Aluminum spray is excellent for use on radio-TV antennas—prevents rusting and pitting; adds lustrous, protective finish. Both sprays are non-flammable, salt-spray resistant, fungus and chemical resistant. In ready-to-use, hand-size spray can. Wt., 1 1/4 lbs.

**43 N 133. Crystal-Clear Plastic Spray.**

**43 N 134. Bright Aluminum Plastic Spray.**

**12 or more, EACH, 1.27. NET EACH..... 1.43**

Krylon Enamel Sprays. Color coatings for interior or exterior use. Feature excellent adhesion to all surfaces. Dry in 3 minutes—for weather-proof and waterproof coating. Non-clogging spray valve for extremely easy application. 1 1/4 lbs.

**43 N 137. Touch-Up White.**

**43 N 138. Glossy Black.**

**43 N 106. Flat Black.**

**43 N 107. Hunter Green.**

**43 N 108. Machine Gray.**

**43 N 109. Bright Gold.**

**NET EACH..... 1.43**

**12 or more, EACH..... 1.27**

### MERIX ANTI-STATIC SOLUTION



Prevents accumulation of static charges on smooth-surfaced substances such as plastics, metals, records, recording discs, etc. Treated surfaces become static-free and no longer attract dust or lint. Can be used on face of TV tube. 4 oz. plastic bottle. Shpg. wt., 6 oz. NET..... 59¢

**43 N 155. RADIO CEMENT.** No. 54. Vibration-proof cement. For speaker cones and general radio work. Fast drying. Brush-in-cap 4 oz. bottle. NET..... 65¢

**43 N 166.** No. 58. 8 oz. bottle. NET..... 1.12

**43 N 156.** No. 59. 1 pt. bottle. NET..... 2.15

**43 N 171. PLASTIC CEMENT.** No. 42. Repairs broken plastic knobs and cabinets. Fast drying. Also cements metal, glass. Brush-in-cap 2 oz. bottle. NET..... 38¢

**43 N 169. VINYLITE CEMENT.** No. 25. Vinylite base cement with extreme flexibility when dry. Adheres to metals, plastics, leather, etc. 2 oz. bottle. NET..... 44¢

**43 N 176. RUBBER CEMENT.** No. 114. For cementing rubber parts to metal or wood. Brush-in-cap 4 oz. bottle. NET..... 71¢

**43 N 157. CEMENT SOLVENT AND THINNER.** No. 64. For loosening cement on speaker cones, etc. Thins Radio and Plastic Cement. 4 oz. bottle. NET..... 56¢

**43 N 163.** No. 68. 8 oz. bottle. NET..... 73¢

**43 N 158.** No. 69. 1 pt. bottle. NET..... 1.06

**43 N 174. POLYSTYRENE CEMENT.** No. 154. For bonding Polystyrene parts, coating coils. Brush-in-cap 4 oz. bottle. NET..... 65¢

**43 N 160. CONTACTENE.** No. 82. Cleaning fluid for switch or relay contacts, volume controls, etc. Brush-in-cap 2 oz. bottle. NET..... 32¢

**43 N 161.** No. 84. 4 oz. bottle. NET..... 56¢

**43 N 178.** No. 88. 8 oz. bottle. NET..... 73¢

**43 N 198. CAP NEEDLE INJECTOR.** No. 989. Surgical-grade needles with oil-resistant neoprene bulb—attached to bakelite bottle cap. Permits easy application of Contactene or Dial Oil to bandwheels, volume controls, etc.; without disassembling. Wt., 2 oz. NET..... 44¢

**43 N 145. ANTI-CORONA LACQUER.** No. 195. Fast-drying, high-dielectric lacquer. A thin layer (.01") withstands over 15 KV. Prevents corona discharge, arcing in HV power supplies, when applied to sharp corners, wires lugs, etc. 2 oz. bottle. NET..... 71¢

**43 N 173. INSULATING VARNISH.** No. 192. Fast-drying; for coils, transformers, solenoids, motors, etc. Non-corrosive, resistant to acid, oil and grease. 2 oz. bottle. NET..... 38¢

### CHAMPION SPRAYON ENAMEL

Sensational new spray paint in a wide variety of attractive colors. Aerosol-can dispenser features non-clogging, removable spray valve; easy to clean and keep in operating condition. No compressor or hose needed—simply shake can and paint. No mixing, no cleanup, no waste. Enamel is quick-drying and non-fading. Unsurpassed as a time and material saver. Ideal for quickly and easily painting irregularly shaped surfaces or hard-to-get-at places. Some of the important uses are: Clear plastic enamel for insulating; chrome aluminum enamel for re-finishing radio-TV chassis; prevention of corrosion and rust on metal surfaces; chrome, gold or copper plate finishes for radiators, boilers, oil tanks, furnaces; clear plastic ideal for protecting chrome trim and waterproofing ignition systems or other electrical circuits; general touching-up, etc. Enamel finish is tough and durable, with excellent resistance to weathering, moisture, acids, gasoline and other solvents. Adheres and dries quickly on almost any object or surface. Pays for itself. Shpg. wt., 1 1/4 lbs.



**43 N 087. Gloss Black.**

**43 N 088. Gloss White.**

**43 N 089. Clear Plastic.**

**43 N 090. Bright Gold.**

**43 N 091. Copper Plate.**

**43 N 092. Royal Blue.**

**43 N 093. Medium Gray.**

**43 N 094. Maroon.**

**43 N 095. Bright Red.**

**43 N 096. Meadow Green.**

**43 N 097. Yellow.**

**NET EACH..... 1.19**

**12 or more, EACH..... 1.07**

**43 N 086. Chrome Aluminum.**

**NET EACH..... 1.05**

**12 or more, EACH..... 95¢**

## "TEKNI-CALS" INSTRUMENT AND PANEL DECALS

Water transfer decal sets. For almost any surface. Each book has ample supply. \*Aircraft set includes titles for instrument panel, cabin, and electrical circuits. Wt., 5 oz.

**37 K 968.** Television, White.

**37 K 966.** Receiver, White.

**37 K 962.** Instruments, White.

**38 K 132.** Communications, Blk.

**37 K 965.** Transmitter, White.

**37 K 954.** Alphabet, Gold.

**37 K 956.** Alphabet, Black.

**37 K 957.** Alphabet, White.

**37 K 958.** Oscilloscope, Black.

**37 K 964.** Oscilloscope, White.

**37 K 961.** Vacuum Tubes, White.

**37 K 959.** Workshop, Black.

**38 K 137.** Workshop, White.

**37 K 967.** Audio, White.

**38 K 130.** Audio, Black.

**38 K 131.** Audio, Gold.

**37 K 963.** Dials, White.

**38 K 133.** Dials, Black.



**NET EACH..... 1.35**

**37 K 969.** Aircraft\* NET..... 2.35

**38 K 134.** Service, White.

**38 K 135.** Service, Black.

**38 K 136.** Service, Gold.

**NET EACH..... 40¢**

### "NO NOISE" SOLUTION

New chemical formula. Cleans, lubricates, protects TV front ends, controls, switches, etc. In 2 oz. bottle with dropper. 6 oz.

**43 N 143. NET..... 98¢**

"No Noise" solution in 6-oz. spray can. Shpg. wt., 10 oz.

**43 N 142. NET..... 2.20**



### G-C TV LENS CLEANER

Specially prepared cleaner for TV screens, lenses, filters and safety glass. Thoroughly cleans dirt and lint from surfaces. Eliminates finger marks and spots. Just apply and wipe clean. Non-inflammable.

**43 N 048.** 8 oz. bottle. NET..... 50¢

**43 N 216.** 8 oz. bottle. NET..... 82¢

**43 N 049.** 16 oz. bottle. NET..... 82¢

**43 N 216.** 16 oz. bottle. NET..... 82¢



### G-C TUBE KOAT

Fast-drying conductive coating for re-coating outside of television picture tubes which are scratched or are peeling. Excellent for retouching coating where ground clips touch tube. 2 oz. bottle has brush.

**43 N 006.** No. 49-2. 2 oz. NET 56¢

**43 N 007.** No. 49-8. 8 oz. NET 1.56



### G-C MAG-NETIK RECORDING HEAD CLEANER

Dissolves the accumulations of sound-distorting oxide on tape and wire recording heads. Thoroughly cleans entire mechanism and prevents loss of sensitivity. In 2-oz. bottle. Shpg. wt., 6 oz.

**43 N 017.** No. 53-2. NET..... 94¢



### INSL-X E-33 TOOL DIP

A red, liquid plastic that hardens into a tough, smooth, completely insulating coating when applied to the handles of pliers, wrenches and other tools used in electrical work. Minimizes shock hazard. Dielectric strength, 1500 v. per mil. Simple application; remove cap from container and just dip handle of tool into liquid. Dries in 24 hours. Can be dipped repeatedly for thicker coating. Resists acids, alkalis, etc. Shpg. wts., 6 oz. can, 10 oz.; 32 oz. can, 2 lbs.



No.	Contents	EA.	24 or More, EA.
42 N 400	6 oz.	79¢	71¢
42 N 401	32 oz.	2.83	2.55

**Insl-X E-16 Insulating Spray.** Spray-on insulation in ready-to-use Aerosol spray-can. Insulates parts, wiring, etc. Has same insulating properties as above. Dielectric strength, 800-1200 v. per mil. 12-oz. can. Shpg. wt., 1/2 lb.

**42 N 402.** Clear.

**42 N 403.** Aluminum. } NET

**42 N 404.** Black. } EACH..... 1.19

**24 or more, EACH..... 1.07**

# Service and Industrial Aids

## LABELON PLASTIC "WRITE-ON-IT" TAPE



Plastic labeling tape with special carbon writing surface sandwiched between two layers of acetate. Writing stays legible permanently, surface is protected by layer of transparent plastic. Cannot be smudged or smeared—resists dirt, water, oil and acid. Sticks firmly to virtually any surface (without moistening), yet can

be peeled off cleanly. Message can be printed on tape with pencil, ballpoint pen, stylus or typewriter. Adheres firmly at -40° F., and withstands heat up to 160° F. Will not curl or discolor. Colors: Blue tape has blue borders and writes blue; green has green borders and writes green; etc. Hundreds of labeling uses in service shops, laboratories, factories, stock rooms, and offices, as well as in the home. Special colors, widths and lengths available on request. Av. shpg. wt., per 400 inch roll, 5 oz.

### 400-INCH DISPENSER ROLLS

Stock No.	Type	Width	Color	EACH	12-23, EA.	24 or More, EA.
52 N 751	335	3/4"	Red	1.22	1.10	1.04
52 N 753	415	1/2"	Black			
52 N 754	425	1/2"	Blue	1.42	1.28	1.21
52 N 755	435	1/2"	Red			
52 N 756	445	1/2"	Green			
52 N 757	515	3/4"	Black			
52 N 758	525	3/4"	Blue	1.62	1.46	1.38
52 N 759	535	3/4"	Red			
52 N 760	545	3/4"	Green			
52 N 761	615	3/4"	Black			
52 N 762	625	3/4"	Blue	1.81	1.63	1.54
52 N 763	635	3/4"	Red			
52 N 764	645	3/4"	Green			
52 N 765	815	1"	Black			
52 N 766	825	1"	Blue	2.55	2.29	2.17
52 N 767	835	1"	Red			
52 N 768	845	1"	Green			
52 N 769	1225	1 1/2"	Blue	3.67	3.31	3.13

### 800" INDUSTRIAL ROLLS (LESS DISPENSER)

Fit on standard 3" core dispensers.

Stock No.	Type	Width	Color	EACH	12-23, EA.	24 or More, EA.
52 N 785	610	3/4"	Black	3.43	3.09	2.92
52 N 786	620	3/4"	Blue			
52 N 787	630	3/4"	Red			
52 N 788	640	3/4"	Green			
52 N 789	810	1"	Black	4.51	4.06	3.83
52 N 790	820	1"	Blue			
52 N 791	830	1"	Red			
52 N 792	840	1"	Green			

Type 330, 800-inch industrial roll, 8 mm wide. Less dispenser. 52 N 752 12-23, EA. 2.21. 24 or more EA. 2.08. NET EACH 2.45  
 Type 655-R, Orange-yellow tape marked with radioactivity symbol. 1/4-inch wide, 400-inch dispenser roll.  
 52 N 770, 12-23, EA. 1.94. 24 or more, EA. 1.84. NET EACH 2.16

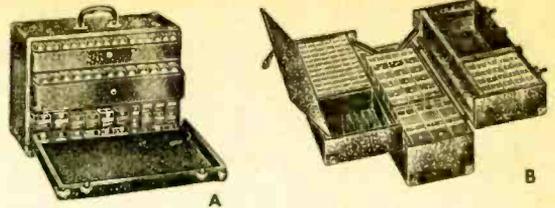
### TABLETS FOR TYPEWRITER USE

Each has 45 3-inch strips. \*Write black; colors given are borders.

Stock No.	Type	Width	Color	NET EACH
52 N 775	62T	3/4"	Blue*	98c
52 N 776	63T	3/4"	Red*	
52 N 777	64T	3/4"	Green*	

### BOOKMATCH TAPE PACKET

Consists of 18 labeling strips, 3/4" wide, 1 1/4" long in handy bookmatch type packet. Packet holds 6 backing sheets, 3 tapes to a sheet, in assorted colors. Pocket-size, ready for use anytime, anywhere. Has unlimited use for easy-to-read, easy-to-apply identification. Saves time and prevents errors. Shpg. wt., box of 24 packets, 12 oz.  
 52 N 780, NET EACH..... 19c



### ARGOS TELEVISION TUBE CADDIES

Fig. A, Model TC-1B Tube Caddy. Portable, luggage-type case holds up to 249 tubes. Makes it possible to take tube inventory at a glance. Contains 2 removable trays with adjustable partitions for loose tubes or small tools. Wood case, brown leatherette covered. Size, 20 1/2 x 14 x 9". Shpg. wt., 16 lbs.  
 86 NX 049, NET..... 13.23

Fig. A, Model TC-2 Tube Caddy Jr. Smaller version of above. Carries up to 143 tubes. Cover has slip-out hinges. Brown leatherette covered. Size, 15 1/2 x 13 x 8". Shpg. wt., 13 lbs.  
 86 NX 057, NET..... 8.67

Fig. A, Model TC-3 Deluxe Tube Caddy. Supplements the junior and regular sizes above. Carries up to 225 tubes. With tray for tools, meters, solder gun, etc. Gray tweed leatherette. Size, 18 x 14 1/2 x 9 1/4". Shpg. wt., 16 lbs.  
 86 NX 058, NET..... 14.65

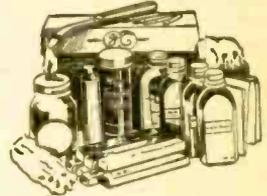
Fig. B, Model TC-4 New Carry-All Caddy. Versatile, new tube caddy and tool kit. Carries up to 262 tubes plus small tools. Opens outward from center in attractive gray tweed leatherette. Size, 8 x 14 x 21". Shpg. wt., 13 lbs.  
 86 NX 129, NET..... 13.67

### QUIETROLE CLEANER AND LUBRICANT

New radio-TV lubricant and cleaner. Stops noisy TV front end tuners and volume-tone controls without removal from chassis. Non-inflammable and non-corrosive liquid; remains effective indefinitely. \*With eye dropper.  
 43 N 102, 2-oz. bottle. \*Shpg. wt., 6 oz. NET..... 1.66  
 43 N 103, 4-oz. bottle. Shpg. wt., 12 oz. NET..... 2.49

### G-C 901 CABINET REPAIR KIT

You can do a fine refinishing job with this practical kit. Repair dents, scratches or nicks on wood, plastic cabinets, knobs, etc. Consists of an assortment of 10 shades of shellac sticks, bottles of light and dark oil stain, metal shading lacquer, polish, Magic Scratch Remover, alcohol lamp, spatula, touch-up brushes, steel wool, sandpaper and wiping cloth. Everything necessary to do a practical repair job and make old cabinets look new. No special skill is required to make perfect patches with this kit. Shpg. wt., 3 lbs.  
 43 N 115, List \$7.50, NET..... 4.41



### G-C SCRATCH STICK

For removing scratches on walnut, mahogany or oak cabinets, in all shades or colors. Scratch stick is simply run over the scratch and it vanishes almost instantly. Excellent accessory item for servicemen's tool kits—invaluable for household furniture use. Shpg. wt., 5 oz.  
 43 N 113, NET..... 29c

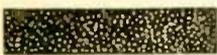
### G-C SILVER PAINT

Pure silver compound used in the manufacture of printed circuits. 1 Troy ounce. Used to repair printed circuits and to touch up around eyelets, rivets, other parts of regular circuits. Wt., 4 oz.  
 43 N 159, NET..... 4.56

## GENERAL CEMENT PAINTS AND VARNISHES



### WRINKLE VARNISH



Attractive, air-drying wrinkle finish for all metal chassis, panels, etc. Easily applied with brush or spray. In black, brown or silver grey. Shpg. wt., 1/2 pt., 8 oz.; 1 pt., 1 1/2 lbs.

1/2 Pint	COLOR	1 Pint
43 N 000	Black	43 N 010
43 N 001	Brown	43 N 011
43 N 003	Silver Grey	43 N 013

1/2 Pint EACH..... 38c Per Pint EACH..... 1.94

### TELEPHONE BLACK AND GRAY

High-grade enamel that covers well and dries fast. Brushes on smoothly. Provides a tough, durable finish. Shpg. wt., 1/2 pt., 1/2 lb.; 1 pt., 1 1/2 lbs.

SIZE	BLACK	GRAY	EACH
1/2 pt.	43 N 060	43 N 065	.38
1 pt.	43 N 061	43 N 066	1.94

### CRYSTALLIZING LACQUER



A fine quality lacquer for finishing metal, wood, paper or other material. Dries in 20 minutes. Easy to apply. Provides professional finish. In black only.

1/2 Pint. Shpg. wt., 1/2 lb.	43 N 020, NET..... 38c
1/4 Pint. Shpg. wt., 1 lb.	43 N 030, NET..... 1.23
1 Pint. Shpg. wt., 1 1/2 lbs.	43 N 040, NET..... 2.38

### DIAL LITE COLORING KIT



Long-lasting bright colors for coloring bulbs. Instant drying. Colors: Red, green, blue, amber and solvent. Bulbs may be colored by dipping. An easy way to dress up an old set. Shpg. wt., 1/2 lb.  
 43 N 110, NET..... 59c

### RETMA COLOR-CODING KIT



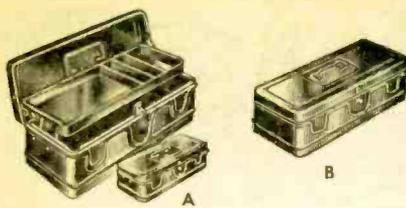
Complete kit of all standard RETMA colors: Black, brown, red, orange, yellow, green, blue, purple, gray and white. All colors are brilliant and long-lasting. Includes brushes and RETMA color-coding chart right on the box. Material is fast-drying lacquer enamel. Shpg. wt., 1 1/2 lbs.  
 43 N 112, Complete kit, NET..... 1.26

### LUMINOUS LITE-KOAT KIT



GC's long-life, non-poisonous luminous coating that emits light in the dark. Coating absorbs light in daytime and glows in dark. Ideal for striping dials, coating knobs or switch plates, etc. Deluxe kit includes powder, Top-Koat, thinner, brushes. Shpg. wt., 2 1/2 lbs.  
 43 N 111, NET..... 1.91

# Steel Chests—Parts Cabinets



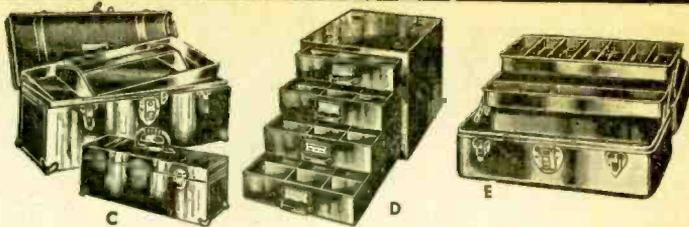
HAMILTON UTILITY BOXES

FIG. A—GREEN DIAMOND MODEL 1564

The perfect tool box for the radio serviceman, kit-builder, and experimenter. Sturdy in construction, handsome in design, this fine tool box will accommodate a soldering iron, screwdriver, pliers, wrenches, test leads, etc. Also excellent for gardening, fishing tackle, or general purpose use. Cantilever tray has four compartments: 2—1 1/4", 1—2 1/4", 1—7/8". Its many features include welded construction, rounded corners, push-button lock with eye for padlock insertion, and a folding fingertip handle. Opens easily, locks securely. Handsomely finished in high-gloss green baked enamel. Overall size, 14 1/2" long, 6 1/4" wide, 4 1/4" deep. Shpg. wt., 3 lbs.  
86 N 006. NET.....1.50

FIG. B—ALL-PURPOSE MODEL 1500

Excellent low-cost metal all-purpose utility box. Ideal as tool carrier for field TV and radio servicing. May be used for extra tools not normally carried in main tool box. Large, roomy and light weight. Ruggedly constructed. Finger grip handle, push-button latch with ring-clasp to accommodate small lock. Rounded corners and smooth baked on green enamel finish will withstand years of hard wear. The perfect "extra" utility box for radio and TV shop, garage, etc. Size, 14 1/2"x6 1/4"x4 1/2". Shpg. wt., 2 1/2 lbs.  
86 N 004. NET.....1.25



UNION STEEL CORP. UTILITY CHESTS

FIG. C—"SUPER STEEL" TOOL CHESTS

Sturdy steel chests with removable tray. Rounded cover and embossed stripes add strength as well as appearance. Reinforced corners protect bottom of chest. Has built-in padlock eye in addition to regular key lock. Continuous hinge welded to cover and case. Indestructible steel handle. Lock and catches heavily nickel-plated. Green, hard-baked enamel interior. Exterior has handsome steel gray ripple finish.  
Type 6116. 16x7x7". Wt., 6 1/2 lbs.  
86 NX 018. NET.....4.40  
Type 6119. 19x7x7". Wt., 7 lbs.  
86 NX 017. NET.....4.70

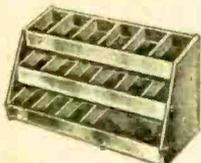
FIG. E—WATERTIGHT TOOL BOXES

Type 5414. Sturdily constructed watertight utility chest with two cantilever-mounted trays. Large tray capacity makes it ideal for storing large and small tools, screws, nails, condensers, resistors, and other small parts. The upper cantilever tray contains seven equal compartments; the lower tray contains one full-length compartment, one 1/2 length compartment, and two small compartments. Has new flat riveted tray supports, giving full access to trays and main compartment when cover is opened. Heavily nickel-plated key lock assure matching bolt catches. Spill-proof lock latches automatically whenever cover is closed, preventing accidental spilling of contents. Full-drawn, seamless, rounded corners, returned edges, embossed stripes on the cover, and embossed reinforcement on the bottom assure extra strength and rigidity. No rough edges to injure hands or contents. Full-grip steel handle is machine-riveted to cover. Exterior finished in sulf green hard-baked enamel; green hard-baked enamel interior. Size, 7 1/4" wide, 7" high, and 14 1/2" long. Wt., 5 lbs.  
86 N 045. NET.....3.18

FIG. D—4-DRAWER STEEL CHEST

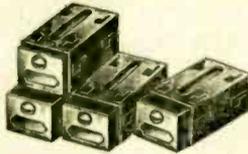
Type 410. Steel chest for storing resistors, condensers and other small parts. 4 sliding drawers; size, 2x9x11 1/2". Each drawer has removable dividers which make from 2 to 12 compartments. Drawers have label holders for identifying contents. Safety Drawer Stop prevents contents of drawers from being accidentally spilled. Cabinet and drawers made of heavy gauge steel. Indentations in top of cabinet hold feet of cabinet above for convenience in stacking units one above another. Durable steel gray ripple finish. Overall size, 10x10x11 1/2". Shpg. wt., 10 1/2 lbs.  
86 NX 019. NET.....4.74

Type 5314. As above, but with one cantilever tray. Tray has 1 full length, 1 two-thirds, and 2 small compartments. Overall size, 7 1/4" wide, 6" high, and 14 1/2" long. Wt., 4 1/2 lbs.  
86 N 046. NET.....2.20



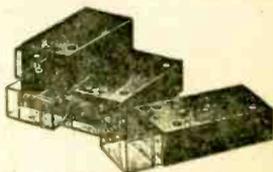
SIMONSEN PARTS STORAGE BIN

Convenient parts storage bin for keeping often-used small parts within easy reach. Trays set at 10 degree angle for easy accessibility. Just right for condensers, resistors, screws, nuts, bolts, washers, solder lugs, and other small hardware and parts. Has mounting holes on bottom and rear panels. Three trays are divided into a total of 16 compartments. Bottom tray contains 1 large compartment 8" wide and 3 small compartments each 2 1/4" wide. Top and middle trays contain 6 compartments, 2 1/2" to 3" wide. All compartments are 4 3/4" deep from front to back. High quality, durable steel construction throughout; all edges rolled. Dark green enamel finish. Overall size, 16 1/2" long, 7 3/4" wide, and 9" high. Shpg. wt., 6 lbs.  
86 NX 014. NET.....2.45



DIXIE INTERLOCKING DRAWERS

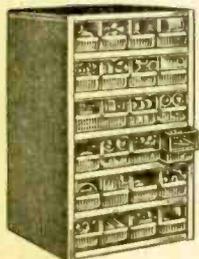
Small steel drawers for storage of all types of radio-TV hardware and small parts. May be used separately or ganged together to form large space-saving cabinets. Each unit interlocks with others at top, sides and bottom. Drawers may be assembled to fit irregularly shaped spaces unsuited to other types of cabinets. Each unit measures 2 7/8"x2 1/2"x5". Label holders make it easy to identify contents. Hundreds of applications in radio-TV laboratories and home workshops. Typical storage items: washers, bolts, nuts, screws, brads, drills, rivets, solder lugs, etc. Shpg. wt., each 10 oz., per dozen 8 lbs.  
86 N 023. NET EACH.....42c  
86 or more, EACH.....38c  
Dividers for Above. In packages of 3. Shpg. wt., per pkg. of 3, 4 oz.  
86 N 179. Pkg. of 3.....10c



PLASTIC "SNAP-ON" PARTS DRAWER

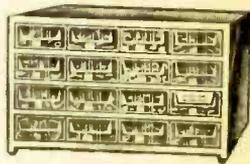
New convenient way to store small parts for easy identification and withdrawal. Designed to display their contents and to make the most of all possible storage space. Consist of transparent drawers in steel shells which snap together to form strong steel cabinets. Each drawer shell has prongs and slots for secure interlock with other units on top, bottom, or side. May be stacked around fixture; may be subdivided into 8 compartments with 7 plastic dividers. Shells are finished in gray. Furnished with one plastic divider and one name card. Overall size, 6" long, 3 1/4" wide, 1 3/4" deep. Shpg. wt., ea. 12 oz., per doz., 5 1/4 lbs.  
86 N 024. NET EACH.....54c  
Standard pkg. of 12.....5.83  
Extra Dividers. Shpg. wt., 12 oz.  
86 N 193. Pkg. of 7.....22c

## "HAZ-BIN" SMALL PARTS STORAGE CABINETS



SR. CABINET TYPES. Handiest cabinets made for storing small parts. Drawers are molded plastic—crystal clear, 10 1/4"x2 1/4"x2 1/4". Each drawer divides into 2, 3, or 4 compartments cross-wise. Rugged cabinet is of welded steel with baked-on gray enamel finish. Will stand on bench, stack together, or hang on wall. Saves space. Contents are always visible in orderly, dust-proof, indexed fashion. Useful in every shop, lab, office, store, etc. Provide perfect storage for small parts, nuts, bolts, drill bits, paper clips, rubber bands, photographic supplies and film, etc. Drawers cannot pull out accidentally and spill contents. Each drawer has a stop on back. Will slide drawer on edge of cabinet, yet, can be easily removed by upward tilt. With rubber feet, set of index tabs, and drawer dividers (3 per drawer). Sizes: Model RS-24, 22 1/2"x13 1/2"x11 1/2"; Model RS-16, 14 1/2"x13 1/2"x11 1/2"; Model RS-12, 11 1/2"x13 1/2"x11 1/2".  
86 NX 145. Model RS-24. 24 drawers. Wt., 23 lbs. NET.....32.00  
86 NX 146. Model RS-16. 16 drawers. Wt., 16 lbs. NET.....21.00  
86 NX 147. Model RS-12. 12 drawers. Wt., 12 1/2 lbs. NET.....16.00

JR. CABINET TYPES. Space-saving cabinets designed to hold the right quantities of parts and supplies for the average user. Clear plastic drawers, 1 1/2"x2 1/4"x5 1/4" are separated into 3 sections by removable dividers. Index cards are supplied to fit slots on fronts of drawers. Cylindrical stub handles afford sure grip without blocking view of cards. Backstop prevents accidental pull-out. Additional cabinets can be attached to back, side or top. Rubber feet.



Stock No.	Mfr's Typo	No. of Drawers	Size	Shpg. wt., Lbs.	NET EACH
86 NX 148	J-8	8	4x12 1/2"x6"	5	4.25
86 NX 149	J-12	12	6 1/2"x12 1/2"x6"	6	5.25
86 NX 047	J-16	16	8 1/2"x12 1/2"x6"	8	6.95
86 NX 143	J-20	20	10 1/2"x12 1/2"x6"	9	7.95
86 NX 144	J-24	24	12x12 1/2"x6"	10	9.95
86 NX 048	J-32	32	15 1/2"x12 1/2"x6"	13	12.95
86 NX 039	J-64	64	15 1/2"x25 1/2"x6"	25	24.95

# Equipto Steel Components

## MULTI-DRAWER STORAGE CABINETS



**No. 8. 8-DRAWER CABINET.** General purpose storage cabinet. Excellent for storing small parts, hardware, tools, supplies, merchandise, etc., in workshops, stores, offices, or anywhere that an attractive, durable storage rack is required. Parts with loose wire ends are kept completely safe from accidental servicemen. Heavy-duty, welded steel frame holds 8 drawers on 2 levels. Each drawer has 2 cross dividers adjustable on 1" centers, making a total of 24 compartments. Drawers are made of heavy steel, with full-size handles and slot holders for label cards. Durable baked olive-green enamel finish. Drawer size, 3 3/4" high, 5 3/4" wide and 11" long. Cabinet size, 10" high, 25 1/2" wide and 12 1/2" deep. May be placed on shelf or stacked. Shpg. wt., 32 lbs. **14.35**

**TYPE 8505 DRAWER.** Same type drawer as in cabinet above. Popular for use as parts trays on open shelving. With handle. Less dividers (below). Shpg. wt., 2 1/2 lbs. **80c**

**86 NX 012. NET** **44c**

**TYPE 8720 CROSS DIVIDERS.** For type 8505 drawer above. Fit grooves die-pressed into drawer sides. Slant top for easy labelling. Shpg. wt., 6 oz. **44c**

**86 N 872. PER PKG. OF 5** **44c**

**No. 11. 18-DRAWER CABINET-NET.** For storing small parts. Each drawer is equipped with two adjustable cross dividers. Drawers have large convenient handles. Instant-visibility label holders on drawers and dividers. Heavy-duty all-steel frame. Olive-green finish. Drawer size, 11x5 3/4x3 3/4". Overall size, 34" wide, 13 1/4" high, and 12" deep. Units fit on 12" shelf and may be stacked for greater storage space. Shpg. wt., 62 lbs. **23.35**

**86 NX 011. NET** **39.95**

**No. 22. 18-DRAWER CABINET.** As above, except 18" deep, and with 17x5 3/4x3 3/4" drawers. Shpg. wt., 95 lbs. **34.95**

**86 NX 099. NET** **49c**

**TYPE 8711 LENGTHWISE DIVIDER.** For No. 8505 drawer, used in both No. 8 and No. 11 cabinets above. Length, 11". Shpg. wt., 9 oz. **49c**

**86 N 871. PER PKG. OF 5** **44c**

**TYPE 8720 CROSS DIVIDER.** For drawers of No. 22 cabinet listed above. Shpg. wt., 6 oz. **44c**

**86 N 872. PER PKG. OF 5** **44c**



## "LITTLE GEM" & COMBINATION STORAGE CABINETS



**COMBINATION CABINETS.** For small and medium-sized parts. Cabinets combine the features of Equipto Standard Drawer Units with the safety and convenience for tiny parts storage of "Little Gem" Drawers. \*For stacking with No. 9 Combination Cabinet.

**No. 12. 14 standard drawers with 3 compartments each and 4 "Little Gem" drawers with 12 compartments each (illustrated). Size: 34x13 3/4x11 1/2". Wt., 68 lbs. **34.93****

**86 NX 096. NET** **44.91**

**No. 13. 10 standard drawers with 3 compartments each and 8 "Little Gem" drawers with 12 compartments each. Size: 34x13 3/4x11 1/2". Wt., 74 lbs. **44.91****

**86 NX 097. NET** **54.89**

**No. 14. 6 standard drawers with 3 compartments each and 12 "Little Gem" drawers with 12 compartments each. Size: 34x13 3/4x11 1/2". Wt., 82 lbs. **54.89****

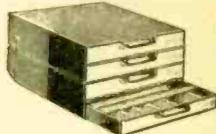
**86 NX 098. NET** **24.33**

**No. 9. 4 standard drawers with 3 compartments each and 4 "Little Gem" drawers with 12 compartments each. Size: 23 1/4x9 1/2x11 1/2". Wt., 37 lbs. **24.33****

**86 NX 094. NET** **34.31**

**No. 10. 8 "Little Gem" 12-compartment drawers. 23 1/4x9 1/2x11 1/2". Wt., 44 lbs. **34.31****

**86 NX 095. NET**



**"LITTLE GEM" CABINETS.** For small parts. May be used individually or stacked. Units lock firmly together when stacked. Large, built-in handle. Drawer stop prevents accidental spilling. Dividers instantly adjustable on 1 1/2" centers. Dividers fit tight to embossed bottom—no creeping of parts under dividers. 12 compartments per drawer—up to 28 with extra dividers. No seams, sharp edges, slots or holes to catch or damage parts. 1 1/2"x11" label holder on front of drawer. 3/4"x11" label holder in overhang at top of each compartment. Olive green baked enamel finish. Size of each drawer: 11" long, 11" wide, and 1 1/2" high.

**86 NX 065. No. 1. 2-DRAWER CABINET.** With dividers providing for 24 compartments. Size: 3 1/2x11x11". Shpg. wt., 7 lbs. **6.95**

**NET** **13.90**

**86 NX 066. No. 2. 4-DRAWER CABINET.** With dividers for 48 compartments. Size: 6 1/2x11x11". Shpg. wt., 15 lbs. **13.90**

**NET** **20.85**

**86 NX 067. No. 3. 6-DRAWER CABINET.** 72 compartments. Safe storage for thousands of parts. Size: 9 1/2x11x11". Wt. 23 lbs. **20.85**

**NET** **39c**

**86 N 068. No. 8730. EXTRA DRAWER DIVIDERS.** Can be added to each drawer to provide up to 28 compartments per drawer. Easily adjustable. Size: 1 1/2" W, 2 1/4x1 1/2". Shpg. wt., 1/4 lb. each. **39c**

**PER PKG. OF 5**

## SINGLE AND DOUBLE TIER LOCKERS



Provide a maximum of utility with the greatest eye appeal through smart modern styling. Complete panel recessing eliminates all obstructions. Edges rolled at top and bottom; no bolt heads or hinges visible on exposed surfaces. Quick easy assembly without tools. Grey baked enamel finish. Used singly or in combinations. Shipped knocked-down.

### SINGLE TIER

No.	Type	W. D. H.	Sh. Wt.	NET
86 NX 860	121866	12x18x66"	75 lbs.	17.40
86 NX 861	151866	15x18x66"	80 lbs.	18.10
86 NX 862	181878	18x18x78"	98 lbs.	20.70

### DOUBLE TIER

No.	Type	W. D. H.	Sh. Wt.	NET
86 NX 863	121278D	12x12x78"	74 lbs.	18.20
86 NX 864	121578D	12x15x78"	75 lbs.	19.60
86 NX 875	121878D	12x18x78"	88 lbs.	21.20
86 NX 876	151578D	15x15x78"	84 lbs.	20.60

## ADJUSTABLE STEEL SHELVING

Equipto shelving is manufactured in standardized units. Each unit is complete within itself, yet all units fit together perfectly in any type of assembly. Can be installed or adjusted in minimum time. Shelving fastens to upright with simple solid steel stud. Shelves are instantly adjustable on 1 1/2" centers. Exclusive "Iron-Grip" keys included to securely fasten any two units together side-by-side. Olive-green baked enamel. Shelves have 400 lb. distributed load capacity. With 6 adjustable shelves, away braces, and all necessary hardware, 36 inch total width, 7 1/2" overall height. Also available, on special order, additional shelves to add to these units, and complete shelving units in other heights.



No.	Type	Depth	Wt., Lbs.	NET
86 NX 865	60-6	12"	90	22.40
86 NX 866	62-6	18"	120	25.90
86 NX 867	64-6	24"	140	29.70
86 NX 868	66-6	36"	168	43.90

## VERSATILE STEEL STANDS AND TRUCKS

### CHASSIS AND TEST UNIT STANDS



Convenient stands for radio and TV chassis, industrial electronic equipment, and test instruments. Models with wheels are ideal for moving chassis to service bench. Also excellent for bringing test instruments to industrial equipment. Heavy steel with olive-green enamel finish. Solid rubber wheels, 2 1/2" diameter. Size, 18" wide, 24" in length. Height: With wheels, 34"; without wheels, 31".

**TYPE 710. With wheels. Wt., 35 lbs. **13.77****

**86 NX 087. NET** **12.12**

**TYPE 709. Less wheels. Wt., 33 lbs. **12.12****

**86 NX 089. NET** **15.27**

**TYPE 711. With wheels and pressed wood top. Shpg. wt., 40 lbs. **15.27****

**86 NX 088. NET**

### STURDY STEEL TRUCKS



New stock-handling cart. Made of heavy steel with 5" diameter solid rubber tired wheels. Front wheels are stationary; rear wheels are swiveled. Top tray may be inverted to make flat surface. Trays are 4" deep. Will handle loads up to 600 lbs. with ample safety factor. Durable olive-green baked enamel finish.

**No. 150. LARGE. 36" high, 24" wide, 36" long. Shpg. wt., 68 lbs. **34.84****

**86 NX 090. NET** **26.80**

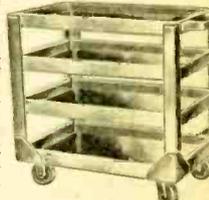
**No. 145. SMALL. As above, but 16" wide, 30" long. Shpg. wt., 49 lbs. **26.80****

**86 NX 092. NET** **2.50**

**No. 146. PAPER CARRYING SHELF. For above trucks. Size, 8 1/2x11". Wt., 5 lbs. **2.50****

**86 N 093. NET**

### NEW MULTI-SHELF TRUCKS



New multi-shelf utility carts. Trays 1 1/2" deep, adjustable on 1 1/2" centers for wide variety of applications. Heavy steel construction with round beaded edges. No exposed bolts, nuts or rivets. 5" rubber tired, front wheels; swivel wheels in rear. For loads up to 600 lbs. with reserve safety factor. Shipped semi-knocked-down.

**No. 155. SMALL. 30" long, 16" wide, 36" high. Shpg. wt., 75 lbs. **30.98****

**86 NX 874. NET** **36.20**

**No. 160. LARGE. 36" long, 24" wide, 36" high. Shpg. wt., 85 lbs. **36.20****

**86 NX 873. NET**

# Radio Hardware



Hardware for all purposes, in popular sizes and quantities. Each 29c quantity comes in a handy transparent plastic container with sliding lid.

Needed items are easy to find—protected against loss—kept free of dust. Ideal for storing any small parts. Size, 2 1/2 x 2 1/2 x 1 1/2".

**Fig. A. Round Head Screws.** General purpose type in most sizes required for repair and construction jobs in radio, television and electronics. Plated steel. Shpg. wts.: 3 oz.; 14 oz.; and 5 lbs.

**Fig. C. Self-Tapping Screws.** Flat-slotted type. Ideal for panel and rack mounting. No tapping of metal required. Plated steel. Hex head—with deep screwdriver slot. Shpg. wt., 4 oz.; 12 oz.; and 4 1/2 lbs.

Size	29c container		Gross Pkg.		1000 Lot Pkg.	
	No.	Quan.	No.	NET	No.	NET
4-36x	44 N 502	40	44 N 741	.53	44 N 742	2.66
4-30x	44 N 503	35	44 N 744	.57	44 N 745	2.84
4-30x	44 N 504	35	44 N 747	.64	44 N 748	3.09
6-32x	44 N 505	40	44 N 703	.57	44 N 704	2.87
6-32x	44 N 506	30	44 N 711	.64	44 N 712	3.35
6-32x	44 N 507	30	44 N 716	.76	44 N 717	3.30
6-32x1	44 N 508	30	44 N 721	.84	44 N 722	4.38
6-32x1 1/4	44 N 509	30	44 N 726	1.06	44 N 727	4.99
8-32x	44 N 518	30	44 N 738	.72	44 N 739	3.67
8-32x	44 N 519	25	44 N 753	.76	44 N 754	4.02
8-32x	44 N 529	25	44 N 756	.82	44 N 757	4.27
8-32x	44 N 535	25	44 N 761	.95	44 N 762	4.94
8-32x1	44 N 546	20	44 N 768	1.09	44 N 769	5.57
10-32x 1/4	44 N 548	20	44 N 777	.95	44 N 778	4.98
10-32x	44 N 549	20	44 N 780	1.14	44 N 781	5.89
10-32x1	44 N 553	17	44 N 783	1.29	44 N 784	6.66

Size	29c container		Gross Pkg.		1000 Lot Pkg.	
	No.	Quan.	No.	NET	No.	NET
4x 1/2"	44 N 564	35	44 N 803	.87	44 N 804	5.40
6x 1/4"	44 N 565	30	44 N 808	.87	44 N 809	5.40
6x 1/2"	44 N 566	25	44 N 813	1.19	44 N 814	7.08
8x 1/4"	44 N 567	20	44 N 823	1.19	44 N 824	7.08
8x 1/2"	44 N 568	15	44 N 828	1.80	44 N 829	9.22
10x 1/2"	44 N 569	15	44 N 833	1.70	44 N 834	8.66

**Fig. B. Phillips Head Machine Screws.** Plated steel. Shpg. wts.: 5 oz.; 1 1/4 lbs.; 6 1/2 lbs.

**Fig. D. Ornamental Head Screws.** For panels, etc. 4 oz.; 13 oz.; 6 lbs.

**Fig. E. Binding Head Machine Screws.** Plated. 4 oz.; 7 oz.; 2 1/2 lbs.

**Fig. F. Hex Nuts.** Plated steel. Wts.: 4 oz.; 8 oz.; 3 lbs.

6-32x 1/4"	44 N 555	40	44 N 851	1.24	44 N 853	6.42
6-32x	44 N 556	40	44 N 856	1.27	44 N 857	6.66
6-32x 1/2"	44 N 557	40	44 N 861	1.27	44 N 862	6.66
8-32x 3/8"	44 N 558	40	44 N 871	1.27	44 N 872	6.66
8-32x 1/2"	44 N 559	40	44 N 876	1.37	44 N 877	7.11
8-32x1	44 N 563	25	44 N 881	1.73	44 N 882	8.96

4-30x 1/4"	44 N 584	30	44 N 906	.74	44 N 907	3.82
6-32x 1/4"	44 N 579	30	44 N 910	.82	44 N 911	4.17
8-32x 1/4"	44 N 585	30	44 N 915	.84	44 N 916	4.28
10-32x 1/4"	44 N 585	30	44 N 918	.84	44 N 919	4.19
8-32x 1/2"	44 N 586	30	44 N 937	.79	44 N 953	3.93
8-32x 3/4"	44 N 587	30	44 N 938	.79	44 N 954	3.93



**Fig. P. Oval Head Screws.** 10/32x 1/4" screws fit all standard relay racks. Nickel-plated. 3 oz.; 8 oz.; 2 1/4 lbs.

Size	29c container		Gross Pkg.		1000 Lot Pkg.	
	No.	Quan.	No.	NET	No.	NET
6-32x 1/4"	44 N 656	30	44 N 521	.81	44 N 522	4.05
8-32x 1/4"	44 N 657	25	44 N 524	.96	44 N 525	4.84
10-32x 1/4"	44 N 658	20	44 N 527	1.11	44 N 528	5.53

**Fig. Q. Right-angle brackets.** \*Cadmium plated brass. †Cadmium plated steel. ‡Brass, one hole tapped 6-32. Dimensions are mtg. ctrs. from corner and bracket width. For No. 6 screws. 3 oz.; 9 oz.; 4 1/2 lbs.

**Fig. R. Snap Hole Plugs.** Fill hole size listed. 3 oz.; 1 1/4 lbs.; 10 lbs.

1/8"	44 N 659	8	44 N 286	3.17	.....
3/16"	44 N 679	8	44 N 289	2.86	.....
1/4"	44 N 689	6	44 N 292	3.31	44 N 293 16.87
5/16"	44 N 699	5	44 N 295	4.84	44 N 296 24.74
3/4"	44 N 707	5	44 N 298	6.40	44 N 299 43.17

**Fig. S. Cable Clamps.** Fit cable sizes below. Wts.: 3 oz.; 12 oz.; 5 lbs.

1/8"-3/8"	44 N 708	25	44 N 333	1.03	44 N 334 5.29
3/8"-1/2"	44 N 719	20	44 N 336	1.19	44 N 337 6.08
1/2"-5/8"	44 N 732	15	44 N 339	1.27	44 N 342 6.53
5/8"-3/4"	44 N 733	15	44 N 344	1.35	44 N 345 6.87

**Fig. T. Rubber Feet.** Take screws, nails, etc. Wts., 3 oz.; 9 oz.; 4 1/2 lbs.

**Fig. U. Rubber Tack Bumpers.** Tacks molded-in. 2 oz.; 8 oz.; 4 lbs.

3/4" O.D.	44 N 763	8	44 N 154	1.01	44 N 155 5.17
1" O.D.	44 N 764	8	44 N 157	2.25	44 N 158 11.47

**Fig. V. Glass Jar.** An ideal storage container for miscellaneous small parts. Complete with metal screw cap for keeping items free from dust and moisture. Size, 2 1/2" high; 2" in diameter. Shpg. wt., 7 oz.

**Fig. W. Plastic Container.** Transparent plastic container with sliding lid. Useful for storing resistors, capacitors, nuts, screws, washers, etc. Size, 2 1/2 x 1 1/2 x 2 1/2". Shpg. wt., 3 oz.

44 N 500. 12 or more, EA. .60. EACH. .6C

44 N 501. PKG. of 12, 1.84. EACH. .17C

Size	29c container		Gross Pkg.		1000 Lot Pkg.	
	No.	Quan.	No.	NET	No.	NET
# 6 screw	44 N 588	65	44 N 662	.56	44 N 663	2.59
# 8 screw	44 N 589	55	44 N 665	.56	44 N 666	2.59
# 10 screw	44 N 593	50	44 N 668	.56	44 N 669	2.59

**Fig. H. Internal Star Lockwashers.** Shpg. wts.: 2 oz.; 4 oz.; 1 1/4 lbs.

**Solder Lugs.** Sturdy, tinned units. Accommodate screw numbers given below; No. 8 holes also take No. 6 screws. Wts.: 2 oz.; 4 oz.; 1 lb.

**Fig. N. Rubber Grommets.** Soft, black stock. Size shown below is chassis mounting hole required. Shpg. wts.: 2 oz.; 8 oz.; 4 lbs.

**Fig. O. Cup Washers.** For oval head screws (Fig. P). 3 oz.; 5 oz.; 2 1/2 lbs.

Size	29c container		Gross Pkg.		1000 Lot Pkg.	
	No.	Quan.	No.	NET	No.	NET
# 6 screw	44 N 653	45	44 N 537	.44	44 N 538	2.03
# 8 screw	44 N 654	45	44 N 540	.49	44 N 541	2.25
# 10 screw	44 N 655	35	44 N 543	.53	44 N 544	2.47

## HANDY HARDWARE ASSORTMENTS

### DELUXE KIT

Consists of a handsome, transparent plastic case with 12 compartments of assorted machine screws, nuts, spade bolts, self-tapping screws, rubber grommets, knob set screws, rivets and eyelets, lugs, washers, and many other small parts. Ideal for servicemen. Shpg. wt., 1 lb. 4 oz.

3.09

### BARGAIN KIT

Save on this amazingly low-priced assortment of rivets, rubber grommets, nuts, screws, lock washers, right-angle brackets, soldering lugs, spade bolts, self-tapping screws, eyelets, and other radio hardware. Includes nickel and cadmium-plated and solid aluminum pieces. In transparent plastic container. Shpg. wt., 1 1/4 lbs.

44 N 315. NET..... 97c

### FIBER WASHERS

Consists of 100 plain and shouldered washers, etc. Have holes for No. 6 to No. 10 screws, 1/8" to 3/8" shafts. The ideal assortment for the radio serviceman. Shpg. wt., 3 oz.

44 N 320. NET PER BOX..... 59c

### ICA BRACKET ASSORTMENT

Type 5800. An assortment of plated metal offset and right angle brackets. Contains most popular sizes for radio and TV work. A valuable addition to your hardware stock. Consists of 28 pieces. All nickel plated finish. Shpg. wt., 1 lb.

44 N 325. NET..... 59c

## STORAGE CONTAINERS

44 N 500. 12 or more, EA. .60. EACH. .6C

44 N 501. PKG. of 12, 1.84. EACH. .17C

# Walsco "50 Line" Hardware

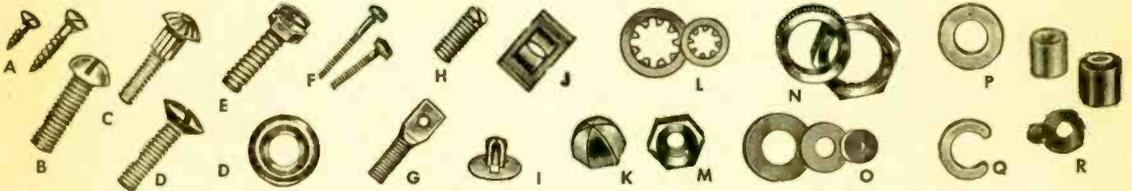
HANDY PLASTIC BOXES OF MOST-OFTEN-NEEDED SERVICING HARDWARE

The Walsco "50" line of most-often-needed hardware used in radio, TV, and electronics. Now attractively packaged in handsome plastic boxes. Contents can be quickly identified from any angle. No loss or spillage. Boxes can be stacked where space is a factor. Listings include the hard-to-get sizes as well as the most popular sizes. The wide selection of items meets all the requirements of the serviceman, experimenter, kit builder, Amateur and technician. All items are precision-made from high-quality materials to insure dependable service in all applications. Stock up on these Walsco "50" assortments—save time and money by having on hand the exact item needed. All are assortments except. \*Approximate quantity.

NET PER BOX **29c**

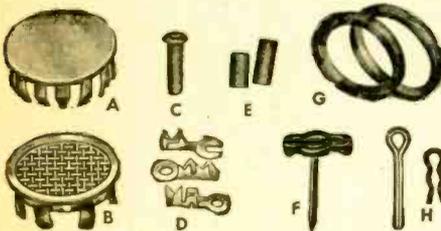
LIST PRICE, 50c

Av. shpg. wt. 4 oz.



## SCREWS, BOLTS, NUTS AND WASHERS

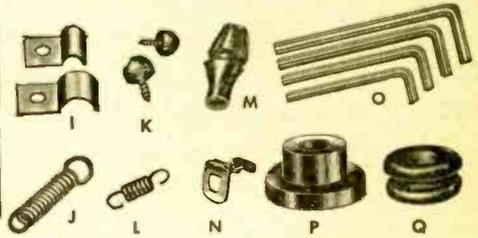
Stock No.	Fig.	Type	Description	Quan.*	Stock No.	Fig.	Type	Description	Quan.*
43 N 332	A	8500F	Escutcheon and wood screws in extra small sizes.	25	43 N 309	I	7370F	Snap-in trimounts.	20
43 N 302	.....	8502F	Wood screws with round and countersunk type heads.	25	43 N 322	J	8960F	Self-locking speed nuts. Easily installed.	30
43 N 300	B	8000F	1/4" to 1" machine screws with round and flat heads: Nos. 6, 8 and 10.	35	43 N 328	K	8950F	Self-locking acorn nuts. Improve appearance of panels and cabinets.	10
43 N 301	B	8002F	Small machine screws and nuts: Nos. 2 and 4.	35	43 N 331	L	7920F	Internal type lockwashers. Tempered. No. 2 to 1/2".	50
43 N 305	C	8250F	1/4"-1 1/4" ornamental head screws: 6-32 and 8-32.	20	43 N 307	M	8800F	Machine screw nuts. Sizes: 6-32, 8-32 and 10-32.	30
43 N 304	D	8005F	Rack screws and cup washers—nickel-plated.	15	43 N 308	N	8920F	Special hex and ring mounting nuts. Used on controls, switches, etc.	15
43 N 303	E	8300F	Sheet metal screws—round, hex-slotted and unslotted. 6, 8 and 10.	25	43 N 330	O	7820F	Insulating washers. Flat and extruded types. No. 6 to 1/4".	35
43 N 318	F	8550F	Phono needle set screws with knurled heads. 2-56, 2-64, 1-72.	12	43 N 312	P	7870F	Steel washers for Nos. 4, 6, 8, 10 and 1/4" screws.	80
43 N 329	G	8570F	Spade bolts for rivets or screws—1/6 hole size.	15	43 N 313	Q	7770F	Retaining rings and C-washers. Rings tempered, washers annealed. For 1/8" to 1/4" shafts.	25
43 N 306	H	8605F	Set screws. Hardened steel. Most-often-needed sizes. For radio knobs, etc. 6-32, 8-32 and 10-32.	15	43 N 326	R	7083F	Rubber washers, bumpers and spacers.	12
					43 N 353	.....	7828F	1/8" flat and extruded fiber washer asst.	20



NET PER BOX **29c**

LIST PRICE, 50c

Av. shpg. wt. 4 oz.

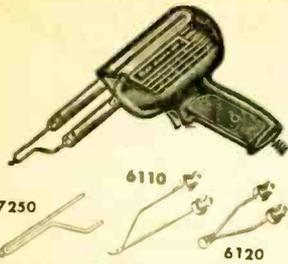


## GROMMETS, CHASSIS MOUNTS, SPRINGS, WRENCHES, ETC.

Stock No.	Fig.	Type	Description	Quan.*	Stock No.	Fig.	Type	Description	Quan.*
43 N 316	A	7300F	Snap-hole plugs for sealing and covering unused holes in chassis panels, etc. 1/4" to 1".	6	43 N 310	J	7421F	Large size expansion springs for all electronic needs.	10
43 N 317	B	7330F	Ventilating hole plugs. Permit free circulation of air. Asst. sizes.	3	43 N 311	J	7420F	Same as type 7421F above but in smaller sizes.	10
43 N 341	C	7527F	TV cord rivets. Sizes: from 1/8" to 3/8" in diameter and up to 1/2" in length. Washers included.	50	43 N 327	K	7050F	Rubber feet with wood screws.	8
43 N 319	D	7100F	Terminal and solder lugs. Tinned brass. No. 6 to No. 10.	30	43 N 337	L	7400F	Small-size dial drive springs. Looped at each end. 1/2" to 3/4".	10
43 N 342	E	7620F	Metal spacers with hole size for Nos. 6 and 8 screws.	12	43 N 338	L	7401F	Same as above but contains both large and small sizes.	8
43 N 343	E	7630F	Insulated spacers for Nos. 6 and 8 screws.	12	43 N 325	M	7048F	Cord strain relief. Provides grommet and strain relief for POSJ type wire.	5
43 N 321	F	7565F	Twin lead wiring nails. Hold FM and TV twin lead to molding.	35	43 N 339	N	7480F	Radio knob springs for quick easy attachment of knob.	18
43 N 347	G	77016F	Phono motor drives. I.D. 2". O.D. 2 1/4". 1/2" thick.	2	43 N 344	O	8600F	Hex wrench set. 4 hex: for No. 4 to No. 10 set screws. Nos. 2-6 cap screws.	Set of 4
43 N 346	G	77014F	Phono motor drives. I.D. 3/4". O.D. 1 1/8". 1/4" thick.	4	43 N 345	O	8602F	Spine wrenches for set screws to 1/4" and cap screws to No. 8.	Set of 4
43 N 348	G	77017F	Phono motor drives. I.D. 1 1/2". O.D. 1 3/4". 3/8" thick.	3	43 N 315	P	7075F	Rubber chassis mounts in most needed sizes.	10
43 N 349	G	77018F	Phono motor drives. I.D. 1/4". O.D. 1 1/8". 3/8" thick.	4	43 N 314	Q	7025F	Rubber grommets. For use on cables, etc. For metal up to 1/8" thick.	15
43 N 350	G	77019F	Phono motor drives. I.D. 1/2". O.D. 1 1/4". 1/2" thick.	4	43 N 324	.....	7760F	Knob felt washers. Brown. O.D. 3/4". I.D. 1/4". 1/2" thick.	40
43 N 351	G	77020F	Phono motor drives. I.D. 5/8". O.D. 6". 3/8" thick.	1	43 N 333	.....	7070F	Rubber tack feet. 1/2" dia., 3/8" in length.	10 ft.
43 N 352	G	77022F	Phono motor drives. I.D. 1 1/2". O.D. 1 3/4". 3/8" thick.	3	43 N 334	.....	7395F	Special thin dial cord.	10 ft.
43 N 320	H	7380F	Cutter and bur plins.	50	43 N 335	.....	7396F	Standard thin dial cord.	10 ft.
43 N 323	I	7500F	Cable clamps. With mounting hole. For 1/4" to 3/8" dia. cables.	20	43 N 336	.....	7397F	Standard dial cord.	10 ft.
					43 N 340	.....	7488F	TV knob springs.	12

# Soldering Irons and Solder

## WELLER INSTANT-HEAT "SOLDERLITE" SOLDER GUNS



### LIGHT-DUTY GUNS

Model S-400. Single-heat type. 135 watts. Shpg. wt. 3 lbs.  
46 N 643. List, \$12.15. NET **8.77**  
Lots of 3, EACH **7.89**

Model D-440. Dual-heat type. 100-150 watts. Shpg. wt. 3 lbs.  
46 N 644. List, \$14.90. NET **10.73**  
Lots of 3, EACH **9.65**

### CHISEL-POINT TIPS

46 N 574. Type 7135. For WS-100, WD-135, S-400 and D-440. PKG. OF 2 **25c**

46 N 573. Type 7250. For models WS-200, WD-250, S-500 and D-550. PKG. OF 2 **35c**

46 N 579. Type 7300. For use only in older models S-107 and D-207. Not interchangeable with tips used in guns listed above. PKG. OF 2 **25c**

### WELLER SOLDER GUN

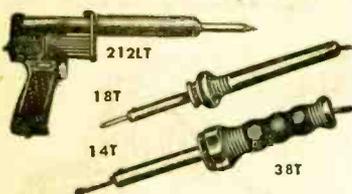
46 N 625. No. 7325 Tip Nut. For Models S-107, D-207, WS-100, WD-135, S-400 and D-440. NET EACH **15c**

46 N 626. No. 7323 Single Heat Switch. For all single-heat models. NET EACH **1.22**

46 N 627. No. 7324 Dual Heat Switch. For all dual-heat models. NET EACH **1.37**

46 N 628. No. 7130 Right Housing. For WS-100, WD-135. NET EACH **1.22**

### WALL "THERMOSTATIC BRAIN" SOLDERING IRONS AND GUNS



Model 212LT. New, transformerless solder gun. Heats in 3 seconds. Narrow, 6 1/2" barrel. "Thermostatic brain" automatically regulates wattage from 300-800 watts. Draws more current for heavy jobs, less current for lighter jobs. Provides the exact temperature required for the job. Ideal for heavy maintenance, industrial and automotive work. Perfectly balanced and light weight (1 lb.). Built-in 10-watt spotlight with switch. Steel-clad 1/2" tip. U.L. Approved. For 110-120 v., AC or DC. Wt., 2 lbs.  
46 N 848. List, \$16.95. NET **11.07**  
Replacement assembly. Tip and element. 3 oz.  
46 N 849. NET **4.58**

Model 214LT. As above, but wattage ranges from 150 to 400 watts. Steel-clad 1/2" tip.  
46 N 850. List, \$11.95. NET **7.85**  
Replacement Assembly. Tip and element. 3 oz.  
46 N 870. NET **2.59**

Solder Irons. Have unique thermostatic feature—simply plug in and "brain" takes over. Provide maximum wattage when soldering; idle back to low wattage when job is done. \*Pencil type. U.L. Approved.

No.	Type	Watts	Tip	Lgth	Wt.	NET
46 N 851	18T*	25 to 90	1/8"	7"	7 oz	3.28
46 N 852	14T*	40 to 125	1/8"	8"	7 oz	3.77
46 N 854	38T	80 to 225	1/2"	11 1/2"	2 lbs.	3.92

### REPLACEMENT TIPS

\*New Walloy-Red tips for production line use.

No.	Type	Size	For	Wt.	NET
46 N 874	18T*	1/8"	18T	2 oz.	.67
46 N 875	14T*	1/8"	14T	2 oz.	1.20
46 N 876	38T*	1/2"	38T	3 oz.	1.34
46 N 873	18T	1/8"	18T	2 oz.	.28
46 N 872	14T	1/8"	14T	2 oz.	.24
46 N 855	38T	1/2"	38T	3 oz.	.40

Here are the latest Weller soldering guns—with advanced features in both light- and heavy-duty types. Ideal for production lines and service shops. Just squeeze the trigger—in 5 seconds your Weller gun is ready for action. Rugged construction. Built-in air-cooled transformer and pre-focused dual spotlights. Streamlined design and long reach make it easy to work in otherwise inaccessible areas. Full, constant heat. Low-cost tips are easily replaced. All models are for 110-120 volts, 60 cycles AC only.

**VERSATILE ACCESSORY TIPS.** Designed for home-crafter and hobby uses. Cutting tip has a hot knife blade; smoothing tip has a trowel shape blade. With attached nuts for easy interchange. Used for sealing home freezer packages, melting stick shellac or wax for furniture repair, cutting plastic wall and floor tile, and many other household repairs, plus all types of soldering. Av. wt., tips and parts, 4-6 oz.

### HEAVY-DUTY GUNS

Model S-500. Single-heat type. 250 watts. Shpg. wt. 3 1/2 lbs.  
46 N 642. List, \$13.50. **9.75**  
Lots of 3, EACH **8.77**

Model D-550. Dual-heat type. 200-275 watts. Shpg. wt. 3 1/2 lbs.  
46 N 641. List, \$16.25. NET **11.71**  
Lots of 3, EACH **10.53**

### VERSATILE ACCESSORY TIPS

46 N 681. Type 6110. Cutting Tip. For WS-100, WD-135, S-400, D-440. EACH. **35c**

46 N 682. Type 6120. Smoothing Tip. For WS-100, WD-135, S-400, D-440. EACH. **35c**

46 N 683. Type 6130. Cutting Tip. For WS-200, WD-250, S-500, D-550. EACH. **35c**

46 N 684. Type 6140. Smoothing Tip. For WS-200, WD-250, S-500, D-550. EACH. **35c**

### REPLACEMENT PARTS

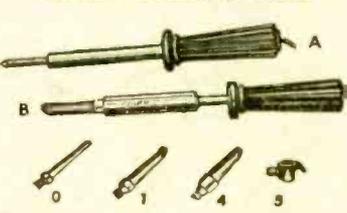
46 N 629. No. 7131 Left Housing. For WS-100, WD-135 soldering guns. NET EACH **1.22**

46 N 630. No. 7417 Tip Nut. For WS-200, WD-250, S-500, D-550. NET EACH **15c**

46 N 631. No. 7225 Right Housing. For Model WS-200, WD-250. NET EACH **1.22**

46 N 632. No. 7228 Left Housing. For Model WS-200, WD-250. NET EACH **1.22**

### THERMOSTAT-CONTROLLED KWIKHEAT SOLDERING IRONS



Thermostatically controlled industrial soldering irons. Heat in 80 seconds. Stay at right temperature for maximum efficiency and economy. Cannot overheat. Preset to maintain 800° heat. Heating element wound on stainless steel core. Exposed parts made of high tensile strength stainless steel. High-impact phenolic handle, ribbed to allow circulation of air, will never get too hot. U.L. Approved.

### Fig. A—MODEL 200—150-WATT

The Kwikheat Jr. for light-duty continuous use. For operation from 100-125 v. AC. Length, with tip, 12 1/2". Shpg. wt., 1 1/4 lbs.  
46 N 634. NET **5.81**  
3 or more, EACH **5.17**

Type 2061 Replacement Tip. Plunger type, pyramid shape. Plated to reduce corrosion. Size, 3/8" diam., 4" long. Wt., 4 oz.  
46 N 633. NET **37c**

### Fig. B—MODEL 300—225-WATT

For heavy-duty continuous use. For 100-125 v. AC. Accommodates any of four tips listed below. Supplied with No. 1 tip. Length, 13 1/2". Shpg. wt., 1 1/2 lbs.  
46 N 560. NET **9.18**  
3 or more, EACH **8.15**

### INTERCHANGEABLE TIPS

46 N 561. No. 0 Tip with small tapered point. Copper alloy. For light work. Wt., 4 oz.  
46 N 562. No. 1 Tip with gradual tapered point. Copper alloy. For medium work. 5 oz.  
46 N 565. No. 4 Tip. Extra heavy with chisel point. Copper alloy. For heavy work. 8 oz.  
46 N 566. No. 5 Melting pot. For tinning wires. Holds 1 oz. solder. Wt., 3 oz.  
ANY TIP. NET EACH **1.13**  
3 or more, EACH **1.00**



### KESTER SOLDERS

Famous for uniformity and reliability. Compounded of 40% tin and 60% lead of the highest grade. Flux filling is evenly distributed and flows easily. Shpg. wts.: Handy coil, 3 oz.; 1-lb. spools, 1 1/4 lbs.; 5-lb. spools, 6 1/4 lbs.

### ROSIN CORE 1/2" SOLDER

Plastic rosin filled. The most efficient solder for all radio and electrical work. Eliminates possibility of corrosion, resistance or leakage. Makes perfect connections with minimum work.

46 N 900. Handy Coll. NET **17c**  
46 N 901. 1-lb. spool. NET **1.07**  
46 N 902. 5-lb. spool. NET **5.15**

### ROSIN CORE 1/4" SOLDER

Thin solder, plastic rosin filled. For delicate soldering where only the smallest amount of solder is desired. Non-corrosive.

46 N 930. 1-lb. spool. NET **1.10**  
46 N 931. 5-lb. spool. NET **5.30**

### "RESIN FIVE" 3/32" SOLDER

Features "Resin 5" flux, non-corrosive and non-conductive. Makes soldering easier and faster. 3/32" dia.

46 N 916. 1-lb. spool. NET **1.07**

### ACID CORE SOLDER

Acid core solder for all general soldering other than electrical connections. Acid flux saves time; makes a lasting job.

46 N 905. Handy Coll. NET **17c**  
46 N 906. 1-lb. spool. NET **1.07**  
46 N 907. 5-lb. spool. NET **5.15**

### BAR SOLDER

One pound bar. Consists of 40% tin, 60% lead. Top quality for production and large-scale soldering jobs. Shpg. wt., 1 1/4 lbs.

46 N 925. NET **90c**

### SOLDERING PASTE

Specially processed for finer, more even distribution of fluxing ingredients. Permits a clean, non-corrosive solder job. Convenient 2-oz. cans. Shpg. wt., 5 oz.

46 N 915. 10 for 1.05. NET **12c**

### KESTER TINNING BLOCK

Cleans and tins soldering irons quickly. Replaces sal ammoniac. Will not crumble or cause any undue corrosion on work. Shpg. wt., 1 1/4 lbs.

46 N 922. NET **65c**

### ERSIN SOLDER

New 5-core solder for high-speed, precision soldering. Melts rapidly with less heat. Pure high-grade tin, lead and non-corrosive Ersin flux. Shpg. wts.: 1 lb. spool, 1 1/4 lbs.; 7 lb. spool, 8 1/2 lbs.; 14 gauge (.064") 40/60 Multicore Solder.

46 N 995. 1 lb. spool. NET **1.26**  
46 N 996. 7 lb. spool. NET **8.54**

16 gauge (.064") 40/60 Multicore Solder.

46 N 991. 1 lb. spool. NET **1.28**  
46 N 992. 7 lb. spool. NET **8.68**

Service Pak. 17-ga. 50/50 5-core solder.  
46 N 997. NET **50c**

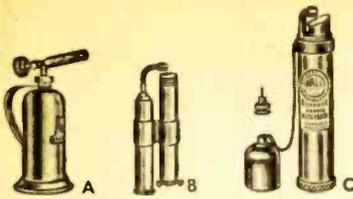
### LECTROHM SOLDER POTS

Two new solder pots designed for continuous operation. Sturdily constructed to provide maximum efficiency at minimum cost. Made of cast iron, mounted on cadmium-plated steel stands. Sizes: SP-200; 2 1/2" ht., 2 1/2" dia., 7/8" cup depth. SP-250; 3 1/2" ht., 2" dia., 1 1/4" cup depth. With 6-ft. cord. For 110 volts, AC or DC.

46 N 880. SP-200 1 1/4 lbs. 200 3 1/4 lbs. 4.99  
46 N 881. SP-250 2 lbs. 250 5 1/4 lbs. 4.98

Replacement nickel-chrome heating elements. Type A. For SP-200. 46 N 882. NET **1.42**  
Type B. For SP-250. 46 N 883. NET **1.42**

# Soldering Irons and Blow Torches



## BLOW TORCHES

### LENK TORCHES

**Fig. A. Type 104. Gasoline Torch.** Non-clogging. Has flame-control and shut-off valve to eliminate evaporation of fuel and loss of pressure. Has self-cleaning orifice. Heavy gauge, seamless, drawn brass tank with funnel shaped bottom. Height 7 1/2", diameter at base 3". Capacity, 1/2 pint. Shpg. wt., 2 lbs.  
43 N 700. NET. 3.31

**Fig. A. Type 105. Alcohol Torch.** As above, but for alcohol. Shpg. wt., 2 lbs.  
43 N 704. NET. 3.31

**Fig. B. Type 108. Alcohol Torch.** Double barrel, self-generating. Uses denatured or commercial alcohol. Copper heat conductor attached to wick insures quick starting. Screw-top and bottom prevents leakage. Nickel-plated. Size, 5 1/2 x 2 1/2 x 1". Shpg. wt., 1 lb.  
43 N 701. NET. 1.66

### Fig. C—WALL ALCOHOL TORCHES

**Type No. 1 Dreadnaught.** New, efficient alcohol torch. Completely automatic. No moving parts. No adjustments necessary. Practically foolproof and absolutely safe to use. Just fill with good denatured alcohol and light. No pumping or priming. Made of highest quality brass, extra heavy duty to prevent smashing. Triple chrome plated. 4-inch flame develops 1800° F. Operates for approximately one and one-half hours. Size, 7/8 x 1/4". Shpg. wt., 7 oz.  
46 N 868. List, \$3.50. NET. 2.28

**Type No. 2 Dreadnaught.** Same as above model, but has 6-inch flame. Size, 1 1/4 x 7/8". Wt., 1/4 lb.  
46 N 869. List, \$4.50. NET. 2.94

## WEN MODEL 250—SOLDER GUN

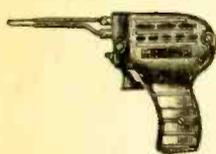


New solder gun which heats in 3 seconds when trigger is pulled. Rated at 250 watts. Excellent for auto repairs, home work, shops, electrical work, sheet metal work, and other heavy jobs as well as for radio and TV repair. Perfectly balanced for ease of handling. Has straight-line design and built-in spotlight for greater visibility. Rigid, streamlined, silver-plated tip fits into tight corners. Handle and case are heat and shock resistant. U.L. Approved. For 110-120 volts, 60 cycles AC. Length, 6 1/2". Shpg. wt., 5 lbs.  
46 N 325. List, \$12.95. NET. 9.71

### REPLACEMENT TIPS

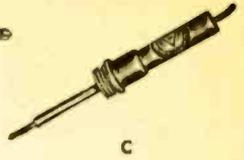
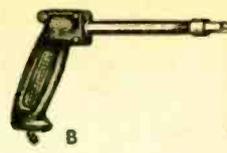
No.	Type	Description	Wt.	NET
46 N 326	25-A-4	Standard tip	5 oz.	1.1c
46 N 327	25-X-20	Feraloy tip	5 oz.	35c

## WEN MODEL 199 "QUICK-HOT"



New, trigertypetype soldering gun. Heats in just 2 1/2 seconds. Excellent balance for more accurate soldering—with less fatigue. Wattage efficiency comparable to guns of much higher wattage ratings. Shock and heat resistant plastic handle. New steel nose long-life tip. Built-in spotlight—focuses on work at tip. Rated at 120 watts. Weighs only 1 1/4 lbs. net. For 110-120 v., 60 cycle AC. Shpg. wt., 2 1/4 lbs.  
46 N 358. NET. 5.95

**Type 198A Tip.** For Model 199 gun above. Shpg. wt., 2 oz.  
46 N 359. NET. 35c



## LENK SOLDERING IRONS

### Fig. A—75 AND 125 WATT "GUN GRIP" SOLDERING IRONS

Here's a handy, dependable soldering iron—at moderate cost. Features a pistol-grip handle that is perfectly balanced, is easier to use, and is cooler. In addition, the chrome-plated barrel is spring-mounted; protects delicate work by absorbing shock. For maximum versatility, 4 tips are supplied: straight, 45°, 90°, and one (straight) heavy-duty, general-purpose tip with adapter. Has metal-clad heating element. Built-in stand prevents burning table. U.L. Approved. For operation from 110-120 volts DC or AC. Has 6-ft. cord.  
Model 504. 75 watts. Wt., 1 1/4 lbs. 4.05  
Model 505. 125 watts. Wt., 1 1/2 lbs. 4.78

43 N 708. NET  
43 N 709. NET

**Extra Tips.** Set of 3 extra tips; straight 45° and 90°—plus adapter. For soldering in any position.  
For Model 504. Shpg. wt., 12 oz. 99c  
For Model 505. Shpg. wt., 14 oz. 1.21

43 N 713. NET  
43 N 716. NET

### Fig. B—ECONOMY PISTOL GRIP SOLDERING IRONS

Popularly priced, all-purpose, pistol grip soldering iron. Designed for efficient, long-lasting use. An excellent iron for servicemen, hobbyists, home owners and mechanics. Cool, convenient handle is perfectly balanced for easier soldering with less fatigue. Has highly dependable, heavy-duty heating element. Heavy chrome-plated barrel. Approved by Underwriters' Laboratories. For operation from 110-120 volts DC, or AC.

Model 376. 80 watt pistol grip soldering iron 3/4" tip. Shpg. wt., 1 1/4 lbs. 2.38  
46 N 638. NET EACH

Model 400. 125 watt pistol grip soldering iron 1/2" tip. Shpg. wt., 1 1/4 lbs. 2.94  
46 N 639. NET EACH

### REPLACEMENT TIPS

43 N 714. 3/4" dia. tip. For use with Model 376 soldering iron. Wt., 3 oz. NET. 59c

43 N 715. 1/2" dia. tip. For use with Model 400 soldering iron. Wt., 4 oz. NET. 73c

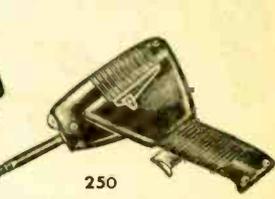
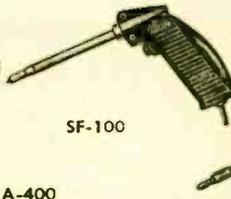
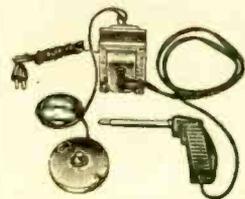
### Fig. C—PENCIL TYPE SOLDERING IRONS

**Type 251 Pencil Type 25-Watt Soldering Iron.** 1/4" dia. tip. Light-weight, compact, and extremely sturdy. Weighs only 4 oz. Ideal for light-chassis jobs; perfect for production line use. 3" copper tip is nickel plated. Construction features silver nichrome element, Madagascar mica, and a brass core. Tiny stainless steel barrel and tip permit easy access to crowded chassis. For 110-120 volts DC or AC. Shpg. wt., 8 oz.  
46 N 940. 12 or more, EACH 3.43. NET EACH 3.67

46 N 941. Type 256. Same as type 251 but for heavier work. Rated at 40 watts. Shpg. wt., 8 oz.  
12 or more, EACH. 3.78. NET EACH. 4.04

46 N 942. Replacement tips for types 251 and 256 irons. Size, 1/8 x 3". Shpg. wt., 3 oz. NET EACH. 30c

46 N 946. New 1/4" Tip. For applications requiring larger tip area. Increases versatility of pencil irons. Shpg. wt., 3 oz.  
12 or more, EACH. 41c. NET EACH. 47c



## PHILLIPS INSTANT-HEAT SOLDERING TOOLS

### A-400 INDUSTRIAL COMBINATION

Excellent new tool to speed up production. Foot-switch control leaves hands free for soldering. Iron operates on 6 to 12 v. AC-DC, or 110 v. AC with HD-520 transformer. Heats almost instantly—6 seconds. Consists of SF-100-400 gun, HD-520-400 transformer, and A-513-400 foot control. Shpg. wt., 7 lbs.  
46 N 353. NET. 8.20  
Model SF-100 Gun. Same as SF-100-400 but has trigger control switch. Wt., 13 oz.  
46 N 354. NET. 2.80

### NEW MODEL 250—250-WATT

For light and heavy-duty soldering. Heats in only 4 seconds. Rapidly interchangeable tips. New, replaceable barrel section solves frozen tip problem; copper soldering tip is forced-treaded to the steel barrel extension and threaded joint allows for replacement of both components as single unit. 6-watt lamp. Trigger switch, 3-amp fuse. With 2 elements and 2 tips—1/4", 1/8", 1/16". For 110-120 v., 50-60 cycle AC. Wt., 4 1/2 lbs.  
46 N 835. List, \$15.95. NET. 10.44

### REPLACEMENT PARTS

For Model A-400 combination and Model SF-100 gun, except 1 for SF-100 only. Av. shpg. wt., 5 oz. except \*4 lbs.

No.	Type	Description	EACH
46 N 802	HD-520-400*	Step-down trans.	4.82
46 N 803	A-109	Rod (with tip)	.29
46 N 804	A-110	Carbon element	.10
46 N 805	A-114	3/4" spade tip	.35
46 N 806	A-115	3/4" pyramid tip	.35
46 N 807	A-116	3/4" pyramid tip	.35
46 N 808	A-119	3/4" pyramid tip	.35
46 N 809	A-120	3/4" spade tip	.44
46 N 810	A-125L*	Left handle	.35
46 N 811	A-125R*	Right handle	.35
46 N 812	A-125LR*	Complete handle	.76
46 N 813	A-136	Button switch	.18
46 N 814	A-501	Sw., complete	.35
46 N 815	A-512-400	Sw., foot control	.88
46 N 816	A-513-400	Foot sw., comp.	1.76

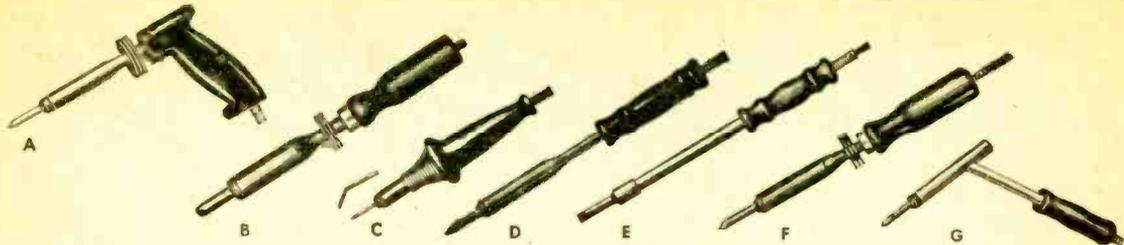
### REPLACEMENT PARTS

Replacement element, \*tip-barrel assemblies, etc., for Model 250. Av. shpg. wt., 5 oz.

No.	Type	Description	EACH
46 N 836	VT-210	Carbon element	10c
46 N 837	VT-214	3/4" spade*	39c
46 N 838	VT-215	3/4" pyramid*	39c
46 N 839	VT-216	3/4" pyramid*	39c
46 N 840	VT-219	1/2" pencil*	39c
46 N 841	VT-220	3/4" spade*	49c
46 N 355	VT-225R	Right housing	98c
46 N 356	VT-225L	Left housing	98c
46 N 357	VT-230	Switch assembly	98c

**TYPE VT 660 BARREL ADAPTER.** Converts earlier Model LW gun to accommodate tip-barrel assemblies of Model 250. 4 oz.  
46 N 842. NET. 59c

# Drake Soldering Equipment



## GENERAL PURPOSE AND INDUSTRIAL IRONS

High-quality, dependable soldering irons. Ruggedly built and perfectly balanced. Heating elements are of highest grade nichrome wire. Comfortable handles. Blued finish. Wide selection of models to cover every application. Standard models are for medium-duty and general radio-television work. Economy models are quick-heating, light-duty irons. Industrial models are designed for continuous duty in production work.

**Fig. A—PISTOL GRIP MODELS**

No.	Model	Watts	Length	Tip	Lbs.	NET
46 N 507	314*	80	9 1/2"	3/8" pyramid	1 1/4	2.06
46 N 509	327*	125	10 1/4"	3/8" pyramid	2	4.41

**Fig. B—VAPOR PROOF INDUSTRIAL MODELS**

No.	Model	Watts	Length	Tip	Lbs.	NET
46 N 553	625	125	10"	3/8" chisel	2	5.88
46 N 554	825	225	10"	3/8" chisel	3	7.35

**Fig. C—MIDGET MODEL 350**

No.	Model	Watts	Length	Tip	Lbs.	NET
46 N 539	350	35	7"	1/8" pencil	1 1/4	3.53

**Fig. D—STANDARD MODELS**

No.	Model	Watts	Length	Tip	Lbs.	NET
46 N 522	225	80	13 1/2"	3/8" pyramid	1 1/4	3.53
46 N 523	325	100	13 1/2"	3/8" pyramid	1 1/4	3.82

**Fig. E—ECONOMY MODELS**

No.	Model	Watts	Length	Tip	Lbs.	NET
46 N 505	5	40	10"	1/8" pencil	10 oz.	1.15
46 N 521	318*	60	11 1/4"	3/8" pyramid	1 1/4	1.47
46 N 546	316*	100	13 1/2"	3/8" chisel	1 1/2	2.00

Deluxe model is extra hot and medium-heavy in weight. Pee-Wee model is small and light—just right for delicate jobs such as soldering voice coil leads, meter connections, crystal pickups and other fine work. All are complete with 6-ft. cord, plug and stand. All have plunger type tips except \*, which have screw-on type. †For intermittent duty. ‡With extra 45° tip. For 110-120 volts, AC-DC.

**Fig. F—INDUSTRIAL MODELS**

No.	Model	Watts	Length	Tip	Lbs.	NET
46 N 550	600-10	100	10"	3/8" pyramid	2	5.29
46 N 538	400	60	9"	3/8" pyramid	1 1/2	3.82

**Fig. F—PEE WEE MODEL 360**

No.	Model	Watts	Length	Tip	Lbs.	NET
46 N 532	360	35	7 1/2"	3/8" pyramid	1	2.94

**Fig. F—DELUXE MODEL**

No.	Model	Watts	Length	Tip	Lbs.	NET
46 N 545	326	125	13 1/4"	3/8" pyramid	2	4.12

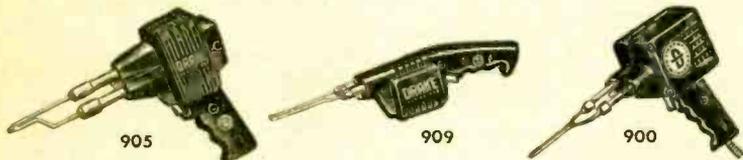
**Fig. G—ANGLE MODEL 402**

No.	Model	Watts	Length	Tip	Lbs.	NET
46 N 524	402	60	9"	1/8" pyramid	1 1/2	4.12

## REPLACEMENT TIPS

Exact duplicate replacement tips for all models. Pure copper.

No.	For Model No.	Description	Oz.	NET
46 N 535	600-10, 225, 325, 326, 327	3/8" pyramid	5	.35
46 N 514	315, 314	3/8" pyramid	5	.53
46 N 515	316, 625	3/8" chisel	5	1.06
46 N 536	825	3/8" chisel	9	1.18
46 N 533	360	3/8" pyramid	1	.18
46 N 513	400, 402	1/8" pyramid	1	.24
46 N 547	350	1/8" pencil, straight	1	.15
46 N 548	350	1/8" pencil, 45°	1	.15



## INSTA-HEAT SOLDERING GUNS

### MODEL 905—250 WATTS

For Heavy-Duty Use

Newest solder gun from this famous manufacturer of soldering equipment. Product of two years, intensive research and development. Incorporates all of the best, time-proven, most popular features of earlier models—plus the very latest engineering advances in soldering gun design. An outstanding, heavy-duty gun that will pay for itself many times over.

The 905 is ruggedly built to withstand the rigors of continuous-duty use on production lines. Its special-design tip reaches otherwise inaccessible spots in crowded chassis—speeding up production in plants or service shops. Twin up production "light up" the work area at all times. "Visa-Lites" light up the work area at all times. Gun is perfectly balanced for maximum ease in handling. Other features: durable, heat-resistant black bakelite case, with 20 air vents and recessed top for free air circulation; comfortable pistol grip; heats up virtually instantaneously, cools very rapidly; uses power only when trigger is pressed; tips are replaceable with a minimum of effort; transformer is air-cooled.

All units are performance-tested before leaving the factory, and are U.L. Approved. Supplied complete with 6 ft. cord, plug and 3 1/2" tip. Length less tip, 6". For 110-120 volts, 60 cycle AC. Shpg. wt., 4 lbs. 46 N 527. List, \$16.25. NET.....9.55

### Replacement Tip for Model 905

Type 906, Special-design tips for use with Model 905 listed above. Easily replaced. Two tips per package. Shpg. wt., 3 oz. 46 N 529. Pkg. of 2. NET.....44c

### MODEL 909—135 WATT IRON

Specially Designed for Servicing

Freshly-styled, newly-shaped solder gun. Combines the best operating characteristics of the solder iron and the gun into one compact unit. Takes a minimum of room in any servicing kit. Features ease of handling and positioning with real portability and convenience. Rated at 135 watts single heat. Uses same transformer and tips as Model 900 listed below. Black bakelite case with handy Visa-lite. Overall length with 3 1/2" tip, 14 1/4". Supplied with cord, plug and 3 1/2" tip. U.L. Approved. For 110-120 v. 60 cycle AC. Shpg. wt., 4 lbs. 46 N 528. List, \$16.25. NET.....9.55

### MODEL 900—135 WATT GUN

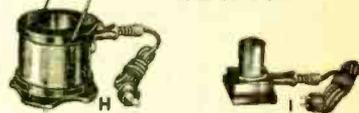
Proven In Years of Service

The tried and proven solder gun for rapid radio and television servicing. Heats rapidly—cools quickly. Delicately balanced to minimize handling fatigue. With built-in Visa-lite. Air-cooled transformer. Durable bakelite case is lowered for ventilation. Overall length including tip, 6". U.L. Approved. With cord, plug and 3 1/2" tip. For 105-125 volts, 60 cyc. AC. Shpg. wt., 4 lbs. 46 N 516. List \$15.00. NET.....8.82

### Extra Tips for Models 909, 900

Type 901, 3 1/2" replaceable tip for guns listed above. Shpg. wt., 3 oz. 46 N 517. NET, pkg. of 2.....44c  
Type 902, 6" replaceable tip for guns listed above. Shpg. wt., 3 oz. 46 N 518. NET, pkg. of 2.....44c

## HEAVY AND LIGHT-DUTY SOLDER POTS



For rapid, easy soldering where many connections are to be made. Just dip spliced wires into melted solder. Make neat, electrically perfect joints. Elements are replaceable. Ruggedly built for continuous operation. Complete with cord and plug. For 110-120 volts AC-DC.

**Fig. H—MODEL 200—300-WATT**

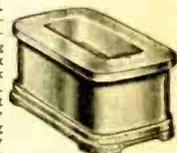
Large solder pot. Holds 2 full pounds of solder. Inside dimensions: 2 1/2" diameter, 2" deep. Shpg. wt., 6 lbs. 46 N 555. NET.....7.14

**Fig. I—MODEL 100—150-WATT**

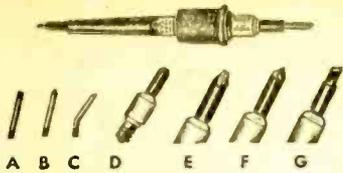
Small pot for the amateur, experimenter and home repairman. Holds 1 pound of solder. Inside dimensions: 1 1/2" diameter, 1" deep. Shpg. wt., 2 1/2 lbs. 46 N 556. NET.....5.56

## HEAVY DUTY SOLDERING POT

Type 202, 600 Watt. Ideal for production-type industrial soldering operations. Oblong well measures 6 1/2 x 1 1/2" and holds a full six pounds of solder. Neat, electrically perfect joints are made quickly and easily by dipping spliced wires directly into solder. Replaceable nichrome element is wound directly around pot for maximum heat transfer. Increases production and reduces hazard of burns, shock, etc. Holds up under hard use and continuous duty. Well is made from top-grade cast iron. U.L. Approved. For operation from 110 to 120 volts AC or DC. Shpg. wt., 8 lbs. 46 N 549. NET.....11.91



# Soldering Irons and Accessories



## UNGAR SOLDERING EQUIPMENT

**Soldering Penell.** Features: Extra long brass shell; spring-action rivet for positive contact; cooler handle of molded plastic, perfectly balanced; extra flexible cord with Neoprene sleeve; form-fit cork grip; ceramic insulation. Length, 7". For 110-120 v. DC, or AC. UL Approved.

46 N 580. Soldering pencil with No. 776 handle and No. 536 tip. Shpg. wt., 6 oz. 10 or more, EACH 1.43. NET EACH 1.76

46 N 591. As above, but with No. 1236 tip for production soldering. Wt., 8 oz. 10 or more, EACH 1.60. NET EACH 1.96

46 N 581. No. 776. Cord and handle only. Less tip and element. Wt., 5 oz. 10 or more, EACH 73c. NET EACH .90c

**Standard Elements And Tips.** 20-watt heating element and tip. Heat to 600 degrees in 60 seconds. \*Extra-hot; 37.5 watts. Wt., 3 oz.

No.	Fig.	Type	Descrip.	EA.	10, EA
46 N 582	F	536	Pyramid	86c	71c
46 N 585	E	539	Chisel		
46 N 587	G	540	Marking		
46 N 592	E	1236*	Pyramid	1.06	86c
46 N 593	E	1239*	Chisel		

**Heating Units And Ekilloy "Tiplets."** Heating unit (Fig. D) does the work of 31 Threaded tiplets screw into heating unit. Type 535 heat unit has 23.5-watt element; \*Type 1235 has extra-hot, 37.5-watt element. Cuts costs. Shpg. wt., 1 oz.

No.	Fig.	Type	Descrip.	EA.	10, EA
46 N 606	B	331	Pencil	12c	10c
46 N 607	C	332	Offset		
46 N 608	A	333	Chisel		
46 N 605	D	535	Ht. unit	86c	71c
46 N 609	D	1235*	Ht. unit	1.06	86c

## "SUPER HI-HEAT" 4000 SERIES SOLDERING IRON TIPS

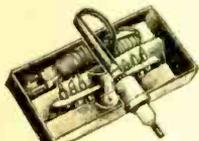
47½ watt heating units that will do any job that can be done by any standard 150-watt soldering iron. For use with Soldering Pencil listed above, iron plated for longer service. Shpg. wt., 12 oz.

No.	Type	Descrip.	EACH	10, EA.
46 N 647	4033	Long chisel	2.40	2.10
46 N 648	4036	¾" pyramid		
46 N 649	4039	¾" chisel		

## TROUBLE-LIGHT BULB

Type S6. Candelabra base. 115 v. bulb—makes trouble-light when screwed into Unger No. 776 Solder Pencil Handle listed above. Clear glass. 1½" long overall. Shpg. wt., 4 oz. 52 E 349. NET EACH 18c

## UNGAR SOLDER AND BURNING SET



Consists of soldering pencil, threaded heating unit, 2 copper tips for soldering, and 4 brass tips for burning or embossing. Less solder. For 110-120 v. AC or DC. U. L. approved. Shpg. wt., 1 lb.

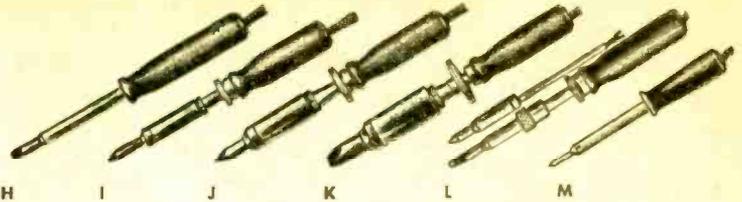
46 N 604. NET 2.29  
6 or More, EA., 1.75. 12 or More, EA., 1.52

## AMERICAN BEAUTY "475" TEMPERATURE REGULATING STAND



Thermostatically controlled to maintain soldering iron temperature. Merely set thermostat for any heat you desire. Eliminates heat variations and overheating. Improves soldering. Body is of molded plastic. Soldering iron grade is metal. Has heavy cord and plug-in receptacle. Will operate on any AC voltage up to 240 volts. 660 watts capacity. Less iron. Shpg. wt., 2½ lbs.

46 N 658. NET 4.41



## AMERICAN BEAUTY SOLDERING IRONS

New tips now available for maximum tip life: Iron-plated, and Eternalloy-plated. Minimize pitting, re-dressing—save time and reduce costs on production lines, in shops, etc.

### Fig. H—MODEL 3128—60-WATT

A compact iron designed for light work. Uses only ¼" tip, making it handy for working in hard-to-get-at spots. With tip, cord, and stand. For 110-120 v. AC or DC operation. Shpg. wt., 1 lb. 46 N 674. NET 3.67  
6 or more, EACH 3.51

46 N 675. Type 3728. ¼" Copper replacement tip for Model 3128 iron. 3 oz. NET 30c

46 N 820. Type 3728-IP. ¼" Iron-plated tip for Model 3128 iron. 2 oz. NET 57c

46 N 824. Type 3728-EP. ¼" Eternalloy-plated tip for Model 3128 iron. 3 oz. NET 1.10

Type 9272. Replacement Element. 60-watt element wound with chrome-nickel ribbon resistance wire, insulated with mica. 6 oz. 46 N 670. NET 1.99

### Fig. I—MODEL 3138—100-WATT

Length 127¼". ¼" tip. Polished chrome plated metal parts. Has cooling baffle. With stand, 6 ft. cord and tip. For 110-120 volts, AC-DC. Shpg. wt., 2¼ lbs. 46 N 655. NET 5.83  
6 or more, EACH 5.58

46 N 656. Type 3738. ¼" Copper replacement tip for Model 3138 iron. 4 oz. NET 37c

46 N 821. Type 3738-IP. ¼" Iron-plated tip for Model 3138 iron. 5 oz. NET 64c

46 N 825. Type 3738-EP. ¼" Eternalloy-plated tip for Model 3138 iron. 4 oz. NET 1.17

46 N 666. Type 9273. Replacement element for Model 3138 iron. Wt., 1 lb. NET 2.39

### Fig. J—MODEL 3158—200-WATT

For medium-heavy factory and production work. Length, 135¼"; tip dia., ½"; weight, 28 oz. Baffle plate keeps handle cool. With cord, stand and tip. For 110-120 volt AC-DC operation. Shpg. wt., 3 lbs. 46 N 650. NET 6.83  
Lots of 6, EACH 6.53

46 N 652. Type 3758. ½" Copper replacement tip for Model 3158 iron. Wt., 7 oz. NET 85c

46 N 822. Type 3758-IP. ½" Iron-plated tip for Model 3158 iron. 7 oz. NET 1.22

46 N 826. Type 3758-EP. ½" Eternalloy-plated tip for Model 3158 iron. 7 oz. NET 1.87

Type 9275. Replacement Element. 200-watt element of chrome-nickel wire on mica insulated steel rod. Wt., 12 oz. 46 N 665. NET 3.19

### Fig. K—MODEL 3178—300-WATT

An excellent general-purpose soldering iron. Ideal for service and production work. Standard equipment in factories and shops. Length 143¼"; tip dia., ¾"; net wt., 2½ lbs. With cord, stand and tip. For 110-120 v. AC-DC. Shpg. wt., 4 lbs. 46 N 671. NET 9.00  
6 or more, EACH 8.61

46 N 672. Type 3778. ¾" Copper replacement tip for Model 3178 iron. 1 lb. NET 1.61

46 N 823. Type 3778-IP. ¾" Iron-plated tip for Model 3178 iron. 1 lb. NET 2.06

46 N 827. Type 3778-EP. ¾" Eternalloy-plated tip for Model 3178 iron. 1 lb. NET 2.70

46 N 673. Type 9277. Replacement element for Model 3178 iron. 1 lb. NET 4.33

### Fig. L. MODEL 3438 ELEMENT-IN-TIP

Unique, highly efficient 100-watt soldering iron designed especially for production-line use. Heating element is permanently embedded in the tip. Features light weight, fast heating, high tip temperatures, production-line economy. Uses Model 9473 iron-plated tip for long service. Length, 13¼". With heat-insulating stand. For 110-120 volts. Shpg. wt., 1½ lbs. 46 N 892. NET 7.33  
6 or more, EACH 7.02

Model 3438-EP with Eternalloy Tip. As above, but ½" tip is Eternalloy-plated for exceptionally long tip-life. Shpg. wt., 1½ lbs. 46 N 893. NET 7.99

Type 9473 Iron-Plated Tip-Element. Replacement tip-element for 46 N 892. Wt., 6 oz. 46 N 896. NET 3.33

Type 9473-EP Eternalloy-Plated Tip-Element. Replacement for 46 N 893. Wt., 6 oz. 46 N 897. NET 3.99

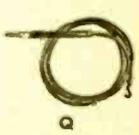
### Fig. M—MODEL 3118—BANTAM

Designed for production type soldering on light work, either continuous or intermittent. Exceptionally light weight, (6½ oz. complete) and well balanced. Plug-type tip. Nickel-chromium heating element, compression wound and mica insulated. For 110-120 volts. AC or DC. 9¼" overall. With ½" tip and stand. Shpg. wt., 12 oz. 46 N 890. NET 3.33  
6 or more, EACH 3.19

Model 3120. As above, but with ¾" tip. 46 N 891. NET 3.33

Type 3718 Tip. For 46 N 890 soldering iron. 46 N 884. NET 16c

Type 3720 Tip. For 46 N 891 soldering iron. 46 N 885. NET 20c



## WASSCO "GLO-MELT" INDUSTRIAL SOLDERING EQUIPMENT

Versatile resistance-type soldering unit for production line or maintenance use. Work to be soldered is connected to unit directly or by simple fixture. Touch copper-clad carbon tip to work, and completed circuit heats tip instantly.

Fig. N. Model 105-B2. Glo-Melt Soldering Power Unit. Selector knob controls 24 heats. Power rating 500 watts maximum. On-off switch. With steel case and carrying handle. For 110-120 v., 60 cycle AC. Wt. 26 lbs. 46 N 960. NET 44.00  
6 to 9, EA., 41.80, 10 or more, EA., 39.60

Fig. O. Panel Attachment. Flexible, versatile accessory for use with 46 N 960. Work to be soldered is brought directly into contact with tips on panel. Includes mtg. panel, 2 stand-offs and bus bars, 2¼" and 2½" tips. Shpg. wt., 12 oz. 46 N 963. NET 12.00  
6 to 9, EA., 11.40, 10 or more, EA., 10.80

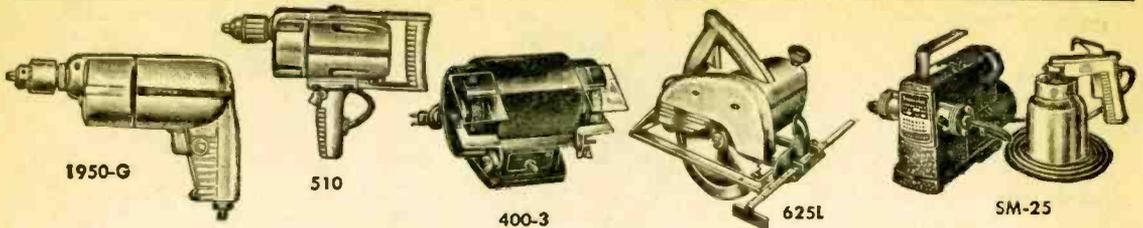
Fig. P. Standard Handpiece and Grounding Clip. For use with 46 N 960 at left. With ¼"x3" tip. Simply touch tip to the work and apply solder. 7" long. Shpg. wt., 8 oz. 46 N 961. NET 6.75  
5 to 9, EA., 6.41, 10 or more, EACH, 6.07

Fig. Q. Panel Handpiece and Clip. Extremely light-weight, small handpiece; for delicate work. Size: ½" dia. x 5". 5 oz. 46 N 971. For ½" dia. tips. NET 6.25  
6 to 9, EA., 5.94, 10 or more, EACH, 5.62

### COPPER-CLAD CARBON TIPS

Stock No.	Dia. x L.	NET EACH	6 to 9, EACH	10 or more, EACH
46 N 966	¼"x3"	18c	17c	16c
46 N 967	¾"x3"	18c	17c	16c
46 N 968	¼"x3"	22c	21c	20c
46 N 970	¼"x3"	28c	27c	25c

# Power Tools



**MODEL 1950-G. 1/4" DRILL.** Precision gear-type chuck drill with pistol grip. A powerful and compact tool, ideal for service bench or home workshop. Excellent source of power for driving attachments. Lightweight, strong, die-cast aluminum alloy case. Gears are precision-cut from heat-treated alloy steel and enclosed in grease-tight housing. Lock-type trigger switch. Forced ventilation. Capacity: 1/4" in steel; 1/2" in hardwood. Speed: No-load, 1600 rpm; full-load, 900 rpm. 1/4" capacity, 3-jaw chuck; 6-ft. rubber-insulated line cord. For 110-120 volts, AC or D.C. U.L. Approved. Length, 8". Shpg. wt., 3 1/4 lbs. 46 N 280. List, \$20.95. NET..... 16.42

**MODEL 510. 1/2" DRILL.** Well-designed, finely-balanced precision drill. Housing and handles of aluminum alloy die castings for strength and light weight. Provides comfortable handling without fatigue. Removable side-handle for close drilling. Dynamically balanced armature. Heat-treated alloy steel gears in grease-tight housing. Bronze bearings and blower-type ventilation for smooth, efficient running and long life. Capacity: 1/2" in steel; 1" in hardwood. Speed: No-load, 450 rpm; full load, 300 rpm. 3-jaw gear-type chuck; 7 ft., 3-wire (ground wire) cord with plug. Overall length, 13 1/4". For 110-120 volts, AC-DC. U.L. Approved. Shpg. wt., 10 1/2 lbs. 46 N 287. List, \$36.95. NET..... 28.97

**MODEL 400-3. BENCH GRINDER.** A practical addition to any home workshop or service shop. Increases the efficiency and life of frequently-used tools. Extremely rugged, compact and light weight. Precision balanced rotor offers virtually vibration-free operation. Plastic eye shields. Speed: No-load, 3500 rpm. 6 1/4" between wheels. Housing and base of zinc-alloy die castings. Wheel guards. Complete with 2 vitrified aluminum oxide grinding wheels, 4" dia. by 1/2" thick. Coarse wheel, 40 grit; fine wheel, 80 grit. Adj. tool rest. For 110-120 v., 60 cyc. AC. 9 1/2" L x 6 1/2" W x 6 1/2" H. U.L. Approved. Shpg. wt., 15 lbs. 46 NX 285. List, \$28.50. NET..... 22.34

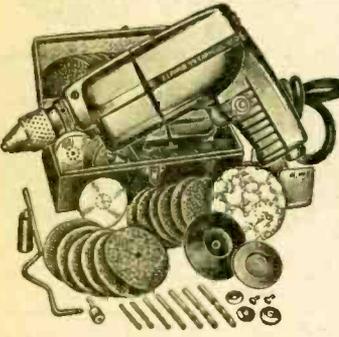
## PET PORTABLE ELECTRIC TOOLS

**MODEL 625L PORTABLE POWER SAW.** A high-quality, power hand saw that is exceptionally safe and easy to use. Precision balanced fan-cooled motor. Easy adjustment for cutting any angle between 90° and 45°. Depth of cut up to 2 1/4" at 90°; 1 3/4" at 45°. Safety guard exposes blade during cutting operations only. Adjustable ripping guide graduated from 1/8" to 8". Speed: No-load, 4700 rpm; normal full-load, 3000 rpm. Complete with CS-3 combination blade listed below, ripping guide and complete instructions. 10 ft. cord and plug. Motor housing of strong aluminum die castings. For 110-120 volts, AC or DC. U.L. Approved. Size: 11 1/4" L x 9 1/4" W x 7" H. Shpg. wt., 12 lbs. 46 NX 281. List, \$39.95. NET..... 31.32

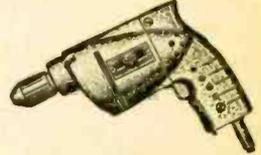
46 N 282. CS-3 6 1/4" COMBINATION SAW BLADE. For above Shpg. wt., 10 oz. NET..... 1.87  
46 N 283. CS-9. 6 1/4" CROSS CUT SAW BLADE. Shpg. wt., 10 oz. NET..... 1.87  
46 N 284. CS-8. 6 1/4" HOLLOW-GROUND SAW BLADE. Shpg. wt., 12 oz. NET..... 3.54

**MODEL SM-25. SPRAYMASTER OUTFIT.** Motor-driven, compressor-type paint sprayer of compact design and top quality. Perfect for the service shop, small factory and home hobbyist. Does all paint jobs in a fraction of time ordinarily required by manual painting. Twin-cylinder compressor driven through steel and fiber gears. Adjustable nozzle for different liquids. Sprayer unit contains an equalizer storage tank. Tested for 90 pounds pressure per square inch. Large capacity maintains average spraying pressure of 25 pounds per square inch. Safety relief valve. Full instructions. Includes motor, compressor, storage tank, spray gun and quart-size aluminum cup. 10 ft. rubber hose; 6 ft. rubber line cord and plug. For operation from 110-120 volts, AC or DC. Size, 8 1/2" x 7 1/2" x 10". Shpg. wt., 9 lbs. 46 N 286. List, \$35.00. NET..... 27.44

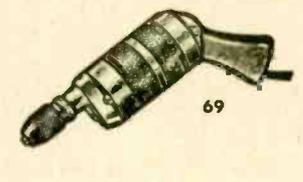
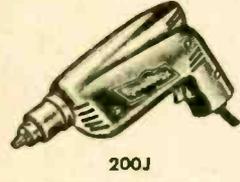
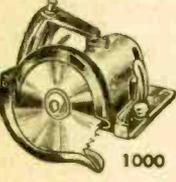
## PET DRILL, GRINDER AND POLISHER KIT



**MODEL 1950-29.** A terrific value in a 34-piece electric drill kit that polishes, grinds, sands and drills. Features the Model 1950-H "Zephyr" 1/4" drill, similar to the 1950-G described above, but with 3-jaw hand chuck. Kit includes electric drill (1600 rpm no load—900 rpm load), molded rubber backing pad, paint mixer, 7 carbon steel twist drills, (1/16", 1/8", 1/4", 3/8", 1/2", 5/8", 3/4" and 1") lamb's wool polishing bonnet, buffing disc, horizontal bench stand, 12 assorted abrasive discs, removable auxiliary side handle, 6 piece adapter set, 2 1/4" dia. grinding wheel and heavy-gauge steel case. Rack is attached to inside cover to hold drills. Contains everything the serviceman or home craftsman could ask for in a big-value, economy-priced electric drill set. May be used to sharpen tools, smooth rough woodwork, drill holes, grind off rust, wax or polish furniture and cabinetry, etc. Pays for itself in convenience and adaptability to the wide variety of small jobs that arise in the home or shop. Ample room for other small tools. Gray hammerloid finish. U.L. Approved. For 110-120 volts, AC or DC. Shpg. wt., 6 lbs. 46 N 289. NET..... 17.95



**MILLERS FALLS UTILITY 1/4" DRILL**  
Model 814. Excellently designed, lightweight electric drill. A perfect choice for shop or home use. Features compact size and sturdy construction. Trigger switch can be locked for continuous use. Powerful 2500 rpm motor has alloy steel gears and oil-impregnated bronze bearings. Hand-type chuck; capacity: 1/4". Die-cast aluminum housing, finished in hammerstone gray enamel. Convenient pistol grip. Overall length, 8 3/4". For 110-120 volts, AC or DC. With 7-ft. cord and plug. U.L. Approved. Shpg. wt., 3 lbs. 46 N 350. List, \$19.85. NET..... 15.56



**Model 1000 SpeedSaw Power Saw.** Safe, versatile, portable power saw. Smooth operating, series-wound motor. No load speed, 3500 rpm. 5" diameter blade. Cutting angle, 90° to 45°. Depth of cut, up to 1 3/4" at 90°; up to 1 1/4" at 45°. Lower blade-guard is self-closing. Momentary contact switch. 3-conductor line cord permits grounding motor housing. Overall length, 9 1/2". U.L. Approved. For 110-120 v., AC or DC. Shpg. wt., 6 1/2 lbs. 46 NX 361. List, \$29.95. NET..... 23.68

**Model 69 1/4" Drill.** Light-duty utility drill. For innumerable drilling, repairing, mounting and installing jobs in the service shop or home. Drill is powered by specially designed high-torque motor. Free running speed, 1000 rpm. Load speed, 600 rpm. For use with carbon or high speed steel bits. Three-jaw hand chuck. With 5 ft. rubber-covered cord. U.L. Approved. Length, 8 1/4". For 110-120 volts, DC, or 60 cycle AC. Shpg. wt., 4 lbs. 46 N 039. List, \$12.50. NET..... 9.80

## THOR SPEED TOOLS

**Model 200J 1/4" Drill.** Here's a fine value in a powerful, excellently balanced electric drill. For servicemen, Amateurs and home craftsmen. Has 1/2" gear-type chuck with key. Heavy-duty, universal series-wound motor. Self-aligning ball thrust bearing assures very smooth, highly dependable operation. Convenient, momentary-contact trigger switch with locking pin. No-load speed, 2400 rpm; full-load speed, 1500 rpm. Has 3-conductor line cord to permit grounding of motor housing. Capacity in steel, 1/4"; capacity in hardwood, 1/2". Lightweight, rugged motor housing. Overall length, 9". Underwriter's Laboratories Approved. For operation from 110-120 volts, AC or DC. Shpg. wt., 4 1/2 lbs. 46 N 360. List, \$19.50. NET..... 14.33



**NEW WEN SUPER-POWER MODEL 303 SANDER-POLISHER KIT**  
New exceptionally powerful, lightweight sander for rough or fine sanding. Features heavy-duty, high-speed, vibrator-type motor; 14,400 strokes per minute. Takes 2 1/2 x 7 1/4" sandpaper. Weighs only 2 1/2 lbs. Convenient self-tightening clamp pulls and tightens paper and locks into position. Red plastic body. Complete with 6 sheets assorted garnet paper, 6 sheets assorted production paper, and sturdy metal carrying case. Body size, 5 1/2 x 2 1/2 x 3 1/4". For 110-120 v., 60 cycle AC. Shpg. wt., 3 1/2 lbs. 46 N 323. List, \$16.95. NET..... 12.46

**Model 202.** Similar to above, but for fine sanding or polishing. With 6 sheets garnet finishing paper and 1 polishing cloth. Less carrying case. Shpg. wt., 3 1/2 lbs. 46 N 320. List, \$13.95. NET..... 10.25

# Tool Kits & Drills

## HANSON TAP AND DIE SETS



**Model 614V**  
Acc. "Super" set. Contains 1 each tap and die: 4-36, 6-32, 8-32, 10-24, 10-32 and 12-24 machine screw std., 1/4-20, 3/8-18, 1/2-16, 5/8-14 and 3/4-13 N.C. (U.S. Std.); 1/4-28, 5/8-24, 3/4-24, 7/8-20 and 1 1/8-20 N.F. (SAE Std.); 1/2" pipe. Includes die stock, tap and reamer wrench, T tap wrench, screwdriver and screw pitch gauge. Dies are V-notch adjustable. Attractive, lightweight, green plastic case. Shpg. wt., 4 lbs.

46 N 245. NET.....18.38

## RADIO TAP AND DIE SET



12-piece set covering basic threads used in radio work. Includes 1 each plug tap and die, sizes: 4-36, 6-32, 8-32, 10-32, 1/4-20; tap wrench and die stock. Dies are solid type. High carbon, tempered steel assures long tap life. In mahogany box. Shpg. wt., 3 lbs.

46 N 025. NET.....4.60

## INDIVIDUAL TAPS AND DIES

High-quality taps and solid dies for all-purpose use. Tough carbon steel. Right-hand thread. Shpg. wt., 2 oz.

Size	Tap	EACH	Die	EACH
4-36	46 N 700	25c	46 N 706	30c
6-32	46 N 701	25c	46 N 707	30c
8-32	46 N 702	25c	46 N 708	30c
10-32	46 N 704	30c	46 N 710	30c
10-24	46 N 703	30c	46 N 709	30c
1/4-20	46 N 705	36c	46 N 711	36c

**Tap Wrench.** "T" handle tap wrench for above taps. Sliding handle with spring tension. Shpg. wt., 4 oz.

46 N 713. NET.....44c

**Die Stock.** Plain die stock for above dies. Has no guide. Shpg. wt., 8 oz.

46 N 714. NET.....44c



## MASTER TAPERED REAMER

New tapered reamer for quickly and easily enlarging undersize holes. Reamer is graduated in width from 1/4" tip to 3/8". Made of finest tool steel, hardened and carefully ground. Has unbreakable plastic handle. A toolbox necessity for radio and TV repairmen. Length, 8". Shpg. wt., 6 oz.

46 N 244. NET.....1.02

## REPAIRMAN'S TAPERED REAMER



**General Hardware Type 130.** For enlarging holes in thin metals and other materials. T-Handle can be easily removed for use in drill chuck. Precision machined of hardened carbon steel. Point 1/8" dia.; shank 1/4" dia.; 5 1/2" long. Shpg. wt., 9 oz.

46 N 243. NET.....1.12



## MILLERS FALLS COUNTERSINK

**Model 710.** Made of fine grade high-speed steel. For use in any material ordinarily machinable with a high-speed cutter. Cuts fast and clean in soft steel, iron, wood and similar materials. Has 5 carefully ground flutes for fast cutting at 82° angle for wood and machine screws. Shank, 1/4". Fits any brace or drill. Overall length, 2 1/2". Shpg. wt., 1 1/4 oz.

46 N 156. List, \$1.50. NET.....1.11

## GENERAL HARDWARE AUTOMATIC CENTER PUNCH



**Model 79.** Hand pressure on handle triggers powerful spring, which drives punch. Perfect for accurate center punching in tight spots. Tension is adjustable. Size, 1/2" dia. x 5". Plastic tube. Replaceable point. Shpg. wt., 5 oz.

46 N 195. NET.....2.85

46 N 196. 79P. Extra point. NET. 35c



## BURGESS V-760 TOOL KIT

Marking, engraving and craftsman's kit. Ideal for many industrial identification applications as well as servicing and hobbyist uses. Kit includes Burgess Vibro-Tool, ten all-purpose attachments and sturdy steel storage case. Extremely compact and easy-to-carry.

Uses include: jewelry engraving; tool and instrument marking; decorating and engraving metal and glass; embossing metal; marking bottles and glass slides; copper and steel plate etching; plastic or celluloid stencil etching; leather tooling and cutting; sheet and pattern cutting; wood engraving; chip carving; model-making from balsa wood sheets; cutting cardboard, thin wood, textiles; engraving and decoration of plastics, horn, bone or ivory; paper silhouette cutting; engraving and decoration of ceramics, composition material; jewel setting; glassware monogramming; etc. Illustrated booklet with complete instructions included. For 110-120 volts, 60 cycles AC. Shpg. wt., 3 1/2 lbs.

46 N 290. List, \$14.95. NET.....9.77

## HIGH-SPEED COPE-SAW BIT



Highly functional all-purpose bit—drills, saws and reams in sheet metal, angle iron, pipe, wood, plastic and similar materials. Takes the place of many more costly tools. Use with 1/2" or 3/4" electric drills and drill presses. Drills its own starter hole and can be used in making circles, ovals, squares, scrolls, etc. Finest abrasive-resistant, high-speed steel flutes. Shpg. wt., 3 oz.

46 N 795. NET.....3.75

## SPEEDWAY G-A-K TOOL KIT

This very moderately priced 28-piece power tool kit has literally thousands of uses in the shop and home. The heart of this extremely versatile kit is the Speedway Speed-Grinder, has 50,000 rpm motor, self-aligning bronze bearings for smooth, highly dependable service and convenient, slide-type off-on switch. Use the Speed-Grinder with the excellent selection of attachments supplied, and the G-A-K kit is capable of doing innumerable jobs. Here are just a few typical applications: Embossing metal; jewelry engraving; finishing, engraving and decorating ceramics; cutting balsa wood for model making; monogramming glassware; cuttink and etching of plastic, celluloid and composition material; tool and instrument marking; removing burrs from metal chassis. In addition to the Speed-Grinder, kit includes the following high-quality attachments: 4—grinding stones; 4—steel cutting burrs; 3—bristle brushes; 1—wire scratch brush; 1—abrasive rubber polishing tool; 2—mandrels; 12—sanding discs. Complete with sturdy, compact wood case; covered with handsome blue leatherette. With instruction manual. For operation from 110-120 volts. AC or DC. Shpg. wt., 2 1/2 lbs.



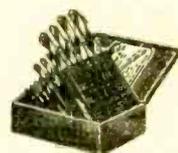
46 N 365. List, \$14.50. NET.....10.66

## KNEISLEY MINIATURE DRILL SET

**Type KS-1115 Carbon Drill Set.** Contains 20 drills in sizes No. 61 through No. 80 (.039" to .0135"). An indispensable set for extremely fine drilling jobs. Drills are hardened by unique new method, assuring precision production. Finest grade of carbon steels used throughout. Set includes 4-jaw chuck with 1/2" shank for using drills in standard chucks. Molded lucite case. Shpg. wt., 6 oz.



46 N 799. NET.....4.86



## CENTURY "MAGIC BLACK" MECHANICS' HI-SPEED DRILL SETS

Feature "Magic Black" tempering treatment; insures extra wearing qualities and makes drill bits stay sharp longer. "Quick-Cut" point (on 7/8" and larger) greatly reduces load on electric drill. Four cutting edges instead of two eliminates walk and wander, gives twice the penetration with half the pressure.

**Fig. A. 13-Drill Set.** 13 drills, 1/8" to 1/2" by 1/4" graduations. Packed in Huot Index Drill Case. Opens like a book with every drill instantly accessible and identified. Case size, 4 1/4 x 2 1/4". Wt., 9 oz.

46 N 782. NET.....5.54

**Fig. A. 11-Drill Set.** 11 drills, 1/8" to 3/8" by 3/32nds. Huot Case has space for 10 more drills in 1/4" graduations. Wt., 13 1/2 lbs.

46 N 783. NET.....8.13

**Fig. A. 15-Drill Set.** 15 drills, 1/8" to 1/2" by 3/32nds. Sizes over 1/4" have 1/8" shank. Huot Case has space for 14 more drills in 1/4" graduations. 7 1/4 x 1 1/2". Wt., 3 lbs.

46 N 786. NET.....15.47

**Fig. B. 7-Drill Set.** 7 drills, 1/8" to 1/2" by 1/2" graduations. With indexed red plastic stand. Shpg. wt., 6 oz.

46 N 784. NET.....2.61

**Fig. C. 6-Drill Set.** 5 drills, 1/4" to 1/2" in 1/4" graduations. All sizes have 1/4" dia. shanks. With indexed plastic container. 1 lb.

46 N 785. NET.....5.99

Fig. D. Maglo Black Hi-Speed Drills Only. Sizes over 1/4" have 1/8" shank.

No.	Size	Each	No.	Size	Each
46 N 723	1/8"	.26	46 N 738	1 3/8"	.74
46 N 724	3/16"	.28	46 N 739	1 1/2"	.81
46 N 725	1/4"	.29	46 N 740	1 3/4"	.89
46 N 726	5/16"	.32	46 N 741	1 7/8"	.96
46 N 727	3/8"	.35	46 N 742	2"	1.05
46 N 728	1/2"	.38	46 N 743	2 1/8"	1.14
46 N 729	5/8"	.40	46 N 744	2 1/4"	1.24
46 N 730	3/4"	.43	46 N 745	2 1/2"	1.34
46 N 731	7/8"	.44	46 N 746	2 3/4"	1.44
46 N 732	1"	.47	46 N 747	3"	1.55
46 N 733	1 1/8"	.49	46 N 748	3 1/8"	1.65
46 N 734	1 1/4"	.52	46 N 749	3 1/4"	1.75
46 N 735	1 1/2"	.56	46 N 780	3 1/2"	1.87
46 N 736	1 3/4"	.62	46 N 781	3 3/4"	2.00
46 N 737	2"	.69			

**Fig. E. General Hardware Cases.** Opening cover brings drills in position for quick selection. Shows each size; has tag index. Less drills.

**Type 41.** Holds and identifies 60 drills, sizes 1 to 60. Sturdy, heavy-gauge steel case, 4 1/4 x 5 1/2". Less drills. Shpg. wt., 2 lbs.

46 N 790. NET.....2.43

**Type 43.** Holds and identifies 32 drills, sizes 1/2" to 1 1/2". Lifetime heavy-gauge steel case, 6 1/4 x 7 1/2". Less drills. Wt., 4 1/2 lbs.

46 N 792. NET.....3.82

## WOOD BIT DRILL SET

For drilling 1/4" to 1/2" holes in wood, with 1/4" electric drills. Consists of 5 wood bits with 1/4" diameter round shanks. Sizes: 1/4", 3/8", 1/2", 5/8", and 3/4". Shpg. wt., 8 oz.

46 N 117. NET.....2.61

## CHROME-STEEL DRILL BIT SET

Set of 5 chrome-alloy steel bits for electric drills. For use on aluminum and other soft metals, wood and plastic. 1/4", 3/8", 1/2", 5/8", 3/4". Plastic box. Shpg. wt., 1 lb.

46 N 787. NET.....2.41

# Xcelite Quality Tools

## SCREWDRIVERS

### Chrome Vanadium Shafts—Xcelite Plastic Handles

High-quality, rugged screwdrivers for every application. Built to last a lifetime. Shafts are skillfully forged from chrome vanadium electric furnace steel, and polished to a high luster. Flange on shaft to handle absorbs shock of pounding. End of shaft is of wired design, and is firmly embedded in handle—will not break loose. Careful lengthwise grinding eliminates indentations produced by crosswise grinding—insures uniform strength right down to the blade tip, plus perfect fit in the screw slot. Handles are of famous Xcelite plastic, are full size and shaped correctly for firm grip and perfect balance.

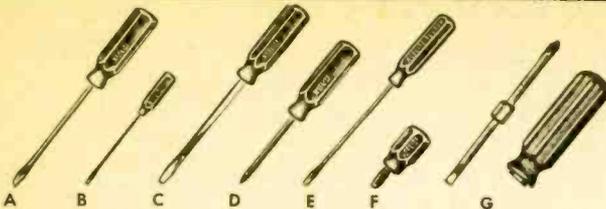


Fig. A. Round Shaft. Available in lengths from 3/4" to 12".

Stock No.	Mfr's Type	Shaft Size		Overall Length	Shpg. Wt.	NET
		Dia.	Length			
43 N 845	R-182	3/16"	2"	4 1/2"	3 oz.	30c
43 N 846	R-184	3/16"	4"	6 1/2"	4 oz.	33c
43 N 847	R-186	3/16"	6"	8 1/2"	4 oz.	36c
43 N 848	R-188	3/16"	8"	10 1/2"	4 oz.	42c
45 N 795	R-144	3/16"	4"	8"	6 oz.	60c
45 N 796	R-146	3/16"	10"	6 oz.	60c	60c
45 N 797	R-148	3/16"	8"	12"	7 oz.	69c

Fig. B. Set-screw Types. Precision-ground, narrow blade screwdrivers designed to fit set-screws. Have pocket clips.

Stock No.	Mfr's Type	Shaft Dia.	Length	Overall Length	Shpg. Wt.	NET
43 N 830	R-3323SS	3/16"	3"	5"	2 oz.	24c
43 N 831	R-184SS	3/16"	4"	6"	2 oz.	24c

Fig. C. Square shaft. Available in lengths from 8" to 18".

Stock No.	Mfr's Type	Shaft Dia.	Length	Overall Length	Shpg. Wt.	NET
43 N 832	S-144	1/4"	4"	8"	6 oz.	69c
43 N 833	S-146	1/4"	6"	10"	6 oz.	72c
43 N 834	S-148	1/4"	8"	12"	7 oz.	81c
43 N 837	S-388	1/4"	8"	12 1/2"	1 lb.	1.14
43 N 838	S-3812	1/4"	12"	18"	1 1/4 lb.	1.65

Fig. D. Phillips Screwdrivers. Alloy steel. \*Stubby type.

Stock No.	Mfr's Type	Shaft Size		Overall Length	Shpg. Wt.	NET
		Dia.	Length			
43 N 876	X-101	No. 1 pt.	3"	6 1/2"	5 oz.	63c
43 N 877	X-108	No. 1 pt.	6"	10"	5 oz.	69c
43 N 878	X-102	No. 2 pt.	4"	7 1/2"	6 oz.	81c
43 N 879	X-1020	No. 2 pt.	10"	13 1/2"	8 oz.	1.08
43 N 881	X-103	No. 3 pt.	6"	10"	10 oz.	1.08
43 N 882	SX-101	No. 1 pt.	6"	2 1/2"	3 oz.	60c
43 N 883	SX-102	No. 2 pt.	6"	3 1/4"	5 oz.	66c

Fig. E. Sparkplug Tester Screwdrivers. Neon bulb in handle.

Stock No.	Mfr's Type	Shaft Dia.	Length	Overall Length	Shpg. Wt.	NET
43 N 823	T-182	1/8"	2"	4 7/8"	3 oz.	54c
43 N 824	T-3166	1/8"	6"	9 5/8"	5 oz.	75c

Fig. F. Stubby Screwdriver. Square shaft, polished blade.

Stock No.	Mfr's Type	Shaft Dia.	Length	Overall Length	Shpg. Wt.	NET
43 N 844	S-141	1/4"	1 1/4"	3 1/4"	5 oz.	45c

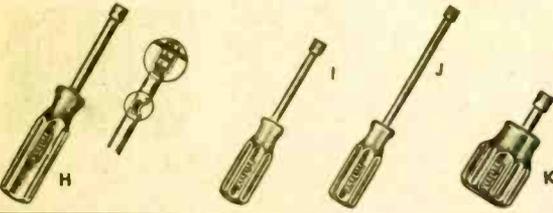
Fig. G. Combination Blade Screwdrivers.

Stock No.	Mfr's Type	Blade Combination	Overall Length	Shpg. Wt.	NET
45 N 746	CR1	3/16" Regular #1 Phillips	7"	4 oz.	1.14
45 N 747	CR2	3/16" Regular #2 Phillips	7"	4 1/2 oz.	1.14
45 N 748	CR3	3/16" Regular #3 Phillips	7"	9 1/2 oz.	1.14

## HEX NUT DRIVERS

### For Every Radio and Electrical Application

The famous Xcelite line of quality nut drivers. Made to exacting specifications, with shafts of Chrome Vanadium electric furnace steel, and handles of rugged Xcelite plastic. Fully polished shaft is firmly embedded in handle—will not break loose. Sockets have no burrs, fit the nuts snugly, and are deep enough to handle two nuts simultaneously. Hardened to retain their correct shape despite continuous service. Handles are full size and shaped correctly for perfect balance and firm grip. Fig. H shows types with full-length hollow shafts especially designed for radio and electrical work; fig. I, color-coded handle type; fig. J, extra-long type, and fig. K, stubby type. \*Used primarily as volume control wrench. Available in sizes for every application.

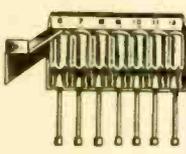


Stock No.	Mfr's Type	Fig.	Nut Size	Handle	Length	Wt. Oz.	NET
45 N 779	HS-8	H	1/8"	Amber	6"	6	75c
45 N 780	HS-10	H	3/16"	Amber	6"	6	75c
45 N 781	HS-11	H	1/4"	Amber	6"	6	75c
45 N 782	HS-12	H	3/8"	Amber	6"	6	75c
45 N 783	HS-14	H	1/2"	Amber	7"	6	84c
45 N 784	HS-16	H	3/4"	Amber	7"	6	87c
45 N 785	HS-18*	H	7/8"	Amber	7"	6	90c
45 N 786	HS-20	H	1"	Amber	7"	6	1.05
45 N 813	127-6	I	3/16"	Black	6"	6	57c
45 N 814	127-7	I	1/4"	Brown	6"	6	57c
45 N 815	127-8	I	3/8"	Red	6"	6	57c
45 N 816	127-9	I	1/2"	Orange	6"	6	57c
45 N 817	127-10	I	3/4"	Yellow	6"	6	57c
45 N 818	127-11	I	7/8"	Green	6"	6	57c

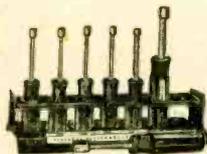
Stock No.	Mfr's Type	Fig.	Nut Size	Handle	Length	Wt. Oz.	NET
45 N 819	127-12	J	3/8"	Blue	6"	6	57c
45 N 860	A6	J	1/8"	Amber	9"	8	69c
45 N 861	A7	J	3/16"	Amber	9"	8	69c
45 N 862	A8	J	1/4"	Amber	9"	8	69c
45 N 863	A9	J	3/8"	Amber	9"	8	69c
45 N 864	A10	J	1/2"	Amber	9"	8	69c
45 N 865	A11	J	3/4"	Amber	9"	8	69c
45 N 866	A12	J	7/8"	Amber	9"	8	69c
45 N 867	A14	J	1"	Amber	9"	8	90c
45 N 868	A16	J	1 1/4"	Amber	9"	8	90c
45 N 857	S-8	K	3/16"	Amber	3 1/2"	5	48c
45 N 858	S-10	K	3/8"	Amber	3 1/2"	5	48c
45 N 859	S-12	K	1/2"	Amber	3 1/2"	5	48c



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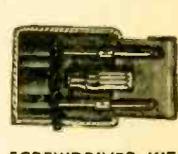
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17



SCREWDRIVER KIT

Model CK-2 Kit. Dual-purpose screwdrivers in plastic roll-type kit. Set contains detachable universal handle. RB-1 shaft with 3/16" regular and #1 Phillips blades, and RB-2 shaft with 1/8" regular and #2 blades. Has No. 25 detachable handle. Shpg. wt. 1/2 lb.  
45 N 740. List, \$3.65. NET.....2.19

## HEX NUT DRIVER SET

### 99PR MULTI-PURPOSE SET

Handy 12-piece tool kit containing 9 nut driver shafts, double-ended standard screwdriver shaft, double-ended Phillips screwdriver shaft, and amber handle. An indispensable tool for radio-TV servicing. Nut driver sizes: 1/8", 3/16", 1/4", 3/8", 1/2", 3/4", and 7/8". Screwdriver blades, 3/16" and 1/4". Average depth of nut driver holes, 1 1/2". All shafts are chrome-plated. With durable plastic roll case. Shpg. wt., 3 lbs.  
45 N 738. List, \$11.95. NET.....7.17

### MODEL 127 HEX NUT DRIVER SET

Color-coded plastic handles indicate socket sizes instantly. Sockets fit nuts snugly; deep enough to handle two nuts. Depth of shaft hole, 1 1/2". Includes 7 wrenches, sizes 3/8" to 3/4" in 1/8" steps. Sturdy metal holder in red wrinkle finish. Holder is lockable; can be permanently fastened to wall. Size, 7 1/2"x7 1/4"x1 1/4". Shpg. wt., 2 1/4 lbs.  
45 N 735. List, \$7.85. NET.....4.71

### MODEL 137 NUT DRIVER SET

Newest nut driver kit from this famous tool maker. Consists of seven nut drivers and a stand-up rack for holding tools in place when not in use. Ideal for serviceman's bench or workshop. Sizes: 3/16", 1/4", 3/8", 1/2", 3/4", 1/2", and 3/4". New, larger handles insure non-slip gripping. Handle colors include black, red, yellow, green, blue, and brown. Shank is fully polished, high quality steel. Shpg. wt., 3 lbs.  
45 N 734. List, \$8.95. NET.....5.37

### MODEL 17 NUT DRIVER SET

Consists of the seven most commonly used nut driver sizes in radio-television servicing. A valuable addition to any work bench. With durable amber plastic handles and highly polished, tough alloy steel shanks. Sizes: 3/16", 1/4", 3/8", 1/2", 3/4", and 1/2". Set includes metal rack for holding nut drivers upright when not in use. Shpg. wt., 2 1/4 lbs.  
45 N 733. List, \$7.20. NET.....4.32

## RADIO & ELECTRICAL ROLL KIT

Model 3C Radio and Electrical Plastic Roll Kit. Deluxe screwdriver kit. Consists of 6 screwdrivers (1 1/4"x4", 1 1/4"x3", 1 1/4"x6", 1 1/4"x2", 1 1/4"x4", 1 1/4"x6") and 1—3" blade No. 1 Phillips-head screwdriver. All tools in durable chrome-plating for years of long life under hard service. Plastic roll type case. Shpg. wt., 1 1/2 lbs.  
45 N 749. List, \$8.85. NET.....5.31



# Quality Tools—Tool Kits

## VACO SCREWDRIVERS AND SCREWDRIVER KITS



### P550 PHILLIPS KIT

Kit of 5 popular size Phillips screwdrivers, listed below. Shock-proof Amberyl handles. Sold as complete kit only. Shpg. wt., 1½ lbs.

Type	Overall	Blade	For Screws
P1	6½"	¼x3"	No. 4 and smaller
P2	7½"	¼x4"	No. 5 to No. 9
P3	10"	¼x6"	No. 10 to No. 16
P5	37"	¼x1½"	No. 5 to No. 9
P6	3"	¼x1½"	No. 4 and smaller

43 N 880. Complete kit. NET.....3.35



### ZB-50 SCREWDRIVER KIT

Features 5 detachable blades. All the screwdrivers ordinarily needed in one compact unit. Very strong, oil-tempered, chronic vanadium steel. Has 1x3¼" Amberyl handle with clutch. Blades: ¼x4", ¼x5", ¼x6", ¼x8", ¼x10". Phillips No. 1 and No. 2. Leatherette tool roll has extra compartment for additional blade. Shpg. wt., 8 oz.

43 N 875. List. \$3.15. NET.....2.47



### SQUARE SHANK KLIPXON SCREWDRIVERS

New, Amberyl-handle, screw-holding screwdrivers. Employ spring steel clip on blade to exert tension in slot of screw. Excellent for removal or insertion of screws in deep holes. When not in use, clip slides back on blade.

No.	Type	Lgth.	Blade	Oz.	NET
43 N 950	OK23	5¾"	3x½"	2½	57¢
43 N 951	OK24	4"	2x½"	2½	60¢
43 N 952	OK26	8½"	6x"	3	63¢
43 N 953	OK28	10½"	8x"	3	67¢
43 N 954	OK34	7½"	4x"	5	77¢
43 N 955	OK36	9½"	6x"	6	80¢
43 N 956	OK38	11½"	8x"	6	83¢



### INSULATED BLADE SCREWDRIVERS

Heavily coated with break-resistant plastic of high dielectric strength. Precision built for perfect balance. Amberyl handles; tool steel blades.

No.	Type	Lgth.	Blade	Oz.	NET
43 N 860	VR241	7"	4x½"	2	51¢
43 N 961	VR261	9"	6x½"	3	55¢
43 N 962	VR281	11"	8x"	3	59¢
43 N 963	VR361	9½"	6x½"	5	67¢
43 N 964	VR381	11½"	8x½"	5	70¢



### FLASHLIGHT SCREWDRIVERS

Lucite lens directs light from bulb in handle in perfect circle around driver bit. Knurled knob switch in head of screwdriver. With cell and bulb. \*Phillips cross-slot driver bit.

No.	Type	Lgth.	Blade	Oz.	NET
43 N 853	FL24	7½"	4x½"	3	1.49
43 N 899	FL34	7½"	4x½"	6	1.49
43 N 854	PFL1*	8½"	No. 1	6	1.72

53 J 301. Penlite cell. EACH.....7¢  
52 E 330. Penlite bulb. EACH.....13¢

## VACO TIME-SAVING SERVICE TOOL KITS

### ZSX-61 WRENCH SET



Handy 7-piece wrench set featuring five detachable hex nut wrench shafts, a six-inch extension shaft, and a shockproof, unbreakable Amberyl handle. All shafts are made of high quality, oil-tempered chrome alloy steel, plated in rust-proof cadmium. Kit consists of one each—1x3¼" Amberyl handle with clutch, ¼" hex nut wrench shaft, ¾" hex nut wrench shaft, 1½" hex nut wrench shaft, ¾" hex nut wrench shaft, and extension shaft. Wrench shafts are 3" long. Seven-section leatherette tool roll included. Shpg. wt., 1 lb.

45 N 828. List. \$5.06. NET.....3.97

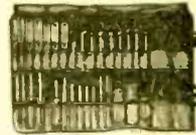
### HANDY COMBINATION KIT



Type RT-14. Provides all the nut drivers, Phillips, and regular drivers needed for almost any job. All blades fit the shock-proof Amberyl handle provided. A special 6" extension is included. Kit includes: Handle; extension piece; 7 nut drivers, sizes ¼", ½", ¾", 1", 1½", 2", 2½"; 2 Phillips drivers, No. 1 and No. 2; and 2 regular drivers, sizes ¼", ½", and ¾". All drivers are of high-quality chrome alloy steel. Kit is supplied complete with 14-section leatherette tool roll. Shpg. wt., 1½ lbs.

45 N 829. List. \$9.18. NET.....7.19

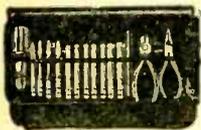
### 27-PIECE TV AND RADIO KIT



Type TV-27. Unique master kit containing practically every hand tool used in radio-TV servicing. Includes: ¼" stubby screwdriver; 1 medium and 1 heavy-duty handle; 6" bit ext.; ¼", ⅜", and ½" bits; #1 and #2 Phillips bits; ⅜", ½", ¾", 1", 1½", 2", 2½", and 3" hex wrenches; ⅜" metal tip aligner; ⅜" pocket clip; #1 Phillips, ¼" screw-holding, ¼" insulated, ¾" screw-holding and ¾" insulated screwdrivers; ¼"x10" non-magnetic adjuster; ¾" fiber TV aligner; medium and small offset screwdrivers. Wt., 2½ lbs.

45 N 831. List. \$20.00. NET.....15.68

### STEVENS-WALDEN TOOL KITS



#### "SPINTITE" SET 3800B15

Deluxe 15-piece radio and electrical kit. Includes 7 hex wrenches in following sizes: ⅜", ½", ¾", 1", 1½", and 2"; three screwdrivers; one combination reamer and awl; and one universal handle which holds all tool shafts. Also includes 6" long-nose pliers, 5° diagonal cutters, and insulated screwdriver and wrench. Supplied complete with leatherette tool roll. Shpg. wt., 2½ lbs.

46 N 055. NET.....10.83



#### "MIGHT" RADIO WRENCH SET

3100C14. 14 pieces. Universal joint handle with sliding "T" bar, and one straight spin type amber plastic handle. Eight hex sockets, ⅜" to ¾"; 3 double-square sockets. Chrome-plated tools in bright enamel-finished case. Shpg. wt., 1½ lbs.

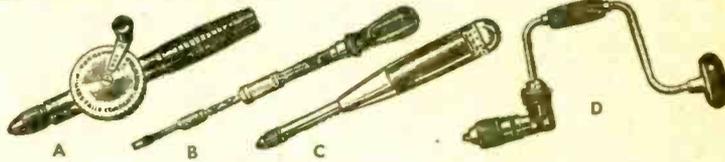
46 N 165. NET.....5.94

### NEW "GRIP-SPINTITE" WRENCHES



New, finger-control "Grip-Spintite" wrenches. Knurled push-pull clamp on shank. Taper lock. As clamp is pushed, wrench closes on nut—when pulled back, releases. 6½" long. Av. wt., 6 oz.

No.	Type	Size	Nut Size	NET
45 N 712	3606	⅜"	#2 & #3	2.46
45 N 713	3608	½"	#4	2.46
45 N 714	3610	⅝"	#5 & #6	2.46
45 N 715	3612	¾"	#10	2.70
45 N 716	3614	1"	#12 & ¼"	2.70
45 N 717	3616	1½"	¾"	2.70



### MILLERS FALLS QUALITY HAND DRILLS, SCREWDRIVERS AND BRACES

Fig. A. Model 104 Hand Drill. Latest drill design. Takes drills up to ½" in diameter. Hollow handle stores 8 drills (supplied). ⅝" to 1¼". Length: 12¾". Wt., 1½ lbs.

46 N 042. List. \$7.00. NET.....5.14

Fig. B. Model 610A. Ratchet Screwdriver. Drives and draws screws by automatic ratchet action. Spring return. Also drives and draws screws by rigid action in long (20½") or short (12¾") position. With 3 blades: ⅜", ½", and ¾". Wt., 1½ lbs.

46 N 048. List. \$7.70. NET.....5.66

Model 29. Ratchet Screwdriver. As above, but smaller. One blade, ¼". Wt., 9 oz.

46 N 047. List. \$3.00. NET.....2.20

Fig. C. Model 100 Automatic Drill. Fully toothed spiral mechanism with internal spring return. Hollow red plastic handle stores 8 fluted-shank drills (supplied). ⅝" to 1¼". Shpg. wt., 1½ lbs.

46 N 038. List. \$4.40. NET.....3.23

Fig. D. Model 1708 Brace. Low-priced brace for square shank bits. Has semi-boxed ratchet and Barber chuck with alligator jaws. 8-inch sweep. Ball bearing head for smooth rotary action. Exposed metal parts nickel plated. Mahogany finished hardwood head and handle. Shpg. wt., 2½ lbs.

46 N 043. List. \$4.50. NET.....3.31

### MOODY WRENCH AND SCREWDRIVER SETS



SCREWDRIVER SETS  
Type SC-5. Contains 5 interchangeable hardened steel blades in sizes .100", .080", .070", .055" and .040". Insert quickly and firmly into chuck. Excellent for kit- and model-building; repairing radios, appliances, cameras, etc. Complete set of five blades, handle and plastic base with transparent dust cover. Wt., 8 oz.

43 N 859. List. \$1.79. NET.....1.19

12 sets or more, EACH.....1.07

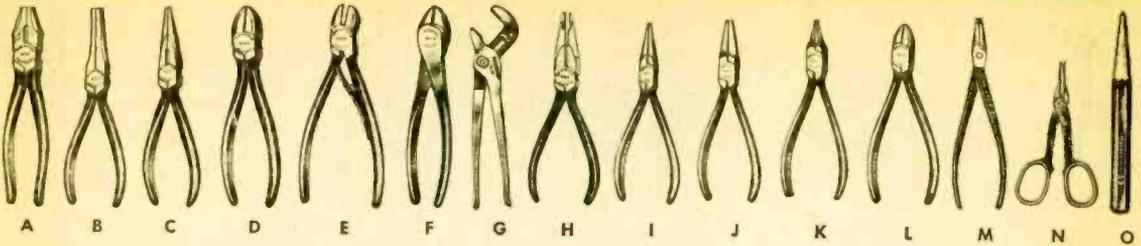
### MAGNETIC SOCKET WRENCH SET

Type BW-5. Moody kit contains five tiny, interchangeable socket wrenches with magnetized swivel-top handle. Magnetized handle provides easy means for removing or inserting nuts in recessed, hard-to-get-at places. Particularly suitable for close work in crowded radio or television chassis. An indispensable tool kit for radio-TV servicemen, electricians, home craftsmen, etc.

Socket wrench sizes: ⅜" hex, ⅝" hex, ¾" hex, 1" hex, and 1½" hex, and heat-treated and rust-proof steel. Kit supplied in transparent plastic container, with colored plastic base. Shpg. wt., 5 oz.

43 N 862. List. \$3.95. NET.....2.59

# Quality Tools



## THE KRAEUTER "INDUSTRIAL LINE" OF HIGH QUALITY HAND TOOLS

Made to exacting specifications, determined by over eighty-five years devoted to the exclusive development and manufacture of tools. Drop-forged from highest quality tool steels. Scientifically heat-treated and hardened in automatic furnaces where absolute uniformity of temperature is closely regulated by electrical controls. These excellent tools have the accurately tempered durability that assures a long life of de-

pendable service under hardest use. Blue-tempered finish resists rust. **4 1/2" Jewelers' Type Pliers\***. Small lightweight pliers designed for use with miniature parts and where working space is very limited. Built to the high standards of Kraeuter standard-size pliers. Av. shpg. wts.: Standard tools, 10 oz.; 4 1/2" pliers, 5 oz.

No.	Fig.	Type	Description	NET	No.	Fig.	Type	Description	NET
46 N 408	A	1801	8 1/2" Side-Cutting Pliers.....	3.67	46 N 414	E	2612	6 1/2" Strip-Notch Diag. Cutters	2.83
46 N 400	A	1830	6 1/2" Side-Cutting Pliers.....	2.29	46 N 410	F	4610	7" Extra Heavy Diag. Cutters	2.50
46 N 413	B	1741	6" Long Flat Nose Pliers.....	1.96	46 N 415	I	83*	4 1/2" Chain Nose Pliers.....	2.42
46 N 401	C	1661	6" Needle Nose Side Cutter.....	2.50	46 N 416	J	85*	4 1/2" Flat Nose Pliers.....	2.50
46 N 404	C	1671	6" Needle Nose (no cutter).....	1.96	46 N 417	K	85*	4 1/2" Round Nose Pliers.....	2.50
46 N 402	D	4501	5" Diagonal Cutters.....	2.21	46 N 418	L	81*	4 1/2" Diagonal Cutting Pliers.....	2.50
46 N 403	D	4501	6" Diagonal Cutters.....	2.50	46 N 412	O	73	Octagon Center Punch. 1/8"x4 1/2"	.46
46 N 421	G	710	10" Joint Pliers.....	2.37	46 N 420	M	71	8" Nose Cutting Pliers.....	3.12
46 N 419	H	1663	6" Nose Cutting Pliers.....	2.58	46 N 422	N	K13	Combination Pattern Snips.....	1.50

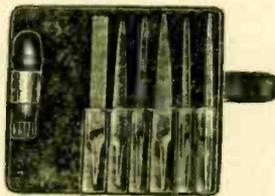


### JEWELERS' PLIERS

**Kraeuter Type 90.** Five jewelers' pliers in black zipper case. Consists of one each: #81 diagonal cutters, #82 end cutters, #83 chain nose, #84 flat nose and #85 round nose pliers. All are

1 1/2" long. Shpg. wt., 1 1/4 lbs.  
46 N 423. NET..... 15.20

### MINIATURE FILE KIT



Contains six files and durable black plastic handle. Length of files, 4". Made in Western Germany. Includes: one equaling file (flat, single cut) with square edge; one half-round file, double cut; one three-square file, (triangular, double cut); one flat, taper file (double cut); one round (rat-tail, single cut) tapered file; and a tapered square (4-sided, double cut) file. Plastic handle contains inserting shank for fitting on tangs. Red plastic roll case. Shpg. wt., 5 oz.  
46 N 340. NET..... 1.95

### DIAMOND CALK TOOLS



#### NEEDLE-NOSE PLIERS

**Type CN56.** Curved needle nose pliers. For hard-to-reach places. Dimalloy tool steel. Length, 6". Shpg. wt., 6 oz.  
46 N 459. NET..... 2.21



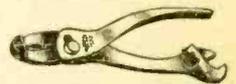
#### COMBINATION PLIERS

**Type K16.** Slip joint combination pliers with wire cutter. Knurled handles for firm grip. 6" long. Shpg. wt., 10 oz.  
46 N 460. NET..... 78c



#### ADJUSTABLE WRENCH

**Type DB76.** Exceptionally strong "Dimalloy" tool steel. Capacity 1/2" and 3/4". Length, 6". Long wearing, rust-resistant chrome finish. Shpg. wt., 6 oz.  
45 N 770. NET..... 2.35



#### HANDIMAN PLIERS

**Type DH16.** Combination of 4 tools in 1. Slip-joint plier, adjustable wrench, screwdriver and wire cutter. Length, 6 1/2". Shpg. wt., 7 oz.  
46 N 461. NET..... 2.35

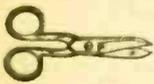
#### WALSCO PROTECTO-TUBE

**Type K-18.** Synthetic HV tubing for insulating handles of pliers, screwdrivers. Expanding solution swells tubing for quick application. 12 ft. of tubing. Shpg. wt., 12 oz.  
43 N 132. NET..... 1.06

#### HANSON 1" MICROMETER

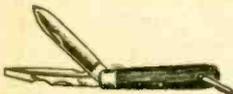
**Type 100RS.** Economically priced, precision micrometer. Accuracy of .0005". Positive spring-friction stop. Shpg. wt., 7 oz.  
46 N 249. NET..... 1.65

### CLAUSS INDUSTRIAL SCISSORS



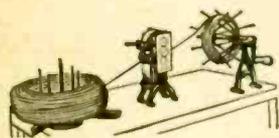
**Type 925.** Electricians' scissors. Made of finest cutting steel. Nickel plated for long service. Lgth. of cut, 1 1/4". Ideal for cutting tape, rubber, etc. 5" long. Shpg. wt., 3 oz.

45 N 896. NET..... 1.84  
**Type 925BS.** (Not illustrated.) Same as above, but one blade serrated. 5" long. 3 oz.  
45 N 897. NET..... 2.05



### CAMILLUS ELECTRICIAN'S KNIFE

**Type 229.** Rugged electrician's knife. Two blades: Combination screwdriver-cutter-stripper-scraper; spear-shaped, 1/2" knife blade. Brass locking bar positively prevents screwdriver blade from closing accidentally. Each blade is 2 1/4" long; of high-quality steel. Black plastic-phenolic handle. Wt., 5 oz.  
45 N 895. NET..... 1.23



### JFD WIRE MEASURING OUTFIT

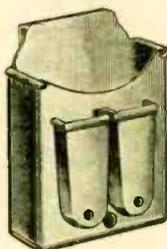
**Model 66C.** Complete Outfit. Deluxe wire measuring outfit consists of 1--66-1 folding reel, 1--66-2 measuring machine and 1--66-3 wire winder. Shpg. wt., 30 lbs.  
46 NX 312. NET..... 81.67

### INDIVIDUAL COMPONENTS

**Model 66-1.** Folding Reel. Wt., 7 lbs.  
46 NX 313. NET..... 14.70  
**Model 66-2.** Measuring Machine. Wt., 14 lbs.  
46 NX 314. NET..... 53.90  
**Model 66-3.** Wire Winder. Wt., 12 lbs.  
46 NX 315. NET..... 22.05

### G.C. 8943 "TUX" TOOL HOLSTER

Servicemen will find this tool holster as handy as a third arm. Excellent for service calls and antenna installations; the required tool is always available. Attaches to belt. Has two narrow compartments and one full-size compartment. Plenty of room for carrying most-needed tools, such as wrench, pliers, wire cutter, tube puller, screwdrivers, alignment tools, file, etc. Made of tough, flexible "Alathon", polyethylene plastic. Holds its shape. Wt., 6 oz.



46 N 345. NET..... 2.32

### NEW WATERBURY STEEL TAPE RULE

**Type 406WS.** Inside-outside push-pull steel 6 ft. rule. Case is die-cast, chrome plated. High carbon steel blade; baked enamel for long service. Highly readable ebony black numerals. Shpg. wt., 1/4 lb.  
46 N 298. NET..... 73c

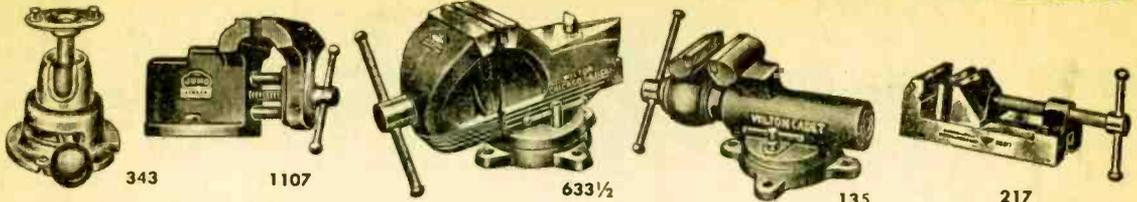


### L. B. MILLER "MAGIMMICK JR."

A permanent magnet swivel-connected to extension handle to pick up small metal objects in hard-to-reach places. 12" long. Wt., 6 oz.  
46 N 084. NET..... 1.10



# Quality Service Tools



## SHOP AND BENCH VISES AND POWRARMS

### WILTON SHOP AND BENCH VISES

**Model 343 "Junior" PowRarm.** Light-duty capacity all-angle work positioner. For positioning small electronic assemblies or parts. Provides a second pair of hands for production workers, servicemen or home craftsmen. Supports work firmly in any desired position. Body is cast aluminum and cadmium-plated steel. Capacity, 24 lbs. Base diameter, 4 1/4". Shpg. wt., 4 1/2 lbs.  
**46 N 857. NET. 12.54**

**Model 1107 "Juno" 2 1/2" Utility Vise.** For use with PowRarm positioner above. Jaw width, 2 1/2". Max. jaw opening, 2 1/4". When used with PowRarm, makes possible the clamping of work piece in any angle or position. Vise utilizes straightline pull Acme-thread spindle and malleable-iron casting for greater strength. Shpg. wt., 3 1/2 lbs.  
**46 N 858. NET. 3.11**

**Model 349 T-Bracket.** Required for fastening fixtures below to PowRarm. Wt., 1/2 lb.  
**46 N 859. NET. 1.30**

**Model 331 6-18" Universal Chassis Attachment.** For fastening radio-TV chassis to PowRarm. Shpg. wt., 5 lbs.  
**46 N 860. NET. 8.04**

**Model 344 Auto-Radio Chassis Holder.** For positioning of auto radio chassis. Shpg. wt., 1/2 lbs.  
**46 N 861. NET. 7.64**

**Model 633 1/2 Vise.** New "Shop King" hardware vise. With slide-bar lock. 3 1/2" jaw width; opens to 4". Top jaws are serrated, hardened steel. Equipped with removable 1 1/2" capacity pipe jaws, cut-off tool, and swivel base. Shpg. wt., 21 lbs.  
**46 NX 866. NET. 7.68**

**Model 634 Vise.** As above, but 4" jaw. Opens to 4 1/2". Shpg. wt., 30 lbs.  
**46 NX 867. NET. 11.37**

**"Cadet" Bench Vises.** Designed expressly for the quality-minded serviceman. Rugged, durable construction of malleable iron and semi-steel castings. New, round barrel styling permits closer, more precise handling of work. Hardened steel jaws are removable, replaceable and reversible; made of high-grade steel with diamond shape serrations. Close fit between movable and stationary sections assures smooth, easy operation at all times. Swivel base may be removed.

**Model 135 "Cadet" Bench Vise.** Jaw width, 3 1/2". Opens to 4". Shpg. wt., 22 lbs.  
**46 NX 862. NET. 15.52**

**Model 140 "Cadet" Bench Vise.** Jaw width, 4". Opens to 5 1/2". Shpg. wt., 39 lbs.  
**46 NX 863. NET. 21.56**

**Model 145 "Cadet" Bench Vise.** Jaw width, 4 1/2". Opens to 5 1/2". Shpg. wt., 42 lbs.  
**46 NX 864. NET. 23.36**

### MILLERS FALLS No. 217 VISE

Handy vise for holding great variety of work on drill-press bed or work bench. Radiomen find it perfect for holding parts to be soldered or drilled. 2 1/2" wide jaws have parallel faces, extend to 3 1/2". Jaws, sides, base and bearing surfaces are accurately machined. All other surfaces are enameled black. Removable swivel jaw is provided for holding odd-shaped parts. Each base rail has two holes tapped 1/4"-20 for permanently fastening vise to bed or bench. Sturdily constructed of hardened steel for extra long life and service. Polished clamp screw.  
**46 N 064. NET. 6.32**

### BRINK & COTTON CLAMP VISE

Compact clamp vise ideally suited for radio work. Securely holds small parts for soldering, filing, cutting, etc. Extremely rugged. Its twin guide rods and clean cut screw assure smooth, easy action and hold its jaws rigidly in place. Can be clamped to bench or table up to 2" thick. Jaws are 1 1/2" wide, open to 1 1/4", and are machined to meet squarely for a firm grip. Shpg. wt. 2 1/4 lbs.  
**46 N 015. NET. 1.57**



### GREENLEE CHASSIS PUNCHES



**Series 730.** Cut holes in metal chassis up to 1/8" thick by turning cap screw. Operate simply with ordinary wrench for drive power. No reaming or filing required. All require 3/4" hole for lead screw, except 1 1/4" hole, and 1 1/4" hole. Average shpg. wt., 1 1/2 lbs.

No.	Size	EACH	No.	Size	EACH
46 N 169	1/2"	2.16	46 N 179	1 1/2"	2.47
46 N 177	3/4"		46 N 174	1 3/4"	2.47
46 N 170	1"		46 N 175	1 7/8"	2.47
46 N 171	1 1/4"		46 N 176	1 3/4"	2.83
46 N 172	1"	2.34	46 N 180	1 1/2"	3.19
46 N 178	1 1/4"	2.47	46 N 181	2 1/4"	6.11
46 N 173	1 1/2"	2.47			

**Series 732 Key Punches.** Cuts holes for keyed sockets. Require 1/2" hole. Av. wt., 1 1/2 lbs.

No.	Size	NET	No.	Size	NET
46 N 184	1 1/4"	3.73	46 N 189	1 1/4"	4.27
46 N 186	1 1/2"	4.00	46 N 193	1 1/2"	4.50
46 N 182	1/2" cap screw for 1/4" and 3/8" chassis punches.	Shpg. wt., 3 oz. NET. 27c			
46 N 183	3/8" cap screw for 1/2" and 7/8" punches.	Shpg. wt., 4 oz. NET. 27c			
46 N 168	3/4" cap screw for 1" to 1 1/4" punches.	Shpg. wt., 5 oz. NET. 27c			

**Series 731 Square Punches.** Cut holes in metal up to 1/8" thick. Requires 1/4" hole. Wt., 2 lbs.

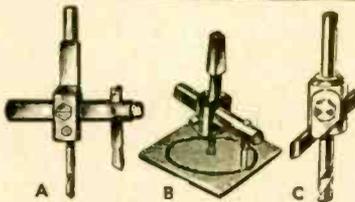
46 N 276.	For 3/4" hole.	NET. 3.33
46 N 277.	For 1/2" hole.	NET. 3.87
46 N 278.	For 1" hole.	NET. 4.50

### PIONEER CHASSIS PUNCHES



Save time—cut square or angular holes for easy mounting of transformers, terminal strips, etc. Operate with ordinary wrench. Several full or shorter cuts will enlarge first hole to any larger angular hole or slot desired. Screw bolt requires 1/4" hole. Wt., 10 oz.

No.	Size	NET	No.	Size	NET
46 N 191	3/8"	2.89	46 N 272	7/8"	3.77
46 N 271	1/2"	3.18	46 N 273	1"	3.87
46 N 192	1/4"	3.43			



### ALL-PURPOSE CIRCLE CUTTERS

Cut holes accurately in wood, sheetmetal, plastics, etc. Round shank type for use in drill press; square shank type for hand brace. Drill acts as center pilot, keeping cutter in alignment. Removable pilot drill and cutter blade. Horizontal cross-bar and cutting bits are instantly adjustable. Polished cutting edges. Shpg. wt., 8 oz.

No.	Fig.	Shank	Hole Size	NET
45 N 600	A	Round 1/4"	1/4" to 4"	1.44
45 N 602	B	Square	1/4" to 5 1/2"	1.91
45 N 603	B	Round 3/8"	1" to 5 1/2"	1.91

**45 N 610. Cutter Blades.** For above. Hardened tool steel. Shpg. wt., 4 oz.  
**NET EACH. 50c**

### Fig. C—CLARK HOLE CUTTER

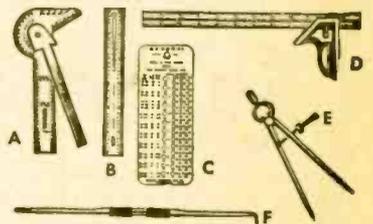
Type 100. Cuts holes from 1/4" to 1 1/2" in diameter, in metals up to 1/4" thick. 1/4" pilot drill with 1/4" round shank for electric drills. Tempered steel construction, polished cutting edge. Fully adjustable. Simply set hex nut. Shpg. wt., 5 oz.  
**45 N 620. NET. 2.89**

### ICA 775 COMBINATION SHANK

Circle cutter for cutting smooth, accurate holes from 1 1/2" to 8" in dia. in chassis metals, panels, bakelite, wood, etc. Rugged 1/2" sq. cutting bar will not twist. 1/2" hexagon shank. With removable 3/8" pilot drill. Shpg. wt., 1 lb.  
**45 N 604. NET. 2.94**



**777 Replacement Blade.** For above. Made of hardened tool steel. Simple installation of new blade and removal of old blades; merely loosen screw holder on side of carrier arm. Shpg. wt., 4 oz.  
**45 N 605. NET. 66c**



### CHASSIS LAYOUT TOOLS

**Fig. A. Multi-purpose Steel Rule.** 4" scale in 32nds and 64ths, drill point gauge, square, bevel protractor, center finder, circle divider, tap-drill table. Handy leather carrying case. Shpg. wt., 4 oz.  
**46 N 153. NET. 1.23**

**Fig. B. 6" Steel Rule and Wire Gauge.** Made of stainless steel. Front graduated in 32nds and 64ths, also B. & S. wire gauge. Back has decimal equivalents. Identifies No. 8 to 20 wire. Rule has easy-to-read numerals. Heavy steel retains shape. Shpg. wt., 2 oz.  
**46 N 061. NET. 33c**

**Fig. C. Drill and Steel-Wire Gauge.** For sizes 1 to 60 with decimal equivalents. Lists taps with tap-drill and body-drill sizes, 1/4-28 to 2-56. 5 oz.  
**46 N 060. NET. 1.13**

**Fig. D. Combination Steel Rule.** 12" etched-steel combination square. Graduated on both sides in 32nds, 16ths, and 8ths. Head has thumb-screw for locking. 45 degree angle for bevel cuts. Wt., 1 1/4 lbs.  
**46 N 154. NET. 1.33**

**Fig. E. Steel Dividers.** Has stiff spring to assure rigidity. Needle points are centerless ground. Divider frame of high quality steel. Needle points tempered for long life under hard usage. Length, 6". Wt., 2 oz.  
**46 N 089. NET. 2.25**

**Fig. F. Scriber.** Two-point machinist's scriber with knurled finger-hold. Bent point on one end convenient for reaching through holes. 9" long. Wt., 3 oz.  
**46 N 197. NET. 38c**

**12" Steel Bench Rule.** (Not illustrated.) Has two sides graduated in 8ths, 16ths, 32nds, and 64ths. Tempered stainless steel. 1/2" wide. Shpg. wt., 2 oz.  
**46 N 088. NET. 60c**

# All-Purpose Quality Tools

## G-C QUALITY TOOLS

### SPEEDEX WIRE STRIPPERS



Very efficient, improved tools for automatically stripping insulation from all wires neatly and quickly. Sturdy and easy to use—with narrow, plier-grip handles. Just insert wire into jaws and squeeze handles. Strips wire ends on any place on wire. Precision-made for uniform results. A great time-saving tool for servicemen, electricians, production lines, etc. Wt., 1 1/4 lbs.

#### DELUXE MODELS

Fully automatic, with "delayed return action" to prevent crushing of fine stranded wires. Hardened steel blades, easy-grip handles. 46 N 225, Type 766, For 10 to 20 wire. 46 N 226, Type 766A, 14 to 30 wire. **NET EACH 4.85**

#### STANDARD MODELS

Same efficient stripping tools as deluxe models listed above, but without "delayed return action" feature. Satisfactory for any stripping job where stay-open feature is not necessary. Hardened steel, precision-ground cutting blades for long life under continuous use. 46 N 003, Type 733, For 12 to 20 wire. 46 N 004, Type 733A, 14 to 30 wire. **NET EACH 3.88**

### 766K WIRE STRIPPER KIT



A complete, versatile kit to fill most service and production line needs. Contains the new Deluxe Wire Stripper with "delayed return action" described above and 7 different size hardened steel blades in special steel box. For wire sizes from No. 8 up to No. 30. Inside cover of box contains a guide listing of blades to use for various wire sizes. A very practical addition to the radio serviceman's tool box. Shpg. wt., 2 1/4 lbs.

46 N 229, List, \$17.25. **NET 10.14**

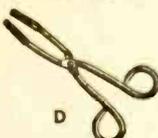


### G-C PIN STRAIGHTENERS

Fig. A, Type 5191, Precision-built steel die. For 7-pin miniature tubes. Wt., 6 oz. 46 N 227, **NET 72c**

Fig. A, Type 8105, As above, for 9-pin tubes. 46 N 228, **NET 72c**

Fig. B, Type 8655, Combination for both 7 and 9-pin miniature tubes. Shpg. wt., 6 oz. 46 N 230, **NET 1.47**



### G-C AMO TUBE PULLERS

Fig. C, Type 5093, Aluminum body with rubber cup; for 7-pin miniature tubes. 2 oz. 46 N 094, **NET 1.03**

Fig. C, Type 8106, As above, for 9-pin tubes. 46 N 155, **NET 1.06**

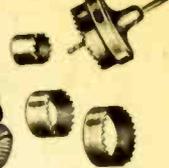
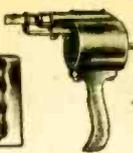
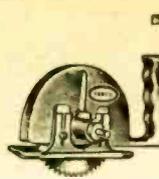
Fig. D, Type TL-201, Scissors-type, with rubber tips. Unusually handy tool. 12 oz. 46 N 092, **NET 97c**

### WALSCO 592 "TWISTO" WIRE STRIPPER



Versatile wire stripper for rapid removal of toughest insulation. Can be inserted into chassis without removing wire. Adjustment for wire sizes 12 to 22. Built-in stop for production stripping. Spring steel blades. 4 1/2" long. Shpg. wt., 8 oz.

46 N 440, List, \$4.50. **NET 2.65**  
592-3P, Replacement Blades, Wt., 2 oz. 46 N 441, List, \$.75. **NET PER SET .44c**



## TOOL ATTACHMENTS FOR 1/4" DRILLS

### FEDCO ADJUSTABLE ATTACHMENTS

Fig. A, Model 605, Circular Saw Attachment. Economically converts any ordinary electric drill into an accurate-cutting power saw. Has 1/4" shaft. Easy to install. Features saw, 11as 1/4" shaft. Easy to install. Features adjustable cutting depth from 1/4" to 1 1/4"; rip gauge and bevel-tilt rip gauge from 0 to 45°. Gear case is fully lubricated and factory-sealed for long life. Has extra-broad base for steadier rest and straighter cutting. Hardened alloy steel shafts; "coppo-steel" gears; oilite self-lubricating bronze bearings. Gear housing and safety guard made of cast aluminum. Can be converted into a table-type bench saw by fastening a piece of plywood to the base plate through holes provided in the plate. An excellent choice for the budget-wise serviceman, home hobbyist or mechanic. Unit is complete with 4" combination blade, suitable for ripping and cross-cutting. Shpg. wt., 3 lbs. 46 N 237, List, \$10.95. **NET 8.20**

Fig. B, Model 500, Circular Saw Attachment. Similar to above, but without bevel tilt feature. Easily converts drill into power saw. Adjustable cutting depth from 1/4" to 1 1/4". Guard fully covers exposed portion of saw blade. Oilite self-lubricating bronze bearings; alloy steel shafts. With 4" diameter combination blade. Shpg. wt., 1 1/4 lbs. **NET 5.82**

Type 604C Combination Blade, 4" blade for Models 605, 500. Shpg. wt., 6 oz. 46 N 239, **NET 1.50**

Type 604R Rip Blade, 4", Shpg. wt., 6 oz. 46 N 240, **NET 1.50**

Type 604M Special Blade, For soft metals. 4" diameter. Shpg. wt., 6 oz. 46 N 241, **NET 2.25**

### GREENE HACKSAW ATTACHMENT

Fig. C, Model 1625, For driving hacksaw blades. Excellent for close work on wood, steel, etc. Die-cast aluminum housing. Hardened steel shafts, oil-impregnated bronze bearings throughout. With Allen wrench and 1 blade, 2 1/4" long. Shpg. wt. 2 3/4 lbs. 46 N 012, **NET 10.99**

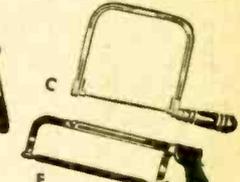
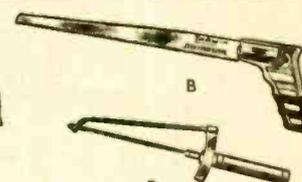
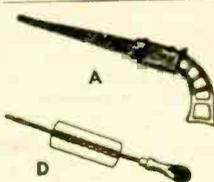
### NEW ROTEX ATTACHMENTS

Fig. D, "Roto Plane" Planing Attachment. Moderately priced precision planer attachment for use with any 1/4" electric drill. Ideal for home craftsmen, carpenters, etc. Increases the versatility and usefulness of any 1/4" electric drill. Planes against, across or with the grain with equal ease. Can be used to cut all varieties of wood, plastics, etc. Guide edge provides automatic planing at a true 90 degrees—simplifies wood jointing. Employs specially designed 3-flute spiral cutter. Diagonal shearing action eliminates deflections from knots or bad grains. Planes at any angle—adjustable depth of cut. Durable alloy tool steel cutter is deep-hardened and precision-ground for long life. Planing width, 1 1/4". Entire unit is perfectly balanced for fatigue-free ease of operation. Lightweight, die-cast aluminum housing. Heavy-duty, oil-impregnated bearing. Baked hammerlored enamel finish. Complete with instructions, ready to install. Shpg. wt., 3 lbs. 45 N 872, List, \$12.95. **NET 9.53**

Fig. E, Hole Saw Attachment. New hole saw attachment for 1/4" electric drills. An indispensable tool for radio-TV servicemen, experimenters, home craftsmen. Cuts through any 1/4" stock, wood, plastic or metal. Ideal for chassis work. Complete with arbor and 4 saws. Cuts 1", 1 1/2", 2" and 2 1/2" holes. Light, rugged aluminum arbor and 4 top quality, high carbon steel blades. Shpg. wt., 1 lb. 45 N 873, List, \$4.95. **NET 3.65**

### NEW ROTO BENCH STAND

Rugged, heavy aluminum horizontal drill stand for any 1/4" electric drill. Won't shake or shimmy. Holds firmly in place on workbench for polishing, grinding, buffing, burnishing, drilling, etc. Adds a variety of new uses to any electric drill and accessories. Bolts to workbench—clamp attachment for drill. Wt., 1 lb. 45 N 874, List, \$3.95. **NET 2.90**



## ALL-PURPOSE SAWS

Fig. A, Keyhole Hacksaw. Handy lightweight saw for all general purpose work. Cuts metal, wood, plaster, conduit, etc. Blade is 1 1/2" long, 24 teeth/inch. Complete with blade. Shpg. wt., 6 oz. 46 N 085, **NET 29c**

Extra Keyhole Saw Blades, Wt., 2 oz. 46 N 086, **NET EACH 14c**

Fig. B, Type 625, Millers Falls Keyhole Hacksaw. Cuts metal, wood, plaster, etc. Has removable, 1 1/4" blade; 10 teeth/inch. Blade can be rotated and locked in any of 8 positions for easier odd-angle cuts. Handle fits blades below. Shpg. wt., 9 oz. 46 N 102, **NET 1.47**

Metal-Cutting Blade, 24 teeth/inch. 3 oz. 46 N 103, **NET 37c**

Wood-Cutting Blade, 7 teeth/inch. 3 oz. 46 N 104, **NET 37c**

Fig. C, Type 100, Wilson Coping Saw. Natural hardwood, lacquered handle. Special ratchet feature locks blade in position. Length of blade, 6 1/2". Throat depth, 3/4". Shpg. wt., 1 lb. 45 N 878, **NET 73c**

Type 124, Replacement Blade, For above. Shpg. wt., 2 oz. 45 N 876, Pkg. of 2, **PER PKG. 9c**

Fig. D, Stickleback Drillsaws. Drills its own hole, then saws any shape in plywood, plaster, wallboard, etc. Tip is fast-rotating gimlet; main blade is sharply toothed spirally. Available in 2 sizes, 7" and 13" long. 3/8" Drillsaw, 7" long. Shpg. wt., 6 oz. 46 N 148, **NET 1.60**

3/8" Drillsaw, 13" long. Shpg. wt., 12 oz. 46 N 149, **NET 2.60**

Fig. E, Type 107, Wilson Utility Saw. For years of heavy duty service. 1/4" round steel back. Sliding channel of 16 ga x 1/4" steel—adjusts for 1/4" to 3" cutting depth. Solid 1/4" knurled steel handle. Nickel finish. Shpg. wt., 3/4 lb. 45 N 877, **NET 52c**

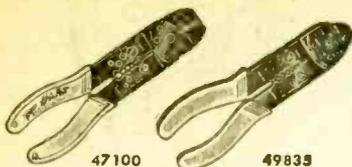
Type 123, Replacement Blade, For above. 6 1/2" long; 32 teeth/inch. Shpg. wt., 2 oz. 45 N 875, Pkg. of 2, **PER PKG. 20c**

Fig. F, Pistol-Grip Hacksaw. Adjustable for 8-12" blades. Saw is 4-directional. With 10" blade. Shpg. wt., 1 1/4 lbs. 46 N 090, **NET 98c**

Replacement Hacksaw Blades, For above. 10" long, 3/8" wide. Saw contains 1 fine and 1 coarse blade. Shpg. wt., 3 oz. 46 N 091, **NET PER SET OF 2 15c**

# General Service Aids

## A-M P TERMINAL TOOLS



47100 SUPER CHAMP HAND TOOL

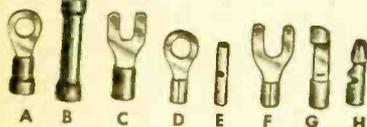
Extra heavy-duty hand tool for crimping solderless terminals, shearing bolts, wire cutting, stripping, etc. Quality hardened tool steel, plastic handles. Designed for insulated terminals listed below. Has handy B & S wire gauge. Shpg. wt., 1 lb.

45 N 321. NET..... 3.95

### 49835 HAND TOOL

For crimping solderless terminals, wire cutting, stripping and shearing bolts. Shears 10-24, 10-32, 8-32, 6-32 and 4-40 bolts. Has B & S wire gauge. For non-insulated terminals below. 7 1/2" long. Shpg. wt., 1 lb.

44 N 453. NET..... 3.95



## A-M P TERMINALS FOR GENERAL WIRING

Provide positive contact without wire fracture. Eliminate soldering. Simple crimping operation provides extremely strong, neat, vibration-proof connections. \*Insulated terminals—plastic outer sleeves. Wire size, 10-14, except 12-16. 100 per pkg. Wt., 8 oz.

Stock No.	Fig.	Mfr's No.	Type	Stud Size	PER PKG.
45 N 301	A	34701*	Ring	8-10	4.58
45 N 302	A	34706*	Ring	4-6	4.58
45 N 303	B	34707*	Butt	4-6	5.49
45 N 304	A	34710*	Ring	4-6	4.58
45 N 305	A	34711*	Ring	8-10	4.58
45 N 306	C	34715*	Spade	4-6	4.58
45 N 307	C	34716*	Spade	8-10	4.58
45 N 308	B	34717*	Butt	8-10	5.49
45 N 309	C	32980*	Spade	6	3.65
45 N 310	D	33021†	Ring	8-10	3.22
45 N 311	D	33020†	Ring	4-6	3.22
45 N 312	E	33045†	Butt	4-6	3.43
45 N 313	B	33023	Ring	8-10	3.22
45 N 314	D	33037	Ring	4-6	2.82
45 N 315	F	33026	Spade	4-6	3.58
45 N 316	F	33027	Spade	8-10	3.58
45 N 317	G	33162†	Knife	.....	2.58
45 N 318	G	33030	Knife	.....	6.45
45 N 319	H	33089	Shur-Plug	.....	1.69
45 N 320	.....	36840*	Recep.	.....	5.10



## ICA FLEXIBLE SHAFT SCREWDRIVER

Type 935. Insulated guide at tip helps locate screwhead and holds blade in screw slot. 7 1/2" long. 3/8" tip. Wt., 5 oz.

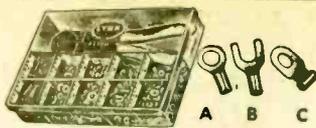
46 N 070. NET..... 1.32



## NEW INSULATED MAGNETIC SCREWDRIVERS

Made by craftsmen in U.S. zone of Germany. Tough steel, full rubber-insulated shock-proof blade. Features magnetic tip to hold screws into deep holes. Molded bakelite handle with screw cap. 1/2" tip. Excellent for trimmer adjustment, TV and radio receiver alignment, etc. Moderately priced yet high in quality. Order a full set for your bench or tool kit.

No.	Type	Lgth.	Blade	Oz.	NET
43 N 867	503	5 1/2"	2 1/4"	1 1/4	1.96
43 N 868	503	4 1/2"	2"	2	2.96
43 N 869	503	6 1/2"	5 1/2"	2 1/4	3.96



## LYNN TERMINAL KIT

Type 2195. Contains: \$5.00 worth of solderless terminals in assorted sizes in addition to the practical, No. 1900 crimping tool. A wide variety of terminals for making virtually any type of lug connector likely to be encountered in radio or TV work; includes new "lightning spade" and hook-type terminals. A full range of sizes is provided. Crimping tool can cut and strip wire from 22 to 10 gauge. Clear plastic container supplied with kit. 8 1/4 x 6 x 1 1/4". Wt., 2 lbs.

44 N 479. NET..... 8.33

No. 1900 Crimping Tool Only. Same as crimping tool furnished in above set. Tempered steel with red plastic shockproof handles. Wt., 1 lb.

44 N 478. NET..... 3.43

Extra Terminals. Popular sizes of Lynn terminals. Av. wt., 3 oz. \*Used in 2195 kit above.

Stock No.	Fig.	Mfr's No.	Type	Wire Size	Stud Size	Pkg. Qua.
44 N 476	A	2300*	Ring	22-16	4-6	45
44 N 481	A	2301*	Ring	22-16	4-6	45
44 N 482	A	2302*	Ring	22-16	8-10	45
44 N 477	A	2400*	Ring	16-14	4-6	45
44 N 485	A	2401*	Ring	16-14	4-6	45
44 N 486	A	2402*	Ring	16-14	8-10	45
44 N 487	A	2403*	Ring	16-14	12-1/4	36
44 N 489	A	2502*	Ring	12-10	8-10	36
44 N 490	A	2503*	Ring	12-10	12-1/4	27
44 N 491	A	2600*	Stud	22-16	4-6	50
44 N 492	B	2601*	Spade	16-14	4-6	45
44 N 493	B	2602*	Spade	16-14	8-10	45
44 N 494	B	2702*	Spade	12-10	8-10	36
44 N 495	C	2802*	Flag	22-16	8-10	45
44 N 496	C	2902*	Flag	16-14	8-10	45
44 N 432	.....	3101	Butt	22-16	.....	58
44 N 433	.....	3102	Butt	16-14	.....	58
44 N 434	.....	3103	Butt	12-10	.....	50
44 N 499	.....	3300*	Hook	22-16	.....	45

NET PER PKG..... 98c

## ICA 999 SOCKET WRENCH AND SCREWDRIVER SET

Consists of 4" wood handle, 2 1/2" screwdriver shaft, 3 1/2" extension and 8 sockets: 1/8", 3/16", 1/4", 5/16", 3/8", 1/2", 5/8", and 3/4" hex; 1/2" round knurl; 1/4" and 3/8" square. Takes care of most needs. Enameled steel case. Shpg. wt., 4 lbs.

46 N 157. NET..... 2.11

## HOLLOW HANDLE SET

Screwdriver bit and 5 hex sockets in 1/8", 3/16", 1/4", and 5/16" sizes. Hollow hard-wood handle and screw top hold all parts. Case-hardened steel sockets have nickel finish. Firmly embedded steel shaft. Wt., 6 oz.

45 N 826. NET..... 89c

## FLEXIBLE-DRIVE SOCKET SET

For use around corners and out-of-the-way places. Shaft of laminated steel wires. Thick cadmium plating. Shockproof amber handle. 8 1/4" overall. Includes 6 hex sockets, sizes: 3/16", 1/4", 5/16", 3/8", 1/2", 5/8". With handy wood case. Shpg. wt., 10 oz.

46 N 067. NET..... 1.96

## SPECO SHOCKPROOF PLASTIC PLIERS

Non-magnetic and shock-proof pliers for working on radios, electrical appliances, etc. 6,000 v. breakdown. Heat resistant. 240° F. Made of black plastic. 6 1/4" long. Shpg. wt., 3 oz.

46 N 035. List. \$1.05. NET..... 97c

## DUTCH BRAND TAPE

For many years a favorite with radiomen and electricians, Dutch Brand tape can always be depended upon for strength and excellent adhesive qualities.



3/4" FRICTION TAPE. A very popular standard width tape. For radio, electrical, home and shop applications. Av. shpg. wt., 6 oz.

Stock No.	Size	Each, in Quantities of
		1-29    30-99    100
52 N 610	3/4"x13'	12c    11 1/2c    11c
52 N 611	3/4"x32'	22c    21c    20c
52 N 612	3/4"x68'	38c    37c    36c

1/2" FRICTION TAPE. Narrow width, for radio work. 60 ft. long. Shpg. wt., 7 oz.

52 N 620. NET..... 19c

PLASTIC TAPE. Black vinyl plastic electrical tape. 3/4" type is only 007". Rated 7000 volts; 1/2" type is .010". Rated 10,000 volts. Stretches and conforms to irregular surfaces. Av. wt., 6 oz.

Stock No.	Size	PER ROLL	EA., in Quantities of
			1-50    51-99    100 or more
52 N 614	3/4"x44'	PER ROLL	1.00
50 or more	PER ROLL	.....	.90
50 or more	PER ROLL	.....	.80
52 N 623	1/2"x108'	PER ROLL	1.84
6-47	PER ROLL	.....	1.66
48 or more	PER ROLL	.....	1.48

VINYL COLOR TAPE. Thin and flexible. Dielectric of 1000 volts per mil. Average thickness, 5 mils. 36 yd. Av. wt., 5 oz.

Stock No.	Color	Size	EA., in Quantities of
			1-50    51-99    100 or more
52 N 690	Red	1/2"	1.50    1.35    1.21
52 N 691	Red	3/8"	2.01    1.79    1.61
52 N 692	Red	1/4"	2.49    2.29    2.00
52 N 693	Green	1/2"	1.50    1.35    1.21
52 N 694	Green	3/8"	2.01    1.79    1.61
52 N 695	Green	1/4"	2.49    2.21    2.00

## "DB" WIRE CONNECTORS

Solderless. Simply strip two wire ends, push into "DB", and screw cap down. No tools necessary. Wires cannot be pulled out. Finest grade phenolic. U. L. Approved. Av. wts.: Pkg. of 25, 5 oz.; Pkg. of 100, 1 1/4 lbs.



Mfr's Wire Type	Stock No.	Pkg. of 25	Stock No.	Pkg. of 100	
DB-1	16-18	52 N 874	25c	52 N 870	.83
DB-3	14-18	52 N 875	38c	52 N 871	1.27
DB-4	12-18	52 N 876	50c	52 N 872	1.62
DB-6	10-18	52 N 877	98c	52 N 873	3.07

## SCOTCH NO. 33 PLASTIC BACKED TAPE

Plastic-backed electrical tape. .007" thick; 10,000 v. dielectric strength. Molds to irregular surfaces. Resistant to chemicals, abrasion, oil, salt water, weathering. Av. wt., per roll, 6 oz.



Stock No.	Size	PER ROLL	12 or More Rolls PER ROLL
52 N 613	3/4"x20'	.54	.49
52 N 616	3/4"x66'	1.47	1.32



## OFFSET SCREWDRIVERS

Forged from a steel bar, heat-treated and tempered, with screwdriver at each end.

Fig. A. For Phillips screws, sizes 1 to 9. 4 1/2" long. Shpg. wt., 7 oz.

45 N 835. NET..... 39c

Fig. B. For standard screws. 3/8" blades. 4 1/2" long. Shpg. wt., 4 oz.

43 N 843. NET..... 54c



## JEWELER'S SCREWDRIVER SET

Type 600. Set of six screwdrivers. An exceptionally useful tool for fine work. Made by General Hardware. Each has swivel head, removable blade, and nickel-plated, knurled body. Overall length, 3 1/2". Blade sizes: 1. .08, .07, .055, .04 and .025". Wt., 8 oz.

43 N 855. NET..... 3.09

# Tools and Accessories



## TAP-A-LINE OUTLETS

**Type TL-1.** Allows as many as 8 separate appliances to be powered from a single outlet. Installation by means of a screw at each end. Consists of two parallel conductors in channels  $\frac{1}{2}$ " apart (prong distance on standard plugs) encased in a tough plastic sheath. Ideal for service shops, workshops, etc. Case is ivory color; 12" long and 1" square. With 4 ft. line cord and plug, and 2 mounting screws. Rated 1000 watts. Shpg. wt.,  $1\frac{1}{2}$  lbs. **52 N 636. NET. 1.47**

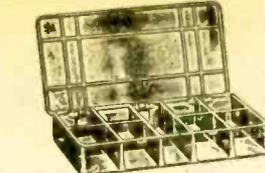
**Type TL-2.** As above but 2 ft. long. Shpg. wt., 2 $\frac{1}{2}$  lbs. **52 NX 637. NET. 2.40**

## RAPID "BRUSHPLATER"



For quick, easy electro-plating of small metal items. Plating process is exceedingly simple—just make a few electrical connections and brush surface to be plated with metal compound. Includes cleaner, polish, plating compound, brush and polishing stick. Requires 2 or 3 No. 6,  $1\frac{1}{2}$ -volt cells. Shpg. wt., 1 lb.

No.	Type	Plating Compound	NET EACH
43 N 080	200	Nickel	1.47
43 N 081	202	Cadmium	
43 N 082	204	Copper	
43 N 083	205	Brass	
43 N 084	206	Silver	1.83
43 N 085	207	24 K Gold	3.67



**VLČEK PLASTIC UTILITY BOXES**  
Tough, clear plastic storage boxes. Individual compartments for neat, visible storage of all small hardware. Heavy-duty plastic.

- Type P250.** One-compartment transparent plastic utility box. Overall size is  $6\frac{1}{2} \times 4 \times 1\frac{1}{4}$ ". Shpg. wt., 6 oz. **44 N 362. NET. 38c**
- Type P212.** Five-compartment utility box. Has two  $1\frac{1}{2} \times 3\frac{1}{4}$ " storage compartments on each side of  $1\frac{1}{2} \times 3\frac{1}{4}$ " center compartment. Overall size is  $7 \times 3\frac{1}{2} \times 1\frac{1}{4}$ ". Shpg. wt.,  $\frac{1}{2}$  lb. **44 N 356. NET. 50c**
- Type P203.** Six-compartment transparent plastic utility box. Each compartment is  $1\frac{1}{2} \times 4\frac{1}{2}$ ". Overall size is  $8\frac{1}{2} \times 4\frac{1}{2} \times 1\frac{1}{4}$ ". Shpg. wt., 1 lb. **44 N 357. NET. 66c**
- Type P210.** Nine-compartment utility box. Has four  $1\frac{1}{2} \times 1\frac{1}{2}$ " storage compartments on each side of  $1\frac{1}{2} \times 3\frac{1}{4}$ " center compartment. Overall size is  $7 \times 3\frac{1}{2} \times 1\frac{1}{4}$ ". Shpg. wt.,  $\frac{1}{2}$  lb. **44 N 355. NET. 50c**
- Type P201.** Twelve-compartment utility box. Has four  $2 \times 1\frac{1}{4}$ " compartments at one end, two  $1\frac{1}{2} \times 4\frac{1}{2}$ " compartments at other end, and six  $1\frac{1}{2} \times 1\frac{1}{2}$ " compartments in center. Overall size is  $8\frac{1}{2} \times 4\frac{1}{2} \times 1\frac{1}{4}$ ". Shpg. wt., 1 lb. **44 N 358. NET. 66c**
- Type P618.** Eighteen-compartment transparent plastic utility box. Each compartment is  $1\frac{1}{2} \times 2\frac{1}{2}$ ". Overall size is  $10\frac{1}{2} \times 6\frac{1}{2} \times 1\frac{1}{4}$ ". Shpg. wt.,  $1\frac{1}{4}$  lbs. **44 N 359. NET. 1.64**

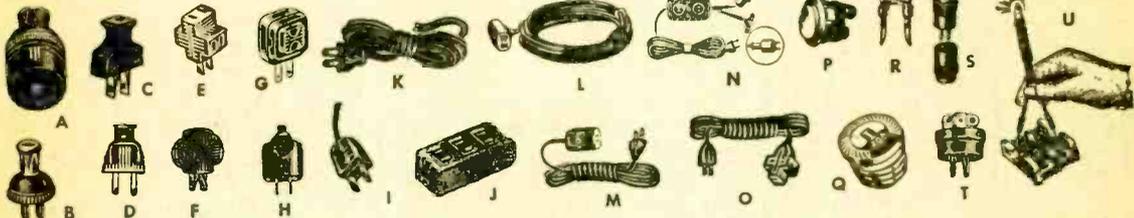


## NEW CHAMPION SPRAY KIT

New, all-metal spraying kit. Provides smooth, professional finish for hour after hour of spraying. Has no nozzle adjustment. Only one simple control knob on back of gun adjusts needle valve for various consistencies of liquids being used. Features revolutionary high-speed atomizing pump with piston-driven actuator, traveling at 7200 strokes per minute. Liquids to be sprayed need not be in enclosed container. Unit will spray from any open container. Strains paints automatically. Fine screen metal filter and strainer. Pump has precision-machined Oillite bearings. Develops 100 pounds per square inch pressure. Complete kit contains: Spray gun; aluminum paint jar; 15 foot Dupont polyethylene distance-spray tubing; 15 foot neoprene extension cord; full set of spare parts including 5 nozzle discs; automatic fine screen metal strainer and filter; steel carrying case and instructions. For operation from 105-125 v., 50-60 cycle AC. Size,  $7\frac{1}{2} \times 12\frac{1}{2} \times 5\frac{1}{2}$ ". Shpg. wt., 14 lbs. **46 NX 202. List, \$29.95. NET. 19.57**

**SPRAY GUN ONLY.** Metal jar. Wt., 5 lbs. **46 N 291. List, \$17.95. NET. 11.73**

**SPRAY GUN ONLY.** Glass jar. Wt., 5 lbs. **46 N 139. List, \$14.95. NET. 9.77**



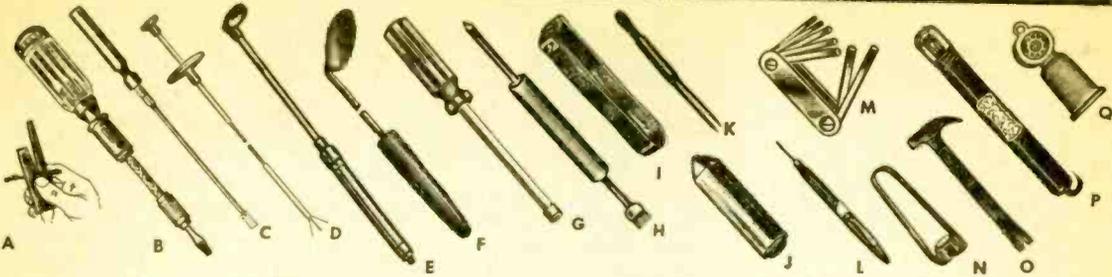
## VALUES IN HANDY ELECTRICAL ACCESSORIES

- Fig. A. LINE CORD RECEPTACLE.** Rubber pull-handle receptacle. Dia.,  $1\frac{1}{4}$ ". 15 amps at 125 v. Wt., 3 oz. **52 N 603. EACH. 26c**
- Fig. B. RUBBER-HANDLE PLUG.** Unbreakable soft-rubber. Approved for power tools. Excellent for use with 52 N 603, above, for line cord extensions. Shpg. wt., 2 oz. **52 N 602. EACH. 8c**
- Fig. C. BAKELITE PLUG CAP.** With finger-grip. Cap size,  $1\frac{1}{2} \times 1\frac{1}{4} \times \frac{3}{8}$ " deep. Brown. Shpg. wt., 2 oz. **52 N 600. EACH. 7c**
- Fig. D. FLAT RUBBER PLUG.** Non-breakable molded rubber plug cap. Because of their narrow construction, these caps are ideal for use with multiple AC receptacles similar to Fig. 1 and Tap-A-Line outlets above. Easily disassembled. Screw terminal wiring. Rated 15A at 125 v.; 10A at 250 v. 3 oz. **52 N 641. EACH. 10c**
- Fig. E. RUBBER CUBE TAP.** Spring-action, 3-way outlet of one-piece, soft rubber. U.L. Approved. Shpg. wt., 4 oz. **52 N 609. EACH. 19c**
- Fig. F. 3-WAY CUBE TAP.** Spring-action type. Brown bakelite. U.L. Approved. Internal contacts are in separate pockets to prevent shorts. Wt., 5 oz. **52 N 667. EACH. 10c**
- Fig. G. CUBE TAP.** 3 taps. Brown bakelite. Flat, compact type. Rated at 15 amperes, 125 volts; U.L. Approved. Wt., 4 oz. **52 N 601. EACH. 10c**
- Fig. H. FUSED PLUG.** Protects equipment. Small fuses for each side of line fit snugly in cylindrical receptacles—blows fuse easily removed for quick replacement. Interchangeable with any standard AC plug. Supplied less JAG cartridge fuses. (See pages 268, 269 for fuses.) Shpg. wt., 3 oz. **52 N 648. EACH. 26c**

- Fig. I. ACADEMY AUTOMATIC PLUG.** No wire stripping. Just insert through Cap "Needles" on prongs make connection through insulation. For POSI cable only. Wt., 3 oz. **52 N 607. NET EACH. 12c**  
**Display Box of 36. NET. 3.51**
- Fig. J. ACADEMY 3-WAY OUTLET.** No wire stripping—insert cord, close case. 15A/125V or 10A/250V. Shpg. wt., 5 oz. **52 N 622. Mahogany plastic. } EACH. 20c**  
**52 N 619. White plastic. }**
- Fig. K. 6 FT. REPLACEMENT CORD SET.** Heavy rubber covered cord firmly secured in sturdy molded plug. Brown. Wt., 5 oz. **49 T 230. 10 or More, EA. 22c. EA. 24c**
- Fig. L. BELDEN EXTENSION CORD.** 10-foot brown, all-rubber extension cord, with unbreakable, rubber plug and double outlet tap. U.L. Approved. Wt., 8 oz. **47 T 820. Type 170. EACH. 1.08**
- Fig. M. CUBE TAP EXTENSION.** 3-way extension tap. Rated at 15 amps 125 volts; 10 amps 250 volts. With 6-foot cord and bakelite plug cap. Wt., 7 oz. **52 N 605. 10 or More, EA. 29c. EA. 32c**
- Fig. N. TYPE 180 ALL-PURPOSE SERVICE CORD.** One cord to service most TV sets. One end plugs into regular AC wall outlet, other end has two 1 ft. cords for standard and Zenith male TV chassis connectors. Also has 2-way outlet receptacle for soldering iron. Double light, etc. 1 lb. **52 N 665. EACH. 1.03**
- Type 192.** As above, but plugs into female connector on TV set back cover. 1 lb. **52 N 666. EACH. 1.45**
- Fig. O. RUBBER CUBE TAP EXTENSION.** New all-rubber, solderless, 3-way extension cord set. 9-ft. cord, cube tap and plug. Shpg. wt., 8 oz. **52 N 608. EACH. 59c**  
**52 N 621.** Same as above, but with 6-ft. cord. **EACH. 50c**

- Fig. P. FLUSH MOUNT PUSH-BUTTON SWITCH.** Pearl button. Brass contacts. Screw terminals. Provided with spring clamps for mounting in  $\frac{1}{8}$ " hole on panels to  $\frac{1}{8}$ " thick. Shpg. wt., 2 oz. **55 B 196. 10 or More, EA. 26c. EA. 29c**
- Fig. Q. PLUG FUSES, U.L. Approved.** Shock proof. Clear view—easily seen when blown. Five of one type per box. Shpg. wt., 8 oz.
- |                        |                    |     |
|------------------------|--------------------|-----|
| 52 B 170. 10 Amps..... | } BOX OF 5 PER BOX | 25c |
| 52 B 171. 15 Amps..... |                    |     |
| 52 B 172. 20 Amps..... |                    |     |
| 52 B 173. 25 Amps..... |                    |     |
| 52 B 174. 30 Amps..... |                    |     |
- Fig. R. INSULATED STAPLES.** Saddle-type, drive-in staples. With fiber insulation. Box of 100. Shpg. wt., 5 oz. **NET PER BOX. 15c**  
**52 N 030. 10 or More Boxes, PER BOX 13c**
- Fig. S. MORSE MIDGET CORD CONNECTOR.** 2-contact pull-apart type. For AC/DC cords, phono motors, pilot lights, etc. Consists of plug and receptacle.  $1\frac{1}{8}$ " long and  $\frac{3}{8}$ " dia. Shpg. wt., 2 oz. **52 N 626. 10 or More, EA. 42c. EA. 47c**
- Fig. T. CORD CLAMP PLUG.** Two-wire bakelite plug cap with cord clamp attachment riveted on. Cord clamp is adjustable to all wire sizes and provides absolute strain relief; wire cannot slip out of clamp—clamp will not move. Spring-action prongs. Highly dependable. Brown. Shpg. wt., 4 oz. **52 N 604. 10 or more, EACH 21c. EA. 24c**
- Fig. U. GENERAL CEMENT NE-O-LITE.** Neon glow-type tester for indicating voltages from 60 v. AC and 90 v. DC to 500 v. AC/DC. Ideal for finding "hot" AC leads, checking fuses, etc. Neon bulb mounted in insulating holder. 5" insulated leads with phose tip ends. Shpg. wt., 3 oz. **78 F 055. 10 or More, EA. 32c. EA. 35c**

# Service Tools—Tool Kits



## ALL-PURPOSE SERVICING TOOLS

**Fig. A. GC 767 6-IN-1 WIRE STRIPPER.** Scraper, cutter, bender, and screwdriver. A necessary tool for all servicemen. 3 oz. 43 N 905. NET..... 29c

**Fig. B. MANSCO SPEEDDRIVER.** New, spiral ratchet-action automatic screwdriver. Made in U.S. Zone, Western Germany, of quality materials. Complete with seven bits, 1/4" and 3/8" screwdrivers; 3 countersink wood drills. Shpg. wt., 8 oz. 42 N 017. NET..... 2.58

**Fig. C. HUNTER TV-12 TUNING SLUG RETRIEVER.** Retrieves Standard Coil slugs without removing chassis from cabinet. Automatic holding mechanism. 11" L. 9 oz. 42 N 012. NET..... 2.20

Type TV-16. As above but 15' long. 42 N 013. NET..... 2.92

**Fig. D. MILLER 345 PICK-UP TOOL.** Press button to open claws—release to close over object. Flexible 14" shaft. Wt., 1 lb. 42 N 014. NET..... 75c

**Fig. E. GC 8725 ILLUMINATED INSPECTION MIRROR.** Permits inspection of parts otherwise hidden from sight. Consists of anodized aluminum flashlight with 6" lucite rod and 1" hinge-mounted mirror. Plastic housing prevents shocks. Locking switch allows one-hand operation. With bulb. Requires 2 penlight cells. 12 1/4" Wt., 6 oz. 42 N 130. NET..... 1.91

**BURGESS TYPE Z CELL.** 1 1/2-volt cell for 42 N 130 above. 1 1/2" x 3 3/4". Shpg. wt., 3 oz. 53 J 031. NET EACH..... 7c

**Fig. F. GC 6090 INSPECTION MIRROR.** For inspecting parts, connections, etc. in tightly wired radio chassis. Handy for reading part numbers and inspecting solder and wire connections in out-of-sight places. Mirror dia., 1". Shpg. wt., 8 oz. 42 N 121. NET..... 32c

**Fig. G. CLAYSON CAPACITOR LUG TOOL.** Sturdy lug twister. Extremely handy. Loosens the old capacitor and fastens the new one in a jiffy. Durable tenite handle and strong steel shank insulated with vinyl tubing. Shpg. wt., 8 oz. 42 N 008. NET..... 93c

**Fig. H. GC 9088 SOLDERING AID TOOL.** One end has wire and terminal cleaning brush. Other end holds wire in place while soldering. Solder will not stick to chrome-tipped probe. Shpg. wt., 4 oz. 42 N 001. NET..... 97c

**Fig. I. MPC WIRE STRIPPER.** Adjustable spring-steel blade easily and quickly set for stranded or solid wires up to size 12. Shpg. wt., 5 oz. 46 N 036. NET..... 66c

**Fig. J. GC 909 SCRATCH STICK.** Removes scratches on TV and radio cabinets, TV tables, furniture, etc. Has oil brush on one end, crayon on other. 6 oz. 46 N 300. NET..... 29c

**Fig. K. HANDY STEEL TWEEZER.** Finely tempered steel tweezers. Size, 6 1/2" long. For delicate work. Holds wires, nuts, screws, etc. Shpg. wt., 4 oz. 46 N 095. NET..... 42c

**Fig. L. PRES-TO-OILER.** Press on plunger to release one drop of oil. Prevents over-oiling and waste. Transparent fountain-pan reservoir holds oil supply. Also ideal for dispensing various radio and TV chemicals in hard-to-reach places. Shpg. wt., 3 oz. 46 N 065. NET..... 95c

**Fig. M. GC 9124 POCKET HEX KEY WRENCH SET.** Hardened steel wrenches open like a pocket knife. Seven popular size hex key wrenches from .050 to 3/16". Fitted in nickel chrome alloy steel case. Plastic carrying case. Shpg. wt., 4 oz. 42 N 002. NET..... 1.62

**Fig. N. KNOB-PULLER.** Easily removes all types of push-on knobs. Simply place blades in back of knob, close handles, and pull forward. Shpg. wt., 4 oz. 46 N 077. NET..... 29c

**Fig. O. ALL-STEEL UTILITY HAMMER.** Claw handle. Tempered steel. Excellent for use in work shop or home. Size, 9 1/2". Shpg. wt., 1 1/4 lb. 43 N 900. NET..... 75c

**Fig. P. GC 705 HANDY TROUBLE LIGHT.** For 105-125 volts, AC or DC. Ideally suited for visual inspection of chassis and components in cabinets, etc. With bulb and 5 1/2-foot cord. Shpg. wt., 1/2 lb. 42 N 120. NET..... 1.32

**Fig. Q. WALSCO 666 "STRAIGHT 'N' PULL."** 3 tools in one. Straightens 7 or 9 pin miniature tube pins; pulls tubes. Extremely helpful where tube pins have been bent thru removal from socket. Prevents finger burns. Shpg. wt., 3 oz. 42 N 016. NET..... 73c

## OXWALL ECONOMY TOOL KITS

### NEW 7-PIECE TOOL KIT

**Type 4008.** 7-piece combination tool kit. Fitted in handy plastic kit with two eyelets for wall hanging. Consists of: 1-7" linesman slip joint pliers; 1-6" adjustable wrench; 1-1/4" x 3/8" screwdriver; 1-1/4" x 3/4" screwdriver; 1-1/4" x 3/4" screwdriver; 1-No. 2 Phillips head screwdriver and 1 amber handle with chuck. Durable tempered steel blades are face ground. Rugged plastic kit is heat-sealed for long service; transparent pockets for each tool. This high quality, general-purpose tool kit is an excellent value for the service bench or workshop. 2 lbs. 42 N 003. NET..... 1.88

### NEW NUT DRIVER SET

**Type 3822.** 7-piece interchangeable nut driver set. Consists of: 1-3/8" x 3/4" nut driver; 1-1/2" x 3/4" nut driver. Drivers supplied in handy roll-type heat-sealed plastic case. Amber handle has flanged aluminum screw chuck. Blades are nickel-plated, hardened and tempered tool steel. Tools held in place by a translucent pocket. Ideal compact kit for the serviceman's tool box. Wt., 1 1/2 lbs. 42 N 004. NET..... 1.88

### NEW 4-PIECE TOOL KIT

**Type 4014.** Drop-forged, imported tool steel. Ground and polished heads. An excellent kit for the service shop or garage. Contains: 1-7" linesman's slip-joint pliers; 1-5 1/2" long nose pliers; 1-5 1/2" diagonal side cutters; 1-6" adjustable wrench. Each tool kept in place by transparent plastic compartment. Size, 7 1/2" x 8 1/2". Shpg. wt., 2 lbs. 42 N 007. NET..... 2.58

### SCREWDRIVER, PLIER, WRENCH SET

**Type 4033.** 8-piece combination wrench, plier and screwdriver kit. An outstanding value in a practical, versatile tool kit. Ideal for the serviceman, amateur or hobbyist—for television, radio or round-the-home use. Provides most of the smaller tools needed for repairs on appliances, table radios, etc. Contains following tools: 4" adjustable wrench; 4 1/4" combination pliers; 3 screwdriver blades measuring 1/2" x 3/8", 3/8" x 3/4", 1/2" x 3/4"; 2 Phillips screwdriver blades, #1 (3/16" x 3/4"), and #2 (1/4" x 3/4"). A shock-proof, amber plastic handle with an adjustable chuck holds both the regular and Phillips blades. Blades are tumblar-finished, hardened steel for maximum service life. Complete with a sturdy roll-up plastic holder. Case has tie-string closing. Shpg. wt., 2 lbs. 42 N 233. NET..... 1.96

### RATCHET HANDLE, BRACE SET

**Type 3688.** 7-piece Speed-O-Matic handy ratchet, brace and screwdriver set. A low-cost, all-purpose kit. Ratchet has 3-way adjustment: Left-Ratchet-Right. All tools in the set can be used in ratchet by inserting directly into adjustable hand chuck. Slide button adjustment for clockwise or counter-clockwise ratchet action, or ratchet or counter-clockwise ratchet action, or ratchet lock. Kit includes: three-way wood ratchet handle, 6" long; brace attachment, 7 1/2" L. Phillips blade #2 (1/4" x 4") for screws #4 to #10; 1 cabinet blade, 1/2" x 4" for light work; 1 regular blade, 3/8" x 1 1/4" for general use; 1 mechanic's blade, 1/2" x 4" for heavier-duty work; and 1 gimlet, 3 1/2" long for starting screw holes in hardwood. In handy plastic roll-up case. Shpg. wt., 1 lb. 46 N 295. NET..... 1.50

### 5-IN-1 SCREWDRIVER KIT

5 different interchangeable blades; plastic handle. Hardened tool steel blades. Contains: 1 each 1/4" and 3/8" cabinet blades; Phillips No. 1 and No. 2 blades; 1/4" key-stone blade with 3/8" tip and plastic handle. Leatherette roll case. Shpg. wt., 8 oz. 46 N 096. NET..... 90c

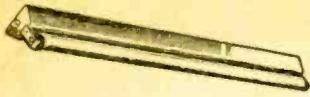


### VLCHek PANEL BAR WRENCH SET

**Type X2664.** 5-piece open-end wrench set. Made of finest tempered carbon steel. 10 openings, 3/8" to 3/4"—marked on wrench. Velco finish resists rust. Shpg. wt., 1 lb. 46 N 265. NET..... 1.03

**Type X2667.** 5-piece large wrench set. As above but 1/2" to 3/4" openings. Wt., 1 1/2 lbs. 46 N 266. NET..... 1.43

# Compco Fluorescent Values



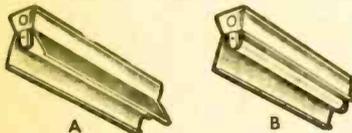
## FLUORESCENT STRIP LIGHTS

Specially designed for end-to-end continuous strip lighting installations. Each unit has provision for secure locking to the adjacent unit. Washable, baked white enamel finish. U.L. Approved. Less lamps. With starters. See listing of lamps on page 295. For AC only.

**1 LAMP—20 WATT 24"**  
 Model 316. Single light strip. Normal power factor. 24" size—perfect for salesrooms, corridors, etc. Shpg. wt. 4 lbs.  
 91 RX 195, List. \$4.10. **2.67**  
 NET EACH  
 Lots of 3, EACH. **2.46**

**1 LAMP—40 WATT 48"**  
 Model 318. Single light strip. Normal power factor. 48" size tube. Designed to give good lighting in large rooms. Shpg. wt. 6 lbs.  
 91 RX 196, List. \$9.80. **4.42**  
 NET EACH  
 Lots of 3, EACH. **4.08**

**2 LAMP—80 WATT 48"**  
 Model 265. Double light strip. High power factor. Provides maximum illumination using two 48" tubes. Shpg. wt. 8 lbs.  
 91 RX 197, List. \$14.95. **9.72**  
 NET EACH  
 Lots of 3, EACH. **8.97**



## REFLECTORS FOR STRIP LIGHTS

Streamlined reflectors for fluorescent strip lights above. Provide maximum lighting efficiency. For symmetrical reflection when strip lights are paired or banked, use one asymmetric reflector on each side. Of heavy gauge steel with white "Glazename" finish.

### REFLECTORS FOR 20 WATT (24") STRIPS

Fig. A, Model 570. Symmetric type. Two-sided units. Easily installed. For 20-watt strip above. Length, 24". Shpg. wt. 2 lbs.  
 91 RX 191, List. \$2.90. **1.89**  
 NET EACH  
 Lots of 3, EACH. **1.74**

Fig. B, Model 571. Asymmetric type. One-sided units for close-to-wall mounting. For 20-watt strip light. Length 24". Wt. 1 1/2 lbs.  
 91 RX 192, List. \$2.90. **1.89**  
 NET EACH  
 Lots of 3, EACH. **1.74**

### REFLECTORS FOR 40 WATT (48") STRIPS

Fig. A, Model 572. Symmetric type. For 40-watt strip. Length, 48". Wt. 4 lbs.  
 91 RX 193, List. \$4.20. **2.73**  
 NET EACH  
 Lots of 3, EACH. **2.52**

Fig. B, Model 573. Asymmetric type. For 40-watt strip. Length, 48". Wt. 3 lbs.  
 91 RX 194, List. \$4.20. **2.73**  
 NET EACH  
 Lots of 3, EACH. **2.52**

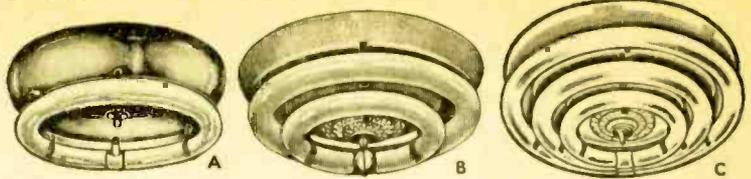
## WALL BRACKET FIXTURE



Model 704. Sturdy, general purpose fluorescent wall bracket—perfect for shop, store or home use. Designed to utilize maximum light radiation by single 15-watt fluorescent lamp. Has handy flush type electrical outlet on side panel. Attractive, triple chrome finish provides long wear and smart appearance. Rotary type on-off switch at one end. Operates from 105-125 volts, 60 cycles AC. U.L. Approved. 20x2x 2 3/4" wide. Less lamp and shade. With starter. Shpg. wt., 3 lbs.  
 91 RX 286, List. \$5.80. **3.77**  
 NET EACH  
 Lots of 3, EACH. **3.48**

Model 705. Fixture as above, but with adjustable, hooded shade, as illustrated. Wt., 3 1/2 lbs.  
 91 RX 287, List. \$7.80. **5.07**  
 NET EACH  
 Lots of 3, EACH. **4.68**

See page 295 for a complete listing of fluorescent lamps, ballasts, starters, and lamp-holders for all popular fluorescent fixtures.



## CIRCLINE FLUORESCENT FIXTURES

### Fig. A—665W 1-LIGHT FIXTURE

Low-cost fluorescent fixture, with "instant-start" feature. Provides clear, glareless light—equivalent in light diffusion to a 100-watt incandescent bulb. Made of steel, finished in washable, white "Glazename". Lamp is securely held by spring steel clips. U.L. Approved. Complete with 12" diameter, 32-watt circline lamp—ready for immediate, simple installation. For operation from 105-125 volts, 60 cycle AC. Shpg. wt. 9 lbs.  
 91 RX 278, List. \$10.40. **6.89**  
 NET EACH  
 Lots of 3, EACH. **6.37\***

### DELUXE MODEL 665C

Similar to Model 665W above, but fully chrome-plated. Complete with 32-watt circline lamp. Shpg. wt., 9 lbs.  
 91 RX 279, List. \$11.30. **7.48**  
 NET EACH  
 Lots of 3, EACH. **6.91\***  
 32-Watt Circline Lamp. For all models. Shpg. wt. 1 1/2 lbs.  
 91 R 271, NET EACH. **2.45**  
 \*Price Includes F.E.T. on Lamps.

### Fig. B—841W 2-LIGHT FIXTURE

Improved 2-lamp model. Attractive design and construction makes fixture appear to be built right into wall or ceiling. 32-watt instant start lamp is augmented by 22-watt instant start lamp of smaller diameter. Provides improved light diffusion. Mounts on either ceiling or wall. Full-length mounting stud furnished. Steel, finished in white, washable "Glazename". Attractive glass pendant. Lamps are held securely by spring clips. With 12" dia. 32-watt, and 8" dia. 22-watt circline lamps and hardware. For operation from 105-125 volts, 60 cycle AC. U.L. Approved. Shpg. wt., 11 lbs.  
 91 RX 261, List. \$17.00. **11.30**  
 NET EACH  
 Lots of 3, EACH. **10.45\***

### DELUXE MODEL 841C

As above but fully chrome-plated.  
 91 RX 262, List. \$17.95. **11.95**  
 NET EACH  
 Lots of 3, EACH. **11.02\***  
 91 R 535, 22-watt, 8" dia. lamp for replacement in 841W and 847W. 1 lb. **2.45**

### Fig. C—847W 3-LIGHT FIXTURE

Newest of the Compco line of circline fixtures. Contains three lamps: one 40-watt; one 32-watt; one 22-watt. Self-starting feature—lamps light almost instantly. Pan diameter, 16 1/2". In two finishes: baked-on, washable white "Glazename"; or highly polished chrome plate. All lamps U.L. Approved. For 105-125 volts, 60 cycle AC. Shpg. wt., 15 lbs.  
 91 RX 538, 40-watt 16" dia. lamp for replacement in 847W and 847C. Shpg. wt., 2 lbs. **3.20**  
 EACH

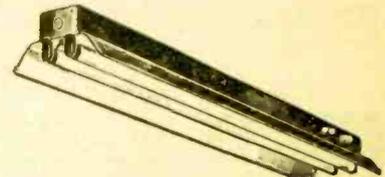
Prices include F.E.T. on lamps.

91 RX 240, Model 847W. White enamel. List. \$40.05. **NET EACH 19.94**  
 Lots of 3, EACH. **18.44**  
 91 RX 241, Model 847C. Chrome plate. List. \$31.55. **NET EACH 20.91**  
 Lots of 3, EACH. **19.34**

## INDUSTRIAL FIXTURES

Efficient, low-cost fluorescent fixtures, ideal for industrial use. Provides non-glaring light with even diffusion and high illumination. Reflector is finished in "Glazename" for maximum lighting efficiency at minimum cost. Reflector is mounted with two wing-nuts for quick convenient removal without tools and without disturbing the wiring. Power factor corrected to reduce inductive effects. An excellent low-cost, stock-room light fixture for the workbench, shadow-room, etc.

Model 633. 48" Standard Fixture. Uses two 48" Type T-12, 40-watt fluorescent lamps. Made of heavy gauge pressed steel, finished in high-gloss gray enamel for easy cleaning. Supplied with brackets for hanging from ceiling and knockouts to permit flush or stem mounting. Fixtures may be hung on chains, flush, or stem mounted. Starters located on side for a continuous row. With reflector, starters and ballasts. Less lamps and chains. U.L. Approved. For operation from 105-125 volts, 60 cycles AC. Shpg. wt., 17 lbs.  
 91 RX 260, List. \$13.75. **NET EACH 8.94**  
 Lots of 3, EACH. **8.25**



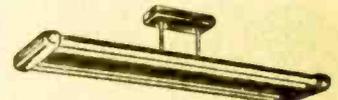
Model 633 RS. Same as Model 633 left, but rapid-starting type. Shpg. wt., 17 lbs.  
 91 RX 315, List. \$17.50. **NET EACH 11.38**  
 Lots of 3, EACH. **10.50**  
 Model 635L. Features deluxe all-white slotted top reflectors. Uses two 48" T-12, 40-watt lamps. Size, 48 1/2 x 13 5/8". U.L. Approved. For operation from 105-125 volts, 60 cycle AC. Shpg. wt., 20 lbs.  
 91 RX 319, List. \$16.10. **NET EACH 10.46**  
 Lots of 3, EACH. **9.66**  
 Model 636 RSSL. Same as 866 above, but rapid-starting type. Shpg. wt., 20 lbs.  
 91 RX 320, List. \$19.00. **NET EACH 12.74**  
 Lots of 3, EACH. **11.76**

## FOUR-LAMP COMMERCIAL FIXTURES

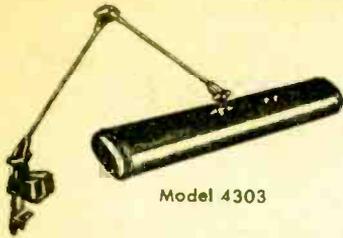
Four lamp, low-cost, high efficiency, streamlined commercial fixtures with water-thin body. Light-weight and only 2 1/2" thick, can be quickly and easily mounted by one man without difficulty. Highly polished end housings made in attractive modern design. Starters replaceable without removing lamps. U.L. App.

Model 319 Open-Style (160-Watt) Fixture. Streamlined to harmonize with modern interiors and provide high-intensity lighting. For surface or suspension mount. Easily installed in continuous rows for greater illumination. Wiring fastened to body. End covers removable for installation or servicing. High-gloss, baked-on white enamel. Stainless steel trim. U.L. Approved. For 40-watt, 48" lamps. With starters, less lamps, stem and canopy. Size, 24 1/2 x 13 1/2". For operation from 105-125 volts, 60 cycles AC. Shpg. wt., 20 lbs.  
 91 RX 280, List. \$27.50. **17.88**  
 NET EACH  
 Lots of 3, EACH. **16.50**

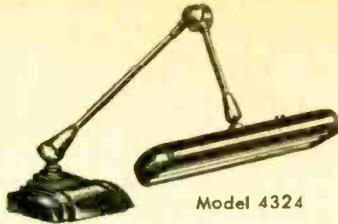
Model 326. Double Stem and Canopy Set. 30" long; for Model 319 fixture at left. Shpg. wt. 4 lbs.  
 91 RX 282, List. \$3.90. **NET 2.54**  
 Model 320 Open-Style 80-Watt Fixture. For 40-watt, 24" lamps. With starters; less lamps, stem and canopy. Size, 2 1/2 x 4 1/2 x 28". For operation from 105-125 volts, 60 cycles. Shpg. wt. 11 lbs.  
 91 RX 281, List. \$16.80. **10.92**  
 NET EACH  
 Lots of 3, EACH. **10.08**  
 Model 325. Stem and Canopy Set. 30" long. For use with Model 320 fixture above. Shpg. wt. 2 lbs.  
 91 RX 283, List. \$2.90. **NET 1.89**



# Industrial & Desk Lamps



Model 4303



Model 4324

## FLEXO ADJUSTABLE FLUORESCENT LAMPS

**Model 4303.** For offices, workshops, drafting rooms, etc. Head tilts vertically 180° and turns 300° on its axis. Upper elbow swings in 160° vertical arc; lower elbow swings in 110° vertical arc. Double arm extends 36° straight up or in any direction. Spring-controlled swivel joints. Push-button on-off. Two bolts clamp base firmly to surfaces up to 3" thick. Bolts removable for screw mounting. Statuary bronze finish. Requires 2 T8 15-watt lamps. For 105-125 v., 60 cycles AC. U.L. Approved. Less lamps. See page 295. Wt., 10 lbs.

91 RX 225. List, \$18.95. NET..... 13.93  
3 or more, EACH..... 13.00

91 RX 224. Model 4300. As above, but single lamp. List, \$15.75 NET..... 11.57  
3 or more, EACH..... 10.80

**Model 4324.** Portable desk model. Similar to above, but with weighted base. For desks or tables where screw clamp cannot be used. Can be adjusted so that light falls at ideal angle for virtually any work. Can be used to illuminate architectural drawing boards, piano music, etc. Attractive streamline base design has pen and pencil grooves. Double arm extends 32°. U.L. Approved. For 105-125 v., 60 cycle AC. Less lamps. See page 295. Shpg. wt., 23 lbs.

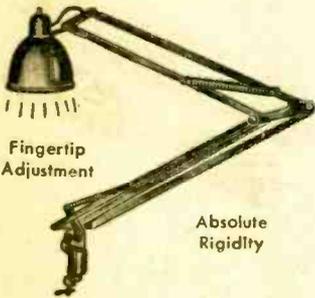
91 RX 226. List, \$25.00. NET..... 18.37  
3 or more, EACH..... 17.15

## LUXO ADJUSTABLE LAMP

### Model L-1A All-Angle Adjustable Lamp

Completely new type of lamp—designed to provide: Proper amount of light, instantaneous fingertip control, absolute rigidity in any position. The perfect lamp for a service bench. May be raised, lowered, or turned, with a touch of the fingers. *At all times, angle of lamp in relation to bench remains the same.* Swings from a straight vertical position to within a few inches of the floor (handy when searching for dropped parts!). The Luxo lamp, made in Sweden. Is famous for its precision construction and adaptability to any lighting application.

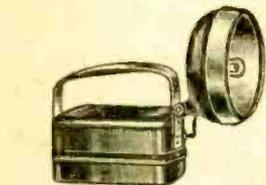
Has two extension arms, 45" long in fully extended position. Swivel joints are spring-loaded; knurled nut controls overall tension. Porcelainized shade has large vents at top for heat dissipation; On-Off switch conveniently located at top of shade. Supplied with clamp bracket for easy attachment to any bench, table, etc. Extremely lightweight (3 pounds) for maximum portability—yet ruggedly constructed for a lifetime of use. Handsome dove gray finish. U.L. Approved. Uses standard light bulb. Less bulb. Shpg. wt., 5 lbs.



Fingertip Adjustment

Absolute Rigidity

91 RX 296. 3 or more, EACH, 15.63. NET EACH..... 21.95



## LIFETIME ALL-PURPOSE LANTERN

**Model 501.** New versatile, highly efficient lantern. Features tremendously powerful, sharply focused sealed-beam lamp. May be hand-held, hung on wall or set on flat surface. Convenient wall hanger on handle. Lamp fully adjustable through 180 degree swivel. Lamp and handle fold down for convenient storage. Has handy 3-way switch always at finger-tip for off-on-manual-flash operation. Easy-open battery case for fast battery change. Excellent as an emergency lamp for power failure or as a trouble light for servicemen, garage, motorist, sportsmen, etc. Compactness makes it ideal for civil defense emergency kits. Uses one 6-volt lantern battery (Burgess F4H listed below). Ruggedly constructed of 16-gauge steel. Finished in bright red baked enamel with chrome trim and handle. Less battery. 5x3x2 3/4". Lamp 4" dia. Wt., 4 lbs.

78 J 222. NET..... 3.53

**Model 500.** Same as above unit, but completely chrome-plated. Less battery (see below). Size 5x3x2 3/4". 4" diameter lamp. Wt., 4 lbs.

78 J 223. NET..... 5.00

**Typo F4H Battery.** Burgess 6-volt lantern battery for above units. Shpg. wt., 1 1/4 lbs.

53 J 028. 12 or more, EA..... 61c  
NET EACH..... 67c



## "STRAT-O-LITE" INSPECTION LAMP

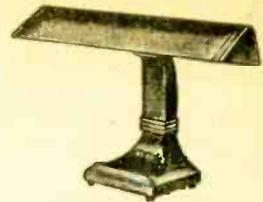
Inspection magnifier lamp. For production line inspectors, lab technicians, repairmen, and engineers. Has 4 1/2" dia. x 9" focal length lens centers in 360° black shield; provides shadow-free, perfectly enlarged vision. Adjustable arm and swivel joints, permit adjustment to any combination of height, angle, magnification, and light source. With instant-start fluorescent circline lamp; illuminates at touch of a button. For 110-120 v., 60 cycle AC. Wt., 8 1/4 lbs.

91 RX 350. NET..... 29.95

## HIDE-A-GLARE TELEVISION LAMP

Provides a soft indirect glow to relieve the eyestrain of continuous television viewing. Just hang on back of TV cabinet. Metal housing, 7 1/2 x 3 1/4 x 3 1/4". Gray crackle finish. With 6-ft. cord and plug. For 110-120 volts, AC or DC. Less standard light bulb. Shpg. wt., 1 1/4 lbs.

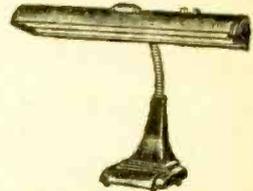
91 R 291. List, \$2.95. NET..... 1.76



## LITEMASTER FLUORESCENT DESK LAMP

**Model 47.** For home, office, and institution. Base and stem are non-magnetic die-cast metal. Shade, 18x3 1/4x2 1/4", is of heavy gauge steel, with white enamel reflector. 5x5 1/4" base has rubber feet and handy well for pens and pencils. Overall height, 11". Double button on-off switch. Less T-8 15-watt lamp (see page 295) U.L. Approved. For 105-125 volts, 60 cycles AC. Shpg. wt., 7 1/2 lbs.

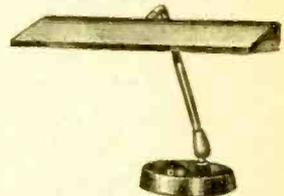
91 RX 147. List, \$8.95. NET..... 6.58



## FLEXARM ADJUSTABLE TWIN-LIGHT DESK LAMP

**Model 444.** Flexible arm permits shade adjustment to any height, 8 to 14". Suitable for office, laboratory and home. Non-magnetic metal base grooved for pens and pencils. Heavy gauge steel shade, 2 1/2 x 4 1/2 x 18". White enamel porcelain reflectors. Rubber bumpers on base. Push-button on-off switch. Requires 2 T8, 15-watt lamps (see page 295). Finished in royal statuary bronze. U.L. Approved. For 105-125 v., 60 cycle AC. Wt., 10 lbs.

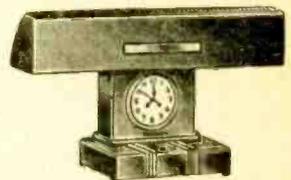
91 RX 146. List \$14.95. NET..... 10.95



## NEW SIGHTMASTER DESK LAMP

**Model 505.** Single tube fluorescent desk lamp in English bronze. Oven-fired, baked enamel for longer lasting beauty and durability. Spring-tensioned swivels hold unit in any desired position without drooping. Adjustable arm and shade are made of steel. Base is die-cast metal, rubber padded. Base is 6 1/4" in diameter; arm, 12 1/2" long; shade, 1 1/2 x 3 1/4 x 18". Maximum height, 15". Less T8 15-watt lamp (see page 295). U.L. Approved. For 110-120 v., 60 cycle AC. Wt., 8 lbs.

91 RX 148. NET..... 8.78



## TV LAMP AND CLOCK

Provides proper amount of background light for tele-viewing. Steel shade, 3x18 1/4". Has louver for clock illumination. Clock is a Telechron 3 1/2" unit. Height, 10 1/4"; base, 5x8". For 110-120 volts, 60 cycle AC. Less T8 15-watt fluorescent tube. Wt., 9 lbs.

91 RX 223. Gray with brass trim.

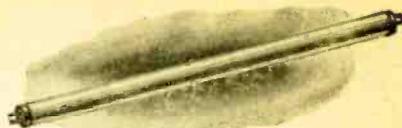
91 RX 222. Bronze with brass trim.

NET EACH..... 11.97

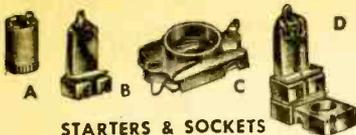
# Lamps & Accessories

## STANDARD, SLIMLINE AND CIRCLINE FLUORESCENT LAMPS

Provide non-glaring light from entire surface with even diffusion and high illumination. White lamps approximate incandescent lighting, daylight lamps have slight bluish tinge approximating natural daylight. Life approximately 2,000 hours or more. Under "Color," cool-white is 4,500° Kelvin. \*Circline lamps; size is diameter of lamp circle. †Slimline lamps; ‡30 ma. shipped by Express only. ††May be mixed sizes and colors. ‡‡Rapid start.



With purchase of fluorescent fixture, order lamp (or lamps) required for fixture, at the lots-of-7 price in table below.



STARTERS & SOCKETS

High quality starters and sockets for all types of fixtures. \*For Circline fixtures. Av. wt., 3 oz.

Fig. A—STARTERS

No.	Type	Watts	Each	10 for
78 R 850	FS2	14,15,20	20c	1.80
78 R 851	FS4	{30 or 40}		
78 R 854	*FS12	32	24c	2.16

Fig. B—LAMPHOLDER SOCKETS

No.	Watts	Color	Each	10 For
78 R 860	14,15,20	Black	15c	1.35
78 R 861	{30 or 40}	White	17c	1.53

Fig. C—STARTER SOCKETS

Standard Dual-Loc. Remotestarter socket. 78 R 858. 10 for 1.26. NET EACH..... 14c

Fig. D—STARTER SOCKET & LAMP HOLDERS

No.	Type	Watts	Each	10 for
78 R 865	14,15,20	Black	33c	2.97
78 R 866	{30 or 40}	White	35c	3.15



DUPLEX STARTER

Features handy "pilot-light." Shows when starter is operating and the lamp is dead. Plastic case. \*Circline Lamp; †Circline. Shpg. wt., 2 oz.

No.	Type	Watts	Ea.	10 for
78 R 855	FS-22	14-15-18*20-22†	25c	2.25
78 R 856	FS-42	13-30-40		

## JUSTRITE WARNING LAMP



Model 2192. New type lantern warning lamp of novel design. Powered by four standard flashlight batteries, light is visible from any direction from as much as 1 1/2 miles away. When used as a flasher, will flash continuously at one second intervals for up to 18 hours. When used for steady service (not flashing), batteries will last up to seven hours. Flasher can be switched removable if white light is desired. Small enough to be stored in glove compartment, tool kit, or tackle box. Actual size, 3x3x6". Rotating base—can be used in virtually any position. Furnished with No. 27 bulb and flasher unit. Finished in lustrous bakelite enamel, bright yellow body, flame red on top. Unbreakable plastic lens and red liner. "Toggle" type switch. Has separate switch on flasher unit. Shpg. wt., 1 lb. Uses 4 No. 2 flashlight batteries (see page 253). Less batteries.

78 J 260. List, \$4.95. NET.....3.23

## "FERRI-LOOPSTICK"



Revolutionary antenna development. Hi-Q Ferrite core coil with short antenna lead. Completely eliminates need for bulky, conventional loop antennas. An extremely small, yet very powerful replacement antenna. Has Q of 240-275. Boosts sensitivity and signal-to-noise ratio considerably in portable receivers. Equally efficient at every angle. Mounts in any position. Needs no orientation. Easily adjusted for proper tracking. Once tuned (with sliding Ferrite core) at installation, no further tuning is needed. Angle mounting bracket has pre-drilled hole for single-fastener mounting. Size: 2" long less mounting bracket; 2 1/2" overall. Shpg. wt., 3 oz.

51 C 036. NET EACH.....44c

## "VARI-LOOPSTICK"

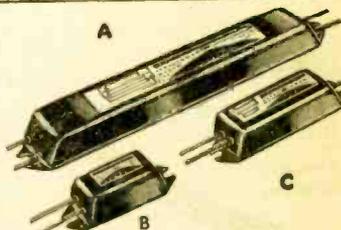


An exceptionally small, compact radio antenna for all types of broadcast receivers. With new micrometer adjustment for maximum efficiency and precise tracking over entire broadcast band. Eliminates the need for installing expensive outdoor antenna. Based on new antenna principles, this unit may be installed in any convenient location, then peaked to its optimum performance. With mounting bracket. Shpg. wt., 4 oz.

51 C 034. NET EACH.....59c

## ADVANCE FLUORESCENT BALLASTS

These ballasts are popular streamlined models which fit any fixture. Normal power factor types are 55-65% corrected. High power factor types are 90-100% corrected and meet power company requirements; also corrected for stroboscopic effect. L-132 is for standard Circline lamp; LQ-132 is for quick-start Circline. S-240 is 4-lead, narrow cross section type. BRSH-240 is 6-lead, brick type ballast. U.L. Approved. For operation from 105-125 volts, 60 cycles AC.



### 1-LAMP BALLAST—NORMAL POWER FACTOR

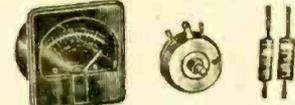
Stock No.	Mfr's Type	Lamp Watts	Size	Mfg. Ctrs.	Fig.	Wt. Lbs.	NET EACH	
							1-9	10-up
78 R 889	L-115	15	4 1/4 x 2 x 1 1/8"	3 1/2"	B	1	.69	.63
78 R 891	L-120	20	4 1/4 x 2 x 1 1/8"	3 1/2"	B	1	.69	.63
78 R 893	L-140	40	6 1/2 x 2 1/2 x 1 1/2"	6"	C	3	1.77	1.60
78 R 894	L-132	32	6 1/2 x 2 1/2 x 1 1/2"	6"	C	2 1/2	1.74	1.56
78 R 895	LQ-132	32	6 1/2 x 2 1/2 x 1 1/2"	6"	C	3 1/4	2.52	2.27

### 2-LAMP BALLAST—NORMAL POWER FACTOR

78 R 898	L-220	20	6 1/4 x 2 x 1 1/8"	5 1/2"	C	1 1/2 lb.	1.39	1.24
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### 2-LAMP BALLAST—HIGH POWER FACTOR

78 R 896	S-240	40	11 1/4 x 2 1/2 x 1 1/2"	11 1/2"	A	4 1/2 lbs.	4.48	4.03
78 R 897	BRSH-240	40	9 1/2 x 2 1/2 x 2"	8 1/4"	C	5 1/2 lbs.	5.74	5.17



## HALLCRAFTERS "S" METER KIT

A handsome, easily installed "S" meter for panel mounting. For use with the Hallcrafters S40B, S20R, S40, S40A, SX62, S77, S77A, etc., as well as communications receivers of any other manufacturers. Can be installed in 1 1/2" or 1 1/4" stage with AVC action. Attractively styled 3" square meter has black dial with white translucent markings with provision for internal back lighting. Two scales; reads in microvolts from 0 to 20,000; "S" units to S-9 at midscale and then in db up to 50 db over S-9. Essential to the Amateur operator for giving accurate signal strength reports. Requires 2 1/2" diameter round hole for meter barrel and four 1/8" holes for mounting studs. Can be separately mounted in individual meter case (see page 231). Kit consists of reverse reading precision 0 to 5 milliamperes meter, 500-ohm potentiometer for electrical zero set, one 82-ohm 1/2-watt 10% resistor, one 330 ohm 1/2-watt 10% resistor, and complete installation instructions covering all recent Hallcrafters communications receivers. Instructions include circuit diagrams and explicit directions for installation. Meter has mechanical zero-adjust. Shpg. wt., 1 lb.

97 S 740. NET.....9.50



## BURGESS FLASHLIGHTS

Fig. A—Standard Size

Two cell flashlight of sturdy, all-metal construction. Factory pre-focused for maximum concentration of light. Has on-off switch with flapper position for use in signaling. Cannot be turned on accidentally when locked in off position. Handsomely styled with chrome trim and durable, lustrous enamel finish. Uses two No. 2 cells with number PR2 single contact, miniature flanged bulb. Less batteries. Shpg. wt., 1/4 lb.

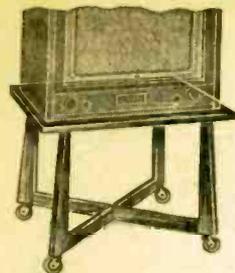
78 J 233. List, \$1.89. NET.....1.26

Fig. B—Type 152 Penlight

New slim penlight with long-lasting chrome finish. Specially designed switch for extra-long life. Ideal for carrying in pocket for emergency light, or for getting light into corners of crowded sets. Requires two No. 7 cells. Complete with No. 224 pre-focused bulb. Less batteries. Shpg. wt., 5 oz.

78 J 245. List, 88c. NET.....59c

# Selected Feature Value



## VALUES IN TELEVISION TABLES

Ultra-Modern—Low Cost



## WROUGHT IRON TV STAND

An unusual value in an up-to-the-minute, solidly constructed TV stand. Made of heavy-duty, ultra-modern wrought iron. Easily adjustable to take even very large TV table models. Adds distinctive note to furnishing scheme or decorative motif of any room. 20 inches high—an ideal height for comfortable television viewing. Adjustable width (to 24") accommodates all table models. Supports receivers weighing up to 400 lbs. Sturdy, black oxidized, 1/2" iron stock. Can be assembled in just a few minutes. May be used with swivel top attachment below. Shpg. wt., 17 lbs. 98 SX 998, NET.....4.95

Adjustable Swivel Top. Accessory for stand above. Enables viewers to select most suitable viewing position; swings in a complete circle. Cradle adjustable to 32". Shpg. wt., 9 lbs. 98 SX 999, NET.....4.95

## KNIGHT CRYSTAL MIKE VALUE

Excellent crystal microphone at an unusually low price. A ruggedly built instrument that assures dependable performance indoors or outdoors. Moisture sealed crystal element resists humidity. High output makes it ideal for Amateur speech amplifiers. Excellent for general recording work. Also ideal for budget-wise home recording fans. Frequency response 60-7500 cps. Output level, -50 db. High impedance. Insulated inner element for safe AC-DC use. Die-cast, gold-finished case. 5 ft. shielded cable. Shpg. wt., 1 lb. 99 S 556, NET.....3.95



## MAHOGANY FINISH TV TABLE

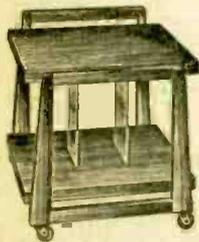
New, mahogany television table. Offers complete flexibility—plus quality furniture design and construction. Criss-cross leg reinforcement eliminates instability and "wobble." Clear, non-marking swivel type casters with 2" styrene wheels for easy rotation or movement to desired position. Table top measures 25" by 21"—large enough to accommodate 21" table model TV receivers. Height of table top is 19"—just right for comfortable viewing from any position. Makes back-of-seat adjustment controls easily accessible. Eliminates distorted angle viewing and "neck-cramping"—does away with chair shifting and TV set moving for comfortable viewing. This ruggedly constructed comfortable features modern styling that fits beautifully into any furnishing scheme. Attractively finished in fine, lustrous mahogany. Shipped knocked down. Shpg. wt., 13 lbs. 98 SX 994, NET.....9.25

## INSULINE "MINI-KIT"

No. 989. A handy, vest-pocket screwdriver kit designed especially for precision radio, television and electrical requirements. Contains three hardened steel blades measuring 100, .080", .070" and .055", which fit into ribbed plastic handle with firm gripping chuck. To change blades, merely loosen chuck, insert interchangeable blade and tighten chuck. Sure-lock handle has swivel top for fingertip control. Blades can be changed quickly and easily to suit specific requirements. Attractive red vinyl case with snap closure. Size: 2"x3 1/2". Shpg. wt., 8 oz. 43 N 856, NET.....1.13



## TOP VALUES IN PHONO TABLE AND RECORD CABINET



## PHONOGRAPH TABLE

New, mahogany, record changer or tape recorder table. Completely new in design, combining beautiful styling with sturdy construction. Top is 21" long by 17" wide providing ample room for even the largest record and tape players. Lower shelf with vertical dividers offers plenty of storage space for record albums and tape reels. Equipped with clear, non-marking, swivel-type casters and 2" styrene wheels. Height of table top is 21"—just right for convenient operation of equipment. Table top has guard rail to protect walls and prevent equipment from slipping off edge. Modern styling blends into any home decorating scheme. Available in either lustrous mahogany or attractive blonde finish. Shipped "knocked down." Wt., 20 lbs. Mahogany, 96 RX 873, NET.....13.95 Blonde, 96 RX 874, NET.....15.45



## PHONO TABLE-RECORD CABINET

New, record and tape storage cabinet can also be used to hold phonograph, record player or tape recorder. Made of high-quality, selected furniture veneer; solidly constructed and attractively styled. Top surface measures 22 1/2" long by 18 1/2" wide—large enough for almost any phonograph, record player or tape recorder. Storage space has vertical divider for 10" and 12" records or albums. Also has horizontal divider for storing 45 rpm records and albums. Horizontal divider is removable for standup or flat storage. Height of cabinet top is 24" for easy access to storage space and operation of equipment. Sturdy construction for long use and beautifully styled to blend with any furnishing scheme. Available in either blonde or mahogany finish. Shipped "knocked down." Easily and quickly assembled. Shpg. wt., 18 lbs. 96 RX 858, Mahogany, 96 RX 859, Blonde, EACH.....10.50

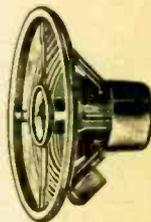
## CERAMIC CAPACITOR ASSORTMENT

Another great value for the experimenter, Amateur, and radio and TV repairman! An excellent selection of assorted, high-quality, ceramic capacitors in popular values. Includes 20 capacitors, one each in the following values (mmf): 2.2, 3, 4, 8, 10, 12, 15, 20, 22, 24, 30, 50, 100, 130, 180, 220, 350, 1000, 1500, and 2x1500. All popular values and voltages. Here is a great opportunity to stock up on ceramics at a money-saving price. Shpg. wt., 5 oz. 58 L 456, NET.....98c



## KNIGHT COAXIAL SPEAKERS

Outstanding value for economy-minded high-fidelity enthusiasts. Dependable, high-quality, 8", 12" and 15" coaxial speakers for home music installations and high-fidelity systems. Unusually good high-frequency response and faithful bass reproduction. All have 6-8 ohm impedance and "Alnico" magnets. Tweeters mounted on cross bars attached to speaker frames. Built-in cross-over networks.



8" Coaxial Speaker. 8" cone; has 2.15 oz. magnet. 2 1/2" tweeter with 1 oz. magnet. Rated at 8 watts. Range: 70-12,000 cycles. Cross-over: 3000 cycles. Shpg. wt., 3 lbs. 81 D 607, NET.....7.95

12" Coaxial Speaker. 12" cone; has 2 lb. magnet. 3 1/2" tweeter with 1.47 oz magnet. Rated at 15 watts. Range: 55-12,000 cycles. Cross-over: 2000 cycles. Wt., 8 lbs. 81 DX 638, NET.....12.95

15" Coaxial Speaker. 15" cone; has 2 lb. magnet. 3 1/2" tweeter with 1.47 oz magnet. Power handling capacity: 20 watts. Range: 45-12,000 cycles. Cross-over: 1800 cycles. Shpg. wt., 11 lbs. 81 DX 608, NET.....19.95

## BUD WIRELESS PHONO OSCILLATOR

Model WO-6A. "Broadcasts" from record player to radio set up to 50 feet away. Requires no inter-connecting wires—transmits directly to clear channel on radio. Simply connect phono pickup to oscillator, plug into any wall outlet, and unit is ready to operate. Will match any crystal pickup.



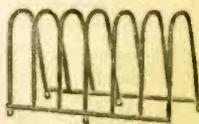
By adding phono motor and pickup, a highly efficient wireless record player may be assembled at a moderate cost. Will play records through any number of radios simultaneously. Tone and volume regulated directly from radio. Oscillator "broadcasts" over frequency range of approximately 1100-2150 kc. Supplied completely assembled and ready to operate—simply tune oscillator adjustment for output on unused frequency to avoid interfering with commercial broadcasts. Tune radio until output of oscillator is heard. Dark grey hammertone case, 4 1/2 x 2 1/2 x 2 1/4". For operation from 110-120 volts DC, or 50-60 cycle AC. With tube. Shpg. wt., 3 lbs. 60 R 336, NET.....8.82

## KNIGHT AC-DC PHONO AMPLIFIER

Complete, ready for immediate installation. Excellent for audio hobbyists or experimenters. The long, narrow chassis is ideal for mounting in portable record changer case. Controls are conveniently mounted on 8" extension cables to simplify installation. On-Off-Tone, and Volume. Has connection for using On-Off switch to control phono motor. Chassis is isolated from line to avoid shock hazard. Supplied complete with 12SQ7 and 50L6GT tubes, 3Z5GT rectifier, output transformer, knobs, line cord, and instructions. Size: 8" long, 3 1/2" wide, and 4 1/2" high. For operation from 110-120 volts DC, or 60 cycles AC. Less speaker. Shpg. wt., 2 1/2 lbs. 83 R 075, NET.....8.95

## NEW RECORD ALBUM RACK

Newly designed record album storage rack. An exceptional value. Will accommodate six 7", 10" or 12" albums. Rigidly constructed for long use. Dividers spot-welded to base sections. Has rubber protective feet. Handsome gold finish. 12x4 1/4 x 6 1/4" Wt., 1 1/4 lbs. 96 RX 879, NET.....1.19



# Selected Feature Values



## MASCO "SMALL TALK" TWO-STATION INTERCOM

New, low-cost 2-station intercom system complete with 50-ft. cable, ready to operate. Consists of Master and Remote unit. Press-to-talk switch allows Remote to originate calls to Master. Remote can answer calls from a distance; can be left "open" for baby-sitting or dictation, or "closed" for privacy but still able to receive calls from Master. 4" Alnico V speakers in Master and Remote assure full voice reproduction. Master has volume control with on-off switch. Separate "press-to-talk" switch. On-off pilot light indicator. Output, 1 1/2 watts. Tubes: 12AT6, 50C5, 35W4 in Master. All metal cabinets, finished in attractive brown hammertone. Size, each cabinet, 6 1/2 x 4 1/4 x 3 1/4" high. Complete with Master, Remote, 50-ft. cable, U.L. Approved. For 110-120 v., 50-60 cyc. A.C. Shpg. wt., 6 1/2 lbs. 95 R 925, List, \$29.95. NET.....17.64

Model MM-6 Multiplier. For converting system above into 6-station system: Master and 5 Remotes. "Small Talk" Master station mounts on multiplier. Slotted front panel has 5 slide switches for selecting one or more remote stations at same time. With 6-ft. cable. Size, 6 1/2 x 5 3/4 x 2 1/2" high. Shpg. wt., 2 lbs. 95 R 926, List, \$11.00. NET.....7.18

Model ST Remote Station. For adding to 2-station system. 6 1/2 x 4 1/4 x 4 1/4" H. Wt., 2 1/4 lbs. 95 R 927, List, \$10.00. NET.....6.54



## TWO-WAY INTERCOM

Model 100. New, 2-station battery-operated intercom. Excellent for use from room to room, garage to home, etc. Employs high output carbon microphones for transmission; 4" Alnico V speakers for clear reception anywhere in the average room. Mikes hang up on side of case. System includes 2 stations, 2 microphones, 25 ft. of 3/cond. wire, 4-1 1/4 v. batteries and complete instructions. Cabinets of red Styron high-impact plastic. Wt., 3 lbs. 95 R 930, List, \$9.95. NET.....7.49

## TAPEMASTER VU METER



For visual monitoring while recording. High damping for easy reading of average power. Designed for use with any recorder. Simplifies control of recording level and prevents distortion. Calibrated in VU and % modulation. Sensitivity, 200 mic. croamps for full scale deflection; 1.2 v. for 0 vu with 7500 ohm connection; 12 v. for 0 vu with 85,000 ohm connection. 3 1/2" scale; black bakelite case. Shpg. wt., 2 lbs. 96 R 554, NET.....16.66

## GIBSON RADIO RULE



New, 6" stencil-type plastic radio rule. Rule contains cutouts for drawing all commonly used radio symbols; circuits, tubes, meters, coils, transformers, etc. Available for students, engineers, technicians. Amateurs and anyone else engaged in drawing circuit diagrams. Complete with cover and directions. 2 oz. 37 K 215, NET.....73c

## FOSTORIA PORTABLE OUTLET BOX



Furnishes 3 extra convenience outlets. Two outlets controlled by toggle switches; other remains "hot" at all times. Switches are AC-DC, rated at 10 amps, 125 volts. Size, 4 1/2 x 5 1/4 x 1 3/4". Complete with 6-ft. rubber covered cord and plug. U.L. Approved. Shpg. wt., 1 1/2 lbs. 42 N 136, NET.....7.06

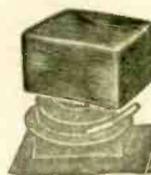
## MICRO-VOX WIRELESS MICROPHONE



Consists of a microphone with a built-in midjet radio transmitter. Plays through any AM radio within 75 feet. Requires absolutely no technical knowledge. Simply tune your radio to any clear channel, then with the knob on the side of the Micro-Vox tune it to the same channel. Mike is detachable from bottom half, which is stand. May be used as a small PA system, for picking up calls from the nursery, sick room, etc. Uses one 22 1/2-volt miniature "B" battery and one flashlight cell. Uses low drain tube. Supplied complete with guide book, tube and batteries. Book includes diction lessons, 3 radio features, typical sound effects and other useful information. Shpg. wt., 3 lbs. 99 S 485, List, \$9.95. NET.....6.50

Micro-Vox AC-DC Wireless Mike. Same as above but operates from AC or DC power source. For 110-120 v., 60 cyc. AC, or DC. Wt., 2 lbs. 99 S 488, List, \$12.95. NET.....8.50

## RECORD CHANGER COVERS



New, decorative vinylite plastic covers for protecting and beautifying record players. Custom made to fit neatly over phonograph or phono attachments that play through radios, TV sets, etc. Protects player from dirt, dust and moisture. Stain and water resistant; will not crack, peel, tear or mildew. Maroon "Sataffetta" embossed finish, harmonizes with any interior decor. Cover wipes clean with a damp cloth. Folds compactly when not used. Electronically welded seams for long life. Av. shpg. wt., 6 oz.

Stock No.	Type	Used For	NET
96 R 920	101	V-M 920 Attachment	1.49
96 R 921	102	V-M 972 Phonograph	1.98
96 R 922	103	V-M 956 Attachment	1.98
96 R 923	104	V-M 926 HF Attachment	1.98
96 R 924	201	RCA 45J2 Attachment	1.49
96 R 925	202	RCA 45V2 Phonograph	1.49
96 R 926	203	RCA 21S1 Attachment	1.98
96 R 927	204	RCA 2E3S1 Phonograph	1.98
96 R 928	301	Webcor 123 Phonograph	1.98
96 R 929	302	Webcor 122 Attachment	1.98
96 R 930	303	Webcor 127 HF Attachment	1.98
96 R 931	401	Columbia 105 Attachment	1.49
96 R 932	402	Columbia 106 Phonograph	1.49

## ECONOMY HAND DRILL



An exceptionally well-balanced, inexpensive hand drill with knurled, hardened steel chuck. A useful tool for radio-TV servicemen, home owners, craftsmen, etc. Will take drill bits up to 1/2" in diameter. Selected hardwood handle, with screw-on cap; has convenient storage space for extra drills—prevents misplacing commonly used, smaller drill bits; keeps them at hand for instant use. Balanced design makes straight drilling easier. Properly meshing gears, with die-cast teeth, for long dependable service. Has wooden side knob. Drill can be used with carbon steel or high-speed steel drill bits for drilling through wood, metal or plastic. Sturdy construction throughout. All wooden parts are lacquer-finished. Overall length, measured to tip of chuck, 1 1/4". Shpg. wt., 1 1/4 lbs. 46 N 030, NET.....1.90



## 3-IN-1 RADIO TUNER

ICA No. 93. Three-way radio tuner functions as antenna tuner, wave trap or aerial eliminator. Operates on any make or model of radio receiver. When used as antenna tuner, improves reception of weak signals. When used as a wave trap, separates interfering stations and improves selectivity. Improves reception when used with outdoor antenna. Quickly and easily installed. Shpg. wt., 6 oz. 70 G 995, List, \$1.00. NET.....59c  
10 or more, EACH.....53c

## CRYSTAL SETS



### Fig. A—PHILMORE SUPERTONE

Gives splendid results on local stations within a radius of 25 miles. Crystal enclosed in dust-proof glass case. Tuning by smooth-action slider. Sturdy bakelite case. Less headphones and antenna, 4 1/2 x 5 1/4 x 2 3/4". Wt., 12 oz. 83 S 003, NET.....1.49

### Fig. B—PHILMORE LITTLE-WONDER

One of the smallest sets made. Will tune local stations within a 25 mile radius when used with a suitable antenna. Galena crystal mounted in lead. Slider-contact tuning. Less headphones and antenna. Shpg. wt., 6 oz. 83 S 015, NET.....1.15

2000-ohm headphones for sets above. Wt., 12 oz. 59 J 110, NET.....1.67  
50 ft. antenna kit; 25-ft. lead-in. 1 1/2 lbs. 83 C 100, NET.....81c

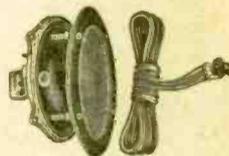
## MIDGET PERSONAL SET

An extremely small, completely self-contained set with built-in earphone. Provides clear reception of local stations. Uses germanium diode crystal—an extremely sensitive detector which eliminates adjustment of catwhisker. Complete with antenna and ground lead. Wt., 1 lb. 83 S 006, NET.....3.95



## QUAM REAR SEAT SPEAKER KIT

Model AS-3. New 5x7" rear seat speaker kit designed especially for automobile use. Ruggedly built to withstand severe shocks and provide years of trouble-free service. Features quick and easy installation by almost anyone. No splicing of wires necessary—each speaker is supplied with 18 feet of cable, completely wired to high quality, three-way switch. Speaker construction incorporates exclusive Adjust-a-Cone suspension—permits precise centering of voice coil for clear, distortionless reproduction. Highly efficient. U-shaped magnet structure. Kit includes: Quam 5x7" Adjust-a-Cone speaker with capacity to handle the full output of any single-ended auto radio; 1.47 oz Alnico V magnet; 1/4" voice coil; dash-mounting switch; 18-ft. cable; attractive, flocked screen grille; baffle plate; all necessary hardware and complete installation instructions. Shpg. wt., 2 1/4 lbs. 81 D 140, List, \$11.95. NET.....7.03



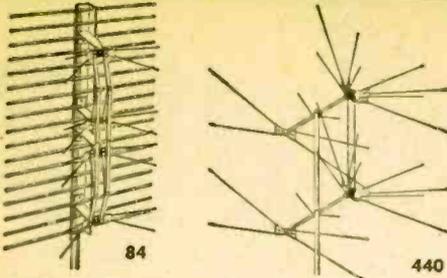
## NEW CORD'N REEL

New cord and reel with built-in electrical outlet. Permits unwinding only as much cord as is needed; current is obtained by plugging tool or appliance into reel hub. Rubber-covered cord is heavy duty, U.L. Approved. "Cord 'N Reel" provides a wide variety of uses for technicians, repairmen, household users, etc. Ideal for use with shop tools, lawn mowers, floor Sanders, vacuum cleaners, hedge trimmers, etc.



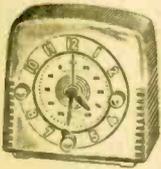
Model 1825. 25 ft. length of SV type. No. 18, 7-conductor cord. Capacity, 7 amps. Shpg. wt., 2 lbs. 46 NX 954, List, \$3.95. NET.....3.28  
Model 1860. As above, but 50 ft. Shpg. wt., 3 lbs. 46 NX 958, List, \$5.95. NET.....4.95  
Model 1650. 50 ft. of SJ type. No. 16, 2-conductor cord. Capacity, 10 amps. 4 lbs. 46 NX 959, List, \$7.95. NET.....6.61

# Latest Releases

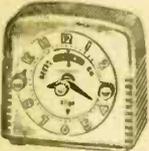


## TELREX "CONICAL-V-BEAMS" TV ANTENNAS

- MODEL 84—4-BAY UHF "CONICAL-V-BEAM".** Low-cost 4-bay UHF antenna of exceptionally compact design and light weight. Covers entire UHF range with excellent signal-to-noise ratio. Stacked array provides sharp directivity with flat high-gain response for clean, snow-free, ghost-free reception. Has solid rod spine reflector elements permanently mounted by special clamping process which eliminates screws and nuts. All aluminum. Less mast, twin line. 10 lbs. 8.79
- MODEL 440—UNIVERSAL DUO-BAND.** 2-bay "Conical-V-Beam" for both UHF and VHF reception. One antenna and one transmission line for both bands. Offers uniformly high gain from channel 2 through 83. Has excellent directivity and high signal-to-noise ratio. All aluminum. Less mast, twin line. Shpg. wt., 9 lbs. 14.99
- MODEL 420—DUO-BAND.** As above, but one bay only. Wt., 6 lbs. 7.10



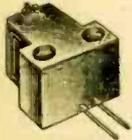
78 B 342. List, \$8.95. NET, (Including Excise Tax) 7.25



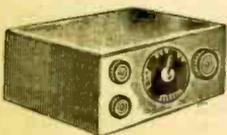
78 B 343. List, \$11.95. NET, (Including Excise Tax) 9.67



installation. Shpg. wt., 6 lbs. 86 NX 178. List, \$7.98. NET 5.87



- ELECTROSONIC HIGH-FIDELITY CARTRIDGES**  
Professional quality, high-fidelity electrodynamic (D'Arsonval movement) cartridge. Readily adaptable to all tone arms. Frequency response, flat from 20 to 10,000 cycles, rising to 20,000 cycles depending on record material. IM, well under 1%. Requires standard audio preamplifier. Hum-free. 1 1/2-ohm output impedance. Output voltage, 1 millivolt at 1000 cycles. (7/16" millivolts with ESL-201 transformer listed below.) Shpg. wt., 9 oz.
- 65 R 540. ESL-101. Sapphire .003" stylus. NET 14.95  
65 R 541. Type ESL-111. Sapphire .001" stylus. NET 14.95  
65 RC 542. Type ESL-121. Diamond .001" stylus. NET 29.95  
65 R 543. Type ESL-201 transformer for above. NET 7.50



compact cabinet. Shpg. wt., 5 1/2 lbs. 98 S 565. Model 153. NET 42.50

## TECH-MASTER "REMOTUNER"

Remote tuning unit for control of TV set from viewing position. Has high sensitivity for fringe as well as local operation. Affords control of tuning, contrast, and brightness from your easy chair. Quickly attaches to all Tech-Master and other 630-type TV chassis. No soldering or chassis realignment required. Complete with 25' cable and plug-in adapter. In attractive

## MINIFON POCKET SIZE WIRE RECORDER

Pocket-size wire recorder for use by agencies, companies, or individuals. Entire recorder weighs only 2 1/4 lbs. Fits easily into coat pocket. Unit records, erases, and plays back. Powered by 1 1/2 volt "A" 30 volt "B", and 9 volt Mallory mercury battery for motor. All self-contained. Motor battery has approximately 24 hour service life. Frequency response from 200 to 4000 cycles. Recording speed of 11.8" per second, re-wind speed 2 1/2 times recording speed. Has single-jack, input-output connector. Output impedance, 500 ohms. Controls include: On-off switch, Volume control, Erase lever, Rewind switch. Motor stops automatically after rewind is completed. Uses special Minifon recording wire with .002" diameter, listed below. Can also be operated from 110-120 volt AC with power supply listed below. Overall dimensions: 4 3/4" wide, 6 3/4" long, 1 3/4" deep. Complete with clip-on crystal microphone, (Illustrated), light-weight earphones with connecting cable and plug, 1/2 hour spool of recording wire, all tubes, batteries, and instructions. Shpg. wt., 4 lbs. 289.50



- 96 RC 651. Fig. A—Wristwatch type microphone. NET 35.00  
96 R 655. 110-120 volt AC power supply. NET 20.00  
96 R 654. Motor battery pack. NET 6.00  
96 R 656. External amplifier connecting cord. NET 6.00  
96 R 660. Telephone recording pickup. NET 7.50  
96 R 652. Leather carrying case with shoulder strap. NET 11.95  
96 R 657. Web shoulder holster. NET 5.95  
96 R 661. 1/2 hour spool of recording wire. NET 5.50  
96 R 659. 1/2 hour spool of recording wire. NET 7.00  
96 R 658. 1 hour spool of recording wire. NET 9.00  
96 R 662. 2 hour spool of recording wire. NET 17.50  
96 R 653. 2 1/2 hour spool of recording wire. NET 21.50

## KLOSS BARUCH-LOW SPEAKER SYSTEM

An exceptionally compact, low-cost and well-styled loudspeaker system. Consists of four matched speakers in a single corner enclosure. Careful engineering and application of novel acoustical principles combine to produce a remarkably clean response in a very small unit. The dimensions of the cabinet are 20" across the front, 13" high, and only 10" deep. The front panel is covered with a fine Lumite Saran woven plastic with birch or mahogany moulding strips across the top and bottom edges. The top, bottom, and side panels of the enclosure are finished in black. The rim suspension of each speaker is treated with a viscous damping material to eliminate rim resonances. Frequency response is 50 to 11,000 cps. Handles 15 watts of program material. Shpg. wt., 14 lbs.



- 81 DX 727. Mahogany finish. 4 ohms. NET EACH 29.75  
81 DX 728. Birch finish. 4 ohms.  
81 DX 729. Mahogany finish. 16 ohm.  
81 DX 730. Birch finish. 16 ohm.

## KARLSON SPEAKER ENCLOSURE KIT

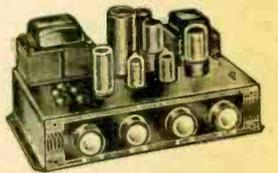
**MODEL 16PK PLYWOOD KIT.** A new speaker enclosure of unique design, clean performance, and relatively simple construction. Designed for use with either a single speaker or coaxial speaker. Employs the principle of an exponential slot radiator to deliver almost completely flat frequency response from the lowest fundamental frequency to the upper limits of the audio spectrum. Response from 20 to 20,000 cps flat within 1 1/2 db, and fundamental coupling is predominant even as low as 10 cps. Kit consists of 34 pieces of precision cut wood, ready to be assembled with no cutting whatever. Unfinished plywood exterior for concealed enclosure installations, or can be finished for use as furniture piece. Size, 34 1/2 x 22 1/2 x 18". Shpg. wt., 69 lbs. 45.00



81 DX 715. NET 45.00

## RAULAND 12 WATT HI-FI AMPLIFIER

A new, excellently engineered high-fidelity amplifier, modestly priced for economy installation. Includes many features found only in much more expensive amplifiers. Features a frequency response flat within .5 db from 20 to 20,000 cps. Intermodulation distortion is less than 2%, measured at 60 and 7000 cps with 4 to 1 ratio. Hum and noise level held to 75 db below rated output. Bass tone control offers 16 db boost or attenuation at 40 cycles—treble control has 16 db boost or attenuation at 10,000 cycles. Controls include: input selector, bass, treble, and volume. Input control selects from tape, tuner, microphone, or magnetic pickup. Three response curves are available for use with the magnetic pickup input: FFR, RIAA, and Quiet (provides scratch reduction for worn records). Tubes: 3-12AX7, 2-6V6GT, 1-5Y3GT rectifier. For 117-130 volts, 60 cycles AC. Overall size, 5 1/2 x 12 1/2 x 7 1/2". Shpg. wt., 14 lbs. 64.39



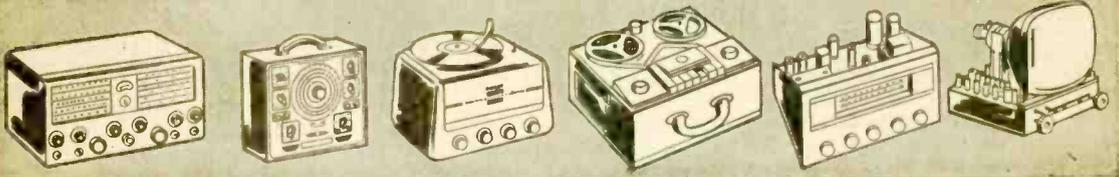
93 SX 806. NET 64.39

# ALLIED'S EASY PAYMENT PLAN

## LIBERAL TERMS ON—

Amateur Gear, Test Instruments,  
P. A. Equipment, Recording  
Equipment, High-Fidelity Components,  
Custom Television Chassis.

**ONLY  
10% DOWN  
12 FULL MONTHS  
TO PAY**



## You Save on Allied's Easy Time Payment Plan

You can buy most of the larger pieces of equipment listed in this catalog without waiting, even if you don't have all of the ready cash. Send only 10% with your order, and take 12 months to pay the balance. The low carrying charges (see table at right) average less than 6% on the unpaid balance. *There are no other charges.* Merchandise sold on this plan is listed below.

### Our Easy Payment Terms

Minimum Order—\$45.00 total cash value.

Down Payment—10%. A bigger down payment will reduce carrying charge and monthly payments.

Carrying Charge—See table. Average is less than 6% on unpaid balance. Carrying charge is subject to refund as explained in column at right.

Monthly Payments—See table. In most cases, there will be 11 equal monthly payments, with 12th payment for odd amount remaining due. Minimum payment per month is \$5.00.

Example:

93 PA 673 Knight 30-Watt PA System.....	126.50
10% Down Payment.....	12.65
Unpaid Balance.....	113.85
Add Carrying Charge (See Table).....	6.60
<b>Total.....</b>	<b>120.45</b>
11 Payments of \$10.00 each (See Table).....	110.00
12th Payment.....	10.45

### How to Buy on ALLIED'S Easy Pay Plan

It's simple to start an Easy Payment account. Use your ALLIED order blank to enter the merchandise you want to buy on credit terms. Please be sure to include only items eligible for sale on time payments (see below). Fill in the answers to the simple questions on the back of the order blank and sign it. Include your remittance for the down payment (10% or more) and mail your order to ALLIED. Shipment is made as soon as your credit is approved. The first payment is made 30 days after shipment, and your invoice will provide complete details. No red tape—no finance companies to deal with—no hidden charges. Any responsible person of legal age, with a steady income, can get credit approval. Additional order blanks and our Time Payment Bulletin will be sent on request.

### Type of Merchandise Sold on Easy Payments

ALLIED'S Time Payment Plan covers Test Instruments, Public Address and Recording Equipment, Amateur Gear, Television Chassis, High-Fidelity Custom Components and Record Changers, and the accessories necessary for this equipment purchased at the same time. Service Manuals (Rider's and H. W. Sams' Photofact) may also be purchased on Easy Payments.

**PLEASE NOTE:** Parts, tubes, supplies, kits, table model radio sets and phonographs, TV boosters, rotators and antennas, and other miscellaneous merchandise are not sold on time payment. Please order on a separate order blank on our regular terms.

### EASY PAYMENT TABLE

If Unpaid Balance Is	Carrying Charges	Monthly Payments
UP TO \$ 51.59	\$ 2.00	\$ 5.00
\$ 51.60 to 63.99	3.40	6.00
64.00 to 74.99	4.10	7.00
75.00 to 84.99	4.80	8.00
85.00 to 95.99	5.40	9.00
96.00 to 105.99	6.00	10.00
106.00 to 115.99	6.60	11.00
116.00 to 126.99	7.30	12.00
127.00 to 146.99	8.20	14.00
147.00 to 170.99	9.50	16.00
171.00 to 190.99	10.80	18.00
191.00 to 212.99	12.10	20.00
213.00 to 233.99	13.40	22.00
234.00 to 253.99	14.60	24.00
254.00 to 274.99	15.80	26.00
275.00 to 299.99	17.20	28.00
300.00 to 321.99	18.60	30.00
322.00 to 343.99	20.00	32.00
344.00 to 365.99	21.30	34.00
366.00 to 387.99	22.60	36.00
388.00 to 409.99	23.90	38.00
410.00 to 435.99	25.30	40.00
436.00 to 457.99	26.80	42.00
458.00 to 483.99	28.20	44.00
484.00 to 505.99	29.70	46.00
506.00 to 527.99	31.00	48.00
528.00 to 549.99	32.30	50.00
550.00 to 575.00	33.70	

Please Write for Terms over \$575.00.

### No Charges if Paid in 60 Days

ALLIED'S Easy Payment Plan provides for full refund of carrying charges if you complete payments within sixty days after shipment. You get a refund of 50% of the carrying charges if you finish payments in half the required time. Take the full time to pay if you wish. But if you decide to pay in 60 days or even six months, you get a refund.

**NOTE:** ALLIED'S Easy Payment Plan is offered to residents of the 48 states only. It does not cover shipments to U. S. Possessions or Territories or to A.P.O. and F.P.O. addresses. For complete details please write for our Time Payment Bulletin.



# HOW TO ORDER FROM ALLIED



## IT'S EASY TO ORDER

Orders may be sent on our order blanks or your own purchase order forms or stationery. To speed handling, please fill in all information requested on our order blank. If you use your own order forms or stationery, please give our stock number, quantity desired, name of item, manufacturer's type number and price. Type or print to help us fill your order accurately. Remit to cover the full amount of the merchandise, plus postage and insurance for parcel post shipments. Don't worry about sending too much. *Every cent extra will be refunded.*

**NEW STOCK NUMBERS SPEED SERVICE**  
Please give our stock numbers on your order just as they are shown in the catalog. For example:

84 FX 482

Our stock number system is designed to permit fast conveyor-belt handling of all orders.

## HOW TO SEND MONEY

The best ways to send money are by postoffice or express money order, bank draft or check. Avoid sending coin or currency, but if necessary, be sure to register your letter. Please do not remit in stamps except if necessary on very small orders. For rush handling, telegraph your order and money by Western Union.

## ABOUT C.O.D. ORDERS

You will save money by sending cash in full with your orders. On parcel post C.O.D. shipments, the Postoffice charges (in addition to regular postage) a C.O.D. collection fee and also a money order fee for forwarding the C.O.D. amount to us. (See C.O.D. fee and money order tables below.) Similar fees are collected on express and freight C.O.D. shipments. It will pay you to remit in full and save the C.O.D. charges. We will refund every penny not used. If a C.O.D. shipment is unavoidable, your order should be for a minimum of \$4.00, with a deposit of at least 25%. Please include full remittance with any orders for less than \$4.00.

## PARCEL POST C.O.D. FEES

\$0.01 to \$5.00. 30c \$50.01 to \$100.00. 80c  
5.01 to 10.00. 40c 100.01 to 150.00. 90c  
10.01 to 25.00. 60c 150.01 to 200.00. 1.00  
25.01 to 50.00. 70c

## MONEY ORDER FEES

From \$0.01 to \$ 5.00.....10c  
From 5.01 to 10.00.....15c  
From 10.01 to 50.00.....25c  
From 50.01 to 100.00.....35c

**PARCEL POST:** Parcel Post shipments are subject to current regulations as passed by Congress. Size and weight limits will vary depending on your postal zone from Chicago and the type of post office area in which you live. Items which cannot be shipped by parcel post will be shipped by express or the most convenient low cost method.

**Include Money for Postage and Insurance.** Please send enough money to cover merchandise, postage and insurance on parcel post orders. Catalog gives approximate shipping weights. If you send too much, we will refund every penny not used to fill your order. In case of insufficient remittance we ship C.O.D. for balance. To protect you we insure all parcel post. Allow for insurance at these rates:

Up to \$5.00..... 5c | \$10.01 to \$25.00...15c | \$50.01 to \$100.00..30c  
\$5.01 to 10.00.....10c | 25.01 to 50.00...20c | 100.01 to 200.00..35c

## HOW TO ESTIMATE PARCEL POST CHARGES

Up to 8 ounces allow 2c for first ounce, 1c for each additional ounce

WEIGHT IN POUNDS	Local	1st & 2nd Zone, up to 150 mi.	3rd Zone 150 to 300 mi.	4th Zone 300 to 600 mi.	5th Zone 600 to 1000 mi.	6th Zone 1000 to 1400 mi.	7th Zone 1400 to 1800 mi.	8th Zone Over 1800 mi.
1	.18	.23	.23	.24	.26	.28	.30	.32
2	.20	.27	.29	.31	.36	.40	.46	.51
3	.21	.31	.34	.38	.45	.52	.61	.69
4	.23	.35	.39	.45	.54	.64	.76	.87
5	.24	.39	.44	.52	.63	.76	.91	1.05
6	.26	.43	.49	.59	.73	.88	1.06	1.23
7	.27	.47	.54	.66	.82	1.00	1.22	1.41
8	.29	.51	.60	.73	.91	1.12	1.37	1.59
9	.30	.55	.65	.80	1.00	1.24	1.52	1.77
10	.32	.59	.70	.87	1.10	1.36	1.67	1.95
11	.33	.63	.75	.93	1.19	1.48	1.82	2.13
12	.34	.67	.80	1.00	1.28	1.60	1.98	2.31
13	.36	.71	.85	1.07	1.37	1.72	2.13	2.49
14	.37	.75	.90	1.14	1.47	1.84	2.28	2.67
15	.39	.79	.96	1.21	1.56	1.96	2.43	2.85
16	.40	.83	1.01	1.28	1.65	2.08	2.58	3.03
17	.42	.87	1.06	1.35	1.74	2.20	2.74	3.21
18	.43	.91	1.11	1.42	1.84	2.32	2.89	3.39
19	.45	.95	1.16	1.49	1.93	2.44	3.04	3.57
20	.46	.99	1.21	1.56	2.02	2.56	3.19	3.75
For Each Extra lb.	Add 1½c	Add 4c	Add 5c	Add 7c	Add 9¼c	Add 12c	Add 15¼c	Add 18c

**EXPRESS:** Please remit full amount for merchandise, but do not send any money for express charges with your order. All transportation charges are collected on delivery at no extra cost to you. To assure safe arrival, we prefer to ship communications and radio sets, television chassis, sound systems, transmitting and TV tubes, recorders, test units and other fragile merchandise by express. If there is no express agent at your location, be sure to specify your nearest express office.

## HOW TO ESTIMATE EXPRESS CHARGES

(To estimated charges add 3% Federal Tax for each shipment.)

Weight Pounds	Maximum Distance in Miles							
	50	150	300	500	750	1000	1500	2250
5	1.80	1.80	1.80	1.80	1.80	1.87	1.99	2.17
10	1.80	1.80	1.87	2.01	2.13	2.25	2.49	2.85
15	1.80	1.87	2.07	2.27	2.45	2.63	2.99	3.54
20	1.82	2.00	2.26	2.53	2.77	3.01	3.50	4.22
25	1.91	2.13	2.45	2.79	3.10	3.40	4.00	4.91
35	2.08	2.39	2.84	3.32	3.74	4.16	5.01	6.28
45	2.25	2.64	3.23	3.84	4.39	4.93	6.02	7.65
55	2.42	2.90	3.62	4.37	5.03	5.70	7.03	9.02
70	2.68	3.29	4.20	5.15	6.00	6.85	8.54	11.08
85	2.93	3.68	4.79	5.94	6.97	7.99	10.05	13.14
For each 100 lbs.	3.19	4.06	5.37	6.72	7.93	9.14	11.56	15.19

**AIR SHIPMENTS:** For quick delivery, instruct us to ship your order by Air Parcel Post, Air Express or Air Freight. Air Parcel Post rates are given below. Consult your local express office for Air Express charges, and your nearest commercial airport office for Air Freight rates. Air parcel post size and weight limits are 70 pounds and 100 inches length and girth combined *except on A.P.O. and F.P.O. shipments* which are limited to 2 pounds and 30 inches in length and girth combined.

## AIR PARCEL POST RATES

ZONES	1, 2 & 3	4	6	6	7	8	U. S. Territories, Possessions and APO & FPO Addresses, 80c per lb.
1st lb.	60c	65c	70c	75c	75c	80c	
For each Extra lb.	Add 48c	Add 50c	Add 56c	Add 64c	Add 72c	Add 80c	

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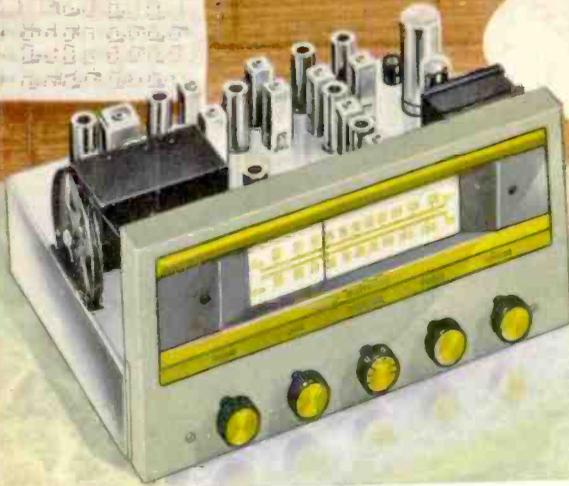
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# HIGH FIDELITY by craftsmen



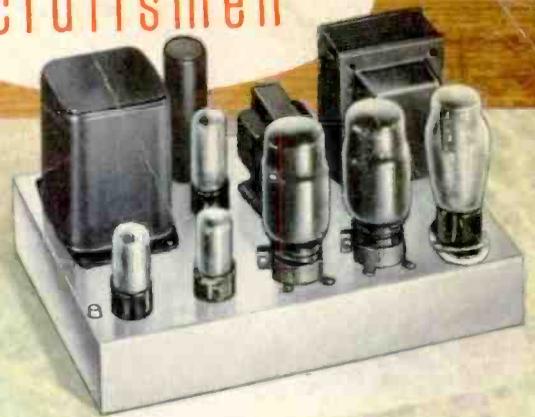
## New C1000 FM-AM Hi-Fi Tuner

Superlative FM-AM tuner with built-in, highly versatile equalizer-preamp. For use with C550 and other deluxe amplifiers. Includes 4-position record compensator, wide-range tone controls, and cathode-follower outputs. Has extreme sensitivity and optimum selectivity. Advanced-design automatic frequency control circuit and ultra-smooth flywheel dial mechanism. Tuning is precise and effortless. Excellent discriminator linearity and very wide, virtually distortionless response assure thoroughly authentic, remarkably clean reproduction.

**FM Specs:** Tuned RF stage and triode converter for very high signal-to-noise ratio. Sensitivity: 1 microvolt for 20 db quieting. Automatic frequency control for "lock-in" tuning and drift-free reception; AFC may be switched off. **AM Specs:** Tuned RF stage. Sensitivity: 2 microvolts for 10 db signal-to-noise ratio. Dual selectivity: "Sharp" position to minimize interference during long-distance reception and "Broad" position for highest-fidelity local reception. Also whistle filter.

**3 Inputs:** Magnetic phono, TV and tape recorder. **2 Outputs:** Amplifier and tape recorder. **Audio Output:** 1.5 v. Outputs are cathode-follower type to permit long lead lengths. **Controls:** Volume, Bass ( $\pm 15$  db), Selector (FM, FM with AFC, AM Sharp, AM Broad, RIAA, LP, Eur, Lon, Tape, TV), Treble ( $\pm 15$  db), Tuning. 15 tubes plus rectifier. Gray-green panel with gold trim; chrome-plated chassis. Size,  $6\frac{1}{2} \times 14\frac{1}{2} \times 13\frac{1}{4}$ " deep. With FM-AM loop antenna and 3-ft. audio output cable. For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., 22 lbs. **179.50**

98 SX 620. List, \$299.00. NET



## New C550 30-Watt Hi-Fi Amplifier

The most critical of audio perfectionists will marvel at the performance of Craftsmen's new C550 basic amplifier. Has very high power-handling capacity and delivers response extending to far beyond the audible range. Distortion is absolutely negligible. Output stage employs KT66 tubes, famous for their high efficiency. Output transformer is specially designed for extreme efficiency and linearity; has interleaved windings and is fully potted. The outstanding fidelity characteristics of the C550 assure virtually flawless reproduction at any volume level and at any portion of the audio spectrum. Has no controls; may be installed in any convenient location. Either the C1000 tuner (at left) or C350 pre-amp (below) serve as excellent control units.

**Power Output:** 30 watts. **Frequency Response:** 2 watts,  $\pm 0.1$  db from 20-20,000 cps and  $\pm 2$  db from 5-100,000 cps; 30 watts,  $\pm 1$  db from 10-50,000 cps. **Harmonic Distortion:** Less than 0.1% at 30 watts. **Intermodulation Distortion:** Less than 0.5% at 30 watts (60 cps and 7 kc tones; 1:1 ratio). **Hum and Noise:** 90 db below 30 watts. **Sensitivity:** 1.5 volts input for 30 watts output. **Damping Factor:** 32:1. **Speaker Output Impedances:** 8, 16 ohms. **Tubes:** 2—6SN7GT, 2—KT66; 5U4G rectifier.

Conservatively rated components and special "warm-up" circuit provide maximum dependability. Thermal time delay circuit automatically protects power supply components by assuring proper warmup before amplifier draws current. Beautiful chrome-plated chassis. Size,  $7\frac{1}{2}$ " high,  $13\frac{1}{2}$ " wide, 8" deep. For 110-120 volts, 50-60 cycle AC. Shpg. wt., 30 lbs. **109.50**

98 SX 621. List, \$180.50. NET

## Other Craftsmen High-Fidelity Components

**C900 FM TUNER.** Extremely sensitive FM tuner. Sensitivity, 1 microvolt for 20 db quieting. Advanced-design circuit features cascode RF stage, wide IF bandpass and excellent discriminator linearity. Only 3 controls: AFC, Off-On-Volume, and Tuning. For use with amplifiers having full sets of controls, or for use with preamp plus basic amplifier, such as C350 (below) and C550 (above). Automatic frequency control for easy "lock-in" tuning and drift-free reception; degree of AFC is adjustable. Cathode-follower output permits using up to 50 feet of output cable to preamp or amplifier. Output: 1.5 volts. 9 tubes plus rectifier. Chrome-plated chassis. Gold-trimmed black panel. Size,  $7\frac{1}{2} \times 13\frac{1}{2} \times 8\frac{1}{4}$ " deep. Supplied with indoor folded-dipole antenna and 3-ft. audio output cable. For operation from 110-120 volts, 50-60 cycle AC. Shpg. wt., 15 lbs. **119.50**

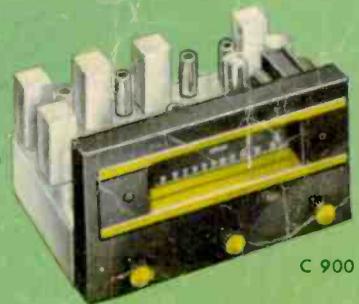
98 SX 009. List, \$199.00. NET

**NEW C350 EQUALIZER-PREAMP.** For control of deluxe systems. Provides exceptional versatility and delivers superb reproduction. Seven positions of record compensation including new RIAA curve. Choice of loudness or volume control. Newly developed bass and treble controls permit smooth, precise tone adjustment; no change in turnover point as controls are adjusted. British 7Z29 tube in preamp circuit; phenomenally low hum and noise. Inputs for magnetic phono, tape, TV and tuner; each has level adjustment. Cathode-follower outputs for amplifier and tape recorder; permit using cable lengths of up to 100 feet without loss in high frequency output. Housed in tastefully styled black-finish case with gold trim. Size,  $3\frac{1}{2} \times 12\frac{1}{4} \times 7\frac{1}{2}$ " deep. 4 tubes plus rectifier. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 11 lbs. **129.50**

98 SX 622. List, \$216.50. NET

**NEW C375 FILTER.** Sharp cut-off filter for elimination of record hiss, scratch and distortion, hum, and turntable rumble. Easily connected between tuner or preamp and amplifier. Excellent for use with C350 preamp or C1000 (above). Two lever switches for selection of high- and low-frequency cut-off points. Low-frequency positions: Flat, 40, 70, 120 and 200 cps at 12 db per octave. High-frequency positions: Flat, 9, 6, 4 and 2.8 kc at 12 db per octave. Only  $1\frac{1}{2}$ " thick to permit easy installation;  $12\frac{1}{2}$ " wide and  $6\frac{1}{2}$ " deep. Black case with gold trim. Has 2 tubes plus rectifier. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 8 lbs. Available December 1, 1954. **39.50**

98 S 623. List, \$66.00. NET



C 900



C 350



# SUPREME VALUE TAPE RECORDER

only  
**\$97<sup>45</sup>**



## KNIGHT PUSH-BUTTON TAPE RECORDER

WITH AUTOMATIC KEYBOARD

records... plays back... erases  
...fast forward and reverse...  
all by **PUSH-BUTTON** controls

records from microphone   
radio  or television 

## "Best Buy" in a Quality Dual-Speed Tape Recorder

The famous Knight tape recorder. Acclaimed coast-to-coast as "best buy" by budget-wise home recording enthusiasts—yet here it is at a lower-than-ever price! Not only retains all the features that have won it nationwide recognition—a recreational value, but now includes provision for ultra-convenient chairside control. For easy operation, excellent tone, handsome styling, and real portability, depend on this outstanding "best buy" recorder!

**EASY TO OPERATE.** Anyone can get perfect results. It's easy to record, easy to play back. Five "piano keyboard" push-button controls permit instant selection of all recording functions: Fast Forward, Playback, Stop, Record, and Fast Reverse. New remote control (listed below) permits ultra-convenient chairside control. Other controls (Tone, Off-On-Volume and Speed Selector) are located for quick, simplified operation. Record "Lock" button prevents accidental erasure. Efficient erase system removes all trace of previous recording while new recording is being made. 7-inch reel rewinds in 3 minutes. Two "Easy-View" neon-type indicators give clear indication of "Normal" and "Overload" recording levels.

**WIDE RANGE OF RECORDING TIMES.** Two-speed, dual-track recording offers a wide range of recording times and provides maximum tape economy. Operates at 3.75" per second or 7.5" per second and records on each half of tape width. At 3.75" speed, 7-inch reel (1200 ft.) will record continuously for one hour—plus an additional hour on second half of tape width. At 7.5" speed a 7-inch reel records one-half hour continuously and one hour overall.

**EXCELLENT TONAL QUALITY.** Rich, full-tone recording and playback fidelity. Response at 7.5" speed is  $\pm 3$  db from 75 to 8000 cps—and 80 to 6000 cps at 3.75" speed. "Wow" content of less than 0.5% assures very smooth, clean recordings. Records from microphone; also from radio, TV set or phonograph (see patch cord listing, below). Plays back through built-in amplifier and built-in, high-quality 5-watt PM speaker. Also has output jack to permit playback through headphones or 3.2-ohm external PM speaker.

**EASILY PORTABLE—HANDSOME STYLING.** This outstanding recorder is handsomely styled and designed for easy portability. Highly attractive and durable, luggage-type case. Extremely compact and lightweight—carrying weight is only 23 lbs. Tubes: 5879, 12AX7, 6AQ5; 6X4 rectifier. Supplied complete with hand-held crystal microphone and 7-ft. cord, 600-ft. (1/2-inch) reel of type "A" tape and 5-inch take-up reel. Size, 14x12x9". U.L. Approved. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 29 lbs.

**96 RK 675. NET.....\$97.45**

**PATCH CORD.** For recording from radio, TV set or phono. One end clips into other end plugs into recorder. Shpg. wt., 3 lbs.

**96 R 486. NET.....\$29.95**

**OPERATED REMOTE CONTROL.** For remote starting and stopping of recorder. Provides chairside control. With 18-ft. cable and plug. Shpg. wt., 3 lbs.

**NET.....\$6.64**

**REMOTE CONTROL—Similar to above, but foot-operated.**

**NET.....\$9.97**



## Knight Plastic Recording Tape

Top Quality at Tremendous Savings

- Wide Frequency Response
- Uniform Output

Use Knight top-quality recording tape and pocket tremendous savings! This fine plastic-base tape meets even the most critical professional requirements—yet it costs a lot less per reel! Manufactured to rigid specifications to assure exceptional clean, highly authentic reproduction. Features wide frequency response, high signal-to-noise ratio, low distortion, and high uniformity of output. The plastic base with thickness controlled to very close tolerance. First-quality red-oxide, securely bonded and mirror-polished for exceptionally clear high frequency response and minimum wear on recording head. 1200-ft. reels splice-free. Type "A" (half-side coated). Transparent plastic reels. Shpg. wts. 600-ft. reel, 1/2 lb.; 1200-ft. reel, 1 lb.

**96 R 698. 600-ft. reel.**  
1 to 4, EACH...1.37. 5 or More, EACH.....1.2

**96 R 699. 1200-ft. reel.**  
1 to 4, EACH...2.10. 5 or More, EACH.....1.8

ALLIED offers an excellent selection of tape recorders and tape recorder accessories. For complete listings, see pages 45-49 of this catalog.