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**1936  
SPRING  
AND  
SUMMER  
CATALOG**

**HALL ELECTRIC COMPANY**  
386 Minnesota St. St. Paul, Minn.  
Telephone: Garfield 3113

# Foreword

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We take pleasure in presenting our *1936 Spring and Summer LIST PRICE CATALOG*. This catalog is designed to fill a long-felt need for a new selling medium which may be exhibited to the consumer without the risk of disclosing confidential trade prices.

## **WHY A LIST PRICE CATALOG?**

You are entitled to make a fair and reasonable profit on the merchandise you sell. Our co-operation is signified by the issuance of a List Price Catalog. Solicit your consumer business through this book and you are assured of increasing your sales and profits. The distribution of this catalog is restricted to those actively and commercially engaged in "Radio"; it is intended to promote our mutual interests.

## **IMPORTANT NOTICE! . . . TRADE DISCOUNTS**

To ascertain your cost on any given article, you will find imprinted at the bottom-center of each page a small figure representing the confidential trade discount applying to that page. Thus, the numbers 50, 40, 30 indicate that your discounts for the respective pages on which they appear are 50%, 40% and 30%. Several pages, and some individual items, are quoted at net prices, in which case the word "NET" will appear at the bottom-center of page or next to the price.

## **CONTENTS**

In the pages of this book you will find listed a complete line of nationally advertised Radio Replacement Parts and Accessories, representing the "best" in the field of Radio. Every part is manufactured in accordance with R.M.A. and N.E.M.A. Standards; rated at safety factors in excess of those required for normal operation.

## **CREATE "SALES" WITH THIS CATALOG**

Be sure to take full advantage of the wealth of information and technical data contained in this catalog. Use it as your constant "Silent Salesman". It also serves as a Radio Parts Reference Book and Encyclopedia.

## **GUARANTEE**

Our liberal guarantee policy is made possible because of the fact that every item of merchandise has been thoroughly tested and approved before being accepted for listing in our Catalog.

## **SPECIAL SERVICE**

We have endeavored to include in this Catalog all of the standard parts and accessories normally required. If you need some article not listed, do not hesitate to take advantage of our "Special Service". We will obtain it for you if it is at all possible.

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NOTE: Prices in this catalog are subject to change without notice. We reserve the right to discontinue any item.

# Make Your Cash Pay!

5% discount allowed for cash on all orders from this catalog amounting to \$2.00 or more. 2% discount allowed on C. O. D. orders. Terms extended to established accounts.

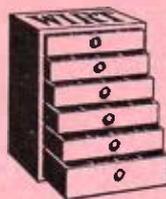
## Red Page Trade Builders

To make it more advantageous for the radio serviceman to become acquainted with our service we are offering the following popular service items made by highly reputable firms at great price savings. Unlike the balance of pages in this catalog, the prices are net, making their values obvious.



Special  
24c ea.  
Net

4 MFD 600 V Peak  
8 MFD 600 V Peak



SPECIAL!

Attractive oak 6-drawer resistor cabinet, complete with 100 assorted 1-watt popular sized resistors .....\$6.00 net

Same with 50 resistors .....\$4.25 net

### POLYMET CONDENSERS

Paper cased Electrolytic



4 MFD 200 V	.....	\$0.30	ea.
8 MFD 200 V	.....	.37	ea.
4 MFD 600 V	.....	.37	ea.
8 MFD 600 V	.....	.39	ea.
4-8 MFD 600 V	.....	.65	ea.
8-8 MFD 600 V	.....	.75	ea.

Power Resistors



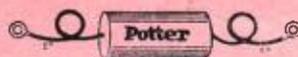
50-watt variable	.....	\$0.85	ea.
25-watt variable	.....	.52	ea.
10-watt non-variable	.....	.16	ea.

Tubular Electrolytic



8 MFD 475 V	.....	\$0.37	ea.
4 MFD 475 V	.....	.35	ea.
8 MFD 300 V	.....	.25	ea.
16 MFD 200 V	.....	.33	ea.
8 MFD 200 V	.....	.25	ea.
4 MFD 200 V	.....	.25	ea.
10 MFD 50 V	.....	.23	ea.

Tubular By-Pass



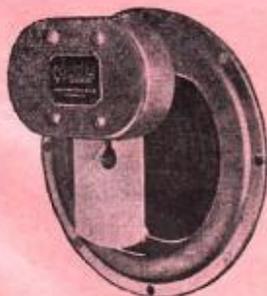
.01 600 V	.....	\$0.04	ea.
.02 600 V	.....	.05	ea.
.05 600 V	.....	.06	ea.
.1 400 V	.....	.12	ea.
.25 400 V	.....	.15	ea.

Mica Condenser

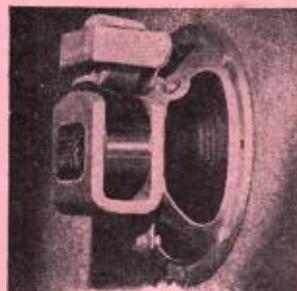
.00005 to .001	.....	\$0.06	ea.
.001	.....	.10	ea.
.006	.....	.15	ea.

Master By-Pass

.1 MFD 400 V	.....	\$0.12	ea.
.25 MFD 400 V	.....	.15	ea.
.5 MFD 400 V	.....	.19	ea.



# QUAM SPEAKERS



High Quality Magnetic. P. P. or single output.

5 inch	.....	\$1.05	net
6½ inch	.....	1.75	net
8 inch	.....	2.00	net

High Quality Dynamic

5 inch	.....	\$1.80	ea.
6½ inch	.....	2.20	ea.
8 inch	.....	2.65	ea.
12 inch	.....	5.00	ea.

# SHIPPING INSTRUCTIONS

Zone number \_\_\_\_\_ 1 2 3 4 5 6 7 8  
 Cost up to 1 lb. \_\_\_\_\_ 8c 8c 9c 10c 11c 12c 14c 15c

Note: Add 5 cents for insurance to all shipments of less than \$5.00, 10 cents to all less than \$25.00, and 15 cents to all less than \$50.00. Do not forget parcel post charges. We will ship your order express collect if not enough money is included for carrying charges.

## The Streamline AUTO ANTENNA

## Auto Radio Supplies



Rubber insulated. Non directional. Fully weatherproof. Sturdy construction. Simple installation.

Complete with brackets .....\$1.65 ea. net  
 Lynch Super Suppressor



Eliminates suppressors on plugs.....\$1.15 net  
 No. 18—1/64 R. C. 16-stranded top aerial and lead-in wire.  
 1000 ft. spool .....\$3.30 ea.  
 100 ft. Spool ..... .40 ea.  
 3/8 copper shield braid, 10 ft. .... .30 net  
 50 lb. spool ..... 1.35 net  
 7/8 in. shield braid, 10 ft. .... .60 net  
 50 lb. spool ..... 2.50 net

### Western Cable Batteries



Long  
Life

Low  
Cost



V30F—Heavy duty—45 V .....\$1.19 net  
 V30D—Std. duty—45 V ..... .81 net  
 H3D—Std. C Battery—4.5 V ..... .19 net  
 V15D—Std. C Battery—22½ V ..... .56 net  
 No. 6 A Battery—1.5 V ..... .24 net



2 V A Battery .....\$2.75 ea.  
 6 V A Battery ..... 3.25 ea.  
 Flashlight Cells .....\$0.03½ ea. net  
 See page T1 for complete battery line.

### Wirt Suppressors



#### Elbow Type



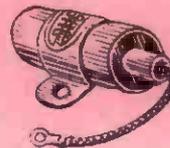
#### Distributor Type



#### Bracket Type



#### Cable Type



Furnished 10M ohm standard or 20M ohm for V8 .....\$0.15 ea.

### Generator and Coil Condenser

.5 MFD .....\$0.16 ea.  
 1 MFD ..... .30 ea.

### EXTENSION CORDS AND ATTACHMENTS

#### Heavy Duty Extension Cord



All rubber cords 25 ft. extension with switch and handle guard .....\$1.25 net

Same with tool tap near socket .....\$1.40 net



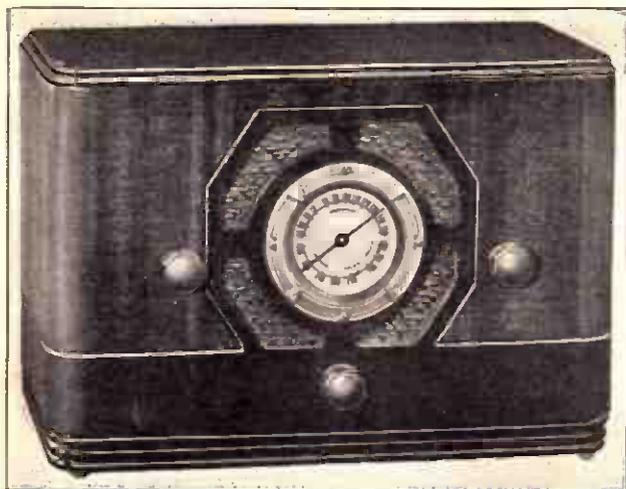
Bakelite Twin Light .....\$0.09 ea.

Bakelite Triple Light \$0.20 ea.



Bakelite Current Tap .....\$0.10 ea.

# HUDSON RADIOS AC. DC.



This low price HUDSON 5-tube AC-DC Radio is of the latest T.R.F. circuit design. Its selective, sensitive circuit, combined with its full-range dynamic speaker, insures exceptionally fine reception. Covering a range from 75 to 550 meters (540 to 4000 kilocycles) this radio brings in Police Calls, Amateur, Aeroplane Signals and Standard Broadcast stations. A separate switch, mounted on the front panel, is used for Short Wave reception. The "modern" cabinet, with rounded corners, is of two-tone walnut with beautiful, grained and matched woods. This cabinet has been built for service as well as beauty; the supporting brackets go clear through to the bottom, making it impossible for the cabinet to warp or pull apart. The tubes used are 1-6D6, 1-6C6, 1-43, 1-25Z5, 1-L40B (metal ballast tube). With built-in aerial.

**Model 112**—HUDSON 5-tube AC-DC 105-125 Volts.  
Two-Band, 70-550 meters (540 to 4000 kc.)  
Size: 9" x 11" x 13"  
Net Weight: 9 lbs.; Gross Weight: 12 lbs.  
Code: ABATE **\$19.95**  
List Price, complete with tubes

**Special Model for European Use:**  
**Model 112A**—HUDSON 5 tube AC-DC, 110 Volts.  
Specifications same as Model 112, except Two-Bands: 190-550 and 900-2000 meters.  
Code: ABBEY **\$20.95**  
List Price, complete with tubes

**220 and 240 Volt MODELS**  
**Model 112B**—range 70-550 meters  
Code: ABBOT **\$20.95**  
List Price, complete with tubes

**Model 112C**—range 190-2000 meters  
Code: ABYSS **\$21.95**  
List Price, complete with tubes

**5 TUBE for POLICE, AERO AMATEUR AND AC. DC. AMERICAN BROADCAST ALSO SPECIAL SETS FOR EUROPEAN USE**

The Model 114 HUDSON 6-tube AC-DC, 110 Volt, Super-Het. Radio uses two new all-metal tubes in places where this latest development will give best results. The aeroplane dial features a dual scale with sectional illumination; when using the broadcast scale, only that portion of the scale is illuminated; for short wave, the other half is illuminated. The automatic volume control assures even, steady signal strength from all stations. The full-size Dynamic speaker produces faithfully the results this set is capable of giving. The manual tone control permits change of pitch to any desired frequency range. The cabinet is of exclusive and original design, with rounded "modern" sides. The finest matched, walnut veneers are used. Mechanically this cabinet is unique for small set construction; the supporting struts extend clear through the bottom, making it impossible for the woodwork to warp or pull apart. The tubes used are 1-6A7, 1-6K7, 1-75, 1-43, 1-25Z5 and 1-L42B. With built in aerial.

**Model 114**—HUDSON 6 Tube AC-DC, 110 Volt, Super-Heterodyne  
Two Bands: 70-175, 190-550 meters (540 to 4000 kc.)  
Net Weight: 10 lbs. Gross Weight: 13 lbs.  
Size: 9" x 11" x 13" **\$28.50**  
Code: ACTOR  
List Price, complete with tubes

**Special Model for European Use:**  
**Model 114A**—HUDSON AC-DC, 110 Volt, Super-Heterodyne  
Same specifications as Model 112 above, except the Two Bands: 190-550 and 800-2000 meters.  
Code: ADDER **\$30.00**  
List Price, complete with tubes

**220 to 240 Volt MODELS**  
**Model 114B**—Range 70-550 meters  
Code: AERIE **\$30.00**  
List Price, complete with tubes

**Model 114C**—Range 190-2000 meters  
Code: AFOOT **\$31.50**  
List Price, complete with tubes



**6 TUBE AC-DC BAND 2 FOR POLICE, AERO AMATEUR AND SUPER AMERICAN STATIONS SPECIAL EUROPEAN MODEL 190 to 2200 MET.**

# HUDSON 7 TUBE AC-DC.

# 3

## BANDS

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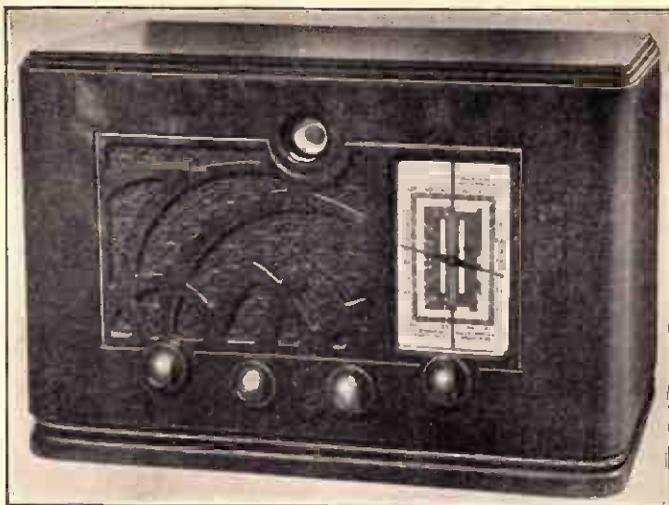
METERS  
17-49  
70-175  
190-550

Foreign Stations  
Police Calls  
Aeroplane Signals  
and  
American  
Broadcast

EUROPEAN  
MODEL

17-2200 Meters  
with  
240 Volt Transformer  
Tapped for any  
desired voltage

Either model  
available for  
220-240 volt



## "Vision Eye" INDICATOR

The Model 114 HUDSON 7-tube AC-DC, Superheterodyne Radio is a miracle of perfection. It combines such unusual features as: "modern" appearance, improved superheterodyne circuit, vision eye, 3-section illuminated dial, A.V.C., tone control, three wave band ranges (14 to 550 meters), new metal tubes. The cabinet is distinctive in design and "modern" in every respect; matched oriental walnut veneers throughout, rounded corners, beveled edges, fluted top and bottom borders. It incorporates the new HUDSON construction features: main struts extend through the bottom, making warping and pulling apart impossible.

The new type oblong illuminated aeroplane dial is equipped with a set of pilot lights connected to the wave-change switch circuit, so that only that portion of the scale is illuminated which corresponds to the wave band being used.

The Vision Eye feature makes possible perfect tuning-in to the station you desire. It utilizes a cathode ray tube which emits a soft green glow through a small window, across which a shadow is thrown; when the shadow is reduced to its thinnest, you are automatically and perfectly tuned in.

Two new metal tubes are located at points where their use effects a distinct improvement in performance and reception.

Automatic volume control and manual tone control afford the listener the comfort and satisfaction to be derived from these practical and up-to-date features. The tone control enable you to vary the audio range to suit your preference. The A.V.C. insures constant signal strength from all stations.

Tubes used are 1-6A7, 1-6K7, 1-75, 1-43, 1-25Z5, 1-L42D, 1-6E5.

### Standard Model

**Model 116**—HUDSON 7-tube AC-DC, 105-125 Volt Superheterodyne

Table Model  
3 Bands: 17-49, 70-175, 190-550 meters.  
Size: 15" x 10" x 7 1/2"  
Net Wt.: 12 lbs. Gross Wt.: 15 lbs.  
Code: AMUSE  
List Price, complete with tubes

**\$39.50**

### European Model

**Model 116A**—HUDSON 7-tube AC-DC Table Model  
Same Specifications as Model 116, except  
3 Bands: 17-49, 190-550, 800-2000 meters.  
Code: ANIMO  
List Price, complete with tubes

**\$41.50**

### Special 220 Volt Models

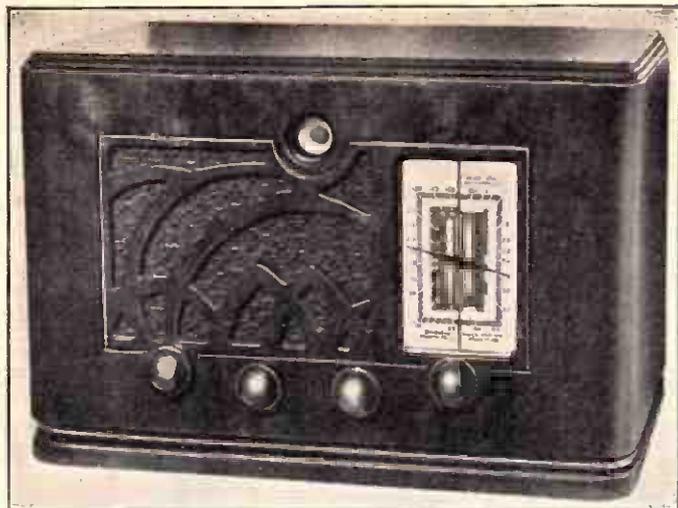
**Model 116B**—HUDSON 7-Tube AC-DC Table Model  
Same Specifications as Model 116 above, except  
for 220-240 volts operation.  
Code: ANTIC  
List Price, complete with tubes

**\$40.50**

**Model 116C**—HUDSON 7-Tube AC-DC European Table Model  
Same Specifications as Model 116A except  
for 220-240 Volts operation.  
Code: ARABA  
List Price, complete with tubes

**\$42.50**

# HUDSON 7-TUBE HI-WATT



## TUNES-IN-THE-WORLD

This HUDSON 7-tube A.C. Superheterodyne Receiver has been specially designed to meet the demand for high power at true fidelity. No finer set within its price range is available on the market today. Every important improvement in radio design and practice is incorporated. All wave, three bands, vision eye, A.V.C., tone control, high fidelity speaker, 3-section illuminated dial, vernier tuning, improved superheterodyne circuit, new metal tubes and "modern" appearance. All Wave: European S. W. Stations, Americans S. W. stations, Police Calls, Aeroplane Signals, Amateur stations and American broadcast reception is obtained from this receiver by means of its unique wave-change switching device.

**Vision Eye:** This feature makes possible perfect tuning-in to the station you desire. It utilizes a cathode ray tube which emits a soft green glow through a small window, across which a shadow is thrown; when the shadow is reduced to its thinnest, you are automatically and perfectly tuned in.

**A.V.C. and Manual Tone Control:** The tone control enables you to vary the audio range to suit your preference, while the A.V.C. insures constant signal strength from all stations.

**Illuminated Dial:** The new type oblong illuminated aeroplane dial is equipped with a set of pilot lights connected to the wave-change switch circuit, so that only that portion of the scale is illuminated which corresponds to the wave band being used.

The improved superheterodyne circuit employs two of the new metal tubes where their use will give "best results." The tube component is: 1-6H7, 1-6K7, 1-76, 1-6F5, 1-42, 1-80, 1-6E5 (note—this is a full 7-tube set—the tube component does not include any ballast tube).

# 3 BANDS

.....  
METERS  
17-49  
70-175  
190-550

Foreign Stations  
Police Calls  
Aeroplane Signals  
and  
American  
Broadcast

EUROPEAN  
MODEL  
17-2200 Meters  
with  
240 Volt Transformer  
Tapped for any  
desired voltage

### Standard 110 Volt Model

Model 118—HUDSON 7-Tube AC 105-125 Volt Super-Heterodyne

Table Model:  
3 Bands: 17-49, 70-175, 190-550 meters.  
Size: 15" x 13" x 7 1/2"  
Net Weight 16 lbs. Gross Weight 20 lbs.  
Code: ANGEL.  
List Price, complete with tubes

**\$43.00**

### Standard 220 Volt Model

Model 118B—HUDSON 7-Tube AC, Table Model  
Same specifications as Model 118, above, except  
for 220-240 volts operation  
Code: APRON  
List Price, complete with tubes

**\$44.00**

### 105 to 240 Volt European Model

Model 118A—HUDSON 7-Tube AC, 105-240 Volt Table Model

This special European model contains a multitap power transformer making it possible to use this set on any line voltage from 105 to 125 volts and from 220 to 240 volts; 50 to 60 cycles.

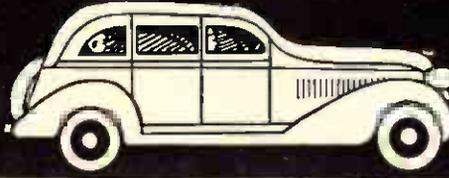
Same Specifications as Model 118, except  
3 Bands: 17-49, 190-550, 800-2000 meters.  
Code: ANKLE

List Price, complete with tubes

**\$45.00**

# HUDSON

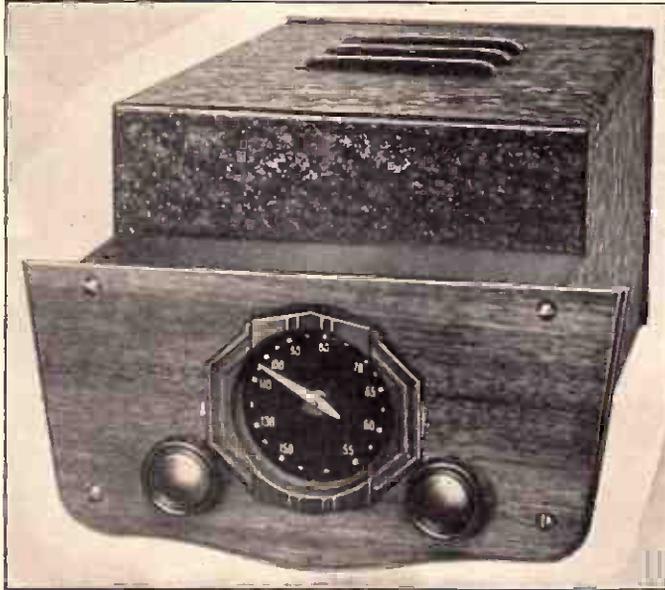
## AUTO RADIO



In this HUDSON Auto Radio, Beauty is combined with Performance for the first time. Every consideration has been given to enhancing the appearance of your dashboard without in any way marring or defacing your valuable automobile, yet affording you that feeling of comfort and extreme pleasure which can come only from Perfect Performance.

### Beautiful

- Walnut Front Panel
- Radium-type Aeroplane Dial
- Dashboard Mounting—Chassis hidden
- No Damage to Fire Board of Auto



### Practical

- Ventilated Chassis
- Easy to Install
- Heavy Metal Case Shielding Throughout
- Utilities 5 Latest Type Tubes
- Plug-in type Vibrator

**THE GRAIN WALNUT FRONT PANEL** matches the dash board and mounts directly in line with it, giving the appearance of a complete assembly.

**THE RADIIUM-FACE-TYPE AEROPLANE DIAL** is really a thing of beauty. The lettering and pointer have been done in the "modern" style and conform in every way with today's automobile interior design.

**DASHBOARD MOUNTING:** The entire chassis, with its self-contained speaker, is mounted under the dashboard and is completely hidden from view. The beautiful walnut panel is the only exposed part of the entire unit.

**FIRE BOARD INTACT:** The fire board of your automobile is put there for your protection. The HUDSON Auto Radio is designed in such a way that it can be mounted in your car without the necessity of drilling holes into the fire board or marring it in any manner.

**VENTILATED CHASSIS:** The chassis of the HUDSON Auto Radio is scientifically ventilated by means of louvres. This prolongs the life of the tubes and of other parts used in radio construction which are affected by extreme heat.

**EASY TO INSTALL:** The ease and simplicity of mounting is astonishing. No drilling of holes in the dashboard. No nut-tightening from the motor side and smearing of clothes with grease and oil. And, above all, no time lost!

**HEAVY METAL CASE SHIELDING:** In conformity with the latest development in Auto Radio construction, an extra heavy gauge, special grade steel casing is used. This acts as a perfect protector and completely shields the entire radio for better radio reception.

**LATEST TYPE TUBES.** The latest type tubes will be found in this Super-Het. set. Only five tubes are used, yet reception is perfect. The tube components are: 1-6A7, 1-6D6, 1-75, 1-41, 1-84.

### Model "110" HUDSON Superhet. Auto Radio

Overall Size.....	11½" x 5" x 6½"
Panel Size.....	11½" x 3"
Actual Weight.....	14 lbs.
Shipping Weight.....	18 lbs.

Code: AURAD

List

Price complete with tubes

**\$32<sup>50</sup>**

# NATIONAL UNION

# RADIO TUBES



Since 1930, National Union has contributed greatly to the Tube Industry from technical and scientific standpoints. National Union Tubes are made in the Company's two modern plants at Newark, N. J. National Union sells more service dealers than any other company in the industry. National Union's standards are higher, and the best materials are used throughout. All National Union Tubes are fully guaranteed.

GLASS TUBES				GLASS TUBES				METAL TUBES			
Type	F.or.H. Volts	Description	List Price	Type	F.or.H. Volts	Description	List Price	Type	Volts	Description	Price
00A	5.0	Triode Detector	\$1.35	34	2.0	VariMu Pent. Amp. Det.	\$1.35	6K7	6.3	Pentode Ampl. or Det.	\$1.60
01A	5.0	Triode Det. Amp.	.69	35/51	2.5	VariMu Pent. Amp. Det.	.99	6A8	6.3	Elec. Cou. Osc. & Mixer	1.85
01AA	5.0	Triode Det. Amp.	.79	36	6.3	Tetrode Ampl. or Det.	.99	6J7	6.3	Pentode Ampl. or Det.	1.70
1A4	2.0	Tetrode Amplifier	1.75	37	6.3	Triode Amp. or Det.	.79	6C5	6.3	Triode Ampl. or Osc.	1.35
1A6	2.0	Elect-coupled Mixer	1.35	38	6.3	Pentode Power Ampl.	.99	6H6	6.3	Twin Diode Detector	1.35
1B4/95L	2.0	Tetrode Amplifier	2.00	39/44	6.3	VariMu Pent. Amp. Det.	.99	5Z4	5.0	Full Wave Vac. Rect.	1.70
1B5/25S	2.0	Triode Det.-Triode Amp.	1.35	41	6.3	Pentode Power Ampl.	.99	6F6	6.3	Pentode Power Ampl.	1.60
1C6	2.0	E. C. Osc. & Mixer	1.60	42	6.3	Pentode Power Ampl.	1.09	6L7	6.3	Heptode Mixer or Ampl.	1.85
1V	6.3	Half Wave Vac. Rect.	.99	43	2.5	Pentode Power Ampl.	1.09	6F5	6.3	Triode Ampl. or Det.	1.35
2A3	2.5	Triode Power Ampl.	1.35	45	2.5	Triode Power Ampl.	.79	6Q7	.....	.....	2.10
2A5	2.5	Pentode Power Ampl.	1.09	46	2.5	Tetrode Power Ampl.	1.09	25A6	.....	.....	1.85
2A6	2.5	Diode-Det.-Triode Ampl.	1.09	47	2.5	Pentode Power Ampl.	.99	25Z6	.....	.....	1.85
2A7	2.5	E. C. Osc. & Mixer	1.35	48	30.0	Pentode Power Ampl.	2.60				
2B7	2.5	2-Dio. Det. & Pent. Amp.	1.35	49	2.0	Tetrode Power Ampl.	1.09				
5Z3	5.0	Full Wave Vac. Rect.	.99	50	7.5	Triode Power Ampl.	2.60				
6A4	6.3	Pentode Power Ampl.	1.35	53	2.5	Twin Triode "B" Ampl.	1.35				
6A6	6.3	Twin Triode "B" Ampl.	1.35	55	2.5	Dio-Det. & Trio. Ampl.	1.09				
6A7	6.3	E. C. Osc. & Mixer	1.35	56	2.5	Triode Ampl. or Det.	.79				
6B5	6.3	Duo Triode P. Ampl.	2.35	57	2.5	Pentode Ampl. or Det.	.99				
6B7	6.3	2-Dio. Det. & Pent. Amp.	1.35	58	2.5	VariMu Pent. Amp. Det.	.99				
6C6	6.3	Pentode Ampl. & Det.	1.09	59	2.5	Pentode Power Ampl.	1.35				
6D6	6.3	VariMu Pent. Amp. & Det.	.99	64	6.3	Tetrode Ampl. or Det.	2.90				
6E6	6.3	Twin Triode "A" Ampl.	1.70	65	6.3	VariMu Pent. Amp. Det.	2.90				
6F7	6.3	Trio. Pent. Osc. & Det.	1.60	67	6.3	Triode Ampl. or Det.	1.90				
10	7.5	Triode P. Ampl. or Osc.	2.10	71A	6.3	Pentode Power Ampl.	2.90				
12A	5.0	Triode Ampl. or Det.	.79	75	5.0	Triode Power Ampl.	.79				
12A5	6.3	Pentode Power Amplifier	2.20	76	6.3	Dio. Det. & Trio. Ampl.	1.09				
12A7	12.6	Power Pent. & Rect.	2.30	77	6.3	Triode Ampl. or Det.	.79				
12Z3	12.6	Half Wave Vac. Rect.	1.09	78	6.3	Pentode Ampl. or Det.	1.09				
15 -	2.0	Tetrode Ampl. or Det.	2.00	80	6.3	VariMu Pent. Amp. Det.	1.09				
19	2.0	Twin Triode "B" Amp.	1.09	81	7.5	Twin Triode "B" Ampl.	1.35				
20	3.3	Triode Power Ampl.	2.09	82	2.5	Full Wave Vac. Rect.	.69				
22	3.3	Tetrode Amplifier	1.35	83	2.5	Half Wave Vac. Rect.	2.10				
24A	2.5	Tetrode Ampl. or Det.	.99	83V	5.0	Full Wave Merc. Rect.	.99				
25Z5	25.0	Voltage doubling Rect.	1.09	83V	5.0	Full Wave Vac. Rect.	1.60				
26	1.5	Trio. A.C. Fil. Ampl.	.69	84-8Z4	6.3	Full Wave Rectifier	1.35				
27	2.5	Triode Ampl. or Det.	.79	85	6.3	Diode Det. & Trio. Ampl.	1.09				
30	2.0	Triode Ampl. or Det.	.79	89	6.3	Pentode Power Ampl.	1.09				
31	2.0	Triode Power Ampl.	.79	99V	3.3	Triode Ampl. or Det.	1.09				
32	2.0	Tetrode Ampl. or Det.	1.35	99X	3.3	Triode Ampl. or Det.	1.09				
33	2.0	Pentode Power Ampl.	1.09	950	2.0	Pentode Power Apl.	2.20				

## METAL-GLASS TUBES

Type	Volts	Description	Price
6K7MG	6.3	Pentode Ampl. or Det.	\$1.60
6A8MG	6.3	E. C. Osc. & Mixer	1.85
6J7MG	6.3	Pentode Ampl. or Mixer	1.70
6C5MG	6.3	Triode Ampl. or Osc.	1.35
6H6MG	6.3	Twin Diode Detector	1.35
5Z4MG	5.0	Full Wave Vac. Rect.	1.70
6F6MG	6.3	Pentode Power Ampl.	1.60
6L7MG	6.3	Heptode Mixer or Ampl.	1.85
6F5MG	6.3	Triode Ampl. or Det.	1.35
6Q7MG	.....	.....	2.10
25A6MG	.....	.....	1.85
25Z6MG	.....	.....	1.85

## MAJESTIC TUBES

Type	Volts	Description	Price
24-S	2.5	Tetrode Ampl. or Det.	\$1.30
27-S	2.5	Triode Ampl. or Det.	.80
35-S	2.5	VariMu Tet. Ampl.	1.40
(51S)	.....	.....	1.40
55-S	2.5	Diode Det. & Trio. Ampl.	1.70
56-S	2.5	Triode Ampl. or Det.	1.30
57-S	2.5	Pentode Ampl. or Det.	1.75
57A-S	6.3	Pentode Ampl. or Det.	1.75
58-S	2.5	VariMu Pent. Ampl. or Det.	1.75
58A-S	6.3	VariMu Pent. Ampl. or Det.	1.75
85A-S	6.3	Dio. Det. & Trio. Ampl.	1.70
2A7-S	2.5	E. C. Osc. & Mixer	2.30
6A7-S	6.3	E. C. Osc. & Mixer	2.30
6B7-S	6.3	Duo-Dio. Det. & P. Amplifier	2.10
6C7	6.3	Dio. Det. & Trio. Ampl.	1.90
6D7	6.3	Pent. Ampl. & Det.	1.75
6E7	6.3	VariMu P. Ampl. & Det.	1.75
6F7-S	6.3	Trio. & Pent. Osc. & D.	1.90
6Y5	6.3	Full Wave Vac. Rect.	1.90
6Z5-1Z25	6.3	Full Wave Vacuum Rectifier	1.90
G84-2Z2	12.6	Half Wave Fil. Rect.	1.85

## CATHODE-RAY TUBES

Type	Characteristics	Special Dealers NET Price
908 -	3" Screen; Focus Electrode, 450-v. Max.; H.V. Electrode, 1500-v. Max.; Grid V. for C. Cut-off -80.	\$18.00
907 -	5" Screen; Focus Electrode, 600-v. Max.; H.V. Electrode, 2000-v. Max.; Grid V. for C. Cut-off -80-v.	45.00
903 -	9" Screen; Focus Electrode, 900-v. Max.; H.V. Electrode, 3000-v. Max.; Grid V. for C. Cut-off, -120-v.	120.00
907A -	5" Screen; Focus Electrode, 450-v. Max.; H.V. Electrode, 1500-v. Max.; Grid V. for C. Cut-off, -60-v.	40.00

The above listed tubes have the following common characteristics: Four Deflection Plates. Short Persist. Screen. Cathode Indirect Heater. Fil. Current 2.1. Fil. Volts (A.C. or D.C.) 2.5. Grid voltage, never positive. Fluorescent-Screen Input Power per sq. cm. (average), 10 max. watts. Sens. in num.-volt at 1000 volts.

## PHOTO ELECTRIC CELLS

TYPE OF CELL FOR VARIOUS MAKES OF SOUND EQUIPMENT	List Price, \$6.00
NU-1—Aeame Simplex, Bell and Howell, Cleveland Sound, Edco, International Projector, Moviola, Oliver Theatre, Audien, RCA Photophone, Powers, Preddy, Skinner Portable, Sonofilm.	List Price, \$6.00
NU-2—Argus, Audien, Bestone, Demford, Des Moines Theatre, DeVry, Electrofilm B, Film Speaker, Full Range, Good-All, Indianapolis Sound, Kolorgraph, Langenkamp-Wheeler, Largen, LeRoy Master, Phototone, Picturephone, Public Address, Quality Theatre, S.O.S. Martin Band, Masterphone, Motiograph, Paecent, Universal, Weber, Wesco.	
NU-3—Ultraphone, Western Electric (ERPI).	
NU-1-S—American Electric, Mellaphone.	
NU-1-RBS—SOS.	
All Types	

## BATTERY CHARGER BULBS

Size	List Price
6-Amp. Bulb.	\$8.00
2-Amp. Bulb.	4.00

## EXCITER LAMPS

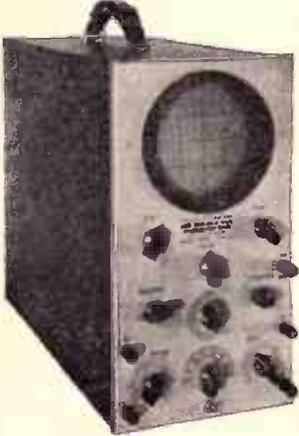
SIZES AVAILABLE	List Price
8 1/2 volts.....4 amps.	\$0.60
10 volts.....5 amps.	.60
10 volts.....7 1/2 amps.	.60
27 volts.....1 amp.	.75

# NATIONAL UNION Service Shop Equipment

Many thousands of service experts and dealers throughout the United States are finding it profitable to be tied-up with the National Union program. They have proven to their own complete satisfaction that National Union means more than Radio Tubes. National Union stands as a symbol of more service business and better service business at a profit. Testers, analyzers, service manuals and service tools are given with the purchase of National Union tubes. The equipment obtained in this way has both the guarantee of the manufacturer and the backing of National Union.

The dealer makes a small cash deposit. In most cases this is less than 50% of the usual dealer cost. This is possible because both National Union and National Union jobbers have an investment. Dealers receive equipment immediately. On completing the purchase of the specified number of tubes, the dealer receives a bill of sale for the equipment and merchandising credit for the total amount deposited by him. The dealer who is not interested in equipment can obtain bonus agreements for additional discounts. Charts, data and information of the most practical value are also obtainable gratis.

## CATHODE-RAY OSCILLOGRAPH



### How To Get One With 3" Tube

Contract to purchase 1550 National Union Tubes. Time Limit—Over a two-year period. Initial Order—50 National Union tubes. Deposit—\$57.50 (Refunded as merchandise credit on completion of contract). Agreed value—\$87.50.

### How To Get One With 5" Tube

Contract to purchase 1750 National Union Tubes. Time Limit—Over a two-year period. Initial Order—50 National Union tubes. Deposit—\$65.00 (Refunded as merchandise credit on completion of contract). Agreed value—\$89.50.

## SUPREME ANALYZER MODEL 339

### How To Get the Standard Model

Purchase 25 National Union radio tubes. Agree to buy 500 more National Union tubes within a two-year period. Deposit \$18.00 (Refunded as merchandise credit on completion of tube purchasing agreement). Agreed value—\$29.95.

### How To Get the De Luxe Model

Purchase 25 National Union tubes. Agree to buy 650 more National Union tubes in a two-year period. Deposit \$24.00 (which is refunded as merchandise credit on completion of tube purchasing agreement). Agreed value—\$39.95.

## SUPREME TUBE-TESTER MODEL 89

### How To Get the De Luxe Model

Purchase 25 National Union radio tubes. Agree to buy 775 more National Union tubes within a two-year period. Deposit \$28.00 (which is refunded as merchandise credit on completion of tube purchasing agreement). Agreed value—\$45.95.

### How To Get the Standard Model

Purchase 25 National Union radio tubes. Agree to buy 550 more National Union tubes within a two-year period. Deposit \$20.00 (which is refunded as merchandise credit on completion of tube purchasing agreement). Agreed value—\$34.95.

## HICKOK ALL-WAVE OSCILLATOR



### How To Get It

Purchase 25 National Union radio tubes. Agree to buy 725 more National Union tubes within a two-year period. Deposit \$25.00 which is refunded as a merchandise credit as soon as the agreed number of tubes have been purchased. (Regular dealer price of this instrument is \$48.00.)

## CARRYING CASE



### How To Get It

Contract—to purchase 125 National Union tubes. Time Limit—over a one-year period. Initial order 25 National Union tubes. Deposit \$2.00 (Refunded as merchandise credit on completion of contract). Agreed value—\$7.50.

## SERVICE SHOP WORK COAT

### How To Get It

Buy 25 National Union tubes. Agree to buy 75 more National Union tubes in one year. Deposit \$1.50 (this is returned to you as a merchandise credit). Agreed value—\$3.50.

Are you on the list to receive  
"What's New In Radio Tubes" ?  
News - Technical Data - Sales Ideas  
It's free. Write National Union Radio  
Corp., 570 Lexington Ave., N. Y. C.

## FREQUENCY MODULATOR



### How To Get It

Purchase 25 National Union radio tubes. Agree to buy 375 more National Union tubes within a two-year period. Deposit \$10.00 (Refunded as a merchandise credit as soon as the agreed number of tubes have been purchased). (Regular dealer price of this instrument is \$27.50.)

## HICKOK DIAMOND POINT JR. TUBE TESTER

### How To Get Either Portable or Counter Model :

Contract—to purchase 625 National Union tubes—Time Limit—over two-year period—Initial order—25 National Union tubes—Deposit \$23.00 (Refunded as a merchandise credit on completion of contract.) Agreed value—\$45.00.

## TRIPLETT SERVICE INSTRUMENTS

### How To Get No. 1200

Purchase 25 National Union tubes—Agree to buy 375 more in two years—Deposit \$10.00 which is refunded as a merchandise credit after the agreed number of tubes has been purchased. Agreed value—\$21.67.

### How To Get No. 1210A

Purchase 25 National Union tubes—Agree to buy 325 more in two years—Deposit \$8.50 which is refunded as a merchandise credit after the agreed number of tubes has been purchased. Agreed value—\$20.00.

### How To Get No. 1220A

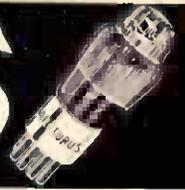
Purchase 25 National Union tubes—Agree to buy 125 more in one year—Deposit \$4.00 which is refunded as a merchandise credit after the agreed number of tubes has been purchased. Agreed value—\$8.33.

### How To Get No. 1230

Purchase 25 National Union tubes—Agree to buy 275 more in one year—Deposit \$6.00 which is refunded as a merchandise credit after the agreed number of tubes has been purchased. Agreed value—\$15.33.



# ARCTURUS



## Six Out of Seven Developments Pioneered by ARCTURUS

Progress in A.C. radio tubes since 1927 has been based on seven fundamental developments. Six out of the seven were pioneered by Arcturus. For the seventh, we give credit to one of our competitors. Seldom, if ever, in any field has a manufacturer so consistently and constructively pioneered. If you are interested in building your own standing, then you must handle products fundamentally right . . . tubes con-

- sistently superior . . . **Arcturus Tubes.**
1. Standard-base A.C. Tube
  2. Quick-Heater
  3. Screen Grid
  4. Variable-Mu
  5. Suppressor Grid (Pentode, 2A5)
  6. Coaxial Grid (Wunderlich)
  7. Emission Control Modulator (2A7)

## GLASS TUBES

Type No.	Class	Operation	Volts	List Price
01-A	Triode	Detector—Amplifier	5.0	\$0.70
10	Triode	Amplifier—Class "A"	7.5	2.10
12-A	Triode	Detector—Amplifier	5.0	.80
15	Pentode	Amplifier	2.0	2.00
19	Dup.—Triode	Amplifier—Class "B"	2.0	2.10
22	Tetrode	Amplifier	3.3	1.35
24	Tetrode	Detector Biased—Ampl.	2.5	1.00
26	Triode	Amplifier	1.5	.70
27	Triode	Detector Biased—Ampl.	2.5	.80
30	Triode	Detector—Amplifier	2.0	.80
31	Triode	Power Amplifier	2.0	.80
32	Tetrode	Detector Biased—Ampl.	2.0	1.35
33	Pentode	Amplifier—Class "A"	2.0	1.10
34	Pentode	R.F. Amplifier	2.0	1.35
35	Use Type 51			1.00
36A	Tetrode	Detector Biased—Ampl.	6.3	1.00
37A	Triode	Detector Biased—Ampl.	6.3	.80
38A	Pentode	Amplifier—Class "A"	6.3	1.00
39-44	Pentode	R.F. Ampl.—Modulator	6.3	1.00
41	Pentode	Amplifier—Class "A"	6.3	1.00
42	Pentode	Amplifier—Class "A"	6.3	1.10
43	Pentode	Amplifier—Class "A"	25.0	1.10
44	Use Type 39-44			1.00
45	Triode	Amplifier—Class "A"	2.5	.80
46	Tetrode	Class "A", "B" Amplifier	2.5	1.10
47	Use Type PZ			1.00
50	Triode	Amplifier—Class "A"	7.5	2.60
53	Tetrode	Var.—Mu Ampl.—Mod.	2.5	1.00
55	Dup. Triode	Class "A", "B" Amplifier	2.5	1.35
56	Diode—Triode	Amplifier—Class "A"	2.5	1.10
57	Triode	Detector Biased—Ampl.	2.5	.80
58	Pentode	Det. Biased—Ampl. "A"	2.5	1.00
59	Pentode	Var.—Mu Ampl.—Mod. "A" or "B" Amplifier	2.5	1.00
71A	Triode	Amplifier—Class "A"	5.0	.80
75	Diode—Triode	Amplifier—Class "A"	6.3	1.10
76	Triode	Detector Biased—Ampl.	6.3	.80
77	Pentode	Det. Biased—Ampl. "A"	6.3	1.10
78	Pentode	Var.—Mu Ampl.—Mod.	6.3	1.10
79	Dup. Triode	Amplifier—Class "B"	6.3	1.35
80	Dup. Diode	Rectifier Full, Half-Wave	5.0	.70
81	Diode	Rectifier Half-Wave	7.5	2.10
82	Dup. Diode	Rectifier Full-Wave	2.5	1.00
83	Dup. Diode	Rectifier Full-Wave	5.0	1.00
84	Dup. Diode	Rectifier Full-Wave	6.3	1.35
85	Diode—Triode	Amplifier—Class "A"	6.3	1.10
89	Pentode	Amplifier—Class "A"	6.3	1.10
99UV	Triode	Detector or Amplifier	3.0	1.10
99UX	Triode	Detector or Amplifier	3.0	1.10
GA	Pentode	Amplifier—Class "A"	5.0	2.75
PZ	Pentode	Amplifier—Class "A"	2.5	1.00
PZH	Pentode	Amplifier—Class A	2.5	1.60
Wunderlich "A"	Tetrode	Detector	2.5	3.00
Wunderlich "A"	Auto	Detector—Amplifier	6.3	3.00

Type No.	Class	Operation	Volts	List Price
1A6	Heptode	Oscillator—Modulator	2.0	\$1.35
1C6	Heptode	Oscillator—Modulator	2.0	1.60
2A3	Triode	Amp. Cl. "A"—P.P. bias	2.5	1.35
2A5	Pentode	Amplifier—Class "A"	2.5	1.10
2A6	Diode—Triode	Amplifier—Class "A"	2.5	1.10
2A7	Heptode	Oscillator—Modulator	2.5	1.35
2B7	Diode—Pentode	R.F., I.F., A.F. Amplifier	2.5	1.35
5Z3	Dup. Diode	Rectifier Full-Wave	5.0	1.00
6A6	Dup. Triode	Class "A", "B" Amplifier	6.3	1.35
6A7	Heptode	Same as 2A7	6.3	1.35
6B7	Diode—Pentode	Same as 2B7	6.3	1.35
6C6	Pentode	Det. Biased—Ampl. "A"	6.3	1.10
6D6	Pentode	Var.—Mu Ampl.—Mod.	6.3	1.00
6F7	Triode—Pentode	Oscillator—Modulator	6.3	1.60
12A5	Pentode	Amplifier—Class "A"	6.3; 12.6	2.20
12A7	Pentode—Diode	Output Pent.—Rec. H.-W.	12.6	2.20
12Z3	Diode	Rectifier Half-Wave	12.6	1.10
12Z5	Dup. Diode	Rectifier Full-Wave	6.3; 12.6	1.50
25Z5	Dup. Diode	Rectifier Full-Wave	25.0	1.10

## SPARTAN TUBES

482B	Power Amplifier	5.0	\$ 1.65
483	Power Amplifier	5.0	1.65
485	Detector Amplifier	3.0	1.45

## MAJESTIC TUBES

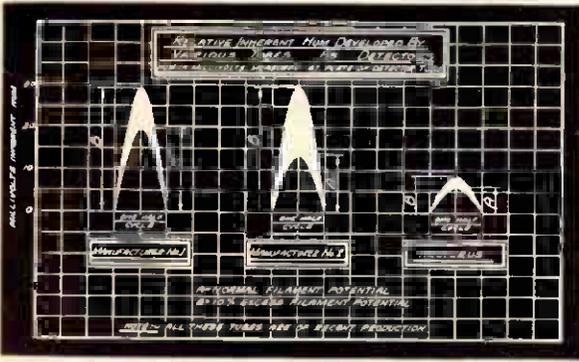
245	Detector—Amplifier	2.5	\$ 1.30
275	Detector—Amplifier	2.5	.80
355	Amplifier	2.5	1.40
555	Detector—AVC	2.5	1.70
565		2.5	1.30
575	Detector—Amplifier	2.5	1.75
57AS	Detector—Amplifier	6.3	1.75
585	Amplifier	2.5	1.75
58AS	Amplifier	6.3	1.75
85AS	Detector—AVC	6.3	1.70
2A7-S	Detector—Oscillator	2.5	2.30
6A7S	Detector—Oscillator	6.3	2.30
6B7S	Detector—Amplifier	6.3	2.10
6C7	Detector	6.3	1.90
6D7	R.F. Amplifier	6.3	1.75
6E7	R.F. Pentode	6.3	1.75
6F7S	Detector—Oscillator	6.3	1.90
6Y5	Full-Wave Rectifier	6.3	1.90

## 15-VOLT TUBES

When ordering these tubes, specify 15 volts

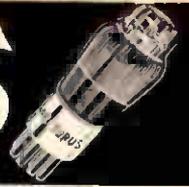
22	Triode	Amplifier	15.0	\$ 7.50
26	Triode	Amplifier	15.0	4.50
30	Triode	Amplifier—Class "A"	15.0	4.50
32	Triode	Hi-Mu Amplifier	15.0	4.50
43(SOI)	Triode	Amplifier—Class "A"	15.0	6.00
48(RAI)	Triode	Amplifier	15.0	4.50

Prices on Metal Tubes and "G" Tubes on next page





# ARCTURUS



## ARCTURUS "CORONET"—The New Perfected METAL Tube



### The Salient Features of Arcturus Coronet Metal Tubes are:

1. Lower capacities than either other metal or glass tubes.
2. More dependable vacuum than the original metal tube.
3. Less prone to gas than the original metal tube.
4. Lower operating temperatures permit closer arrangement of chassis components.
5. Eliminate possibility of dead shorts to ground.
6. Diameter identical to other metal tubes.
7. Height 1/2-inch greater, facilitating insertion and removal.
8. Rugged structure; better appearance; longer life.
9. Quiet operation, as it has no metallic sleighbells.
10. Self-shielding.

## The Metal Tube the Industry Hoped For . . . Is Here!

Utilizing all the advantages of manufacturing technique developed in the past twenty-eight years, Arcturus has perfected and improved "the greatest advance in radio tube design in twenty-eight years." The radio industry, aware of the inherent weaknesses of metal tubes, had looked forward to an improvement by 1936.

Now, a full business year ahead of the industry, Arcturus introduces the CORONET Metal Tube—the **perfected development of the metal tube**. CORONET Metal Tubes at once advance the metal tube development from an experimental stage to a dependable design using all the tried and proved advantages of the vacuum tube art.

### Metal Glass Tubes

Type No.	Description	Volts	List Price
5Y3	Full-Wave Rectifier	5.0	\$1.00
6A8G	Detector-Oscillator	6.3	1.60
6B6	Detector-AVC	6.3	1.40
6C5G	Detector-Amplifier	6.3	1.10
6F5G	Amplifier	6.3	1.10
6F6G	Power Amplifier	6.3	1.30
6H6G	AVC-Detector	6.3	1.10
6J7G	Detector-Amplifier	6.3	1.40
6K7G	Amplifier	6.3	1.30
6L7G	Mixer-Amplifier	6.3	1.60
6P7	Detector-Oscillator	6.3	2.00
6N7G	Amplifier—Class "B"	6.3	1.70
6Q7G	Detector—AVC	6.3	1.70
6X5G	Rectifier—Full Wave	6.3	1.60
25A6G	Amplifier—Class "A"	25.0	1.60
25Z6G	Rectifier—Full Wave	25.0	1.60

### Metal Tubes

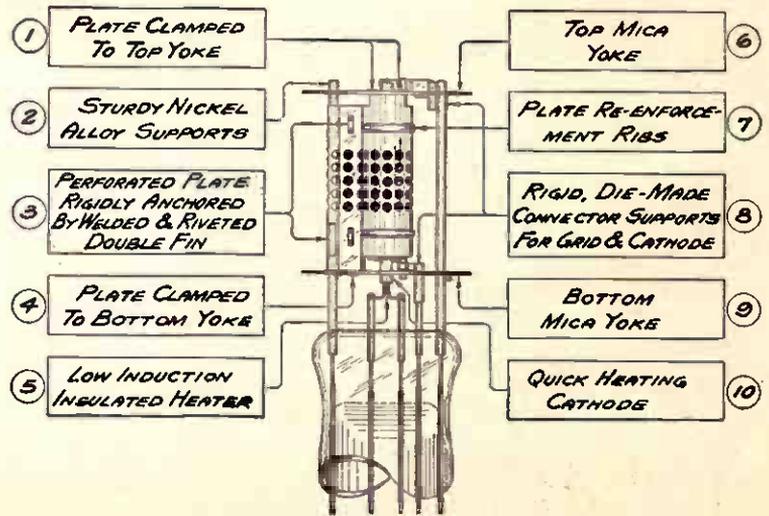
Type No.	Description	Volts	List Price
5Z4	Full-Wave Rectifier	5.0	\$1.60
6A8	Detector-Oscillator	6.3	1.60
6C5	Detector-Amplifier	6.3	1.25
6F5	Amplifier	6.3	1.25
6F6	Power Amplifier	6.3	1.50
6H6	AVC-Detector	6.3	1.25
6J7	Detector-Amplifier	6.3	1.60
6K7	Amplifier	6.3	1.50
6L7	Mixer-Amplifier	6.3	1.75
6N7	Amplifier—Class "B"	6.3	2.00
6Q7	Detector—AVC	6.3	2.00
6X5	Rectifier—Full Wave	6.3	1.75
25A6	Amplifier—Class "A"	25.0	1.75
25Z6	Rectifier—Full Wave	25.0	1.75

## Unitary Structure Principle for Improved Performance

This exclusive Arcturus Unitary Structure is a decided advance and is the last word in tube ruggedness, assuring uniform characteristics.

This sturdy construction insures precise spacing and grips every element firmly in position, making all elements inter-dependent. This entire assembly, exceptionally rigid, is safe against distortion of elements and minimizes microphonism.

Rated as the most rugged tube construction on the market, this is another reason why Arcturus Tubes insure efficient and dependable performance, improved reception and satisfied customers.



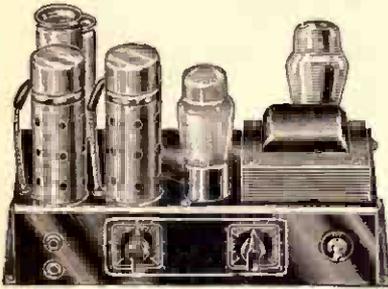
# 5 Watt

# TONEVOX

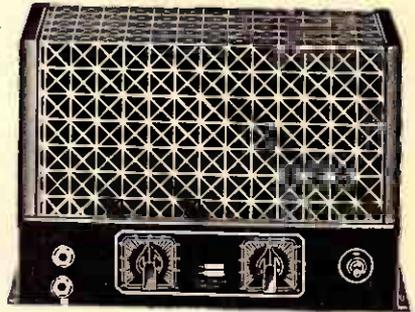
## HIGH QUALITY—HIGH GAIN

## AMPLIFIER

### TONEVOX 5-WATT AMPLIFIER



An exceptionally fine high-gain, 4-stage amplifier that possesses all the features of larger and higher-powered models. Its compactness makes this TONEVOX 5-Watt Amplifier suitable for use where space is limited. The high overall-gain of 116 dB. makes it possible to use crystal or ribbon microphones without the use of any pre-amplification. Two input sources are available. A high-gain input for crystal or dynamic microphones, and a low-gain input for phono pick-up, etc. A simple plug-in jack arrangement allows for quick change from one input source to another.



The amplifier also contains a built-in speaker field supply for 1000 ohms at 6 watts. The frequency response is exceptional for this type of amplifier showing a deflection of only  $\pm 2$  dB. from 50-10,000 cycles. The front panel of the chassis is equipped with an overall gain control, a tone control and a speaker plug for positive contact connections and high and low input jacks. Size of amplifier: 12"x6 $\frac{3}{4}$ "x7 $\frac{1}{4}$ ".

**Model No. 501—TONEVOX 5-Watt Amplifier**

**List Price, Less Tubes**

**\$ 29.90**

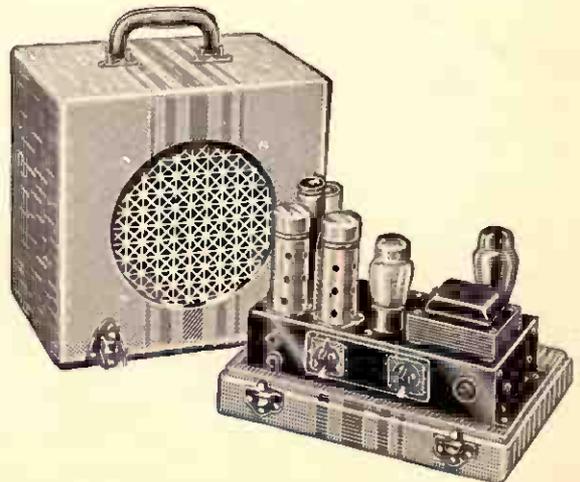
Tubes Required: 1—83V, 1—6B5, and 2—6C6.

Peak output .....	8 watts
Normal output .....	6 watts
Harmonic content at above ratings .....	7%
Overall gain .....	116 dB.
Hum level .....	-51 dB.
Field supply for 1000-ohm field	6 watts
Power consumption from line	60 watts
Circuit—Class "A"; output impedance .....	7000 ohms
Input impedance—high gain, 5 meg; low gain .....	$\frac{1}{2}$ meg.

### PORTABLE 5-WATT P. A. SYSTEM

The TONEVOX 5-Watt Portable Public Address Sound System is a compact, lightweight and attractively-designed unit that embodies all the essential qualities of larger and more expensive units. A newly-developed high-gain amplifier permits the use of either Dynamic, Crystal or Velocity Microphones. Previously, due to the limited amplification available in small amplifiers, only carbon microphones could be used. The unusually low price of the TONEVOX 5-Watt P.A. Portable should now bring this unit within the reach of all who need a real, low-power sound system.

The TONEVOX Portable Public Address Sound System comes in an attractively designed "acropplane type" carrying case covered with a weatherproof fabric. The unit is completely housed in a single case. It is extremely light and compact and is particularly suited for use by restaurants, small orchestras, window demonstrators, lecturers and others requiring voice or musical amplification to cover a larger audience. Included in the system are the high-gain amplifier Model No. 501 described above and a 10" dynamic speaker of fine quality. Equipped with 25 ft. of heavy-duty rubber cable. The carrying case is divided in two sections. The amplifier is fixed to the bottom end and the speaker, housed in the remaining top of the case, can be lifted off and placed wherever desired. The feature also permits the utilization of the entire carrying case as a baffle for the speaker. The speaker opening is covered with an attractive steel grill-piece and backed by a speaker grill-cloth for protection against puncture and to prevent the collection of dust. The outside dimensions of the case are: 13"x9 $\frac{1}{4}$ "x14 $\frac{3}{4}$ ".



**Model No. 502—TONEVOX Portable 5-Watt P.A. System**

**List Price, Less Tubes** **\$ 59.00**

Tubes Required: 1—83V, 1—6B5, and 2—6C6.

# 15 Watt

# TONEVOX PORTABLE AMPLIFIER

Complete Two Speaker System in a Single Case

The Model 600 TONEVOX Amplifier is the latest development in P.A. Systems. One sturdy weather-proof case contains a complete 15-watt amplifier with two high-fidelity speakers and sufficient gain to use crystal or velocity microphone. Entirely A.C. operated. Any acoustical requirements can be met by the proper arrangement of the speakers, since one can be placed at 25 feet and the other at 50 feet from the amplifier.

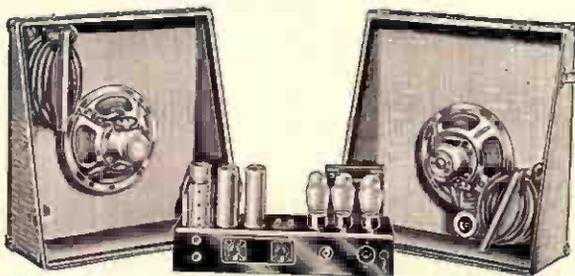
Can be successfully used for orchestras, churches, amusement parks, lecture rooms, meetings, and wherever voice or musical amplification is necessary to cover a large audience.

A tremendous gain, in addition to the high amplification, is obtained with this amplifier, which permits the use of a crystal microphone, doing away with pre-amplifier and mike-current supply, and definitely eliminating the annoying characteristic hiss of carbon microphones.

## New Improved Carrying Case

An exclusive feature is the diagonally-bisected carrying case with removable amplifier. This special design has made it possible to carry two speakers with their proper baffles and the amplifier in only one case. So far it has been necessary to carry at least two cases when using dual-speaker-portable amplifiers. The case is of the latest **Aeroplane Luggage** lightweight, weather-proofed material and the corners have been reinforced with metal plates.

Each section is equipped with rubber legs which provide a cushion for the speakers and avoid marring furniture. Special shock-proof grills avoid any possibility of damaging the cones. The width of the case is only 7", providing suitcase convenience in carrying. Overall size: 17"x17"x7".



## Heavy Duty Components

Compare the size of the transformer with the tubes. Each part is oversized to give continuous service, and conservatively rated to give a high safety margin. A power-line fuse, mounted on the chassis near the control board, protects the amplifier from overload damage.

## TECHNICAL CHARACTERISTICS

Peak Output into Plate.....	25 watts
Peak Output into a 500-ohm line.....	20 watts
Normal Output into Plate.....	19 watts
Normal Output into a 500-ohm line.....	15 watts
Harmonic Content at 500-ohm line.....	7%
Overall Gain.....	125 dB.
Gain at Low-Gain Jack.....	85 dB.
Field-Supply for 10,000 ohms total.....	16 watts
Frequency response within 2 dB. from 40 cycles to 10,000 cycles.....	
Power Consumption from line.....	120 watts
High-Gain Jack Input Impedance.....	.5 megohms
Low-Gain Jack Input Impedance.....	1/2 megohm
Tubes used—1-6C6; 1-76; 1-6A6; 2-6B5; 1-83V.	

## 125 db Gain

It has an overall gain of 125 dB. This tremendous signal amplification allows the operator to use a crystal or velocity microphone without preamplification. If other microphone is desired, a low-gain input is also available. The High-Gain Input, Low-Gain Input, Gain Control, Tone Control, "On-Off" Switch and Speaker Plug are conveniently mounted on one side of the amplifier. The harmonic content at the line impedance value is only 7%.

## 50-ft. Speaker Cable

To attain the best results, the speakers can be placed at variable distances from the amplifier. Reverberation or any other particular conditions of the room can be practically overcome by the proper location of the speakers. The second speaker connects into the first speaker. Each one is provided with a 25-ft. heavy-duty rubber cable and plug. Consequently, the first speaker can be located within 25 feet from the amplifier, and the second one 50 ft. from the amplifier. The cable rubber cover is impervious to water and made to withstand heavy usage.

## 40 to 10,000 Cycles Flat Response

The frequency response is practically flat from 40 cycles to 10,000 cycles. This high quality reproduction has never before been attained in this type of amplifier.



Model 600 TONEVOX Two-Speaker-Portable Amplifier, complete, as described above, but less tubes and microphones.

# \$95.00

## List Price

Tubes Required: 1-6C6; 1-76; 1-6A6; 2-6B5; 1-83V.

# 15 Watt

# TONEVOX

## LOW COST -- HIGH GAIN

# AMPLIFIER

Furnished with Glass or New Metal Tubes

- Two High-Gain Channels
- Uses Crystal Mike Without Pre-Amplifier
- Built-In Mixer
- Lowest Cost
- Excellent Frequency Response



**Overall Gain of 97 dB.**

An exceptionally low-cost amplifier, suitable for the greatest majority of P.A. installations. Any two input devices can be mixed and faded by an electronic control mixer of smooth operation. It is particularly suited for use with extremely high impedance devices, such as crystal microphones and pickups, and will give excellent reproduction at all frequencies with these units. However, any impedance device can be used without matching transformer, provided a minimum of .014 volts is available from the driving source.

The 97 dB. gain available makes unnecessary the use of a pre-amplifier when a crystal microphone or other equally low-level input device is employed. When a velocity microphone is to be used only a simple adapter is required. (See page C-8 for Model 420 Velocity Adapter.)

**Only 4% Harmonic Content**

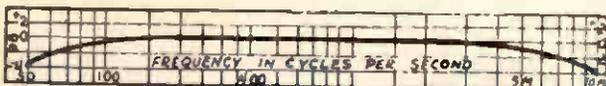
The four-stage circuit makes use of the following tubes: one Type 53 as mixer, one Type 57 as voltage amplifier and one Type 53 driving two 2A5's in Class "A" Prime. A Type 83 is used as rectifier. The overall gain of 97 dB is obtained with an harmonic content of only 7%. The output impedances available are 1 to 15 ohms for voice-coils and 250 or 500 ohms for lines.

**Available With Metal Tubes**

A model designed to operate with metal tubes is also available. This model uses four metal and two glass tubes, because no metal tubes are at present available to replace those glass tubes. Though the performance of both models is identical in every respect, it is important to bear in mind that the amplifier designed for the metal tubes cannot be used with the glass tubes and vice versa. The amplifier tube line up of the metal model consists of two 53's, one 6J7, two 6F6's and one 83V.

**Excellent Frequency Response**

The frequency response of this amplifier is excellent, as can be seen on the curve shown below. This response is much better than required for ordinary P.A. installations. The response shown by the curve was obtained with the output transformer.



### Technical Characteristics

#### Output

Peak .....	20 watts
Maximum into tube load .....	18 watts
Maximum into 500-ohm line .....	15 watts
Harmonic content .....	7%
Overall gain .....	97 dB.
Hum level .....	-47 dB.
Power consumption from line .....	80 watts

**Model 721-A**—15-Watt "TONEVOX" Amplifier. Complete with Output Transformer, but less glass tubes. Dimensions: 7" deep, 16" wide, 8 1/4" high. Shpg. Wt. 35 lbs.

**List Price, Less Tubes .....** **\$53.00**

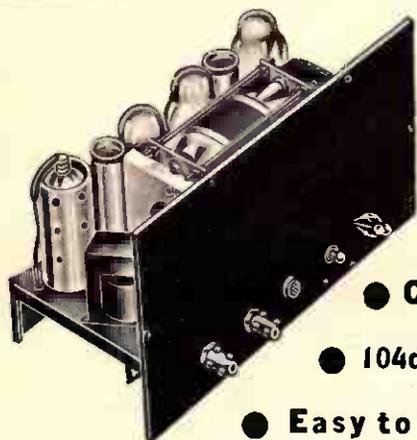
**Model 721-B**—15-Watt "TONEVOX" Amplifier. Same as above, but designed for metal tubes. Complete with Output Transformer, less tubes.

**List Price, Less Tubes .....** **\$53.00**

# 15 Watt

# TONE VOX AUTO AMPLIFIER

6 V.—110 V. Mechanical Remote Control



- Compact
- 104db. Gain
- Easy to Install
- Uses Crystal Microphone
- Only 7% Harmonic Content
- Mechanical Remote Control
- Excellent Frequency Response

A compact remote-controlled unit that can be mounted in the same manner that an auto radio is mounted and can be controlled from the steering column. Line switch and pilot light are on the case. Volume control and stand-by switch, to shut off the generator, is mounted on the remote control. Case dimensions are 12"x7¼"x7½".

## Requires No Pre-Amplifier

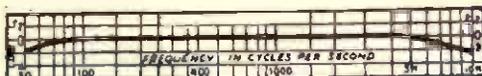
The extraordinary gain of 104dB. makes possible the use of crystal microphones without pre-amplification. Peak output is 20 watts. Maximum output into plate impedance, 18 watts. Maximum output into 500-ohm line, 15 watts. The harmonic content at rated outputs is only 7%, much less than the allowed standard harmonic content. Power consumption is 14 amperes at 6 volts.

## Self-Contained Converter

The high-quality converter is contained in the cabinet together with all parts. Special mounting type permits this arrangement without microphonic vibrations into tubes.

## Multiple Applications

Any type of automobile, whether a pleasure car, truck or commercial vehicle, can easily be changed to the most effective means of street advertising known to date. Several police departments are using these systems in their cars to warn traffic violators.



## Mechanical Remote Control

The Mechanical Remote Control is one of the greatest improvements in Auto Amplifiers. It is universally used today by all auto radio manufacturers as the only practical means of bringing all controls to your fingertips without changing the electrical characteristics of the circuit. All controls are built in the amplifier, but the volume control and stand-by switch—to shut off the generator—can be operated from the steering column.

## Flat Frequency Response Curve

The frequency response is exceptional for an amplifier of this type. The frequency response curve shown above was taken with the output transformer. As it is clearly seen, the curve is perfectly flat from 80 to 5000 cycles, having a slight deflection of 2 dB. between 50 and 100 cycles and again from 5000 to 10,000 cycles. This is an exceptionally good response since it is considered that the average deflection of a good amplifier is 4 dB.

Output transformer impedances are from 1 to 15 ohms for voice coils and from 250 to 500 ohms for lines.

### Model No. 341-A

### 15-Watt TONEVOX Auto Amplifier

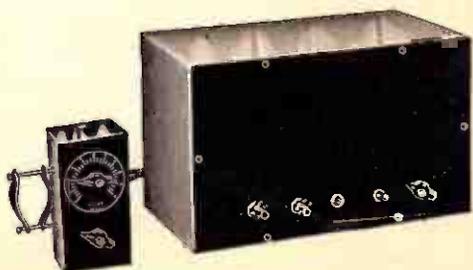
Complete unit, mounted in a 12"x7¼"x7½" steel case, including the remote control box and connecting shafts.

List Price

# \$99.00

less tubes

Set of tubes required for the above amplifier: 1—6C6, 1—6A6, 2—6B5.



# 20 Watt

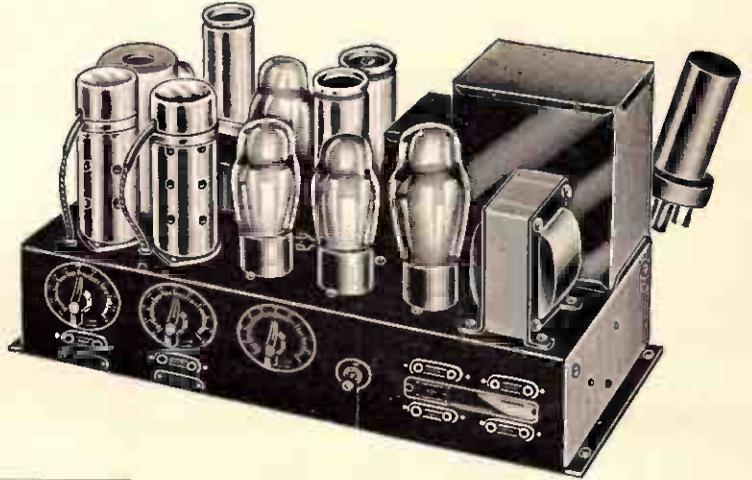
# TONEVOX

## De Luxe • HIGH GAIN

# AMPLIFIER

Available with the New METAL Tubes

- High Gain of 124 dB
- Full 20-Watt Output
- Low Hum Level
- Built-In Two-Position Mixer
- Dual Velocity Mike Operation
- Low Price



### Technical Specifications

Peak output.....	26 watts
Maximum output into 10000 ohms.....	24 watts
Maximum output into 500-ohm line.....	20 watts
Harmonic content at rated output.....	7%
Gain.....	124 dB. Hum level.....-45 dB.
Power consumption from line.....	90 watts

A tremendous gain of 124 dB. at 20-watt output is obtained with an extremely low hum level. Its compactness, wide range, high fidelity, high gain, and low price make this amplifier incomparable. It is unquestionably the most sensational amplifier developed to date. Its high gain permits the use of any type velocity microphone or low level "sound-cell" crystal microphone without using any pre-amplifier.



The above curve shows the excellent frequency response obtained from this amplifier.



### Two-Channel Mixer Built-In

A new two position electronic mixer is incorporated in the amplifier. It provides two high gain channels. Any two inputs can be fed into these channels and can be faded and mixed as desired. Any high impedance input device can be used. Low impedance devices can also be used with suitable matching transformers.

### Entirely New Circuit

An entirely new circuit has been developed for this amplifier. It consists of two 75's as voltage amplifier, one 6A6 as mixer, one 76 voltage amplifier, a 42 driver and two 42's in a new Class "A" Prime circuit. The rectifier is an 83. The high frequency response can be adjusted to suit individual preferences by a special tone control.

### Available With New Metal Tubes

This amplifier is also available with the new metal tubes, using two 6F5 as voltage amplifiers, one 6A6 as mixer, one 6C5 as voltage amplifier, and one 6F6 driving two 6F6 in an entirely new application of Pentode Class "A" Prime operation. As a rectifier the 83 is used.

### 20-Watt Output

The output into a 500-ohm line is 20 watts. The output impedances vary from 1 to 15 ohms for voice coils and 250-500 ohm for audio lines.

### 20-WATT "TONEVOX" HIGH-FIDELITY AMPLIFIER

#### Model 742-A—Using Glass Tubes

Dimensions: 7"x6½"x3½" high. Shpg. Wt. 36 lbs. Complete as described above, less tubes.

**\$73.00**

List Price.....  
Tubes required for above amplifier:—2—75; 1—6A6; 1—76; 3—42; 1—83.

#### Model 742-B—Using Glass and Metal Tubes

Same as described above, but incorporating some of the new metal tubes. Complete, less tubes.

**\$73.00**

List Price.....  
Tubes required for above amplifier:—2—6F5; 1—6A6; 1—6C5; 3—6F6; 1—83.

**40**  
**Watt**  
**DeLuxe**

# TONE VOX

**WIDE RANGE  
ULTRA HIGH GAIN**

# AMPLIFIER

**4 in 1**

**Completely  
SELF-CONTAINED  
on a  
SINGLE CHASSIS**

- 1—Mixer                      3—Power Amplifier**  
**2—Pre-Amplifier        4—Field Supply**

### Built-in Mixer and Pre-Amplifier

This Ultra High-Gain "Wide Range" Amplifier is the most outstanding unit ever developed, as it incorporates within itself the capability of functioning as a TWO-CHANNEL MIXER, a High-Gain PRE-AMPLIFIER, a flat-response Power Amplifier and a 40-watt Field Exciter.

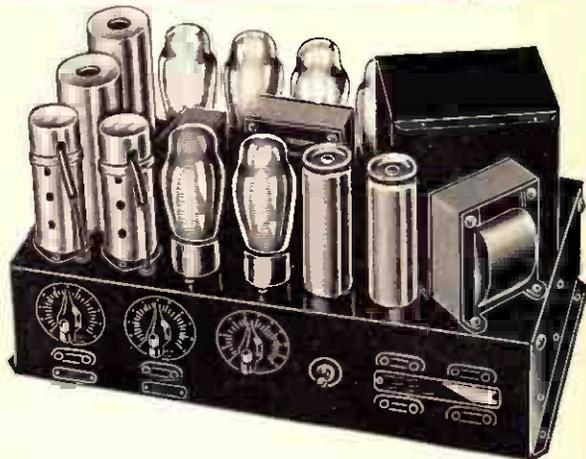
The two-position mixer provides two high-gain channels for use with high-impedance velocity microphones, crystal microphones, or sound-cell microphones. Either input can be faded in or out or the two mixed together as desired.

### Self-Contained Speaker Field Supply

A considerable saving in field exciter cost is made possible with the built-in FIELD SUPPLY. It furnishes current for four 1250-ohm speakers at 10 watts each (total 40 watts at 5000 ohms), or any combination thereof.

### 122 dB. Gain

A gain of 122 dB. from input to output is obtained. This extraordinary high gain is made possible only by a special

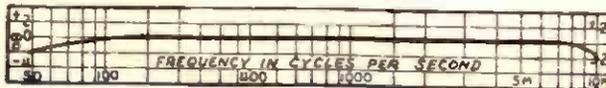


design and the most careful circuit balance. It has a power output of 40 watts into a 500-ohm line. At this output it has a harmonic content of only 6%. The peak output is 50 watts.

The output transformer is made to match from 1 to 15-ohm voice coils and 250-500-ohm lines.

### Very Compact

Never before has an amplifier been available having all of these features in so compact a form. It measures 9½" x 16½" x 9½" high. All controls are in the front of the amplifier. A tone control is also provided so that the high frequency response can be adjusted to suit individual preferences.



### Excellent Frequency Response

The frequency response is excellent, as is clearly seen on the response curve shown above. The response is absolutely flat from 100 to 8000 cycles, and having only a drop of 2 dB. below 100 and above 8000. Practically the response is flat from 50 to 10,000 cycles.

**USES SOUND CELL  
OR  
VELOCITY MICROPHONES**



### Technical Characteristics

Peak output	50 watts
Maximum into 3000-ohm load	45 watts
Maximum into 500-ohm line	40 watts
Harmonic content at rated output	7%
Gain	120 dB.
Hum level	43 dB.
Average drain from line	190 watts

A total of ten tubes are used in this new amplifier as follows: Two Type 2A6 as voltage amplifier; one Type 53 as mixer; one Type 56 as voltage amplifier; one Type 59 as driver, and four Type 46 in push-pull-parallel in the Class "B" output stage. The rectifier is a Type 83 tube. Four speakers at 10 watts each can be operated simultaneously, as the amplifier supplies enough current for four 1250-ohm fields at 10 watts each.

### Model 452A TONEVOX AMPLIFIER

Four-in-One Ultra High-Gain "Wide Range" 40-Watt Amplifier, as described above, less tubes, but including output transformer with 1 to 15-ohm voice coil and 250-500 line impedances. Overall dimensions: 9½" x 16½" x 9½" high. Shpg. Wt. 90 lbs.

**List Price, Less Tubes** ..... **\$95.00**

Set of Tubes required for above amplifier: 2—2A6's, 1—53, 1—56, 1—59, 4—46's, 1—83.

# 100 Watt

[Peak Output  
168 Watts]

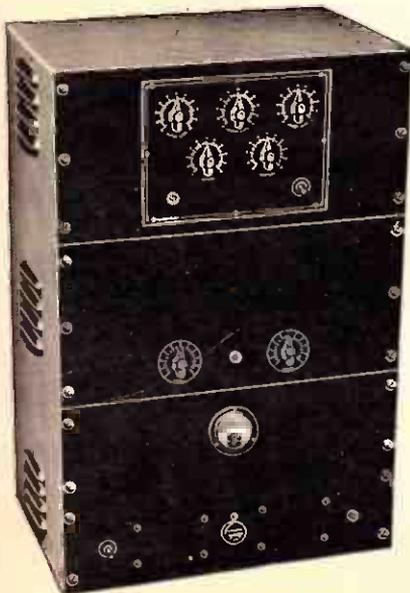
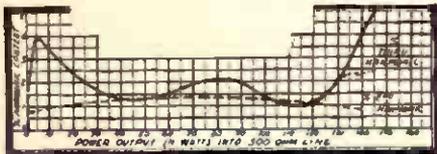


## TECHNICAL CHARACTERISTICS 100 Watt Power Stage

Peak output .....	160 watts
Maximum output into plate load .....	125 watts
Maximum output into 500-ohm line .....	100 watts
Harmonic content .....	3%
Power output gain .....	14.3 dB.
Hum level .....	-60 dB.
Power consumption from line .....	350 watts
Overall voltage gain .....	133 dB.

## POWERSTAGE PLUS DRIVER

Harmonic content .....	5%
Power output gain .....	95 dB.
Hum level .....	-50 dB.
Power consumption from line .....	460 watts



## Complete Rack Mounted 100-Watt P. A. System

The complete 100-Watt Public Address System illustrated at the left contains in a single steel cabinet a three-channel "Electronic Mixer" and Pre-Amplifier, a 12-Watt Driver Amplifier, and a 100-Watt Output Stage.

On the front panel are conveniently mounted the three individual channel-controls, tone-control and overall gain-control, the output-stage ammeter, the fuse, and the "on-off" switch.

The cabinet is very attractive in appearance and completely enclosed. The door in the rear of the cabinet allows access to the tubes and parts.

**Model 250-P**—100-Watt "TONEVOX" Enclosed Rack P.A. System, complete with Mixer, Driver, and Power Amplifier, including tubes, as described above. Size: H. 28 1/2"; W, 19 1/4"; D, 13". Shpg. Wt. 185 lbs.

Complete with Tubes \$  
**List Price \$350**

# TONEVOX

## All A. C. Operated AMPLIFIER

### 133 D.B. Gain for VELOCITY and CRYSTAL Microphones

## 100 WATT POWER STAGE

Only 3% Harmonic Content

For installations where a high power output is required, as in airports, athletic stadiums and hotels, this low-cost amplifier has been designed. It has a total gain of 133 dB. and a conservatively rated output of 100 watts into a 500-ohm line with only 3% harmonic content.

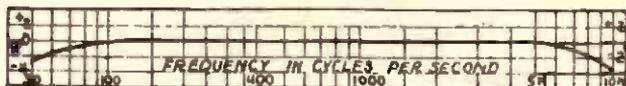
One of the advantages of this 100-watt amplifier is its low tube cost, as only eight ordinary Type "46" tubes are used instead of the expensive large transmitting types used in many high-powered amplifiers.

Because of this saving in tube cost, and despite the fact that only the finest components, including the largest and most efficient output transformers ever designed, are employed, this new amplifier sells complete with tubes for less than competitive makes.

## Only an 8-Watt Driver Required

Only 8 watts are required to drive this amplifier. For co-ordinated results—the 12-watt Driver described below is recommended.

The excellent frequency characteristic of this amplifier is the result of accurate design. A glance to the curve shown below will tell you about the efficient response of this high-powered amplifier. A complete Rack-Mounted 100-Watt P.A. System is also available, as described below, using a three-channel Electronic Mixer, which will mix any of the three inputs—mike, radio and phonograph—or any combination of these desired. This mixer has no frequency discrimination and no loss. High impedance velocity or crystal microphones can be used with this system without requiring any additional pre-amplification.



**Model 831-A**—100-Watt "TONEVOX" Power Stage complete as described above, but less metal cabinet. Dimensions: 19" wide by 12" deep by 10 1/2" high overall. Shpg. Wt. 122 lbs.

**List Price, Less Tubes \$169.00**

Complete Kit of Matched Tubes—8-46's, 2-83's .....

All-Metal Semi-Portable Carrying Case, for above amplifier. ....

**List Price \$14.00**



## 12-Watt Driver

This unit, especially recommended for driving the amplifier described above, employs 3 Type "53" and 2 Type "2A3" tubes. It delivers 12 watts with an harmonic content of only 3%. This content is less than 2% at the average level required to drive the amplifier.

**Model 931-A**—12-Watt "TONEVOX" High Fidelity Driver for 100-Watt Amplifier, less tubes. For rack mounting. Dimensions: 7" x 19" x 8 3/4" high overall. Shpg. Wt. 45 lbs.

**List Price, Less Tubes \$59.00**

Tubes for the Driver: 3-53, 2-2A3, 1-5Z3.

All Metal Semi-Portable Carrying Case for the Driver. **List Price \$7.50**

# Mixers **TONEVOX** Tuners

## PRE-AMPLIFIERS

### TONEVOX Electronic Mixer

**A Radically New Development**

- Affords Gain instead of Loss
- Smooth Control by Electronic Means
- Mixes and Fades Three Channels



Has no frequency discrimination and no loss. Will provide an average gain of approximately 10 dB. Its frequency response is flat from 20 to 10000 cycles and it will mix any of three inputs—mike, radio and phonograph—or any combination of these desired. Five controls are provided—three individual channel controls, one overall gain control and a tone control. The Electronic Mixer can be used with any amplifier having up to 95 dB. gain. Operation is extremely quiet and smooth due to the unique electronic method employed.

#### A Model for Every Purpose

The high impedance model has both high impedance inputs and output. Any device can be connected to the input terminals providing it will develop .01 volts when connected to an amplifier having a gain of 95 dB. With lower gain amplifiers the voltage required increases. The output can be connected directly to the grid of the first tube in the main amplifier. This model is particularly recommended for its excellent frequency response.

The low impedance model is made in two types. Both have two low impedance (200-500 ohms) channels and one high impedance channel and a low impedance (200 ohms) output.

High impedance and low impedance models are available for either 2½ volt or 6 volt operation. The 2½-volt models requiring 2½ volts at 3 amperes and the 6-volt models 6 volts at .9 ampere.

Plate supply can be anything from 100 to 400 volts. If desired these mixers can be operated from an external power supply instead of the supply being obtained from the amplifier.

All models are mounted in a rubber black finished steel case with an etched metal front panel. Dimensions: 10"x7"x5½". Shpg. Wt. 10 lbs.

#### HIGH IMPEDANCE MODELS

**Model 100**—2½-volt type.  
**Model 102**—6-volt type.  
**List Price, Either Type, Complete with Tubes..... \$29.00**

#### LOW IMPEDANCE MODELS

**Model 802**—P.A. 2½-volt type.  
**Model 902**—P.A. 6-volt type.  
**List Price, Either Type, with Tubes..... \$39.00**

### TONEVOX Pre-Amplifier & Control Box for Crystal or Ribbon Microphones



Suitable for use with mikes having a -65 dB. level when used with an amplifier having a gain of over 80 dB. Also, with mikes having a level of -70 dB. when used with amplifiers having a gain of over 90 dB. Thus it is possible to use this pre-amplifier to provide the necessary pre-amplification required for crystal and ribbon microphones.

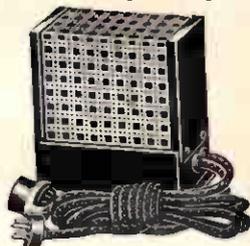
It can be operated either from A.C. or from a six volt storage battery. Plate supply can be obtained from the amplifier or from batteries if necessary. Both gain and tone controls are provided as well as a change-over switch for changing from mike to phono-pickup. Without transformer input is at high impedance directly to grid of tube. Amplifier dimensions: 10"x7¼"x5½". Steel case black crystallized finish. Shpg. Wt. 10 lbs.

**Model 822**—Without input-transformer but complete with tube.  
**List Price..... \$25.00**

**Note**—When a low-impedance device is used a good quality input transformer is necessary.

### TONEVOX Velocity Adapter

When this Adapter is used with the average high gain amplifier having a gain of from 95 to 100 dB. it will provide sufficient additional gain so that velocity mikes may be used. Gain approx. 15 dB. Full instructions included for obtaining power supply from amplifier. All have high impedance output for connection directly to grid of tube. 2½-volt model for amplifiers using 2½-volt tubes. 6 volt for 6-volt tubes. 7"x6¼"x3½" deep Shpg. Wt. 5 lbs.



**Model 420**—High impedance input for high impedance velocity and crystal mikes.  
**List Price..... \$16.00**

### TONEVOX T. R. F. "High Fidelity" P. A. Tuner

- Ample Selectivity
- No Side-Band Cutting
- Four-Tuned Circuits
- Pre-Selector

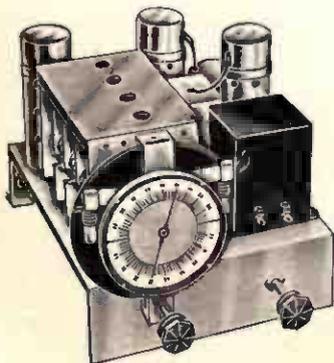
This T.R.F. Tuner has been designed for use with an amplifier for sound work or recording purposes where high fidelity is required. It provides the maximum fidelity possible from broadcast transmissions. This circuit is used in preference to the "Super-Het" to eliminate side-band cutting.

Four tuned circuits are used, including a pre-selector, two tuned radio frequency stages using Type 58 tubes, and a tuned detector stage using a Type 56 as a diode.

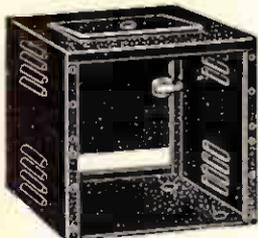
Filament supply for the tuner is self-contained and the "B" supply required (180 to 250 volts) may be obtained from the amplifier or from any "B" eliminator.

The quality obtained with this unit surpasses the performance of any radio receiver.

**Model 550**—T.R.F. High-Fidelity Tuner with "diode" detector,  
**List Price—less tubes..... \$39.00**



### Steel Cabinets for Rack Panels



Especially designed to house receivers, transmitters, P.A. systems, etc. Afford neat, professional appearance. All take standard 19" panels. Constructed of 1/4" steel with black crystallized lacquer finish. Have doors with heavy latch for access to chassis. Sides and back have louvers for ventilation. Comes complete with panel mounting screws and washers. Bases have "mounting feet." All joints spot welded; units are rigid. Suitable steel and aluminum rack panels for use with the cabinets listed here are described on the third column of this page. Blank chassis listed at the bottom of that column are designed to fit these cabinets. Larger cabinets have opening in rear for cables, etc.

- SC128**—Cabinet for single panel. Has door in top, 8 3/4" high and 12" deep. Shpg. Wt. 20 lbs.  
**List Price, Each** ..... \$9.40
- SC1210**—Cabinet for single panel. Door in handles on side. 10 1/2" high, 12" deep. Shpg. Wt. 22 lbs.  
**List Price, Each** ..... \$16.25
- SC1713**—Cabinet for two panels. Has door in top and door on rear panel. 17 1/2" high and 13" deep. Shpg. Wt. 34 lbs.  
**List Price, Each** ..... \$16.25
- SC2613**—Cabinet for three panels. Has door on rear panel. 26 1/4" high and 13" deep. Shpg. Wt. 42 lbs.  
**List Price, Each** ..... \$16.90

### Steel Brackets



Used to re-enforce racks and panels. Of 1/2" steel with black crystallized lacquer finish. Panels must be at least 7" high. Mounting holes drilled. Shpg. Wt. 3 lbs.

- SB78**—For 8" base.  
**List Price, per Pair** ..... \$1.00
- SB711**—For 11" base.  
**List Price, per Pair** ..... 1.50

### Meter Panels



Of steel, with crystallized lacquer finish. Fit the standard racks. All 19" long and 5 1/4" high. For 3 or 5 meters. 2" and 3" type. Shpg. Wt. 7 lbs.

No.	Holes	Meter Size	List Price
MP32	3	2"	\$1.65
MP52	5	2"	2.45
MP33	3	3"	1.65
MP53	5	3"	2.45

### Standard Relay Racks

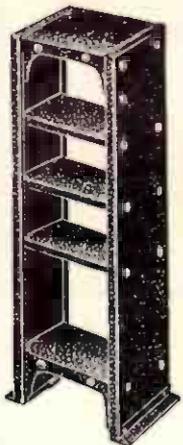
These sturdy steel racks are constructed of 1/4" steel, with spot welded corners. Finished in black crystalline lacquer. Racks are for use with standard 19" long panels, and are accurately drilled for mounting holes every 1 3/4". Holes tapped for 10-32 thread. Substantially braced base to prevent wobble and to keep units in correct alignment. Ideal for use with all types of Transmitters or for Public Address Systems. These Racks are NOT cheap, flimsy units built down to a price. They are used in very fine transmitters.



No.	Dimensions	Shpg. Wt.	List Price
RR196	6 ft. 19 1/4" in. 16 in.	60	\$17.95
RR193	3 ft. 19 1/4" in. 16 in.	30	14.60

### Sectional P.A. Rack

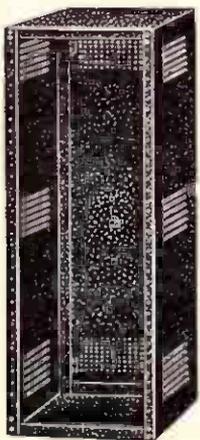
Entire assembly constructed of steel with black crystalline lacquer finish. Adaptable to almost any apparatus. Will improve the appearance of any existing installation. Comes furnished with three shelves in addition to the bottom shelf. Rack stands 5 ft. high, 19 1/4" wide and 12 3/4" deep. Channel type of construction allows hiding of all unsightly wiring. All corners re-enforced with steel braces. Shipped in knockdown form with all necessary nuts, bolts and washers.



- Shpg. Wt. 60 lbs.  
**SR195**—  
**List Price** ..... \$17.25  
 Additional steel shelves. Shpg. Wt. 7 lbs.  
**SM1912**—  
**List Price** ..... \$1.65

### Enclosed Relay Racks

Constructed of heavy steel finished in black crystallized lacquer. Holes drilled for standard 19" panels every 1 3/4". Holes have 10-32 thread. Sides have louvers to provide ample ventilation. Back panel in form of a door with heavy latch; has two screen sections for additional ventilation. Comes knocked down, with all necessary nuts, bolts and washers. Easy to assemble. Ideal for the professional type amateur transmitter.



No.	Dimensions	Shpg. Wt.	List Price
ER205	5 ft. 20 1/4" in. 15 in.	120	\$44.50
ER203	3 ft. 20 1/4" in. 15 in.	75	36.90

### Steel Rack Panels 19" Long



Made in accordance with standard specifications. They are 19" long, and will fit the relay racks described at the left. Constructed of 1/4" steel with black crystallized lacquer finish. Available in 12 standard sizes to fill practically every requirement.

No.	Width	Shpg. Wt. Lbs.	List Price
3600	1 1/4"	2	\$0.90
3601	3 1/4"	5	1.00
3602	5 1/4"	7	1.15
3603	7"	8	1.20
3604	8 3/4"	9	1.60
3605	10 1/2"	10	1.95
3606	12 1/4"	12	2.30
3607	14"	13	2.65
3608	15 3/4"	14	2.95
3609	17 1/4"	15	3.30
3610	19 1/4"	16	3.60
3611	21"	17	4.00

### Aluminum Rack Panels 19" Long

For those desiring an easier working material. Standard panels of 1/4" aluminum, fit relay racks listed at left. Available with black crystallized lacquer finish or unfinished dull aluminum.

### Crystallized Lacquer Finish Panels

No.	Width	Shpg. Wt. Lbs.	List Price
3675	1 1/4"	1	\$1.30
3676	3 1/4"	1	1.80
3677	5 1/4"	2	2.30
3678	7"	2	2.75
3679	8 3/4"	3	3.30
3680	10 1/2"	3	4.25
3681	12 1/4"	4	5.00
3682	15 3/4"	5	6.35
3684	17 1/4"	5	6.75
3685	19 1/4"	6	7.65
3686	21"	7	9.00

### Dull Unfinished Panels

No.	Width	Shpg. Wt. Lbs.	List Price
3728	1 1/4"	1	\$0.85
3729	3 1/4"	1	1.40
3730	5 1/4"	2	1.90
3731	7"	2	2.50
3732	8 3/4"	3	3.00
3733	10 1/2"	3	3.85
3734	12 1/4"	4	4.25
3736	15 3/4"	5	5.75
3737	17 1/4"	6	6.20
3738	19 1/4"	7	6.70
3739	21"	8	7.50

### Blank Steel Chassis or Sub-bases

Designed for use with the relay racks described at the left. Constructed of No. 16 gauge steel finished in black crystallized lacquer. Are furnished with bottom cover plates and bolts for mounting.

No.	Dimensions	Shpg. Wt.	List Price
15280	8"x17"x2"	14 lbs.	\$2.70
15210	11"x17"x3"	20 lbs.	3.25

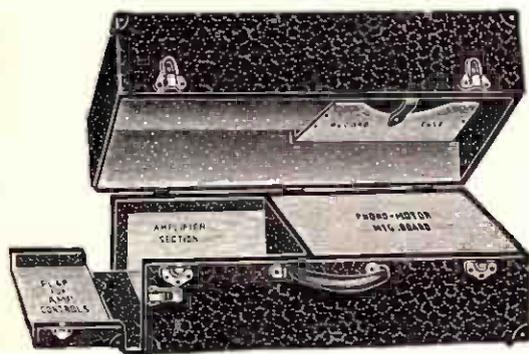
**Cadmium-Plated Chassis**—Similar to the above, but steel cadmium-plated. Size 17" long, 11" wide and 2 1/4" deep. Shpg. Wt. 18 lbs.  
**15211—List Price** ..... \$3.15

# CUSTOM

# CARRYING CASES

The portable carrying cases listed on this page are constructed of a strong, heavy plywood designed to withstand hard usage under all conditions. The panels are covered with a neat and durable black fabrikoid that will last indefinitely. The cases are equipped with heavy-duty, reinforced carrying handles, extra heavy leather corner posts, and strong rust-proof clasps that prevent accidental opening. These cases are a necessary and convenient means by which the sound man can readily transport his public address equipment from place to place.

## Combination Amplifier and Phonograph Case



An especially designed carrying case with two separate compartments for an amplifier and phonograph. The top cover of the case contains a separate space for carrying 10" and 12" records. A mounting board for the phonograph is also included. The case opens on two sides; accessibility to the amplifier controls is provided by means of a drop front at one end of the case. The overall dimensions are: 18" high, 24 3/4" long, and 10 3/4" deep.

Model No. 50  
List Price ..... **\$19.35**

## Dual Speaker Case

This dual speaker case fills a long-felt need. Two speakers, mounted and ready to work, are carried in one case. Each side of the case, when open, will stand by itself without any outside support, making for instant and convenient installation. When used in conjunction with the combination Amplifier and Phonograph case illustrated at left, a complete sound system up to 40 Watts is available in only two handy carrying cases.



This type of carrying case is constructed in two separate sections which are diagonally cut so as to afford the largest mounting space possible in the given size. Each section will accommodate a speaker 12" in diameter and has sufficient baffle area for an exceptionally fine frequency response. The case is constructed of a high grade plywood fabricoid covered, and is made to withstand rough wear. It is reinforced with special leather corners for protection at these points. Leather bumpers on the base sides will prevent marring of any mounting surface. The case comes furnished with metal speaker screens. The overall dimensions are: 25" high, 17 1/2" wide, and 10 1/2" deep.

Model No. 52  
List Price ..... **\$10.50**

## Speaker Cases



Two serviceable portable speaker cases for 10" to 12" speakers. The high-grade heavy plywood with rounded corners, the beautiful black fabrikoid covering, the heavy-duty carrying handle, and the metal bumpers make these cases an exceptional value at this low price. There are sufficient openings in the detachable back to prevent cone pressure.

For 10" speakers; Size: 13"H.x12 3/4"W.x10"D.  
Model No. 54  
List Price ..... **\$5.85**

For 12" speakers; Size: 15"H.x15"W.x10"D.  
Model No. 56  
List Price ..... **\$8.00**

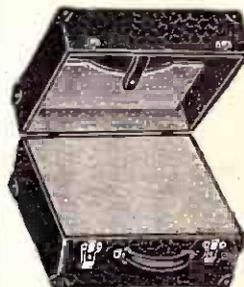
## Portable Amplifier Carrying Case



A large-sized carrying case designed to accommodate all makes of amplifiers. It has a removable drop-front that permits quick and easy accessibility to the controls. High grade, durable plywood construction, attractive fabricoid covering, reinforced heavy leather corners, regulation luggage handle, rust-proof clasps. The overall dimensions of the case are: 10 3/4" high, 17 1/2" long, and 11 3/4" deep. There is sufficient space provided to carry such additional equipment as cables and other small accessories.

Model No. 58  
List Price ..... **\$9.60**

## Portable Phonograph Case



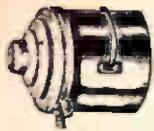
Large enough to accommodate any standard make phonograph motor such as General Electric or Green Flyer. There is also sufficient room for mounting a phono pick-up. The top section contains a compartment for carrying 15 records. The case comes equipped with a mounting board. Furnished with metal bumpers. Size: 12 3/4" high, 14 3/4" wide, 8 3/4" deep.

Model No. 60  
List Price ..... **\$7.50**

## Automatic Record Changer Case

A carrying case designed especially for the Packard Automatic Record Changer. The top cover is equipped with an inclined, felted board that acts as a receiver for the ejected records. The case is already cut out to the exact requirements of the record changer. A small opening is provided on the outside of the case for any plug connection that may be desired. The hole is covered with the black fabricoid and is not visible from the outside if not used. Size: 12 3/4" high, 12 3/4" wide, and 7 1/2" deep.

Model No. 62  
List Price ..... **\$9.60**



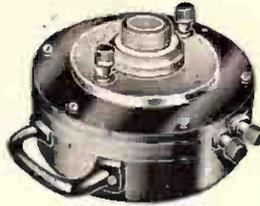
# ATLAS



## UNITS

## TRUMPETS

**TROUBLEPROOF EFFICIENT**  
**WEATHERPROOF**  
**POWERFUL DEPENDABLE**



**HERE ARE**  
**THE NEW ATLAS**  
**DYNAMIC HORN UNITS**

Atlas units represent the Acme of Perfection in electro-dynamic unit construction. Atlas diaphragms are spun from sheets of the very best grade of Duraluminum. They are given various heat treatments and anealing processes which have much to do with the ability of the one-piece all metal diaphragm to withstand the motion at its flex points yet offer the necessary rigidity at its dome. This diaphragm is designed with a

special corrugation which provides a recess for accurately seating the voice coil. Other important diaphragm features incorporated in the Atlas diaphragm are six point mounting, copper-bronze voice coil leads, aluminum voice coil wire, two layer winding, etc. These units are sturdily constructed and designed to withstand all manner of hard usage and weather conditions.

### ATLAS GIANT UNIT

6-Sv. field excitation. 1.2 ampere consumption at 6v. 15-ohm voice-coil impedance at 1,000 cycles. Continuous operating capacity 22 watts. Shpg. Wt. 20 lbs.

**\$60.00**

### ATLAS SENIOR UNIT

6-8v. field excitation. 1.2 ampere consumption at 6v. 15-ohm voice-coil impedance at 1,000 cycles. Continuous operating capacity 18 watts. Shpg. Wt. 12 lbs.

**\$40.00**

### ATLAS EXCITER FE-2



Supplies proper field excitation for one or two Atlas units. This is a special all-dry, all-electric, humless, exciter and will not overheat. Built for 110-120v., 50-60 cycle operation. Net Wt. 7 lbs.

**\$22.50**

### ATLAS ADAPTERS



**U-2H**—This adaptor bears standard thread, is a carefully machined bronze casting. It enables the use of two horns with a single unit. **List Price \$10.00**

**U-3H**—Same as above but for three horns with a single unit. **List Price \$13.50**

**WEB**—This adaptor is for coupling a western electric unit to a horn bearing a standard size thread. **List Price \$3.50**

**H-2U**—This adaptor is for the purpose of connecting two units to one horn. **List Price \$10.00**

### ATLAS EXCITER FE-4

FE-4—Same as above but capable of supplying up to four units. Net Wt. 13 lbs.

**\$42.50**

## ATLAS SQUARE-MOUTHED TRUMPETS

These trumpets present the last word in trumpet design. They are especially suited for sound-truck and outdoor work, due to their ease of mounting. They are constructed of a special all-weather material which will withstand the most severe usage to which it may be subjected. These horns have a solid brass welding and an aluminum demountable tone arm with a standard thread for the reproducer unit.

### WEATHERPROOF

#### MODEL S-6

Bell 30"x30", length, six feet; color, bright aluminum; weatherproof. Net Wt. 20 lbs.

**\$42.50**

#### MODEL S-54

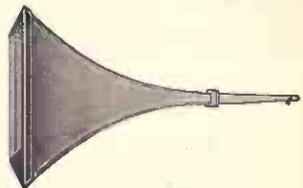
Same as above, length 54", finish aluminum. Net Wt. 14 lbs.

**\$35.00**

#### MODEL S-43

Same as above, length 43", finish aluminum. Net Wt. 12 lbs.

**\$30.00**



## ATLAS CIRCULAR BELL TRUMPETS

These Atlas round-mouthed horns are produced by a new production method. These horns have no parallel for true reproduction over a wide band of frequencies. They are made with a solid cast aluminum throat and are finished in bright aluminum.

### Model RT-3-6

Similar to RT-6 but 3 1/2 foot size. Net Wt. 10 lbs.

**\$25.00**

### TRUMPET HORN—Model RT-6

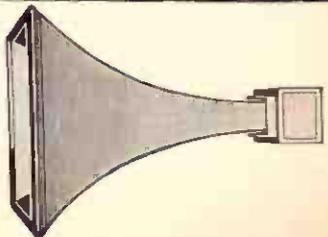
Length six ft., weight 22 lbs., standard thread, one inch metal bead edge, strong suspension ring, demountable tone arm. 2 1/2 ft. long. Net Wt. 22 lbs.

**List Price**

**\$42.50**

## DIRECTIONAL 5-INCH CONE SPEAKER TRUMPETS

These special trumpets are for use with 5-inch cone reproducer-units. These trumpets flare on all four sides, resulting in a horn that affords greater coverage and improves the frequency response of the cone unit. These horns are absolutely weather-proof and will withstand a great amount of physical shock and strain. They are constructed of a smooth durable material and have the seams joined by a one-piece brass welding. The housing for the cone speaker is weather-proof and is securely fastened to the trumpet. Finish brilliant aluminum. Brackets for convenient mounting and a canvas cover for the mouth of the horn are supplied with each trumpet. Overall size:—Bell 30"x30", length 4 ft. Shpg. Wt. 25 lbs.



Model CT-5  
 List Price

**\$25.00**



**UNITS**

# ATLAS



**TRUMPETS**

## “DEMOUNTABLE” FLARE AND DIRECTIONAL BAFFLES



Model "UF"

Simple assembly    Fine appearance    Convenient handling  
 Low Cost            Absolutely weather proof    Small storage space

Improve the frequency response, increase the efficiency and control the sound distribution of your cone speaker.



Model "UD"

Overall dimensions, Bell opening 30x18, depth 14 inches. Shpg. Wt. 10 lbs. Shpg. Size 30x16x2 1/4 inches.  
 Type "A" for 10, 11 and 12-inch cones.  
 Type "B" for 7, 8 and 9-inch cones.

**Model "UF" .....** List Price \$7.00

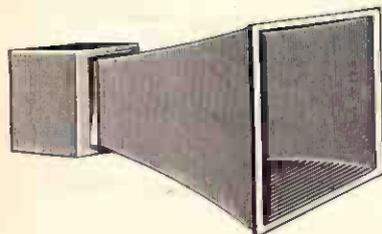
Overall dimensions, Bell opening 22x23, depth 25 inches. Shpg. Wt. 15 lbs. Shpg. Size 27x25x3 inches.  
 Type "A" for 10, 11 and 12-inch cones.  
 Type "B" for 7, 8 and 9-inch cones.

**Model "UD" .....** List Price \$9.50

## Weatherproof "Demountable" Speaker Housing

This speaker housing may be easily attached to either of the above horn baffles. Inside dimensions of housing 15 3/4"x15 3/4"x11" deep. Shpg. Wt. 8 lbs. Shpg. Size 17"x17"x2".

**Model "UB" Speaker Housing .....** List Price \$5.00



## ATLAS GIANT CONE SPEAKER PROJECTOR HORN

Flared Exponential Side

This horn is ideal for long range indoor and outdoor application. With a good cone speaker sound can be projected over extreme distances. This horn can be easily demounted for storage and transportation. Guaranteed 100% weatherproof in all climates. Finished in a brilliant aluminum. Will accommodate all speakers having 10, 11 or 12-inch cones. Bell opening 24"x36". Total length as shown, 4 feet. Shpg. Size (demounted) 37"x25"x3 1/4". Shpg. Wt. 24 lbs.

**Model UP (less Cone Housing) .....** List Price \$14.50

**Model UP (with UB Housing as illustrated) .....** List Price 19.50

## WALL SURFACE SPEAKER HOUSING

A speaker housing for school-room, hospital installation, inter-office call system, ship state-rooms, etc. These housings are spun from heavy gauge aluminum and beautifully finished in a weather-resistant, natural aluminum color. The cone opening is protected with a strong metal screen and grill cloth covering.

Dimensions: Cone opening diam., 5 1/2"; inside depth, 4 1/2"; smallest inside diam., 8". Shpg. Wt. 1 1/2 lbs.

**Model SH-5—List Price .....** \$5.00

Dimensions: Cone opening diam., 7"; inside depth, 5 1/4"; smallest inside diam., 10 1/2". Shpg. Wt. 2 lbs.

**Model LH-7—List Price .....** \$6.00



## ORIGINAL ATLAS ALUMINUM DEFLECTOR BAFFLE

The latest development in all-aluminum, 100% weatherproof, directional baffles. The Atlas Baffle features: heaviest gauge metal, snap-on weatherproof cover, heavy metal grill cloth, protective screen, acoustic felt lined speaker housing, all hardware for mounting cone speaker, etc. Overall length 20", diameter bell 17". Will accommodate all 10, 11, 12 inch speakers. Finish, brilliant aluminum. Shpg. Wt. 6 lbs.

**MB-10—List Price .....** \$15.00

**AM-10—Same as above, Lighter gauge, less special features, List Price 9.00**

Adaptor rings for accommodating smaller size speakers in MB-10.

**List Price .....** .75

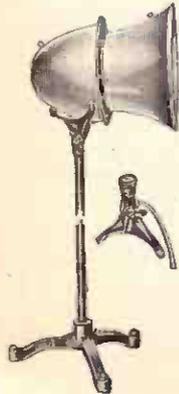


## FLOOR STAND COMPLETE — MF-10

This item offers an ideal method of supporting the baffle. The stand weighing 29 lbs. is adjustable so that the baffle can be directed in any position. Stand height with baffle is 6 feet. Finish black shrivel. The adjustable mounting fixture alone (SA-10) is available for mounting baffle on any standard pipe fixtures.

**Floor Stand Complete—MF-10 .....** List Price \$20.00  
 Shpg. Wt. 35 lbs.

**Mounting Fixture only—SA-10 .....** List Price 9.00  
 Shpg. Wt. 4 lbs.



# SPEAKER CONES

# CARRON

# FIELD COILS

## CARRON

"A CARRON CONE IMPROVES THE TONE"

### REPLACEMENT SPEAKER CONES

Carron Replacement Cones are made of one piece of seamless material molded by a patented process to insure longer life and better resonant qualities than the originals. The voice coils are exact duplicates with respect to wire size and winding. These cones are specially designed to match the originals and will produce a noticeable improvement in tone quality.



No.	Model No.	O.D. Ins.	List Price	No.	Model No.	O.D. Ins.	List Price	No.	Model No.	O.D. Ins.	List Price
<b>ATWATER KENT</b>											
1900	43, 46, 55, 60, 66, 67, 64, F4	10 3/4	52.00	1058	G1 for Models 71, 72...	9	1.95	1087	104, 105	8	2.00
1001	43, 46, 55, 60, 66, 67, 64, F2	10 3/4	2.00	1059	G2 for Models 71, 72, 91, 92, 181	9	1.95	1088	Speaker 169, Models RE20, R34, R35, R39, R50, R55, RE57, RAJ59, RAE79, R80, R82, R86	10 1/4	2.00
1002	80, 82, 81, 558, 627, 87, 90, 92, 87, Early 83, 85	8 3/4	1.75	1060	G3 for Models 90, 91, 93, 101, 102, 103	10	2.00	1089	48, R6, R7, R-7A, R-7LW, R8, R9, R-9DC, R-10, R-10DC, R-11, R-12, R14, R15, RE16, RE-16A, RE17, RE18, RE-18A, RE19, R21, RO-21, RAJ-26, CE-29, R34, R42, R-43DC, RE73	10	1.50
1003	112, I, F, P, H	10 3/4	2.00	1062	G5 for Models 131, 132, 231, 61, 62, 103	12	2.90	1124	R32, R35, E35, RE45, R52, R75, E-135, E152, RE154, RE156	9	1.75
1004	77, 88, 89, 94, 96, 469	10 3/4	2.00	1064	G7 for Model 21	10	2.50	1164	R5, RX5, R5DC (RCA R71)	7 1/2	1.00
<b>BOSCH</b>											
1007	48, 58	9 5/8	2.75	1065	G8 for Model 22	12	2.00	<b>ROLA</b>			
1008	31, 73, 20J, 19, 36, 38	9 3/4	2.75	1067	G10B, G10C, G10D, G10E for Models 151, 153, 154, 155, 156	7 1/2	2.00	1081	F5, used in Lyric S-50, General Motors 1907	6 1/4	1.75
<b>COLONIAL</b>											
1026	33, 38	12 1/4	2.90	1068	G11B, G11C for Models 251, 253, 264, 201, 203, 204, 211, 214	10	2.40	1083	F6, F8, used in Sparton 10, 14, 15, 56, 72, Airline 33-35, Kolster K60	7 1/2	2.00
1208	37, 41, 52, 85, 62, 97, 51, 53	9 5/8	2.50	1069	G13B, G13C for Models 353, 215	12	2.25	1086	K9, inside Spider	11	2.75
<b>CROSLEY</b>											
1027	M45, 262, 425, 625, 408, 308, Dynacoil	9	2.50	1070	G14, G14B, G14C, G14D, G14E, G14F for Models 351, 353, 223, 221, 407	12	2.00	1226	K9, 3-point Spider	11	2.90
1117	124	7 3/4	2.25	<b>PHILCO</b>							
1037	124, 127	11 1/4	2.75	1078	40, 41, 42, 65, 76, 77, 87, 90, 95, 96, 111, 112	10 3/4	1.40	1079	3, 20, 21, 46, 70, 90, 470, 490	8	1.25
1053	124	7 1/2	2.25	1203	5, 48, 50, 80, 81, 52	5 3/4	1.00	1245	6, 7, 8, 9, 10, 12, 14, 15, 19, 43, 47, 71, 89, 91	7 3/4	1.00
1118	125	7 3/4	2.25	1247	86	9	1.50	1269	35, 37, 50, 51	8 3/4	1.25
1055	135	8	2.50	<b>STEWART WARNER</b>							
<b>FADA</b>											
1030	20, 32, 15, 25, 15B, 15C, 15 Series Deep	8 1/2	2.75	1094	200A, 445A, 565A, 440, 950, 201A (2-point Spider)	9	2.75	1095	445A, 200A, 565A, 440, 990, 950 (3-point Spider)	9	2.75
1133	KD45, 65, 41, 412, 42, 422, 44, 46, 47, 12A-12B	10 1/2	2.90	<b>UTAH</b>							
<b>JENSEN</b>											
1034	D1, D5	9 1/2	2.90	1122	A100, D200, used in Airline 28-22, 28-95, 10,000, 6200, 14,000, Balkeit	8 3/4	2.75	1123	Stadium, 66A, 66B, used in Airline 2955, 3065	11 1/2	2.90
1035	D7, D8	11 1/4	2.90	<b>U. S. APEX GLORITONE</b>							
1036	D9 (Outside Spider)	11 3/4	2.90	1105	26A, Speaker 2467	8	2.00	1109	27, Speaker 1936	8 1/2	2.00
1037	D9 (Inside Spider)	11 1/4	2.75	1111	10B, Speaker 2802	10	2.50				
<b>MAGNAVOX</b>											
1048	D7, D8, D6, 80, 90, 100	9	2.75								
1050	130, 138, 401	8 1/2	2.50								
1053	140, 144	7 3/4	2.25								

Write us for additional quotations on any cone assembly not listed above, or else you may send us your old cone and voice coil with a cash deposit and we will replace it for you at a price not to exceed \$2.75 for standard types. There will be an additional charge of \$1.00 for each installation made by us.

### CARRON "415" CEMENT



For cementing bakelite to bakelite, metal parts, glass. Will hold loose inserts, tube bases, moldings, caps, etc. Also many other uses. Packed in two-ounce can.

List Price \$0.50

### CARRON CEMENT KIT

Carron Radio Repair Cement Kit manufactured expressly for speaker repair work. Kit consists of one two-ounce metal can of cement, one two-ounce metal can of thinner, together with brush. Used for cementing leads, voice coil, R.F. coils, chokes etc. The thinner is used for loosening wires, breaking down cemented parts, etc. If cement hardens mix thinner with it, and the cement will become as efficient as ever.

This cement and thinner is the same as that used by many of the leading speaker manufacturers in the country. For efficiency in your speaker repair work, use Carron Cement Thinner, and avoid the difficulties which accompany all experimentation.



List Price Per Kit 63c

### CARRON SPEAKER CONE CEMENT

Made Particularly for Speaker Work. Fast Drying. Quick Adhesion.



List Price \$0.42

# SPEAKER CONES

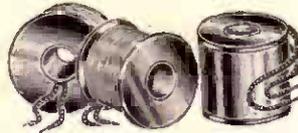
# CARRON

# FIELD COILS

## AUTOMOBILE SPEAKER REPLACEMENT CONES



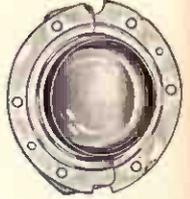
No.	Model No.	O.D.	List Price
<b>ARVIN</b>			
1172	10 (Operadio)	5	\$1.50
1204	20 (Operadio)	6 1/2	1.75
<b>ATWATER-KENT</b>			
1271	666 (Utah)	6 1/2	1.75
<b>CHEVROLET</b>			
1254	600, 565, 600, 249 (Gradow)	8	2.50
1200	601, 038 (Motorola)	8	2.50
<b>CHRYSLER—See PHILCO</b>			
<b>CROSLEY</b>			
1212	103, 167	6	2.00
<b>DE SOTO—See PHILCO</b>			
<b>DODGE—See PHILCO</b>			
<b>EMERSON</b>			
1201	KS38 (Utah)	5	1.50
<b>FORD</b>			
1156	118 (Majestic)	6	1.50
1205	Zenith	6 1/2	2.00
<b>GENERAL ELECTRIC</b>			
1091	B40 (RCA M34)	5	1.00
<b>HUPMOBILE—See PHILCO</b>			
<b>MAJESTIC</b>			
1156	66, 118 (G24)	6	1.50
<b>MOTOROLA</b>			
1128	88, 61	8	2.50
1125	61	6	2.00
1054	55, 77	6	2.00
1233	77A, 77B	7 1/4	2.25
1201	44	5 1/2	1.50
1185	44	5	1.50
1271	Super 6	6 1/2	2.00
1198	34	5	1.50
1199	Dual 6	6 1/2	1.75
1200	Twin 8	8	2.50
<b>NASH—See PHILCO</b>			
<b>PHILCO</b>			
1079	3	8	1.25
1203	5, 11, J, R	5 3/4	1.00
1245	6, 7, 8, 9, 10, 10-122, 12, 800, 800-122, PAD, PBD, C, C-122, D, D-122, E, G, H, H-122	7 3/4	1.00
1269	700, G-122, Q	7 1/2	1.00
<b>PLYMOUTH—See PHILCO</b>			
<b>RCA-VICTOR</b>			
1091	M34, 105	5	1.00
<b>STUDEBAKER—See PHILCO</b>			



## REPLACEMENT FIELD COILS

No.	Model No.	Ohms	List Price
<b>APEX GLORITONE</b>			
3001	26	11,500T	\$4.00
3002	20A	11,500T	4.00
3003	26P	11,500T	4.00
<b>ATWATER KENT</b>			
3017	46, 53, 47 Early, Late 55K	1,700	6.00
3018	55, 60	1,100	6.00
<b>BOSCH</b>			
3021	48	2,000	6.00
<b>COLONIAL</b>			
3032	31-32	6,000	15.00
3034	33AC	6,000	6.50
<b>CROSLEY</b>			
3040	M45	350	3.90
3041	M45	1,500	4.40
3042	M45	2,500	4.80
<b>JENSEN</b>			
3058	D7-D8	1,500	4.40
3059	D7-118	2,500	5.00
3061	D9-D15	1,000	2.60
3064	D9-D15	2,500	2.50
<b>MAJESTIC</b>			
3084	G1	3,100	8.00
3085	G2	2,730	8.00
3086	G3	2,730	7.50
3088	G5	7,650	8.00
3089	G6	1,000	7.50
3090	G7	1,250	7.50
<b>PHILCO</b>			
3129	20	3,100	2.00
3130	86, 87, 65, 95, 74, 96, 77	3,200	4.50
<b>RCA-VICTOR</b>			
3131	46	2,500	4.00
3134	106	6,000	5.00
<b>ROLA</b>			
3137	F4	3,000	2.75
3138	F5	1,800	2.85
3139	F6	2,500	3.50
<b>STEWART-WARNER</b>			
3149	950	10,000	8.00
<b>STROMBERG-CARLSON</b>			
3152		7,500	9.00
<b>VICTOR</b>			
3167	R32, 45, 75	2,950	5.80
<b>ZENITH</b>			
3169	52	2,500	6.50

## REPLACEMENT ALUMINUM DIAPHRAGMS



Diaphragms for all types Rason Units. Complete with Voice Coil. **LIST Price \$5.00**

Diaphragms for Western Electric Units. Complete with Voice Coil. **LIST Price \$5.00**

Diaphragm for Fox Units. Complete with Voice Coil. **LIST Price \$5.00**

Diaphragm for Amplion Units. Complete with Voice Coil. **LIST Price \$5.00**

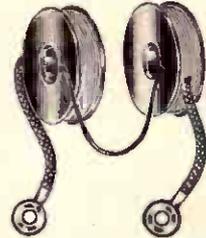
These diaphragms, made of the best grade of duraluminum obtainable, will match, and in many instances, surpass the performance obtained from the original. Electrical and physical specifications are exactly the same as the original.

## CARRON SPEAKER CENTERING SHIMS



Carron Speaker Centering Shims are made of very flexible celluloid in four different thicknesses and four distinct colors. Each size and thickness has its own compartment in a specially constructed leather case, and is so marked on the case. No serviceman, doing speaker work can possibly get along without these inexpensive and convenient cases. **LIST Price \$0.60**

## MAGNETIC COILS



RCA 100, Western Electric 540-AV, RCA Model 30. **LIST Price, 75c Per Pair**

RCA 100A, 100B, 103, used in RCA receivers 30A, 50 and 51. **LIST Price, 75c Per Pair**

Coils for Best and Utah Orthovox Speakers. **LIST Price, Per Pair 75c**

## CARRON COLOR CODING ENAMEL SET



A very brilliant kit for color-coding sockets, coils, wire terminals, tubes, jacks, etc. Will produce a tough, brilliant surface and will improve the appearance of various parts of servicemen's test equipment. **Dries in Fifteen Minutes**

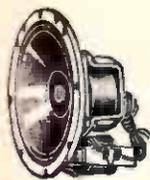
Consists of four soft camel hair quill brushes, five screw top bottles, quarter ounce size, one of thinner and four of contrasting and brilliant colored enamels. Green, orange, blue and yellow. **LIST Price 50c**

THE LISTINGS ON THESE CARRON PAGES SHOW ONLY THE LEADERS. THE COMPLETE LISTING IS FREE FOR THE ASKING. WRITE FOR CATALOG.

# WRIGHT DeCOSTER SPEAKERS

## WEATHERPROOF CONE SPEAKERS AND TRUMPETS

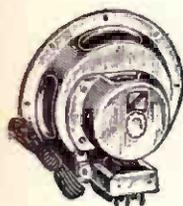
### THE SPEAKER WITH THE SOLID CENTER SPIDER



**Model 390—5" D.C. Unit** ..... List Price \$3.90

Voice-coil impedance at 400 cycles 4.2 ohms. Field-coil dissipation, maximum 6 watts, minimum 3.5 watt s; voice-coil 3 watts maximum; cone, 3 $\frac{3}{8}$ " ; outside diameter of cone bracket, 5" ; depth, 2 $\frac{7}{8}$ " ; packed 1 to a carton; approximate shpg. wt. 1 $\frac{3}{4}$  lbs. Finish—bright rust-proof cadmium-plate. Standard mounting-hole template. Standard voice-coil transformer matches single 43 output-tube.

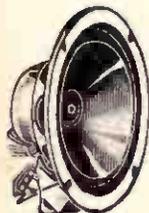
Standard field-coil resistance, 3000 ohms.



**Model 530—6" D.C. Unit** ..... List Price \$5.30

Voice-coil impedance at 400 cycles 3.58 ohms. Field-coil dissipation, maximum 9 watts, minimum 5 watts; voice-coil 5 watts maximum; cone, 4 $\frac{1}{2}$ " ; outside diameter of cone bracket, 6 $\frac{3}{8}$ " ; depth, 3 $\frac{1}{8}$ " ; packed 1 to a carton; approximate shpg. wt. 1 $\frac{1}{2}$  lbs. Finish—bright rust-proof cadmium-plate. Standard mounting-hole template. Universal voice-coil transformer matches all output tubes.

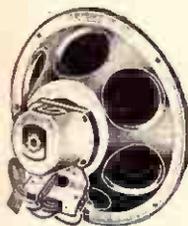
Standard field-coil resistance, 2500 ohms.



**Model 630—8" D.C. Unit** ..... List Price \$6.30

Voice-coil impedance at 400 cycles 3.58 ohms. Field-coil dissipation, maximum 9 watts, minimum 5 watts; voice-coil 8 watts maximum; cone, 6" ; outside diameter of cone bracket, 8 $\frac{1}{4}$ " ; depth, 4" ; packed 1 to a carton, approximate shpg. wt. 4 $\frac{1}{2}$  lbs. Finish—bright rust-proof cadmium-plate. Standard mounting-hole template. Universal voice-coil transformer matches all output tubes.

Standard field-coil resistance, 2500 ohms.



**Model 790—10" D.C. Unit** ..... List Price \$7.90

Voice-coil impedance at 400 cycles 5.05 ohms. Field-coil dissipation, maximum 12 watts, minimum 6 watts; voice-coil 9 watts maximum; cone, 8" ; outside diameter of cone bracket, 10 $\frac{1}{8}$ " ; depth, 5 $\frac{7}{8}$ " ; packed 1 to a carton; approximate shpg. wt. 5 $\frac{3}{4}$  lbs. Finish—bright, rust-proof cadmium-plate. Standard mounting-hole template. Universal voice-coil transformer matches all output tubes.

Standard field-coil resistance, 2500 ohms.

Models 530, 630, 790 are all equipped with neutralizing coils.

**Model 470—A.C. Field Supply** ..... List Price \$4.70

By using the Model 470 Field Supply you may now have the best 6, 8 or 10-inch A.C. Speaker at a price which would have been considered impossible yesterday.

Dimensions, 8 $\frac{3}{4}$ " x 2 $\frac{1}{2}$ " x 1". Weight, packed one to a carton, 2 lbs. Price less 25Z5 tube.

Standard Specifications: 110 volt, A.C. 25, 50 or 60 cycle. Delivers a maximum of 100 milliamperes at 140 volts.



**Model 520—Field Supply** ..... List Price \$5.20

Delivers 17 watts to 1700 ohm field and 12 watts to 2500 ohm field. Heavy Duty model for P.A. reproducers. See other side.

### "Cabinette" Speaker

Designed to completely serve the multitude of modern speaker applications and to satisfy the demand of the most exacting critic. Dark walnut finish, with face edges of base and top black walnut. The Cabinette may be hung on the wall without any mounting shelf, due to the bottom having the same beautiful finish as the rest of the cabinet.

**Model 1480** ..... List \$14.80  
Packed one to carton. Approximate Shpg. Wt. 10 lbs. Equipped with standard Model 630, 8" speaker.

**Model 1640** ..... List \$16.40  
Packed one to carton. Approximate Shpg. Wt. 11 lbs. Equipped with our standard Model 790, 10" speaker.

### Metal Cabinet Dynamic Speakers

#### Multi-Purpose Model for Amateurs, Experimenters and Engineers

The black crystalline finished all-metal cabinet with the black and grey grille cloth lends a singularly attractive value to these dynamic speakers.

**Model 880** . List Price \$8.80  
Equipped with 6" Speaker with universal transformer to match all output tubes. 2500-ohm field. Packed one to carton.  
Approx. Shpg. Wt. 8 lbs.

**Model 980** List Price \$9.80  
Equipped with 8" Speaker with universal transformer to match all output tubes. 2500-ohm field. Packed one to carton.  
Approx. Shpg. Wt. 8 $\frac{1}{2}$  lbs.

### New "Hyflux" Magnetic Reproducer

Especially designed for battery radios, auto radios, schools, hotels and amateurs. A highly efficient speaker, engineered and constructed to give the best tone quality through a broad frequency range. Seamless cone; easily accessible adjustment; bakelite coil form; and metal dust-proofed cap and lever arm.

**Model 400—6"** . . . List \$4.00  
**Model 450—8"** . . . List 4.50

# WRIGHT DeCOSTER SPEAKERS

## WEATHERPROOF CONE SPEAKERS AND TRUMPETS

### THE SPEAKERS WITH THE "PARA CURVE" DIAPHRAGMS

Eliminates Sub-Harmonics  
Greatly Assists in Elimination of High-Frequency Cancellation



Extends the Range of the Reproducer Into the Higher Frequencies Further Than Was Ever Possible Before

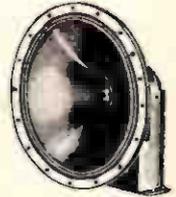
## PUBLIC ADDRESS "HIGH FIDELITY" SOUND PRODUCERS

### Model 1750—12-inch Speaker ..... List Price \$17.50

Voice-coil impedance: 2.6 ohms at 400 cycles. Voice-coil power-handling capacity 10 watts. Universal voice-coil transformer for all output tubes is furnished as standard equipment. Standard field resistance 2500 ohms. Field resistance made to any specification. Shpg. Wt. 17 lbs. Dimensions on above model: Cone bracket 12 1/4"; cone 10"; depth 7 3/8". Finish: Bright rust-proof cadmium-plate.

### Model 1980—12-inch Speaker ..... List Price \$19.80

Developed and designed for smaller indoor sound installations. The full rich, mellow tone so pleasant and much in demand by all lovers of music is further assured at good volume through the use of an extra large 2 1/4" voice-coil. Voice-coil impedance: 10 ohms at 400 cycles. Voice-coil power-handling capacity 11 watts. Universal voice-coil transformer for all output tubes. Standard field resistance of D.C. model, 2500 ohms. Field resistance made to any specification. Shpg. Wt. 17 lbs. Cone bracket 12 1/4"; cone 10"; depth 7 3/8". Finish: bright rust-proof cadmium-plate.



### Model 2940—12-inch Speaker ..... List Price \$29.40

This reproducer has a water-proof cone and all metal parts are cadmium-plated. It has a large field, excellent power handling capacity and is perfectly adapted for both outdoor and indoor sound installations.

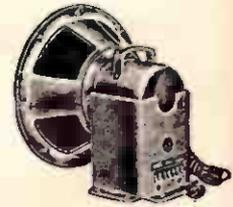
Voice-coil impedance: 10 ohms at 400 cycles. Voice-coil power-handling capacity 12 watts. Universal voice-coil transformer for all output tubes. Standard field resistance of D.C. model 2500 ohms. Field resistance made to any specification. Shpg. Wt. 25 lbs. Cone bracket 12 1/4" cone 10"; depth 8 3/8". Finish: bright rust-proof cadmium-plate.

## MODEL 5800—STADIUM "SENIOR"

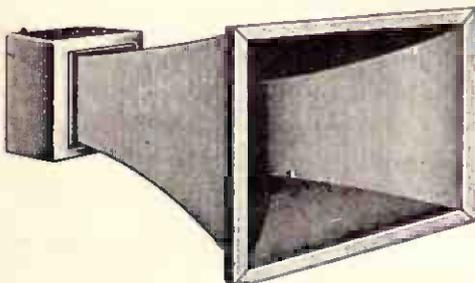
Full Range Reproduction.  
Complete Versatility.

Power Handling Capacity 15 Watts.  
Extraordinary Ruggedness.

Five input impedances; 10 ohms (directly to voice coil) 500, 1000, 1500 and 4000 ohms, thus eliminating the need for special impedance matching transformers. Field resistance—1800 ohms—to operate on 220 to 275 volts D.C. at current of 125 to 150 mls. Field dissipation 18 to 40 watts. Dimensions: 12 1/2" wide; 9" deep; 12 1/4" high over all. Guaranteed **RUST-PROOF**. The Senior Stadium Model is cadmium plated and then painted, which assures an everwearing finish.



### Model 5800—Weight, 32 lbs. .... List Price \$58.00



## The Model 6000 Silver Port-a-Horn

The Portable Horn With a Dynamic Cone Type Speaker

Sensitive enough to operate on one watt, yet capable of handling ample power, it will deliver an astounding amount of volume.

The terminal strip is accessible from the outside and has three impedances—500, 1500 and 4000 ohms—enabling the user to adapt any number of these units to any amplifier. Field resistance is 6000 ohms, however, any special field resistance can be furnished at no extra charge.

Outside measurement, length overall, 30 1/4"; Bell opening 28"x18 1/2"; Unit housing 10 1/4"x7 1/4". Wt. crated, 77 lbs.

List Price ..... \$60.00

## The Model 2050 Silver Horn and Speaker

Ideal for use in hotel banquet halls and small auditoriums. Standard field resistance of the special 6" speaker unit of Model 2050 is 2500 ohms, but any field resistance will be furnished, no extra charge. Field dissipation, maximum 12 watts, minimum 6 watts. Voice-coil impedance, 5 ohms. Outside measurement of horn: Length overall, 27 1/4". Bell at opening, 22 3/4"x14". Wt. crated 15 lbs. The Model 900 matching transformer is extremely adaptable as it will take care of from one to six speakers with any amplifier having an output of either 500, 1500, or 4000 ohms. Size—3 3/8" high, 5" deep, 4 1/2" wide. Wt. boxed 4 1/2 lbs. Speakers with individual transformers can be furnished to match any impedance.

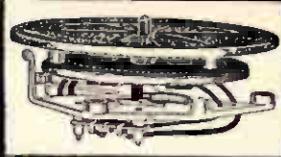
List Price \$20.50

Model 2300—Same as Model 2050 with Separate Voice-Coil Transformer ..... List Price 23.00

Model 900—Multi-Impedance Matching Transformer for Models 2050 or 2300 ..... List Price 9.00

With Wright DeCoster original duplicate parts for cones, transformers and field coils, you are assured of the same high quality workmanship and performance as the original product.

# PHONO MOTORS PHONO PICK-UPS



## "RCA" HEADS AND PICK-UPS Model 67



Part No. 2601. Impedance of coil 48.5 ohms. Has long leads. Shpg. Wt. 2 lbs.  
**List Price** .....\$4.00

### For Victor RE-45 and RE-75

Victor Part No. 10779. Impedance 200 ohms. Has fine frequency response. Shpg. Wt. 2 lbs.  
**List Price** .....\$4.75

### For RE-80, RE-81 and RE-84

Part No. 6335. Impedance 7 ohms. Pin jack connections. Shpg. Wt. 2 lbs.  
**List Price** .....\$4.00

## Special Two Speed Pick-Up

Most recently developed type. Used in Model E31. Has flat response from 50 to 5000 cycles. Arm heavily counter-balanced to provide least needle pressure on both 78 and 33 R.P.M. records. Assembly comprises Head No. 6542 with impedance of 28 ohms; Arm No. 6543, with stop rod and connecting cable; and Facutcheon No. 3779, with mounting rivets.



**List Price** .....\$8.61

No. 6542—Head only.

**List Price** ..... 4.15

## Balanced Pick-Up



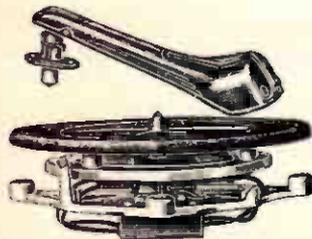
Used in Models R-80, RE-17, RE-57, RAE-68 and T-5 Electrola. Assembly comprises Head No. 7085; Arm No. 8643 with stop rod and connecting cable. Impedance of head 20 ohms. Fine response. Finished in dull silver. Shpg. Wt. 7 lbs.

**List Price** ..... 58.00

No. 7085—Head only.

**List Price** ..... 4.00

## Midget Phono-Motor and Pick-Up Assembly



The motor is for operation on 110 volts, 60 cycles A.C., and measures only 7" in diameter and 2 1/2" deep. Synchronous type, 78 R.P.M., but not self-starting. The pick-up unit measures only 6 1/4" from needle screw to tip of arm. Fully as efficient as larger pick-ups. Impedance of coil is 2500 ohms. Comes complete with head, arm and connecting cable.

No. 9038—Motor. Shpg. Wt. 7 lbs.

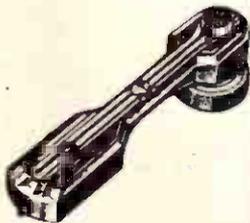
**List Price** ..... \$8.00

No. 11100—Midget Pick-Up. Shpg. Wt. 2 lbs.

**List Price** .....\$5.00

## "WEBSTER" HIGH-FIDELITY PICK-UPS

Designed To Insure Fine Tone Quality



Webster Electric has designed a new pick-up in which fidelity of tone has been developed to a superlative degree. The greatly improved performance is to be found in three elements of design. First, the use of an inert material in the arm. Secondly, the use of a superior dampening material. Thirdly, in a new method of needle suspension with very free movement. The light material employed in the arm, the perfect balance incorporated in the unit as a whole, and the design of the pick-up head assure long record life. Further, it permits playing either 78 or 33 1/2 R.P.M. records without any detachable counter-balance. Furnished complete with built-in volume control. Packed in an attractive display carton.

Model	Voltage	Impedance	List Price
30-A	.5V	9100 ohms at 1000 eye.	\$10.25
31-A	1.0V	36500 ohms at 1000 eye.	11.25

Note—These models can also be supplied less the volume control. Low impedance models can be furnished to specifications at slight extra cost. Standard stock models are supplied in an attractive gold finish.

## NEW "WEBSTER" CRYSTAL PICK-UP

Fitting Companion to the Well Known and Widely Used Webster Magnetic Pick-Up

### The New Model X-70A

is complete in every respect. Arm construction is rigid yet light in weight. The needle pressure is only 2.5 oz. The vertical bearings are self adjusting. Horizontal bearings are of the double cone type. The frequency range is from 40 to 8000 cycles with compensation on both extreme high and low frequencies.

### Model X-71A

is identical with the above except that the response may be termed true high fidelity. The frequency response is flat within 2 dB. from 40 to 5000 cycles, with a constantly rising output from 5000 to 8000 cycles. Ideal for use with high fidelity amplifiers or where extremely fine record reproduction is necessary. Output .7 volts at 1000 cycles.

**Specifications — Model X-70A —** Standard response. Complete with built-in volume control. Voltage output: 1.5 volts. Impedance: 180,000 ohms at 1000 cycles.

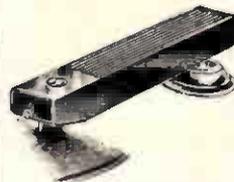
**Model X-71A—**High fidelity, complete with built-in volume control. Voltage output: .7 volts. Impedance: 85,000 ohms at 1000 cycles.

**Model X-70A** ..... **List Price** \$12.75

**Model X-71A** ..... **List Price** 14.50

## "AUDAK" PICK-UPS

### Model 100 Pick-Up



Genuine magnet - induction type. No crystal or condenser materials used in its construction. Designed for use where space and weight are important factors. Mounts just above turn-table shaft. Not affected by climate. Frequency response covers entire tone range. Shpg. Wt. 1 lb.

**List Price** .....\$7.50

### Electro-Chromatic Pick-Up

#### Model 2033

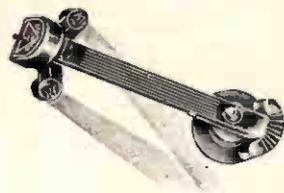
Fine frequency response. Ideal for use in all types of radio receivers. In 200, 500 or 7500 impedance. Specify impedance desired when ordering. Shpg. Wt. 5 lb.

**List Price** .....\$12.50

A low priced model similar to the above. Frequency response covers wide range. In 200, 500 or 7500 ohm impedance. Specify impedance desired. Shpg. Wt. 5 lbs.

**List Price** .....\$9.50

### Electro - Chromatic Pick-Up Model HR-33



Exceptionally fine reproduction is provided with this high quality wide range pick-up for use with records up to 12" in diameter. Equipped with needle ballast for compensation on frequencies below 300 cycles. Finest parts used in its construction. Available in 200, 500 and 7500 ohm impedances. Specify impedance desired when ordering. Shpg. Wt. 5 lbs.

**List Price** .....\$16.90

## "PIEZO" High Fidelity CRYSTAL PICK-UPS



30 to 8000 C.P.S.

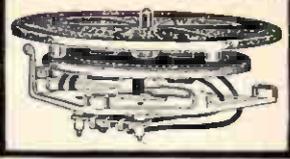
Without Resonant Peaks

With this pick-up the quality of the music available is limited only by the associated equipment. The Piezo Electric Crystal is the most efficient agent known for converting mechanical motion into electrical energy. Ball bearings and extremely light weight make possible the playing of 78 R.P.M. or slow speed records without the use of additional counterbalance weights. Available with 8 or 12-inch arms. Uses 1/2 Meg. volume control. Shpg. Wt. 5 lbs.

**Standard 8" Arm** ..... **List Price** .....\$15.00

**Standard 12" Arm** ..... **List Price** ..... 17.50

# PHONO MOTORS PHONO PICK-UPS



## R. C. A. Phonograph Oscillator



This unit is a small broadcast band oscillator. It may be used with any standard receiver. Solves most difficult problems in phonograph modernization work. No chassis wiring changes are necessary. All parts mounted on a radium plated metal chassis. Shpg. Wt. 6 lbs.

No. 9554—Phonograph Oscillator, less tube.  
List Price.....\$7.75

## R. C. A. Two-Speed Turntable



Used with models RE-81, RE-80 RE-40, 310 and 330. Part No. 8948. For other phono-motors. Ball race speed reducer. Felt top cover. Shpg. Wt. 5 lbs.

No. 8948—List Price.....\$5.50  
Shift Lever for above:  
No. 11106—List Price.....98

## Home Recording Blanks Double-Faced Type

These records will afford fine recordings. Of flexible composition, double-faced. To be played back with RCA-Victor Home Recording Needles or similar types.

6" Blanks. Package of 4.  
List Price.....\$1.10  
10" Blanks. Package of 2.  
List Price.....1.10  
12" Blanks.  
List Price.....1.10

## Victor Technical Purpose Records

An aid to all service engineers. Many types available in frequencies from 30 to 10,000 cycles. Also constant volume and aural test discs. If interested, write for detailed information.

No. XL-101—12". Single face. Variable from 30 to 10,000 cycles.  
List Price.....\$2.10

## Dual Speed Adapter

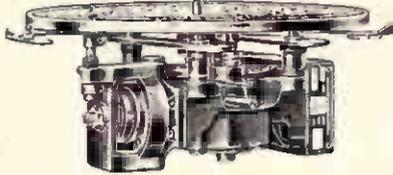


Can be attached to any phono-motor, in place of turntable. Lever selects either 78 or 33 1/3 R.P.M. speeds. Disc is 12" in diameter  
List Price.....\$6.00

## GREEN FLYER Governor Controlled

### Two-Speed Motor

33 1/3 or 78  
R.P.M.  
for A.C. or D.C.  
Operation



Specially designed for playing the new records recorded at 33 1/3 R.P.M. and records recorded at 78 R.P.M. The shift from one speed to the other is accomplished by simply moving a lever. All gears are completely enclosed and run in oil. Silent Spiral-Cut Gears made from Laminated Bakelite. Long, oversize, self-lubricating bearings. Absolute uniformity of speed under severe variation of voltage and record drag. Will not overheat in closed Cases and Cabinets. 10-inch turntable. Dial and Pointer Speed Regulator. Hardware bronze finished. Automatic stop available at extra cost.

Two-Speed—110 volts, 50 to 60 cycles, A.C.	List Price.....\$16.00
Single-Speed—78 R.P.M. Motor, 110 volts, 50 to 60 cycles A.C.	12.50
Single-Speed—78 R.P.M. Motor, 110 volts D.C.	12.50
Special 6-Volt—For Sound Truck Installations—Two-Speed	23.50
Special 6-Volt—Single-Speed, 78 R.P.M.	21.00
Universal A.C.—D.C. Motor.—Operates equally well on 110 volts A.C. or D.C. Only for 78 R.P.M. Automatic Stop.	18.00
Special Recording Motor, Dual Speed—Similar to above, but field and rotor are one half inch longer and motor is much more powerful. Constant speed under varying load conditions. Complete with 12-inch turntable. 105 to 120 volts, 50 to 60 cycles A.C.	\$19.50

Motors and turntable of different specifications are also available.

## PACKARD Record Changer



Sturdy construction, simple to operate. Uses powerful two-speed motor that plays either 78 or 33 1/3 R.P.M. records. Plays eight 10-inch records automatically, repeating or rejecting any record at will. Plays 12-inch records manually. Last record repeats until switch is turned off. Uses new Piezo Crystal high impedance pick-up. Entire unit built of copper plated steel, with all exposed parts finished in statuary bronze. Requires space 17 1/2" long, 5 1/2" high and 13 1/2" wide. Shpg. Wt. 30 lbs.

For 110 volts, 60 cycles A.C.—List Price.....\$47.50  
For 110 volts, A.C. or D.C.—List Price.....56.00

### MODEL L

Same as above, but plays both 10- and 12-inch records automatically. Available for all types of current. Shpg. Wt. 32 lbs.  
110 volts, 60 cycles, A.C.—List Price.....555.50  
For 6 volts, D.C.—List Price.....64.00  
Universal Type, 110 volts, A.C. or D.C.—List Price.....63.50  
Portable Case for all types—List Price.....8.00

## CAPEHART Dual Speed Automatic Record Changer

### Latest MODEL 19-12C-2

Equipped with the new balanced electrical pick-up. Excellent device for the home, public address systems, etc. Using ten long playing Victor records you can listen to four hours of music without a stop. Completely automatic, last record repeats until re-stacked or when master switch is turned off. An encore may be had of any record. Additional equipment includes a reject device and unloading lever. Can be mounted in your own cabinet, or in our De Luxe Cabinet, made expressly for the accommodation of this mechanism. Base, 14 1/2" x 14 1/2". Height above mounting board, 7 1/4"; depth below 3 3/4". Shpg. Wt. 30 lbs.



Mechanism complete, less Cabinet—List Price.....\$101.00

## Automatic Stop

Fully adjustable. Mounts under any turntable. Heavy duty type, will last indefinitely.  
List Price.....\$1.00



## Needle Cups



For phono or phono-radio combinations. Also good for replacing old tarnished cups. Bronze finish. Diameter 1 1/4". Open Type.

List Price.....\$0.09  
Per Dozen.....90  
Closed Type.  
List Price.....\$0.12  
Per Dozen.....1.30

## RCA Phono Needles STEEL

Available in Half Tone, Full Tone and Extra Large Tone. Half Tone needles packed 75 to envelope; others 100 to envelope. Specify type desired.

List Price, Per Envelope...\$0.17

### CHROMIUM

Semi-permanent needles. Available for use with 78 R.P.M. recordings (green shank) and for 33 1/3 R.P.M. recordings (orange shank).

List Price, Either Type,  
Package of Six.....\$0.30

### TUNGSTONE

Also semi-permanent type. Available in Full Tone and Extra Loud Tone sizes. Packed 8 to a container.

List Price, Either Type,  
Container of 8.....\$0.30

## R. C. A.

### Orthophonic Sound Box

Will improve the tone and volume of any Victrola now in use. Has a ribbed aluminum diaphragm that provides a more extensive frequency response than the old types.



Genuine RCA Part No. 6927, dull bronze finish. Shpg. Wt. 1 lb.

List Price.....\$4.50

## Drive Spring for "Victor"

### Victrolas



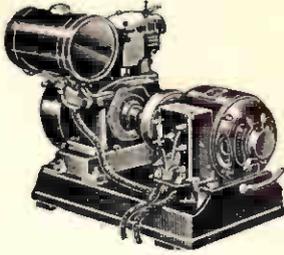
Two types available. Part No. 8656 will fit Victor Portable and Table Models 2-65, 2-30, 1-90, 2-55, 2-60, T-90, 2-25, and 7-11 and V-30. Part No. 10148 is used in the Victor Models 4-40, 4-20, 7-10, 7-25, 7-30, 8-9, 8-36, and 8-8. Shpg. Wt. 2 lbs.

Part No. 8656,  
Part No. 10148.  
List Price.....\$1.15

# MOTORS AND GENERATORS

## KATO A.C. Power Plant

Ideal for farm lighting, sound trucks, dance pavilions, etc. Consumes a minimum of gasoline and oil. Conservatively rated. Made self-starting by connecting to a 6-volt starting battery which the plant keeps automatically charged. Remote starting and stopping, by means of push buttons or wall switches, available at slight extra cost. Small voltage variation between load and no-load. Uses four cycle, magneto ignition and accurate mechanical governor. Available in sizes from 300 to 3000 W. Write for details and prices of sizes not listed.



300 watts 110-v. A.C. Shpg. Wt. 200 lbs.....	List Price
450 watts 110-v. A.C. Shpg. Wt. 220 lbs.....	\$158.00**
Remote control panel for either unit.....	185.00**
Special Muffler Head for Sound Truck installations.....	35.00**
	9.00**

## JANETTE Rotary Converters



For operating 110-volt, 60-cycle A.C. electrical appliances, radios, P.A. Systems, etc., from D.C. supplies. Models available for any voltage from 6 to 220 volts as listed below. All are equipped with interference filters to prevent noise reaching the radio. If filter is not required, write for prices on model desired. Sizes are listed suitable for practically any requirement from small midwest radios up to large public address systems, transmitters, etc.

Output Watts	Input Amps.	List Price	Output Watts	Input Amps.	List Price
<b>110-v. D.C. to 110-v. 60-cyc. A.C.</b>					
50	5.4	\$38.50*	80	1.3	\$38.50*
100	6.5	41.50*	110	1.9	41.50*
150	8.5	46.00*	150	2.4	46.00*
225	11.5	53.50*	300	4.0	64.50*
300	15.0	64.50*	500	6.4	85.00*
600	18.0	85.00*	<b>12-v. D.C. to 110-v. 60-cyc. A.C.</b>		
450	27.0	126.50*	30	6.5	40.00*
<b>6-v. D.C. to 110-v. 60-cyc. A.C.</b>					
30	13.0	40.50*	80	15.0	47.00*
60	24.0	64.50*	120	18.0	54.00*
			160	22.0	77.00*

## A.T.R. 200-Watt Inverter

### 110 Volts D.C. to A.C.

Produces absolutely noiseless 110-A.C. from 110-D.C. and can be used on receivers for short-wave and high-frequency reception without creating its own interference. The A.C. power can be used to operate radios, fans, vacuum cleaners, mixers, hair dryers, Public Address equipment and transmitters and receivers. No rotating parts—the only element that moves is the vibrator. Overall dimensions: 7 1/4" x 8" x 3 1/4". Shpg. Wt. 16 lbs.



110 Volts D.C. to 110 Volts A.C. at 200 Watts. List Price \$18.50

## HARTMAN 32 volt Converter

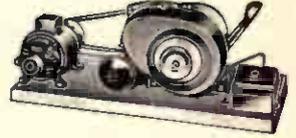
Supplies 85 Watts at 110 Volts A.C.



Makes possible the sale of A.C. sets to 32-volt homes. Makes it unnecessary to stock these special D.C. sets, and enables you to give the farmer a set that will not become useless if he moves, or power lines are extended. Can be used as supply for tube checkers on 32-volt calls. Filtering system is included. Dimensions: 6 1/2" x 5 1/2" x 4 1/2".

Model 32-C..... List Price \$16.00

## PIONEER Gas-Engine-Driven A. C. Generator 300 Watt



The Eacor Gas-engine-driven Generator provides both 110-volt A.C. for the operation of radios, amplifiers, or any other electrical devices together with 7 1/2-volts D.C. for charging 6-volt storage batteries. The engine is of the 4-cycle type and will run about 4 hours on a quart of gasoline. A built-in mechanical governor assures a constant frequency of 60 cycles. Filter can be supplied for operation on radio sets to eliminate any commutator ripple hum. Length 26", Width 12".

List Price..... \$136.00  
List Price, Filter Only..... 15.00

## PIONEER "Gen-E-Motor" Converters D.C. to A.C.



These new low price D.C. to A.C. Pioneer Gen-E-Motor Converters have proven extremely dependable and are conservatively rated. The armatures are wound with specially insulated wire of unusually large size, making possible higher power rating. The high breakdown point of the insulation assures long life, even under continuous duty. Vibration and operating noise have been practically eliminated by careful balancing of the armature and quiet running brush and commutator design. Adequate ventilation is provided through openings in the cast end plates. One year guarantee. Less Filter.

All Units Deliver 110 Volts,					60 Cycle Alternating Current				
No.	Input D.C. Volts	Output Amps.	Output Watts	List Price	No.	Input D.C. Volts	Output Amps.	Output Watts	List Price
640	6	13.3	40	\$44.00	3220	32	10.0	200	\$45.50
660	6	19.0	60	55.00	3225	32	13.0	250	49.50
1240	12	7.5	40	32.50	3230	32	15.0	300	55.50
1280	12	11.8	80	44.00	1140	110	0.8	40	31.00
1212	12	17.5	120	51.00	1180	110	1.30	80	34.00
1216	12	20.0	160	66.00	1111	110	1.78	110	37.00
3240	32	2.78	40	31.00	1115	110	2.23	150	41.50
3280	32	4.7	80	34.00	1120	110	2.80	200	45.50
3211	32	5.6	110	37.00	1125	110	3.55	250	49.50
3215	32	7.8	150	41.50	1130	110	3.85	300	55.50

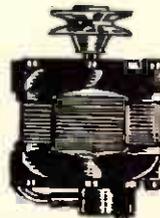
## PIONEER "Air-Flo" Wind Driven Generator-Charger

The Pioneer Gen-E-Motor Corporation presents here for the first time a complete unit device, wind-powered and providing 6 volts and 5 amperes direct current to charge and keep charged the storage battery of a radio set or the battery of any 6-volt lighting system. The generator unit is completely weatherproof and provided with cutout device to operate when the battery is fully charged. The propeller is scientifically curved to get maximum R.P.M. at any wind velocity and to operate at extremely low wind velocity. The unit may be mounted directly on the barn or house roof or may be supported by the tower unit which is illustrated and sold separately. Furnished complete with ammeter, cutout relay, pipe fittings, clamps, battery clips, and sufficient wire for average installation.

Wind Gear..... \$27.00  
Tower..... 6.75



## The New "AUTONATOR" Delivers 110-Volts A.C. In Cars and Trucks.



Ideal for sound trucks, motor cars, trucks, buses, taxis, planes, fire trucks, motor boats, neon signs, etc. It is a simple A.C. alternator—no wire-wound armature, commutator, brushes or collector rings. Only one moving part on sturdy ball-bearing shaft. Trouble-proof. Costs nothing to operate—can't burn out from over-load. Easy to install. It's pulley is driven from the fan belt. Operates when the car is running, and normally delivers 100-v. 60-cycle A.C. at 1800 R.P.M. but can be regulated at

any speed and for any load.

Cat. No.	Watts	List Price	Cat. No.	Watts	List Price
G-1	150	\$44.50**	G-5	600	\$112.50**
G-2	250	62.00**	G-6	800	129.50**
G-3	350	74.00**	G-7	1000	159.50**
G-4	450	92.50**			

# CARTER — PIONEER GEN-E-MOTORS

## for Autos - Sound Trucks - Transmitters and Police

### NEW CARTER Compact GEN-E-MOTOR

For Auto Radio Sets

It is the **Smallest Complete Eliminator** made. The motor is only 4 inches wide by 5 inches, by 2 1/4 inches high. The filter is built in. Ideal for replacing batteries and unsatisfactory vibrator type eliminators in auto radio sets. Easy to install; will run in any position; quiet running bearings require no oiling; runs from 6 volts; fully guaranteed.

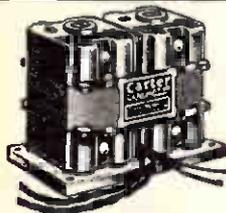


Code No.	Input Volts	Output Volts	Ma.	Inter Tap	Drain on Battery	List Price
1580A	6.3	180	30	90	2.6	\$16.50
1535A	6.3	135	30	67 1/2	2.2	16.50
1520A	6.3	200	40	90	3.5	16.50

### CARTER POWER PLANTS

For Sound Trucks and Transmitters

Special high voltage motors. Quick starting; no oiling; no adjustments. Single Units are furnished with large filter; Dual Units without filter. Standard R.M.A. guarantee.



Single Units (4 1/2 "x5 1/2 "x3 1/2 " high)

Code No.	Input Volts	Output Volts	Ma.	Drain	List Price
3510	6.3	350	100	11.3	\$35.00
3010	6.3	300	100	10.5	35.00
2775	6.3	275	75	6.	32.50
2550	6.3	250	50	4.5	30.00
1815	6.3	180	115	7.3	30.00

Dual Units (4 "x7 "x5 1/2 " high)

Code No.	Input Volts	Output Volts	Ma.	Drain	List Price
515	12	500	150	10	\$40.00
420	12	400	200	12	40.00
320	12	300	200	12	40.00
310	6.3	300	150	18	40.00
3015	6.3	350	150	19	40.00
3015	6.3	350	150	19	45.00*

\*With filter.

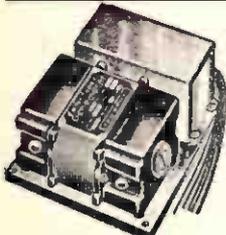
For Two-Wave Ultra Short Wave Police Radios, our No. 255-351 dual unit is recommended. One of the Generators delivers 250 volts at 50 Ma. for operating the receiver. The other unit delivers 350 volts at 100 Ma. for the transmitter. It runs only when transmitting.

List Price.....\$40.00

Can be supplied with large filter compartment and special filters to suit your requirements, at an additional charge.

### NEW HEAVY-DUTY POWER PLANTS

Extra-large double filters assure quiet radio reception. No oiling. No adjustments. No shielded wires. No vibrators. No relay. No trouble. No overheat. The Police Type will run continuously day and night on a 30% overload. Fully guaranteed. Can be furnished to operate with any make of radio set. Size: 4 1/2 " wide by 5 1/2 " long by 3 1/2 " high. Input 6.3 volts.



Regular Heavy Duty

Code No.	Output Volts	Ma.	Inter Tap	Drain on Battery	List Price
1780A	180	30	90	2.2	\$18.50
1735A	135	30	67 1/2	1.8	18.50
1720A	200	40	90	3.	18.50
1750A	250	50	90	4.5	18.50

When ordered we can supply generators for 12-32 input at \$2.00 extra. Special filter for operating long and short wave sets can be supplied at an added cost of \$2.50.

Police Radio Type

Code No.	Output Volts	Ma.	Inter Tap	Drain on Battery	List Price
1780AP	180	30	90	1.70	\$25.00
1735AP	135	30	67	1.5	25.00
1740AP	200	40	90	2.75	25.00
1750AP	250	50	90	4.2	25.00

### PIONEER GEN-E-MOTOR

Replaces vibrator type power supplies in all popular makes of auto radio receivers. It may be installed within the chassis housing of most sets. Compact 4 1/4 " high, 5 1/2 " wide, 2 3/4 " deep. Uniform output. No adjustments, no oiling, no servicing. Noiseless. One year guarantee.



No.	Output	Battery Drain	List Price
JW-18	180 V.—30 Ma.	1.94	\$13.00
JW-20	200 V.—40 Ma.	2.75	13.00
JW-25	225 V.—50 Ma.	3.80	13.00
JW-50	250 V.—80 Ma.	4.20	13.00

Special Plug-in Type for Ford Majestic Sets

JW-F	250 V.—50 Ma.	4.20	\$13.00
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### PIONEER GEN-E-MOTOR Auto "B" Eliminators

New Compact Models

Complete with built-in filter units, for use as battery eliminators for auto receivers using "B" batteries, and for installation in auto sets where it is desired to remove the filter system used with the old vibrator unit. The entire unit is housed in a sturdy metal case measuring 2 3/4 "x5 1/2 "x5 1/2 ". The Gen-E-Motor is floated in rubber, assuring complete freedom from vibration. The armature is supported by two sets of ball bearings. Shpg. Wt. 7 1/2 lbs.



No.	Volts	Output	Ma.	Battery Drain	List Price
5135-A	135	30	30	1.42	\$18.00
5180-A	180	30	30	1.94	18.00
5200-A	200	40	40	2.75	18.00
5225	225	50	50	3.80	18.00
5250	250	50	50	4.20	18.00

The above units may be furnished with intermediate tap for 50 cents additional. Add "T" to code word.

### Model H For Amplifiers and Sound Trucks

Dimensions 5 1/4 "x5 1/2 "x3 1/2 "

7565	265	75	5.00	\$31.00
7300	300	100	8.75	34.00

Shpg. Wt., each, 9 lbs. For 12-volt input add 10% to list price of 6-volt units.

### CROWE REMOTE CONTROLS UNIVERSAL HEAD

Universal Control for instrument panel, underdash, or steering column mounting. Has Croglax crystal. Adjustable pointer. V.C. knob removable 550 to 1500 Kc. calibration. 12 to 1 ratio. 300-degree pointer travel.

No. 603—Head only. List Price.....\$4.00



### HEADS FOR GENERAL MOTORS CARS

For all 1935 Oldsmobiles, Pontiacs and Chevrolet Master series.



List Price

No. 253—12 to 1 ratio.....\$6.00

Escutcheon Plate for Above Head

List Price

M-4910—Oldsmobile.....\$0.88

M-4887—Pontiac......70

M-4887—Chevrolet......70

### Flexible Shafts and Casings

Assembly includes one flexible shaft with connecting fittings and one Parkerized case. Two assemblies will be required for each radio installed.

18" length—List Price...\$1.00

30" length—List Price... 1.30

### Instrument Panel Mounting Kit

For mounting Crowe Universal Head on dashboard panel of cars listed below. Replaces ashtray. Has same finish. Kit includes dashplate, brackets, all hardware.

No. Car

A4344—DeSoto 35 Airstream.

A4611—"Ford 34, Deluxe, Std.

A4344—Hupmobile 35.

A4344—Plymouth 35.

A4344—Plymouth 35 (early).

A-4541—Plymouth 35 (late).

List Price, Less Head...\$1.20

\*Hole must be cut in panel.

### Steering Column Kit

Steering Column Mounting with fibre liners to fit all columns 1 1/4" diameter or less.

A-4617—List Price.....\$0.32

# UNIVERSAL MICROPHONES

## Microphone Stands and Accessories

### Mod. W-Single Button



Small protected diaphragm, very sensitive and compact. Standard impedance—gold surface. Output level—38 dB. 1 1/4" diam., 1/4" thick. Wt. 1 1/4 oz.  
**List Price**.....\$3.00

### Universal Lapel Mike



#### Two Button

A precision instrument with real broadcast reproduction. Cord easy to replace or remove. Output level—55 dB.; frequency response 50 to 4500 cy. Diam. 2 1/4" x 3/4" thick. Wt. 2 oz.  
**List Price**.....\$25.00

#### Single Button

For hearing aids, detective listening-in equipment, etc. Output level—37 dB.; frequency response 50 to 4000 cy. Same as above in appearance.  
**List Price**.....\$17.00

### Ordering Phone Box



Microphone Control Box 3 1/2" x 5" x 2". Wt. 1 1/4 lbs. Engraved bakelite panel as shown. Threaded for standard 1/4" pipe conduit. Provided with press button "to talk," green light as "O. K. signal" and red light showing "in use."

For single-button mounting, press button is D.P.S.T.: without microphone.  
**List Price**.....\$10.00

For double-button mounting, press button is three pole single throw; without microphone.  
**List Price**.....\$12.00

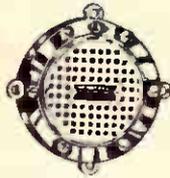
### Handi Mikes



Scientifically damped. Gold contact faces. Equipped with "on and off" switch in handle. Length 6". Diam. head 2 1/2". Packed Wt. 1 1/4 lbs. (Standard impedance.)

**Single-Button Model No. 200.**—For all uses. Output level—40 dB. With 6 ft. cord.  
**List Price**....\$10.00

**Double Button.**—For clarity and high quality. Damped for use close to loud speakers, sound trucks, etc. Output—55 dB. With 6-ft. cord.  
**List Price**.....\$15.00



### Model "A"—Single Button

Fully protected diaphragm. New heavy-duty design. Stretched diaphragm—24k gold contacts, highest grade. "Less hiss" granules. Scientific damping. 200 ohms—response 100 to 3500 cy. Output level—45 dB. Diam. 3"x1" thick. Net Wt. 1 lb. Packed Wt. 1 1/4 lbs.

**List Price**.....\$15.00

### Models X and XX—Stretched Diaphragm

Standard impedance—gold spots, low hiss level, and new detailed improvements. Fully protected diaphragm, frequency response 100 to 4000 cycles. Packed Wt. 1 1/4 lbs.

**SINGLE BUTTON** (as shown, except no front bar is used. Output level—50 dB.  
**List Price**.....\$7.50

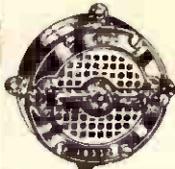
**DOUBLE-BUTTON** (as shown in illustration with heavy front bar). Furnished in three sensitivities—S-Sen. output level—45 dB.; M-Med. output level—50 dB.; D-Damped output level—55 dB.  
**List Price**.....\$10.00



### Model "BB"—Two-Button

The general all purpose microphone for both voice and music. 3 in. dia., 2 in. thick. Wt. packed 1 1/4 lbs. Polished chrome plate. Fr. 50 to 5000 cy. 200 ohm buttons.

Three degrees of sensitivity—S-Sen. Output level—45 dB.; M-Med. Output level—50 dB.; D-Damped. Output level—55 dB.  
**List Price**.....\$25.00



### Model "KK"—Two-Button

Ideal for studio broadcasting and recording. Frequency range from 40 to over 6000 cycles. Buttons 200 ohms impedance each. Output—50 dB. 24K pure gold spots. Finished in polished chrome. Three degrees of sensitivity as above. 2 1/2 in. dia., 1 1/4 in. thick. Net Wt. 1 1/4 lbs.  
**List Price**.....\$40.00

### Model "LL"—Two-Button

Standard broadcasting Model. Rust proof. Pure gold contacts, 30 to 7000 cycles. Output—50 dB. Dia. 3 1/2 in.; 1 1/4 in. thick. 200 ohms per button. 3 degrees of sensitivity as BB.  
**List Price**.....\$60.00

### Model "E" Condenser Microphone

For Highest Quality Broadcasting and Recording

Assembled. Ready for use as shown. A 2-stage amplifier using No. 230 tubes. Absolutely does away with batteries and renewal costs. Just plug Model "E" into 110v. A.C. 50-60 cycle socket. Absolutely no hum or ripple. Guaranteed as quiet as batteries. Output perfect for recording on either film or discs. Frequency response 35 to 10,000 cycles. Output greater than from a standard two-button microphone (—32 dB.) Connect to standard input transformers where carbon microphones have previously been used. Head has automatic barometric adjustment and diaphragm is protected by a solid cast grating. 25-ft. of rubber-covered, shielded cable furnished. Without tubes. Black crackle finish. Wt. packed, 34 lbs.

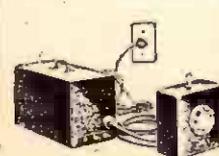
**List Price Complete**.....\$100.00  
**Model E-30**, as shown and described above, without power pack. Wt. 11 lbs.  
**List Price**.....\$60.00

**Battery Model E-64**, wired for 804 tubes. To be entirely operated by batteries. Output—35 dB. Without tubes. Wt. 11 lbs.  
**List Price**.....\$60.00

**E" Condenser only.** With circuit blue print—**List Price**.....\$40.00  
**Suitable Desk Mount—List Price**.....\$6.00  
**Floor Stand—List Price**.....\$15.00



### Model "G" All A.C. Condenser Microphone



Same specifications as above, but 70 to 7000 cycles.  
**List Price**.....\$84.00

**"G" Condenser head only**, with blue print.  
**List Price**.....\$30.00

**Floor Stand for Condenser Mike**.....\$15.00  
**Desk Mount for Condenser Mike**.....\$6.00  
**List Price**.....\$6.00

### Suspension Rings

Solid metal for hanging mikes from ceiling, etc. Beautifully chrome-plated. 8 springs included. 5" diam. for Model X-KK.  
**List Price**.....\$2.50



6 1/2" diam. for Model LJ, BB.  
**List Price**.....\$4.00

### New "X" Desk Mount



Highly-polished nickel-plated ebony rubber-covered base and 8 suspension springs, especially for mounting of Universal "X" microphone. Ring 5" diam.  
**List Price**.....\$3.50

### "K" Desk Mounts

5" diam. for mounting Models "X", "K" or "A". 4-point suspension. 8 springs. Base set in moulded rubber. Two tubes furnished for high and low assembly. Chrome-plated finish. Blank call-letter plate. High assembly 13". Low assembly 9 1/2".



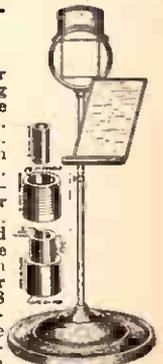
**With Covers.** Springs included.  
**List Price**.....\$6.00  
**Without Covers.** Springs included.  
**List Price**.....\$4.00

### "L" Desk Mounts

Similar to Type "K", but more rugged. Ring 6 1/2" diam.  
**Without Covers—List Price** \$6.00  
**With Covers—List Price**.....\$10.00

### Studio Floor Stand

For Dynamic-Ribbon or Crystal Mikes



A perfect floor stand. Ring 6 1/2" diam. Base 12" diam. Wt. 12 1/2 lbs. Ht. 5 1/2 ft. Smooth operation. Clamp lock positive. Silver crackle base. Highly polished chrome plate equipped with blank call letter nameplate. 8 springs included. Three fittings are furnished with each floor stand at no additional cost allowing the use of any make or model of microphone. Also a light weight adjustable and detachable copy holder furnished free.  
**List Price**.....\$15.00

# UNIVERSAL MICROPHONES

## Microphone Stands and Accessories

### Hearing and Devices



**HA2**—Has two-stage amplifier using Type 230 tubes— $3\frac{1}{2} \times 6\frac{1}{2} \times 7\frac{1}{2}$ " Weight without batteries 4 lbs. With batteries installed 7 lbs. Utmost

in quality and volume. Complete with Universal Microphone and Two-ounce Earphone with head band, but without tubes or batteries.

**List Price**.....\$44.00

**HA1**—Same as above except larger— $11 \times 5\frac{1}{2} \times 7\frac{1}{2}$ ". Weight without batteries  $4\frac{1}{2}$  lbs.; with batteries 16 $\frac{1}{2}$  lbs. Up to ten single earphones can be connected to HA1 at one time.

**List Price**.....\$48.00

### Five-Meter Sets



Special for five-meter transceivers. Light in weight and compact. Highly polished molded bakelite units of the French phone type, using special high output mikes. A 6-ft. 4-conductor cord furnished. Wt. 15 oz.

**Single-Button Mike** (output—38 db.), with either 2000 or 75-ohm high quality sensitive receiver.

**List Price**.....\$8.00

**Double-Button Mike** (output—55 db.), with either 2000 or 75-ohm high quality sensitive receiver.

**List Price**.....\$14.00



### Telephone Type Plug and Jack

Special 3-conductor plug and jack for microphone use Plug length  $2\frac{1}{4}$ ". Diameter  $\frac{3}{8}$ ". Jack length  $3\frac{1}{4}$ ". Fits  $\frac{3}{8}$ " hole.

**Jack—List Price**.....\$0.75

**Plug—List Price**.....1.50

### Suspension Springs



Highest grade spring steel. Rust proofed and polished chrome plated.

**List Price, each**.....\$0.05

### Carbon Granules

No. 100 Size



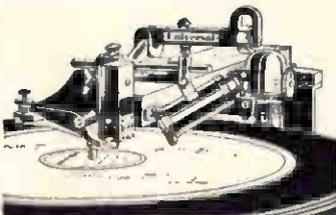
Very best grade transmitter carbon granules. Each vial contains sufficient granules to recarbon two two-button microphones. Hermetically sealed.

**List Price**.....\$1.00

### PROFESSIONAL RECORDER

**Not a Revamped Phonograph—Not a Suitcase Model.**

**A heavy reliable "rock solid" piece of machinery for long and continued use.**



The Recorder assembly is mainly of cast-iron and weighs 225 lbs. The turntable disc is 16 inches diameter, weighing 69 lbs., and mounted on 1-inch steel shaft.

**Rim Drive** is endless linen gum-dipped round belt engaging grooves in periphery of turntable. This method has proven itself smooth, quiet and reliable and without "waver" or "wow" and superior to any other kind of drive.

**The Motor** is 110-volt A.C., 100% synchronous, reversible and not self-starting. It maintains perfect constant speed under all varying load conditions. Develops 1/12 H.P., more than ample to cut any blank recording material up to 16 inches diameter. Recording can be done at 78 or 33 $\frac{1}{2}$  R.P.M. and on 50 or 60-cycle current.

**The Slide** is 1" x 3" solid steel bar rolling on ball-bearing grooves.

**The Cutter** is a special Universal Cutting Head with four pole pieces and four screw adjustments for damping—one in each pole piece. The magnet is Cobalt steel. By means of the adjustment screws any type of frequency response can be obtained, either high or low predominance, or equal response over an exceptionally wide frequency-range. It will cut any type of material in common use today for recording purposes.

**A Magnifying Glass** of 10 power and large field is mounted on an adjustable bracket so that all conditions while cutting will be under enlarged observation.

Workmanship throughout is of extreme precision and all iron parts are finished in black lacquer, with small parts in contrasting chrome and cadmium.

**UNIVERSAL Professional Recording Machine** for operation on 110-volt A.C., 50 to 60-cycle current, with motor, motor mounting, three belts, depth gauge and shoe, magnifying glass, etc., but without recording head or cutter.

**NET Price**.....\$250.00

**Transformer** for operation on 220-volt.

**Extra, NET Price**.....5.00

**Special Power Cutter** fitted to above, in any impedance desired—15, 50, 200 or 400-ohm.

**NET Price**.....35.00

**Extra Belts, any size.**

**NET Price, Each**.....1.00

**Boxing for Shipment, complete machine.**

**NET Price**.....2.50

### Aluminum Disc Recorder

#### New Model 12



For up to 12-inch recording on Universal blank aluminum discs. Powerful motor. Weighted turntable, two speeds—33 $\frac{1}{2}$  and 78 R.P.M. rubber mounted. Fitted with volume indicator, volume control, off-and-on switch. Cuts 80 lines per inch. Fitted with

Universal 6-volt Field Power Recorder in 15, 50, 200 or 400-ohm. Cutter angle adjustable. Each machine accurately tested before shipment. Sample test record, Stroboscope and booklet "Advanced Disc Recording" accompany every recorder.

As shown, ready for use on 50 to 60-cycle, 110-volt A.C. Wt. 28 lbs. **Net Price**.....\$74.00

### Lead Screw

For recording up to 12-inch records at 98 lines per inch. Cuts from "outside to inside." Instantly connected or removed. Smooth operation, silent and accurate. Wt. 1 lb. Complete with guide, arm and adjustable outboard bearing, as shown.

**List Price**.....\$10.00

For recording up to 16-inch records, 100 lines per inch. Furnished to cut either "inside to outside" or "outside to inside." Specify which is desired when ordering. Otherwise same as above.

**List Price**.....\$15.00



### Professional Cutting Head

Full Frequency Built Like a Watch

A scientific recording head capable of cutting or grooving all types of material. Size— $2\frac{1}{2}$ " high x 1" wide x  $\frac{3}{8}$ " thick. Response to input frequency substantially flat from 30 to 8000 cycles.



Furnished in either 15, 50, 200, or 400-ohm. Specify which wanted in ordering.

**Recording Head, only, as shown above.**

**NET Price**.....\$35.00

Professional cutting head as described above, complete with 12 inch arm. Furnished in either 15, 50, 200, or 400-ohm.

**NET Price**.....\$45.00

### Full Frequency Pickup



A high class pickup for playback of all types of instantaneous records—especially aluminum, Silveroid and other semi-plastic materials, up to 16 inches. Adjustable arm. Pressure adjustable. Matches input of standard mike transformers. Supplied in either 15, 50, 200, or 400-ohm. Beautifully finished.

**List Price**.....\$15.00

### Needles



**A**—For simultaneous grooving and recording on aluminum discs. Sapphire.

**List Price**.....\$4.00

**B**—For recording on pregrooved discs. Sapphire.

**List Price**.....\$4.00

**D**—For Silveroid and semi-plastic materials in which a fine thread is actually cut out. Hardest Sapphire.

**List Price**.....\$6.00

**Red Cactus Needle**—Plays 5 to 15 records without re-pointing. Envelope of 10 needles.

**List Price**.....\$1.00

### Blank Aluminum Disks

Universal Aluminum Discs are of special hardness, alloy and surface mirror polish to assure volume, brilliance and durability, with a minimum of surface noise.



Dia.	List Price	Dia.	List Price
6"	50.24	10"	50.48
8"	36	12"	60

# AMPERITE Velocity MICROPHONES

A COMPLETE LINE—FILLING EVERY BROADCASTING NEED!

AMPERITE introduces a new line of High Level Velocity Microphones which operate without pre-amplifier.

●High enough in impedance to operate directly into grid—but not high enough to introduce serious losses in line up to 200 ft.

●Replace condenser and crystal microphones—no changes or additions necessary.  
●Ordinary carbon volume controls can be used for mixing.

●Eliminate input transformer and its losses! Also eliminate inductive hum. Require 12 dB. less overall amplification.



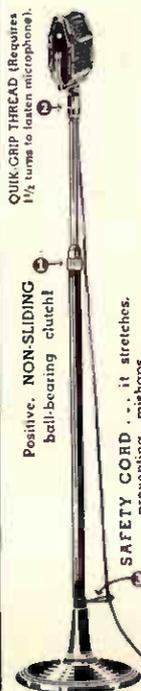
## Studio Models "SR-80", "SR-80H"

Combine the highest type of professional performance and efficiency at a very economical cost... the easiest way to improve any studio or public address installation. Whenever sound reproduction of the highest fidelity is wanted, the Velocity Microphone should be used. It is the only microphone that covers the entire frequency range of sound without introducing resonant peaks of its own.

Model SR-80—Can be placed up to 2000 ft. from the amplifier without appreciable loss. Frequency response 30 to 14,000 C.P.S. Output, -64 dB. (open line) -90 when using input transformer (100,000 ohm Sec.). Impedance 300 ohms (any other impedance furnished upon request). Cable 25 ft.

New High-Level Model SR-80H—Unusual brilliancy and definition. Excellent for both studio and remote. Is high enough in impedance (2000 ohms) to operate directly into grid—but not high enough to introduce serious losses in line up to 50 ft. Can be supplied for P.P. input.

Nos. SR80 and SR-80H—  
List Price, Each.....\$100.00



## Microphone Stands

Positive, Non-Sliding ball-bearing clutch. Will never wear out... never require adjustment. Will not "Creep." Tightens with only one-eighth turn of clutch. Microphone can be rotated without loosening clutch. Smooth Pneumatic-like action up and down. Stands are furnished in a polished gunmetal offset with a chrome clutch. Also available in all chrome finish at a slight additional cost.

Model FS-25M—Featuring (1) Positive clutch; (2) Quick-grip Thread; (3) Safety Cord. Studio 3-legged floor stand. 21-lb. base. 17" base spread. 1 1/2"-pipe.  
List Price.....\$32.00

Model FS-13M—Floor stand. 13-lb. base. 11" base spread. 5/8-27 Thread.  
List Price.....\$18.00

Model DS-M—Combination desk and banquet. 6-lb. base. 7 1/4" base spread. 5/8-27 Thread.  
List Price.....\$12.00

Model PS-M—Folding portable. 20" base spread. 5/8-27 Thread.  
List Price.....\$20.00

## Professional Model Velocity Microphones

Note these advantages... 6 dB. more output! For the first time in America, the new Super-Flux Nickel Aluminum Magnets are used—the most powerful magnets available—more powerful than even 36% Cobalt. You get 8 times more volume without feedback, than you can get with any diaphragm mike. Not affected by temperature, altitude, or moisture... Thoroughly shielded against hum pickup. Rugged.



Model RS-H—Especially designed for speech. Can also be used for music. Actually tested output—-68 dB. (open line). Output impedance 2000 ohms. to operate directly into grid without pre-amplifier... List Price, with shock absorber and instructions.....\$32.00

Model RB-S—Same as above, but 200 or 50-ohm impedance. List Price,.....\$32.00

Model RB-H—Recommended for speech and music. Includes laboratory grade nickel alloy transformer. Flat response without peaks, over the entire audible range, on actual test 40 to 10,000 C.P.S. ± 2 dB. Unusual quality. Actually tested output: -64 dB. (open line). Output impedance 2000 ohms, to operate directly into grid, without pre-amplifier. List Price, with shock absorber and instructions.....\$42.00

Model RB-M—Same as above, but 200 or 50-ohm impedance. List Price,.....\$42.00

Model RB-BH—Beam type. Similar characteristics to RB-H, except more directional. To be used only for unusual feedback conditions.

List Price, with shock absorber and instructions.....\$42.00

Model RB-E—Same as above, but low impedance. List Price,.....\$42.00

## A.C. Operated Pre-Amplifier Model "PPP"



Can be operated as 1- or 2-stage pre-amplifier with low or high-impedance mikes. With power supply in one case. Output: 200, 500 and 2000 ohms. Tubes: 2-6C6, 1-80. Gain—69 dB. 40-10000 cycles within 1 dB. For 110-volt, 60-cycle.

List Price—Less tubes.....\$50.00  
Model BP—As above but battery operated.  
List Price—With batteries, less tubes... \$35.00

## 7-Point Jr. Velocity Mike

No bigger than a match box. Output equal to a large velocity mike. Directional quality eliminates audience noises and acoustic feed-back. Output impedance, 200 ohms. Frequency response 60-7500 C.P.S. Output—68dB. Transformer included in microphone case. Thoroughly shielded; weatherproof. Size: 1 1/4" x 1 1/2" x 1". Junior High Impedance Model also available.



Model 7J-H—List Price.....\$30.00

## AMPERITE Self-Adjusting Line Voltage Control

Duresite No.	Amperite No.
98, 105, 106	0-20
125	10-10
118, 415	11-10
110	11-20
130	13-10
313	13-20
314	14-20
315	15-20
126	12-20

A.C. Set Replacements	
Bruns 14, 21, 31	9-20
G.E. B-86	5-16
Majestic 70, 71, 72	70
Majestic 90, 91, 92	90
RCA 876 (screw base)	876
RCA R-223	5-16
Scott Raider	12-20
Victor R32, 52	10-10
Victor R35, 39	9-10

### How to Determine the Proper AMPERITE for A.C. Sets

The Amperite for most sets can be determined approximately from the following chart:

No. of Tubes in Set	Use Amperite No.
4 or 5	5-A-5
6 or 7	7-A-5
8, 9, 10	9-A-5
11 or 12	11-A-5
1-50 tube	14-A-5
2-50	20-A-5

### For A.C.-D.C. Sets

40 watts	4-A-5
45	311-5



AMPERITE for 2-Volt Tubes—The 2-volt tubes will give excellent results when operated on their proper voltage. A 10% overload, however, will decrease the filament life 25%, a 15% overload, 40%, etc. Using Amperite Automatic Voltage Regulator you protect tubes and obtain better performance. (Specify set.)

Any Type, List Price, \$2.10 — Socket for Amperite, \$0.25.

# CRYSTAL MICROPHONES

## ASTATIC CRYSTAL MICROPHONES

### Contact Type

A super-sensitive direct contact microphone, not dependent upon air as the transmitting medium, and capable of detecting sounds through solids. Small, compact and rugged. Excellent for detection work, etc. Opens new and unexplored fields to the sound man which will prove lucrative. Output level—50 dB. Dimensions:  $2\frac{3}{8}$ " dia., approx.  $\frac{3}{8}$ " thick. Finished in chromium and supplied with connecting cord. Shpg. Wt. 1 lb.

**C-104S—List Price.....\$22.50**

### Cardiophone Type

A precision instrument of wide frequency response for determining heart and lung conditions. Tremendous improvement over old-fashioned stethoscopes—and will facilitate more rapid and accurate diagnosis. The case is 3" in diam. and 1" thick. Chrome finish. High impedance, no input transformer required. Output Level—65 dB. With 8 ft. shielded cable, and "push to listen" switch. Shpg. Wt. 2 lbs.

**CP-104—List Price.....\$25.00**



### Model D-104

It requires no field or button current—has no hiss—cannot "pack"—may be used in any position and has a high output making unnecessary any great amount of pre-amplification. High impedance. No matching transformer necessary. Case is 3" in diam. and 1" thick. Finished in chromium. Output Level—58 dB. Diaphragm is screen protected. Complete with 6 ft. shielded cable. Shpg. Wt. 2 lbs.

**List Price.....\$22.50**

### Model D-104 H.S.

Same as above except that it is provided with a handle and "Push to Talk" switch which may be locked in position. Supplied with 8-ft. cord. Shpg. Wt. 2 lbs.

**D-104 H.S.—List Price..\$26.50**

### Model D-104 H.

Same as above except without switch.

**List Price.....\$25.00**

### Multi-Unit Type



Latest in crystal mike design. Arranged so that the forces of two opposed diaphragms are applied to one crystal, simultaneous with appropriate damping. Increases efficiency and fidelity characteristics—substantially flat from 30 to 5,000 cps., with a rise of approx. 10 dB. at 10,000 cycles. Output—64 dB., with non-directional characteristics. Excellent for broadcast stations, High Fidelity P. A. Systems, etc. Shpg. Wt. 2 lbs.

**Model K-2—List Price..\$37.50**

### Lapel Mike

Operates on similar principles as Multi-Unit Type. Extremely sensitive and high quality microphone with high-fidelity characteristics. Output Level—75 dB. Response is practically flat to 5,000 cycles. Dimensions— $1\frac{1}{4}$ " in diam., and  $\frac{3}{8}$ " thick at center. Finish dull black. Equipped with 25 ft. shielded cable. Shpg. Wt. 2 lbs. **Actual Weight one oz.**

**L-1—List Price.....\$30.00**

Ideal for use by public speakers, auditorium lecturers, actors, announcers, etc.

### "Twist Lock" Polarized Armored Connectors



A twist of the wrist and they are securely locked together. Cannot pull apart accidentally. Completely armored for protection against breakage. Equipped with clamps for cable. Will take large size wire up to  $\frac{1}{2}$ ". Shpg. Wt. 1 lb.

#### Two-Wire Connectors

Male  
**List Price.....\$0.65**

Female  
**List Price.....1.30**

#### Three-Wire Connectors

Male  
**List Price.....1.00**

Female  
**List Price.....1.65**

#### Four-Wire Connectors

Male  
**List Price.....1.45**

Female  
**List Price.....2.50**

### "Twist-Lock" Receptacle

Fits standard outlet box.

**3 Wire—List Price.....\$1.65**

**Four Wire.....1.25**



### Microphone Connector

Moulded bakelite. Heavy brass outer shell finished in black enamel and chrome. Lock prevents disconnection. Will withstand snow, rain and slush. Absolutely moisture-proof. **Diam.  $\frac{3}{8}$ ". Length  $2\frac{3}{4}$ ". Hole  $\frac{1}{8}$ " drill.**

### Use of MC 3 for Microphone Connections

The Amphénol Microphone Connector makes the ideal microphone-to-stand connection, enabling you to make a quick, easy disconnection of the microphone for repair or replacement. By removing the gasket caps, at the ends of the plug, the  $\frac{1}{8}$ -27 threaded ends may be screwed into the ring and stand,  $\frac{1}{8}$ -27 being the standard thread for this joint.

### Use of MC 3 for Chassis and Panel Connections

The Amphénol Microphone Connector is also designed for bringing in cable to the chassis, or to making connections to outlet plates or any other panel surface. Either Male or Female end of the connector may be inserted in a  $\frac{1}{8}$ " panel hole and, by means of the spacer sleeve supplied with the Connector, held firmly in place by screwing tight the end gasket cap. The Bakelite inserts holding the prongs and contacts are interchangeable enabling the use of either a Male or Female chassis outlet.



**List Price, Each Unit.....\$2.00**

### "Twist-Lock" Recessed and Base Mount Plugs

For mounting on apparatus and to be used with "Twist Lock" Female Connectors. Recessed type provides flush surface and prevents accidental contacts with prongs. Shpg. Wt. 1 lb.

#### Two-Wire Male

Base Mount  
**List Price.....\$0.60**

Recessed  
**List Price......95**

#### Three-Wire Male

Base Mount  
**List Price......80**

Recessed  
**List Price.....1.30**

#### Four-Wire Male

Base Mount  
**List Price.....1.00**

Recessed  
**List Price.....1.65**

### "Twist Lock" Female Receptacle



Made of porcelain. Shpg. Wt. 1 lb.

**2 Wire, Each, List.....\$0.80**

**3 Wire, Each, List.....1.35**

**Two-Section Floor Stands**

**8-Lb. Thumb-Screw Type**

A high-grade floor stand with a base diam. of 7 1/2". Extends from 3 ft. to 67". Rod is threaded for 1/2"-27 thread.

**Without fittings:**  
No. EF-3L—Chromium..... List Price \$10.00  
No. EF-3L—Bronze..... List Price 9.00

**10-Lb. Thumb-Screw Type**

A medium-type floor stand of good quality. Base diam. 10". Height 3 ft. to 67". Rod is threaded for 3/8"-27 thread.

**Without fittings:**  
No. EF-2L—Chromium..... List Price \$12.50  
No. EF-2L—Bronze..... List Price 12.50

**10-Lb. "Chuck" Holding Type**

Same as above, with exception of chuck-holding device instead of thumb-screw arrangement.

**Without fittings:**  
No. EF-2CL—Chromium..... List Price \$13.50

**18-Lb. Thumb-Screw Type**

A ruggedly-constructed floor stand of high quality. Extends from 3 ft. to 67". Extra-heavy base with a diameter of 10". Rod is threaded for 3/8"-27 thread.

**Without fittings:**  
No. EF-1L—Chromium..... List Price \$16.50  
No. EF-1L—Bronze..... List Price 16.50

**18-Lb. "Chuck" Holding Type**

Same as above, with exception of chuck-holding device instead of the thumb-screw arrangement. Easy to handle and prevents the possibility of slipping.

No. EF-1CL—Chromium..... List Price \$17.50  
Fittings for above on next page

**32-Lb. Studio Type  
Two-Section Stand**

An extra-heavy floor stand, employing over-sized material throughout, designed especially for use with all heavy velocity, dynamic and condenser microphones. Especially recommended for use with Ampeze SR80 and RCA velocity-mikes. Swaying and top-heaviness are entirely eliminated by use of a 23-lb. base with a diameter of 12". The total net weight of the stand is 32 lbs. A special feature incorporated in the clamping screw allows the stand-height to be varied with the slightest amount of pressure. A soft rubber cushion attached at the bottom of the movable rod acts as a shock-absorber. This stand has its movable rod threaded for 1/2" pipe-thread, which allows the velocity microphones mentioned above to be mounted directly thereon without the use of extra fittings. Extends from 39" to a maximum of 6 ft. 6 in.

No. EF-9L—Gun-Metal..... List Price \$35.00



**Banquet Stand**



This high-grade banquet stand is identical in appearance to the EF-1 and EF-2 floor stands and presents a very neat appearance.

The height can be extended from 16" to 26". Felt feet in base of stand prevent marring of furniture. The base diameter is 7 1/2" and the net weight is 6 lbs. The connecting rod is threaded for 3/8"-27 thread.

**Without fittings:**  
No. EB-4L—Chromium..... List Price \$10.00  
No. EB-4L—Bronze..... List Price 10.00

**Three-Section Floor Stands**

**8-Lb. Collapsible Type**

A telescopic stand, comprising three non-removable sections. Has 7 1/2" base. Height extends from 26" to 62". Rod is threaded for 1/2"-27 thread.

No. EF-8L—Chromium..... List Price \$10.00  
No. EF-8L—Bronze..... List Price 10.00

**10-Lb. Collapsible Type**

Same as above, but heavier. Base diam. 10". Height extends from 26" to 62". Rod threaded for 3/8"-27 thread.

**Without fittings:**  
No. EF-8AL—Chromium..... List Price \$13.00  
No. EF-8AL—Bronze..... List Price 13.00

**18-Lb. Collapsible Type**

Designed for applications where weight is not a factor. Heavy base 10" in diam. Height from 26" to 62". Rod is threaded for 3/8"-27 thread.

**Without fittings:**  
No. EF-8BL—Chromium..... List Price \$16.00  
No. EF-8BL—Bronze..... List Price 16.00



**Banquet and Desk Stand  
Combination  
Standard Model**

A light-type desk-banquet stand. Base diam. 5 1/2". Height from 9" to 14". Rod threaded for 1/2"-27 thread.

**Without fittings:**  
No. ED-14L—Chromium..... List Price \$6.50  
No. ED-14L—Bronze..... List Price 6.50

**Heavy-Duty Model**

Base diam. 7 1/2". Height from 9" to 12". Net Wt. 6 lbs. Rod threaded for 3/8"-27 thread.

**Without fittings:**  
No. ED-21L—Chromium..... List Price \$9.00  
No. ED-21L—Bronze..... List Price 9.00



**Non-Adjustable Desk Stands**

**Carbon Mike Model**

High-quality stand with 6 3/8" diam. ring. Overall height, 12 1/2". Base diam. 5 1/2".

No. ED-5—Chromium..... List Price \$6.00  
No. ED-5—Bronze..... List Price 6.00

**For Light Non-Carbon Mikes**

Same as ED-5, less mike ring. Height 6". Threaded 1/2"-27. **Without fittings:**  
No. ED-5L—Chromium..... List Price \$4.50  
No. ED-5L—Bronze..... List Price 4.50

**For Crystal Mikes**

Same as ED-5L, but with 9 1/4" height and swivel fitting.  
No. ED-5D—Chromium..... List Price \$5.50



**For Heavy Non-Carbon Mikes**

For mikes with their own tilting feature. Base diam. 7 1/2".  
**Without fittings:**  
No. ED-23L—Chromium..... List Price \$6.50  
No. ED-23L—Gun-Metal, Black Nickel..... List Price 6.50

**Suspension Ring**

A 6 3/8" ring for ceiling suspension.  
No. ER-6—Chromium-finish..... List Price \$2.50



**SEE OTHER SIDE FOR FITTINGS TO ADAPT THESE STANDS TO ANY MICROPHONE**

**CARBON  
RIBBON**

# EASTERN MIKE STANDS

**CRYSTAL  
DYNAMIC**

## New! "Air Chamber" Stands

With the Air-Valve Button  
"Weight" Control



The operation of the new "Air Chamber" type microphone stand is based upon the principle of elasticity of air in which the movable rod supporting the microphone floats steadily in a cushion of air. The addition of this stand to the Eastern line now makes available, at popular prices, a heretofore expensive method of stand adjustment. The height of this stand can be varied with one hand by merely pressing a button near the top of the movable rod. The air chamber eliminates all possibility of dropping the microphone accidentally and reduces noise caused by vibrations. This method of adjustment is a distinct improvement over all other methods which require both hands. Can be varied from 42" to 70". Threaded for 5/8"-27 thread.

No. EF37L—14 lb.—15" Tripod Base. . . . . List Price \$35.00  
No. EF38L—24 lb.—12" Round Base. . . . . List Price \$35.00

## Collapsible Floor Stand

Folding Base



For remote control equipment and portable systems, where space is at a premium, we recommend this type of stand. The three legs can be adjusted to give a base spread of 20", which is ample assurance against tipping. Three brass telescopic sections allow stand height to be varied from 26" to 43" for two sections and a maximum of 60" for all three sections. When folded it requires only 21" of space. Entire stand furnished in chromium finish. These stands can be used with any type of microphone by ordering the required reducer as listed below.

No. EF28L—Heavy tubing model for 5/8"-27 thread. . . . . \$13.00  
List Price  
No. EF27L—Light tubing model for 1/2"-27 thread. . . . . \$10.50  
List Price

## THESE FITTINGS FOR ALL STANDS LISTED ON OTHER SIDE

### Carbon Mike Ring



A carbon mike ring made of the finest materials for use with the Eastern Mike Stands listed on the previous page. The ring is 6 3/8" in diameter

and is available in various finishes to match the finish of the stand. Specify thread size or Stand No. with order.  
List Price . . . . . \$2.00

### Double Arm Fitting



For two mikes on a single stand. Made to match any of the floor or banquet stands listed on other page. Length of arm 11 1/2".

No. DAC—With 2 Rings.  
List Price . . . . . \$13.50

### 5/8"-27 Bushing

5/8"-27 Bushing, available in the following inside thread sizes: 3/8"-27; 1/2"-27; 5/8"-27.



Model R—Bushing  
List Price . . . . . \$0.75

### 1/8" Pipe Reducer

1/8" Pipe Reducer, available in the following inside thread sizes: 3/8"-27; 1/2"-27; 5/8"-27. For microphones of Astatic, Brush and Turner Crystal Mikes; Bruno Lab. Models P.A.-2 and L (no swivel).



Model F—Pipe Reducer  
List Price . . . . . \$0.75

### New Mike Stand Fittings

With Shorting Switch



Eastern now presents a new type of microphone stand-fitting with a shorting-switch. Available with or without swivel. Both types may be had with a 1/8" pipe or 5/8"-27 outside thread. Both are available in the following inside thread sizes: 5/8"-27; 3/4"-27; 1/2"-27 and 3/4" 27.

List Price—Swivel Type . . . . . \$3.50  
List Price—Less Swivel . . . . . 2.50



### Swivel Fittings

Available in the following inside threads: 5/8"-27; 3/4"-27; 1/2"-27; 3/4"-27.

Model D—1/8" Fitting



1/8" Pipe Swivel

For mikes of Astatic, Brush and Turner Crystal Mikes; Bruno Lab Models P.A.-2 and L (no swivel).

List Price . . . . . \$1.00

Model S—5/8"-27 Fitting



5/8"-27 Fitting

For mikes of Shure Crystal, Radio Receptor Models 6B and 6C, Amperite Corp. (except SR-80).

List Price . . . . . \$1.00

### 1/4" Pipe Reducer

1/4" Pipe Reducer, available in the following inside thread sizes: 3/8"-27; 1/2"-27; 5/8"-27. For microphones of Bruno Lab. models P.A.-3, M, and R.V.-3 (with swivel).



Model G—Pipe Reducer  
List Price . . . . . \$0.75

### 1/2" Pipe Reducer

1/2" Pipe Reducer, available in the following inside thread sizes: 3/8"-27; 1/2"-27; 5/8"-27. For microphones of Universal Dynamic.



Model P—Pipe Reducer  
List Price . . . . . \$1.00

### Dynamic Mike Fittings



For ceiling suspension mounting. The mike can be set at any angle and locked into place. For floor stand mounting, unswivel hook. Chromium or bronze.

No. EW-18B—For Western Electric.

No. RR-18B—For Radio Receptor & Audio Research.

No. TL-18B—For Thomaston Lab.  
List Price . . . . . \$16.50

Principle same as above, but fitted with a thumb-screw swivel, allowing the mike to be tilted to any angle. Chromium and Bronze.

No. EW-18A—For Western Electric.

No. RR-18A—Radio Receptor & Audio Research.

No. TL-18A—Thomaston Lab.  
List Price . . . . . \$11.00

For W.E. models 618 and 618A. A set screw concealed in the mtg. fitting holds mike firmly in place. Can be furnished threaded for any stand.

No. EW-18  
List Price \$6.50



# SUPREME

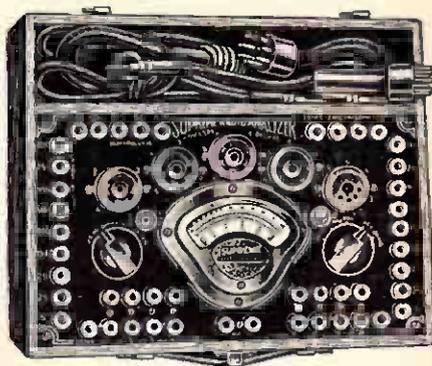
# Testing EQUIPMENT

## Supreme 339 De Luxe ANALYZER

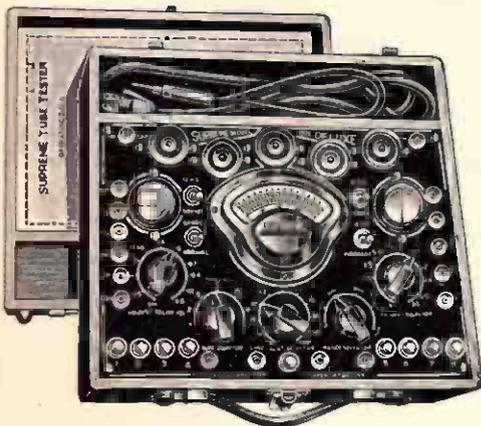
**Quick Point-to-Point Tests:** All resistance, voltage, capacity and current readings are secured through the 8-conductor analyzer cable, plugged into the receiver sockets. Tests made without removing chassis from the cabinet. Test leads may be inserted into tip-jacks on panel for continuity tests if desired. Has five sockets. Tests all tubes including the new 8-prong Octal Metal (steel) types, direct from the receiver socket. Flexible (Free Reference) point system of analysis is used by which the receiver chassis, or any element of the tube acts as a reference point for all measurements.

**Checks All Circuits:** Large Laboratory 5" fan-type meter has direct reading ranges for checking any circuit in the receiver. Both A.C. and D.C. ranges of 0/5/25/125/250/500/1250 volts at 1000 ohms per volt; D.C. current ranges of 0/5/25/125/250/500/1250 M.A. Capacity ranges of 0/0.05/0.25/1.25/2.5/5.0/12.5 mfd. (for measuring both paper and electrolytic condensers). Five resistance ranges of 0/2,000/20,000/200,000 and 0/2/20 megohms. Both resistance and capacity ranges are energized by a separate built-in A.C.-operated power supply. Circuit is designed so that meter and rectifier are protected against damage due to overload of current or voltage. Makes tube checks by comparative plate current-grid shift method from radio set chassis.

Dealer's NET Cash Wholesale Price ..... \$39.95



## Supreme 89 De Luxe TUBE TESTER



**The Quality Tester:** Accurately checks all tubes including the new 8-prong (Octal) Metal (steel) types, using only five sockets. Requires no adapters. Indicates whether tube is "good" "bad" or "doubtful" on the large scale of the 5" English-Reading "fan" type meter. Only three simple adjustments are necessary for tube checking.

**Neon Tube Leakage Tester:** In addition to the quality test, each tube is checked for inter-element leakages and shorts. Neon lamp indicator detects leakages and shorts between all tube elements up to 100,000 ohms.

**Condenser Analyzer:** An English-reading condenser analyzer accurately and positively classifies all electrolytic condensers as either "good" or "bad". Also has a Neon condenser tester for determining leakage or shorts up to 100,000 ohms in all paper, mica and oil capacitors.

**Multi-Range Meter:** Provides point-to-point resistance and D.C. voltage measurements of the receiver circuit. Plainly marked pin-jacks on instrument panel for inserting test leads. Voltage ranges 0/5/125/500/1250 D.C. volts. Resistance ranges 0/2,000/20,000/200,000 ohms and 0/2/20 megohms. All ohms and megohms ranges are energized by self-contained power supplies.

Dealer's NET Cash Wholesale Price ..... \$45.95

## Supreme 385 AUTOMATIC

An up-to-date analyzer with the flexible "Free Reference Point System" of analysis for all tube circuits, including all of the new 8-pin metal tubes.

An English-reading Tube Tester which tests all tubes (without adapters and including all of the new metal tubes) under approximate load conditions.

"Neonized Tester" for detecting any and all tube element leakages.

An Electrostatic Capacitor Leakage Tester, utilizing the special Supreme "Neonized" circuit.

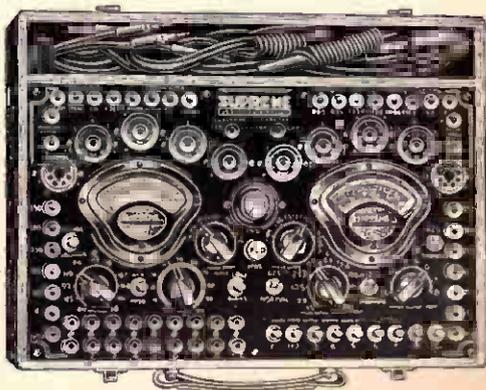
An English-reading Electrolytic Capacitor Leakage Tester.

A capacitor tester for measuring the capacity of electrostatic and electrolytic capacitors.

Provides every electrical measurement required in radio servicing.

The sensitive 5" fan-shaped d'Arsonval meters are made to provide (1) six D.C. potential measuring ranges of 0/5/25/125/250/500/1250 volts D.C.; (2) six A.C. potential-measuring ranges of 0/5/25/125/250/500/1250 volts A.C.; (3) six current-measuring ranges of 0/5/25/125/250/500/1250 milliamperes, D.C.; six capacity-measuring ranges of 0/0.05/0.25/1.25/2.5/5.0/12.5 mfd., and (4) resistance-measuring ranges of 0/200/2,000/20,000/200,000/2 Meg. /20 Meg. ohms; the four lower ranges of the ohmmeter are powered by a self-contained flashlight battery and the two higher, or 0/2/20-megohm ranges, are powered with a self-contained miniature "power pack."

Dealer's NET Cash Wholesale Price ..... \$77.95



# SUPREME

# Testing EQUIPMENT



## SUPREME 189 SIGNAL GENERATOR

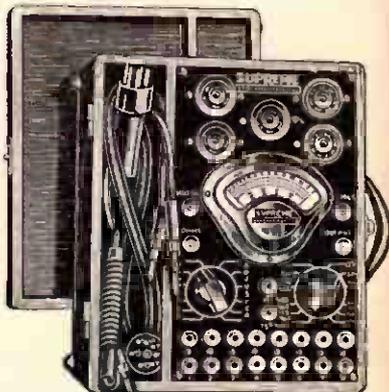
This new completely A.C. operated Signal Generator enables the user to align perfectly the most complex All-Wave receivers. The tube circuit is electron-coupled, producing a strong, perfectly steady signal on all frequencies, from 90 Kc. to 30 Mc. Incorporates actual R.F. attenuation of generator's signals as compared to audio-frequency attenuation, which is only variation of modulation from 0% to maximum %. Each instrument is individually calibrated, insuring precision circuit adjustments. Has self-contained 400-cycle beat-oscillator, capable of modulating radio-frequency signal 50%. Entirely A.C. operated, 98-125 volts, 60 cycles.

Direct-reading dial. Easy to operate. Only four controls. **No Charts or Tables to Refer to.** Also has band-selector and ladder-attenuator scale approximately calibrated in microvolts for effective control of the output, and 4-position attenuator multiplier switch of 0-1/10/100/1000 microvolts.

Dealer's NET Cash Wholesale Price ..... \$36.95

## MODEL 339 STANDARD ANALYZER

Analyzes and checks all circuits of any radio receiver. Large 5" laboratory-type meter has A.C. and D.C. voltage ranges of 0/5/125/500/1250 volts at 1000 ohms per volt, D.C. current ranges of 0/5/125 M.A. and two resistance ranges of 0/2000/200,000 ohms. All A.C. voltage ranges are available for output circuit measurements, without adapters. Meter has large figures and plainly marked scales for ease in reading. All meter ranges are selected by a single 3-point 12-position rotary switch. Has Supreme's exclusive "Free Reference Point" System of Analysis, providing complete flexibility of analyzer circuit, and practically eliminates possibility of obsolescence. All voltage, current, and resistance measurements are made directly from the receiver-tube sockets. An 8-conductor cable and plug are provided, with adapters, for plugging into the sockets, eliminating the necessity of removing the chassis from the cabinet. Designed for use with any circuit, including those employing the new Octal Metal (steel) tubes. Supplied with complete associate equipment, including test leads, cable, adapters, instructions and Free Reference Point Charts. Quartered Oak carrying-case, size 11 1/4" x 10" x 4 1/2".

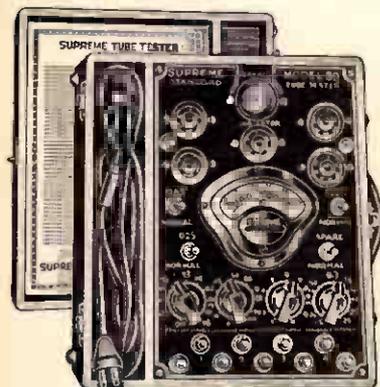


Dealer's NET Cash Wholesale Price ..... \$29.95

## SUPREME 89 STANDARD TUBE-TESTER

A new, high-quality, low-priced tube-tester that really sells tubes! Plainly shows your customer the actual condition of his tube in terms of "Good" or "bad" on the large 5" fan-type English reading meter. Tests all existing radio tubes under actual operating conditions, including the new All Metal types. Circuit is designed to guard against obsolescence as new tubes are developed. Each tube is "double-checked" by the famous Supreme Neonized Leakage test. No tube will pass both the leakage and quality tests of this tester unless it will perform satisfactorily in a radio receiver. Requires only three simple adjustments to test any tube type. Has only 5 sockets and requires no adapters. Line-voltage adjustment for accurate tests provided by tapped transformer primary adjustment between 98-125 volts, 60 cycles A.C. Supplied in a handsome, sturdily-constructed quartered oak case, size 11 1/4" x 12 1/4" x 5 1/2", with leather carrying handle for portable use. Furnished with full instructions and complete tube chart. A low-priced instrument that will pay big dividends in increased tube sales.

Dealer's NET Cash Wholesale Price ..... \$34.95



## MODEL 491 P.A. ANALYZER

A newly-developed instrument for the advanced service engineer who is also a P.A. and sound specialist. Has many added features that provide for all tests required in servicing any radio receiving chassis or P.A. amplifier system. Measures all voltages, currents and resistances directly from tube sockets through flexible cable and analyzer plug, by means of simple switches which eliminate the use of jumper leads. Also measures audio signal levels (calibrated in dB's), photo-cell currents and microamperes and exciter-lamp currents up to 12.5 amperes. Provides check of tube quality, including new "Octal" types, by grid shift method from chassis of operative radios.

**Multi-Range Meter.**—The meter is the large 5" laboratory "fan" type, with easily readable open face. Three simple scales provide ranges of 0-250 microamperes: 0/5/25/125/250/500 D.C. milliamperes: 0/1.25/12.5 D.C. amperes: -10 to 0, 0 to +10, +20, +30, +40 decibels: 0/5/25/125/250/500/1250 A.C. and D.C. volts at 5000 ohms-per-volt: 0/10,000/100,000 ohms. 0/1/10.0 megohms: 0/0.0125/0.025/0.05/0.125/0.25/0.5/1.25/2.5/5.0/12.5/25.0/50.0 mfd's., electrolytic and electrostatic (paper).

**Easy to Operate.**—Rotary switches on panel enable selection of any meter range or function, or any circuit, by simple operation. All functions plainly marked so as to eliminate any and all confusion.

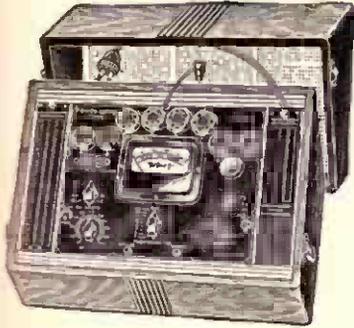
Dealer's NET Cash Wholesale Price ..... \$89.95



# TRIPLETT TRIPLETT

## Modern Testing Equipment

### POWER OUTPUT TUBE TESTER (With Neon Short Test)



Model 1500

Model 1500 is the acknowledged last word type of tube tester. The gain method is used allowing the nearest approach to actual receiving set operation. Quickly tests all glass and metal tubes.

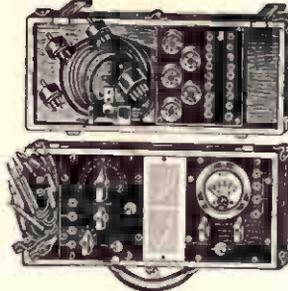
Applies proper D.C. voltages to tube elements. Includes test for rectifier tubes, and separate diode test. Supplies A.C. signal to C-G and indicates amplification on the A.C. voltmeter. Neon short test detects even the slightest leakages.

This new 1934 Triplett Model is a truly accurate, dependable tester of the type tube manufacturers use and recommend.

Model 1500 is furnished in a very attractive 3-ply two-tone Walnut case with sloping panels for portable or counter use. Case measures 15 1/2" x 11 1/2" x 7 1/2".

Model 1500.....NET Price \$35.94

### SERIES 1100 TESTERS



Model 1181-A

The Model 1100 series quality Triplett testers are successfully used by expert radio servicing engineers everywhere. Noted for their precision accuracy and rugged construction. Are fully equipped for either glass or metal tubes. Quartered oak case size—16 1/2" x 7 1/2" x 4 3/4" deep. Cover is removable. Batteries, accessories and complete operating instructions included.

**Model 1181-A**—A Portable Laboratory combining No. 1125 Volt-Ohm-Milliammeter, No. 1151 All-Wave Oscillator, and No. 1166-A Free-Point Auxiliary Set Tester.

NET Price.....\$37.24

**Model 1180**—Perpetual Tester. Combines Models 1125 and 1151 in 1181-A size case.

NET Price.....\$29.40

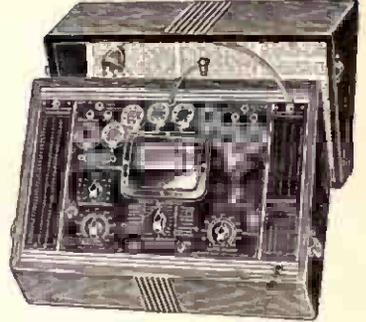
**Model 1167-A**—A Set Tester. Includes Models 1125 and 1166-A in a 1181-A size case.

NET Price.....\$24.50

**Model 1125**—Contains a direct-reading Ohmmeter, Output Meter, A.C.-D.C. Voltmeter and Milliammeter. Complete with 3 1/2", 400 Microammeter having sixteen different scale readings. All readings controlled by a selector switch.

Model 1125.....NET Price \$19.60

### MULTI-PURPOSE TESTER (Power Output Type)



Model 1501

Model 1501 Multi-purpose tube tester has the most advanced circuit, (same as Model 1500) for giving the final answer to all tube tester problems. It combines in one instrument the equivalent of ten separate units—Tests tubes for their worth, Neon Short Test, Separate Diode Tests, Neon Paper Condenser Tests, Electrolytic Condenser Leakage Test, D.C. Voltmeter and Milliammeter, Ohmmeter, A.C. Voltmeter, Decibel Meter and Impedance Meter. Case same as 1500.

D.C. scale: 10-50-250-500-1000 volts at 1000 ohms per volt, 10-50-250 milliamperes, 1000-10,000-100,000-1,000,000-10,000,000 ohms per volt, 10-50-250-500-1000 A.C. volts at 400 ohms per volt. Down 10 and up 15 decibels.

Model 1501.....NET Price \$45.74

### UNIVERSAL A.C.-D.C. METER (Copper-Oxide Type)

D.C. 2% Accuracy  
A.C. 5% Accuracy



Scale reads: 0-1500 ohms; 0-1.5 megohms; 15-150-750 volts A.C., D.C., 1000 ohms per volt; D.C. 15-150 Ma. The copper-oxide unit with a D.P.D.T. toggle switch for A.C. and D.C. is housed with shunts for the 0.4 milliammeter in a separate case.

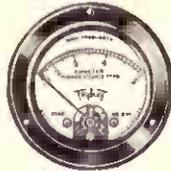
Universal Model 321 Meter, Complete.

NET Price.....\$9.80

Model 1127—Kit of Parts, including Panel and Batteries, less Meter.

NET Price.....\$13.06

### THERMOCOUPLE AMMETERS (High Frequency) Accuracy %



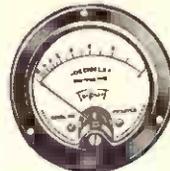
Thermocouple Ammeter

Triplett Thermocouple Ammeters are supplied in Models 241, 341, 441 and 541. All molded cases. Have external couples which withstand 50% overload connected to meter with 2' leads. Couples are easily replaced when necessary. External Couples only, for any Model.

NET Price.....\$4.18

Range	Approx. Amps.	Approx. Res.	Model 241 NET	Model 341 NET
0-1	.35		\$9.48	\$10.46
0-1.5	.21		9.48	10.46
0-2.5	.13		9.48	10.46
0-5	.065		9.48	10.46
Range	Approx. Amps.	Approx. Res.	Model 441 NET	Model 541 NET
0-1	.35		\$13.72	\$13.72
0-1.5	.21		13.72	13.72
0-2.5	.13		13.72	13.72
0-5	.065		13.72	13.72

### POWER LEVEL INDICATORS



Decibel Meter

Power Level Indicators are used to measure sound or noise levels in amplifiers for Public Address. The Decibel Meter permits the operator to make instant adjustments to prevent distortion. It can be furnished in two ways—either standard or highly damped. Standard range furnished reads up 6 and down 10 decibels, zero decibel at 1.73 volts, 500 ohm lines, 6 milliwatts. Furnished in either Model 321 or 221 molded case. Standard damping furnished, unless highly damped is specified. Other ranges to order only.

Model 321—Up 6 down 10 Decibel Meter.

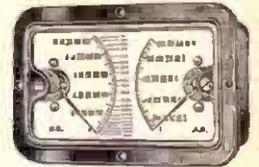
NET Price.....\$11.76

Model 221—Up 6 down 10 Decibel Meter.

NET Price.....\$10.78

### TWIN INSTRUMENT AND KIT

D.C. 2% Accuracy  
A.C. 2% Accuracy



**No. 120 Triplett Twin Instrument.**—Scale reads: D.C. 10-50-250-500-1000 volts at 2000 ohms per volt; 1-10-50-250 Ma.; 1500 ohms; 1.5 and 3 megohms. A.C. 10-50-250-500-1000 volts. Simultaneous reading on both instruments.

NET Price.....\$10.12

Model 1200 Kit enables the engineer to build his own Volt-Ohm-Milliammeter. Complete with No. 120 Triplett Twin Instrument, resistors, switches, condenser, panel, test leads, etc.

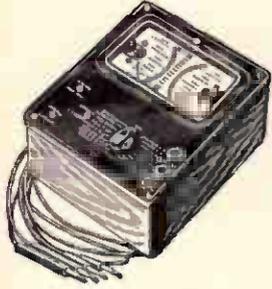
NET PRICE.....\$16.34

# TRIPLETT TRIPLETT

## Modern Testing Equipment

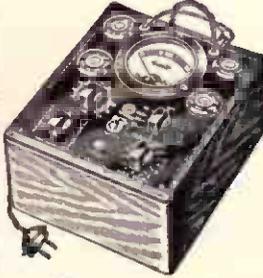
### MASTER UNITS

#### VOLT-OHM-MILLIAMMETER



Model 1200 Unit

#### TUBE TESTER



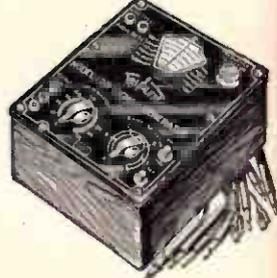
Model 1210-A Unit

#### FREE-POINT TESTER



Model 1220-A Unit

#### SIGNAL GENERATORS



Model 1231 Unit

Has two instruments, A.C. and D.C., in molded case. Can be tilted to any reading angle. Avoids errors. Scale markings in straight lines. Each instrument is best adapted to a specified use for which it is designed. Scale readings: D.C. 10-50-250-500-1000 volts at 2000 ohms per volt; 1-10-50-250 Ma.; 1500 ohms; 1.5 and 3 meg-ohms. A.C. 10-50-250-500-1000 volts.

Resistance measurements have individual zero adjustments. Three jacks for VOLTS—OHMS—Ma.'s and OUTPUT measurements. Selector switch for all instrument readings. Simple. Fool-proof. Accurate. Convenient. Always dependable. Answers every requirement for the serviceman. Contains 2½ and 1½-volt batteries.

**Model 1200 Unit—**  
NET Cash Price ..... \$21.24

Tests all types of tubes—both metal and glass. Direct reading. Colored GOOD and BAD scale. Includes rectifier tube. Large meter. Line voltage regulation. All short tests. Cathode leakage test. Individual tests on diodes and full wave rectifiers. Simple to operate. Only four sockets. Model 1210-A has a new and exclusive circuit approved by leading tube engineers, with every essential for a dependable emission test of tube values. No confusion, complications or calculations. A true test of good and bad conditions, including the slightest leakages. 60 cycle, 100-130 volts.

**Model 1210-A Unit—**  
NET Cash Price ..... \$19.60

For servicing all sets using metal or glass tubes. Has five sockets—with standard RMA markings, including one for new eight-prong metal tubes. Panel also includes eight automatic switch type and ten single-action jacks. Makes all series and parallel meter connections through the set sockets to all parts of the circuit. Automatic in operation. Used in conjunction with Model 1200 Volt-Ohm-Milliammeter. A Free-Point tester for all present-day and future requirements. Extra connections can be added, when necessary, at a very slight cost.

**Model 1220-A Unit—**  
NET Cash Price ..... \$8.16

Model 1231 All-Wave Direct Reading D.C. Signal Generator is a 1936 addition to the popular Triplet Master Units. Has perfect attenuation. All frequencies are fundamentals, and fully stabilized. Extra long 12" Vernier type direct reading scale, permitting extra fine readings for the 6 bands covering 100-30,000 Kc. Has 400 cycle audio signal available. Furnished with batteries and two type '30 tubes.

**Model 1231—**  
NET Cash Price ..... \$26.14

Model 1232 All-Wave A.C. Signal Generator Unit (same as Model 1231, but for 110 volts—60 cycle A.C. operation).

**Model 1232—**  
NET Cash Price ..... \$26.14

Model 1230 Unit is an All-Wave Signal Generator supplying a continuously variable signal. Frequencies are controlled on six fixed positions, from 100-18000 Kc. Batteries, tubes and six individually calibrated graphs supplied.

**Model 1230—**  
NET Cash Price ..... \$15.02

### MASTER UNITS

Case is metal, nicely finished in cracked black. Size 7½"x6½"x4½" deep. Panels are black with metal reinforcements. Sockets are flush. All materials are of the best quality. Master carrying cases listed below.

#### MASTER UNIT CASES

Convenient cases are furnished for carrying 1, 2, 3 or 4 Master Units. Units fit snugly. A separate compartment is provided for accessories. Master Line Portable Carrying Cases are strongly made with black grained leatherette covering. Individual compartments are lined with soft green felt.

**Model 1201—Case only, for single Master Unit**  
Dealer's NET Cash Price ..... \$3.92

**Model 1202—Case only, for two Master Units**  
Dealer's NET Cash Price ..... \$4.58

**Model 1203—Case only, for three Master Units**  
Dealer's NET Cash Price ..... \$5.22

**Model 1204—Case only, for Master Test Set**  
Dealer's NET Cash Price ..... \$5.88

#### 1211-A COUNTER TUBE TESTER CASE

This quartered oak case is especially designed for Model 1210-A Tube Tester. Metal tube reading charts are fastened to sloping panels. Size in inches: Length 12, width 11¼, height, front 3¾, back 6¾.

**Model 1211-A—Case only.**  
Dealer's NET Cash Price ..... \$3.92

#### MASTER UNIT TEST SETS

Model 1206 Master Unit Test Set is a complete Portable Laboratory for the radio servicing engineer. It includes all units required by the professional serviceman, doing the most expert work. It contains four Master Units in 1204 Portable Case:

Model 1200—Volt-Ohm-Milliammeter.

Model 1210-A—Tube Tester.

Model 1220-A—Free Point Tester.

Model 1231—Direct Reading All-Wave Signal Generator.

Designed to service sets using either glass or metal tubes.

Each unit represents the last word in its respective servicing application.

**Model 1206—Complete (as shown above with Model 1231).**  
Dealer's NET Cash Price ..... \$81.02

**Model 1207—Complete (as shown above but with Model 1232).**  
Dealer's NET Cash Price ..... \$81.02

**Model 1205-A—(Same as 1206, but includes Model 1230.)**  
Dealer's NET Cash Price ..... \$69.90



# Readrite TEST INSTRUMENTS Readrite

## EQUIPMENT

### DIRECT READING TUBE TESTERS



Model 430

Model 430 is designed to check all tubes speedily and accurately. Five flush-mounted sockets provide for the various tubes without the use of adapters. The tester operation is very simple and indicates condition of the tube being tested, for both dealer and customer, on the Direct Reading GOOD-BAD colored meter scale. The tester circuit is designed to indicate all inner element shorts, and make leakage tests.

Removable cover makes tester equally satisfactory for counter or portable use.

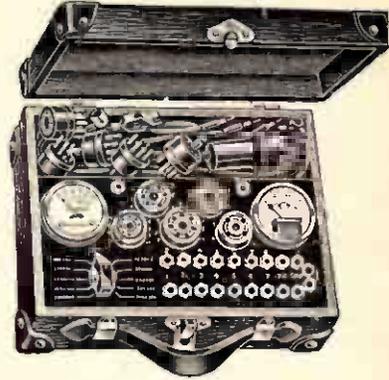
Dimensions of closed case— $8\frac{1}{2} \times 8 \times 6\frac{3}{4}$ ". Approx. Shpg. Wt. 16 pounds.

Model 430—Dealer's NET Price ..... \$17.64  
 Model 431—Same as Model 430, but with Readrite meter having GOOD-BAD Direct Reading scale. NET Price ..... \$14.12

### MODEL 430 FEATURES

1. Checks both metal and glass-metal tubes.
2. Applies proper load values to tube being checked.
3. Tests for slightest leakages and all shorts.
4. But four simple operations required.
5. Uses Triplett Model 221 meter with GOOD-BAD scale.
6. Meter especially protected against damage.
7. Unique shadow type A.C. meter for line volts adjustment.
8. Has double grid cap for metal and glass-metal tubes.
9. Sloping, all metal, silver and black panel.
10. Attractive quartered oak case.

### POINT-TO-POINT TESTERS



Model 720-A

Model 720-A—Point-To-Point Tester. Is designed for speedy and efficient servicing. Equipped to handle sets using glass or glass-metal tubes. Used to measure resistance, capacity and continuity. Also for checking voltage of any tube circuit. Accurate and extremely flexible. Model 720-A includes two meters—D.C. meter, having scale for reading 15-150-300-600 volts, 15-150 milliamperes; A.C. meter scale for reading 10-25-150 and 750 volts. Separate meter ranges available. Complete set of instructions, charts and accessories furnished.

Supplied with black leatherette covered case which when closed measures  $10\frac{3}{4} \times 8\frac{1}{2} \times 4$ ".

Model 720-A—Dealer's NET Price ..... \$14.70  
 Model 730-A Point-To-Point Tester, same as Model 720-A, but with Triplett Model 223 D.C. voltmeter having 1000 ohms per volt and scale reading 15-150-300-600.  
 Model 730-A—Dealer's NET Price ..... \$18.23

### RESISTANCE PANEL METER



No. 501 Resistance Meter is furnished either with wide flange (as shown) or narrow rim type for rear clamping. A thoroughly reliable instrument at a popular price. For continuity tests.

No. 501—NET Price ..... \$1.62

### DIRECT READING OHM-METER



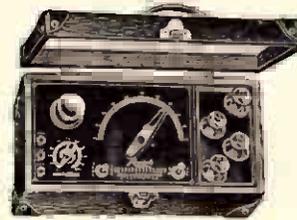
Model 500

Mounted in seamless steel case 4" in diameter. Provides direct readings of ohmage up to 10,000 and D.C. volts up to 4.5. Model 502 furnishes readings up to 10,000 ohms on one scale and up to 100 ohms on second scale.

Both are complete with a small 3-cell battery and leads. Shpg. Wt. 4 lbs.

Model 500 NET Price ..... \$3.82  
 Model 502 NET Price ..... \$4.56  
 Model 506 NET Price ..... \$8.38

### ALL-WAVE SIGNAL GENERATORS



Model 554-A

The new Model 554-A All-Wave Signal Generator design has incorporated all improvements and advantages of present day engineering. For present and future requirements. All frequencies are fundamentals and thoroughly stabilized. Completely shielded and tube modulated.

Special plug-in type coils supplied for each of the present 5-frequency bands, covering 100-20,000 Kc.

Self-contained batteries and two '30 tubes. Case when closed measures  $12 \times 6\frac{1}{2} \times 5\frac{3}{4}$ "

Dealer's NET Price ..... \$14.11

### SET TESTERS



Model 710-A

Model 710-A is used to check all parts of radio tube circuits by plugging directly into the receiving set socket. Handles sets using either glass or glass-metal tubes.

D.C. voltmeter scale reads 20-60-300-600; D.C. milliammeter scale 15-150, and A.C. voltmeter scale 10-140-700.

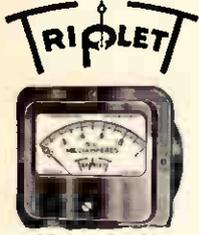
Complete with necessary accessories. Measures  $10\frac{3}{4} \times 8\frac{1}{2} \times 4$ " when closed.

Dealer's NET Price ..... \$16.17  
 Model 712-A Dealer's NET Price ..... \$21.76

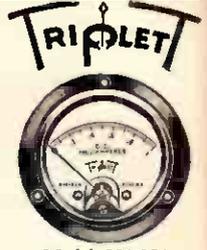
# TRIPLET PANEL

# Readrite

# TRIPLET METERS



Model 421-431



Model 321-331

## PANEL METERS

TRIPLETT D.C. Instruments are the D'Arsonval type with an extra light moving coil and reinforced strong parts. TRIPLETT A.C. Instruments are the movable iron repulsion type. All are air damped. Have extra light moving parts. Both A.C. and D.C. instruments have: Sapphire jewel bearings. Finest workmanship to assure dependable performance. White enameled metal scales. Moulded zero adjusters. Accuracy within 2%. Portable models 525-535 with mirror hand-drawn scales and knife-edge pointers are accurate within 1%. Description of Portable, Square and Twin Model Instruments with dimensional diagrams on pages 3-4.

### D.C. Voltmeters

Range	Models 221-223		Model 321		Model 421	
	Net Price	Ohms per V.	Net Price	Ohms per V.	Net Price	Ohms per V.
0-10	\$2.94	1000	\$3.75	1000	\$4.90	1000
0-25	2.94	4.24	3.75	5.39	4.90	6.37
0-50	2.94	4.24	3.75	5.39	4.90	6.37
0-150	2.94	5.07	3.75	5.71	4.90	6.54
0-250	3.75	.....	4.58	.....	.....	.....
0-750	6.05	7.84	7.18	8.99	.....	10.46

### D.C. Milliammeters

Range	Approx. Res.	Models 221-233		Model 321		Model 421	
		Net Price	Ohms per V.	Net Price	Ohms per V.	Net Price	Ohms per V.
0-1	33	\$3.75	2.94	\$4.58	2.94	\$5.88	4.90
0-1.5	22	3.75	2.94	4.58	2.94	5.88	4.90
0-5	8.5	2.94	2.94	3.75	2.94	4.90	4.90
0-15	2	2.94	2.94	3.75	2.94	4.90	4.90
0-50	.6	2.94	2.94	3.75	2.94	4.90	4.90
0-150	.23	2.94	2.94	3.75	2.94	4.90	4.90
0-250	.12	2.94	2.94	3.75	2.94	4.90	4.90
0-500	.06	2.94	2.94	3.75	2.94	4.90	4.90

### D.C. Ammeters

Range	Approx. Res.	Models 221-223		Model 321		Model 421	
		Net Price	Ohms per V.	Net Price	Ohms per V.	Net Price	Ohms per V.
0-5	.01	\$2.94	2.94	\$3.75	2.94	\$4.58	2.94
0-25	.002	2.94	2.94	3.75	2.94	4.58	2.94
30-0-30	.0016	2.94	2.94	3.75	2.94	4.58	2.94

Triplet also supplies 5" instruments. Portables. Power Level Indicators, Thermo-ammeters, A.C.-D.C. Twin Relays, etc.

### Dimensions

Model No.	Body Diameter	Flange Diameter	Body Depth	Type Case
221-231	2 1/4"	2 3/4"	1 1/2"	Flush
223-233	2 1/4"	2 3/4"	1 1/2"	Clamp-on
321-331	2 1/4"	3 1/4"	1 1/2"	Flush
421-431	2 1/4"	4 1/4"x4"	1 1/2"	Flush

### A.C. Voltmeters

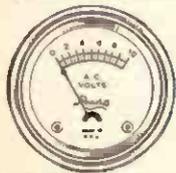
Range	Approx. Ohms per V.	Models 231-233		Model 331		Model 431	
		Net Price	Ohms per V.	Net Price	Ohms per V.	Net Price	Ohms per V.
0-10	16	\$2.94	16	\$3.75	16	\$4.90	16
0-50	60	2.94	60	3.75	60	5.88	60
0-150	110	3.75	110	4.58	110	6.37	110
0-300	166	4.75	166	5.39	166	6.37	166
0-1,000	166	9.65	166	10.46	166	12.10	166

### A. C. Milliammeters

Range	Approx. Res.	Models 231-233		Model 331		Model 431	
		Net Price	Ohms per V.	Net Price	Ohms per V.	Net Price	Ohms per V.
0-15	1125	\$2.94	1125	\$3.75	1125	\$4.90	1125
0-50	85	2.94	85	3.75	85	4.90	85
0-250	.12	2.94	.12	3.75	.12	4.90	.12
0-500	.8	2.94	.8	3.75	.8	4.90	.8

### A.C. Ammeters

Range	Approx. Res.	Models 231-233		Model 331		Model 431	
		Net Price	Ohms per V.	Net Price	Ohms per V.	Net Price	Ohms per V.
0-5	.01	\$2.94	.01	\$3.75	.01	\$4.90	.01
0-10	.005	2.94	.005	3.75	.005	4.90	.005
0-30	.001	.....	.001	4.58	.001	.....	.001



# Readrite

## PANEL METERS

Model 55

Economical, ruggedly constructed, and dependably accurate instruments. Flush panel mounting, clamp-on type, requires a  $2\frac{5}{8}$ " hole. Full nickel.

# Readrite

### Flanges For Model 55 Meters

2 3/4" outside diameter. Black enamel. NET Price, Hardware included.....\$0.99



Milliammeters		D.C. Voltmeters				D.C. Ammeters		A.C. Voltmeters		A.C. Ammeters	
Range	NET	Range	Ohms	NET	Range	Ohms	NET	Range	NET	Range	NET
0-5	\$1.32	0-1	30	\$0.59	0-50	3250	\$0.59	0-4	\$1.62	0-1	\$1.62
0-10	1.18	0-3	175	.59	0-50	15440	1.91	0-6	1.62	0-3	1.62
0-15	.59	0-5	410	.59	0-100	6500	.88	0-10	1.62	0-5	1.62
0-25	.59	0-6	550	.59	0-100	30888	1.91	0-15	1.62	0-10	1.62
0-50	.59	0-8	850	.59	0-150	9750	1.03	0-150	2.65	0-50	1.91
0-100	.59	0-10	1475	.59	0-150	46320	1.91	0-300	3.23	0-50	\$1.62
0-150	.59	0-15	2914	.59	0-300	92640	1.91	0-750	4.56	0-100	1.62
0-300	.59	0-25	1625	.59	0-500	154400	2.65	0-10-140	2.65	0-250	1.62
0-400	.59	0-25	7720	1.62						0-500	1.62
0-20/100	1.18										
0-15/150	1.18										

## RESONANCE TUNING METERS

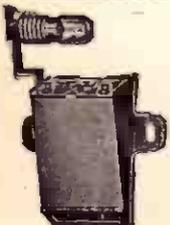
With present day sharp tuning receiving sets, silent tuning, and automatic volume control, the Resonance Tuning Meter has come to be one of the most important adjuncts in the design of the modern receiver. These Readrite meters are offered in a variety of styles and sizes. The best use of the Tuning Meters is in conjunction with AVC. Meters furnished with full scale deflection of 5, 7, 10 or 15 milliamperes.

TM-103—Opaque dial with lighting through window.

TM-121—Shadowgraph Type Meter. The solid shadow spreads over the translucent dial. Supplied complete with 6.3-volt lamp. Special styles are also available.

NET Price, Any Style.....\$0.88

Readrite Tuning Meter Escutcheons—NET Price.....\$0.18



Model TM-121



Model TM-103

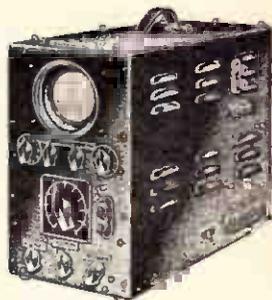


# CLOUGH-BREngle



## PROFESSIONAL Service Instruments

### MODEL "CRA" CATHODE - RAY OSCILLOGRAPH OSCILLOSCOPE, AMPLIFIER AND LINEAR SWEEP



Contains all the elements necessary for a complete Cathode-Ray analysis. The input amplifier permits a sensitivity of 0.4 RMS volts per inch. The sweep rate is adjustable from 20 to 50,000 cycles per second. Unit has a synchronizing circuit for securing steady image on Cathode-Ray tube. Other uses of this instrument are: Modulation analysis, voltage and current measurements, hum analysis, phase measurements, and distortion in the A.F. amplifier. Uses tubes: 1 Type 906 or 908 Cathode-Ray, 1-75, 1-2A5, 1-835, 1-80, 1-81. Dimensions: 13 1/4" high, 8 3/4" wide, 18" deep.

Dealer's NET Cash Wholesale Price ..... \$84.50

### MODEL "OC" RADIO FREQUENCY OSCILLATOR SIGNAL GENERATOR



Introducing countless entirely new electrical and mechanical features, its performance may be summed up as follows: The Model OC provides every known intermediate, broadcast, and short-wave frequency on fundamental signals (no confusing harmonics) at whatever signal strength needed for perfect alignment of any stage, no matter how badly out of alignment or how great the amplification or high the sensitivity of the set.

All this at an overall accuracy of 1/2 of 1% at any point in all frequency bands! Use of an electron-coupled circuit and careful engineering assure absolute frequency stability. Errors of frequency setting are banished with the new Micro-Accurate Dial that may be set to 1/10 of 1% accuracy.

The Model OC is compact, lightweight, and built to take the hardest service. Operation is from any 110-volt A.C. or D.C. line, eliminating the expense and weight of batteries.

Dealer's NET Cash Wholesale Price ..... \$32.91

### MODEL "OM" FREQUENCY MODULATED R.F. OSCILLATOR SIGNAL GENERATOR

The Model OM R.F. Signal Generator is essentially similar to the Model OC, with the addition of the Beat-Note Frequency Modulation Circuit necessary for producing selectivity-sensitivity curves on a Cathode-Ray Oscilloscope.

The shortcomings of frequency modulation systems, where a motor-driven condenser is connected directly across the oscillator tuning condenser, and the fact that a selectivity curve of uniform width cannot be secured at all test frequencies, are eliminated by this newly-developed circuit.

A separate Beat-Note Oscillator Circuit, whose frequency swings plus and minus 15Kc. of a fixed value, at a rate of 50 cycles per second, provides uniform, accurately calibrated frequency modulation of all frequencies of the main calibrated oscillator output. Accurate to 1/2 of 1%.



Dealer's NET Cash Wholesale Price ..... \$57.75



### MODEL "79" BEAT-NOTE AUDIO OSCILLATOR

A valuable instrument for laboratory use by the Public-Address man, radio engineer and serviceman. Has an output impedance of 5000 ohms and delivers 27 volts. Direct heading 50 to 10,000 cycles. Gives less than 5% distortion at all frequencies above 100 cycles at maximum output. Contains vacuum tube voltmeter, which permits zero-beat adjustment. Complete with 5-76 and 1-80 tubes.

Dealer's NET Cash Wholesale Price ..... \$51.90



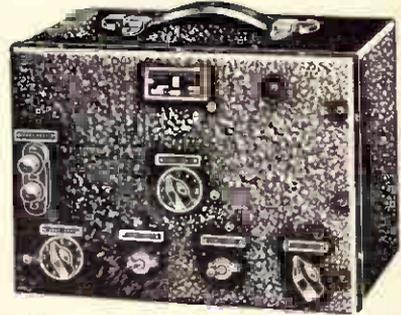
# CLOUGH-BRENGLE



## PROFESSIONAL Service Instruments

### MODEL 81 HETERODYNE FREQUENCY MODULATOR

This model is a 670 Kc. fixed oscillator, having a motor-driven condenser to vary its frequency plus or minus 15 Kc. at 50 times a second. Provides all the advantages of calibrated selectivity curve analysis when using the Cathode-Ray oscilloscope, as first introduced in the Model OM, without the necessity of replacing your present oscillator. Operates with any oscillator and does not require any alterations or recalibration of the oscillator. Simply connect the oscillator output cord to the Model 81, which in turn connects to the set. "Ladder Type" attenuator used. Complete with built-in heterodyne oscillator or, sweep motor and tubes.



Dealer's NET Cash Wholesale Price.....\$34.25

### MODEL "UP" POWER LEVEL (Decibel) METER



Supplied with carrying case

**Application**—Wherever it is desired to measure the power level in an audio line, an amplifier audio output, or for a visual monitor in broadcasting or recording and in theatre and public address work.

**Ranges**—Scale band calibrated directly in decibels and instrument with a total range of minus 12 to plus 40. Specially designed attenuator provides attenuation of 3 decibels per step. The 3 1/4" meter is calibrated over a very small range (minus 12 to plus 10) making possible readings accurate within 1/4 decibel over the entire range.

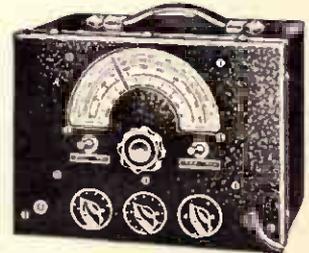
**Frequency**—Suitable for use in circuits at any frequency from 20 to 20,000 cycles.

**Internal Resistance**—5,000 ohms, purely resistive, non-inductive. Bridging loss is only .2 dB. when used on 500-ohm lines or pads.

Dealers NET Cash Wholesale Price Complete, in case.....\$26.40

### MODEL "82" DIRECT READING OSCILLATOR

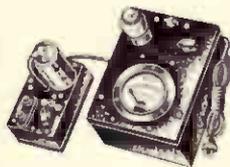
A continuously-variable oscillator with range from 85 Kc. to 21 Mc. on six tuning bands. Ladder attenuator, 8 1/2" scale, full-vision dial, separate audio and radio-frequency outputs. Signal modulated or unmodulated, as desired: modulation 30%, 400 cycles. Complete battery operation from one 22 1/2-volt unit for "B" supply, and one 4 1/2-volt unit for filaments. Uses two Type 37 tubes, one as R.F. oscillator, and one as A.F. oscillator. Accuracy 3%. Battery consumption is almost negligible. Supplied complete with tubes.



Dealer's NET Cash Wholesale Price.....\$19.90

### MODEL "UC" VACUUM - TUBE VOLTMETER

A D'Arsonval type indicating-meter is used. Potentials under 2000 Kc. of .2 volts and lower may be read with ease and an accuracy of no less than 2% of full scale value. Operation from 110-120-volt A.C. power line. Standard type tubes are used: one 6C6 and one 84 rectifier. Frequency error has been reduced to less than 2% when measuring voltages of frequencies under 2000 Kc., to 4% of 3000 Kc. and 5% above 4000 Kc.



Wave-form errors are negligible, since the design of the Model UC is such that the voltmeter tube is worked at the point in its characteristic curve so as to provide true square-law function. Input resistance is practically infinite on the 5-volt scale, reducing current drain from the measured circuit to very near absolute zero. The shunts used on the two higher scales do not reduce the input resistance to less than 2 megohms.

Dealer's NET Cash Wholesale Price.....\$34.80

### MODEL "85" UNIMETER VOLT-OHM MILLIAMETER



**Ranges**—A.C. Volts 0/15/150/750; D.C. Volts 0/10/100/1000 (1000 ohms per volt); D.C. Milliamperes 0/1/10/100; Resistance 0/2000/20,000/2,000,000 ohms; Output over three A.C. voltage ranges; Capacity over four ranges with complete calibration curves; and High Current with an external shunt (0/10 amps). Resistance measured up to 10 megohms with external battery. One rotary selector switch connects test leads to any desired current or voltage measuring range. Control panel also contains a compensating shunt in place of the usual series resistor for zero adjustment of resistance ranges. The energizing battery potential may fall as much as 30% and accurate readings are still maintained. Completely shielded and protected from dust. Accuracy within 2%.

Dealer's NET Cash Wholesale Price.....\$24.90

# MODERN *testing* Equipment

## Tube Checkers · Oscillators · Analyzers

### HICKOK PRODUCTS

#### All-Wave R.F. & A.F. Oscillator



Most complete meter-equipped oscillator. Permits frequency modulation for oscilloscope use. Frequency range: 85 K.C. to 40 megacycles, in 8 bands. All fundamentals to 25 megacycles. R.F. modulated

50% by 400 cycles, and available either modulated or unmodulated. Also, 400 cycles separately available. Combines Variable A.F. Signal Generator, besides R.F. Oscillator. Employs double range output meter—output continuously variable in two ranges, from less than .1 microvolt to over .1 of a volt. Calibrated A.F. output continuously variable from 0 to 10,000 cycles—oscillator has a frequency stability of .05%.

Dealers' NET Price, Complete ..... **\$48.00**

### HICKOK

#### Model 5200 Multi-Selector

For use with volt-ohm meters and radio set testers all makes. Combination Plug-in for Dynamic and Point-to-Point Radio Set Testing. Voids obsolescence and embraces extreme simplicity of operation. Equipped with 8-prong socket for metal tubes.

Size: 6 1/4" x 3 1/2" x 3 3/4" deep.

Dealers' NET Price ..... **\$11.70**

### HICKOK

#### Special Capacity Tester

Provides a dependable and accurate method of rapid Service in the testing of all condensers as used in today's radio receivers. Direct reading from .0001-mfd. to 20 mfd. Operates on 100-130 volts, 50-60 cycles. Accuracy not affected by temperature. Size: 6 1/4" x 3 1/4" x 3 1/4" deep. Complete with leads, A.C. cord and detailed instructions which include reading **Henries**.

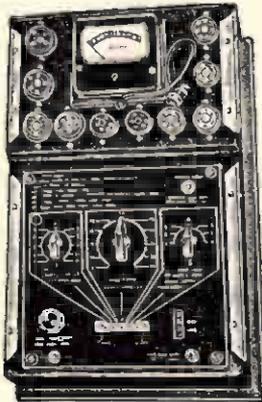


Dealers' NET Price ..... **\$19.80**

### DAYRAD PRODUCTS

#### Model 25

#### "Index" Locator Tube Checker



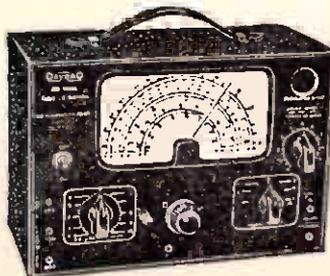
#### Close up of New "INDEX" Locator

Something new and radically different. The new Dayrad "Index" quickly selects setting of tube to be tested. No charts or instructions to follow—just turn index wheel until figure number appears and all settings are immediately indicated. Tests all present type tubes, including the new metal types. Tests leakages up to 2,000,000 ohms; tests noisy tubes; English reading dial indicates "Poor" and "Good" tubes; wide range line voltage control—100 to 130 volts. Shorts and leakages indicated. Metal counter case, two-toned finish. Grid cap fits metal or standard tubes. Shpg. Wt. 30 lbs.

Dealers' NET Price ..... **\$37.50**

### DAYRAD

#### All-Wave Signal Generator



Range from 60 to 60,000 K.C. (5000 to 5 meters). Six separate bands using fundamental frequencies only. Individual coils for each band; Vernier control. Absolute attenuation. Circuit uses one 6C6 R.F. Electron Coupled Oscillator, one 37 Audio Oscillator and 1-37 Rectifier. A 400-cycle note is available. Low and high output connections. Built-in neon tube output indicator with variable adjustment. All circuits individually shielded. In metal case with black crystalline finish. Size 10" x 7" x 1 1/2". Shpg. Wt. 14 lbs. All-Wave Signal Generator, for 100 volts, 50-60 cycles A.C. Complete with tubes.

Dealers' NET Price ..... **\$31.75**

### DEPENDABLE PRODUCTS

#### Model 305C Tube Tester



Practical for radio servicemen and dealers; an efficient and dependable tester. Tests all tubes, including the new metal 8-prong types. Incorporates a new 5-inch bakelite fan type meter with English reading scale. Separate line-voltage meter with controls. No adapters to use. Includes Ohmmeter and Continuity Tester. Will measure from 10 ohms to 1 meg-

ohm. No batteries required. Also, checks for open, shorted and leaky condensers of all types. Model 305C—Complete. Ready for use.

Dealers' NET Price ..... **\$21.95**

305KC—Counter type, same as above in kit form. Dealers' NET Price ..... **\$17.65**

#### PORTABLE MODEL

Removable hinged cover and compartment for tubes and tools. Size 14" x 11 1/2" x 7 1/2". Features identical with above.

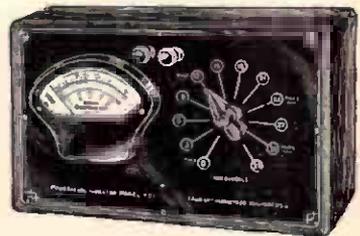
305P—Portable—Counter Type. Dealers' NET Price ..... **\$24.50**

#### Multitester Model 406

A quality volt-ohm-milliammeter. Ohmmeter is in 3 ranges: 0/2000/20000/2000000 ohms. A tapered rheostat permits smooth zero adjustment on all ohmmeter ranges. Milliammeter has 3 individual ranges: 0-5, 50 and 250 mls. 4-range Voltmeter scale, at 2000 ohms per volt, 0-5, 50, 250, 750, and for A.C.: 0-5, 750 D.C. multipliers and shunts are hand calibrated for accuracy of 1%. All ohmmeter batteries are self-contained. Dimensions: 6" x 8 1/2" x 3" Model 406. Dealers' NET Price ..... **\$18.95** Model 406P—Same with hinged cover. \$19.95



#### Power Level Indicator



#### MODEL 421

For measuring power levels in A.F. lines. Can also be used as a monitor and as a 4-range A.C. voltmeter. Power levels can be read from 12 to 43 dB. Uses a 500-microampere meter with a knife-edge pointer. Employs a 10,000-ohm attenuator. Accurate reading from 20 to 20,000 cycles.

Model 421—Power Level Indicator housed in a fine natural-finish wooden case. Size: 11" x 8 1/2" x 4". Shpg. Wt. 3 1/2 lbs.

NET—To Engineers, Servicemen ..... **\$25.85** and dealers.

Model 421K—Complete Kit of Parts, except panel and case. Dealers' NET Price ..... **\$21.00**

# METER ACCESSORIES

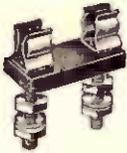
## Littelfuse Mountings



These attractive mountings have a base of moulded bakelite. Are furnished with plated fuse clips. Base is  $1\frac{1}{2} \times \frac{3}{8} \times \frac{3}{8}$ ".

1010—List Price.....\$0.15  
For 3AG Fuses  
1060—List Price.....\$0.20

## Littelfuse Panel Type Mounting



For sub-pane use. Studs are 1" long and have 6-32 thread. For 1" fuses only. Base of fine bakelite. Size  $1\frac{1}{2} \times \frac{3}{8} \times \frac{3}{8}$ ".

1050—List Price.....\$0.20

## Neon TATTELITE Tester



Ideal for servicemen and electricians for testing for blown fuses, live lines, open circuits, polarity, continuity tests, checking resistors, shorted condensers, and a multitude of other tests. Made in pocket size, it employs a tiny neon lamp which consumes negligible current, will glow on as little as .5 Ma., and may be used for indicating voltages of 90 volts D.C. and 60 volts D.C. and upwards. Varished cambric insulation on leads made to withstand 5000 volts. Glows pink on R.F., orange on D.C. and therefore most handy for servicing. A 50,000 ohm protective resistance is in series with the lamp, minimizing replacement of this unit. Full instructions of its many uses included. Shpg. Wt. 1 lb.

5076—List Price.....\$1.00

## Littelfuses for Test Instruments



Designed to insure and protect meters and other expensive equipment. Are dependable and accurate. Has many laboratory uses. Breaks circuit immediately on reaching maximum milliamperere load. Length 1", diam.  $\frac{1}{4}$ ".

## High Voltage Littelfuses



Efficient, renewable type fuses. Multi-break fuse wire blows each  $\frac{1}{2}$ " of its length. Rated to blow at 50% above rating

1000 Volt		5000 Volt	
Cat. No.	List Price	Cat. No.	List Price
2013	\$0.40	3020	\$0.70
2014	.35	3021	.70
2015	.35	3022	.65
2016	.35	3023	.65
2017	.35	3024	.65
2017-A	.40	3024-A	.75
2018	.40	3025	.75
2018-A	.40	3025-A	.75
2019	.40	3026	.75

## For Radio Sets and Amplifiers

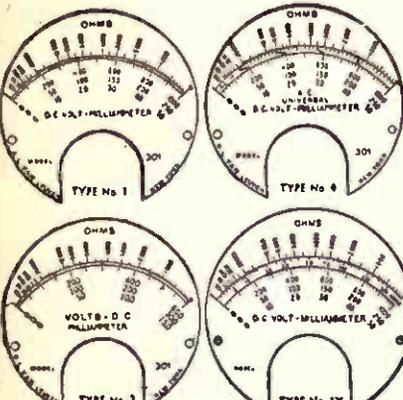


Designed for protection of radio receivers. Used in power supply line. Approved. Size  $\frac{1}{4} \times 1\frac{1}{4}$ ".

Cat. No.	Specifications	List Price Each
1040	1 Amp. 250 V.	\$0.08
1041	1 1/2 Amp. 250 V.	.08
1042	2 Amp. 250 V.	.08
1043	3 Amp. 250 V.	.08
1044	1/2 Amp. 500 V.	.15
1045	1 Amp. 500 V.	.15
1046	1 1/2 Amp. 500 V.	.15
1047	2 Amp. 500 V.	.15

Cat. No.	Rating Amps.	Max. Load Ma.	Aver. Resis. 5 Ma. Load	List Price
1000	1/200	5	500	\$0.30
1001	1/100	10	110	.20
1002	1/32	25	20	.20
1003	1/4	60	5.0	.20
1004	1/2	100	3.0	.15
1004-L	1/2	.....	1.5	.20
1005	3/4	200	6.2	.15
1006	1	300	3.0	.15
1007	1 1/2	400	2.5	.15
1007-A	1 1/2	600	.40	.15
1008	1	1000	.24	.10
1008-A	1 1/2	1500	.18	.10
1009	2	2000	.14	.10

## Metal and Plyboard Metal Dials



Heavily silver plated metal dials with etched black numerals. Types 1, 2 and 4 for use with Jewell (88-54), Weston (301) and Triplett (321) meters. Plyboard dials in Types 1, 2 and 4 for Beede (701) meters. Type 3X dials in metal for Weston 301 and Jewell 88 fifty millivolt meters.

Type 1, 2, 3X and 4  
List Price, Each.....\$0.75

## Indicator Tattelites



The smallest neon lamp in the world. Excellent on sensitive test where low-level illumination is desired. Use for pilot lights on remote control circuits, condenser and tube leakage testers, audio oscillators, etc. Mounting has clear phenolic resin casing. Also has direct terminal to cut out 100,000-ohm resistor when used on R.F.

No. 5122—Lamp only.....List Price \$0.50  
No. 5123—Mounting only.....List Price 1.00

## Fuse Holder

For 3AG Fuses. Cadmium-plated cover.  
No. 1126  
List \$0.20



## "Meter-Back" Mounting



Mounts directly on one meter terminal. Will not touch other post, even on smallest standard meter.  
List Price.....\$0.20

## Multiple Shunts



For 27 M.V. Meters. To extend the range to 5, 10, 25, 50, 100 and 500 Ma.  
List Price, Each.....\$1.50  
For 30 M.V. Meters. To extend the range to 5, 10, 25, 50, 100 and 500 Ma.  
List Price, Each.....\$1.50  
For 50 M.V. Meters. To extend the range to 5, 10, 25, 50, 100 and 500 Ma.  
List Price, Each.....\$1.50  
For 100 M.V. Meters. To extend the range to 5, 10, 25, 50, 100 and 500 Ma.  
List Price, Each.....\$1.50

## Series Tapped Shunts



For 1 Mill. D.C., 27 M.V. Tapped 10-100 millis  
List Price.....\$2.45  
For 50 M.V. Meter. Tapped 5-25-100 millis.  
List Price.....\$2.95  
For 50 M.V.—No switch required. For direct connection to meters parts. Tapped 10-25-100-500 millis.  
List Price.....\$3.45



## Neon Glow Lamps

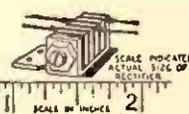
The serviceman and experimenter will find these glow lamps useful for many purposes. Their extreme sensitivity permit great accuracy in tests for leakage, high resistance circuits, continuity, etc., since they draw a negligible amount of current. Also used in tube checkers for indicating inter-electrode shorts. Will operate on 105-125 volts A.C. or D.C. except  $\frac{1}{2}$  watt types which operate on A.C. only.

Type No.	Watts	List Price	Type No.	Candelabra Base Watts	List Price
G10	$\frac{1}{2}$	\$0.60	S 4 1/2	1/2	\$0.60
G10	1	.60	G10	1/2	.70
S-14	2	.75	G10	1	.70
S14	3	.90			



## Copper Oxide Rectifier

For D.C. meter conversion. Converts D.C. milliameters of 15 Ma. or less to A.C. milliameters. With proper resistors can measure up to 1000 volts. Only  $\frac{1}{4} \times \frac{3}{4}$ ". Full instructions included. Shpg. Wt. 1 lb. Small enough for all practical purposes.  
List Price.....\$5.00



# BOOKS NEWEST

## Radio Data

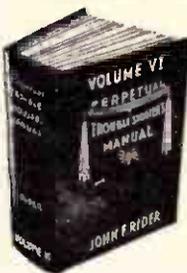
### RCA Service Manuals



A complete series of Service Manuals covering ALL the RCA receivers made between 1923 and 1934. The most complete information available. Exceptionally low in price. Stiff covers fabric covered and lettered in gold.

Year	Shpg. Wt. lbs.	Net Price Each Manual
1923-1928	3	\$1.00
1929-1930	3	
1931-1932	3	
1933	3	
1934	3	

### RIDER'S Perpetual Trouble Shooters' Manual No. 6



John F. Rider's latest Manual—No. 6—Contains more detailed information than any other Manual offered. All essential servicing details of over 940 models covering the products of 115 manufacturers. Contains 1,250 pages and a separate 90-page Index that lists exactly what appears on every page in all six volumes. The servicing encyclopedia of the year!

Volume No. 6—NET Price..... \$7.35

Volume No. 5—Contains many diagrams of receivers that you are now getting for service. These diagrams do not appear in previous or subsequent issues.

NET Price..... \$7.35

Volume No. 4—NET Price..... \$7.35

Volume No. 3—NET Price..... \$7.35

Volume No. 2—NET Price..... \$6.37

Volume No. 1—NET Price..... \$7.35

### BOOKS BY GHIRAROI AND FREED

#### Modern Radio Servicing



Auto Radio, Cathode Ray Applications, All-Wave, High Fidelity, etc., completely described. 2nd Edition. Profusely illustrated with diagrams and schematics. 1300 pages.

NET Price,..... \$4.00

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Contains comprehensive tube charts, wire tables, I.F.'s of all standard superhets, Symptoms and Remedies for troubles in over 500 models of standard receivers, ignition troubles in car radios, etc.

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Above two books, purchased together—NET Price..... \$5.00

### DRAKE'S Cyclopaedia New Edition



Completely revised. This valuable encyclopedia, written in simple language contains information on radio and all its allied lines. Gives all practical data on Radio transmitting and receiving, Sound Pictures, Public Address, Television, Photo-electric cells, etc. 1048 pages, 500 complete articles, 1100 additional definitions and references. 130 tables and graphs. Thoroughly covers new Superheterodynes, Short Wave Receivers and Converters and Aviation Radio. Self indexed to make every fact easy to find. Size 9"x6 1/4"x2 1/4". Shpg. Wt. 10 lbs.

NET Price, Each..... \$3.92

### GERNSBACK'S Official Radio Service Manual

1935 Edition



New issue containing a wealth of information extremely valuable to the serviceman. All the new circuit developments including all-wave and straight short wave receivers are described. All new receivers are diagrammed. Flexible cover—loose leaf binding. 1000 pages.

Shpg. Wt. 4 lbs. \$5.45

NET Price..... \$5.45

#### 1934 Official Radio Service Manual

Contains many diagrams not available in other older or newer Manuals. Over 400 pages. Over 1500 illustrations. Flexible leatherette cover. This manual will save both time and expense and is a real necessity in every service shop. Shpg. Wt. 4 lbs.

NET Price—1934 Edition..... \$2.75

#### 1933 Official Radio Service Manual

This edition contains diagrams and information that does not appear in other older and newer Manuals. Many of the sets the serviceman is now getting for repair are only listed in this edition. Over 2000 illustrations, over 700 pages. Size 9"x12". Flexible loose-leaf leatherette cover. Shpg. Wt. 4 lbs.

NET Price—1933 Edition..... \$3.75

### Official Short-Wave Radio Manual



A complete manual on short wave equipment and practice. An excellent book for use by Amateur and Radio Serviceman. Covers the construction, servicing and operation of both home built and commercially built receivers and converters. Also includes information on the construction and operation of amateur Transmitters. Everything pertaining to short wave is included. 240 pages. Shpg. Wt. 4 lbs.

NET Price..... \$2.00

### RIDER'S Specialized Auto-Radio Manuals



Volume II. The most complete servicing data on every auto radio receiver built from 1933 to April 1935. No details have been omitted. A real practical and valuable help. The information you have been looking for; right at your finger tips. 350 pages. Size 11 1/4"x8".

Shpg. Wt. 5 lbs. \$3.43

NET Price..... \$3.43

Volume I. Same as above; however contains all servicing information on auto radio receivers up to 1933 only.

NET Price..... \$3.43

### OFFICIAL Auto-Radio Service Manual

The publishers of the very popular Official Radio Service Manual have published this new manual that covers the auto-radio field in great detail. Complete diagrams and service notes on old as well as all new sets and accessories; detailed instructions for suppressing ignition interference. Tells when and how to use rooftop, running board, and between-axle aerials; gives technical details on all popular types of "B" Eliminators and explains how to adjust generator charging rate. All the newest features used in the latest type receivers are carefully explained. 200 pages. Size 9"x12". Loose-leaf cover. Shpg. Wt. 2 lbs.

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### Radio Physics Course



A complete up-to-date Radio and Electrical Course which answers every question pertaining to Radio, Electricity, Photo-Electric Cells, Television and Talkies. Second edition. 992 pages, 500 illustrations.

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### Radio Engineering Handbook

Written by Keith Henney, Authoritative. Every section written by a specialist. A book every technical radio man should have. 583 pages. Shpg. Wt. 2 lbs.

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#### How to Protect and Merchandise It

Book on Patents, Trademarks, and Copyrights. By Elmore B. Lyford

Outlines and explains in everyday language every step you should take to completely protect your ideas and patent them. What is patentable and what isn't; how to select a patent attorney; the intricacies of patent law; how to promote your inventions; foreign patents. Contains 21 legal forms for records of conception, assignments, licenses, etc. 210 pages.



NET Price..... \$1.50

### Short-Wave Coil Book



Every possible bit of information on coil winding that you could need. Gives dimensions, sizes of wire to use, methods of computing turns needed, spacing, etc. No duplication.

NET Price..... \$0.25

# BOOKS NEWEST

## Radio Data

### Radio Amateur Call Book



The only publication listing all Radio Amateur Stations throughout the entire world. Each issue contains a complete and accurate list

of high frequency commercial stations. International abbreviations, "Q" readability system, "R" audibility system, "T" tone system, International prefixes, high frequency press and weather schedules, 320 pages. Shpg. Wt. 2 lbs. Latest Edition.

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### Radio Amateur's Handbook



The most popular Handbook for Amateurs ever written. It is the most comprehensive book published, covering every phase of the subject. Includes: The Story of Amateur Radio; Getting Started; Electrical Fundamentals; Planning and Building Transmitters; and a host of other information. Latest Edition.

Shpg. Wt. 1 lb.  
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Covers every phase of Amateur License procedure in a clear and concise manner. Prepared in response to an uninterrupted demand for information on how to pass examinations and apply for licenses. Complete question and answer section covers every type of question you will be asked for any type license. You can save yourself a lot of worry by studying this helpful book.

Shpg. Wt. 2 lbs.  
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Information—ideas—suggestions. Practical tips, brainstorming that worked, money saving dodges, time saving thoughts. A whole book full of them. A compilation of the best ideas in one cover. Shpg. Wt. 2 lbs.

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Second edition in 32 pages outlines the entire field of amateur radio. Makes learning the code easy, tells how to build a station, get a license, etc.

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Practical data for using 1/2-meter and 5-meter bands. Reception and transmission below 10 meters is fully covered. Shpg. Wt. 2 lbs.

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## REFRIGERATION BOOKS

### Official Refrigeration Service Manual



In this refrigeration manual every part is carefully explained; diagrams are furnished of every known machine; special rare given to the service end. Tools needed are illustrated and explained; There are trouble shooting charts and other service data. Over 1200 diagrams; 340 pages; size 9x12"; flexible loose leaf cover. Makes electric refrigeration servicing easy.

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The work is in everyday language. With this book the practitioner is enabled to intelligently design or operate refrigerated machinery. The theoretical and fundamental operating principles are given attention first. This is followed by numerous practical considerations and the application of the fundamental principles to the economic production of ice and refrigeration for various purposes. Over 1,000 pages. Profusely illustrated in a cloth binding.

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An enlarged fourth edition of the only book published on Domestic Refrigeration. Covers in detail the principles, types, construction and operation of domestic refrigerators and refrigeration.

Contents include chapters on—Refrigeration Units and Theory—History and Principles of Refrigerating Systems—Domestic Ice Refrigerators—Refrigerants—Air Conditioning—Commercial Systems—Miscellaneous Tables. Over 700 pages 6 1/4" x 9 1/4" in size, profusely illustrated.

**NET Price** ..... \$4.00

## SOUND PICTURE Manuals

### SOUND PICTURES

#### Recording and Reproducing



A book covering the recording and reproduction of sound motion pictures, and equipment necessary for same. Contains complete information on the new "high-fidelity" and "wide-range" recording and reproducing. Fully illustrated with diagrams and photographs. 340 pages. Shpg. Wt. 3 lbs.

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### Servicing Sound Equipmt.



Primarily intended for use by theatre projectionists and those in the servicing of sound equipment of great value to any sound man. New second edition greatly enlarged and

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### P. A. Systems



A comprehensive book on all types of P.A. Equipment. Includes chapters on hotel radio installations, and police radio. Complete information on theatre, school, ball park, etc., installations. Tells how to select the proper equipment and the peculiarities of the different types.

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## Servicing Superheterodynes

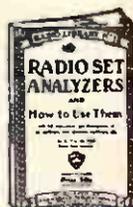


Do you know all that you should to enable you to service superhets at a profit? . . . Are you familiar with various kinds of superheterodyne circuits? . . . Do you know the function of individual parts of a superheterodyne receiver—of an autodyne superhet? . . . Do you know what is meant by "image frequency"? . . . Can you adjust the Atwater-Kent "double spot" interference-eliminating system? Servicing Superheterodynes answers all these questions. Gives all the information you need about superhet receivers. 163 pages. type set, profusely illustrated, cloth bound. Shpg. Wt. 2 lbs

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### Radiocraft Library

These books are all new and up-to-date: written by men who are authorities on the subject. The volumes are all uniform size 6x9" and contains 50 to 120 illustrations.



**Radio Set Analyzers.**

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**How to Become a Service Man.**

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**Radio Kinks and Wrinkles.**

**Radio Questions and Answers.**

**Auto Radio and Servicing.**

**Home Recording and All About It.**

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**How to Become An Amateur Radio Operator.**

**Point to Point Resistance Measurements.**

**P.A. Installation and Servicing.**

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### How to Design and Build 5-Meter Sets



How to design and build 5-meter transceivers, transmitters, etc., by Frank Jones with supplementary information by Kruse, Haigis, Hawkins, Hart.

**NET Price** ..... \$0.25

### The Radio Handbook



Just released and therefore right up to the minute. 292 pages of real information on newest developments. New metal tubes, new H.F. amateur receivers, transmitters—from a 1 tube beginners' job to a

1 KW for old-timers. Antennas, charts, and 5 meter data. 64 pages on New Electron Theory of electricity and radio. All in simple language. 296 pages overall. Shpg. Wt. 4 lbs.

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### The Cathode Ray Tube at Work



The theory underlying the functioning of the cathode ray tube. Circuits that accompany it, are fully described.

Tells how the tube can be utilized. 320 pages. Shpg. Wt. 3 lbs.

**NET Price** ..... \$2.50

# 30-Watt Phone & C. W. TRANSMITTER

## A Professional Outfit for the Amateur



This new 30-watt transmitter incorporates the well-known Harmonic Oscillator as the exciter. It uses a circuit employing a Type 56 and a 53, and has proven entirely satisfactory with regard to cost of operation, power output, etc. Exhaustive laboratory tests, covering voltage and current measurements, air tests and life tests have more than justified every claim made. The oscillator, buffer and amplifier tuning condensers, 0-25 Mil. amplifier grid or oscillator plate current meter and 0-150 Mil. buffer or amplifier plate current meter are mounted on the panel.

### Finest Quality Components

While it is true that appearance was considered to be of importance in the design of this transmitter, the most important consideration, namely the inherent quality of the components, was kept foremost. That is why you will find such fine quality parts as Hammarlund variable condensers, Cornell Duhiiler fixed condensers, Triplett bakelite-cased meters, etc., in this new transmitter. The workmanship is of the finest and each individual transmitter is carefully checked for output on both dummy and regular antennas, for modulation on an oscillograph and an audio oscillator, and for performance by actually putting it on the air. Full instructions are supplied with each unit so that within only a few minutes after uncrating it and making a few tuning adjustments you are on the air with a sharp, crystal-controlled C.W. signal that cuts through QRM like a knife, or a phone signal modulated 100% with tone quality that would do justice to the finest broadcast transmitter.

### Has a Conservatively Rated Output

This transmitter has a conservatively rated output of 30 watts. The laboratory has actually put 45 watts into a 100-ohm non-inductive dummy antenna on the 160, 80 and 40-meter bands. On the 20-meter the power output dropped to 37 watts. These measurements were taken with an input of 60 watts into the 16s.

### Separate Self-Contained Power Supplies

Separate self-contained power supplies are contained in each unit. The power supply for the R.F. unit uses an 83 tube and a single choke dual condenser filter and furnishes a maximum of 600 volts. The modulator built-in power supply is especially designed for good regulation under varying load prevailing in Class "B" circuits. It also uses an 83 mercury vapor rectifier.

### Modulator

Modulator uses four stages consisting of: A 57-pentode resistance coupled to a 30-triode followed by a 4s in Class "A" driving a pair of 46's in Class "B". Power output is 30 watts. Frequency response within plus or minus 1 1/2 dB. from 60 to 17,000 C.P.S. Overall gain of 110 dB.: ample for crystal microphone. Has special modulation transformer with output impedances of 4000, 6000, 8000 and 10,000 ohms and is designed to carry Class "C" plate current. The power supply is built into the unit; has excellent regulation characteristics—uses an 83 rectifier. A gain control and the 0-200 mil. meter (modulation indicator) are mounted on the front panel.

### Antenna Coupling Unit

The transmitter includes an antenna-coupling or tuning-unit with two variable condensers, a series-parallel change-over switch, with a neutral position, and a Triplett thermo-couple ammeter having an accuracy of 2%. The series-parallel switch connects each condenser in series with a feeder or one condenser in parallel with the antenna coupling coil. Neutral position permits tuning of final amplifier for minimum plate current with antenna load disconnected.

### Complete 30-Watt C.W. and Phone Transmitter

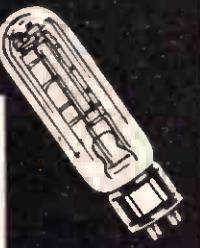
The complete transmitter consists of the Antenna Coupling Unit, the R.F. Unit and the Modulator Unit housed in a three-deck Metal Cabinet Rack, with one set of coils for either 160, 80, 40, or 20-meter bands (specify band desired). Crystal, tubes, microphone and key extra. 19"x26 1/4"x13". Shpg. Wt. 125 lbs

<b>Complete Transmitter</b> , as described above.....	<b>List Price</b>	<b>\$217.50</b>
<b>Extra Set of Coils</b> for 160, 80, 40 or 20-meter bands.....	<b>Each</b>	<b>5.85</b>
<b>Complete Kit of Tubes</b> .....		<b>10.00</b>
<b>Mounted 160 or 80-Meter, X-Cut Crystal</b> .....		<b>5.85</b>
<b>Mounted 160 or 80-Meter, AT-Cut Crystal</b> .....		<b>9.20</b>
<b>Mounted 40-Meter, X-Cut Crystal</b> .....		<b>7.50</b>
<b>Mounted 40-Meter, AT-Cut Crystal</b> .....		<b>15.45</b>



## TRANSMITTING TUBES

These transmitting tubes are made of the finest quality, and the care and precision used in their manufacture insures long life and constant electrical characteristics.



**No. 203B Metal Plate**—Class "B" Modulator. 200-watts audio power may be secured in Class "B" operation. Fil. 10-volts at 3-amp. Max. plate potential, 1000-volts at 500-Ma..... **List Price, \$12.50**

**No. 845**—Modulator and A.F. Ampl. Fil. 10-volts at 3.25 amp. As Class "A" R.F. amplifier and mod. max. plate 1000-1250-volts, 75 to 65 ma. Peak grid swing 150-250-volts. Max. plate dissipation, 75 volts..... **List Price, \$20.85**

**No. 841A**—Class "C" Osc. and R.F. Ampl. or Class "B" Mod. in P. P. are capable of delivering 200 watts of audio power. Fil. 10-volt at 2-amp. Plate 1000-volts max. at 50-watts dissipation. Amplification factor 30..... **List Price, \$11.70**

**No. 825**—45-watts Class "C". A pair will deliver 80 watts as Class "B" audio mod. Fil. 7 1/2-volts 2-amps. Max. plate potential, 750-volts at 100-Ma..... **List Price, \$8.25**

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**No. 866B**—Super-Duty Rectifier. A new half-wave mercury rectifier. Fil. 5-volts at 5 amps. Max. inv. peak 8500-volts at 1000 Ma. **List Price, \$5.00**

**No. 203A**—Fil. 10-volts, 3.25-amp. Plate 1000-volts at 175 Ma. C bias, 25-volts, Mu-25..... **List Price, \$20.85**

**No. F-52**—Oscillator-Power Amplifier. Operate at peak efficiency on frequencies as high as 1 meter. Fil. 10-volts, 3.85-amp. Amplification factor 12. Mod. Op. 2000-volts; unmodulated, 3000-volts. Plate dissipation 150 watts..... **List Price, \$37.50**

**No. 203A**—Heavy-Duty Osc. Power Amplifier and Class "B" Audio Modulator. Plate dissipation 150 watts. Fil. 10 volts at 4 amp. Max. plate potential 1750-volts..... **List Price, \$29.20**

**No. 211**—Class "C" Osc. and Power Amplifier. A general purpose transmitting tube of unusual adaptability. Fil. 10-volts at 3.25 amp. Max. plate as Class "C" Osc. and Power Amplifier, 1000-1250-volts. .050 to .175 amp. Max. plate dissipation 100 watts. **List Price, \$20.85**

# TONEVOX TRANSCEIVER AND 5 METER ACCESSORIES

## Tonevox Transceivers

### Model "91"

The model "19" provides an exceptionally high output—approximately 2 watts—which is almost ten times that of the ordinary transceiver using the Type 30 tube as oscillator.

The circuit consists of a Type 19 tube used as a unity-coupled push-pull oscillator which is modulated by another Type 19 as a Class "B" audio amplifier which is driven by a Type 30. As a receiver one Type 19 is used as a push-pull super-regenerative detector with the Type 30 and the other Type 19 as the first and second stage audio amplifiers respectively. More than enough output is obtained for speaker operation. His level on reception is especially low and the frequency stability on transmission of a particularly high order.

The transceiver is equipped with two aerial terminals so that a transmission line can be used. Jacks for both mike and headphones are provided on the face of the front panel.

The case is of steel finished in black crystallized lacquer and is equipped with a leather carrying handle. Dimensions: 15" high, 7 3/4" wide and 6 1/4" deep. Batteries required are 135-volt "B," 7.5-volt "C," one 4.5-volt battery and two No. 6 dry cells.

**Type "91" Transceiver**—Less tubes, batteries and accessories. Shpg. Wt. 18 lbs. **List Price**..... \$26.60

**Complete Set of Batteries (Burgess)**—3-5308, 1-2370, 1-5540, 2-4FH **List Price**..... 5.40

**Kit of Matched Tubes 1-30, 2-19** **List Price**..... 2.67

### Model "13"

The Model 30 TONEVOX Transceiver has same external appearance as the Model 19 shown at side. It is extremely economical to operate and will provide exceptionally long battery life. It uses the popular 30-33 tube combination in a circuit that is an exclusive TONEVOX development. For transmission the 30 is used as an oscillator and the 33 as modulator—for reception the 30 becomes a very sensitive super-regenerative detector and the 33 is used as a high gain audio amplifier. Sufficient volume is available for loudspeaker operation. Inductances are wound with hard drawn copper and are rigidly mounted in place. Jacks for mike and headphones are provided. The entire back of the case is removable. Case is 15" high, 7 3/4" wide and 6 1/4" deep. Finished in black crystallized lacquer. Batteries required are 135-volt of "B," 13 1/2-volt "C" and two 1 1/4-volt dry cells. The only accessories required outside of the case are the antenna, mike and headphones. Complete instructions furnished.



**Type "13" Transceiver**—Less tubes, batteries and accessories. Shpg. Wt. 15 lbs. **List Price**..... \$19.95

**Complete Set of Batteries (Burgess)**—1-5150, 3-5308, 2-4FH **List Price**..... 5.30

**Kit of Matched Tubes 1-30, 1-33**—**List Price**..... 1.68

Despite the low power used in Transceivers a license is required for their operation.

## Kellogg Transceiver Sets



100-ohm Mike requiring .025 amps. at 3 volts. Gold plated diaphragm. Carbon button thoroughly insulated from case with moulded bakelite. Super-sensitive 2000-ohm receiver with bi-polar cobalt steel magnets and bakelite cap. Receiver cap 2 3/4" diameter. Length of handset overall 9". Handle of cast aluminum. Equipped with 6-foot four-conductor moisture proof cord. Shpg. Wt. 5 lbs. **List Price**..... \$11.00

**Note: See also Universal Phone Sets on Universal page.**

## 5-METER ANTENNAS



These ultra-high-frequency antennas are designed to cover every requirement for antennas, either portable or stationary. Taper lock bushings permit length of the antenna to be adjusted by simply forcing down the bushing with a turning action.

Cat. No.	Description	List Price Each
153	3-Section, 36" closed, 102" open with 4 1/2" standoff insulator.....	\$2.50
156	2-Section, 26" closed, 50" open, binding post mounting.....	1.00
158	2-Section, 26" closed, 50" open, with center insulator mounting.....	1.70
159	4-Section, 1/2-wave doublet with 4 1/2" standoff insulator.....	3.25
161	6-Section, 1/2-wave doublet with 4 1/2" standoff insulator.....	5.25
163	3-Section, 36" closed, 102" open, with center insulator mounting.....	2.40

## MANHATTAN



### Practice Wireless Key

An inexpensive high-grade key. Nickel-plated key lever, silver contacts. Mounted on mahogany finished baseboard.

**Type No. 101**—**List Price**..... \$1.50

## MANHATTAN

### High Frequency Buzzer

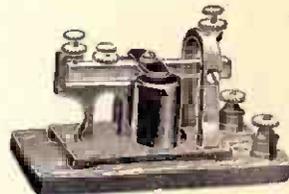
Adjustable and standard resistance, 2 ohms. Silver contact. Finished brown crystallized lacquer metal case.

**Type No. 251**—**List Price**..... \$1.40



## MANHATTAN

### Improved A.L. Giant Sounder



Aluminum sounding bar; solid brass sounder plate, bronze bridge and anvil. Mounted on mahogany-finished wood base. Equipped with brass binding posts. Tone quality, U. S. Government standard.

Type No.	Ohms	List Price
110	5	\$4.25
111	20	4.50
112	50	4.50
113	75	4.75

# THORDARSON POWER TRANSFORMERS

Replacement

Universal adaptability features the new THORDARSON radio replacement transformers described in this catalog. The same old stamina, which has characterized THORDARSON products for over 40 years, has been retained in every respect. THORDARSON transformers are the favorites of servicemen who choose quality merchandise to insure their own reputation.

Particular attention is directed to the new universal Type "U" mounting power transformers adaptable to practically all types of radio receivers now on the market.

## POWER TRANSFORMERS

Primary 115 Volts, 60 Cycles

### Half Shell Mounting (Figure 2H)

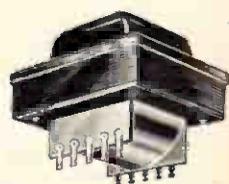
Type	HV—CT		Secondary Windings				Fil.—CT		Dimensions			List Price
	V.	Ma.	V.	A.	V.	A.	V.	A.	H.	W.	D.	
T-6049	560	30	5	2	2.5	3.5	...	...	2 $\frac{3}{8}$ "	x3"	x2 $\frac{1}{2}$ "	\$2.00
T-5002	620	40	5	2	2.5	5	...	...	3"	x3 $\frac{1}{2}$ "	x3"	2.75
T-7020	600	50	5	2	6.3	2	...	...	3"	x3 $\frac{1}{2}$ "	x3"	2.75
T-4900	700	70	5	2	2.5	8.5	...	...	3 $\frac{3}{8}$ "	x3 $\frac{1}{8}$ "	x3 $\frac{1}{4}$ "	3.25
T-6362	700	70	5	2	2.5	7	2.5	1.5	3 $\frac{5}{8}$ "	x3 $\frac{1}{8}$ "	x3 $\frac{1}{4}$ "	3.50
T-7021	700	70	5	2	6.3	3	2.5	4	3 $\frac{3}{8}$ "	x3 $\frac{1}{8}$ "	x3 $\frac{1}{4}$ "	3.50
T-5003	700	80	5	2	2.5	12	...	...	3 $\frac{5}{8}$ "	x3 $\frac{1}{8}$ "	x3 $\frac{1}{4}$ "	3.75
T-6363	700	80	5	2	2.5	9	2.5	3	3 $\frac{5}{8}$ "	x3 $\frac{1}{8}$ "	x3 $\frac{1}{4}$ "	4.00

### Upright Shielded Mounting (Figure 2G)

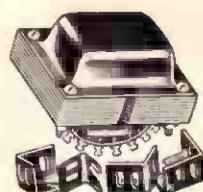
Type	HV—CT		Secondary Windings				Fil.—CT		Dimensions			List Price
	V.	Ma.	V.	A.	V.	A.	V.	A.	H.	W.	D.	
T-5601	650	70	5	2	5	.5	1.5	4	4 $\frac{5}{8}$ "	x3 $\frac{3}{4}$ "	x3 $\frac{3}{4}$ "	\$4.50
T-5602	700	70	5	2	1.5	9	2.5	3	4 $\frac{5}{8}$ "	x3 $\frac{3}{4}$ "	x3 $\frac{3}{4}$ "	4.25
T-7061	770	70	5	2	2.5	9	2.5	1.5	4 $\frac{5}{8}$ "	x3 $\frac{3}{4}$ "	x3 $\frac{1}{4}$ "	4.00
T-5603	700	105	5	2	6.3	2.5	2.5	1.75	5"	x3 $\frac{3}{4}$ "	x3 $\frac{3}{4}$ "	5.50
T-5604	700	105	5	2	2.5	12	1.5	1	5"	x3 $\frac{3}{4}$ "	x3 $\frac{3}{4}$ "	5.25
T-5822	730	115	5	3	2.5	14	...	...	5"	x3 $\frac{3}{4}$ "	x3 $\frac{3}{8}$ "	6.00
T-5605	700	110	5	2	2.5	9	2.5	3	5"	x3 $\frac{3}{4}$ "	x3 $\frac{3}{4}$ "	5.75
T-7062	745	145	5	2	2.5	3	...	...	5"	x3 $\frac{3}{4}$ "	x3 $\frac{3}{8}$ "	5.50
T-6826	1100	150	5	3	6.3	4.5	2.5	5	5"	x3 $\frac{3}{4}$ "	x4 $\frac{3}{8}$ "	6.50
T-6793	700	200	5	3	7.5	2.5	5	2	5"	x3 $\frac{3}{4}$ "	x4 $\frac{3}{8}$ "	8.00
T-6935	775	200	5	3	2.5	15	...	...	5"	x3 $\frac{3}{4}$ "	x4 $\frac{3}{8}$ "	7.00

### Universal Service Mounting (Figure 2U)

Type	HV—CT		Secondary Windings				Fil.—CT		Dimensions			List Price
	V.	Ma.	V.	A.	V.	A.	V.	A.	H.	W.	D.	
T-7537	650	40	5	3	2.5	5.25	...	...	2 $\frac{1}{2}$ "	x2 $\frac{1}{2}$ "	x3"	\$2.35
T-7538	650	40	5	3	6.3	2	...	...	2 $\frac{1}{2}$ "	x2 $\frac{1}{2}$ "	x3"	2.35
T-7539	700	50	5	3	2.5	7	...	...	3"	x2 $\frac{1}{8}$ "	x3 $\frac{3}{8}$ "	2.75
T-7540	700	50	5	3	2.5	5.25	2.5	1.75	3"	x2 $\frac{1}{8}$ "	x3 $\frac{3}{8}$ "	3.00
T-7543	700	70	5	3	6.3	2.5	...	...	3 $\frac{1}{2}$ "	x3 $\frac{1}{8}$ "	x3 $\frac{3}{4}$ "	3.25
T-7541	700	70	5	3	2.5	9	...	...	3 $\frac{1}{2}$ "	x3 $\frac{1}{8}$ "	x3 $\frac{3}{4}$ "	3.35
T-7542	700	70	5	3	2.5	7	2.5	3.5	3 $\frac{1}{2}$ "	x3 $\frac{1}{8}$ "	x3 $\frac{3}{4}$ "	3.60
T-7544	700	110	5	3	2.5	10.5	2.5	3.5	4"	x3 $\frac{1}{2}$ "	x4 $\frac{1}{8}$ "	4.50

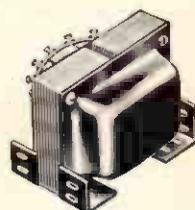


2H



2U

Half-Shell



2U

Horizontal



2G

25 Cycles, 115 Volt, primary, add 60%. 60 Cycle, 220 Volt, primary, add 30%.

**REPLACEMENT**

**THORDARSON**

**AUDIO Transformers**

**AUDIO, INPUT, OUTPUT TRANSFORMERS AND CHOKES**



FIG. A

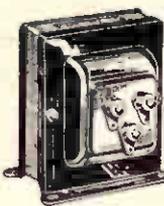


FIG. D

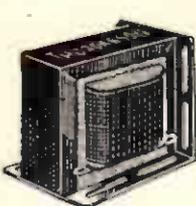


FIG. C



FIG. B

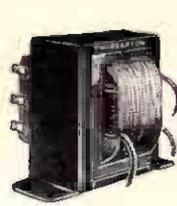


FIG. E



FIG. F

**AUDIO TRANSFORMERS**

Typical Application	Thor. Type	Turns Ratio	Mfg. Fig.	Dimensions			Mtg. Holes	List Price
				H.	W.	D.		
Single Plate 27, 56, etc. to Single Grid 50, 46, 47, etc.	R-100	1:2	C	2 3/4" x 2"	x 1 3/4"	Univ.	\$1.75	
	T-2999	1:2	B	2 3/4" x 2"	x 2"	2 3/4"	1.75	
	T-5736	1:2	F	2 3/4" x 2 1/2"	x 2 1/2"	2 3/4"	2.00	
	R-103	1:2	F	2 1/4" x 2 1/4"	x 1 1/4"	Univ.	2.00	
	T-5737	1:3	B	3"	x 2 1/2"	x 2 1/2"	2 3/4"	3.00
T-5738	1:3	F	3"	x 2 1/2"	x 2 1/2"	2 3/4"	3.25	
Single Plate 27, 56, etc. to P.P. Grids 50, 46, 47, etc.	T-3391	1:3.2	B	2 3/4" x 2"	x 2"	2 3/4"	2.00	
	R-101	1:3.2	C	2 3/4" x 2 1/4"	x 1 1/4"	Univ.	2.25	
	T-5740	1:3	C	3"	x 2 1/2"	x 2 1/2"	2 3/4"	3.50
	T-4304	1:3	A	3"	x 2 1/2"	x 2 1/4"	2 1/2"	4.00
	T-5742	1:3	B	3"	x 2 1/2"	x 2 1/2"	2 3/4"	3.50
T-5741	1:3	F	3"	x 2 1/2"	x 2 1/4"	2 3/4"	3.75	
P.P. Plates 27, 56, etc.	T-6434	1:1.3	B	3"	x 2 1/2"	x 2"	2 3/4"	3.50
	T-5397	1:1.3	F	3"	x 2 1/2"	x 2 1/4"	2 3/4"	3.75
P.P. Grids 50, 46, 47, etc.	T-6781	1:1.5	B	3"	x 2 1/2"	x 2"	2 3/4"	3.50

\* High peak for power detection.  
† May carry grid current in Class "AB", but should not be used in final Class "B" stages.

**CLASS B INPUT AND OUTPUT**

Thor. Type	Typical Application		Mtg. Fig.	Dimensions			Mtg. Holes	List Price
	Primary	Secondary		H.	W.	D.		
T-7846	Single 30	19 or P.P. 30	B	2 1/2" x 1 1/4"	x 1 1/4"	2 1/4"	\$1.65	
T-8101	19 or P.P. 30	2-4-8 ohms	B	2 1/2" x 1 1/4"	x 1 1/4"	2 1/4"	1.65	

**OUTPUT TRANSFORMERS—For Receivers and Amplifiers**

Thor. Type	Typical Application		Mtg. Fig.	Dimensions			Mtg. Holes	List Price
	Primary	Secondary		H.	W.	D.		
T-5701	Single or P.P. power tubes	1 to 29 ohms	F	2 1/4" x 2"	x 2"	2 3/4"	\$2.00	
R-107			C	2 1/2" x 2 1/4"	x 1 1/4"	Univ.	2.25	
T-3399	P.P. 45, etc.	6-12 ohms	F	2 3/4" x 2"	x 2"	2 1/4"	1.75	
T-5744			B	2 3/4" x 2"	x 2 1/2"	2 3/4"	2.00	
T-6748	P.P. 45, etc. Cl. A Single 53 Class B	4-8-15-500 ohms	F	3"	x 2 1/2"	x 2 1/2"	2 3/4"	3.75
T-6751	P.P. 2A5, etc. Cl. A P.P. 79, etc. Cl. B	4-8-15-500 ohms	F	3"	x 2 1/2"	x 2 1/2"	2 3/4"	3.75
T-6594	P.P. 50, etc. Cl. A P.P. 2A5 Cl. AB	4-8-15-500 ohms	F	3 1/2"	x 2 3/4"	x 3"	3 3/4"	5.00
T-6754	P.P. 2A3 Cl. AB	4-8-15-500 ohms	F	3 1/2"	x 2 3/4"	x 3"	3 3/4"	5.00
T-6752	P.P. 46 or 59 Cl. B	4-8-15-500 ohms	F	3 1/2"	x 2 3/4"	x 3"	3 3/4"	5.00
T-6806	Single 2A5, etc.	10 ohm V.C. or 2000 ohm max. rpk.	F	2 3/4" x 2"	x 1 1/4"	2 3/4"	2.50	

**FILTER CHOKES—For Radio Receivers**

Thor. Type	Rated D.C. Ma.	Henries Induct.		Resist. D.C. Ohms	Mtg. Fig.	Dimen.—In.			Mtg. Holes	List Price
		Rated Ma.	No. D.C.			H.	W.	D.		
T-1892	35	22	31.1	405	B	2 1/4" x 2 1/2"	x 1 1/2"	3 1/4"	\$1.75	
R-405	75	10	13.2	266	C	2 1/4" x 2 1/4"	x 1 1/4"	Univ.	1.75	
T-4707	75	12	15.2	290	E	2 1/4" x 2 1/2"	x 1 1/2"	3 1/4"	1.75	
T-5751	80	5	7.5	138	B	2 1/4" x 2"	x 2"	2 3/4"	1.50	
T-6807	85	15	17.2	375	B	3"	x 2 1/2"	2 3/4"	2.00	
R-196	85	15	17.2	375	A	3"	x 2 1/2"	x 2 1/2"	2.50	
T-5753	110	9.5	13.5	200	B	3"	x 2 1/2"	2 3/4"	2.00	
T-1700	130	8.75	21	231	D	3 1/4" x 2 3/4"	x 3"	2 3/4" x 2 1/4"	3.50	

**IMPEDANCE CHOKES—To Couple Two Single Audio Stages**

Thor. Type	Max. D.C. Ma.	Henries No. D.C.	Ohms D.C.	Mtg. Fig.	Dimensions H. W. D.	Mtg. Holes	List Price
T-2927	8	1080	6150	B	2" x 2 1/4" x 1 1/4"	2 1/4"	\$1.50
T-6746	5	510	0479	B	2 3/4" x 2" x 2"	2 3/4"	2.00

**TUBE TO LINE (LOW LEVEL)**

Type	Fig.	Primary	Secondary	List Price
T5515	F	56, 37, 27, 864, 30, etc.	200 or 50 Ohms	\$3.00
T6226	F	56, 37, 27, 864, 30, etc.	500 or 125 Ohms	3.00
T7211	F	P.P. 56, 37, 27, 864, etc.	500 or 125 Ohms	3.00
T7573	F	P.P. 56, 37, 27, 864, etc.	200 or 50 Ohms	3.00

**MIXER OR LINE TO TUBE**

T5516	F	200 or 50 Ohms	Single or P.P. Grids	\$3.00
T6193	F	500 or 125 Ohms	Single Grid	4.00
T6372	F	50, 100, 150 or 200 Ohms	Single Grid	4.00
T6371	F	200, 400, 600 or 800 Ohms	Single Grid	4.00
T6194	F	500 or 125 Ohms	P.P. Grids	4.00

**MIXER OR LINE TO LINE**

T6195	F	200 or 50 Ohms	200 or 50 Ohms	\$4.00
T6196	F	500 or 125 Ohms	200 or 50 Ohms	4.00
T6374	F	H. I. Phono Pickup	200 or 50 Ohms	3.00

**MICROPHONE COUPLING TRANSFORMERS**

T6373	F	D. B. Mike 200-0-200 Ohms	200 or 50 Ohms	\$4.00
T6197	F	Ribbon or Velocity Micr.	200 or 50 Ohms	3.00
T6573	F	D. B. Mike 200-0-200 Ohms	Single Grid	3.25
T5837	F	D. B. Mike 200-0-200 Ohms	Single Grid	3.50
T3020	A	D. B. Mike 200-0-200 Ohms	Single Grid	3.50
T2357	A	Single Button Microphone	Single Grid	2.50
T6123	F	Ribbon or Velocity Micr.	Single Grid	3.00

**OUTPUT COUPLING TRANSFORMERS**

T6125	D	Universal, 2A3, 2A5, 45, 47, 50, etc.	500 Ohms	\$3.00
T6126	D	Universal, P.P. 2A3, 2A5, 45, 47, 50, etc.	500 Ohms	3.00
T5701	D	Universal, Single or P.P. output tubes	1-29 Ohms	2.00
T6754	F	P.P. 2A3 Class "AB"	4, 8, 15 or 500 Ohms	5.00
T6748	F	P.P. 45 Class "A" or 1-53 Class "I"	4, 8, 15 or 500 Ohms	3.75
T6752	F	2-53, P.P. parallel Class "B" or 2-46 or 50 Class "B"	4, 8, 15 or 500 Ohms	5.00
T6792	F	4-2A3 P.P. parallel Class "AB"	4, 8, 15 or 500 Ohms	6.00
T6753	F	4-46 or 59 P.P. parallel Class "B"	4, 8, 15 or 500 Ohms	7.50
T6751	F	P.P. Pentodes, 79 Class "B" or 2-10 Class "A"	4, 8, 15 or 500 Ohms	3.75
T6594	F	P.P. 50 Class "A", 2A5 or 42 Class "AB", or 2-79 Class "B"	4, 8, 15 or 500 Ohms	5.00
T6760	F	1-19 Class "B"	4, 8 or 2000 Ohms	3.25

**LINE TO SPEAKER**

T6048	D	500 Ohms	Universal Voice Coils	\$3.00
T5381	B	500 or 250 Ohms	4, 8 or 15 Ohms	4.50
T6764	D	500 Ohms (Auto-transf.)	500, 250, 166, 125, 100 or 84 Ohms	3.00

**CLASS "B" AND "AB" INPUTS**

T6750	F	1-89 Class "A"	1-79 or 83 Class "B"	\$2.75
T6789	F	1-89 Class "A"	2-79 parallel Class "B"	3.75
T5463	F	1-30 Class "A"	1-19 Class "B"	2.75
T6747	F	1-53 (plates in parallel)	1-53 Class "B"	2.75
T6778	F	1-46 or 59 Class "A"	2-46 or 59 Class "B"	3.75
T6698	F	2-46 or 59 P.P. Class "A"	4-46 or 59 push-pull parallel Class "B"	5.25
T5870	F	P.P. 56's, etc.	P.P. 2A3's Class "AB"	3.75
T6578	F	2A5 Triode	P.P. 2A5's Class "AB"	5.00
T7201	F	P.P. 56's, etc.	P.P. 45's Class "AB"	3.75

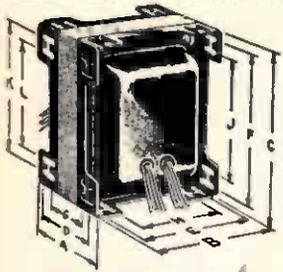
**MODULATION TRANSFORMERS**

T6426	B	2-46 or 59 Class "B"	5000 or 10000 Ohms (100 Ma.)	\$6.50
T6425	B	2-210 Class "B"	5000 or 10000 Ohms (200 Ma.)	9.00
T6759	F	1-53, 6A6 or 79 Class "B"	3000 Ohms (100 Ma.)	3.50

**TRANSCIVER AUDIOS**

T5463	F	1-30 Class "A"	1-19 Class "B"	\$2.75
T6769	F	1-19 Class "B"	2700 Ohms (50 Ma.)	3.00
T6760	F	1-19 Class "B"	4, 8 or 2000 Ohms	3.25
T6806	F	Single Pentode	10 or 2000 Ohms	2.50
T7258	D	Single Pentode	High or Low Impedance Phones	1.65
T7259	D	Single Plate and Single Button Microphone	Single Grid	1.65

# GENERAL TRANSFORMERS



*"Multi-Tap"*  
(Trade Mark)  
**POWER TRANSFORMERS**

**ONLY FIVE MODELS for 95% of All Radios** Easily Installed!  
FILL DIRECTIONS WITH EACH UNIT

The wide range of adaptability of only five models of "Multi-tap" Universal Power Transformers is made possible through various taps in these units which may be used singly or in combinations. These units are fully shielded, designed for meeting the specifications of radios having Underwriters Lab. approval. This is very essential, since many states require such approval to protect the set owner's fire insurance policies.

Dimensions—"Multi-Tap" Power Units								
No.	A	B	C	D	E	F	K	L
1814	2 3/8	3 3/8	3 3/8	2 1/2	2 3/8	3 3/8	2 3/8	2 3/8
1816	2 3/8	3 3/8	3 3/8	2 3/8	2 3/8	3 3/8	2 3/8	2 3/8
1818	3 3/8	3 3/8	4 1/8	3	3 1/4	4	3 3/8	2 3/8
1820	3 3/8	3 3/8	4 1/8	3 1/4	3 1/4	4	3 3/8	2 3/8

**Exact Duplicates Electrically**

<b>No. 1804—FOR FOUR TUBES</b> .....	<b>List Price \$3.50</b>
2-24, 27, 35, 57, 58, 2A6, etc.	
and 1-45, 46, 47, 59, 2A3, 2A5	2.5v.-C.T.-5.25 A
1-80, 80M, 83, 5Z3	5.0v.- 3.0 A
or 1-82	2.5v.- 3.0 A
High Voltage	650v.-C.T. at 50 MA
<b>No. 1806—FOR 5 OR 6 TUBES</b> .....	<b>List Price \$4.75</b>
3-26s	1.5v.- 3.15 A
or 3-24, 27, 35, 58, 2A6, 2A7, etc.	2.5v.- 5.0 A
1 or 2-27	2.5v.- 3.5 A
2-45, 46, 47, 59, 2A3, 2A5	2.5v.-C.T.-5.0 A
or 2-171A	5.0v.-C.T.-0.5 A
1-80, 80M, 83, 5Z3	5.0v.- 3.0 A
or 1-82	2.5v.- 3.0 A
High Voltage	650v.-C.T. at 60 MA
<b>No. 1808—FOR 7 OR 8 TUBES</b> .....	<b>List Price \$5.50</b>
4-26s	1.5v.- 4.20 A
or 4-24, 27, 35, 55, 56, 57, etc.	2.5v.- 7.0 A
1 or 2-27	2.5v.- 3.5 A
2-45, 46, 47, 59, 2A3, 2A5	2.5v.-C.T.-5.0 A
or 2-171A	5.0v.-C.T.-0.5 A
1-80, 80M, 83, 5Z3	5.0v.- 3.0 A
or 1-82	2.5v.- 3.0 A
High Voltage	700v.-C.T. at 80 MA
<b>No. 1810—FOR 9 OR 10 TUBES</b> .....	<b>List Price \$6.00</b>
6-26s	1.5v.- 6.5 A
or 6-24, 27, 35, 55, 56, 57, etc.	2.5v.- 10.5 A
1 or 2-27	2.5v.- 3.5 A
2-45, 46, 47, 59, 2A3, 2A5	2.5v.-C.T.-5.0 A
or 2-171A	5.0v.-C.T.-0.5 A
1-80, 80M, 83, 5Z3	5.0v.- 3.0 A
or 1-82	2.5v.- 3.0 A
High Voltage	700v.-C.T. at 100 MA
<b>No. 1850—HIGH POWER UP TO 15 TUBES</b> .....	<b>List Price \$12.50</b>
7-26	1.5v.- 7.35 A
or 7-24, 27, 35, 55, 56, 57, etc.	2.5v.- 11.5 A
9-C484, C485	3.0v.- 11.7 A
2-45, 46, 47, 59, 2A3, 2A5	2.5v.- 5.0 A
or 2-C484, C485	3.0v.- 2.6 A
2-210, 250, C585, C586	7.5v.- 2.5 A
2-281, C281 in parallel	7.5v.- 2.5 A
or 2-281, C281 in series	15.0v.- 1.25 A
High Voltage	1400v.-C.T. at 150 MA

**FOR 6.3 VOLT TUBES**

See directions with any of the Multi-Tap Units.

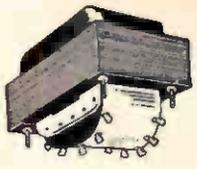


Type "G"



Type "F"

**General "Multi-Use" Power Transformers**



Type "P"

This comprehensive list of "Multi-Use" power transformers offers a variety from which may be selected a unit with the proper mounting and correct electrical characteristics to fit into almost any of the popular radios and renew original performance. These numbers are for 110-120v.—50-60 cy. GENERAL manufactures to order any of these numbers for 220-240v., 50-60 cy., or 150v., 50 cy., at \$1.00 (list) per unit additional and for 115v., 25-40 cy., at 60% plus the list of 110 v., 60 cy.; 220v., 25 cy., 75% plus 110v., 60 cy.

2.5 VOLT DOUBLE FIL WINDING	"P"		"G"		"F"	
	No. 1550 Price \$2.50	No. 1545 Price \$2.50	No. 1551 Price \$2.75	No. 1546 Price \$2.75	No. 1804 Price \$3.50	No. 1624 Price \$4.00
<b>For 4 and 5 Tubes</b>	No. 1550 2.5v.....5.00 A 2.5v.-C.T.....1.75 A 5.0v.....3.0 A Plate 650v.-C.T. 40 MA		No. 1545 Mtg.—2 1/2 x 2 1/2 e.e. 2 1/2 x 3 1/4 x 3 1/4 high		No. 1804 Mtg.—2 x 2 1/2 e.e. 2 3/8 x 2 3/8 x 3 1/2 high	
<b>For 5 and 6 Tubes</b>	No. 1551 2.5v.....5.25 A 2.5v.-C.T.....1.75 A 5.0v.....3.0 A Plate 650v.-C.T. 50 MA		No. 1546 Mtg.—2 1/2 x 2 1/2 e.e. 2 1/2 x 3 1/4 x 3 1/4 high		No. 1624 Mtg.—2 3/8 x 2 1/2 min. to 2 1/2 max. e.e. 3 1/8 x 3 1/2 x 1 1/2 high	
<b>For 6 and 7 Tubes</b>	No. 1544 2.5v.....7.0 A 2.5v.-C.T.....3.0 A 5.0v.....3.0 A Plate 700v.-C.T. 70 MA		No. 1547 Price \$3.50 Mtg.—2 1/2 x 3 1/2 e.e. 3 1/2 x 3 3/4 x 3 3/4 high		No. 1641 Price \$4.50 Mtg.—2 3/8 x 2 1/2 min. to 2 1/2 max. e.e. 3 1/2 x 3 1/2 x 1 1/2 high	
<b>For 8 and 9 Tubes</b>	No. 1555 2.5v.....10.5 A 2.5v.-C.T.....3.0 A 5.0v.....3.0 A Plate 700v.-C.T. 90 MA		No. 1548 Price \$4.00 Mtg.—2 3/8 x 3 e.e. 3 3/8 x 4 1/2 x 3 1/2 high		No. 1625 Price \$5.00 Mtg.—2 3/8 x 2 1/2 min. to 2 3/8 max. e.e. 3 3/8 x 3 1/2 x 4 1/2 high	
<b>For 10 and 12 Tubes</b>	No. 1557 2.5v.....15.25 A 2.5v.-C.T.....3.0 A 5.0v.....3.0 A Plate 700v.-C.T. 110 MA		No. 1549 Price \$4.75 Mtg.—3 x 3 1/2 e.e. 3 1/2 x 4 1/2 x 3 3/4 high		No. 1631 Price \$5.50 Mtg.—2 3/8 x 2 1/2 min. to 2 3/8 max. e.e. 3 3/8 x 3 1/2 x 4 1/2 high	

6.3 VOLT TUBES	"P"		"G"		"F"	
	No. 1660 Price \$2.50	No. 1675 Price \$2.50	No. 1661 Price \$3.50	No. 1676 Price \$3.50	No. 1684 Price \$4.25	No. 1685 Price \$4.75
<b>For 4 and 5 Tubes</b>	No. 1660 6.3v.-C.T.....1.7 A 5.0v.....2.0 A Plate 650v.-C.T. 50 MA		No. 1675 Mtg.—2x2 1/2 e.e. 2 1/2 x 2 3/4 x 3 1/4 high		All Units in 6.3V Unit Section Electro Statically Shielded	
<b>For 6 and 7 Tubes</b>	No. 1661 6.3v.-C.T.....2.8 A 5.0v.....2.0 A Plate 650v.-C.T. 70 MA		No. 1676 Mtg.—2 1/2 x 2 1/2 e.e. 2 3/8 x 3 1/2 x 3 3/4 high		No. 1684 Mtg.—2 1/2 x 2 3/8 e.e. 3 1/2 x 3 x 3 1/2 high	
<b>For 8 and 9 Tubes</b>	No. 1662 6.3v.-C.T.....3.5 A 5.0v.....2.0 A Plate 700v.-C.T. 85 MA		No. 1677 Price \$4.00 Mtg.—2 1/2 x 3 1/2 e.e. 3 1/2 x 3 1/2 x 3 3/4 high		No. 1685 Mtg.—2 3/8 x 2 1/2 e.e. 3 3/8 x 3 x 4 1/2 high	
<b>For 10 and 12 Tubes</b>	No. 1663 6.3v.-C.T.....4.5 A 5.0v.....2.0 A Plate 700v.-C.T. 100 MA		No. 1678 Price \$4.75 Mtg.—2 3/8 x 3 e.e. 3 3/8 x 4 1/2 x 3 3/4 high		No. 1686 Price \$5.50 Mtg.—2 3/8 x 2 3/8 e.e. 3 1/2 x 3 3/4 x 5 1/2 high	

# GENERAL TRANSFORMERS

**EXACT-DUPPLICATES**  
with  
**"MULTI-TAP" or "MULTI-USE"**  
alternates for same models  
**"Pull-Push" Moisture-Proofed**

Name of Radio Model	Stock No.	List Price
<b>Atwater-Kent</b>		
37, 38.....	2509	55.25
	1818	5.50
55, 55C, late model.....	2510	6.50
	1555	4.00
55, 55C, early model.....	2511	6.50
	1555	4.00
H1, H2, I-1, I-2, L.....	2512	6.25
	1818	5.50
82F, 85F.....	2513	9.00
	1555	4.00
84 (All).....	2514	6.25
	1816	4.75
84F.....	2515	9.00
	1544	3.50
80, 83.....	2516	6.00
	1544	3.50
80F, 83F.....	2517	9.00
	1544	3.50
87, 89, 89P.....	2518	6.50
	1820	6.00
89F.....	2519	10.00
	1820	6.00
66 (Plate).....	2520	8.00
82, 85.....	2521	6.00
	1544	3.50
60, 60C.....	2697	9.00
	1555	4.00

Name of Radio Model	Stock No.	List Price
<b>Bosch</b>		
20, 825.....	2525	7.25
28.....	2526	5.75
	1818	5.50
48.....	2527	6.50
	1544	3.50
58.....	2528	6.50
	1555	4.00
60.....	2529	7.25
	1820	6.00

Name of Radio Model	Stock No.	List Price
<b>Majestic</b>		
90, 9P6.....	2573	4.50
	1818	5.50
180, 8P6 (plate).....	2574	7.25
70, 7P6 (plate).....	2575	5.00
	1555	4.00
70, 7P6, (filament).....	2576	4.50
180, 8P6, (filament).....	2577	5.00
50 unmounted.....	2578	5.50
15A unmounted.....	2579	3.50
	1818	5.50
21, 22, 23, chassis 20, unmounted.....	2581	4.75
	1557	4.75
90B, 100B.....	2582	4.75
	1818	5.50
130A, 230A, sets 130, 131, 132, 133.....	2583	7.25
	1544	3.50
25; 25A.....	2584	5.75
	1557	4.75
15, 151, 153, 154, 156.....	1546	2.75

Name of Radio Model	Stock No.	List Price
<b>Philco</b>		
20, 220.....	2585	55.75
	1818	5.50
65.....	2586	5.50
	1818	5.50
76, 77, 77A.....	2587	6.00
	1818	5.50
86, 82.....	2588	5.25
	1818	5.50
87.....	2589	6.00
	1818	5.50
95, 96, 296, 92.....	2590	6.25
	1820	6.00
70, 270, 370, 470, 570.....	2591	5.50
	1818	5.50
111, 211, 112, 212.....	2592	7.00
490, 90, (45 or 47).....	2593	6.50
	1820	6.00
500, 511, 521, 531, 541, 551, 561, 571, 581.....	2596	6.25
	1816	4.75
20, 220 (25 cycle).....	2682	10.50
	1918	9.50
14, 91.....	2683	5.50
	1818	5.50
80, 80B, 60, 60B.....	2684	4.25
	1816	4.75
80, 81.....	2685	3.75
	1816	4.75
57, 57C.....	2686	3.50
43.....	2687	5.00
	1818	5.50
87, 25 cycle.....	2688	9.00
	1918	9.50
4.....	2690	3.50
71.....	2693	3.75
	1818	5.50
50, 51, 52.....	2694	4.25
	1818	5.50
15.....	2695	5.50
	1818	5.50
21.....	2696	6.00
	1818	5.50

Name of Radio Model	Stock No.	List Price
<b>RCA-Radiola</b>		
80, 82, 86.....	2597	6.00
	1820	6.00
60, 62.....	2598	5.50
	1820	6.00
44, 46, 47.....	2599	6.00
	1816	4.75
17, 18, 33, 51, 50.....	2500	5.50
	1818	5.50

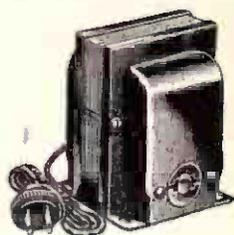
Name of Radio Model	Stock No.	List Price
<b>RCA-Radiola</b>		
(Continued)		
66.....	2601	56.50
	1318	5.50
42, 48, R15, R14.....	2332	6.50
	1818	5.50
17, 18, 33, 51, 50, 25 cycle.....	2604	7.00
No Alternates.		
R14, R15, 42, 48, 25 cycle.....	2605	10.00
No Alternates.		

Name of Radio Model	Stock No.	List Price
<b>RCA-Victor</b>		
R34, R37, R35, R39.....	2632	6.25
	1818	5.50
R32, R52, RE45, RE75, 25 cycle.....	2603	8.50
R34, R37, 25 cycle.....	2605	8.00
	1918	9.50
7-11, 7-25.....	2606	6.75
	1816	4.75
R32, R52, RE45, RE75-60 cycle.....	2607	6.75
	1820	6.00
R35, R39, RE57.....	2608	6.50
	1818	5.50
R35, R39, RE57, 25 cycle.....	2609	8.00
	1918	9.50
R8, R12.....	2643	6.00
	1818	5.50

Name of Radio Model	Stock No.	List Price
<b>Sparton</b>		
589.....	2612	6.50
591, 593, 931.....	2613	6.50
80A.....	2614	5.50
60, 79, 89.....	2615	6.00
109 ensemble.....	2616	10.25
930.....	2617	5.00
25, 26, 26AW, 30, 45.....	2618	6.50
	1820	6.00
301, 301A, 740, 750.....	2619	8.00
110, 11, 101.....	2620	8.00
410, 420.....	2623	6.25
	1641	4.50
	2624	8.25
103, 578.....	2624	8.25
600, 610, 620, 737, 235 combination.....	2621	6.25
410, 420, 25 cycle.....	2703	10.00

Name of Radio Model	Stock No.	List Price
<b>Zenith</b>		
52, 53, 54, 55, 57, 60, 61, 62, 64, 67, 602, 613, 622, 642, 672, 522, 532, 542, 95.....	2648	7.25
	1820	6.00
10, 11, 12.....	2649	7.50
	1625	5.00

## STEP-DOWN STEP-UP TRANSFORMERS



**Step - Up**  
**Primary 80 Volts**  
**50-60 Cycles**  
**Secondary 110 Volts**

No.	Wattage	List Price
2919	80	53.75
1919	160	6.00

**Step - Down**  
**Primary 220-240 Volts**  
**50-60 Cycles**  
**Secondary 110 Volts**

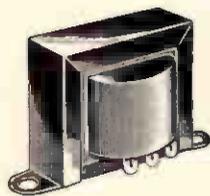
No.	Wattage	List Price
2922	80	54.00
1909	160	6.25

**Step - Up**  
**or**  
**Step - Down**  
**Duo Models**  
**Primary 220-240 Volts**  
**50-60 Cycles**  
**Secondary 110 Volts**

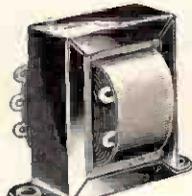
Part No.	Wattage	List Price
1932	80	55.25
1933	160	6.75
1951	250	9.00
1952	500	30.00
1953	750	35.00
1954	1000	40.00
1955	1250	45.00

For a complete list of "General" replacement transformers write for our new "Replacement Transformer Guide."

# GENERAL TRANSFORMERS



Type A

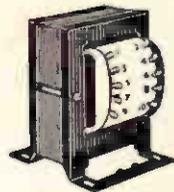


Type B

The exceptionally flat response curve of GENERAL audios assures true reproduction at all frequencies. Equally as important is the process of complete moisture-proofing of these units, making them especially suitable for radios in the humid sea coast and tropical climates.



Type C



Type E

## AUDIO TRANSFORMERS

### STANDARD SIZE, UNSHIELDED—TYPE "A"

Core  $\frac{3}{4}$ "x $\frac{3}{4}$ ", Size  $2\frac{1}{4}$ "x $2\frac{1}{2}$ "x $2\frac{1}{4}$ ". Mtg. Hole centers  $2\frac{3}{8}$ ".

2 to 1 Stock No.		3 to 1 Stock No.		4 to 1 Stock No.		List Price	
Single	Push Pull	Single	Push Pull	Single	Push Pull	Single	Push Pull
1235	1240	1247	1251	1258	1263	\$1.75	\$1.90

### LARGE SIZE, UNSHIELDED—TYPE "B"

Core 1"x1", Size  $2\frac{3}{4}$ "x $2\frac{1}{2}$ "x $2\frac{1}{4}$ ". Mtg. Hole centers  $3\frac{1}{8}$ ".

2 to 1 Stock No.		3 to 1 Stock No.		4 to 1 Stock No.		List Price	
Single	Push Pull	Single	Push Pull	Single	Push Pull	Single	Push Pull
2200	2203	2201	2204	2202	2205	\$2.50	\$2.65

### SPECIAL SIZE, SHIELDED—TYPE "C"

Core  $\frac{3}{4}$ "x1", Size  $2\frac{1}{2}$ "x $1\frac{1}{2}$ "x $2\frac{1}{4}$ ". Mtg. Hole centers  $2\frac{3}{8}$ ".

2 to 1 Stock No.		3 to 1 Stock No.		4 to 1 Stock No.		List Price	
Single	Push Pull	Single	Push Pull	Single	Push Pull	Single	Push Pull
2230	2233	2231	2234	2232	2235	\$2.50	\$2.65

### LARGE SIZE, SHIELDED—TYPE "C"

Core 1"x1", Size 3"x $2\frac{1}{2}$ "x $2\frac{1}{4}$ ". Mtg. Hole centers  $2\frac{1}{2}$ ".

2 to 1 Stock No.		3 to 1 Stock No.		4 to 1 Stock No.		List Price	
Single	Push Pull	Single	Push Pull	Single	Push Pull	Single	Push Pull
2206	2209	2207	2210	2208	2211	\$3.00	\$3.25

## OUTPUT TRANSFORMERS

To Feed From	To	Inches		Mtg.	No.	List Price
		H.	D. L.			
12A5, 31, 43, 45, etc.	6 to 15 Ohm Voice Coil	$2\frac{1}{2}$	$1\frac{1}{4}$ x $2\frac{3}{8}$	B	1345	\$1.50
2A5, 41, 42, 47, etc.		$2\frac{1}{4}$	$1\frac{1}{4}$ x $2\frac{3}{8}$	B	1347	1.50
10, 12A, 26, 38		$2\frac{1}{4}$	$1\frac{1}{4}$ x $2\frac{3}{8}$	B	1323	1.50
48, 59, 2A3		$2\frac{1}{4}$	$1\frac{1}{4}$ x $2\frac{3}{8}$	B	1397	1.50
P. P. 19, 45, 53, etc.		$2\frac{1}{4}$	$2\frac{1}{4}$ x $2\frac{3}{8}$	B	1346	1.65
P. P. 41, 42, 47, etc.		$2\frac{1}{4}$	$2\frac{1}{4}$ x $2\frac{3}{8}$	B	1319	1.65
P. P. 10, 12A, 26, 38		$2\frac{1}{4}$	$2\frac{1}{4}$ x $2\frac{3}{8}$	B	1348	1.65
P. P. 48, 59		$2\frac{1}{4}$	$2\frac{1}{4}$ x $2\frac{3}{8}$	B	1396	1.65
P. P. 2A3		$2\frac{1}{4}$	$2\frac{1}{4}$ x $2\frac{3}{8}$	A	1394	2.50
P. P. 2A5		$2\frac{1}{4}$	$2\frac{1}{4}$ x $2\frac{3}{8}$	A	1395	2.50
P. P. 50	$2\frac{1}{4}$	$2\frac{1}{4}$ x $2\frac{3}{8}$	A	1320	2.50	

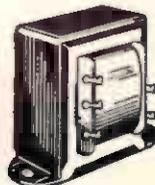
### SPECIAL OUTPUTS FOR MIDGETS & A.C.-D.C. SETS.

Tubes	To	Inches		Mtg.	No.	List Price
		H.	D. L.			
12A5, 43, 48	6 to 15 ohm Voice Coil	$1\frac{3}{8}$	$1\frac{1}{4}$ x $1\frac{1}{2}$	A	345	\$0.90
33, 41, 42, 47, 31		$1\frac{3}{8}$	$1\frac{1}{4}$ x $1\frac{1}{2}$	A	344	.90
38		$1\frac{3}{8}$	$1\frac{1}{4}$ x $1\frac{1}{2}$	A	343	.90
12A5, 43, 48		$2$	$1\frac{1}{4}$ x $1\frac{1}{2}$	B	318	1.10
33, 41, 42, 47, 31		$2$	$1\frac{1}{4}$ x $1\frac{1}{2}$	B	314	1.20
38		$2$	$1\frac{1}{4}$ x $1\frac{1}{2}$	B	306	1.20

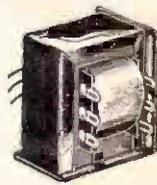
## CHOKES

Inductances given are not the "30-henries" commercial ratings, but ACTUAL MEASURED VALUES.

Henries	Mils	Res	Inches		Mtg.	No.	List Price
			H.	D. L.			
11	50	400 ohms	$2$	$1\frac{1}{4}$ x $3\frac{1}{2}$	A	1120	\$1.40
7	75	300 ohms	$2\frac{1}{2}$	$1\frac{1}{2}$ x $3\frac{1}{2}$	A	1122	1.60
12	100	300 ohms	$2\frac{3}{8}$	$2$ x $4$	A	1125	2.00
<b>FOR AMATEUR TRANSMITTERS AND LARGE P. A. AMPLIFIERS</b>							
6	150	150 ohms	$2\frac{1}{4}$	$2\frac{1}{4}$ x $2\frac{3}{8}$	A	1111	2.50
8	200	150 ohms	$4\frac{1}{2}$	$3\frac{1}{2}$ x $3\frac{1}{2}$	E	1112	4.00
8	250	125 ohms	$4\frac{1}{2}$	$3\frac{1}{2}$ x $3\frac{1}{2}$	E	1113	4.50
7	300	95 ohms	$4\frac{1}{2}$	$3\frac{1}{2}$ x $3\frac{1}{2}$	E	1114	5.00
10	500	75 ohms	$4\frac{1}{2}$	$3\frac{1}{2}$ x $3\frac{1}{2}$	E	1155	7.50
5-15	300	50 ohms	$4\frac{1}{2}$	$3\frac{1}{2}$ x $3\frac{1}{2}$	E	1153	4.00
<b>A.C.-D.C.—THESE CHOKES FOR A.C.-D.C. SETS</b>							
4	30	200 ohms	$1\frac{3}{8}$	$1\frac{1}{4}$ x $2\frac{3}{8}$	A	5104	\$0.90
5	30	300 ohms	$1\frac{3}{8}$	$1\frac{1}{4}$ x $2\frac{3}{8}$	A	5108	.90
7	30	400 ohms	$1\frac{3}{8}$	$1\frac{1}{4}$ x $2\frac{3}{8}$	A	5112	.90
8	30	500 ohms	$1\frac{3}{8}$	$1\frac{1}{4}$ x $2\frac{3}{8}$	A	5116	.90
8	30	250 ohms	$2$	$1\frac{1}{4}$ x $2\frac{3}{8}$	B	1129	1.40
10	30	400 ohms	$4$	$1\frac{1}{4}$ x $2\frac{3}{8}$	B	1127	1.50
11.5	30	500 ohms	$2$	$1\frac{1}{4}$ x $2\frac{3}{8}$	B	1137	1.65
11.0	30	600 ohms	$2$	$1\frac{1}{4}$ x $2\frac{3}{8}$	B	1138	1.80
<b>CENTER TAPPED CHOKES</b>							
12 C.T.	100	300	$2\frac{1}{2}$	$2\frac{1}{2}$ x $2\frac{3}{8}$	A	1185	\$2.25
6 C.T.	150	150	$2\frac{1}{2}$	$2\frac{1}{2}$ x $2\frac{3}{8}$	A	1186	2.75



Type B



Type U

### Multi-Tap Type "U" Output

No. 1337—The universal primary and the tapped secondary, from 2 to 30 ohms, in 2 ohm steps, makes it possible to feed practically any straight or push-pull output stage to any dynamic speaker. May be mounted on end or side. List Price, \$1.75.

### Multi-Tap Type "B" Output

No. 2314—To match any standard output tube either singly or in Push-pull to magnetic speaker or any of the standard voice coils. Size— $1\frac{1}{2}$ "x $3$ "x $2\frac{1}{2}$ " high. Mounting centers  $2\frac{3}{8}$ ". List Price, \$1.75.

### Input Audio Type "U"

No. 3205—Efficiently feeds any straight or Push-pull audio stage on either A.C. or D.C. sets. Size— $2$ "x $2\frac{1}{2}$ "x $1\frac{1}{2}$ ". List Price, \$1.75.

### Input Audio Type "B"

No. 3256—(Same as 3205). Size— $1\frac{1}{2}$ "x $3$ "x $2$ " high. Mtg. centers  $2\frac{3}{8}$ ". List Price, \$1.75.

### Multi-Tap Filament Transformer

No. 1081—Delivers 1.5, 2.5, 5.0, 6.3, 7.5 volts at 3 amps. Mtg. type "B". Dimensions:  $1\frac{1}{2}$ "x $3\frac{1}{4}$ "x $2\frac{1}{2}$ " high. C. C.  $3\frac{1}{2}$ ". List Price, \$2.25.

### Multi-Tap Choke

No. 1076—High impedance choke with five taps in combination with a selector switch and a neon bulb constitutes an excellent short circuit turns tester when operated from a 115 volt, 60 cycle source. Can also be used as an audio autotransformer for impedance matching purposes. Type "A" Mtg. Size  $2\frac{1}{2}$ "x $3\frac{1}{2}$ "x $1\frac{1}{4}$ ".  $2\frac{1}{4}$ " mtg. centers. List Price, \$2.75.

# GENERAL TRANSFORMERS

## "STENTORIAN" SOUND AMPLIFIER NUCLEUS



The "STENTORIAN" way was designed for employing only the standard and most practicable circuit fully demonstrated in actual service for each capacity—the shortest and surest way to dependable high-quality performance without costly experimenting with "trick circuits."

Full directions, circuit diagrams with list of all parts required included with each Nucleus.

### 15-WATT ALL-METAL TUBES

#### GENERAL TRANSFORMERS

T <sub>1</sub>	Tapped Input Transformer	2059	\$3.50
T <sub>2</sub>	Audio Transformer	2293	3.00
T <sub>3</sub>	Interstage Transformer	2294	3.75
T <sub>4</sub>	Tapped Output Transformer	2356	4.00
T <sub>5</sub>	Power Transformer	1686	5.50
CH <sub>1</sub>	Input Choke	1125	2.00
CH <sub>2</sub>	Filter Choke	1122	1.60
	Chassis 10"x14"x3" deep. Complete with all holes, sockets, and terminal strips	20274	5.50
	Total Nucleus		28.85

#### TUBES

1	Type 6J7	2	Type 6F6
2	Type 6C5	2	Type 5Z4

### 6-WATT ALL-METAL TUBES

Total Nucleus Kit	List Price
	\$19.90

### 6-WATT ALL-GLASS TUBES

Total Nucleus Kit	List Price
	\$19.90

### 10-WATT ALL-GLASS TUBES

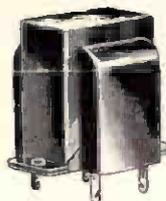
Total Nucleus Kit	List Price
	\$22.30

### 15-WATT ALL-GLASS TUBES

Total Nucleus Kit	List Price
	\$30.65

### 30-WATT ALL-GLASS TUBES

Total Nucleus Kit	List Price
	\$35.90

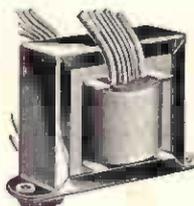


## PHILCO DUPLICATES

### INPUT and INTERSTAGE AUDIOS OUTPUTS and CHOKES

	Part	List
<b>Input and Interstage Audio</b>		
Transitone	1st Audio	3212 \$2.25
511, 521 (Chassis)	Interstage Audio	3212 2.25
30, 40, 41, 42, 73, 76, 77, 77A, 82, 83, 86, 87	P. P. Input	3211 2.25
21, 20, A, 21, 220, 220A	P. P. Input	3210 1.75
62, 6592, 95, 96, 96A, 111, 111A, 211, 211A, 290, 296A	P. P. Audio Input	3213 2.90
(For 245 Tubes) 112, 112A, 212, 212A	P. P. Audio Input	3213 2.90
Input Audio Mod. 90 and 90A		3239 2.25
<b>Outputs and Chokes</b>		
70, 70A, 270, 270A, 370, 370A, 470, 470A, 570, 570A, Transitone No. 3, also 90, 90A, 490, 490A. (using 1-247 tube)	Output	1371 2.15
20, 20A, 21, 40, 41, 46, 42, 62, 68, 73, 76, 77, 77A, 82, 83, 86, 87, 92, 95, 96, 96A, 111, 111A, 211, 211A, 220, 220A, 296, 296A, 346	P. P. Output	1370 2.15
(For 245 tubes) 90, 90A, 112, 112A, 212, 212A	P. P. Output	1370 2.15
30, 62, 65	Audio Choke	1142 2.15
15, 15A, 50, 51, 42, 62, 65, 73, 76, 77, 77A, 83, 87, 92, 95, 96, 96A, 111, 111A, 112, 112A, 211, 211A, 212, 212A, 296, 296A	1st pos. Choke	1140 2.35
83, 87	2nd pos. Choke	1141 2.55
Model 20 Choke		149 1.90
Double Choke Unit Mod. 500 series (Z-224)		1170 4.00

## TUBE TESTER PLATE AND FILAMENT TRANSFORMER



In addition to the conventional filament voltages, this transformer has a plate winding, the voltage of which may be impressed directly to the plate of the tube under test. If a d-c voltage is desired on the tube under test, an 84 type tube may be used as a half wave rectifier.

All leads are color coded and a diagram of connections is included.

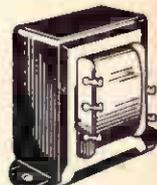
No. 1063—Pri. 115v.—60 cy.	Sec. 1.5, 2.0, 2.5, 3.3, 5.0, 6.3, 7.5, 15, 25, 30	List Price
		\$2.75
No. 2033		3.50

Pri. 115v.—60 cycles.  
Fil. Sec. 1.5, 2.0, 2.5, 3.3, 5.0, 6.3, 7.5, 15, 25, or 30 v. at 2.0 Amp  
Plate Sec. 250v. A.C. at 40 MA.  
2 1/2" high, 4 1/4" wide over Mtg. brackets: 2 1/4" deep, o.c. 3 1/4".

## MICROPHONE TRANSFORMERS



These microphone transformers have a very flat response. The primary is matched to a standard 200 ohm microphone. The secondary impedance is about 400,000 ohms. Leads soldered to lugs. Black japanned steel frame.



### SINGLE BUTTON

Type C	Type B
Core 1x1. Mounting Hole Centers 2x1/2". Overall, 2 3/4" x 2 3/4" x 3/4" high	
Type B Mtg.—No. 1001	List Price
Type C Mtg.—No. 1006	\$2.25
	4.50

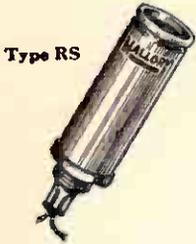
### DOUBLE BUTTON

Overall, 3 1/2" x 2 3/4" x 2 3/4". Hole centers, 2" x 2".	List Price
Type B Mtg.—No. 1002	\$2.50
Type C Mtg.—No. 1026	5.00

# MALLORY

# DRY ELECTROLYTIC CAPACITORS

## Dry Electrolytic Round Can Filter Units



● Modern in construction, these units are of reduced size and inaugurate many new features. They are for use whenever round can units are desired.

Type RS—Single Section.  
Type RN—Common Cathode.  
Type RM—Multiple Separate Section.

Type	Cap.	Wkg. V.	Max. Surge	Size	List Price*
RS 201	4	250	300	2 1/4" x 1"	\$0.75
RS 203	8	250	300	2 3/4" x 1"	.95
RS 205	12	250	300	2 3/4" x 1"	1.10
RS 211	4	450	525	2 3/4" x 1"	.85
RS 213	8	450	525	2 3/4" x 1"	1.05
RS 215	12	450	525	3" x 1"	1.40
RN 231	4-8	250	300	3" x 1"	1.30
RN 232	8-8	250	300	3" x 1"	1.45
RN 235	8-8-8	250	300	3" x 1 1/2"	2.10
RN 241	4-8	450	525	3" x 1"	1.45
RN 242	8-8	450	525	3" x 1 1/2"	1.60
RN 245	8-8-8	450	525	3 1/2" x 1 1/2"	2.30
RM 251	4-8	250	300	3" x 1 1/2"	1.30
RM 252	8-8	250	300	3" x 1 1/2"	1.45
RM 255	8-8-8	250	300	3 1/4" x 1 1/2"	2.10
RM 257	8-8-16	250	300	3 1/4" x 1 1/2"	2.35
RM 259	8-16-16	250	300	3 1/2" x 1 1/2"	2.60
RM 261	4-8	450	525	3" x 1 1/2"	1.45
RM 262	8-8	450	525	3" x 1 1/2"	1.60
RM 265	8-8-8	450	525	4" x 1 1/2"	2.30

\* Prices include palnut and flat washer.  
Prices on other hardware listed on this page.

## Dry Electrolytic Round Can Bypass Units

● Type BN units are made in two different mounting arrangements, and, while only one capacity and voltage rating is listed, they may be secured in various ratings on request.



Type	Cap.	Wkg. V.	Max. Surge	Size	List Price
BN 225	10-10	50	75	1 1/4" x 1"	\$0.95
BN 226	10-10	50	75	1 3/4" x 1"	1.00

## Dry Electrolytic Large Round Can Units

● Designed primarily for replacement use covering old style wet electrolytics.



Type	Cap.	Wkg. V.	Max. Surge	Size	List Price
MN 272	8-8	450	525	2 1/2" x 1 3/4"	\$1.80
MN 273	5-15	450	525	2 1/2" x 1 3/4"	2.30
MN 275	8-8-8	450	525	3" x 1 3/4"	2.70
MN 277	8-8-8-8	450	525	3" x 1 3/4"	3.60

## Dry Electrolytic Cardboard Carton Filter Units

● Developed for all applications where dry electrolytic carton type filter condensers are required, these units represent the greatest advance in practical design and electrical superiority ever offered in this field.

Type CS—Single Section.  
Type CN—Common Cathode.  
Type CM—Multiple Separate Section.



Type	Cap.	Wkg. V.	Max. Surge	Size	List Price
CS 121	4	250	300	1 1/2" x 3/4" x 2 3/8"	\$0.65
CS 123	8	250	300	1 1/2" x 3/4" x 2 3/8"	.80
CS 125	12	250	300	1 1/2" x 1" x 2 3/8"	1.00
CS 130	2	450	525	1 1/2" x 3/4" x 2 3/8"	.65
CS 131	4	450	525	1 1/2" x 3/4" x 2 3/8"	.75
CS 133	8	450	525	1 1/2" x 1" x 2 3/8"	.95
CS 135	12	450	525	1 1/2" x 1 1/4" x 2 3/8"	1.30
CN 140	4-4	250	300	5/8" x 1" x 3"	.90
CN 141	4-8	250	300	5/8" x 1" x 3"	1.15
CN 142	8-8	250	300	5/8" x 1 1/4" x 3"	1.30
CN 145	8-8-8	250	300	5/8" x 1 1/4" x 3"	1.95
CN 150	4-4	450	525	3/4" x 1 1/4" x 3"	1.20
CN 151	4-8	450	525	3/4" x 1 1/4" x 3"	1.35
CN 152	8-8	450	525	3/4" x 1 1/4" x 3"	1.50
CN 155	8-8-8	450	525	1 1/4" x 1 1/4" x 3"	2.20
CM 160	4-4	250	300	3/4" x 1 1/4" x 3"	.90
CM 161	4-8	250	300	3/4" x 1 1/4" x 3"	1.15
CM 162	8-8	250	300	3/4" x 1 1/4" x 3"	1.30
CM 165	8-8-8	250	300	1 1/4" x 1" x 3"	1.95
CM 170	4-4	450	525	3/4" x 1 1/4" x 3"	1.20
CM 171	4-8	450	525	3/4" x 1 1/4" x 3"	1.35
CM 172	8-8	450	525	1 1/4" x 1" x 3"	1.50
CM 175	8-8-8	450	525	1 1/2" x 1 1/4" x 3"	2.20

## Dry Electrolytic Tubular Audio Bypass Units

● These units are designed especially for bypassing the cathode bias resistors in Audio Frequency and other low-voltage circuits where dry electrolytic condensers are applicable.



Type	Cap.	Wkg. V.	Size	List Price
TS 101	10	25	1 1/4" x 3/8"	\$0.50
TS 102	20	25	2 1/4" x 3/8"	.60
TS 105	5	50	1 3/8" x 3/8"	.50
TS 106	10	50	2 1/4" x 3/8"	.65
(TN—Dual Common Cathode Type)				
TN 110	5-5	25	1 3/4" x 3/8"	.75
TN 111	10-10	25	2 1/4" x 3/8"	.75
TN 112	5-5	35	1 3/4" x 3/8"	.75
TN 113	5-5	50	2 1/4" x 3/8"	.75

## "Terminal Connector" and Accessories for Types RS, RN and RM

● These accessories afford a practical method of installing Standard Mallory round can units in any style of mounting.

Type	Description	List Price
A-017	For clamp mounting on 1" cans	\$0.05
015-1	For 3/4" hole mounting on 1" cans	.03
015-2	For spade bolt mounting both 1" and 1 1/4" cans	.03
A-016	Terminal Connector	.05



# MALLORY

# CONDENSERS

## Wet Electrolytic Units

### Type WE

● Mallory Wet Electrolytic units include all late features and are of the regulating type. The interior of the container is treated to prevent its formation when an A.C. component is present.

Supplied with lug positive and container negative in the sizes shown below.



Type WE

The special "A" washer is required when using 1" cans in replacing 1 3/8" cans of the clamp mounting type. Always mount in an upright position. Prices include palnut for mounting.

Type	Cap.	Wkg. V.	Size	List Price
WE 447	4	475	1" x 3 3/8"	\$0.80
WE 847	8	475	1" x 4 1/2"	.95
WE 1247	12	475	1 3/8" x 4 1/2"	1.15
WE 1647	16	475	1 3/8" x 5 1/2"	1.35
WE 1847	18	475	1 3/8" x 5 1/2"	1.50
WE 3540	35	400	1 3/8" x 1 1/2"	1.75

## Paper Dielectric



● Tubular bypass condensers, although generally the smallest condenser unit in the radio receiver, are nevertheless just as important to its proper operation as any other component.

All Mallory units will be found to be safely rated (three papers for 400 volts, etc.), and are manufactured with the same degree of care and precision allotted to other Mallory products.

Since R.F. impedance is of paramount importance, great care is taken to insure a low impedance contact between the unit and its lead wires. Non inductive wound.

All units are thoroughly impregnated under high vacuum, oil-treated, and completely filled with a special high temperature moisture-resisting compound.

## Tubular Bypass Units

Type	Capacity	Size	List Price
<b>Working Voltage—600 D. C.</b>			
TP 401	.0001	1 1/2" x 1 1/2"	\$0.15
TP 402	.00025	1 1/2" x 1 1/2"	.15
TP 403	.0005	1 1/2" x 1 1/2"	.15
TP 404	.001	1 1/2" x 1 1/2"	.15
TP 405	.002	1 1/2" x 1 1/2"	.15
TP 408	.005	1 1/2" x 1 1/2"	.15
TP 409	.008	1 1/2" x 1 1/2"	.15
TP 410	.01	1 1/2" x 1 1/2"	.15
TP 412	.02	1 1/2" x 1 1/2"	.15
TP 415	.05	1 1/2" x 1 1/2"	.20
TP 416	.06	1 1/2" x 1 1/2"	.20
TP 418	.1	2 1/4" x 1 1/2"	.25
TP 420	.25	2 1/4" x 1 1/2"	.35
TP 432	.5	2 1/4" x 1 1/2"	.50

Type	Capacity	Size	List Price
<b>Working Voltage—400 D. C.</b>			
TP 421	.01	1 1/2" x 1 1/2"	.15
TP 423	.02	1 1/2" x 1 1/2"	.15
TP 426	.05	1 1/2" x 1 1/2"	.15
TP 428	.1	1 1/2" x 1 1/2"	.20
TP 430	.25	2 1/4" x 1 1/2"	.25
TP 431	.5	2 1/4" x 1 1/2"	.35

Type	Capacity	Size	List Price
<b>Working Voltage—200 D. C.</b>			
TP 436	.05	1 1/2" x 1 1/2"	.15
TP 438	.1	1 1/2" x 1 1/2"	.15
TP 440	.25	1 1/2" x 1 1/2"	.25
TP 441	.5	2" x 1 1/2"	.35
TP 443	1.0	2 1/4" x 1 1/2"	.50

## Auto Vibrator Condensers

Paper Dielectric—Oil Impregnated and Oil Filled



Type VL Fig. 4



Type VB Fig. 1



Type VB Fig. 2



Type VB Fig. 3



Type VO Fig. 5

Type	Cap.	Wkg. V.	Size	Fig.	List Price
VB 470	.0075	1600	2 1/2" x 3/4" x 3/4"	1	\$0.45
VB 471	.01	1600	2 1/2" x 3/4" x 3/4"	1	.45
VB 472	.0126	1600	2 1/2" x 3/4" x 3/4"	1	.60
VB 473	.015	1600	2 1/2" x 1 1/4" x 3/4"	2	.60
VB 474	.02	1600	2 1/2" x 1 1/4" x 3/4"	1	.65
VB 475	.03	1600	1" x 1 1/2" x 1 1/2"	2	.70
VB 476	.04	1600	1" x 1 1/2" x 1 1/2"	1	.75
VB 477	.05	1600	1" x 1 1/2" x 1 1/2"	3	.95
VL 478	.01	2000	3 1/2" x 1 1/2" x 1 1/2"	4	.95
VL 479	.5	200	3 1/2" x 1 1/2" x 1 1/2"	4	.65
VO 480	5	120	2 1/2" x 1 1/2" x 1 1/2"	5	.45

● The vibrator field constitutes the most severe service for which paper condensers are specified. These condensers must operate under extreme temperature conditions, excessive vibration and unusually high and continuous peak voltages.

With the exception of Types VL479 and VO480, low voltage units, all vibrator condensers described on this page are not only oil impregnated but are also oil filled. **No other type of condenser will give satisfactory service in this field.**

## Auto Generator Suppressor Units



Type AG

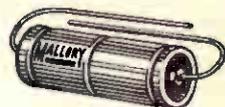


Type AM

Type	Cap.	Size	List Price
AG 451	.5	2 1/2" x 3/4"	\$0.50
AG 452	1.0	2 1/4" x 1 1/2"	.75
AM 454	.5	2 1/2" x 3/4"	.45

Working Volts—200

## Paper Dielectric Oil Filled Tubular Units



● Non-inductive, oil impregnated and oil filled, extremely low R. F. impedance and power factor, carefully and effectively sealed, they will readily prove their value in all "tough" circuits.

Working Volts—2,000

Type	Cap.	Size	List Price
OT 458	.0025	1 1/2" x 1 1/2"	\$0.55
OT 459	.005	1 1/2" x 1 1/2"	.55
OT 460	.0075	1 1/2" x 1 1/2"	.55
OT 461	.01	1 1/2" x 1 1/2"	.55
OT 462	.0125	2 1/4" x 1 1/2"	.55
OT 463	.015	2 1/4" x 1 1/2"	.60
OT 464	.02	2 1/4" x 1 1/2"	.60
OT 465	.03	2 1/4" x 1 1/2"	.65
OT 466	.04	2 1/4" x 1 1/2"	.70
OT 467	.05	2 1/4" x 1 1/2"	.75

## A.C. Electrolytic Capacitors

For Motor Starting Service



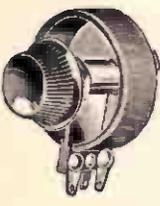
Type	Cap.	Wkg. V.	Size Dia	List Price
MS 540	60	110	2"	\$3.70
MS 541	70	110	2"	3.95
MS 542	80	110	2"	4.20
MS 543	100	110	2"	4.70
MS 544	115	110	2"	5.20
MS 545	135	110	2 1/2"	6.00
MS 546	150	110	2 1/2"	6.60
MS 547	100	150	2 1/2"	7.00
MS 548	30	220	2 1/2"	5.60
MS 549	40	220	2 1/2"	7.20

## FREE! New Condenser Manual

The 1936 Mallory Condenser Service & Replacement Manual contains 96 pages of information that is of invaluable aid to you. A free copy will be sent to dealers or servicemen who write to P. R. Mallory & Co., Inc., at Indianapolis, Indiana, on business letterhead.

# Centralab

RESISTORS



## POWER RHEOSTATS

Maximum dissipation by complete air circulation. Core and frame is all metal insulated with treated asbestos. Black bakelite knob. Bushing  $\frac{3}{4}$ " x  $\frac{1}{2}$ " long. Shaft  $\frac{1}{4}$ " x  $\frac{1}{2}$ " long. Resistance strip 2" diameter.

Part No.	Resistance in Ohms
48-002	2
48-006	6
48-150	150
48-400	400
48-810	1000
48-850	5000

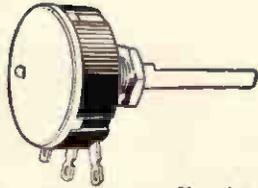
**List Price Each** ..... \$2.00

Giant—50 Watts	
Part No.	Resistance in Ohms
48-851	5000

**List Price Each** ..... \$2.75

Giant—75 Watts	
Part No.	Resistance in Ohms
47-277	50
47-278	150
47-279	300
47-280	500
47-281	1000

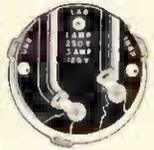
**List Price Each** ..... \$3.00



## Centralab

### IMPROVED RADIOHMS

Your future business depends upon how well each repaired set you turn out satisfies its owner. The kind of volume control you install is an important part of that satisfaction. The new Radiohm Resistor with the patented rocking contact permits a better energy and contact distribution than was formerly possible. The variable contact covers almost the entire width of the resistor and always operates smoothly without wear. The resistance tapers are carefully adjusted for proper attenuation in each circuit. The soft aluminum shaft is 2 1/4" long, milled flat, and can be cut to the exact length needed. Diameter is 1 1/4" and the resistor area 1.025 sq. in. The C-H power switch plate is approved by Underwriters.



Part No.	Usual Circuit Location	Ohms
72-118	Voltage Divider	500
72-107	Voltage Divider	1,000
72-101	Voltage Divider	2,000
72-108	Voltage Divider	3,000
72-109	Voltage Divider	4,000
72-110	Voltage Divider	5,000
70-204	Antenna Shunt	5,000
72-114	Antenna, C-Bias	10,000
72-113	Antenna, C-Bias of 1 tube	10,000
70-205	Antenna, C-Bias of 2 tubes	10,000
72-100	Antenna Shunt	10,000
72-115	Antenna, C-Bias	15,000
79-006	Antenna, C-Bias	15,000
72-119	Antenna, C-Bias	20,000
72-111	Voltage Divider	25,000

Part No.	Usual Circuit Location	Ohms
70-206	C-Bias	25,000
72-102	Antenna Shunt	25,000
72-103	Voltage Divider	50,000
72-117	Tone Control	50,000
72-123	Tone Control	75,000
70-202	C-Bias	75,000
72-104	Voltage Divider	100,000
72-122	Audio Grid or Tone	100,000
72-120	Audio Grid or Tone	200,000
72-131	C-Bias	200,000
72-121	Audio Grid or Tone	250,000
72-105	Audio Grid or Tone	500,000
72-106	Voltage Divider	500,000
70-203	Series in R. F. Plate	500,000
72-116	Audio Grid or Tone	1 Meg.
72-132	Audio Grid or Tone	3 Meg.

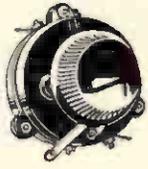
**Standard Radiohm**  
List Price, Each ..... \$1.00

**Switch Cover Plate**  
List Price, Each ..... \$0.50

## COMMERCIAL "L" PAD

10-Watt

Suitable for output circuits where the power is not more than 10 watts. Generally used as a voice-coil control for Dynamic Speakers. When used in multiple circuits the unit gives a constant impedance, and thus does not affect the adjustment of other sections of the circuit. The wire-wound resistance units permit maximum power-rating. Molded Bakelite case used as in the "T" Pad. Provides single or three-hole mounting. Diameter of control 3 1/4". Depth of control 2" approximately. Shpg. Wt. 8 oz.



Part No.	Resistance in Ohms
94-001	15

Part No.	Resistance in Ohms
94-004	200
94-005	500

List Price ..... \$5.00



## CONSTANT IMPEDANCE "T" PAD

A well-made Pad, containing 2 wire-wound sections, gives constant resistance to the input and output circuits. A tapered graphite section gives even attenuation of volume level. Another feature is the dust and moisture-proof case that covers the three resistances. Guaranteed for long life. Furnished with Bakelite knob. Shpg. Wt. 8 oz.

Part No.	Ohms
93-003	200

Part No.	Ohms
93-002	500

List Price, Each ..... \$7.00

## SENIOR GAIN CONTROLS

Dust-proof case and fully insulated shaft and bushing are used. Control gives a uniform attenuation for audio amplifiers. Case 2 3/4" x 1 3/4". Bushing 3/4" x 3/4" long. Shaft 1/4" x 1". Complete with dial and knob.

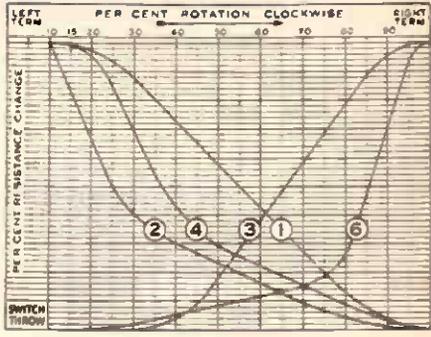


Part No.	Ohms	Attenuation
1-010-851	500,000	50 Db.
1-010-850	1,000,000	50 Db.

List Price, Each ..... \$5.00

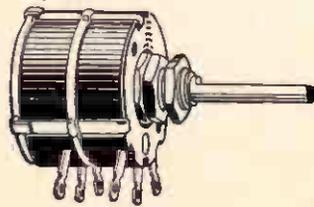
## STANDARD RESISTANCE CURVE CHART

Every Centralab Control is made to a particular curve that is numbered and charted on the left. This chart indicates the percent resistance change with rotation. The ten heavy vertical lines represent every 10% the knob is rotated, the LEFT TERM indicating the minimum volume end of rotation; maximum volume is indicated at the right. The figures at the top show percentage of clockwise rotation. The usual application of the curves are as follows: (1) Voltage divider with uniform resistance change. (2) "C" bias rheostat. (3) Antenna and "C" bias of one tube. (4) Antenna and "C" bias of two tubes. (5) Antenna shunt, or tone control. When ordering volume controls refer to this chart to obtain the proper one for your needs.



## TWIN REPLACEMENT CONTROLS

Two resistances completely insulated from each other and from the shaft and bushing. There are so many possible combinations in Twin Controls that most replacements are adapted to only one model set. The ones listed are the most popular and the ones used most frequently.



74-601—Back base	25,000 Ohms
Shaft base	10,000 Ohms
74-602—Back base	50,000 Ohms
Shaft base	10,000 Ohms

### Dual Grid Volume Control

4010805 Both Bases	100,000 Ohms
4010807 Both Bases	250,000 Ohms
4010804 Both Bases	500,000 Ohms

List Price \$2.50



# Centralab

## REPLACEMENT CONTROLS



Make and Model No.	Part No.	List Price	Make and Model No.	Part No.	List Price
Majestic (Grigsby-Grunow) 15-B (Tone)	41-070	\$1.50	Phileo 47 (D.C.) 71	51-095	\$1.50
Majestic (Grigsby-Grunow) 25, 251, 253, 254, 254 Early (Tone)	41-065	1.50	Phileo 48 (D.C.) 51, 51A, 52	51-076	1.50
Majestic (Grigsby-Grunow) 25 Tone, 251, 253, 254 Early	41-065	1.50	Phileo 50, 50A	74-559	2.50
Majestic (Grigsby-Grunow) 25-B, 251-B, 253-B, 254-B	2011910	2.00	Phileo 53	2021904	2.00
Majestic (Grigsby-Grunow) 25-B, 251-B, 253-B, 254-B (Tone)	41-065	1.50	Phileo 54	2011911	2.00
Majestic (Grigsby-Grunow) 35, 351, 353	2011910	2.00	Phileo 57	2021905	2.00
Majestic (Grigsby-Grunow) 35, 351, 353 (Tone)	41-085	1.50	Phileo 60, 261	2021001	2.00
Majestic (Grigsby-Grunow) 55, 56, 57, 58	55-010	2.00	Phileo 65	1010978	1.50
Majestic (Grigsby-Grunow) 140-A	74-530	2.50	Phileo 70 (A.V.C.)	1010975	1.50
Majestic (Grigsby-Grunow) 200, 201, 203, 204	72-156	1.50	Phileo 70, 90 (2-4's), 470, 70A	74-579	2.50
Majestic (Grigsby-Grunow) 200, 201, 203, 204 (Tone)	52-032	2.00	Phileo 76	1010982	1.50
Majestic (Grigsby-Grunow) 210, 211, 214, 215	72-155	1.50	Phileo 80	2021906	2.00
Majestic (Grigsby-Grunow) 210, 211, 214, 215 (Tone)	52-031	2.00	Phileo 81	1020903	1.50
Majestic (Grigsby-Grunow) 220, 221, 223	72-163	1.50	Phileo 86, 87, 511	24-016	1.50
Majestic (Grigsby-Grunow) 220, 221, 223 (Tone)	52-035	2.00	Phileo 89, 19 Early	2011921	2.00
Majestic (Grigsby-Grunow) 260	62-064	2.00	Phileo 89 Late	2020904	1.50
Majestic (Grigsby-Grunow) 290, 300, 300-A, 310-A, 310-B, 77, 291, 293, 294, 303, 304, 307, 311, 314, 315, 321, 336	1010961	1.50	Phileo 90 (1-47), 490	1010976	1.50
Majestic (Grigsby-Grunow) 290, 310-A, 310-B, 291, 293, 294, 311, 314, 315 (Tone)	33-015	2.00	Phileo 90 (2-47's)	1010975	1.50
Majestic (Grigsby-Grunow) 300, 300-A, 320, 330, 77, 303, 304, 307, 324, 321, 336 (Tone)	33-036	2.00	Phileo 91	1010981	1.50
Majestic (Grigsby-Grunow) 340, 360, 390, 344, 363, 393	51-123	1.50	Phileo 95	24-264	1.50
Majestic (Grigsby-Grunow) 340, 360, 390, 344, 363, 393 (Tone)	33-056	2.00	Phileo 144	2221902	2.00
Majestic (Grigsby-Grunow) 370, 371, 373	2112901	2.00	Phileo 20, 45	2221901	2.00
Majestic (Grigsby-Grunow) 380, 381	2111906	2.00	Phileo Ford Car Radio	2221904	2.00
Majestic (Grigsby-Grunow) 400, 411, 411-A, 413, 413-A	37-006	2.00	Pilot Radio & Tube Corp. K-117	74-526	2.50
Majestic (Grigsby-Grunow) 120, 121	74-548	2.50	R.C.A. Victor R-37P, 38P	1210901	1.50
Majestic (Grigsby-Grunow) 120-B, 123	74-558	2.50	R.C.A. Victor RC-78A Tapped	1210902	1.50
Majestic (Grigsby-Grunow) 110, Auto	72-088	1.50	R.C.A. Victor RC-78 Twin	4220900	3.00
Majestic (Grigsby-Grunow) 111, Auto	30-017	1.50	R.C.A. Victor R-32, RE-45, 52, 76, 145	74-600	2.50
Majestic (Grigsby-Grunow) 114, Auto	30-019	1.50	R.C.A. Victor 21, 22	72-013	1.50
Majestic (Grigsby-Grunow) 116, Auto	28-046	1.50	R.C.A. Victor 4 Circuit RC3, 48, R15, RE17, R42	74-526	2.50
Majestic (Grigsby-Grunow) 66, Auto	2011093	2.00	R.C.A. Victor RE-57, RE-73, R-14, RE-34, 42	74-524	2.50
Majestic (Grigsby-Grunow) 66 (Tone), Auto	1010111	1.50	R.C.A. Victor RC-38	72-087	1.50
Majestic (Grigsby-Grunow) 440	2111037	2.00	R.C.A. Victor RC-29	52-024	2.00
Majestic (Grigsby-Grunow) 460	1010962	1.50	R.C.A. Victor R-8, R-12, R-11, R-26, R-10, RE-18, RE-18A, RE-19, R-21, R-37, R-38	1210900	1.50
Majestic (Grigsby-Grunow) 460 (Tone)	2012900	2.00	Sears Roebuck Co. 112	98-003	2.00
Majestic (Grigsby-Grunow) 490	1010107	1.50	Sentinel (United Air Cleaners) Portola 3	44-059	2.00
Majestic (Grigsby-Grunow) 500	2012901	2.00	Sparks-Withington (Sparton) 750D, 870, 69, 79-A, 101, 110AC, 301, 389, 591, 593, 930, 931	1010963	1.50
Majestic (Grigsby-Grunow) 570	1010108	1.50	Sparton 89-A, 111-A, 564, 570, 574, 600, 610, 620, 737, 740, 870	1010964	1.50
Majestic (Grigsby-Grunow) 570 (Tone)	2012020	2.00	Sparton 410-20-30	75-543	3.00
Majestic (Grigsby-Grunow) 600	33-129	2.00	Splitdorf—See Edison		
Majestic (Grigsby-Grunow) 800	1010965	1.50	Sterling Radio 3A, 4, B, A2	44-059	2.00
Majestic (Grigsby-Grunow) 800 (Tone)	2011912	2.00	Sterling Radio F-1-60, 8 Tube, G	75-507	3.00
Majestic (Grigsby-Grunow) 118 Ford	1010983	1.50	Stewart-Warner Corp. 900 Series	28-031	1.50
Montgomery-Ward & Co. AE-10	74-509	2.50	Stewart-Warner Corp. R-100 Series, 950, 935, 110 Series	30-010	1.50
Montgomery-Ward & Co. Monarch, Air Line	79-014	2.50	Stewart-Warner 950 DC	4010901	2.50
National Carbon Co. 50 Series	74-503	2.50	Stromberg-Carlson Tele. 635, 636	72-161	1.50
Ozarka V-16-16 Tubes, Tone Control	76-009	2.50	Stromberg-Carlson Tele. 635, 636	Panel	72-162
Ozarka Oxford	82-034	2.50	Stromberg-Carlson Tele. 641, 42, 52, 54	Panel	72-159
Phileo 14, 15 Late, 91	1210907	1.50	Stromberg-Carlson Tele. 641, 42, 52, 54	Panel	72-160
Phileo 15 Early	1010979	1.50	Stromberg-Carlson Tele. 846, 848	Rear	72-205
Phileo 16	2211900	2.00	Stromberg-Carlson Tele. 846, 848	Panel	72-206
Phileo 17	2221903	2.00	Stromberg-Carlson Tele. 12, 14	Panel	72-042
Phileo 18	2221900	2.00	Stromberg-Carlson Tele. 22, 24	Panel	72-082
Phileo 19 Vol., Late	1210906	1.50	Stromberg-Carlson Tele. 638	Rear	72-210
Phileo 20, 21, 41 DC, 42 DC, 77	74-579	2.50	Stromberg-Carlson Tele. 638	Panel	72-209
Phileo 35, 36 (Batt.)	4010907	2.50	Stromberg-Carlson Tele. 48, 49, 50, 51 Tone	Panel	52-041
Phileo 30, 96, 111, 111A, 112, 112A	72-177	1.50	Stromberg-Carlson Tele. 38, 39	Panel	75-545
Phileo 37 (Batt.)	74-557	2.50	Temple Corp. 8-61-81-91, 5-55	74-515	2.50
Phileo 38, 38A (Batt.)	1010980	1.50	Transformer Corp. 40	55-004	2.00
Phileo 70 Lazy "X," 370	75-544	3.00	Transformer Corp. 55	51-005	1.50
Phileo (40) (D.C.)	1010977	1.50	Transformer Corp. 300	306-001	2.00
Phileo 43	2021908	2.00	Westinghouse Electric WR-4	74-526	2.50
Phileo 44, 118	2021907	2.00	Westinghouse Electric WR-2	72-013	1.50
Phileo 46 (D.C.)	74-560	2.50	Wholesale Radio Great Duo-Symphonic	74-607	2.50
			Zenith Radio 50, 60, 70-1-2-3-7, 712-22-32-72, 70 Series, 41, 42, 412, 422	75-614	3.00
			Zenith Radio 52, 53, 54, 57, 522-32-42, 70, 102, 112, 212, 11, 12	62-042	2.00
			Zenith Radio 2017	75-503	3.00
			Zenith Radio 2014, 2017	51-039	1.50

See Centralab Volume Control Guide for Details of these and other Replacement Controls

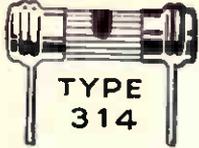
# CENTRALAB

CRL

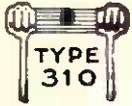
## CENTRALAB CARBON RESISTORS



**TYPE 316**



**TYPE 314**



**TYPE 310**

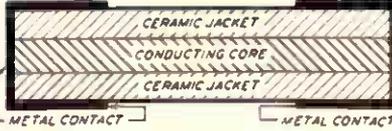
All resistances have flexible wire leads  $1\frac{1}{2}$ " long, and are R.M.A. color-coded. Types 316 and 314 individually labelled and packed in cartons of ten.

- Type 316 Resistor**, size  $\frac{1}{4}$ "x $1\frac{3}{4}$ ", rating 1.5 watts. . . . . \$0.20
- Type 314 Resistor**, size  $\frac{1}{4}$ "x1", rating 1 watt. . . . . .18
- Type 310 Resistor**, size  $\frac{1}{4}$ "x $\frac{5}{8}$ ", rating .5 watt. . . . . .15

**Resistance in Ohms**

100	1,500	14,000	125,000
200	2,000	15,000	150,000
300	2,500	17,000	200,000
400	3,000	20,000	250,000
500	3,500	25,000	300,000
600	4,000	30,000	400,000
750	5,000	40,000	500,000
800	6,000	45,000	750,000
900	7,500	50,000	1 Meg.
1,000	8,000	55,000	1.5 Meg.
1,100	9,000	60,000	2 Meg.
1,200	10,000	70,000	3 Meg.
1,300	12,000	75,000	4 Meg.
1,400	13,000	100,000	5 Meg.

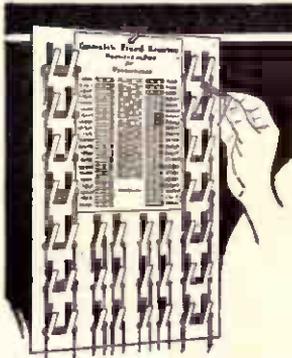
**Carbon Resistor Cross-Section**



This magnified cross-section illustrates important and exclusive features of Centralab Resistor design. These are:

1. Center core of resistance material is surrounded by a dense shock-proof ceramic, providing strength and protection against humidity.
2. Core and jacket are fired together at 2500 degrees F. into a single solid unit, hard and durable as stone.
3. Pure copper covers the Resistor ends for wire lead-contact.
4. Because resistance is small in diameter and uniformly distributed for entire length, Centralab's specific resistance per unit length is low.

## CENTRALAB HANDY RESISTOR RACK



Keeps your resistor stock in order. Made of heavy sheet steel lacquered finish. Easily accommodates 80 Type 310 or 120 Type 310 resistors. Color code chart integral with rack.

Supplied free with order for the following assortment of 40 resistors:

- Type 316:** 250, 500, 750, 1000, 1500, 2500, 4000, 5000, 7500, 10M, 15M, 20M, 25M, 30M, 40M, 50M, 75M, 100M, 150M, 250M ohms.
- Type 310:** 100, 300, 500, 750, 1M, 100M, 125M, 150M, 250M, 300M, 400M, 500M, 750M ohms, and 1, 1.5, 2, 3, 4, 5 Megohms.

**List Price of Assortment** . . . . . \$6.00

**Resistor Rack Only** . . . . . .75

## AIR CELL "A" BATTERY CONVERSION RESISTOR PLUG

Necessary to replace ballast tube in converting battery operated receivers to use Eveready Air Cell. Plugs last forever—nothing to burn or wear out. Correct plug for each receiver must be used. See chart below.

Part No.	Make and Model
408-001	SILVERTONE 1712, 1713, 1714, 1854, 1857.
408-002	SILVERTONE 1710, 1711, 1711A, 7090, 7090A.
408-003	COLONIAL 659; SILVERTONE 1850, 1851.
408-005	AIRLINE 77, 95; SENTINEL 060, 6200, 6234, 6241.
408-006	PHILCO 38, 38A; SENTINEL 7700, 7732, 7741.
408-007	PHILCO 39, 39A, 38, 38A with type IC6 translator tube.



**List Price** . . . . . \$1.00

## MOTOR RADIO SPARK NOISE SUPPRESSORS

Centralab Suppressors insure top efficiency for both the radio and the motor. They are designed with long resistors and minimum capacity, they have the best possible ratio of R.F. to D.C. resistance. A resistance of only 10,000 ohms gives adequate noise suppression, and this low D.C. resistance insures full motor efficiency. Mechanically they are very strong, and will withstand high voltage, heat, vibration, and all kinds of weather.

Suppressor design is simple enough when only radio is considered, but to design one that will permanently maintain full motor efficiency along with good radio reception is a difficult problem.

Every motor ignition spark is followed by a train of radio frequency waves. Resistances of proper value located at the plugs and the common distributor cable damp these waves so they do not radiate.

- | Part No.  | List Price |
|---|------------|
| 327—Screw on plug type. Will fit most popular cars. . . . .                   | \$ .30     |
| 307—Bracket type. For older types of cars. . . . .                            | .30        |
| 329—Distributor type. Placed in series with center distributor cable. . . . . | .30        |
| 304—Snap on plug type. Snaps on plug at any desired angle. . . . .            | .30        |
| 305—Snap on plug cable end type. Replaces regular cable end. . . . .          | .30        |
| 338—Cable type. To be inserted in cable near spark plug. . . . .              | .30        |



No. 327



No. 307



No. 329



No. 304



No. 305



No. 338

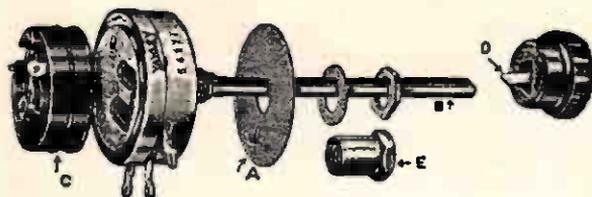
# YAXLEY

APPROVED RADIO PRODUCTS

# UNIVERSAL

## Volume Controls

### YAXLEY Volume Controls



The New Yaxley replacement volume controls incorporate such exclusive features as an adjustable grid bias, universal 3-inch aluminum shaft, 4-inch long extension shaft, spiral hex shoulder nut, knob spacer, special attachable switch, and completely enclosed control. All of these features definitely determine the quality of workmanship and minimize the time spent in servicing receivers.

\* Have adjustable bias feature. W.W.—Wire Wound.

### UNIVERSAL Single Controls

Control No.	Type	Resistance Ohms	Taper	Yaxley Curve No.	List Price
V	W.W.	60	linear	IV	\$1.00
W	W.W.	100	linear	IV	1.00
X	W.W.	200	linear	IV	1.00
A	W.W.	500	left	I	1.00
B	W.W.	1000	left	I	1.00
*C	W.W.	2000	right	II	1.00
C12	W.W.	2000	left	I	1.00
*D	W.W.	3000	right	II	1.00
D7	W.W.	3000	...	VII	1.00
D12	W.W.	3000	left	I	1.00
*E	W.W.	5000	right	II	1.00
E7	W.W.	5000	...	VII	1.00
E12	carbon	5000	left	I	1.00
*F	W.W.	7500	right	II	1.00
*F7	W.W.	7500	...	VII	1.00
F12	carbon	7500	left	I	1.00
*G	W.W.	10M	right	I	1.00
G7	W.W.	10M	...	VII	1.00
G12	carbon	10M	left	I	1.00
*H	W.W.	15M	right	II	1.00
H7	W.W.	15M	...	VII	1.00
H12	carbon	15M	left	I	1.00
Y	carbon	20M	left	I	1.00
J	carbon	25M	right	II	1.00
K	carbon	50M	right	II	1.00
K12	carbon	50M	left	I	1.00
Z	carbon	75M	right	II	1.00
Z12	carbon	75M	left	I	1.00
L	carbon	100M	left	I	1.00
M	carbon	250M	left	I	1.00
N	carbon	500M	left	I	1.00
O	carbon	1 Meg.	left	I	1.00
P	carbon	2 Meg.	left	I	1.00

### YAXLEY Linear Controls

Control No.	Type	Resistance Ohms	Taper	Yaxley Curve No.	List Price
A400P	W.W.	400	linear	IV	\$1.00
*A2MP	W.W.	2000	linear	IV	1.00
*A5MP	W.W.	5000	linear	IV	1.00
*Y5MP	carbon	5000	linear	IV	1.00
*A10MP	W.W.	10000	linear	IV	1.00
Y10MP	carbon	10000	linear	IV	1.00
*A20MP	W.W.	20000	linear	IV	1.00
Y25MP	carbon	25000	linear	IV	1.00
Y50MP	carbon	50000	linear	IV	1.00
Y100MP	carbon	100000	linear	IV	1.00
Y200MP	carbon	200000	linear	IV	1.00
Y250MP	carbon	250000	linear	IV	1.00
Y500MP	carbon	500000	linear	IV	1.00
Y1000MP	carbon	1000000	linear	IV	1.00

\* Have adjustable bias feature. W.W.—Wire Wound.  
Note: Knob, extension shaft and large hex shoulder nut are extra.

### YAXLEY Universal Dual Controls

Control No.	Type	Resistance	
		Front	Rear
CE	W.W.	2,000	5,000
GG	W.W.	10,000	10,000
GK	H. R.	10,000	50,000
LM	H. R.	100,000	250,000
MN	H. R.	250,000	500,000
NN	W.W.	500,000	500,000
DRP119	W.W.	3,000	10,000
DRP169	W.W.	7,500	10,000

List Price..... \$2.50

### Universal "Tapped" Controls

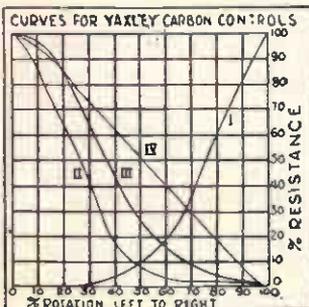
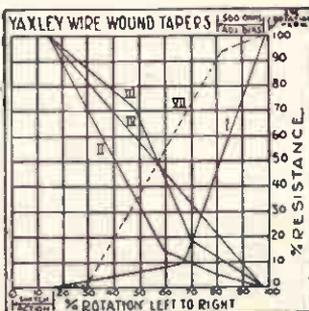
The following thirteen Universal tapped controls are a complete listing and include all the types the serviceman requires for his replacement needs. They will correctly replace any type of tapped control now in use.

Mfrs. No.	Res. Ohms	Tapped At
TRP600	6,000	2,500
TRP601	30,000	6,000
TRP602	60,000	3,000
TRP603	250,000	C.T.
TRP604	350,000	25,000
TRP605	350,000	75,000
TRP606	500,000	100,000
TRP607	500,000	C.T.
TRP608	1 Meg.	200,000
TRP609	1 Meg.	C.T.
TRP610	1 Meg.	200,000
TRP611	1 Meg.	170,000
TRP612	2 Meg.	25,000

List Price, Each..... \$1.50

### YAXLEY Volume Control Tapers

The graphs shown below illustrate the various tapers used on Yaxley wire-wound and carbon element volume controls.

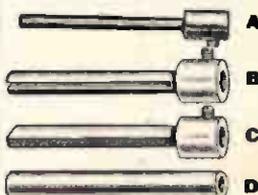


### Attachable Switches



Nb.	Type	List
9	S.P.S.T.	\$0.50
8	S.P.D.T.	.60
7	D.P.S.T.	.60

### Extension Shafts



Type A—Length 4".  
RS-242— $\frac{1}{8}$ " diam.,  $\frac{1}{8}$ " flat.  
RS-243— $\frac{1}{4}$ " diam.,  $\frac{1}{8}$ " flat.  
RS-244— $\frac{3}{8}$ " diam.,  $\frac{1}{8}$ " flat.  
Any Size List Price, each 30c

### SPECIAL EXTENSION SHAFTS

Type B—2" long,  $\frac{1}{4}$ " diameter with  $\frac{1}{8}$ " slot. Enclosed in tight fitting tube (D).  
RS-245—List Price..... \$0.35  
Type C—2" long,  $\frac{1}{4}$ " wide,  $\frac{1}{8}$ " thick. Tongue shaped and fitted with tube (D). For use in auto receivers.  
RS-246—List Price..... \$0.35

### Hex Shoulder Nuts

11260-2—For  $\frac{3}{8}$ " panels.  
List Price..... \$0.20  
11260-12—For  $\frac{1}{2}$ " panels.  
List Price..... \$0.15

### Adjustable Mounting Brackets



RB-248—1 $\frac{1}{2}$ " centers.  
RB-249—2 $\frac{1}{4}$ " centers.  
List Price..... Each \$0.20

### FREE TOOL OFFER



### Volume Control Wrench

Repairs damaged threads. Tightens nuts in close quarters. Fits control bushings and nuts. No. 178—List Price... \$0.20  
Or sent FREE with an order for six Yaxley Controls.



FREE!  
NEW EDITION  
VOLUME 2  
YAXLEY  
VOLUME CONTROL GUIDE

A complete manual for servicemen.

# JACKS

# YAXLEY SWITCHES

APPROVED RADIO PRODUCTS

# SWITCHES

## YAXLEY Push Button Switches



For use in test equipment or on special laboratory apparatus. Long-life springs used throughout, insuring positive contacts at all times. Finest type of insulation used. Bakelite button.

### Non-Locking Type

- No. 2001—S.P.S.T. List Price ..... \$0.90
- No. 2003—S.P.D.T. List Price ..... \$1.00
- No. 2006—D.P.D.T. List Price ..... \$1.50

### Locking Type

- No. 2001-L—S.P.S.T. List Price ..... \$0.90
- No. 2003-L—S.P.D.T. List Price ..... \$1.00
- No. 2006-L—D.P.D.T. List Price ..... \$1.50

Also available in break contact type.

## YAXLEY Jack Switches



### Single Pole—Single Throw

- Type 720—2-spring. List Price ..... \$0.70

### Single Pole—Double Throw

- Type 730—3-spring. List Price ..... \$0.85
- Type 732—3-spring. Same as Type 730 but with center neutral position. List Price ..... \$0.85

### Double Pole—Single Throw

- Type 740—4-spring. List Price ..... \$0.95

### Double Pole—Double Throw

- Type 760—6-spring. List Price ..... \$1.25
- Type 762—Same as Type 760, but with center neutral position. List Price ..... \$1.20

## YAXLEY Junior Jacks



Same construction as jack switch, except has hole for receiving any standard jack. Mount in  $\frac{1}{8}$ " hole on panels not over  $\frac{1}{8}$ " thick.

### Type 701—"Open Circuit"

- One Insulated Spring. List Price ..... \$0.40

### Type 702—"Closed Circuit"

- Two Insulated Springs. List Price ..... \$0.55

### Type 702A—"Two Circuit"

- For use on insulated panels. List Price ..... \$0.55

## YAXLEY JACKS

### Midget Jacks



Especially compact size. Type A1 Infant Jack, illustrated at left. Others as per illustration at right. Mount in  $\frac{1}{8}$ " hole.

No.	Type	List
A-1	Open Circuit	\$.25
A-2	Circuit Closing	.40
A-2A	Two-Circuit	.50
A-3A	Circuit Reversing	.60

### Insulated Tip Jack



Bakelite Cap. Red and Black for Positive and Negative. Phone tips nests all the way in jack. Mounts in  $\frac{1}{8}$ " hole. Slugs. Wt. 2 oz.

- No. 422 List, Per Pair \$0.25

### Metal Type Tip Jacks



#### Round Head Type

Mounts in  $\frac{1}{8}$ " hole. Tinned solder lug terminal.

- No. 416—List ..... \$0.10

#### Hexagon Head Type

Mounts in  $\frac{1}{8}$ " hole. Nickel-plated. brass.

- No. 417—List ..... \$0.10

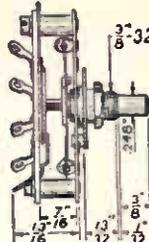
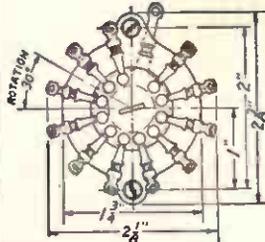


#### Insulated Tops

Round bakelite head type; mounts in  $\frac{1}{8}$ " hole in panel up to  $\frac{3}{8}$ " thick. Red, Black, Green; specify color.

- List Price, Each \$0.15
- List Price, Pair. \$0.25

## YAXLEY Gang Switches



### Important Explanation

A 2-circuit, 2-point single-gang switch is similar in performance to a Double-Pole, Double-Throw Switch. A 1-circuit, 11-point switch would be similar to a single-pole, 11-throw

switch, etc. All contacts are silver-plated and the insulation is of the finest quality obtainable.

### Non-Shorting

Type No.	Type
1216	1316
1211	1311
1215	1315
1213	1313
1212	1312
1226	1326
1221	1321
1225	1325
1223	1323
1222	1322

### Single Gang Switches

Type No.	Type	List Price
1-circuit, 1 to 6 points	1.15	
1-circuit, 1 to 11 points	1.15	
2-circuit, 1 to 5 points each circuit	1.25	
3-circuit, 1 to 3 points each circuit	1.35	
4-circuit, 1 to 2 points each circuit	1.45	

### Two-Gang Switches

Type No.	Type	List Price
2-circuit, 1 to 6 points each circuit	1.60	
2-circuit, 1 to 11 points each circuit	1.70	
4-circuit, 1 to 5 points each circuit	2.00	
6-circuit, 1 to 3 points each circuit	2.10	
8-circuit, 1 to 2 points each circuit	2.25	

### Three-Gang Switches

Type No.	Type	List Price
3-circuit, 1 to 6 points each circuit	2.20	
3-circuit, 1 to 11 points each circuit	2.35	
6-circuit, 1 to 5 points each circuit	2.50	

### Four-Gang Switches

Type No.	Type	List Price
4-circuit, 1 to 6 points each circuit	2.75	
4-circuit, 1 to 11 points each circuit	3.00	
8-circuit, 1 to 5 points each circuit	3.50	

## YAXLEY Etched Dial Plates

No.	Marking	No.	Marking
372	1 to 2	383	Off 1 to 3
373	1 to 3	384	Off 1 to 4
374	1 to 4	385	Off 1 to 5
375	1 to 5	386	Off 1 to 6
376	1 to 6	387	Off 1 to 7
377	1 to 7	388	Off 1 to 8
378	1 to 8	389	Off 1 to 9
379	1 to 9	390	Off 1 to 10
380	1 to 10		
381	1 to 11		
382	1 to 12		

List Price, Any Type ..... \$0.15



## YAXLEY Phone Plugs



No. 75—Bakelite housing. Screw terminals with coin slots. For phones, speakers, etc. List Price, Each ..... \$0.50

No. 75TC—Same as above, but with insule loop for tie cord connection. List Price, Each ..... \$0.60

No. 75A—Same as No. 75, but with heavy nickel shell. List Price ..... \$2.25

No. 76—Three-way microphone plug. Bakelite shell. List Price ..... \$1.00

No. 76A—Same as above, but with heavy duty nickel shell. List Price ..... \$2.50

## Extension Jacks



No. 100—Extension jack fibre shell. For No. 75 plug. List Price, Each ..... \$0.75

No. 100A—Same as above, but with heavy duty nickel shell. For No. 75A plug. List Price, Each ..... \$2.50

No. 101—Extension jack, fibre shell. For No. 70 microphone plug. List Price, Each ..... \$1.50

No. 101A—Same as above, but with heavy duty nickel shell. For No. 76A plug. List Price ..... \$2.75

## Pilot Light Bracket



Excellent indicator. Choice of green, red or amber. Specify color desired. No. 310 List Price \$0.30

No. 311—Jewels List Price ..... \$0.20

only with locking nut. Specify color.

List Price ..... \$0.20

## Moulded Twin Tip Jacks



Shorting Type

No. 432—Circuit is automatically closed when the tips are removed. Moulded bakelite with single hole mounting. Red or black. Specify color. List Price, Each ..... \$0.30

**Note** We can supply any Yaxley product not listed on this page. Let us know your requirements.

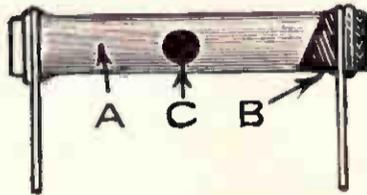
# Carbon Resistors

## GENERAL REPLACEMENT RESISTORS

Moisture-Proof. Will Resist All Climates and Weathers

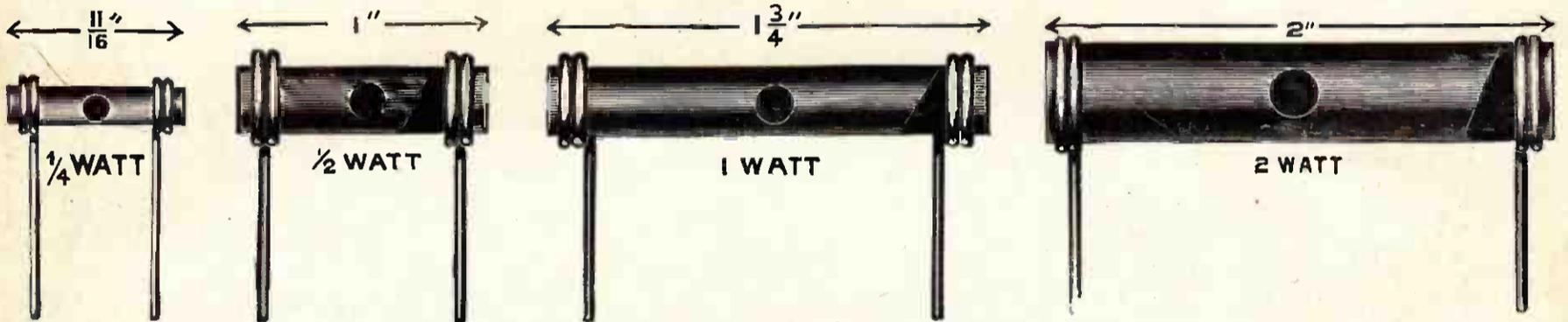
No ordinary service or overload can damage the resistor. The resistance material is molded in a solid form and fired at a high temperature. They are RMA color-coded for easy identification, **Guaranteed accuracy, 10% plus or minus.** Resistance values read approximately the same at any normal voltage. As no moisture can possibly penetrate, age cannot change the resistance value. Accidental breakage is also eliminated.

### R. M. A. STANDARD COLOR CODE CHART



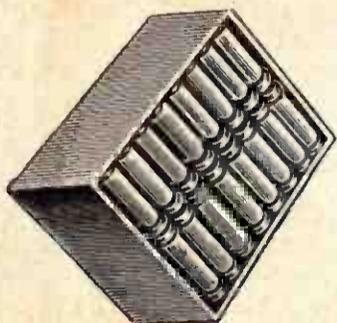
**A**—Body color represents first significant figure.  
**B**—End color represents second significant figure.  
**C**—Dot color represents the number of ciphers following the first two figures.

A	B	C
Body Color	End Color	Dot Color
0 Black	0 Black	.0 Black
1 Brown	1 Brown	0. Brown
2 Red	2 Red	00. Red
3 Orange	3 Orange	000. Orange
4 Yellow	4 Yellow	0,000. Yellow
5 Green	5 Green	00,000. Green
6 Blue	6 Blue	000,000. Blue
7 Violet	7 Violet	0,000,000. Violet
8 Gray	8 Gray	00,000,000. Gray
9 White	9 White	000,000,000. White



THE ILLUSTRATIONS ARE ACTUAL SIZE

1/4 WATT		1/2 WATT		1 WATT		2 WATT	
List Price	\$0.20	List Price	\$0.20	List Price	\$0.20	List Price	\$0.30
100 Ohms	750 Ohms	4,400 Ohms	22,500 Ohms	100,000 Ohms	1.5 Meg.		
150 Ohms	875 Ohms	5,000 Ohms	25,000 Ohms	125,000 Ohms	2 Meg.		
200 Ohms	1,000 Ohms	6,000 Ohms	30,000 Ohms	150,000 Ohms	2.5 Meg.		
250 Ohms	1,250 Ohms	7,000 Ohms	35,000 Ohms	180,000 Ohms	3 Meg.		
300 Ohms	1,500 Ohms	7,500 Ohms	40,000 Ohms	200,000 Ohms	3.5 Meg.		
350 Ohms	1,750 Ohms	8,000 Ohms	45,000 Ohms	250,000 Ohms	4 Meg.		
400 Ohms	2,000 Ohms	9,000 Ohms	50,000 Ohms	350,000 Ohms	5 Meg.		
450 Ohms	2,250 Ohms	10,000 Ohms	60,000 Ohms	400,000 Ohms	6 Meg.		
500 Ohms	2,500 Ohms	12,500 Ohms	70,000 Ohms	500,000 Ohms	7 Meg.		
600 Ohms	3,000 Ohms	15,000 Ohms	75,000 Ohms	600,000 Ohms	8 Meg.		
650 Ohms	3,500 Ohms	17,500 Ohms	80,000 Ohms	750,000 Ohms	9 Meg.		
700 Ohms	4,000 Ohms	20,000 Ohms	90,000 Ohms	1 Meg.	10 Meg.		



## CARBON RESISTANCE KITS

### 36 POPULAR SIZE RESISTORS

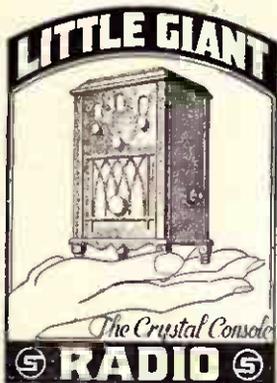
These kits consist of the thirty-six most popular value resistors, enabling the serviceman to make practically any resistor repair regardless of any unusual value resistance needed. Any combinations can be made up. Simply specify thirty-six of any of the resistance values listed above. **Accuracy guaranteed within 10%, and most values are actually within 5%.**

1/4 WATT		1/2 WATT		1 WATT		2 WATT	
List Price	\$6.48	List Price	\$6.48	List Price	\$6.48	List Price	\$9.72

# CRYSTAL SETS



# HEADPHONES



## "SNYDER" "LITTLE GIANT" CRYSTAL SET

A console crystal set with attractive calendar dials and available in assorted colors. Will give clear reception of the broadcast stations within a radius of 25 miles under normal local conditions. No batteries or power line of any kind necessary. The set is only 5" high and weighs less than 1 lb.

List Price.....\$1.50

## BRUSH Crystal Phones

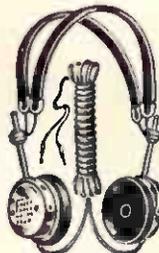
Extremely sensitive. Light in weight. Response 60-10,000 C.P.S. High impedance. With cord and band. Shpg. Wt. 3 lbs.



List Price \$9.20

## FROST DX-Special Phones

These phones fully meet the requirements of amateurs and DX fans. are extremely sensitive. Shells of polished aluminum with a five-foot flexible cord. Impedance of 20000 ohms.



List Price.....\$4.25

## FROST Standard

Long a big favorite with the radio man because of their all-round high quality, lightness of weight, and ease of adjustment for perfect comfort. Shpg. Wt. 2 lbs.

2000 Ohms  
List Price, per Pair.....\$2.55  
3000 Ohms  
List Price, per Pair.....\$2.80

## BRANDES Phones



Full size and adjustable. Polished aluminum shells. Resistance 2000 ohms. Shpg. Wt. 2 lbs.

List Price, per Pair.....\$2.50

## Extension Cords



## Tinsel Centers

Double covering of cotton insulating braid. Not suitable for carrying heavy current. Pin tips both ends.

Length	List Price
10"	\$0.30
20"	.35
30"	.52
40"	.71
50"	.76
100"	1.60

## Ear Phone Cushions



Made of soft rubber to protect ears from pressure of headphones.

List Price, Pair \$0.42

## TRIMM Featherweight Phones Wt. only 4 ozs.

One of the finest headsets ever designed. Despite their high quality and excellent performance they weigh only 4 ozs. Complete including the headband and the cord. Bakelite shell and cap. Forged cobalt steel magnet. Adjustable spring steel headband. Impedance 24000 ohms per pair. Shpg. Wt. 1 lb.



List Price, per Pair.....\$10.00

## TRIMM Lorgnette Phone

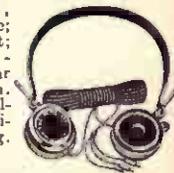


Comprises a single unit featherweight phone mounted on a lorgnette handle. Used for group installations in churches, theatres, lodges, etc. Made in two sizes with adjustable handle which permits extending to 14 or 22". Shpg. Wt. 4 lbs.

14" handle  
List Price.....\$6.75  
22" handle  
List Price.....7.35

## ACME Headphones

Efficient, small in size; lightweight; easily adjusted. Clear articulation. Shells of polished aluminum. Shpg. Wt. 1 lb.



2000 Ohms  
List Price.....\$1.60  
4000 Ohms  
List Price.....2.05

## New TRIMM Dependable Phones

A reliable, ruggedly constructed headset for the amateur or short-wave broadcast listener. Bakelite shells and caps. Magnets of Chrome steel. Comes with headband and cord. Shpg. Wt. 2 lbs.

2000 Ohms  
List Price, per Pair.....\$3.00  
4000 Ohms  
List Price, per Unit.....3.75

## Phone and Speaker Cords

Five-foot double cord. Spade tips one end; straight tips other. Cotton braid cover.

List Price, Each.....\$0.60  
As above with straight tips both end.  
List Price, Each......60  
Five-foot single cord with straight tips both ends.  
List Price, Each......35



List Price, Each.....\$0.13

## CRYSTAL Receiving Set

This little set using a specially developed crystal for detection gives surprisingly good results. Complete with crystal and cats whisker. Shpg. Wt. 2 lbs.



List Price.....\$1.30

## I.C.A. LoLoss Crystal Sets



Inexpensive. Sensitive. Easy to connect. Attach aerial, ground and headphones, and set is ready to use. Shpg. Wt. 1 lb.  
Crystal Set.....\$1.00  
Crystal Detector only.  
List Price.....\$0.50

## "LITTLE GIANT" CRYSTALS

### The Perfect Detector

SNYDER Crystals are made of the highest grade Pyrite, Galena and Silicon. Each crystal is triply tested for tone, selectivity and sensitivity.

The use of these "Little Giant" Crystals will assure you of good reception of broadcast stations within a radius of approximately 25 miles under normal conditions.

Every Crystal is individually packed in tins. Each carton contains 72 crystals.

Cat. No.	List Price
C-1—Standard Size.....	\$0.10
C-2—For "Little Giants".....	.15
C-3—Single Jumbo.....	.25
C-4—Triple Jumbo.....	.50

## Glass Enclosed Crystal Detector

Dust-proof. Super-sensitive crystal and easily adjusted cats-whisker that will hold its position.

Your Cost.....\$0.50



## Cat Whiskers

Finest wire—correct tension—sensitive.

List Price, Envelope of 3.....\$0.15

# CONTINENTAL RESISTORS

## CONTINENTAL "INSULATED" CARBON RESISTORS

Exclusive "Triple-Coated" 1000-Volt Insulation: Protects against Shorts to Sub-Panel and Wiring. Permanent Resistance Value. Oxygen-Welded "Copper-Bonded" Leads. Non-Inductive.



### Stock Resistor Values

10	900	8,500	65,000	900,000
15	1,000	10,000	70,000	1 megohm
25	1,250	11,000	75,000	1.5 megohms
50	1,500	12,500	100,000	2 megohms
75	1,750	15,000	125,000	2.5 megohms
100	2,000	17,500	150,000	3 megohms
150	2,250	20,000	200,000	3.5 megohms
250	2,500	22,500	250,000	4 megohms
350	3,000	25,000	300,000	5 megohms
400	3,500	30,000	350,000	6 megohms
450	4,000	35,000	400,000	7 megohms
500	4,500	40,000	450,000	8 megohms
600	5,000	45,000	500,000	9 megohms
700	6,000	50,000	600,000	10 megohms
750	6,500	55,000	700,000	
800	7,500	60,000	800,000	



### "DIAL COLOR CODE" and RESISTOR CABINET

Here's one of the most useful service units ever made available to the Radio trade. The serviceable cardboard cabinet holds 35 continental 1/2 or 1-watt resistors in rack formation for easy accessibility. On the cover is a dial-operated color-code chart giving exact resistance values almost automatically.

**Special: 35 Continental Carbon Resistors** (either 1/2 or 1-watt) complete in cabinet with "Dial Color Code."

List Price ..... 57.00

Type No.	Watts	Size	List Price
H5	5	3" x 3/8"	\$0.50
E2	3	2" x 3/8"	.30
D2	1	1 1/4" x 3/8"	.20

Type No.	Watts	Size	List Price
G1	1/2	1" x 1/2"	\$0.20
K7	1/4	3/8" x 3/8"	.20

## CONTINENTAL AUTO-RADIO FILTER CONDENSERS

This new line of equipment has been specially designed to give the serviceman a means of easily eliminating every cause of noise interference in auto-radio installations—at the actual source of the interference.



GB02S, GB05, GB1



GB05F



GB05C

Cat.	Application	Capacity	Size	List
GB02S	Generator and coil	.25	1 1/2" x 3/4"	\$0.40
GB05	Generator and coil	.5	1 3/4" x 3/4"	.50
GB1	Generator and coil	1.0	2" x 1"	.70
GB1A	Generator and coil	1.0	2 1/4" x 1 1/4"	.80
GB05C	Generator and coil	.5	2" x 3/8"	.50
GB05H	Ammeter to ground	.5	3" x 1"	.80
*GB05HC	Dome light filter	.5	3 1/4" x 1 1/4"	.80
GB05DH	Dome light filter	.5-.5	3 1/4" x 1 1/4"	1.00
GB05F	Ford V-8 coil	.5	1 1/4" x 3/4"	.60

\* GB05HC, dome light filter, same choke and condenser as in GB05H, mounted in metal can similar to GB05DH.



GB05H



GB05DH



GB1A

## NEW AUTO-RADIO VIBRATOR CONDENSERS



TAE

Buffer condensers rated for 1500 volts D.C. and flash tested at 3000 volts. Type T are tubular and Type V are rectangular in sealed metal containers.



VAE

Cat.	Capacity	Size	List
TAE11	.01	1 1/2" x 1/2" dia.	\$0.40
TAE12	.02	1 3/8" x 3/4" dia.	.45
VAE11	.01	1" x 7/8" x 3/8"	.45
VAE12	.02	1" x 7/8" x 3/8"	.45
VAE13	.03	1" x 1 1/4" x 3/8"	.45
VAE14	.04	1" x 1 1/4" x 3/8"	.45

## SUPPRESSORS

ALL Models ..... List \$0.30



Type S-21 Universal Spark Plug Suppressor—with "U" terminal.



Type S-27 Suppressor—Thread will fit all spark plugs. Most universal type yet devised. Ferrule nut is removable.



Type C-11 Cable Suppressor—meets requirements where it is necessary to cut ignition cable.



Type S-20A Spark Plug Suppressor—for Buick, Packard, and Chrysler cars. Takes place of terminal on ignition cable.



Type T-13 Distributor Suppressor—fits all distributors.



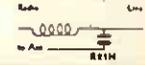
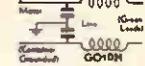
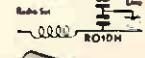
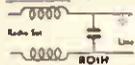
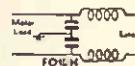
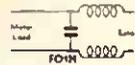
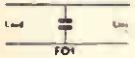
Type T-14 Distributor Suppressor—for Ford V-8 cars.

# CONTINENTAL CONDENSERS

## FILTERCONS FOR THE REDUCTION OF MAN-MADE STATIC

### PRACTICAL INTERFERENCE ELIMINATION

These filter units are essential to-day for perfect radio reception, particularly on all-wave sets. There is a special unit for every particular need. These units will prevent radiation of interference from electric motors, electric signs, vibrators, and all other man-made interference. Full instructions with each unit.



## CONTINENTAL FILTERCONS

All Filtercons Rated at 110 Volts A.C.-D.C., 5 amperes

Code	Application	Mounting	Size Dia. L.	List Price
FO1	Small electrical devices of all kinds	Plug-In	1 3/8" x 1 3/4"	\$0.40
FO1H	Small motors, hair dryers, vacuum cleaners, mixers, clippers, fans, heating pads	Plug-In	1 3/8" x 2 3/8"	.80
FO1DH	Flatirons, Schick razors, brush arcing, 1/2 H.P. motors and all severe cases of interference	Plug-In	1 3/8" x 2 3/8"	1.00
RO1H	Radio Sets A.C.-D.C. Eliminator of man-made static in a majority of sets	Plug-In	1 3/8" x 2 3/8"	.80
RO1DH	Radio Sets A.C.-D.C. for cases of severe interference	Plug-In	1 3/8" x 2 3/8"	1.00
GO1D	Small motors and electrical devices where Filtercon can be mounted on frame at device	Bracket for bolting to frame of device	3/4" x 2 3/8"	.50
GO1DH	Same as GO1D except for very severe cases of interference	As above	1 1/4" x 3 1/4"	1.50
R21H	Aerial Eliminator short and long wave	Plug-In	1 3/8" x 1 3/4"	.50

## "H" TYPE TRANSMITTING CONDENSERS

Continental Type "H" Transmitting Condensers are non-inductive, wax-impregnated, tested at twice rated voltage. Metal containers are painted with aluminum finish. Mounting ears are welded to the base. Standoff insulators of white porcelain are used.

Code	Capacity	D.C. Working Voltage	Dimensions In Inches	List Price
HAJ1	1	1000	3" x 2" x 2"	\$1.75
HAJ2	2	1000	3" x 2" x 2"	2.50
HAJ4	4	1000	5" x 2" x 2"	4.50
HAE1	1	1500	3" x 2" x 2"	2.25
HAE2	2	1500	5" x 2" x 2"	3.25
HAE4	4	1500	5" x 3 1/4" x 2 1/2"	5.00
HBJ1	1	2000	5" x 3" x 1 3/4"	2.90
HBJ2	2	2000	5" x 3 1/4" x 2 3/8"	4.00
HBJ4	4	2000	5" x 4 3/8" x 2 3/8"	6.00

## REPLACEMENT CONDENSERS—"L" TYPE

475 Volts D.C. Working 600 Volts Peak

Type "EL"—Cardboard—6" Leads

Code	For Replacement of	Dimensions	List
EL2	2 Mfd.	2 1/2" x 1 1/2" x 1 3/8"	\$0.65
EL4	4 Mfd.	4 3/8" x 1 1/2" x 1 3/8"	.75
EL8	8 Mfd.	4 3/8" x 1 1/2" x 1 3/8"	.95
EL44	4-4 Mfd.	4 3/8" x 1 1/2" x 1 3/8"	1.25
EL48	4-8 Mfd.	4 3/8" x 1 1/2" x 1 3/8"	1.45
EL88	8-8 Mfd.	4 3/8" x 2 1/2" x 1 3/8"	1.60

Type "IL"—Cylindrical Metal Inverted 6" Leads, 4 3/8" Long, 1 3/8" Diam.

Code	For Replacement of	List
IL4	4 Mfd. Replacement	\$0.95
IL8	8 Mfd. Replacement	1.15

Type "UL"—Cylindrical Metal Upright 4 3/8" High Hex-Nut Terminals

Code	For Replacement of	Diameter	List
UL4	4 Mfd.	1 3/8"	\$0.95
UL8	8 Mfd.	1 3/8"	1.15
UL44	4-4 Mfd.	2 1/2"	1.65
UL88	8-8 Mfd.	2 1/2"	2.00
UL444	4-4-4 Mfd.	2 1/2"	2.50
UL888	8-8-8 Mfd.	3"	3.25
UL9918	9-9-18 Mfd.	3"	5.00
UL515	5-15 Mfd.	2 1/2"	3.00



Replacement condensers also available in the "E" type, 600 Volts Working, 1000 Volts peak at slightly higher list prices.



## TYPE "T" BY PASS

Non-Inductive tubular condensers in cardboard, vacuum impregnated with moisture-proof Halowax. Sealed ends. Bare flexible tinned leads. 2 1/2" long. Available in all standard sizes.

Code	Capacity Mfd.	D.C. Working Voltage	List
TF31	.0001	600	\$0.18
TF325	.00025	600	.18
TF21	.001	600	.18
TF22	.002	600	.18
TF25	.005	600	.18
TF11	.01	600	.18
TF12	.02	600	.18
TF15	.05	600	.20
TF01	.1	600	.25
TF025	.25	600	.40
TF05	.5	600	.55
TD25	.005	400	.17
TD11	.01	400	.17
TD12	.02	400	.18
TD15	.05	400	.18
TD01	.1	400	.20
TD025	.25	400	.25
TD05	.5	400	.40
TD01	1.0	400	.60

# COILS AND KITS

## SHIELDED ANTENNA AND R.F. COILS

175 to 500 Meters



Wound on a 1" diam. by 2 1/4" long coil-form. The proper relation between the shield and coil insures the minimum of loss. Can size is 1 1/2" diam. by 2 1/4" high with 1 3/4" mtg. centers, utilizing two 6/32 spade bolts. Shield can be soldered to the chassis.

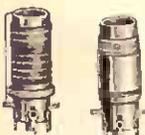
### Low Impedance Primary

- A-1007**—Bank-wound Litz secondary antenna-coil. List Price..... \$0.55  
**B-1007**—Bank-wound Litz secondary R.F. coil. List Price..... \$0.55

### High Impedance Primary

- A-1018**—Bank-wound Litz secondary antenna-coil. List Price..... \$0.65  
**B-1018**—Bank-wound Litz secondary R.F. coil. List Price..... \$0.65

## UNSHIELDED ANTENNA AND R.F. COILS



These coils are supplied on a standard 3/4" diam. by 2 1/4" long coil-form. Mounting bracket and dowel, together with brass mounting-screw and bolt, are furnished, enabling mounting of coil in any position.

### Low Impedance Primary

- A-1008**—Bank-wound Litz secondary antenna-coil. List Price..... \$0.45  
**B-1008**—Bank-wound Litz secondary R.F. coil. List Price..... \$0.45

### High Impedance Primary

- A-1001**—Bank-wound Litz secondary antenna-coil. List Price..... \$0.55  
**B-1001**—Bank-wound Litz secondary R.F. coil. List Price..... \$0.55  
**A-100**—Straight solenoid plain enamel secondary antenna-coil. List Price..... \$0.50  
**B-100**—Straight solenoid plain enamel secondary R.F. coil. List Price..... \$0.50

All coils, shielded and unshielded, listed above are thoroughly impregnated and impervious to moisture. Matched to .00035 mfd. variable condenser. Each coil is furnished with a wiring diagram showing connections for circuit that coil is designed for.

## Unshield Antenna R.F. & Oscill. Coils

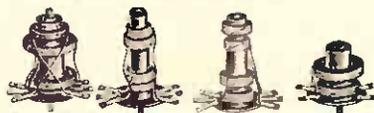


15-55 & 200-550 Meters

High-gain unshielded R.F. antenna and oscillator coils, with the short-wave section spaced-wound on threaded bakelite tubing. Tuning range from 15 to 55 and 200 to 550 meters, with a standard .000365 mfd. (usually called .00035 mfd.) variable condenser. Complete with wiring diagram.

- | No.    | R.F. Coil       | List Price |
|--------|-----------------|------------|
| A-2050 | R.F. Coil       | \$1.15     |
| B-2050 | Antenna Coil    | 1.15       |
| O-3090 | Oscillator Coil | 1.00       |

## ANTENNA AND OSCILLATOR COILS FOR SUPER HETS

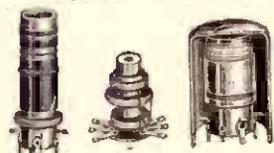


B2021 3019 A3015 2037

Lateral-wound antenna and oscillator-coils for superheterodyne use. Coils can be used separately or in pairs. The broadcast coils are wound on 1/2" diam. by 1" long special dowel, while the combination S.W. and Broadcast coils are wound on a 3/8" diam. by 1 1/4" long dowel. Wiring diagram and instructions are furnished with each coil for use with a .00035 tuning condenser. Broadcast coils cover from 550 to 1500 Kc., while S.W. coils cover from 550 to 1500 Kc. and 1500 to 4000 Kc.

- | No.    | Antenna Broadcast coil          | List Price |
|--------|---------------------------------|------------|
| 2037   | Antenna Broadcast coil          | \$0.88     |
| A-3015 | Ant. S.W. and Broadcast coil    | .95        |
| O-3019 | Broadcast Osc. coil 465 Kc.     | .80        |
| O-3039 | Broadcast Osc. coil 262 Kc.     | .90        |
| O-3014 | Broadcast Osc. coil 175 Kc.     | .80        |
| O-3040 | Broadcast Osc. coil 115 Kc.     | .90        |
| O-3015 | B'cast & S.W. Osc. coil 465 Kc. | 1.05       |
| O-3041 | B'cast & S.W. Osc. coil 262 Kc. | 1.20       |
| O-3042 | B'cast & S.W. Osc. coil 175 Kc. | 1.05       |
| O-3043 | B'cast & S.W. Osc. coil 115 Kc. | 1.20       |

## SHORT-WAVE AND BROADCAST ANTENNA AND R.F. COILS



120 A2021 1022

mfd. condenser. High impedance primary.

### Unshielded

Plain enamel secondary with S.W. shunt to cover 75 to 200 meters and 200 to 545 meters. 1/4"x2 1/4" long.

- A-120-Antenna B-120-R.F. List, \$0.55 Ea.**

Special S.W. and Broadcast coils. High gain. Both primary and secondary lateral winding. Cover 80 to 200 and 200 to 545 meters. Wound on dowel 1/2"x1 1/4" long.

- A-2021-Antenna B-2021-R.F. List, \$1.00 Ea.**

### Shielded

Bank-wound Litz secondary tap for S.W. 120 to 200 and 200 to 545 meters. Coil 1"x2 1/4" long. Shield can 1 1/4"x2 1/4" high. Two 6/32 spade bolts for mtg. with centers of 1 3/4".

- A-1022-Antenna B-1022-R.F. List, \$0.80 Ea.**

## Midget Antenna R.F. and Oscillator Coils

1 1/4"x1 1/4" high.

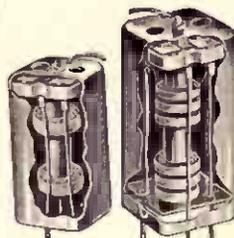


Designed for Superheterodyne and T.R.F. receivers. Newest type litz wire sectional winding with low R.F. resistance and distributed capacity. For use with (.00035) condensers. Desirable for auto radio construction as well as home receivers. Furnished with complete wiring diagrams.

- | No.    | Ant. Coil | List Price |
|--------|-----------|------------|
| A-2098 | Ant. Coil | \$0.70     |
| B-2098 | R.F. Coil | .70        |
| O-3098 | Osc. Coil | .60        |

## INTERMEDIATE FREQUENCY TRANSFORMERS

Single and Double Tuned



Large De Luxe

This is a complete line of all I.F. transformers necessary for replacement work and new set design. They can be used in any combination required for the necessary number of I.F. stages and are interchangeable for broadcast, short-wave, and long-wave receivers regardless of the type of second detector employed. Litz wire is used where improved results are obtained thereby, while the most efficient windings possible are used on the other coils. The **De Luxe** units are supplied with the new triple section series wound construction. In this construction R.F. resistance and distributed capacity have been reduced to a minimum with a resulting maximum "Q". This type of winding is also supplied in the **Regular** units numbered 3104, 3013, 3013X, and 3106. The remainder will not perform more efficiently with the sectional winding and consequently are supplied with regular lateral wound primaries and secondaries. With all units, the best practical sensitivity and selectivity will be obtained. The tuning condensers are of the mica compression type, mounted on Isolantite bases, and are adjustable from the top of the shield can. The coils are wound on special dehydrated forms and are thoroughly impregnated and impervious to moisture. All units are individually boxed with enclosed wiring diagram. (Prices are given for any frequency.)

### Regular Four-Lead I.F. Transformers

Peak in Kc.	D.T. De Luxe	D.T. Large Size	S.T. Large Size	D.T. Regular	S.T. Regular
465	3107x	3018x	3054x	3103x	3068x
456	3107	3018	3054	3103	3068
380	3120	3112	3113	3106	3114
262	.....	3052	3055	3104	3059
175	.....	3012	3056	3032	3013
115	.....	3053	3057	3051	3061
List Price	\$2.00	\$1.50	\$1.20	\$1.25	\$1.20

### FIVE LEAD I.F. TRANSFORMERS (TAPPED)

Peak in K.c.	D.T. Large Size	S.T. Large Size	D.T. Regular	S.T. Regular
465	3070x	3062x	3074x	3066x
456	3070	3062	3074	3066
265	3071	3063	3075	3067
175	3072	3064	3076	3068
115	3073	3065	3077	3069
List Price	\$1.60	\$1.25	\$1.50	\$1.25

### Shield Can Sizes

Single and double tuned large size 2 1/4" diam. x 3" high round can. 1 1/2" Mtg. Centers. Two 6/32 spade bolts.

Double tuned regular size. 1 1/4"x1 1/4"x3" high square can. 1 1/4" Mtg. Centers.

Single tuned regular size. 1 1/4"x1 1/4"x2 1/4" high square can. 1 1/4" Mtg. Centers.

Double tuned de luxe size. 1 1/4"x1 1/4"x5" high square can. 1 1/4" Mtg. centers.

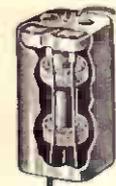
# COILS AND KITS

## REPLACEMENT COILS FOR MAJESTIC

These units are designed to fit in perfectly with the chassis that they are designated for. In a few cases the actual size and appearance are not identical, but the mechanical and electrical properties and mounting arrangements are as required. Where shielding and other attachments are to be combined with the coil forms provision is made on the replacement unit to fit in perfectly with such accessories. The coils, themselves, are wound according to the latest advancement in coil winding and are a decided improvement over the method used by the manufacturer at the time the original coils were designed. These have been developed in conjunction with the original Majestic chassis and have been approved by men formerly in authority with the Majestic Service and Replacement Department. They are not to be confused with replacement coils only, where, in many cases, it is almost impossible to replace these coils in their original Majestic assemblies.



3907-3908



10118

Complete Assembly for **Chassis Model No. 20:** First I.F. Transformer, including Trimmer Condenser, Shield Can, Bypass Condenser, and four leads coded Black, Yellow and Green.  
**Part No. M-3908**..... **List Price \$2.40**

Complete Assembly for **Chassis Model No. 20:** Second I. F. Transformer leads coded Black, Red, Yellow and White with Red tracer. Specifications same as M-3908.  
**Part No. M-3907**..... **List Price \$2.50**

Complete Assembly for **Chassis Model No. 460:** First I.F. Transformer, including Trimmer Condenser, Shield can, and four leads coded Green, White, Red and Brown.  
**Part No. M-10148**..... **List Price \$1.40**

Complete Assembly for **Chassis Model No. 460:** Second I.F. Transformer, including coil Shield Can with Center Mounting Screw and Six Flexible leads coded Green, Yellow, Red, Brown, Orange and White with Red Tracer.  
**Part No. M-10253**..... **List Price \$0.80**

Complete Assembly Antenna Coil for **Chassis Model Nos. 15 and 15B.**  
**Part No. M-4430**..... **List Price \$1.00**

Complete Assembly R.F. Coil for **Chassis Model Nos. 15 and 15B.**  
**Part No. M-4431**..... **List Price \$1.00**

Complete Assembly for **Chassis Model Nos. 15, 15B and 150:** First I.F. Transformer and Composite Oscillator including Trimmer Condensers, Three Sets of Coils, Shield Can, and seven leads coded Yellow, Red, Orange, Blue, White with Red tracer, and two Green leads.  
**Part No. M-4428**..... **List Price \$2.40**

Complete Assembly for **Chassis Model Nos. 55 and 15** using local distance switch: First I.F. Transformer including Trimmer Condenser, Shield Can, and five leads coded Green, Red, Yellow, Black and Blue.  
**Part No. M-4429**..... **List Price \$1.60**

Complete Assembly for **Chassis Model Nos. 15, 15B and 150** without local distance switch: First I. F. Transformer. Other specifications the same as M-4429 but with only four leads coded Green, Red, Yellow and Black.  
**Part No. M-8384**..... **List Price \$1.40**

Complete Assembly for **Chassis Model No. 111 (Auto Set):** First I.F. Transformer including Trimmer Condenser, Shield Can, and six leads coded White, Black, Blue, Yellow, Red and Green.  
**Part No. M-8323**..... **List Price \$1.90**



4428



10253

### SHORT-WAVE PLUG-IN COILS



S. W. Plug-in Coil Kit, 16 to 30 meters, 33 to 65 meters, 55 to 115 meters, 108 to 217 meters.

Cat. No.	List Price
2030—4 coils, 4-prong	\$1.50
2150—4 coils, 5-prong	1.75
2160—4 coils, 6-prong	2.25

Broadest Coil Kit, 190 to 310 meters, 300 to 550 meters.

Cat. No.	List Price
2065—2 coils, 4-prong	\$1.20
2151—2 coils, 5-prong	1.50
2161—2 coils, 6-prong	1.75

Ultra S. W. Coil, 9.5 to 21 meters.

Cat. No.	List Price
2064—4-prong	\$0.50
2152—5-prong	.75
2162—6-prong	1.00

2060—4-prong—coil form	0.18
2061—5-prong—coil form	.18
2062—6-prong—coil form	.18

### R.F. CHOKE COILS



Unshielded R. F. Choke

The unshielded R.F. chokes are wound on a  $\frac{1}{4}$ " diameter by  $\frac{3}{4}$ " long special impregnated dovell form with a 1" round bakelite wafer for mounting lugs. Either the bracket or mounting screw can be utilized, giving universal mounting. The untuned transformer has 5" coded leads.

The shielded chokes are furnished in a special alloy shield can. This can is  $1\frac{1}{2}$ " in diameter. Two 6-32 spade bolts with mounting centers of  $1\frac{3}{8}$ " can be used for mounting, as well as a single screw located in the center of the top of the can. If necessary the can may be soldered direct to the chassis.



Shielded R.F. Choke

Inductance	Unshielded Part No.	List Price	Shielded Part No.	List Price
2.5 Milli Henry	2012	\$0.25	2112	\$0.35
5.5 Milli Henry	2013	.25	2113	.35
6.0 Milli Henry	2014	.25	2114	.35
8.0 Milli Henry	2036	.30	2136	.40
16.0 Milli Henry	2010	.35	2110	.45
30.0 Milli Henry	2038	.45	2138	.55
60.0 Milli Henry	2016	.65	2116	.75
80.0 Milli Henry	2039	.80	2139	1.00
Untuned Transformer	2024	.65	2124	.75

### Short-Wave Shunts

With these shunts, receivers designed for the 200- to 550-meter band can be made to include the 75- to 200-meter short-wave bands. One short-wave shunt is needed for each antenna and R.F. coil in the set. Diagram is enclosed showing how to connect in the circuit. Size:  $\frac{3}{8}$ " x  $\frac{3}{4}$ ".

No. 2048—Short-Wave Shunt—List Price \$0.30

### COIL KITS

Practically anyone with a fair knowledge of radio circuits can easily assemble these receivers with the aid of the comprehensive circuit diagrams included with each kit.

**Kit 310.—7 Tube Super A.C.—I.F. 175 Kc.**—Employs the following tubes: 2-58s, a 2A7, 55, 2-A5s and an 80.  
**List Price**..... **\$4.80**

**Kit 400.—5 Tube Auto Set—I.F. 175 Kc.**—Employs the following tubes: two 6D6, a 6A7, a 75 and a 41.  
**List Price**..... **\$4.50**

**Kit 402.—5 Tube All-Wave Superheterodyne—I.F. 456.**—Employs the following tubes: a 6A7, a 6D6, 75, 42 and an 80. Band coverage: 17.5 Mc. to 540 Kc.  
**List Price**..... **\$6.00**

**Kit 305.—Tube A.C.—D.C. Super—(1500 to 540 Kc.) (20 to 5.5 Mc.) I.F. 456 Kc.**—Employs the following tubes: a 6A7, 78, 77, 43 and a 12Z3.  
**List Price**..... **\$5.00**

**Kit 305.**—Same as above, but employs the following tubes: a 2A7, 58, 2B7, 2A5 and an 80, for A.C. only.  
**List Price**..... **\$5.00**

**Kit 308.—5 Tube A.C. Super I.F. 456 Kc.**—Employs the following tubes: a 2A7, 58, 2B7, 2A5 and an 80.  
**List Price**..... **\$4.00**

We have attempted to show only a few of the popular replacement coils that we are manufacturing. We are continually adding to this list, and will attempt to duplicate any samples that you will send in—giving the manufacturer's name and the model number, together with whatever additional information you can furnish.

# ICA INSULINE ICA

## RADIO PRODUCTS



### Headphone Adapters

3-ft. cable to toggle-switch and 2 tip-jack receptacles for headphones. Switch keeps proper potentials on tube and cuts off speaker of receiver.

#### For Power Tubes

No.	List Price
2580—4-Prongs	\$2.50
2581—5 "	2.50
2582—6 "	2.50

#### For Push-Pull Output Tubes 2 Adapters

No.	List Price
2583—4 Prongs	\$3.00
2584—5 "	3.00
2585—6 "	3.00

### Improved Bakelite Sockets

#### Base Mounting

Special spring-bronze nickel-plated contacts for positive contact.



No.	List Price
2480—4 Prongs	\$0.25
2481—5 "	.30
2482—6 "	.35
2483—7 " (comb.)	.40
2489—8 " (octal)	.45

#### Sub-Panel Mounting



Same as above.

No.	List Price
2484—4 Prongs	\$0.25
2485—5 "	.25
2486—6 "	.30
2487—7 " (comb.)	.35
2488—8 " (octal)	.40

No.	List Price
2494—4 Prongs	\$0.20
2495—5 "	.25
2496—6 "	.25
2497—7 " (comb.)	.30
2498—8 " (octal)	.35

### Base Mounting Sockets

Made of Insulux—a non-hygroscopic ceramic compound—superior to porcelain. Unaffected by weather conditions. Adapted for ultra-short-wave work and transmitters.

No.	List Price
290—4 Prongs	\$0.50
291—5 "	.50
292—6 "	.55
294—7 " large and small	.55
300—8 " (octal)	.60

### Insulux Wafer Sockets

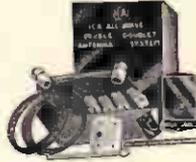


Sub-panel or base board mounting. Low loss.

Prongs	List Price	Prongs	List Price
4	\$0.40	7 large	\$0.50
5	.40	7 small	.50
6	.45	8	.55

## I. C. A. ALL-WAVE DOUBLET ANTENNA SYSTEMS

This antenna system has been carefully designed to provide the most efficient reception of short-wave and broadcast bands. The double doublet system obtains peak efficiency and performance uniformly throughout the short-wave band by combining the response of two doublet antennas



into one simple, easily installed system. Also incorporates a balanced transmission line to match the entire system. A special transformer matches the transmission line to the all-wave or short-wave receiver. System contains a switch for extending reception to the broadcast band.

### All-Wave Doublet Antenna System

Kit contains the following parts:

1 All-Wave Antenna Coupler	2 Lead-in Strips
1 Transmission Line	1 Ground Clamp
2 Coils Antenna Wire	3 Insulux Navy Type Aerial Insulators
1 Porcelain Nail Knob	
No. 649	List Price \$3.50
No. 650—Less Coupler	List Price 2.00

### All-Wave Double-Doublet Antenna System

Complete with instructions and diagrams.

1 Receiver Matching Transformer with Switch	
1 Insulux Cross-Over Insulator	
4 Insulux Strain Insulators	
2 45½-ft. Coils Stranded Wire	
1 80-ft. Coil Balanced Transmission Line	
2 Transmission Line Insulators	
1 Insulating Lead-in Tube	
1 Piece Cambric Tubing	
4 Screw Eyes	
1 Ground Clamp	
No. 639—60-ft. Span	List Price \$5.00
No. 640—34-ft. Span with 2 Special Loading Coils	List Price \$5.50

## ADAPTERS FOR NEW METAL TUBES



With these adapters, the new 8-Prong Tubes can be tested in existing tube checkers. In the following list the metal tube number is followed by the glass tube number to which the metal tube is adapted.

### Multiple Tube Test and Replacement Adapters

No. 2076—6J7 to 77 or 6C6 Tube Test Adapter (Also Radio Receiver Replacement); 6K7 to 78 or 6D6 Adapter; 6F6 to 42 Adapter; and 6D5 to 42 Adapter, with "Octal" top and 6 Pin Base.	List Price \$1.00
No. 2075—6A8 to 6A7 Adapter and 6L7 to 6A7 Adapter with "Octal" top and small 7 Pin Base.	List Price \$1.00

<b>Tube Test Adapter</b>	
No. 2077—6F5 to 75 or 85 Adapter with "Octal" top and 6 Pin Base.	List Price \$1.00
No. 2077—	List Price \$1.00

<b>Tube Test Adapter</b>	
No. 2078—6H6 to 75 or 85 Adapter with "Octal" top and 6 Pin Base.	List Price \$1.00
No. 2078—	List Price \$1.00

### Tube Test and Replacement Adapter

No. 2079—6C5 to 37 or 76 Adapter with "Octal" top and 5 Pin Base.	List Price \$1.00
No. 2079—	List Price \$1.00

### Tube Test and Replacement Adapter

No. 2080—5Z4 to 80 Adapter with "Octal" top and 4 Pin Base.	List Price \$1.00
No. 2080—	List Price \$1.00
No. 2090—Set of 6	List \$6.00

### Adapter Kit



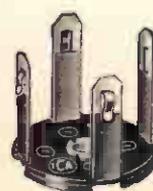
7-prong handle plug; 4 adapters—4, 5, 6, 7 Prongs.

No. 2040. List Price \$2.00

### Universal Adapters

Prongs not required can easily be removed by hand or left in the adapter.

No. 2027—4 P.	
No. 2028—5 P.	
No. 2029—6 P.	
No. 2030—7 P.	
List	\$0.25



### Voltage Regulators

No. 92—Universal	List \$0.75
No. 99—Heavy-duty	List \$1.75
A.C.-D.C.; 110, 220-volt, all cycles	

### Reducers

220-volt to 110-volt	
30-40-50-60 watts	List \$1.75

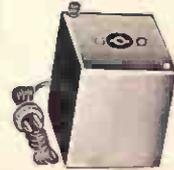
### ICA Filtevolt, Jr.

Eliminates noises caused by small electrical appliances and motors. May be installed at radio or source of interference.



No. 94. List Price \$3.00

### All-Wave Filtevolt



250 watts, for 32, 110 and 220-volt A.C.-D.C. circuits.

No. 338  
List Price \$4.50

### Antennatrol—All-Wave Variable Antenna Coupler



Eliminates interfering stations; operates as noise reducer with out-side aerial or by itself as indoor aerial. Easily installed.

No. 4394	List Price \$1.00
No. 635—For All-Wave Doublet Antenna System	
List Price	\$1.00

### ICA

### Insultenna

**Aerial Eliminator**  
Replaces outdoor and indoor aerials without interference and static. Size: 5"x-2½"x1". Has a capacity of 75 ft. of ordinary aerial wire.



Has no connections with the electric current line.

No. 87. List Price \$2.50

### Universal All-Wave Doublet Coupler

For Doublet Short-Wave Antenna System with All-Wave Receivers. Only one aerial necessary.



No.	List Price
661—Coil only	\$0.75
636—With Shield Can	1.50

# ICA INSULINE ICA

## RADIO PRODUCTS

### NEUTRALIZING AND ALIGNING TOOL KIT



Contains: 3 insulated screw drivers with metal nib (6", 5", 2 1/2"). 2 metal nut wrenches (3/8", 1/2"). Alligator side wrench; 1/4" square nut insulated wrench; 1/4" hexagon metal slide wrench; 3/8" hexagon slotted insulated wrench; metal screw driver; 3/8" hexagon insulated nut wrench; 0" insulated screw driver. No. 998—With black leatherette carrying case.

List Price.....\$4.00

### 4-IN-1 NEUTRALIZING TOOLS, SCREW-DRIVERS, WRENCHES



Made of Fenoline—fully insulated.

No. 1019—Complete as above.

List Price.....\$0.75

### 5-IN-1 NEUTRALIZING AND COMPENSATING TOOL



Has extra all metal screw driver.

No. 1022—List Price.....\$1.25

### NEUTRALIZING TOOLS WITH METAL NIBS



Sturdy and unbreakable.

No. 996—List Price.....\$1.25

### FORK TYPE NEUTRALIZING WRENCH AND SCREW-DRIVER



No. 1024—List Price.....\$0.40

### SCREW-DRIVER AND WRENCH



Made of Fenoline

No. 1025—List Price.....\$0.50

### ICA INSULOID COLORED NEUTRALIZING SCREW-DRIVER



With Grip-Rite Handle and Pocket Clip

No. 1028—List Price.....\$0.30

### INSULOID COLORED NEUTRALIZING TOOLS



Composed of 2 socket wrenches and a screw-driver.

No. 1027—With pocket clips. List Price \$0.60

Over 15 years of exclusive radio manufacture assures you of the uniform quality of these ICA products. The Jacks, Test Leads, Tools and Neutralizing and Aligning Kits displayed below are of sturdy design and construction and are guaranteed to give a lifetime of dependable use.

### SHORT-O-TESTER

To Check Circuit and Continuity



Contains a 2 1/2-volt lamp and a small flashlight battery that will indicate an open or closed circuit when the leads are placed across the terminals. Will test the continuity of practically any circuit used in radio receivers. Complete with Battery and 2 1/2-volt bulb.

No. 1030—List Price.....\$1.50

### NEUTRALIZING KNOB TYPE OF SCREW-DRIVER



No. 1023—List Price.....\$0.40

### INSULATED ADJUSTABLE NEUTRALIZING TOOLS

Made of finest grade unbreakable Fenoline. Ideal for peaking I.F. Transformers. Absolutely no metal parts. Screw driver slides into inside of neutralizing wrench.

No. 990—Extends 6" to 11".

List Price.....\$0.60

No. 991—Extends 10" to 18".

List Price.....\$0.85

### INSULATED AND HEXED NEUTRALIZING WRENCHES

Made of hexed sturdy black "Fenoline"—so made that when one part wears out or breaks, you saw off that part and continue using the neutralizing wrench.

No. 985—6" long. List Price.....\$0.20

No. 986—8" long. List Price......25

### ICA MAGIC TUNING ALIGNING TOOL



Consists of bakelite rod with a brass cylinder at one end and an iron core at the other. Inserting the brass cylinder into a coil lowers its inductance, while inserting the end with the iron increases the inductance. For checking all-wave receivers without disturbing the adjustment of the trimmer capacities.

No. 997—List Price.....\$1.25

### BAKELITE SCREW-DRIVER



Made entirely of 3/8" bakelite rod with a sturdy blade for neutralizing and adjusting condensers, radio receivers or for use in places where a metal screw driver cannot be used electrically.

No. 1029—List Price.....\$0.50

### ICA BALANCING TOOL



Enables serviceman to neutralize any radio without having to remove chassis from cabinet.

No. 1026—List Price.....\$0.40

### TEST LEADS



Flexible, rubber-covered, kinkless wire, black and red, fitted to slim handles. Insulated for 5000 volts.

Phono. Needle-Point Leads—54" Long

No. 379—Clips. List Price.....\$0.60

No. 381—Terminals. List Price......50

No. 382—Phone Tips. List Price......50

De-Luxe Leads—50" Long

No. 354—Clips. List Price......60

No. 375—Tips. List Price......50

No. 356—Terminals. List Price......50

Long Pointed Leads—50" Long

No. 369—Tips. List Price......50

No. 383—Lugs. List Price......50

No. 370—Clips. List Price......60

Heavy Duty Leads

No. 388—Clips. List Price......90

No. 400—Phono. Plugs, insulated handles.

List Price.....1.00

### INSULATED KNURLED GRIP HANDLES

With Solderless Plugs

No. 401B—List Price, Each.....\$0.15

### VACUUM TUBE VOLTMETER



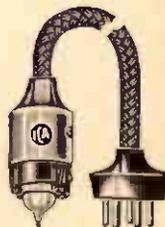
In Kit Form

Contains complete assortment of materials required to build the Vacuum Tube Volt Meter recently announced by RCA, using the new Acorn Type No. 954 Pentode. Can be assembled in an hour. Tube can be placed at point of measurement. Easily calibrated, effective by-passing insures maintenance of accuracy at high R.F. when calibrated at 60 cycles.

No. 1036—Complete with instructions and diagrams—less microammeter and tube. List Price.....\$10.00

### PROBE FOR ACORN TYPE VACUUM TUBE VOLTMETER

This probe is to be used in the Vacuum Tube Meter circuit by RCA, using the new Acorn Type No. 954 pentode. By means of this probe the tube itself can be placed at the point of measurement to avoid long leads and high input capacitances. Consists of acorn tube socket connected to a standard 5-prong plug through a shielded 4-wire cable. Overall length 24 inches.



No. 1035—List Price.....\$2.75

# ICA INSULINE RADIO PRODUCTS ICA

## Slow Motion Dials with Vernier Grip Knobs



Chrome-Silver 4" dial with grained satin finish and black etched numerals.

No.	List
2198—325 degrees 0-100.....	\$1.65
2199—180 degrees 0-100.....	1.65

## Brass Black Satin Finish Dial Plates and Pointer Knobs with Etched Silver Numerals



Specifications Calibra. Deg. Diam.	TYPE A		TYPE B		TYPE C		Plates Only	
	No.	List	No.	List	No.	List	No.	List
0-100 325 3 3/4"	2214	\$0.60	2264	\$0.90	2273	\$0.95	2230	\$0.40
100-0 180 3 3/4"	2215	.60	2265	.90	2274	.95	2231	.40
0-100 180 3 1/2"	2216	.60	2266	.90	2275	.95	2232	.40
100-0 180 2"	2217	.45	2267	.70	.....	.....	2233	.30
0-100 325 2"	2218	.45	2268	.70	.....	.....	2234	.30
100-0 325 2"	2219	.45	2269	.70	.....	.....	2235	.30
0-100 180 2"	2220	.45	2270	.70	.....	.....	2236	.30

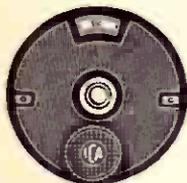
## ICA Bakelite Pointer Knobs



Ideal knob for test equipment, 5 meter transceivers, etc. Two sizes for 1/4" shaft and set screw.

No.	List
1155—1 1/4" long Black.....	\$0.15
1156—2 1/4" long Black.....	.20
1157—1 1/4" long Brown.....	.15
1158—2 1/4" long Brown.....	.20

## Bakelite Vernier Dials



With 3 Windows  
Friction drive, 4" diam., 9 to 1 ratio. For 1/4" shaft.

No. 2211.....	List \$1.75
---------------	-------------

### With 1 Window

No. 2212—Vernier type; 4" diam.; 1/4" shaft; 9 to 1 ratio.	List, \$1.50
No. 2213—De-Luxe Vernier; 3" diam.; 1/4" shaft; 7 to 1 ratio	List \$1.50

## ICA Chrome Silver Dial Plates and Pointer Knobs



Specifications Calibra. Deg. Diam.	TYPE A		TYPE B		TYPE C		Plates Only	
	No.	List	No.	List	No.	List	No.	List
0-100 180 2"	2240	\$0.65	2284	\$0.90	.....	.....	2294	\$0.50
0-100 325 2"	2241	.65	2285	.90	.....	.....	2295	.50
0-100 180 3 1/2"	2242	.95	2286	1.25	2290	\$1.30	2296	.75
0-100 325 3 1/2"	2243	.95	2287	1.25	2291	1.30	2297	.75
0-100 180 4"	.....	.....	2288	1.60	2292	1.60	2298	1.00
0-100 325 4"	.....	.....	2289	1.60	2293	1.60	2299	1.00



Moulded of black bakelite with 1/4" shaft hole. Pointer-type knob, uses a non-conducting material.

No.	List
1165—Less Pointer—1 1/4".....	\$0.30
1166—With Pointer—1 1/4".....	.40
1167—Less Pointer—1 1/2".....	.40
1168—With Pointer—1 1/2".....	.50

## Finger-Grip Pointer Knobs

Flange type with a white engraved indicating lines.



No.	List
1169—Less Pointer—2 1/4".....	\$0.50
1170—With Pointer—2 1/4".....	.60
1171—With Flange—2 1/4".....	.50
1172—With Flange—3".....	.65

## Crystallized Finished Cabinets



Steel, With Hinged Lids

No.	L.	W.	H.	List
3825	9"	5"	6"	\$2.50
3828	12"	8"	7"	3.75
3830	14"	8"	7"	4.50
3831	18"	12"	9"	6.00

## Chassis for ICA Cabinets

No.	L.	W.	H.	List
1560	8 1/2"	4 1/2"	1 1/2"	\$0.75
1561	9 1/2"	7 1/2"	3"	1.00
1562	11"	10"	2 1/2"	1.50
1521	17"	10"	3"	1.75

## Crackle-Finished Cabinets

Same as above but with Removable Top

No.	L.	W.	H.	List
3800	6"	6"	6"	\$1.25
3801	9"	5"	6"	1.85
3802	10"	8"	7"	2.50
3803	10"	8"	7"	2.75
3804	12"	11"	8"	3.25

## ICA Radio Panels



Insuline (Hard Rubber)

High dielectric qualities; moisture-proof; drills easily.

No.	Size	List
800	7" x 10" x 1/4"	\$1.25
801	7" x 12" x 1/4"	1.40
802	7" x 14" x 1/4"	1.70
803	7" x 18" x 1/4"	2.05
804	7" x 21" x 1/4"	2.50
805	7" x 24" x 1/4"	2.85
806	7" x 26" x 1/4"	3.10
807	7" x 28" x 1/4"	3.25
808	7" x 30" x 1/4"	3.50

Bakelite (Black, Mahogany, Walnut)

No.	Size	List
832	7" x 10" x 1/4"	\$1.09
833	7" x 12" x 1/4"	1.31
834	7" x 14" x 1/4"	1.53
835	7" x 18" x 1/4"	1.96
836	7" x 21" x 1/4"	2.29
837	7" x 24" x 1/4"	2.62
860	10" x 12" x 1/4"	1.95
842	7" x 10" x 1/4"	1.64
843	7" x 12" x 1/4"	1.96
844	7" x 14" x 1/4"	2.30
845	7" x 18" x 1/4"	2.95
846	7" x 21" x 1/4"	3.45
847	7" x 24" x 1/4"	3.94
863	10" x 12" x 1/4"	2.90

## ICA Panels



No. 16 gauge thickness

Size	Electralloy	Aluminum
7" x 10".....	\$0.60	\$0.80
7" x 12".....	.70	1.00
7" x 14".....	.80	1.20
7" x 16".....	.90	1.40
7" x 18".....	1.00	1.60
7" x 21".....	1.20	1.80
7" x 24".....	1.35	2.00
7" x 30".....	1.70	2.50
36" x 36".....	9.00	.....
24" x 36".....	10.50	.....

Special size panels to order

## ICA Chassis Bases



Size	Electralloy	Steel
7" x 12" x 3".....	\$2.50	\$1.40
7" x 17" x 3".....	3.35	1.65
10" x 12" x 3".....	2.75	1.50
10" x 17" x 3".....	3.75	1.75

## ICA Cans

Supplied in knocked-down form with drilled and tapped corner posts for quick assembly in the following sizes:



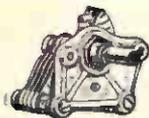
No.	Size	List
1184	8" x 8" x 6"	\$3.50
1185	6" x 6" x 6"	2.90
1186	9" x 5" x 6"	3.00
1187	5" x 5" x 6"	2.75
1188	4" x 5" x 6"	2.40
1189	10" x 8" x 6"	4.00
1190	14" x 7" x 6"	4.50
1191	12" x 10" x 6"	5.50
1192	18" x 9" x 6"	7.00
1193	12" x 6" x 6"	3.50

## ALUMINUM

No.	Size	List
1203	8" x 8" x 6"	\$4.50
1204	6" x 6" x 6"	4.00
1205	9" x 5" x 6"	3.50
1206	5" x 5" x 6"	3.25
1207	10" x 8" x 6"	5.25
1208	12" x 6" x 6"	4.50
1209	14" x 7" x 6"	5.50
1210	12" x 10" x 6"	6.60
1211	18" x 9" x 6"	8.75

# ICA INSULINE ICA

## RADIO PRODUCTS



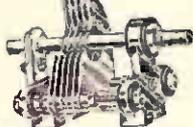
### ICA Universal Midget

Removable shaft with lock-nut provides permanent condenser alignment. Insulated with Insulex.

No.	Cap. Mmfd.	Spacing	List Price
111	15	.026"	\$0.65
112	25	.026"	.95
113	50	.026"	1.05
114	100	.026"	1.15
115	140	.026"	1.50
125*	35	.077"	1.75
126*	60	.077"	2.25

\*X'mitt'g types for neutralizing and tuning.

### Straight Line Wave Length Midget Var. Condensers



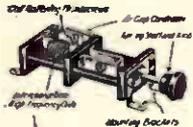
Designed to meet requirements of Ultra High Frequency Service. Shaft-length  $1\frac{1}{4}$ " diam.

No.	Mmf.	Air-Gap	Plates	List
101	50	.026"	11	1.35
103	100	.026"	20	1.85
104	140	.026"	29	2.00

### Double Spaced

No.	Mmf.	Air-Gap	List
120*	35	.077"	\$2.00
121*	50	.077"	2.50

### Ultra-High Frequency Constant 'Q' Tuning Coils



Synchronously varying air-dielectric cond.; constant L to C Ratio at all frequencies. Mounting form supplied with two interchangeable coils— $1\frac{1}{4}$ " to 6 meters—5 to 10 meters.

No. 1658..... List Price \$4.75

### Band-Switching Short-Wave and Broadcast Coils



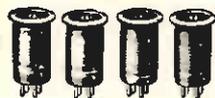
For Regenerative Detector and Stage. Covers wave-length of 16 to 550 meters.

No. 1415..... List Price \$4.25

No. 1416—Superhet Oscillator List Price \$4.25

No. 1417 (1415, 1416 combined) List Price \$7.50

### ICA Standard Plug-In Coils and Coil Forms



**4 PRONGS—2 WINDINGS**  
Short-Wave Meters—10-36; 33-65 57-115; 108-217;  
List Price..... \$1.65  
Broadcast Meters—190-310; 300-550.  
No. 1430B..... List Price \$1.50  
9.5 to 21 meters. No. 1440B  
List Price..... \$6.65

**5 PRONGS—2 WINDINGS**  
(same as above)  
No. 1437—16-217 meters  
List Price..... \$2.00

**6 PRONGS—3 WINDINGS**  
Short-Wave Meters—16-38; 35-75; 73-137; 135-200. No. 1423B  
List Price..... \$2.50  
Broadcast Meters—190-310; 300-550. No. 1424B.  
List Price..... \$1.85

9.5 to 21 meters. No. 1442B.  
List Price..... \$0.75

**LONG-WAVE COILS**  
**4 Prongs—2 Windings**  
No. 1484—4 coils, 450-2000 meters.  
List Price..... \$3.75

**SMALL BAKELITE FORMS**  
No. 1108B—4 prong..... List \$0.20  
No. 1113B—5 prong..... List .20  
No. 1114B—6 prong..... List .20

**COIL FORM WITH PADDING CONDENSER**  
No. 1463—80 mmfd..... List \$0.45  
No. 1464—180 mmfd..... List .45

### ICA Ribbed Plug-In Coils and Coil Forms



**SHORT-WAVE**  
**4 Prongs—2 Windings**  
No. 1471—4 coils, 16-217 meters.  
List Price..... \$1.90  
No. 1472—1 coil, 9.5-21 meters.  
List Price..... \$0.75

**5 PRONG SHORT-WAVE**  
(2 Windings)  
No. 1465—4 coils, 13-200 meters.  
List Price..... \$2.25

**6 PRONG SHORT-WAVE**  
(3 windings)  
No. 1474—1 coils, 16-200 meters.  
List Price..... \$2.75  
No. 1475—1 coil, 9.5-21 meters.  
List Price..... \$0.90

**COIL FORM WITH PADDING CONDENSER**  
No. 1448—5-prong; 80 mmfd. List \$0.50  
List P-ice  
No. 1449—5-prong; 180 mmfd. List \$0.50  
List Price

**SMALL RIBBED FORMS**  
No. 2158—4-prong..... List \$0.20  
No. 2159—5-prong..... List .25  
No. 2160—6-prong..... List .25



### R.F. Chokes on Insulux Forms

For all type receivers. Can be mounted almost any place.

No.	List
1777—2 $\frac{1}{2}$ M.H.	\$0.40
1776—3 $\frac{1}{2}$ M.H.	.40
1775—5 M.H.	.40
1774—10 M.H.	.45
1772—30 M.H.	.55
1773—60 M.H.	.60
1771—80 M.H.	.65

### Insulux R.F. Chokes



### HIGH FREQUENCY ENAMELED WIRE WOUND

With leads for easy mounting. Designed for high-frequency receivers, and have extremely low distributed capacity.

No.	Inductance	List
2277	2 $\frac{1}{2}$ M.H.	\$0.50
2278	3 $\frac{1}{2}$ M.H.	.55
2279	5 M.H.	.55
2280	10 M.H.	.60
2281	30 M.H.	.65
2282	60 M.H.	.75
2283	80 M.H.	.75

### ICA Shielded R.F. Chokes Insulux Forms



Size 1" O.D. x  $1\frac{1}{2}$ " long.

2.5 Millihenries; to 550 meters. No. 275..... List \$0.65  
3.5 Millihenries; 10 to 225 meters. No. 274..... List \$0.65  
5 $\frac{1}{2}$  Millihenries. No. 276..... List \$0.65  
10 Millihenries; 600 to 2,000 meters. No. 273..... List \$0.70  
30 M.H. for general use in short-wave and broadcast receivers. No. 271..... List \$0.80  
60 Millihenries; to 2,025 meters. No. 272..... List \$0.85  
80 M.H. for general use in short-wave and broadcast receivers. No. 270..... List \$0.90

### Insulux R.F. Choke



Any style of mounting. Absolutely low-loss. Inductance 8 M.H.—D.C. resistance 70 ohms. Current-carrying capacity—125 milliamperes.

No. 279..... List \$1.00

### High Inductance R.F. Choke 125 M.H.

Wound on Insulux Molded Form for use in R.F. Plate Filter circuits and Impedance Coupled circuits. No. 1778..... List \$1.25



### Insulux Transmitting Socket

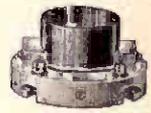
For Type 802 Tube. No. 293B..... List \$0.55  
For '52, '10, '66 Tubes. No. 290B..... List \$0.50  
Sub-Panel Mounting. No. 2600..... List \$0.40

### Insulux Giant 5-Pin Transmitting Socket



For RCA 803, Sylvania 803A, Raytheon RK 28 Type Tubes  
Easy mounting on panel or sub-panel.  
No. 950..... List \$2.00

### Insulux Transmit'g Socket



Panel Mounting (with bracket) No. 957—50 Watts..... List \$2.00  
Table Mounting. No. 956—50 Watts..... List \$1.75

### Acorn Tube Socket Insulux



For Ultra Short Waves  
 $1\frac{1}{4}$ " diam.  $\frac{1}{2}$ " high.  
No. 959..... List \$1.00

### New and Improved Crystal Holder



Made of Insulux Will accommodate crystals up to .250" thick x  $1\frac{1}{2}$ " square.  
No. 414..... List \$1.50

### Heavy-Duty Transmitting Choke



For current to 500 Ma. Dist. cap. 1.5 mmfd. Inductance 5.3 M.H. D.C. resist. 12 ohms.  
No. 278..... List \$1.75

### Transmitting R.F. Choke



10,000 v. insulation; induct. 4 M.H.; resist. 10 ohms. Cont. rating. .6 amp., intermittent .8 amp.  
No. 265..... List \$2.00

# WIRE - CABLE

# BELDEN

# ELECTRICAL ACCESSORIES

## Lightning Arresters



### Doublet Type

Porcelain type with complete instructions for installing. Same arrester furnished with Belden All-Wave Aerial Kits—1 in carton.

No. 8950 . . . . . List Price \$0.35

### Standard Type

Thoroughly sturdy, reliable protectors that effectively dissipate destructive charges induced in the aerial system. They are designed for installation either inside or out-of-doors.

No. 8896 . . . . . List Price \$0.25  
8891—Large “ “ . . . . . .50

## Lead-In Wire



### All Rubber

Consists of seven strands of tinned copper insulated with rubber compound. Easily stripped.

No.	Size	List Price
8850	50 ft.—14 in carton	\$0.85
8851	250 ft.—14 on spool	4.00
8852	50 ft.—16 in carton	.55
817	100 ft.—16 on spool	.90
8853	250 ft.—16 on spool	2.25

### Shielded

Consists of a stranded conductor with a heavy easy-strip rubber insulation and an over-all braid of fine mesh, tinned copper wire.

No.	Size	List Price
8856	50 ft.—14 in carton	\$1.80
8854	250 ft.—14 on spool	8.50
8894	50 ft.—16 in carton	1.15
8895	250 ft.—16 on spool	6.00

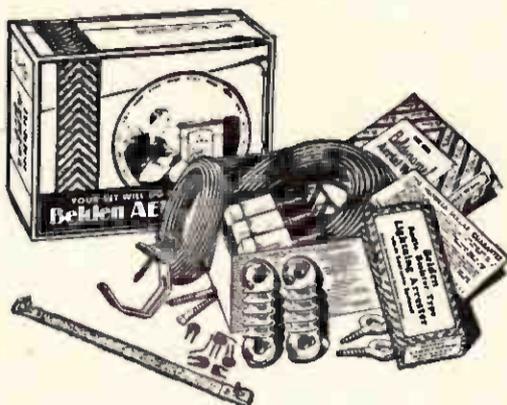
## Twisted Lead-In Wire Transmission Cable



Doublet-style twisted lead-in for low-impedance coupling.

No. 8839—500ft.Spool. List \$8.80  
8834—80-ft. Coil. List \$1.45

## BELDEN AERIAL KITS



An efficient Doublet-type antenna designed for maximum signal strength on the high-frequency short waves and equal to the standard-type antenna for broadcast signals. A special coupler is supplied with a manual compensator to match the lead-in impedance to receivers designed for aerial and ground connections. Particular attention should be paid to the lightning arrester, which is especially designed to operate with a doublet lead-in.

### All-Wave Kits

**BELDEN ALL-WAVE AERIAL KIT, Complete**—For permanent installation in exposed positions and to withstand severe weather conditions. It contains:

- 2—50-ft. coils of 7x20 Beldenamel Aerial Wire
- 1—75-ft. coil Special Twisted Pair Lead-in Wire 8834
- 1—25-ft. coil Twisted Pair Interior Lead-in Wire, Brown
- 1—25-ft. coil Single Conductor Ground Wire 818
- 1—Doublet Arrester 8950
- 4—6-in. Stand-off Insulators
- 2—Nail-on Knobs
- 4—3-in. Glass Insulators 8814
- 1—Type “C” Ground Clamp 8897
- 1—Double Lead-in Strip 8813
- 2—Galvanized Screw-eyes
- 6—Insulated Staples
- 1—Instruction Sheet

8915 . . . . . List Price \$4.65

**BELDEN SPECIAL ALL-WAVE AERIAL KIT, Complete**—Intended for erection in protected locations such as under eaves; in attics of frame buildings, and where bare wire is not in danger of corrosion. Each arm of the aerial is soldered at a point 33 feet from one end to permit erection of “X” type doublet aerial where space is limited. It contains:

- 2—50-ft. coils 7x24 Bare Copper Aerial Wire 843
- 1—75-ft. coil of Special Twisted Pair Lead-in Wire 8834
- 1—25-ft. coil Twisted Pair Interior Lead-in Wire, Brown
- 1—25-ft. coil Single Conductor Ground Wire 818
- 6—Insulated Staples
- 2—6-in. Stand-off Insulators
- 1—Type “C” Ground Clamp 8897
- 2—Nail-on Knobs
- 4—Glass Insulators 8814
- 1—Double Lead-in Strip 8813
- 1—Triangular Cross-over Junction Block
- 1—Instruction Sheet

8916 . . . . . List Price \$3.50

### Broadcast Kit

**BELDEN AERIAL KIT**—It contains:

- 1—75-ft. coil 7x26 Bare Copper Aerial Wire
- 1—25-ft. coil 18-Stranded Rubber Lead-in Wire
- 1—Belden Arrester 8896
- 1—8897 Type “C” Belden Ground Clamp
- 1—12-in. Belden Lead-in Strip 8890
- 2—Porcelain Insulators
- 2—Nail-on Knobs
- 1—Instruction Sheet

8910 . . . . . List Price \$1.10

## BELDEN AERIAL WIRE

### Beldenamel Stranded

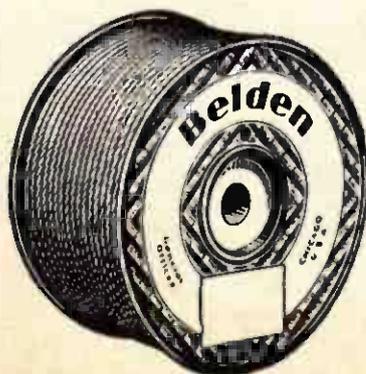
No.	List Price
8820—75 ft. 7x22	\$0.65
8821—100 ft. 7x22	.85

### Beldenamel Solid

8828—100 ft. #12	\$1.05
8829—100 ft. #14	.70

### Bare Copper Stranded

829—50 ft. 7x22	\$0.35
830—75 ft. 7x22	.50
831—100 ft. 7x22	.70
843—50 ft. 7x24	.25
840—75 ft. 7x24	.35
841—100 ft. 7x24	.45



## Lead-In Strips

Lead-in strip conductor is a thin, flat, flexible strip that bends easily under the window. Weatherproof insulations as shown below.



15-in. Single Lead-in Strip with tough rubber insulation with attractive waxed finish and clips soldered on both ends—packed in individual carton. List Price

No. 8811 . . . . . each \$0.15

12-in. Single Lead-in Strip with tough rubber insulation with attractive waxed finish and clips soldered on both ends—25 in carton. List Price

No. 8890 . . . . . each \$0.10

12-in. Single Lead-in Strip with lacquered braid insulation and screw-type connections—25 in carton. List Price

No. 8812 . . . . . each \$0.10

12-in. Double Lead-in Strip with lacquered braid insulation and screw-type connections. This is the same strip furnished with Belden All-Wave Aerial Kits—10 in carton. List Price

No. 8813 . . . . . each \$0.30

## Insulators



Sturdy 3-in. Glass Insulators. Packed 2 in a carton. List Price

No. 8814 . . . . . per pair \$0.25

## Ground Clamps

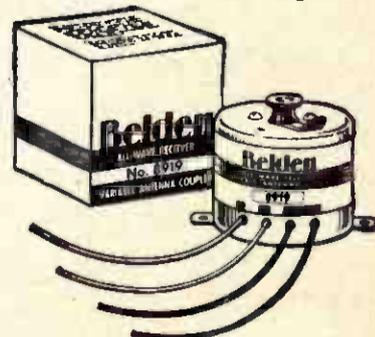
“Biter” Type—Packed 25 in a carton. List Price

No. 8892 . . . . . each \$0.15

“C” Type—Packed 25 in a carton. List Price

No. 8897 . . . . . each \$0.15

## All-Wave Variable Antenna Coupler



This variable coupler makes it possible to match the doublet antenna to all broadcast and short-wave receivers and assures stronger signals. It minimizes local noise interference on both broadcast and short-wave bands and makes a doublet antenna suitable for broadcast as well as short-wave reception. List Price

No. 8919 . . . . . \$1.85



# MISCELLANEOUS

## WIRE ASSORTMENT

### Spaghetti

The best quality. High grade cambric tubing impregnated with transparent varnish of great insulating properties. Colors: red, yellow, green, or black. Specify color wanted. 30" lengths.

No. 1701  
Per Length.....\$0.12  
12 Lengths.....1.30



### Bus Bar

2-foot, Tinned Copper, Round. Lengths

No. 1702	Size 14	100 Lgths.
List Price..	\$0.24	\$2.10
No. 1703	Size 12	100 Lgths.
List Price..	\$0.52	\$4.10
Shpg. Wt., lbs.	1	8

### Parallel Silk Cord



insulated lamp cord. Consists of two conductors laid parallel and covered with braided silk. Has inner braid. Colors: White, Brown, Maroon, Old Gold, Black. Specify color when ordering.

18 Gauge ☆ R.C.	
No. 1601—List Price	
Per Ft. 100 Ft.	500 Ft.
\$0.02	\$1.92
18 Gauge ☆ R.C.	
No. 1602—List Price	
Per Ft. 100 Ft.	500 Ft.
\$0.04	\$2.50

### All Rubber Parallel Lamp Cord



Developed to meet the demand for an abrasion and water-proof wire. Two conductors sheathed in coating of extremely tough live rubber. Ridge between conductors allows them to be easily separated. Available in Black, Green, Ivory and Brown. Specify color desired.

18 Gauge	
No. 1612—List Price	
Per Ft. 100 Ft.	500 Ft.
\$0.03	\$2.50

### Standard Push-Back Wire



Black, green or red. Specify color.

No. 1501—Stranded #19	
List Price, 50-ft. Coil.....	\$0.48
List Price, 100-ft. Coil.....	.78
List Price, 500-ft. Spools.....	3.76
List Price, 1000-ft. Spools.....	6.76
No. 1502—Solid #19	
List Price, 50-ft. Coil.....	\$0.44
List Price, 100-ft. Coil.....	.68
List Price, 500-ft. Spool.....	3.16
List Price, 1000-ft. Spool.....	6.20

### Reinforced Cord



Used indoors for portable machines and drop cords, insulated with belt of seamless rubber and covered with smooth cotton braid. Size No. 18. (Black only.)

Heavy Reinforced ☆ R.C.	
No. 1603	1'er Ft. 250 Ft.
List Price..	\$0.04 \$9.90
Light Reinforced ☆ R.C.	
No. 1604	Per Ft. 250 Ft.
List Price..	\$0.03 \$7.50

### Parallel Cotton Cord



For hooking up radios, extensions, etc., available in White, Brown, Maroon. Specify color when ordering.

2 Conductor 18 Gauge ☆ R.C.	
No. 1613—List Price	
Per Ft. 100 Ft.	500 Ft.
\$0.02	\$1.92
2 Conductor 18 Gauge ☆ R.C.	
No. 1614—List Price	
Per Ft. 100 Ft.	500 Ft.
\$0.04	\$2.50

### Best Grade Push-Back Wire Double Cotton Braid



Extra heavy insulation: red or black.		
No. 1503—Stranded		
25 Ft.	50 Ft.	100 Ft.
\$0.34	\$0.66	\$1.30
No. 1504—Solid		
25 Ft.	50 Ft.	100 Ft.
\$0.34	\$0.66	\$1.30

### SPECIAL WIRE

#### Assortment



On Spool  
List Price Each  
**80c**

Just the thing for the serviceman. These popular types of wire are put up on metal spools. Manufactured by the most reputable wire manufacturer in the business. Guaranteed to be of the finest quality, full length and exact gauge as specified. Don't fail to take advantage of this remarkably low price.

### Solid Push-Back

Stock No.	Gauge	Color	Lgth. Ft.
1704	#22	Red	100
1705	#22	Black	100
1706	#22	Green	100
1707	#22	Yellow	100
1708	#18	Red	50
1709	#18	Black	50
1710	#18	Green	50
1711	#18	Yellow	50

### Stranded Push-Back

Stock No.	Gauge	Color	Lgth. Ft.
1712	#20	Red	85
1713	#20	Black	85
1714	#20	Green	85
1715	#20	Yellow	85
1716	#18	Red	50
1717	#18	Black	50
1718	#18	Green	50
1719	#18	Yellow	50

### Colored Rubber Wire-Stranded

Stock No.	Gauge	Wall	Color	Lgth. Ft.
1720	#18	☆	Red	100
1721	#18	☆	Black	100
1722	#18	☆	Green	100
1723	#18	☆	Yellow	100
1724	#16	☆	Red	50
1725	#16	☆	Black	50
1726	#16	☆	Green	50
1727	#16	☆	White	50

### Special Lacquered Inner Braid Push-Back Wire

Stock No.	Gauge	Color	Lgth. Ft.
1728	#20 Solid	Red	100
1729	#20 Solid	Black	100
1730	#20 Solid	Green	100
1731	#18'	Red	75
1732	#18'	Black	75
1733	#18'	Green	75

\* Stranded.

### Asbestos Heater Cord



Heavy asbestos covered wire. Rayon or cotton covered—specify which is desired.

No. 1605—List Price	
Per Ft. 100 Ft.	500 Ft.
\$0.04	\$1.90

### Auto Ignition Wire



Standard 7 mm black lacquered braided wire for use in automobile ignition and high tension work. No. 1606—100 Ft. List Price.....\$2.90  
9 mm wire specially designed for Neon sign use. Shpg. Wt. 4 lbs. No. 1607—100 Ft. List Price.....\$3.90

### Heavy Duty Cord Type



The thick belt of flexible rubber that covers the conductor is made of smooth oil-resisting, abrasion-proof, high quality rubber. Especially suitable for outdoor work, garages, portable devices.

Stock No.	Size	Per Ft.	Per 100 Ft.
1608	18—2-wire	50.06	55.50
1609	18—2-wire	.08	7.50
1610	14—2-wire	.12	10.80
1611	18—3-wire	.08	7.50

### Heavy Twisted Pair



Standard ☆ rubber, 14 gauge. Finest wire obtainable for jobs that call for a wire of large current carrying capacity and ability to stand plenty of abuse.

No. 14—4"	
No. 1615—List Price	
Per Ft. ....	\$0.04
Per 100 Ft. ....	\$3.90

### Bell Wire

An excellent grade of bell or annunciator wire. 18 B. & S. gauge with waxed cotton covering.



No. 1616	1/2 lb. roll	List Price... \$0.24
No. 1617—25 ft. roll.	List Price.....	\$0.10

### Single Fixture Wire



18 Gauge ☆ R.C. Silk Colors: Old Gold, Brass, Maroon, White with Red tracer, Black, Green. Cotton Colors: Black, Tan, Brown, Brass, Green with tracer. (Specify color and covering desired.) No. 1617—List Price

100 Ft.	500 Ft.	1000 Ft.
\$1.00	\$3.70	\$7.00

18 Gauge ☆ R.C.		
Cotton only in Black with Red tracer.		
No. 1618—List Price		
100 Ft.	500 Ft.	1000 Ft.
\$1.00	\$3.70	\$7.00
16 Gauge ☆ R.C.		
Silk Color: Brown with Red tracer. Cotton Color: Brown with Red tracer. (Specify silk or cotton.)		
No. 1619—List Price		
100 Ft.	500 Ft.	1000 Ft.
\$1.90	\$7.90	\$14.00

### Enamel Wire

Stock No.	Size	1/2 Lb.	List Price 1/2 Lb.
1505	16	\$0.30	\$0.38
1506	18	.32	.40
1507	20	.32	.42
1508	22	.34	.48
1509	24	.38	.52
1510	26	.40	.56
1511	28	.42	.62
1512	30	.46	.68
1513	32	.52	.74
1514	34	.62	.90
1515	36	.76	1.16
1516	38	.98	1.46

### Double Cotton

Stock No.	Size	1/2 Lb.	Price List 1/2 Lb.
1517	16	\$0.36	\$0.48
1518	18	.40	.54
1519	20	.44	.62
1520	22	.48	.64
1521	24	.52	.74
1522	26	.62	.96
1523	28	.72	1.22
1524	30	.84	1.46
1525	32	1.02	1.80
1526	34	1.26	2.28
1527	36	1.62	2.88

### Double Silk

Stock No.	Size	1/2 Lb.	List Price 1/2 Lb.
1528	18	\$0.46	\$0.90
1529	20	.50	.94
1530	22	.58	1.10
1531	24	.66	1.24
1532	26	.78	1.44
1533	28	.92	1.62
1534	30	1.06	1.94
1535	32	1.40	2.52
1536	34	1.88	3.48
1537	36	2.58	4.30

# MISCELLANEOUS

## ANTENNA EQUIPMENT



### Nail-it Knobs

Heavy white porcelain nail knob. Leather washer under nail head prevents breaking knob when fastening. Height  $1\frac{1}{4}$ " diam.  $1\frac{1}{2}$ ".

No. 1801  
List Price, Each, \$0.04  
50 for \$1.90. 100 for \$3.10



### Sticktape Aerial

Adhesive tape aerial. Sticks anywhere. Highly efficient.

No. 1815  
50 ft.  
List Price..... \$1.06

### Indoor Ribbon Aerial

Consists of a gold colored metallic braid woven into a strip of fabric about  $\frac{3}{4}$ " wide. Held in place by thumb tacks. 65 ft. to roll.

No. 1816—List Price..... \$0.58



### Pipe Strips

A strip of copper with holes at short intervals so that clamp is adjustable to fit any size pipe up to 2" in diameter. Has spring clip for attaching ground wire.

No. 1750—List, Each..... \$0.06  
10 for... \$0.50 50 for \$2.40

### Nail-it Knobs

Heavy rectangular knob with extra strong nail. Has leather washer under nail head to prevent breakage when fastening. Makes a neat looking job. Easy to use.

No. 1802  
List Price, Each..... \$0.03  
50 for \$1.10 100 for \$1.70



### Antenna Turnbuckles

No.	Length	Take-up	List
1817	3"	$\frac{3}{4}$ "	\$0.28
1818	5"	$1\frac{1}{4}$ "	.46
1819	6 $\frac{3}{4}$ "	$2\frac{1}{4}$ "	.70

For tightening aerial guy wires. Cast brass will not rust.



### BARE COPPER WIRE

7/27 STRANDED  
No. 1825—100 Foot Coils  
Single Lots of Lots of  
Lots, Each 10, Each 25, Each  
\$0.28 \$0.26 \$0.24  
75 Foot Coils \$0.18 \$0.17  
\$0.19

7/26 STRANDED  
No. 1826—100 Foot Coils  
Single Lots of Lots of  
Lots, Each 10, Each 25, Each  
\$0.34 \$0.32 \$0.30  
75 Foot Coils \$0.24 \$0.22  
\$0.26

7/24 STRANDED  
No. 1827—100 Foot Coils  
Single Lots of Lots of  
Lots, Each 10, Each 25, Each  
\$0.44 \$0.41 \$0.40  
75 Foot Coils \$0.34 \$0.32 \$0.30  
\$0.34

7/22 STRANDED  
No. 1828—100 Foot Coils  
Single Lots of Lots of  
Lots, Each 10, Each 25, Each  
\$0.58 \$0.55 \$0.52  
75 Foot Coils \$0.44 \$0.42 \$0.39  
\$0.44

### ENAMELED COPPER WIRE

We guarantee our wire to be First Quality, Full Length and Standard Gauge as specified. It has been called to our attention that some houses are cutting short lengths and selling under-size wire in order to quote a low price. Our prices are the very lowest, consistent with standard size, length and quality.

7/24 STRANDED  
No. 1829—100 Foot Coils  
Single Lots of Lots of  
Lots, Each 10, Each 25, Each  
\$0.60 \$0.56 \$0.52  
75 Foot Coils \$0.48 \$0.44 \$0.40  
\$0.48

7/22 STRANDED  
No. 1830—100 Foot Coils  
Single Lots of Lots of  
Lots, Each 10, Each 25, Each  
\$0.78 \$0.74 \$0.70  
75 Foot Coils \$0.62 \$0.58 \$0.54  
\$0.62

No. 14 SOLID  
No. 1831—100 Foot Coils  
Single Lots of Lots of  
Lots, Each 10, Each 25, Each  
\$0.62 \$0.60 \$0.58  
\$0.62

No. 12 SOLID  
No. 1832—100 Foot Coils  
Single Lots of Lots of  
Lots, Each 10, Each 25, Each  
\$0.92 \$0.90 \$0.88  
\$0.92

No. 10 SOLID ENAMELED  
No. 1833  
Per Ft. \$0.02 Per 100 Ft. \$1.50



### Screw-in Knobs

For attaching lead-in or ground wires to posts or buildings. Wire passes through center of porcelain. With screw 3" long.

No. 1803  
List Price..... \$0.05  
12 for \$0.54—100 for \$3.80  
No. 1804—6" long.  
List Price, Each..... \$0.08  
12 for \$0.84 100 for \$5.50

### Bakelite Insulated Screw Eyes

Stronger than porcelain.

No. 1805—3" long.  
List Price, Each..... \$0.06  
Per Dozen..... .60  
No. 1806—6" long.  
List Price, Each..... \$0.10  
Per Dozen..... 1.00



### Glass Insulators



Special tempered glass, unaffected by heat or cold or other climatic conditions. Best quality. 3" long.

No. 1807  
List Price, Each..... \$0.06  
Lots of 100..... 5.30  
No. 1808—Length 4".  
List Price, Each..... \$0.08  
Lots of 100..... 7.00  
No. 1809—Length 5".  
List Price, Each..... \$0.20  
Lots of 100, Each..... .18

### Porcelain Insulators

Porcelain insulators of the better quality. Heavy and strong.  $3\frac{3}{4}$ " long.  $\frac{1}{2}$ " hole.



No. 1810  
List Price, Each..... \$0.08  
Per 100..... 6.50

### Brown Porcelain



Strain insulator made of heavy porcelain.  $2\frac{1}{2}$ " long,  $\frac{1}{2}$ " hole.

No. 1811  
List Price, Each..... \$0.04  
Per 100..... 3.50

### 'Doublet' Arrester



For the doublet type of antenna. This kind of lightning arrester must be of the air gap type and be carefully insulated from ground. A well-designed protector. Made of fine quality porcelain smoothly glazed.

No. 1820—List Price..... \$0.50

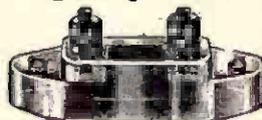
### I. C. A. Champion Arrester



Black glazed porcelain for outdoor and indoor use. Absolutely weatherproof and non-grounding. Carbon type, positive protection. Individually tested to meet Underwriters' requirements. Shpg. Wt. 2 lbs.

No. 1821  
List Price..... \$0.54

### BRACH Vis-O-Glow Lightning Arrester



Instead of using resistance of an air-gap it makes use of a Neon Tube. By far the most sensitive arrester made, the slightest induction is readily shunted to ground. When in operation you can see it work. No. 1822—List Price..... \$1.18

### A Special Value!



A thoroughly reliable protector that can be retailed at a low figure with out sacrificing your margin of profit. Porcelain body.  
No. 1823—List, Each..... \$0.18  
12 for... \$1.40 100 for... \$13.00

### "SNYDER" Ground Clamp

A very special value. Makes a vise grip on pipe. Has sharp pointed screw that penetrates surfacing and makes perfect contact. Has screw for connecting ground wire.

No. 1751—List, Each..... \$0.06  
12 for... \$0.60 100 for \$4.50



### Ground Clamp

Standard type. Sharp teeth bite through rust or paint on pipe. Insures good connection. Pipes up to  $\frac{3}{4}$ ".

No. 1752  
List Price, Each..... \$0.20  
12 for..... 2.20



### Lead-in Strips



Copper Core with waterproof lacquered webbing. Length 12". Has new screw type terminals which make better connections and a neater appearance than most other strips. Quickly installed.

No. 1753—100 for..... \$9.00  
List Price, Each..... .10  
Asabe with Fahnestock terminals.  
No. 1754—100 for..... \$5.80  
List Price, Each..... .08

### Duplex Lead-in Strip



For antennas of the doublet or double-doublet type. Highest grade weather-proof braid insulation. Heavy copper core. 12" long. Mounting screw holes. Screw or spring clip terminals.

No. 1758—List Price..... \$0.20  
10 for..... 1.90

### Antenna Spring



Takes up slack in aerial. Spring only.

No. 1755—List Price..... \$0.14

### Porcelain Tubes



For lead-ins.  $\frac{3}{4}$ " diam.  
No. 1756—5" long.  
List Price, Each..... \$0.06  
Per 100..... 4.50  
No. 1757—6" long.  
List Price, Each..... .08  
Per 100..... 6.00

# MISCELLANEOUS Jacks - Switches - Sockets

## Enamelled Copperweld Antenna Wire



Consists of a tough steel core completely covered with high conductivity copper.

No. 4001—No. 12 Gauge.  
List Price, per 100 Feet. ... \$1.80  
No. 4002—No. 14 Gauge.  
List Price, per 100 Feet. ... 1.20

## Navy Type Insulator



Of white glazed porcelain, free from sharp edges. For antennas handling up to 50 watts. 4".  
No. 4062—List Price, Each \$0.20

## Feed-Thru Insulator



Made of white ceramic highly glazed to prevent dirt accumulation. Shpg. Wt. 4 lbs.  
No. 4063—10" rod.  
List Price, Each. .... \$1.10  
No. 4064—15" rod.  
List Price, Each. .... 1.20

## Wafer Sockets for Glass and Metal Tubes



Made of laminated bakelite with one-piece contact springs, cadmium-plated. State marking desired. Mounting centers 1 1/2".



Stock No.	Prongs	Markings Available
4021	4	Plain, or 2A3, 5Z3, 230, 231, 232, 34, 245, 250, 171A, 280, 281, 82, 83, 12A, 01A, 10, 26.
4022	5	Plain, or 6A4, 224, 27, 33, 35, 36, 37, 38, 39, 40, 47, 56, 84.
4033	6	Plain, or 1A6, 2A5, 2A6, 25Z5, 41, 42, 43, 48, 55, 57, 58, 75, 77, 78, 79, 85, 89, 6C6, 600.
4034	7 S. & L.	Plain, or 2A7, 2B7, 6A7, 6B7, 6F7, 53, 59.

List Price, Each—Any Type. .... \$0.10

## Midget Sockets for Glass and Metal Tubes

Especially designed for compact or midget receivers. Mounting holes, from center to center, 1 1/2". Laminated bakelite construction with one-piece contact springs. Available in plain only.

Stock No.	Prongs	List, Each	Per Dozen
4035	4	\$0.10	\$1.10
4036	5	.10	1.10
4037	6	.10	1.10
4038	7 S. or L.	.12	1.30
4039	8	.12	1.30

## American Phenolic Sockets New Clip-Tite Principle

### Bakelite

A new type sturdy socket made of molded bakelite. Has long contacts which grip tube pins firmly. Socket mounts in special adapter plate and is held in place by a locking ring. Slotted mounting holes permit replacing of any socket having from 1 1/2" to 2" mounting centers.



### Steatite

For high and ultra-high gain circuits. Made of Steatite. The metal adapter takes the full strain of riveting and mounting, making it unbreakable. Diam. 1 1/4". Thickness 3/8". Mfg. centers from 1 1/2" to 2".

No.	Prongs	No.	Prongs	RSS4	4-contact	...	\$0.50
RS4	4	RS7L	7, large	RSS5	5-contact	...	.55
RS5	5	RS7S	7, small	RSS6	6-contact	...	.58
RS6	6			RSS7S	7-contact (small)	...	.60
				RSS7L	7-contact (large)	...	.60
				RSS8	8-contact (octal)	...	.65

List Price, Each. .... \$0.14  
RS8—8 pr. for Metal Tubes.  
List Price, Each. .... .18

## Feed-Thru Stand-Off Screw and Nut Type

Made of glazed porcelain. Nickel-plated brass hardware. Available in four standard sizes.



No. 4004—3/8" high and 3/8" in diam.  
List Price, Each. .... \$0.15  
No. 4005—5/8" high and 3/4" in diam.  
List Price, Each. .... .25  
No. 4006—1 1/4" high and 3/4" in diam.  
List Price, Each. .... .30  
No. 4007—2 1/4" high and 2" in diam.  
List Price, Each. .... .70

## Wall Insulator

For supporting wiring on instruments or may be used for supporting lead-in or ground wires. Glazed porcelain. 2 1/2" high. Shpg. Wt. 8 oz.  
List Price, Each. .... \$0.15  
No. 4008—50 for. .... 6.00



## Screw-in Stand-Off



Strong porcelain insulator with wood screw base. 2 1/2" high. Shpg. Wt. 8 oz.  
List Price, Each. .... \$0.20  
No. 4009—50 for. .... 7.90

Corrugated porcelain well glazed. For use as mountings for transmitter output terminals, switch gear, wiring, etc. 2 sizes both with 1/2" x 20 brass stud.



No. 4010—5 1/2" high, 2 1/2" square base.  
List Price. .... \$0.80  
No. 4011—3 3/4" high, 1 3/4" square base.  
List Price. .... \$0.40

Made of porcelain; extra heavy to stand great strain. Ribbed body provides additional surface to prevent leakage. Length 4".  
No. 4012—  
List, Each. .... \$0.16  
Lots of 10. .... 1.50



## Pyrex Antenna Insulators



Strong and neat; a size for every amateur purpose.  
Stock Length Power List  
No. Overall Rating Price  
4016 3 3/4" 250 watts 10.35  
4017 7 1/2" 250 watts 1.40  
4018 12 1/4" 1 1/2 KW 4.15

## Toggle Switch

Nickel-plated toggle switches. 3 amps., 125 volts. Single pole, single throw.  
No. 4040—1/2" Shaft.  
List Price, Each. .... \$0.30  
Per Dozen. .... 3.40  
No. 4041—1" Shaft.  
List Price, Each. .... \$0.36  
Per Dozen. .... 4.00  
Single pole, double throw.  
No. 4042—1/2" Shaft.  
List Price, Each. .... \$0.38  
Per Dozen. .... 4.10



## Single Pole— Triple Throw

Exposed type. Dead center position. 1/2" shaft.  
No. 4043  
List, Each. .... \$1.10  
Per Dozen. .... 12.00

Single Pole—Double Throw  
Similar to above. 1/2" shaft.  
No. 4044  
List Price, Each. .... \$0.50  
Per Dozen. .... 5.50

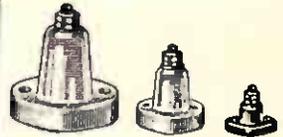
## Miniature Bakelite Knife Switches



Bases of fine grade of bakelite. Contacts securely fastened so that they will not loosen or break out under normal conditions of use. Nickel-plated metal parts. Single pole types 1 1/2" long, double pole 2 1/2".

No.	Poles	Throw	List
4049	1	S	\$0.50
4050	1	D	.34
4051	2	S	.72
4052	2	D	.88
4053	3	S	1.24
4054	3	D	1.26
4055	4	S	1.46
4056	4	D	1.58

## Stand-Off Insulators



An excellent stand-off insulator useful in many ways. Three sizes provide a type for any purpose: lead-in, wiring, or as supports for condensers, tank coils, etc.

No. 4013—No. 20. 2" high with 10-32 nickel plated brass hardware.  
List Price, Each. .... \$0.15  
In Lots of 10. .... 1.30  
No. 4014—No. 22. 1 3/4" high, 8-32 nickel plated brass hardware.  
List Price, Each. .... \$0.10  
In Lots of 10. .... .90  
No. 4015—No. 24. 3/4" high, 6-32 nickel plated brass hardware.  
List Price, Each. .... \$0.08  
In Lots of 10. .... .75

## Amateur Type



Diameter 2 1/4". Supplied with brass rod, 4 brass jam nuts, 2 brass washers, 2 rubber washers and 2 rubber gaskets. Shpg. Wt. 3 lbs.  
No. 4019—15" rod.  
List Price. .... \$3.00  
No. 4020—20" rod.  
List Price. .... \$3.20

## Rotary Switch

3 amp. 125-volt switch with 1 1/2" shaft. For standard knob. Suitable for 110 volts A.C.  
No. 4045—  
List, Each. .... \$0.32  
Per Dozen. .... 3.50



## D. P. D. T. Toggle

A suitable switch for meter panels. Shaft 3/4" long. Underwriters' approval.  
No. 4046—  
List, Each. .... \$0.70  
Per Dozen. .... 7.50



D. P. S. T.  
Similar to the above, but 4 lugs.

No. 4047—  
List, Each. .... \$0.50  
Per Dozen. .... 5.50

## Off-On Switch Plate

No. 4048—  
List Price, Each. .... \$0.05  
Per Dozen. .... .40



## Porcelain Base Knife Switches



For many radio and electrical uses, especially suitable for aerial and ground. Copper contacts and blades.

No.	Poles	Throw	List
4057	1	S	\$0.20
4058	1	D	.24
4059	2	S	.34
4060	2	D	.38
4061	3	D	.78

# Electrical Specialties

### Bakelite Attachment Caps



Genuine Bakelite with sturdy prongs.  
No. 3030—

List Price..... \$0.04  
Per Dozen..... .40  
Per 100..... 2.50

### Bakelite Plug



With handle prevents pulling out wires.  
No. 3038—

List Price..... \$0.06  
Carton of 25... 1.36

### Soft Rubber Handle Plug



Handle plug made of soft rubber. Cannot crack or break. Best type to use for portable tools, vacuum cleaners, etc.  
No. 3031—

List Price..... \$0.08  
Carton of 10..... .70

### Fused Triple Outlet Plug



Protects appliances, etc. Prevents main fuses from blowing. Shpg. Wt. 1 lb.  
No. 3032—

List Price... \$0.40

### Nickel Chrome Element



600-watt spiral wound element. Exact size, no cutting necessary. Two diameters.  
No. 3081—  
1/2" diameter.  
List Price..... \$0.15

No. 3082— 3/8" diameter.  
List Price..... .25

### Toaster Element



Can be adjusted to fit many types of toasters.  
No. 3078—

List Price... \$1.30  
Carton of 10..... \$12.00

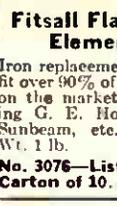
### Bell Ringing Transformer



Primary 110 volts A.C. Secondary 8-8 volts. Wire leads on primary, posts on secondary.  
No. 3060—

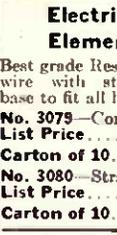
List Price... \$0.80

### Fitsall Flatiron Element



Iron replacements. Will fit over 90% of the irons on the market, including G. E. Hot Point, Sunbeam, etc. Shpg. Wt. 1 lb.  
No. 3076—List Price..... \$0.45  
Carton of 10..... 4.20

### Electric Heater Elements



Best grade Resistance wire with standard base to fit all heaters.  
No. 3079—Cone Shape.  
List Price..... \$0.45  
Carton of 10..... 4.20

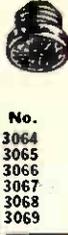
No. 3080—Straight Type.  
List Price..... \$0.55  
Carton of 10..... 5.00

### Bakelite Baseboard Outlet



This handy device enables you to quickly install an outlet in any part of the house. Made of brown bakelite with center mounting wood screw. Shpg. Wt. 8 oz.  
No. 3039—List Price..... \$0.16

### Plug Fuses



For use in standard fuse mountings. Will give complete protection.

No.	Amps.	List Price	Carton of 5
3064	3	\$0.08	\$0.36
3065	10	.06	.28
3066	15	.06	.28
3067	20	.06	.28
3068	25	.06	.28
3069	30	.06	.28

### Pull Chain Angle Socket



With pull chain. The bulb hangs straight. For shade.  
No. 3050—

List Price \$0.45  
Carton of 10... \$4.00

### Bakelite Surface Switch



Bakelite cover will not tarnish and provides perfect insulation.  
No. 3040—

List Price... \$0.30  
Carton of 10 2.50

### Trio Plug

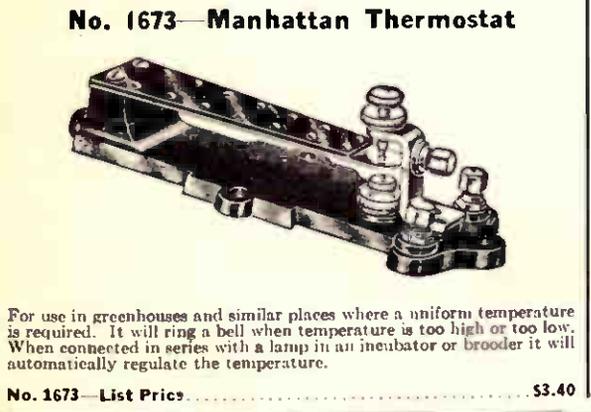


Bakelite. Three outlets from 1 plug.  
No. 3036—

List Price..... \$0.10  
Per Dozen..... 1.00

## MANHATTAN ELECTRICAL PRODUCTS

### No. 1673—Manhattan Thermostat



For use in greenhouses and similar places where a uniform temperature is required. It will ring a bell when temperature is too high or too low. When connected in series with a lamp in an incubator or brooder it will automatically regulate the temperature.

No. 1673—List Price..... \$3.40

### Manhattan Spring Connectors



The standard where good connectors are required. The contact parts are moulded under heavy pressure in a solid block of hard composition. Phosphor bronze springs.

Size: 1/4" x 1/4" Type A  
Model No. 6501—List Price..... \$0.40

Size: 1/4" x 2 1/2" Type A  
Model No. 6502—List Price..... \$0.40

Size: 3/8" x 1 1/2" x 1 1/4" Type B  
Model No. 6535—List Price..... \$0.65

Size: 3/8" x 2 1/4" x 2" Type B  
Model No. 6540—List Price..... \$0.90

### Manhattan Bells



For many years Manhattan Bells have been recognized as the standard of quality. They are full size and are equipped with large, double magnets. The units are tested to operate on batteries or bell ringing transformers.

No.	Standard Type	List Price
No. 1845	2 1/2' Bell	\$0.45
" 1846	3' "	.65
" 1847	4' "	.87

**Heavy Duty (Skeleton) Type**  
Rigidly constructed throughout. No exposed wires.

No.	Gong	List Price
No. 2083	5' Gong	\$5.75
" 2084	6' "	6.50
" 2086	8' "	9.00

### Manhattan Polarity Indicators



Instantaneous polarity indicators for battery or D.C. circuits.  
No. 3320—For battery..... List \$3.25  
No. 3321—For 50-600 Volts..... List 3.25

### Bell Buzzer

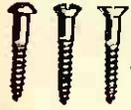


A high quality electric bell buzzer that operates on dry cells or bell ringing transformer. Has same construction as bells shown on this page.

No. 1848—List Price... \$0.42

# HARDWARE for RADIO

## Nickel Plated Brass Wood Screws, Round, Flat and Oval Head



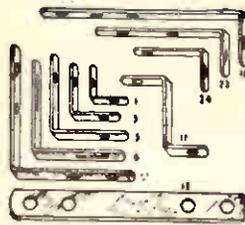
Size	Length	Doz.	Gr.	List Price
4	1	50.08	50.80	
5	1	.10	1.00	
5	1	.12	1.20	
5	1	.16	1.20	
<b>Oval Head</b>				
4	1	.08	.80	
5	1	.10	1.00	
5	1	.12	1.20	
5	1	.16	1.20	
<b>Flat Head</b>				
4	1	.08	.80	
5	1	.10	1.00	
5	1	.12	1.20	
5	1	.16	1.20	

## Hex Nuts, Knurled Nuts, Washers Nicked Brass



6-32x1/4" Hex Nuts. Envelope of 20.	List Price	\$0.10
Per 100	\$0.40	
8-32x1/4" Hex Nuts. Envelope of 20.	List Price	\$0.10
Per 100	\$0.40	
6-32x3/8" Hex Nuts. Envelope of 15.	List Price	\$0.10
Per 100	\$0.50	
8-32x3/8" Hex Nuts. Envelope of 15.	List Price	\$0.10
Per 100	\$0.50	
6-32x1/2" Knurled Nuts. Envelope of 6.	List Price	\$0.10
Per 100	\$1.50	
No. 6 Washers. Envelope of 25.	List Price	\$0.10
Per 100	\$0.40	
No. 8 Washers. Envelope of 25.	List Price	\$0.10
Per 100	\$0.40	

## Angle Brackets



Brass nickel plated. Width 3/8"

No.	Size	List Per	Pair
1	1/2" x 1/2"	\$0.04	
3	3/8" x 3/8"	.06	
5	1" x 1"	.08	
6	1 1/2" x 1 1/2"	.10	
7	1 1/2" x 1 1/4"	.14	
10	1 1/2" x 2 1/4"	.14	
11	3/4" high	.04	
15	3" long	.12	
23	1/2" x 1 1/2"	.12	
24	1/2" x 3/4"	.06	

## Mounting Lugs



For anchoring shield can to chassis. Made of cadmium plated steel. Flat end with hole to fit 6-32 screw. Threaded end size 6-32.

List Price, Per 10	\$0.10
List Price, Per 100	\$0.80

## Tapered Lugs

Will fit over all diameters of screws up to No. 10. Shank fits banana plugs. Width of lug 1/2", length 1 1/4". Bridge in barrel for easy soldering.



List Price, Per Dozen	\$0.25
List Price, Per 50	\$0.80

## Insulating Washers



### Extruded Washer, Fibre

O.D.	I.D.	Thick
1"	3/4"	1/8"
1 1/4"	1"	1/8"
1 1/2"	1 1/4"	1/8"
1 3/4"	1 1/2"	1/8"
2"	1 3/4"	1/8"
2 1/4"	2"	1/8"
2 1/2"	2 1/4"	1/8"
2 3/4"	2 1/2"	1/8"
3"	2 3/4"	1/8"
3 1/4"	3"	1/8"
3 1/2"	3 1/4"	1/8"
3 3/4"	3 1/2"	1/8"
4"	3 3/4"	1/8"
4 1/4"	4"	1/8"
4 1/2"	4 1/4"	1/8"
4 3/4"	4 1/2"	1/8"
5"	4 3/4"	1/8"
5 1/4"	5"	1/8"
5 1/2"	5 1/4"	1/8"
5 3/4"	5 1/2"	1/8"
6"	5 3/4"	1/8"
6 1/4"	6"	1/8"
6 1/2"	6 1/4"	1/8"
6 3/4"	6 1/2"	1/8"
7"	6 3/4"	1/8"
7 1/4"	7"	1/8"
7 1/2"	7 1/4"	1/8"
7 3/4"	7 1/2"	1/8"
8"	7 3/4"	1/8"
8 1/4"	8"	1/8"
8 1/2"	8 1/4"	1/8"
8 3/4"	8 1/2"	1/8"
9"	8 3/4"	1/8"
9 1/4"	9"	1/8"
9 1/2"	9 1/4"	1/8"
9 3/4"	9 1/2"	1/8"
10"	9 3/4"	1/8"

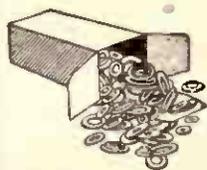
List Price, Either Type, Package of 10

### Flat Washer, Bakelite

O.D.	I.D.	Thick
1"	3/4"	1/8"
1 1/4"	1"	1/8"
1 1/2"	1 1/4"	1/8"
1 3/4"	1 1/2"	1/8"
2"	1 3/4"	1/8"
2 1/4"	2"	1/8"
2 1/2"	2 1/4"	1/8"
2 3/4"	2 1/2"	1/8"
3"	2 3/4"	1/8"
3 1/4"	3"	1/8"
3 1/2"	3 1/4"	1/8"
3 3/4"	3 1/2"	1/8"
4"	3 3/4"	1/8"
4 1/4"	4"	1/8"
4 1/2"	4 1/4"	1/8"
4 3/4"	4 1/2"	1/8"
5"	4 3/4"	1/8"
5 1/4"	5"	1/8"
5 1/2"	5 1/4"	1/8"
5 3/4"	5 1/2"	1/8"
6"	5 3/4"	1/8"
6 1/4"	6"	1/8"
6 1/2"	6 1/4"	1/8"
6 3/4"	6 1/2"	1/8"
7"	6 3/4"	1/8"
7 1/4"	7"	1/8"
7 1/2"	7 1/4"	1/8"
7 3/4"	7 1/2"	1/8"
8"	7 3/4"	1/8"
8 1/4"	8"	1/8"
8 1/2"	8 1/4"	1/8"
8 3/4"	8 1/2"	1/8"
9"	8 3/4"	1/8"
9 1/4"	9"	1/8"
9 1/2"	9 1/4"	1/8"
9 3/4"	9 1/2"	1/8"
10"	9 3/4"	1/8"

List Price, Either Type, Package of 10

## Fibre Washers



A handy assortment for the service kit. Contains various sizes of both shouldered and plain fibre washers in cardboard box. 100 pieces. Shpg. Wt. 8 oz. List Price, Per Box



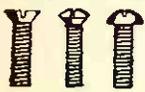
## Rubber Grommet Assortment

Kit "A" contains 12 assorted grommets in 4 sizes—3/8" to 1/2". List Price \$0.25  
Kit "B" contains 30 assorted grommets in 5 sizes—3/8" to 1/2". List Price \$0.50

## Self Tapping Screw Assortment



Box of forty assorted self-tapping screws. These screws are used in many modern receivers. Require no nut. List Price \$0.50



## Nickled Brass Machine Screws

Length	Doz.	Gr.	List Price
3/4"	50.06	50.60	
1"	.08	.76	
1"	.10	1.00	
1 1/4"	.10	1.00	
1 1/4"	.12	1.30	
<b>8-32 Round Head</b>			
1"	.08	.80	
1"	.10	.96	
<b>6-32 Flat Head Machine Screws</b>			
1"	50.06	50.60	
1"	.08	.76	
1"	.10	1.00	
1 1/4"	.10	1.00	
1 1/4"	.12	1.20	
<b>6-32 Oval Head Machine Screws</b>			
1"	50.06	50.60	
1"	.08	.76	
1"	.10	1.00	
1 1/4"	.10	1.00	
1 1/4"	.12	1.20	

## Fancy Head Bronze Finish Screws

For Mounting Speakers, etc.

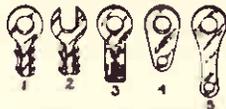
Size	Length	Doz.	Gr.	List Price
6-32	3/4"	50.16	51.90	
6-32	1"	.18	1.90	
6-32	1 1/4"	.20	2.00	
8-32	3/4"	.20	2.00	
8-32	1"	.20	2.00	
8-32	1 1/4"	.28	3.00	

## Handy Hardware Assortment



A big assortment for the serviceman, of assorted screws, nuts, washers, eyelets, lugs, brackets, etc. (3 3/4 pounds). Something of everything in the way of small parts used in radio receivers. Shpg. Wt. 5 lbs. List Price \$1.50  
Same as above, but contains 2 lbs. of hardware. Shpg. Wt. 3 lbs. List Price \$1.00

## Tinned Brass Lugs



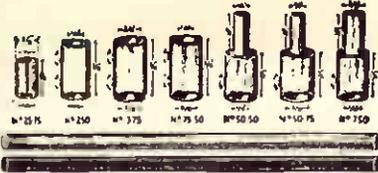
All have No. 8 hole which will fit either No. 6 or 8 screws. Shpg. Wt. 6 oz.  
Style No. 1, Style No. 2, Style No. 3—Solderless; Style No. 4—3/8" long; Style No. 5—1/2" long.  
List Price, Per 100, Any Type \$0.36

## FARNESTOCK Clips



Single—3/4" List Price, Per Dozen \$0.20  
Single—1" List Price, Per Dozen \$0.25  
Twin—1 1/4" long List Price, Per Dozen \$0.50  
Twin—1 1/2" long List Price, Per Dozen \$0.60

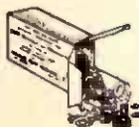
## Shaft Couplings, Extenders, Reducers



These accurately machined brass fittings can be used for coupling shafts of the same or different diameter, for straight extension, or for extension with smaller or larger shaft diameter.

Type No.	Length	Description	List Price
25-75	1 1/2"	1/2" Hole I.D.—3/4" O.D. Dial Bushing	\$0.10
250	1 1/2"	1/2" Hole I.D.—1" O.D. Coupling	.20
375	1 1/2"	1/2" Hole I.D.—1 1/4" O.D. Coupling	.20
75-50	1 1/2"	1/2" Hole I.D.—1 1/2" O.D. Coupling	.20
50-50	1 1/2"	1/2" Hole I.D.—1 1/2" O.D. Extender	.20
50-75	1 1/2"	1/2" Hole I.D.—1 1/4" O.D. Reducer	.20
750	1 1/2"	1/2" Hole I.D.—1 1/2" O.D. Reducer	.20
6250	6"	Diameter Brass Shafting	.20
12250	12"	Diameter Brass Shafting	.35
637	6"	Diameter Amerloid Shafting	.35
1237	12"	Diameter Amerloid Shafting	.50

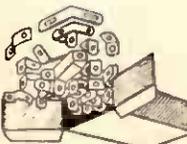
## Complete Hardware for Shortwave and Radio Receivers



This assortment is composed of machine screws, wood screws, hex nuts, brass washers, fibre washers, rubber grommets, terminal lugs, screen grid caps, fibre pieces and fibre bushings. Approximately 235 pieces to the box. Shpg. Wt. 1 lb. List Price \$1.60

## Angle Bracket Assortment

Contains 28 of the most popular angles and brackets used on the average radio set. Solid brass neatly nickel plated. A very handy assortment that no serviceman should be without. Shpg. Wt. 1 lb. List Price \$0.50



# HARDWARE for RADIO

## Alligator Test Clips



Head of clip is long thin design. Round barrel and

made to fit plug-in prongs. Has firm spring grip. Ideal for meters, test boxes, etc. Size  $\frac{1}{4}$ " wide, 2" long.  
**No. 45AT—Per Dozen.....\$0.80**  
**List Price, Each......08**  
**No. 2—Same style as above but 2" long,  $\frac{1}{4}$ " wide.**  
**List Price, Each.....\$0.10**  
**Per Dozen.....1.10**

## Jacks and Plugs



For use with all types of transmitting equipment. All milled of solid brass, nickel plated and furnished with lugs. Plugs have alloy contact springs secured over a pin, making them non-collapsible. Giant plugs and jacks have capacity of 25 amps, others 8 amps. The construction of these jacks and plugs insure perfect electrical contact, and consequently makes them also ideal for use with test equipment.

Giant Plug with 10-32  $\frac{3}{4}$ " screw;  
 Giant Plug with  $\frac{1}{2}$ "- $\frac{3}{4}$ " screw;  
 Giant Plug with  $\frac{1}{4}$ "-28 Threaded Shank;

**List Price, Each, Any Type, \$0.60**  
**Giant Jack  $\frac{1}{4}$ " mounting-hole;**  
**List Price, Each......40**  
**Plug, 6-32 Threaded Shank;**  
**Jack,  $\frac{1}{4}$ " mounting-hole;**  
**List Price, Either Type.... .08**

## JUMBO Jack and Plug



Heavy duty jacks and plugs for coils, etc. Brass nickel plated. Ends threaded for 10-32 screw.

Plug (fits  $\frac{3}{8}$ " hole)  
**List Price.....\$0.60**

Jack (fits  $\frac{3}{8}$ " hole).  
**List Price, Each......45**

## Tip Jacks

For test equipment. Nickel plated. Powerful bronze spring.  $\frac{1}{4}$ " mounting-hole.

**No. 137**  
**List Price, Each, \$0.06**  
**Per Dozen......70**

**Senior Tip Plug**

All-metal tip-lug for tip-jack use. Solderless connection.  
**No. 10—Per Dozen.....\$0.70**  
**List Price, Each......06**

## Junior Tip Plug

As above, but only 1" long.  
**No. 9**  
**List Price, Each.....\$0.06**

## Regular Type

Nickel plated brass.  
**No. 16**  
**List Price, Per Dozen.....\$0.10**  
**Per 100.....1.00**

The insulation on the various items listed below is available in the following attractive colors: Red, Black, Blue, Green, Purple or Yellow. When ordering state color desired.

## Laboratory Test Prods



Solderless, needlepoint test prods. Colored insulation. Two handle lengths— $5\frac{1}{2}$ " and 7".  
**No. 145—5" List Price, Each.....\$0.30**  
**No. 149—7" List Price, Each......40**

## Insulated and Banana Plugs and Jacks



Insulated shoulders and screw ends for solderless connections. Heavy brass nickel plated springs. Jacks have insulated caps and are provided with washer, soldering lug and nut. Fit  $\frac{1}{4}$ " hole. Specify color desired.

**No. 131—Insulated Banana Plugs.**  
**No. 135—Insulated Banana Jacks.**  
**List Price, Each, Either Type.....\$0.13**  
**Per 10.....1.00**

## Insulated Tip Jacks



Have new type springs which provide sure grip contact. Tip nests all the way in jack. Mounts in  $\frac{1}{4}$ " hole. Caps lessen danger of shorting. All colors. **Per Dozen \$1.00**

**No. 138**  
**List Price, Each......10**

## Combination Jack

New type, takes both phone tips and banana plugs. Fully insulated. Colors available as above.  $1\frac{1}{4}$ " long. Insulated washer furnished.  
**No. 148**  
**List Price, Each, 50.15**

## Bakelite Terminal Strip Assemblies



Screw and collar terminals mounted on  $\frac{1}{4}$ " bakelite strips,  $\frac{1}{4}$ " wide. Hardware is nickel-plated. Terminals spaced  $\frac{1}{2}$ " apart. Ideal for use as speaker connection terminals. "Ant" and "Gnd" strips, etc. Collar and lugs cannot loosen or pull out.

Terminals	Mtg. Centers	List Price
2	1 $\frac{1}{2}$ "	\$0.20
3	2"	.30
4	2 $\frac{1}{2}$ "	.40
5	3 $\frac{1}{2}$ "	.50
6	4"	.60

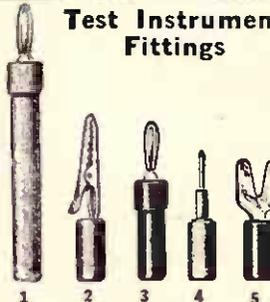


## Lug Terminal Strip

For mounting resistors, condensers, etc.  
**Lugs Tinned Bakelite Strip**

No.	Lugs	Each	10 For
520	2	\$0.06	\$0.50
530	3	.06	.50
540	4	.10	1.00
560	6	.12	1.20

## Test Instrument Fittings



These fine quality fittings add immeasurably to the attractiveness of your test instruments, etc. The bright colors provide an easy means of terminal identification.

1—4" Test Prod with banana plug tip.  
**No. 134—List Price.....\$0.30**  
 2—Insulated Alligator Clip to fit test prod or any banana plug.  
**No. 129—List Price......10**  
 3—Short Test Prod, 2 $\frac{1}{2}$ " long.  
**No. 131A—List Price......25**  
 4—Insulated Needle-point Phone Tip Plug to fit test prods.  
**No. 132—List Price......12**  
 5—Insulated Plug with tapered lug.  
**No. 133—List Price......12**

## Senior Insulated Plugs



A positive contact plug of the solderless type fits all standard test prods. Used for test leads on meters, analyzers, etc. Specify color desired.  $1\frac{1}{4}$ " long.

**No. 141—Per Dozen.....\$1.20**  
**List Price, Each......12**

## Junior Insulated Plug

Similar to the above but only  $1\frac{1}{2}$ " long. All colors.

**No. 142—Per Dozen.....\$1.20**  
**List Price, Each......12**



## Rubber Grommet Type

**No. 38A**  
**List, Each.....\$0.10**  
**Per Dozen.....1.00**

## Adjustable Bracket Type

Slot in bracket for adjusting.

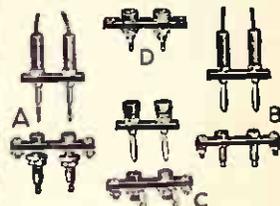
**No. 36**  
**List, Each...\$0.10**  
**Per Dozen...1.00**

## Insulated Grommets

For insulating holes in chassis, etc., for power line cords, grid leads, etc. Red or black.

**No. 160— $\frac{1}{8}$ " h.  $\frac{3}{8}$ " d.  $\frac{3}{8}$ " l. List Price.....\$0.09**  
**No. 161— $\frac{1}{8}$ " h.  $\frac{1}{2}$ " d.  $\frac{1}{2}$ " l. List Price......10**  
**No. 162— $\frac{1}{4}$ " h.  $\frac{3}{8}$ " d.  $\frac{1}{2}$ " l. List Price, Either Type.... .12**  
**No. 163— $\frac{1}{4}$ " h.  $\frac{1}{2}$ " d.  $\frac{1}{2}$ " l.**

## Twin Plugs and Jacks



Sturdy material of high insulating qualities. Plugs finished with red and black 36" leads and corresponding colored tip sleeve. Jacks have all necessary lugs, washers, and nuts. Surface terminals are red and black. Banana plugs are non-collapsible. The variety offered should find favor with those who modernize or "build their own" test units.

(A) Twin Phone Tip and Jack.  
**No. 413—List Price.....\$0.80**  
 (B) Twin Banana Plug and Jack  
**No. 408—List Price.....\$0.80**  
 (C) Twin Banana Plug with Binging Post, and Jack.  
**No. 402—List Price.....\$0.70**  
 Single Post only, red or black.  
**No. 401—List Price.....\$0.22**  
 (D) Twin Tip Jack.  
**No. 406—List Price.....\$0.25**



## Insulated Plug Type Binding Post

Hole in top fits banana plug. Hole in stem for wire. Red or black. Specify color.

**List Price, Each \$0.15**

## Wing Nuts



Brass, nickel-plated. For all types of portable equipment and test instruments.

Thread	Your Cost
6-32.....	\$0.07
8-32.....	.07
10-32.....	.07
$\frac{1}{4}$ -20.....	.07
Per 100.....	5.50

## New Miniature Tube Caps



Control-grid caps for use on the new miniature metal tubes. Adapter to fit any regular control-grid clip for contacting new miniature tube caps.

**List Price, Type A, Each...\$0.15**  
 Luster nickel-plated brass tube-cap clip for contacting miniature caps on metal tubes.

**List Price, Type B, Each...\$0.04**  
 Above with wire ferrule for making neat soldered connection.

**List Price, Type C, Each...\$0.06**

## Upright Clip Mount



**Each.....\$0.10**  
**Per Dozen...1.00**

# HARDWARE and TOOLS for the Serviceman

## Shockless Screw Driver



A popular priced insulated-handle screw driver for electrical, household and automotive work. Handle and ferrule are molded in one piece of black composition. Blade is nickel plated and has straight side point. 6" long. Shpg. Wt. 1 lb.  
No. 2000. List Price.....\$0.20  
Per Dozen.....2.00

## Ratchet Screw Driver



Tool steel blade. Nickel plated ferrule, hardwood handle. Has 3-position ratchet adjustment that allows operation to right or left or holds blade rigid. Shpg. Wt. 1 lb.  
Stock Blade List  
No. Length Price  
2001 3" \$0.31  
2002 4" .35  
2003 5" .39

## Screw-Drivers



Have fine steel blades set in insulated amberloid handles. Non-flammable. Handles finely knurled. Blades fit set screws, small wood screws, etc. Three sizes available.  
No. 2004—2" Blade. List Price, Each.....\$0.12  
No. 2005—3" Blade. List Price, Each......14  
No. 2006—5" Blade. List Price, Each......15  
Per Set of Three......35

## GOODELL PRATT Small Screw Drivers



Two attractive and useful small screw drivers. Good for small screws, such as found in radio knobs, etc. One has a 1 1/4" blade, and the other is 2 1/4". Both are in white nickel finish, have nickle ferrules, and hardwood handles.

No. 2007. List Price.....\$0.15

## Radio Reamer



The handiest tool for reaming holes in radio panels, wood, light metals, etc. Length of blade 4". Will ream holes from 1/8" to 3/8" Shpg. Wt. 8 oz.

No. 2008. List Price, Each \$0.29

## Socket Hole Punches



Consists of 2 units; punch proper and anvil, for knocking out socket holes. Ideal for constructor or experimenter. Available in following sizes: 3/8", 1/2", 1 1/8" and 1 3/4". Specify sizes desired. Average Shpg. Wt. 1 lb. each punch.  
No. 2009—List Price.....\$2.85

## Adjustable Circle Cutters



No. 1

Cut holes easily and quickly in metal, wood, bakelite, hard rubber, etc. Nos. 1 and 2 cut holes from 1" to 4" in diameter. No. 5 cuts holes from 1" to 5" in diameter. No. 1 cutter has an extra beading cutter attached. No. 5 cutter available with square or round shank. State type desired on order.

List Price

No. 1—With beading cutter...\$3.20  
No. 2—Less beading cutter...1.80  
Junior—Light work only—  
2 1/2" maximum.....1.20



No. 5

List Price  
No. 5—Heavy Duty Model.  
For brace or electric drill...\$3.20  
Extra Blades......40

## SPIN TYPE Socket Wrenches—Straight and Offset Types



6" Straight  
No. 48—For 3/8" hexagon nuts.  
No. 50—For 1/2" hexagon nuts.  
No. 51—For 5/8" hexagon nuts.  
No. 52—For 3/4" hexagon nuts.  
No. 53—For 7/8" hexagon nuts.  
No. 49—For 1" hexagon nuts.  
List Price, Any Size.....\$0.19  
No. 660—For Set of 6......92

7" Offset Type  
No. 106—For 3/8" hexagon nuts.  
No. 107—For 1/2" hexagon nuts.  
No. 108—For 5/8" hexagon nuts.  
List Price, Any Size.....\$0.20

Ribbed wooden handle and cadmium plated shank. Has deep hole in end of socket and will take a long screw up to No. 10. Two sizes in straight type—6" and 9". Shpg. Wt. 1 lb.

9" Straight  
No. 58—For 3/8" hexagon nuts.  
No. 54—For 1/2" hexagon nuts.  
No. 55—For 5/8" hexagon nuts.  
No. 56—For 3/4" hexagon nuts.  
No. 57—For 7/8" hexagon nuts.  
No. 59—For 1" hexagon nuts.  
List Price, Any Size.....\$0.20  
No. 690—For Set of 6......65

No. 109—For 3/8" hexagon nuts.  
No. 110—For 1/2" hexagon nuts.  
No. 111—For 5/8" hexagon nuts.  
No. 670—Set of 6, List Price \$1.10

## Wire Stripper



Strips insulation from wire easily and cleanly. Saves time. Cutting edge of tempered steel that will retain its hardness.

No. 2015  
List Price.....\$0.15

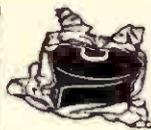
## Handy Scratch Remover



For removing mars and scratches from furniture. Will last indefinitely. Indurable container.

No. 2016—  
List Price, Each.....\$0.40

## Friction Tape



Highest quality tape, kept fresh by tin foil wrapper. Always a radio, auto and

household necessity. Rubber tape listed below is of live rubber under a layer of friction tape. Used for properly insulating electrical splices. Kept fresh by wrapper of tin foil. Available in small roll sizes for small requirements. Wrapped and packed in boxes.

Stock No.	Roll	List Price	10 Rolls
2017	2 oz.	\$0.10	\$0.90
2018	4 oz.	.14	1.25
2019	8 oz.	.29	2.84
<b>Rubber Tape</b>			
2020	1/2 lb.	\$0.25	\$2.10
2021	1 lb.	.47	4.20

## SIGNAL Portable Electric Drill

TYPE OB-4



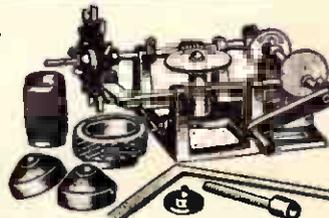
This high grade drill is recommended for production, garage or radio shop work, and it is equally at home in hands of electricians, carpenters and machinists. It has an abundance of power developed by an efficient, smooth-running SIGNAL universal motor. Drill has a capacity up to 1/2", weighs 7 1/4 lbs. and is well balanced and easy to handle.

### Specifications

**Motor**—Universal, A.C., D.C., 110-120 volts, 25-60 cycles.  
**Speed**—No load, 1700 R.P.M.  
**Amperes**—No load, 1.5.  
**Housing**—Durable aluminum alloy.  
**Bearings**—Bronze, wool packed, with thrust ball bearing on spindle shaft.  
**Gears**—Special alloy heat-treated.  
**Length**—12 inches.  
**List Price**.....\$24.50

## MORRIS De Luxe Coil Winder

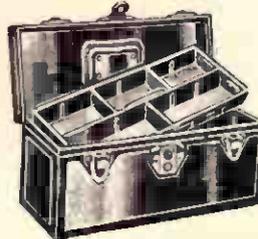
Will wind Honey Comb, Spiderweb, or Solenoid coils of various widths and diameters. Equal in appearance to factory-made coils. Includes all accessories necessary for winding the various types. Has recorder and indicator that counts turns. Black enamel finish. Shpg. Wt. 6 lbs.  
List Price.....\$7.25



## The "Utility" Steel Tool Boxes

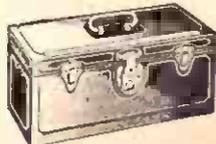
Ideal for auto mechanics, radio servicemen. Will hold many everyday tools. Loose tray with movable partitions. Heavy steel, beautifully finished. Nickel-plated hardware. Split-proof lock. Size 14"x10 1/2"x6". Shpg. Wt. 6 lbs.

No. 2022—List Price.....\$1.27



## The "Craftsman"

Cantilever tray pulls into position when box is opened. Contents easily accessible. Made of cold rolled steel with welded flush seams. Finished in hard-baked, olive green enamel. Full grip handle. Has embossed rule on cover. Lock and key. Matched hardware. Size 14"x6 1/2"x6". Shpg. Wt. 7 lbs.  
No. 2023—List Price Each.....\$1.50



# HARDWARE and TOOLS for the Serviceman



## KESTER Paste Flux

An entirely new, different, and more efficient soldering paste flux—designed for the serviceman, constructor, and for speeding up production. Made by a new viscoforming process which makes possible a uniform non-varying paste. All fluxing ingredients are finely divided and evenly distributed. Results in better soldering. Packed in handy sized tins. Contains 2 ounces of flux. Only small quantity necessary for joints.

No. 2065—List Price ..... \$0.24



## KESTER Radio Solder

Preferred by radio men everywhere. Will not spatter. Makes clean joints. Servicemen and other large users will find it more economical to buy their solder this way.



	Rosin Core		Acid Core		Alum. Solder	
	No.	List	No.	List	No.	List
Per Tin	2054	\$0.25	2057	\$0.25	2060	\$0.30
1-lb. Spool	2055	.94	2058	.94	2061	3.00
5-lb. Spool	2056	4.42	2059	4.42	.....	.....

## Solderall

An amazing preparation which solders all metals, except aluminum.

Consists of a mixture of paste and powdered solder. Put up in small metal tubes, ready for instant use. Makes a clean, strong joint; easy to apply.



No. 2063—Single tubes.  
List Price ..... \$0.14

No. 2064—Display box of 24 tubes. Shpg. Wt. 4 lbs.

List Price ..... \$2.95

## MAGIC Embossing and Engraving Pencils



The engraving pencil will burn lettering, designs, etc., in wood, leather, rubber and other similar materials. Easily used. Heat adjusts itself. Absolutely no danger. The embossing pencil will emboss lettering, etc., in beautiful colors: gold, silver, blue, green, purple, copper, etc., on leather, cloth, silk, paper, wood, celluloid, bakelite, etc. When the foil is removed the lettering or design is left on the material. Each furnished with complete instructions and foil. Book of designs and lettering of all-types furnished with engraving kit. Shpg. Wt. 2 lbs.

No. 2050—110-Volt Engraving Kit.  
List Price ..... \$1.60

No. 2051—110-Volt Embossing Kit.  
List Price ..... \$1.30

## Electric Soldering Irons

These irons are extraordinarily high quality tools. Replaceable forged copper tips and elements. Standard Irons 110 volts A.C. or D.C. can also be furnished in any voltage from 32 to 250 volts.

		List Price
55 Watts—Weight 6 oz.; length 11 3/4"; only for 110 volts.	Complete	\$1.10
65 Watts—Weight 7 oz.; length 11 3/4".	Complete	1.75
100 Watts—Weight 9 oz.; length 12 3/4".	Complete	2.75
150 Watts—Weight 18 oz.; length 12 3/4".	Complete	5.00

## Constant Duty Soldering Irons



One-piece heavy gauge steel case. Mounted element. Positive grip handle. Give unlimited service regardless of the hardest use imposed upon them. Available with either plug type or screw tips. Ample heat delivered to the tip for fastest work. Operates on either A.C. or D.C. Available in any voltage from 32 to 250 volts. Elements and parts easily replaced when necessary.

	List Price
65 Watts—Equal to copper of 1/2 lb. 10" long; weight 8 oz.; 3/8" diameter tip. For light work, as radio factory. Complete	\$5.00
100 Watts—Equal to copper of 3/4 lb. 12" long; weight 10 oz.; 3/8" diameter tip. For light work, as radio factory. Complete	5.50
130 Watts—Equal to copper of 1 lb. 12 1/4" long; weight 16 oz.; 3/8" diameter tip. For general factory soldering. Complete	7.75
200 Watts—Equal to copper of 1 1/2 lb. 14" long; weight 24 oz.; 3/8" diameter tip. Suitable for small branders. Complete	8.75

## Snap-On Iron Holder



Iron snaps into place and cannot roll. May be left on constantly. Raises iron 2" from bench and grips firmly. No possibility of burned furniture. Fits all makes and sizes of irons.

No. 1956 ..... List Price \$0.35

## Handy Stand



Concave metal stand made of rust resisting metal. Iron cannot roll out and burn furniture. Ruggedly built; will last almost as long as more expensive stands. Shpg. Wt. 1 lb.

No. 2053 ..... List Price \$0.30

## ICA Soldering Iron Holder and Stand



A compact and practical iron holder and stand for the radio serviceman. All metal construction and lined with asbestos inside the holder. No need to wait until iron cools. Shpg. Wt. 3 lbs.

No. 1966-A—List Price ..... \$1.25

## LENK Blow Torches

Heavy duty blow torches that assure matchless performance. Generate quickly from asbestos filled drip cup. Features: flame control and shut-off valve, self cleaning orifice, no loss of pressure, no evaporation of fuel, non-clogging burner.



Alcohol Torch  
No. 105—List Price ..... \$2.00

Gasoline Torch  
No. 104—List Price ..... \$1.75

## LENK Halide Detector

Detects Refrigerant Gas Leaks  
Similar to above with Halide attachment. Uses alcohol. Rubber Tube absorbs the leaking gas, changing the color of the flame from blue to green. Dia., 3"; height, 7 3/4".

Model 205—List Price ..... \$3.50

## LENK RED DRAGON Gasoline Blotorch

Heavy  
Duty  
Self-  
Priming

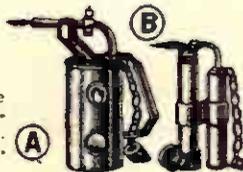


Features heavy brass burner for continuous hot blast of about 2000°F. Handle always cool. Burns over 2 hours with one filling of gasoline. Size: 6 3/4" x 6 1/2" x 2 3/4".

No. 125  
List  
Price ..... \$1.75

## LENK Automatic Alcohol Torches

These alcohol torches are a big favorite with the radio man because of their neatness, efficiency and ease of operation. Made of brass, nickel plated, highly polished. Entirely automatic.



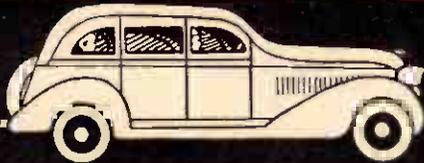
Type A: Double burner, one for needle point flame, add the attachment for heavy flame. Pressure release valve eliminates sputtering, evaporation and leaks. Cleaning pin in handle. Size 7" x 4 3/4" x 3". Shpg. Wt. 4 lbs.

No. 50—List Price ..... \$5.00

Type B: A very handy little torch for the tool box. Solid base makes it mechanically leak proof. Screw cap makes loading easy. Nozzle cap prevents evaporation. Copper heat conductor generates quickly. Size 6 3/4" x 2 3/4" x 1 1/4". Shpg. Wt. 2 lbs.

No. 66—List Price ..... \$1.50

# AUTO RADIO ACCESSORIES



## Generator Silencer



Both the generator commutator and cut-out are sources of noise. This noise can be eliminated by using our generator silencer.

List Price—5 mfd. .... \$0.32  
List Price—1 mfd. .... .43

## Ammeter Condenser

A condenser especially designed to eliminate the noise originating in wiring running from the ammeter—such as the horn wiring, head-light wiring, dashlight wiring, etc. Mounted in metal can equipped with mounting lug that automatically grounds one side of the condenser and with a flexible lead and lug for attaching to the ammeter.



List Price ..... \$0.35

## Dome Light Filter



For eliminating noise originating in the wiring running to the dome light. Has self-contained choke and condenser.

List Price ..... \$0.60

## FORD V8 Distributor Suppressor



This unit makes it now possible to insert a distributor suppressor in FORD V8 auto installations. Resistor brush replacing regular distributor brush.

List Price ..... \$0.30

## Special "Low Resistance" Auto Radio Fuses

Approximately 25% to 30% lower resistance than standard radio fuses. 5, 10, 15 and 20 amperes.

List Price, Any Type ..... \$0.05

## Universal Suppressor



Bakelite—eliminates interference caused by spark plugs and distributor. Will fit any car.

No. 378—List Price ..... \$0.25

No. 351—For Ford car. .... .25

List Price ..... .25

## Distributor Suppressor

Bakelite—Works with the No. 378 Universal Suppressors.

No. 352—List Price ..... \$0.30

## Inductive Ignition Suppressors

Made of enameled wire, wound and enclosed in a bakelite heat resistant case, well impregnated and moisture proof. With standard brackets to fit all makes of spark plugs. Will fit all cars. 120 ohms D.C. Lifetime indestructible construction.



No. List Price

2351—Spark Plug ..... \$0.50

2352—Cable Type ..... .50

2353—Distributor ..... .50

## Elbow Silencers

For cars in which Elbow type noise suppressors are more practical. Made of bakelite. Moisture-proof. Noise-proof.

No. 393—  
List Price ..... \$0.35

## Auto By-Pass Condenser and Generator Silencer



For by-passing ammeter, dome light or generator. 1/2 mfd.

No. 1244—  
List Price ..... \$0.40

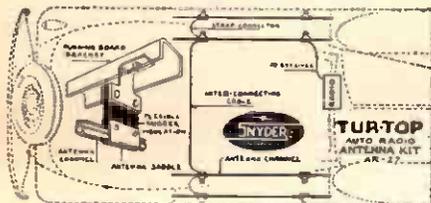
## Generator Silencers

A simple, easily installed, but highly effective silencer for any disturbances to reception caused by the generator. Capacity 1 mfd.

No. 1243—List Price ..... \$0.65

# "SNYDER" AUTOMOBILE ANTENNAS

## TROMBONE ANTENNA



## TRIANGLE ANTENNA

## Flex-O-Cable AUTO RADIO AERIAL

A-42 STRAND AERIAL CABLE  
B-INSULATORS & FITTINGS  
C-FLYWHEELS  
D-ADJUSTABLE TENSION SPRING  
E-FRONT HOUSING BRACKET



• FOR TURRET TOP CARS  
• QUICKLY INSTALLED  
• DURABLY CONSTRUCTED  
• 3 MODELS—LOW PRICES

Especially designed for **Turret Top** cars which cannot be factory-equipped with antennas due to metal roof.

Adjustable **All Ways**. No extra hardware necessary for installation under **any** modern car. The entire antenna can be installed easily and quickly by just removing four nuts from each running-board, spacing the aerial brackets and replacing the nuts. The complete antenna assembly is made at the factory, requiring no unnecessary soldering or connecting at the antenna.

All metal parts are made of extra heavy gauge, alloy steel, **Cadmium Plated** to withstand the rigors of under-car service.

**Insulation**—Extra heavy, flexible rubber blocks act as insulators connecting the adjustable saddles to running-board bracket supports. Heavy rubber covered and **all-shielded** lead-in cable is rigidly attached to one of the brackets.

No.	List Price
AR-27A Single Outfit with shielded lead-in...	\$2.00
AR-27 Dual Outfit, complete with necessary cable.	4.00

A complete set of equipment for a **Housing-to-Rear** triangle antenna installation. Consists of special 42-strand copper wire (1/8" diameter), two rear axle insulator assemblies, one flywheel housing insulator assemble, with tension adjuster, lead-in cable and other hardware necessary for quick and easy installation.

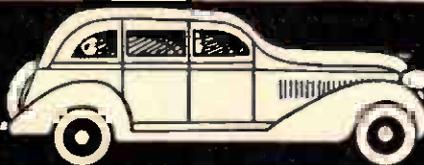
No.	List Price
AR-19 Standard Model.....	\$1.25
AR-19X With Heavy Shielded Lead.....	1.50

## DE LUXE MODELS

**De Luxe** models are equipped with genuine **Bakelite** insulators and extra heavy 7 m/m shielded lead-in cable.

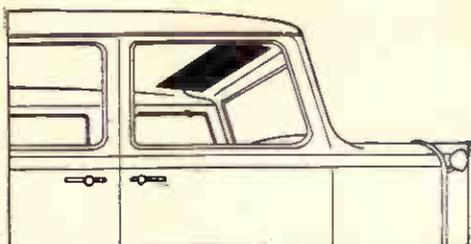
No.	List Price
AR-19S De Luxe Model Outfit.....	\$1.75
AR-20 Without Shielded Cable.....	1.50

# AUTO RADIO ACCESSORIES



## SNYDER Auto Radio Antennas Universal

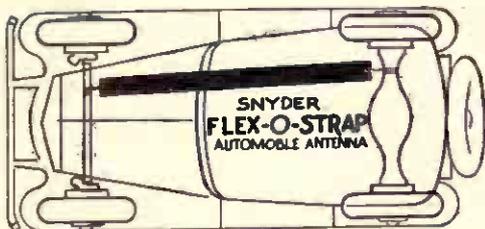
For Inside Car or Top Mounting



Can be installed anywhere in the car. Made of heavy leatherette, completely weatherproof. No tools necessary for mounting. 32" long, 10" wide.

AR-10	—Black or brown	.....	List Price	\$1.25
AR-10D	—Heavy weatherproof fabric	.....	"	1.50
AR-11	—Bow covering, to match lining	.....	"	1.25
AR-11X	—Bow-covered 15"x30"	.....	"	1.50
AR-7	—Rigid type 18"x26" gray and tan	.....	"	1.25
AR-14	—Imitation leatherette 33"x12"	.....	"	.75

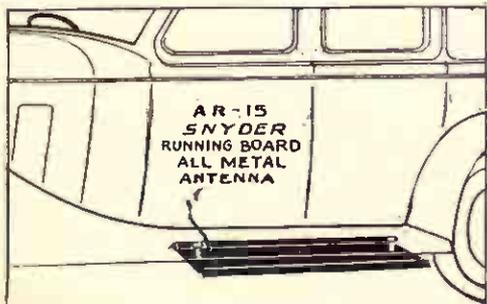
## Under Car—Flexible



Fox under car axle to axle mounting. Weatherproof.

AR-4	—44" long, 3" wide	.....	List Price	\$0.75
AR-5	—50" long, 3½" wide	.....	"	1.00
AR-6	—50" long, 6" wide	.....	"	1.50
AR-8	—60" long, 3½" wide	.....	"	1.25
AR-9	—60" long, 6" wide	.....	"	1.75
AR-9B	—60" long, 8" wide	.....	"	2.75

## All-Metal Running Board

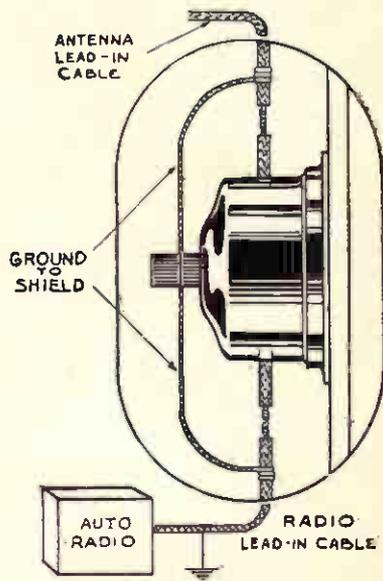


36" long, 8" wide. Complete with triple springs and attachments.

AR-15	—One piece, non adjustable	.....	List Price	\$1.25
AR-15F	—Complete with Ground Flap	.....	"	1.75
AR-16S	—Special Inter-locking model. 50" maximum extension	.....	"	1.75
AR-16SF	—Complete with Ground Flap	.....	"	2.25

## SNYDER Transifier

Three-Purpose  
Automobile  
Radio  
Attachment  
  
Designed  
Especially  
for New Cars  
with All-Steel  
Tops



(1) **Noise Suppressor**—Decreases motor noises induced by ignition systems. (2) **Signal Booster**—Increases volume and signal pick-up strength. (3) **Chassis Antenna**—Replaces old method of aerial installations. No other wiring necessary. Quickly and easily installed to any model receiver in any make of automobile.

Model 17E	—Complete unit	.....	List Price	\$1.25
" 18E	—with 5 ft. 7 m/m shielded lead-in cable	.....	"	1.60

## SNYDER Auto Antennas

For Roadsters, Phaetons, Convertibles



A most ingenious and new type of auto-radio antenna made especially for roadster, phaetons and convertible cars. Two to set. Can be slipped into the top side padding and is equally efficient when top is lowered. Invisible after installed. Contains our special sheet copper, which affords the necessary flexibility and pick-up strength. Made in brown and taupe felt to match top linings.

AR-12	—(Two to set)	.....	List Price	\$1.75 Pair
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Same as the AR-12 Model, but made in double length for Phaetons and Convertible Sedans.

AR-17	—(Two to set)	.....	List Price	2.25 Pair
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# Radliant Replacement Vibrators for Automobile Radios

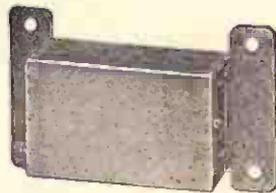
The Original Line of Exact Duplicate Replacement Vibrators



Chevrolet



RCA



Majestic



Ford



Philco

## A Specially Designed Vibrator for Every Make of Auto Radio

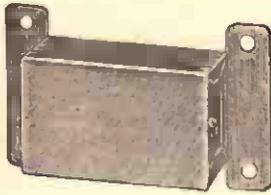
Make	Model	Stock No.	List Price	Make	Model	Stock No.	List Price
<b>AIRLINE</b>				<b>ELECTRIC AUTOLITE</b>			
62		3443	\$5.00	062, 062A		3443	\$5.00
118		3417	4.50	<b>EMERSON</b>			
<b>ALL AMERICAN MOHAWK</b>				5A		3283	5.50
A60		2867	4.50	6A		3417	4.50
<b>ARVIN</b>				667, 965		3299	4.50
7, 17, 17A, 27, 37		3262	4.50	678, 1933 mod		3308	5.50
10A, 16, 20A, 30A, 30B, 18 2nd ser., 25 2nd ser., 35 2nd ser., 45 2nd ser.		2742	4.50	De Luxe		3850	5.50
15 1st ser., 25 1st ser., 35 1st ser., 45 1st ser.		3261	4.50	<b>ERLA-SENTINEL</b>			
<b>ATWATER-KENT</b>				802		2747	4.75
424, 534		3308	5.50	803		3375	4.50
666, 776, 926, 936		3263	4.50	5500		4260	4.50
816		3848	5.25	7M, 10M		3888	4.50
<b>AUDIOLA</b>				<b>FADA</b>			
On S6, S7 send old vibrator.				101-2, 104B		3313	4.75
A6		3308	5.50	<b>FAIRBANKS-MORSE</b>			
S7, S6 Special Order—				348, 347		3356	4.50
345, 346, 347		3356	4.50	<b>FORD MAJESTIC</b>			
C6, 64, 74		3782	4.50	Plug in pack		3312	10.00
<b>AUTOCROT</b>				Standard pack		3310	8.00
5		2867	4.50	Head only		3442	4.75
<b>AUTOMATIC</b>				Plug in vibr.		3263	4.50
1933		2867	4.50	<b>FORD PHILCO</b>			
1934, 1935		3398	4.75	Less trade in		3320	4.50
<b>BLACKHAWK</b>				<b>FORD ZENITH</b>			
6U		3417	4.50			3263	4.50
<b>BOSCH</b>				<b>GENERAL ELECTRIC</b>			
140, 150 ser., 2, 160, 45 syn.		3283	5.50	B40, B52, C41, C61		3319	5.50
150 ser. 1		3318	5.75	C60		3417	4.50
524, 634, 79, 2nd ser.		4260	4.50	D72		3806	4.50
45 non sync.		3263	4.50	D50, D61, D52		3883	5.00
<b>B. O. P., BUICK, OLDS., PONTIAC</b>				<b>GRAYBAR</b>			
405057—02, 542215—40		3461	5.25	150		3283	5.50
980383—93		3313	4.75	<b>GREBE</b>			
980455—59		3315	5.25	61R		2867	4.50
980507—8—9		4611	5.25	<b>GULBRANSEN</b>			
<b>CADILLAC</b>				062, 062A		3443	5.00
072 1st ser.		3443	5.00	072, 072A, 06W		3318	5.75
072 2nd ser., 06W Std., 06W Master		3318	5.75	<b>HARLEY DAVIDSON</b>			
6U? Std.		3417	4.50			3283	5.50
<b>CHEVROLET</b>				<b>HUDSON TERRAPLANE</b>			
36441		3313	4.75	Majestic head		3442	4.75
600153, 600249, 600565—66		3315	5.25	Zenith '33, Zenith '34		2867	4.50
601038, 601176—77, 601547—74		3461	5.25	Zenith '35		3865	4.50
<b>CLARION</b>				<b>INTERNATIONAL</b>			
100		2867	4.50	1934 mod		3263	4.50
<b>COLONIAL</b>				<b>KARADIO</b>			
150		3283	5.50	1934-5 models		3263	4.50
150 non-sync., 164		3263	4.50	<b>L. TATRO</b>			
<b>CONSOLE</b>				K665, H465, J665, I465		3283	5.50
6A		3283	5.50	<b>MAJESTIC</b>			
<b>CROSLEY</b>				66 (head), 116, 116A		3442	4.75
99, 98, 102-3, 119, 5A1		3317	5.75	66 (pack) stan.		3310	8.00
4A1, 5A3		3789	5.00	66 (pack) 84 tube		3311	9.00
<b>DETROLA</b>				<b>MALLORY "B" ELIMINATOR</b>			
1100, 1100A, 6A		3442	4.75	Syne.		3318	5.75
1934, 1935		2867	4.50	5-6		3443	5.00
1935 plug in.		4260	4.50	<b>MISSION-BELL</b>			
<b>DE WALD</b>				10A, 11, 12, 14, 25A		2867	4.50
52		3313	4.75	<b>MOTOROLA</b>			
61		2867	4.50	44A, 66, 77A		4502	5.50
605		3741	4.50	34		4260	4.50
640		3786	4.50	44		3290	5.75

# Radiart Replacement Vibrators for Automobile Radios

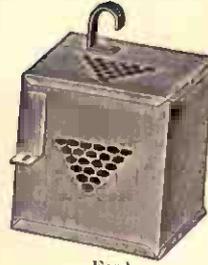
The Original Line of Exact Duplicate Replacement Vibrators



RCA



Majestic



Ford



Philco



B.O.P.

## A Specially Designed Vibrator for Every Make of Auto Radio

Make	Model	Stock No.	List Price
<b>MOTOROLA—(Continued)</b>			
55, 55A		4607	\$5.75
57, 75, 100		3815	4.50
61, 88		3444	5.00
66, 77		3445	5.75
Dual 6, twin 8		3417	4.50
<b>OLDSMOBILE</b>			
393884-5, 405015-6, 405057-62		3461	5.25
<b>PACKARD</b>			
1933-1934		3320	4.50
<b>PHILCO (Less trade on old vibrator)</b>			
6F, 9F, 10, 11, 51, 800, '34 and '35 models		3320	4.50
<b>PONTIAC</b>			
544267-68		3461	5.25
<b>RADIART</b>			
B eliminator, 3310 Majestic Unit.		2867	4.50
<b>RCA VICTOR</b>			
63		3262	4.50
101, 104, 108, 160		3883	5.00
109		3806	4.50
M34, M105, M116, De Luxe		3319	5.50
M107		3417	4.50
M123		4415	6.50
<b>SILVERTONE</b>			
1933 models		2867	4.50
1934 models		3283	5.50
<b>SIMPLEX</b>			
T		2864	5.00
1935 auto, 6 volt house set		3679	5.00
<b>SOLAR</b>			
062, 062A		3443	5.00
<b>SPARTAN</b>			
33, 33A		3313	4.75
36		3315	5.25
296		3263	4.50
<b>STAR</b>			
062, 062A		3443	5.00
6U		3417	4.50

Make	Model	Stock No.	List Price
<b>STEWART-WARNER</b>			
131, 132		4260	\$4.50
1112, 1171, 1172		4260	4.50
1121, 1122		2867	4.50
R132 (7 prong)		4414	5.50
<b>STROMBERG-CARLSON</b>			
'33, '34 model		3318	5.75
<b>TROPIC-AIRE</b>			
06W, 06X		3318	5.75
<b>TRUETONE</b>			
062, 062A		3443	5.00
062-3rd series		2819	5.00
6U		3417	4.50
25Y		3883	5.00
<b>TRUEVALUE</b>			
6U		3417	4.50
<b>UNITED MOTORS</b>			
626-7-8-9		3461	5.25
2035, 4036		3313	4.75
4037, 4038		3315	5.25
'35 non sync.		3260	4.50
<b>UTAH "B" ELIMINATOR</b>			
Non-sync		3313	4.75
<b>WELLS-GARDNER</b>			
062, 062A		3443	5.00
072, 072A, 06W		3318	5.75
6U, 26U1		3417	4.50
Z8Z1		2819	5.00
37		3883	5.00
<b>WESTINGHOUSE</b>			
WR25		3299	4.50
WR26, WR300, WR501		3417	4.50
<b>WILCOX-GAY</b>			
4B6		3263	4.50
<b>WURLITZER</b>			
160		2867	4.50
<b>ZENITH</b>			
7, 460, 462		2867	4.50
Junior 7		3263	4.50
664, 666, 668		3865	4.50

## 32-VOLT HOUSEHOLD SETS

Make	Model	Stock No.	List Price
<b>ADMIRAL (L. Tatro)</b>			
F923		3462	\$5.50
<b>AUDIOLA</b>			
32 volt		3608	5.25
<b>CAPTAIN (L. Tatro)</b>			
F913		3462	5.50
<b>COLONIAL</b>			
1934 models		3503	5.75
<b>COMMANDER (Tatro)</b>			
E283		3462	5.50
<b>CROSLLEY</b>			
		3607	6.00
<b>DELCO</b>			
3203, 3204		4404	5.50
4049, 4050		3607	6.00
<b>GOVERNOR (Tatro)</b>			
N54		3463	6.25
N74		3395	5.00
<b>L. TATRO</b>			
C625, D625, F725		3395	5.00

Make	Model	Stock No.	List Price
<b>LT. GOVERNOR (Tatro)</b>			
L54		3463	\$6.25
L74		3395	5.00
<b>MAJESTIC</b>			
Complete pack		3316	10.00
Head only		3460	5.25
<b>PILOT (Tatro)</b>			
J5		3462	5.50
<b>PRESIDENT (Tatro)</b>			
081		3463	6.25
094		3395	5.00
<b>SILVERTONE</b>			
4 prong		3395	5.00
6 prong		3503	5.75
<b>SIMPLEX</b>			
'33, '34 models		3225	5.50
<b>WELLS-GARDNER</b>			
'34 1st series		3395	5.00
'34 2nd series		3651	5.50
1935 models		3651	5.50

# RADIO BATTERIES

Burgess "B" and "C" Batteries are Available with Combination Fahnestock Clip and Plug-in Connections

## New BURGESS Portable "B" Battery



Small efficient Portable "B" Batteries, especially designed for use in transmitters, portable radio equipment, laboratory and medical instruments. Despite their small size they have a long life.

No. A30BP—45-volt "B". Uses 30 cells. Size  $2\frac{1}{2} \times 4\frac{1}{2} \times 4\frac{1}{2}$ ". Shpg. Wt. 4 lbs.

List Price ..... \$1.44

Type Z30P—45-volts "B". Uses 30 cells. Size  $3\frac{1}{4} \times 1\frac{1}{2} \times 4\frac{1}{4}$ ".

List Price ..... \$1.50

## BURGESS Flat Batteries

For Analyzers and Flashlights

Large

No. 532— $4\frac{1}{2}$  volts. Size  $2\frac{1}{2} \times 2\frac{1}{2} \times 4\frac{1}{2}$ ". Has brass contact springs on top.

List Price ..... 30c

No. 432, same as Eveready 751.  $4\frac{1}{2}$  volts. Size  $2\frac{1}{2} \times 2 \times 4\frac{1}{2}$ ". Has brass contact springs on top.

List Price ..... 30c

## BURGESS BATTERIES



BURGESS batteries are the choice of most experimenters, radio amateurs and others to whom performance and reliability are important. Because of their uniformity Burgess Batteries assure uniform tone quality, better reception, and maximum economy.

Burgess No.	Volts	D.	Size, Inches W.	H.	Shpg. Wt. Each	Unit Pkg. Quan.	List Price
<b>SUPER "B" BATTERIES</b>							
21308	45	$4\frac{1}{2}$	8	$8\frac{1}{2}$	16	6	\$2.95
22308	45	3	8	$8\frac{1}{2}$	$10\frac{1}{2}$	6	1.95
<b>STANDARD "B" BATTERIES</b>							
10308	45	$4\frac{1}{2}$	8	$8\frac{1}{2}$	14	6	\$2.25
2308	45	3	8	$8\frac{1}{2}$	11	6	1.75
5308	45	$2\frac{1}{2}$	$4\frac{1}{2}$	$6\frac{1}{2}$	11	5	1.50
5156	22	$2\frac{1}{2}$	4	$2\frac{1}{2}$	5	4	.85
4156	22	$2\frac{1}{2}$	3	$2\frac{1}{2}$	2	4	.75
2156	22	$4\frac{1}{2}$	6	$3\frac{1}{2}$	5	5	1.50
<b>Police Radio Type</b>							
21305	45	$4\frac{1}{2}$	8	$8\frac{1}{2}$	15	6	\$3.60
<b>AIRCRAFT RADIO BATTERY</b>							
5966	135	$2\frac{1}{2}$	9	$7\frac{1}{2}$	9	1	\$7.25
<b>STANDARD "C" BATTERIES</b>							
5360	$4\frac{1}{2}$	$2\frac{1}{2}$	$4\frac{1}{2}$	$2\frac{1}{2}$	1	4	\$0.40
2370	$4\frac{1}{2}$	$1\frac{1}{2}$	4	3	2	10	.40
5540	$7\frac{1}{2}$	$1\frac{1}{2}$	4	$2\frac{1}{2}$	3	4	.65

## BURGESS "A" and "B" Midget Batteries



Use these new Burgess Midgets in your portable receivers. They are recommended for Amateur Clubs, Hospitals, Radio Stations, Construction Gangs—for any users of portable transmitters or receivers. They are Midget in size and weight, but they deliver a powerful, even current.

The Burgess 3-volt "A"—only  $1\frac{1}{2} \times 2\frac{1}{2} \times 3\frac{3}{4}$ " and weighs only 8 oz. The Burgess 45-volt "B"—only  $1\frac{1}{2} \times 3\frac{3}{4} \times 4\frac{1}{2}$ " and weighs just 14 oz.—less than an ordinary 45-volt "C" battery—but it will give 22 hours of intermittent service. Rated capacity—13-watt-hours.



T2FL—3.0-Volt "A" Battery  
List Price ..... \$0.35

Milliamperes Drain	60	80	125	250
Hours per Day	Ampere-Hour Capacity			
3	4.2	4.0	3.7	2.0
6	4.4	3.4	3.3	1.4
24	3.0	2.4	2.4	1.4

The above figures are based on 1.8-volt end point per 3.0-volt battery.

X30FL—45-Volt "B" Battery  
List Price ..... \$2.30

Milliamperes Drain	1	3	10	25
Hours per Day	Ampere-Hour Capacity			
3	.38	.351	.31	.25
6	.38	.351	.31	.25
24	.38	.351	.31	.25

All Ampere-Hour capacities are based on 1.13-volt end point for each cell in series.  
30 cells—45-volt battery=34-volt end point.



## BURGESS "Power House" 3-Volt "A Pack"

For Use with 2-Volt Radio Receivers  
**400 Hours Service**—Based on  $\frac{1}{2}$ -ampere discharge 3 to 8 hours per day using an end point voltage of 1.8 volts per 3.0-volt battery.

The Burgess Power House is scientifically designed for 2-volt tubes. Costs less than 1c per hour to operate. Developed in the laboratory, proved in service, this new dry "A" places radio on a high plane of convenience, reliability, and economy. There is no recharging; no servicing; no filling with water; nothing to spill; no creeping or dangerous liquids. It embodies a revolutionary "Close Pak" cell construction with expansion areas. Under intermittent service, "Chrome the Preservative" gives this new pack remarkable recuperative powers. It is necessary that a suitable resistor be used to step down the voltage to the required 2-volts.

Burgess 20F2 "Power House" (size  $11\frac{1}{2} \times 4\frac{1}{2} \times 6\frac{1}{4}$ " ) without the resistor.  
List Price ..... \$3.30

Resistor—For voltage control, having four positions and a switch which can readily be moved from one position to the next. This is essential on receivers without a built-in voltage regulator.  
List Price ..... \$0.25

## BURGESS "Little Six" Dry Batteries

Replacing the now obsolete Standard No. 6 type of battery, the new Burgess Little-Six saves 40% in weight and 30% in space, but retains all of the electrical capacity of the No. 6 cell. The Little-Six is a combination of size F cells, which are made of seamless drawn zinc cans, connected in parallel. Under typical conditions 40 watt-hours of service at  $1\frac{1}{2}$  volts may be obtained. Absolutely leakproof. Has adequate voids to collect any electrolyte which is accidentally spilled. It can be used successfully wherever Standard No. 6 cells are employed, and maintains a higher voltage than the Standard No. 6 cells. Wt. 1 lb., 6 oz. Size  $2\frac{3}{4} \times 2\frac{3}{4} \times 4\frac{1}{4}$ ".



A special type of Little-Six is made for Radio "A" use. This is ideal where uniform power, high sensitivity and hairline selectivity are desired. The Ignition Type Little-Six is the one most commonly used for general service.

4FH (Screw Terminal) Ignition type ..... List Price \$0.35  
4FH (Spring Clip) Ignition type ..... List Price .35  
4FA (Screw Terminal) Radio "A" type ..... List Price .40

## BURGESS Uni-Gel Batteries

Ideal for Testers, Analyzers or fountain pen flashlights. Burgess Uni-gel batteries are available in two sizes—No. 1, small size, and No. 2, large size.

List Price, Each ..... \$0.10



# RADIO BATTERIES



## Genuine Mazda Pilot Bulbs

Used for radio dial lamps, indicators, etc. Standard carton contains 10 bulbs. Shpg. Wt. 8 oz., per box of 10.

Volts	Amps.	List Price
2.5	0.50	Pkge. \$0.90
3.2	0.45	of 1.17
6.8	0.50	10 .90

### Special Air Cell Bulb

Tubular bulb, miniature base. 2-volts, 0.06-amps. Has lowest current drain of any bulb.

List Price, Each ..... \$0.33

### Victor-Mazda Pilot Bulb

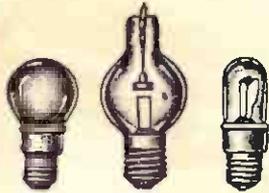
Intermediate base, frosted bulb. 110-volts. For use in Colonial, Victor, and other receivers.

List Price, Each ..... \$0.28

### Special Auto Radio Bulb

Round bulb, miniature base. 6-8 volts, 0.15-amps. Small size.

List Price, Each ..... \$0.13



## Genuine Tungar Bulbs

Used in battery chargers, "A" eliminators, etc. All guaranteed perfect. Tested before shipment.

Type	List Price
.6 amp.....	\$4.65
2 amp. (new).....	4.65
2 amp. (old).....	4.65
6 amp.....	9.30

## Tungar 5-Ampere Charger



For charging any 6-volt battery at home. Delivers full 5-amp. rate and tapers off as battery becomes charged, thus preventing overcharging.

Complete with receptacle for attaching to car and ammeter so that battery can be charged without removing it from the car. Complete with tube and all attachments. For 110-volt, 60-cycle A.C. Shpg. Wt. 12 lbs.

List Price ..... \$16.12

Note:—Other types of battery charges on hand. Call or write for information.

## NEW "HI-RATE" HOMCHARGER 10 to 6-Ampere Automatic

A heavy-duty charger for those who want the best. Fast 10-amp. charging-rate will charge any battery quickly, yet in perfect safety because of its automatic tapering feature. Equipped with accurate ammeter; no guessing about your charging. It uses no more current than smaller models. Charges a "dead" battery in from 15 to 30 minutes. Complete with ammeter, 10-ft. cables. De Luxe dash receptacle, bakelite charging-plug, operating and installation instructions. For 110-volt, 60-cycle A.C.



Shpg. Wt. 15 lbs.

List Price ..... \$16.95

## 6-Ampere Homcharger

Completely recharges "dead" battery in from 12 to 16 hours. Costs only 6 or 7 cents each time it is used. Comes complete with approved cables, steering post charging-clamp that fits all cars, complete instructions. One-year guarantee.

List Price ..... \$9.95

## NEW HOMCHARGER "BOOSTER"

A genuine Homecharger Booster at very low price. It contains no expensive bulbs, no erratic dry pack units, no liquids of any kind. Its only wearing part usually lasts 1000 hours or longer and is replaceable for only \$1.

Shpg. Wt. 7½ lbs. **Booster means low rate of charge.**

List Price, Complete ..... \$6.10



## MUELLER BATTERY CLIPS

Screw or Lug Connections. No solder required. Strong channel-construction throughout. Polarity indications.



Steel, Cadmium Plated	Steel, Lead Coated
No. 45—Pee-Wee, 1½" long. 5-amp. .... List Price \$0.05	No. 24A—2½" long. 25-amp. .... List Price \$0.10
No. 48B—2" long. 10-amp. .... List Price \$0.05	No. 21A—3¾" long. 50-amp. .... List Price \$0.20
No. 27—2¾" long. 10-amp. .... List Price \$0.12½	No. 11A—5¾" long. 100-amp. .... List Price \$0.50

### Solid Copper Clips

High-grade current carrying clips for general testing purposes.

No. 48C—2" long. 10-amp. .... List Price \$0.10
No. 24—2½" long. 25-amp. .... .20
No. 21—4¼" long. 50-amp. .... .60
No. 11—5¾" long. 100-amp. .... .85
No. 33—7¼" long. 200-amp. .... .95

## Hydrometer

To determine the exact condition of any storage battery. Durable rubber bulb, clear readings on float.

List Price ..... \$0.40



## The "ADD-A-CHARGER"



Whether you make battery charging a business, or merely charge those in your own cars and trucks—whether you wish to charge a single battery or many, the new Add-A-Charger idea offers the most economical, as well as the most satisfactory solution of your charging problems.

For in this revolutionary new charger you will find every feature you could possibly desire or wish—**Low Initial Cost—Lowest of all Charging and Maintenance Costs—Simplicity of Operation—Convenience and Safety in using—Fast or Slow charging—Unlimited Expansion** as your charging requirements increase.

Manufactured in two popular types. The Add-A-Charger Model, for "wall mounting" and "bench charging," is ideal for Public Garages, Battery Service Stations, etc.—wherever it is customary to remove the battery for charging. The Portable "Serv-A-Charger" Model for recharging without removing battery or floorboards is a great convenience to private "fleet" operators, "Rent-A-Car" Agencies, Taxi operators, Truck Owners, etc.

### STANDARD UNIT SIZES

Size of Battery	Charging Rate		List Prices	
	Cycles	Amperes	Add-A-Charger	Serv-A-Charger
B-3	6 volts	50-60	10-6	\$19.50
B-3	6	25-30-40	6-4	21.00
B-6	12	50-60	8-5	19.50
B-6	12	25-30-40	5-3	21.00
B-1	2	50-60	12-8	19.50
B-1	2	25-30-40	8-6	21.00

Available for 220-volts. **Add to List, \$1.50.**  
Extra Charging Clamp on type, Dash Receptacle, for use with Serv-A-Charger. **List Price ..... \$1.50**

# INDEX

This is a List Price Catalog, designed primarily to give you an opportunity to solicit consumer business. Use the catalog for that purpose and watch your sales and profits increase!

**DISCOUNTS:** Your confidential trade discount is indicated by the small figure which appears at the bottom-center of each page. Thus, where the figures 50, 40 or 30 appear, your discount would be 50%, 40% or 30% for the items on those respective pages. On some pages and individual articles only net prices apply; in such case the word "NET" appears at the bottom of the page or next to the item.

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