

INDEX PAGE 250 CATALOG ORDER CENTER 1012 McGPE, KANSAS CITY, MO. 64106 ARJA CODE 816 BA $1-2266$


KANSAS CITY, MISSOURI 1012 MeGEE \& 301 E. 55th
OVERLAND PARK, KANSAS 6808 W. 75th
DERVER, COLORADO 800 LINCOLN


## HOW UP TO 15 TIMES LONGER WEAR!

Features a new improved black oxide magnetic coating and a longer wearing binder system to permanently secure the oxide to the tope backing . . . vastly superior, 15 times longer wearing, compared to other red oxide topes. Anti-static properties of new black exide prevent dust particles from accumulating and pre vents recording drop outs all respects professional in

- finest quality • full range -by leading producer - satisfaction guaranteed


## STANDARD $112 / 2$ MIL ACETATE TAPES

Finest quality, splice-free ...better than competitive brands selling for considerably more.
Stock up now at B-A's low, low prices. Shpg. wt: $7^{\prime \prime \prime}-12$ oz.; $5^{\prime \prime}-6$ oz.



LONG-PLAY 1 MIL MYLAR TAPES
Extra-play, extra-strength tape providing 50\% Super strong ond playing time than $11 / 2 \mathrm{mil}$. temperature or humidity ... retains original charocteristics over longer period of time. Shpg. wt.


DOUBLE-PLAY $1 / 2$ MIL TENSILIZED MYLAR TAPE
Twice the recording and playing time of $11 / 2 \mathrm{mil}$. topes. Finest qualify, tear resistont. . made of super-strong tensilized Dupont Mylar, specially conditioned for best performonce alwoys longer life than plastic topes. 5hpa wh. 7"-2400' Reel $\$ 4.95$ IA944. Each 5 Lots

## EXTRA BIG SAVINGS ON RECORDING TAPE AND ACCESSORIES



225-FOOT 3-INCH I MIL ACETATE TAPE

## 3 for 996

High quality acetate base, for tape letters, dictotion, etc. Standard 3 inch reel fits for recorders. Good for 100's of recordings.
No. 11 A953.
Speciol,
${ }_{3}$ for $\ldots 99 \mathrm{c}$

## FULLY GUARANTEED

ALC FIRST QUALITY PRODUCTS
OF LEADING MANUFACTURER

B-A Buyers discovered a leading recording Tope Manufacturer (we can't mentar base name, with an excess inventory of first quality acetote and to lucky B-A customers at the lowest be "bought right" and passed olong All top quality $11 / 2 \mathrm{mil}, 50 \%$ longer play 1 mil , or double play $1 / 2 \mathrm{mil}$. All top quality. Guaranteed to please you, or your money bock.
$1 / 2$ MIL MYLAR BASE. $300^{\circ}$ on $3^{\prime \prime}$ Reel 69c $\begin{aligned} & 10 \text { @ } \\ & \text { No. } 11 C 676 \text {. Each................................... }\end{aligned}$ Each.
$1 / 2$ MIL MYIAR BASE. $600^{\prime}$ on $31 / /^{\prime \prime}$ Reel. $\$ 1.29$
No. 1 IC677. Each................................ 29
$11 / 2$ MIL ACETATE BASE. $600^{\prime}$ on $5^{\prime \prime}$ Reel 89C
No. 11A455. Each................................... 89C
1 MIL MYIAR BASE. $900^{\circ}$ on $5^{\prime \prime}$ Reel
No. 114457 . Each............................... $\mathbf{\$ 1 . 2 9}$
1/2 MIL MYIAR BASE. $1200^{\prime}$ on $5^{\prime \prime}$ Reel $\$ 1.79$
1 MIL ACEIATE BASE. $1800^{\prime}$ on $7^{\prime \prime}$ Reel $\$ 1.99$
No. 11 A460. Each.............................. 1.99
$1 / 2$ MIL MYIAR bASE. $2400^{\prime}$ on $7^{\prime \prime}$ Reel $\mathbf{\$ 2 . 9 9}$
No. 11 B602. Each............................. $\mathbf{\$ 2}$

HIGHEST QUALITY MYLAR


B-A'S TAPE RECORDER ACCESSORY KIT COPARARED TO

## ONLY <br> $\$ 735$

Always needed aids for better recordings
Kit contains o fost action
professional style editing of topes, magnetism, a telephone pickup for therder heads of noise producing permonent magnetism, a telephone pickup for phone recording, universal potch cord for of Your Tope Recorder". Top quality imports throughout. to Get The Most Out
of 128 page book. How No. 11 A604. Complete Kit Only.
$\$ 7.35$

Dt's The Choice of Profestionals AMPEX MODEL 86I SOLID STATE
COMPLETE
STEREQ RECORDER $\$ 29995$

THE FIRST AMPEX NATIONALIY ADVERTISED FOR LESS THAN $\$ 300.00$

8 WATT RMS, 16 W. PEAK POWER STEREO AMPLIFIER

MATCHED SPEAKERS ATTACH EASILY TO FRONT OF RECORDER

# 2 DYNAMIC MICROPHONES 

## Stereo Recorders!

## AMPEX ALL INCLUSIVE OME YEAR WARRANTY

If your Recorder should fail due to manufacturing or material defects Ampex will repair or replace it at no charge to you.

## AMWME <br> NEW 2161 PORTABLE STEREOPHONIE REGORDER OUTFIT

THREADS ITSELTF AUTOMATICALLYPLAY AND EVEN RECORDS A COMPLETE 4-TRACK TAPE TWO WAYS WITHOUT REELL CHANGING OR REWINDING

$\$ 599^{95}$
8 WATTS RMS-16 WATTS STEREO POWER
2 Model 2001 Hi-Imp. Mikes with matiching brushed aluminum bases.

## 2 MATCHED MODEL 2013 SPEAKERS SLIDE ON EASILY

In a class by itself the new ultro-outomatic Ampex 2161 portable outfit offers you the ultimate in automotic conveniences-automatic threading, outomatic you the ulfimate in automotic conveniences-automatic trreading, automatic reverse and now bi-directional recording! Now you can octualy recard addi-left-to-right and from right-to-left with no rewinding or reel chonging. In addition to ten extra-quality features common to all Ampex Tape Recorders the 216.1 incorporotes the unique built-in Monophonic Mixer. It permits you to mix both mike and line input together on a single trock to create
phonic recarding blencled together from two separate sound sources. The 2161 has 3 -position record and playback equalization control, adjusts amplifiers for optimum fidelity for record and plavback in each of the three speeds. Convenient stereo-phone jack located at top of deck. Vinyl covered top plite adds rich-looking customized oppearance to deck. Automatic shut-off switch turns off tape transport of end of tope. Muting switch for record monitoring Push-pull bass attenuator. On-aff pilot lightal
"Hidden" external input and output receptocles to eliminate unsightly tangled Hidden external Frietion-loaded volume controls for simultaneous adjusiment of individual cords. Friction-loaded volume controls for simultaneous adjusiment of individua The 2161 portable outfit includes Madel 2160 Tape Recorder, two Model 201 he 216 portable outfit includes Model 21 oo high impedance microphones, complete with matching brushed aluminum bases, and a poir of Ampex Model 2013 slide-on speakers. Each rich-looking speaker enclosure has a wooter, $31 / 2$ tweeter and comes with $a$ of ft . cord which ers attoched, $11^{\prime \prime} \mathrm{D} . \times 19^{\prime \prime} \mathrm{L} \times 13^{\prime \prime} \mathrm{H}$ Sopg. wht 40 lbs. No! 40B183. 2161 System as described above.. Net..
\$599.95

## NEW AMPEX 985 TOTAL MUSIC CENTER FEATURING STEREO TAPE RECORDER FM-AM-FM STEREO RADIO RECEIVER

 BEAUTIFUL WALNUT CABINET WITM DISAPPEARING TAMBOUR DOORSCombines the excellence of an Ampex automatle-reverse Tape Recorder with a fine new AM/FM stereo FM Radio Receiver-all in one smart, compoct unit All you add ore speakers and perhaps a record player to have all the components you need for a beoutiful, complete stereo high-fidelity system. Has all the features of other Ampex recorders with addition of phono inputs for magnetic cartridge.
$A M$ and $F M$. reception level indicator helps you odjust tuning for clecrest station reception. Dual ganged bass and treble tone contrals. Individual channel loudness controls. FM stereo Beacon Indicator. System Includes two high quality microphones.
Less speakers. Shpg. wt. 60 lbs .
No. 408185 . Model 985 Music Center
$\$ 599.95$
BEAUTIFUL WALNUT MATCHING 830 SPEAKERS
The perfect match for the 985 music center. Each speaker enclosure has on $8^{\prime \prime \prime}$ woofer and acoustically bolanced $3^{1 / 2 \prime \prime}$ tweeter. Shpg. wt. $25 \mathrm{lbs} \$ 99.95$
No. 40A186. Model 830 Speakers, Pair.


# Urollensek <br> <br> ALL ANERICAN MADE! 

 <br> <br> ALL ANERICAN MADE!}

SOLID STATE 5800 FULL STEREOPHONIC TAPE RECORDER
Two-Piece sliding doors intluded with Recorder,
Tuner and Storage Cabinet. Can be wall mounted


## BEAUTIFUL MALNUT WOOD

## CASES FOR MODULAR USE

## OPTIONAL MATCHING AM-FM TUNER WITH

TAPE STORAGE
A recorder the tope enthusiast will be proud to show in any room! It's component high-fidelity stereo, holsed in fine wolnut ... at a very modest price.
Separate modular units ore ompact, size $19^{\prime \prime} \mathrm{D} ., 11^{\prime \prime} \mathrm{H} ., 21$ " W.) and
lightweight lightweight, easy to rearrange with the furniture. Two-piece doors slide on tracks, add to the fine furriture look. Modules may be in-line end-toend or separated in any arrangement on bookshelves, tables, or wall. Recorder features the same as Madal 5740 (see opposite poge). Sound is
trenendous from a two-way high-fidelity system in eoch enclosure, $6 \times 9$. trernendous from a two-way high-fidelity system in each enclasure, $6 \times 9^{\prime \prime}$ elliptical and 3 inch tweeter.
Fren reso. $4 \mathrm{C}-17,000 \mathrm{cps} . \pm 3 \mathrm{cts}$. $71 / 2 \mathrm{ips}$; $40-10,000 \mathrm{cps} . \pm 3 \mathrm{db}$. @ $3 / 4$ ips. NARTB stondord equalization.
Model 5800 . Recoraer with sliding cioars, two Model 5800 . Recoraer with sliding coors, two speaker systems. With microphone
 No. 31 249. Shpg. wt. 50 lbs .
Net Each.
$\$ 299.95$

## WITH SPEAKER ENCLOSURES..



5810 FM-AM-FM STEREO MULTIPLEX TUNER. Recorc FM stereo with the 5800. Matching case. Stereo indicator light, vertical slide-rule dial outomatic frequency control. Meets famous Wollensak stondards. Solid stat? electronics. Includes two matching sliding doors and mounting brockets.
Specifications: FM; IHFM 10 uv, image rejection + 35 db . H.D. under $.5 \%$ @ $30 \%$ mod. Fieq. resp. Mono 40-15,000 cps.; Steres 40-12,000 cps. Sterco separation 25 db . @ 1 KC . If rejection 70 db . Size $9<11 \times 21$
No. 318250 . Shpg. wt. 20 lbs
Net Each
$\$ 169.95$

WALNUT
CABINET


## WITH DETACHABLE WING SPEAKERS AND RECESSED CARRYING HANDLE

# TAPA RHCORDHAS SIM 

 3-SPEFD 4-TRAYK STEREO RECORD AND PLAYBACKNEW SOLID STATE 5740


Superb features . . . priced with the lowest-cast sterea recorders. Sound quality for the most crltical music listeners. Vinyl covered wing speakers place anywhere for best stereo, grace ony room. Features Wollensok's exeiting "Sound with Sound", famous quolity and durability. New solid state design compocts size.
Only Wollensak stereo recorders oct as two separate monaural recorders, permitting recarding applications never dreomed of before, The 5740 records/ plays stereo or mono $1 / 4$ track at $71 / 2,33 / 4$, $17 / 8$ ips. Either channel may be used for public address. You can sing or play duets with yourself, call squore donces with pre-recorded music, add comments to pre-recorded speeches or longuage lessons, re-record previous recordings while listening to your first try, ete. Separote valume and tone controls, VU meters for each chonnel. Other advonced fectures are fast forword and fewind with interlocking safety con-

CENTER CONTROL PANEL
POWER OPERATED PUSH-BUTTONS

All Record / Play Functions at your fingertips
Separate VU Meters, Tane and Valume Controls for Each Channel.

## Wallensak <br> NEW 5730 4-TRACK 3-SPEED PORTABLE STEREO RECORDER

A stereo high fidelity portable with professional features Built for portability, ease of operation ond the reliability of operation that has made Wallensak famous. Its low cost is a pleasont surprise.
Plays ond records 4 -track stereo and monaural in elther vertical or horizontal Ploys ond records 4 -track stereo and monaural in either vertica, Feotures 2-VU meters, eosy to use center control panel, digltal tape counter automotic shut-off at end of tope, self-contoined reel locks, 3 speeds $(71 / 2,33 / 4 \mathrm{r} 17 / 8 \mathrm{ips})$, instont pause control, power activated push buttons, fast forward and rewind with inte-locking safety controls, automatic tape lifters, outoforward and rewind with interlocking safety controls, autornalfadjusting braking system. One dynamic micróphone, blank tope accessory cords and take-up ree included.
Frea. resp. 40-17,000 $\mathrm{cps} \pm 3 \mathrm{db}$ @ $71 / 2 \mathrm{lps}$. $40-10,000 \mathrm{cps} \pm 3 \mathrm{db}$ @ 15 wotts sach channel). Inputs for 2 -mikes and 2 -phono/radio. 2 self-con15 wotts each channel). inputs for $2-$ mikes and 2 external speakers and 2 -preamps. tained $4 \times 6^{\circ \prime}$ elliptical speakers. Outputs for 2 externa speakers and ${ }^{\prime \prime}$-preamps. Attractive high impact case constructian ibs. consumption 100 wotts AC only. Wt. 22 . 31 A215. Shpg. wt. 30 lbs . Net Each
$\$ 199.95$ No. MONAURAL MODEL 5710
2-Track manaural version of 5730 listed above. Some specifications except one input and single $4 \times 6^{\prime \prime}$ speaker. Wt. 22 lbs. No. 31 B217. Shpg. wt. 29 lbs. Net Eoch.
$\$ 159.95$


## WOLLENSAK KEYBOARD CONTROL MODEL 150055

## MOLLEMEAK FINIE $A$ CCF $2 \cdot 6 \cdot 1=5$

TF404 Foot Control. Starts and stops tope with monual operotlon. 1500 Series
No. $\mathbf{2 9 A + 1 9 .} \mathbf{~} \mathbf{\$ 1 7 . 5 0}$
A-0458 Eorphone with pin plug.
A.0458 Eorphone with pin plug. $\$ 10.50$ A-0455 Microphone Extension Cord. 15 ff.
No. 31A55. Each.....a...................... $\$ 7.50$ A-0456 Carrying Cose for 5710, 5730. No. 31 B56. Eoch.
10.95

A-0454 Dynamic Mike.
No. 39Al 84. Eoch
A. 0460 Mike Stand.

Na. 39A185. Each. . $\$ 7.95$
TSC405 Corrying Case for 1500 series.
No. 31 C296. Eoch .--

## IMPROVED SOLID STATE VERSION OF FAMOUS MODEL 1500... FEATURES RECORDING LEVEL METER PLUS ALL TRANSISTOR ELECTRONICS - 2 TRACK MONAURAL

A marvel of compactness using minioturized components and oll-metal airplone construction. A superior monoural tape recorder. Provides UP to 4 hours recording time on $7^{\prime \prime}$ reel using long play tape. 12 watts push pull cutput is four times greoter than ordinary recorders. Features keyboard control. Dual speed, operates of $33 / 4 \mathrm{lps}$ and $71 / 2 \mathrm{ips}$; level recording meter, precision index counter.
Specifications: Frequency response: $40-15,000 \mathrm{cps} \pm 3 \mathrm{db} @ 71 / 2 \mathrm{ips}$; $40-8,000 \mathrm{cps} \pm 3 \mathrm{db}$ @ $33 / 4 \mathrm{ips}$. Both speeds, signol to noise ratic 48 db . Wow and flutter less than $.3 \%$. Operistes from $110-125 \mathrm{~V} .60 \mathrm{cy}$.
AC. Size $61 / 2 \times 101 / 4 \times 113 / 4^{\prime \prime}$.
Complete with dynomic microphone, 2 reels (one with tope). $\$ 184.95$
No. 37 D 232 . Shpg. wt. 23 lbs. Net Eoch. No. 37232. Shpg. wt. 23 lbs, Ner Eoch

QUANTITY USERS: Schools, Churches, Institutions write for special quotes for any Wollensak recorders in lots of 12 or more.


RECORDS 4 HOURS ON 7" REEL

## PANASONIC



Sosnd-on-sound and Pam-A-Trak for language or usic study.
2-Speeds $71 / 2$ and $33 / 4$ ips. Automotic shutoff

- 2 built-in 3×5". PM speakers.
- Tekes up to 7 reels
- Vertical or horizontal operotion.

AC bias on Record and Erase heads.

- Up to 6 hours mono, 12 hrs. stereo record/play
- Frequency response 60-15,000 eps.

Provides brilliant stereophonic recording and playback of the lowest price ever. Provides such out standing features as provision for monitoring while recording, pouse lever, separate volume and tane controls for each chonnel. Inputs, 2 each for microphone and ouxiliary. Outputs 2 each for external speaker and for line. 2 VU meters for accurate recording level setting. Conservatively rated output 4 watts EIA sterec, 8 watts music power. Size $133 / 4^{\prime \prime}$ W., $161 / 2^{\prime \prime} H_{0,} 8^{\prime \prime}$ D. Cabinet of wood covered with scuff-resistent vinyl. Color charcoal gray, 117 V. AC operation. Accessories included. 2 high-fidelity microphones, $7^{\prime \prime}$ reel of tape plus empty reel, splicing tape, 2 radio/TV potch cords,

## \$15995

2 line cords, 2 extra plugs. Wt. 27 lbs. Less exension speakers shown above. Shipg. wt. 32 lbs.
No. 39 A 248 . RS755s. No. 39A248. RS755S.
$\$ 159.95$

MODEL RS7555 Recorder with matching extension Speakers as shown above. Each side contains P $^{\text {P/ }}$ PM high-fidelity speaker with 8 H. cord and connecting plug. Two speaker units lock together for ease of corrying. Size in locked position $155 / 8 \times$ $16 \times 9^{\prime \prime \prime}$ Tatal weight of speokers 15 lbs . Shog. wt. 20 ibs. Complete system including ali occessories described with recorder above plus matching extension speakers. | extension speakers. |
| :--- |
| No. 39A249. Shpg. wt. |
| 52 |
| lds. Net |
| 199.50 |


panasomic

## FEATURE OPTIONAL USE WITH VOICE-AGTUATED MIGROPHONE Operate on 6 Flashlight Batteries or Crdinary House Current

6 Transisfors 3 Diodes 1 Thermisfor


UP TO 2 HOURS ON 3-INCH REEL


POSTPAID ANYWHERE IN U.S.A. Automatically starts recorder at sound of voice or
music. When sound stops, recorder stops automatically.
Leove recorder unottended for zillions of special uses
never before possible.
No. 31 C264. RP950 Microphone. Each......... $\$ \mathbf{\$ 9 . 9 5}$

## SPECIAL REVOLUTIONARY AUDIO-MATIC MICROPHONE



- One Full Year parts Warranty ... Your Money Back if you're not more than pleased. Constant-speed Capstan drive: $17 / 8-33 / 4$ ips. Tiny in size, and lightweight for easy carrying. Masterpieces of miniature construction. Optional Audio-Matic Microphone opens a new world of recorder uses. Record telephone conversations, conferences, meetings, secret conversations, and dictate; hands free... without touching the recorder. Big recorder sound ... superb recordings . . clear est playback with powerful amplifier and speaker Latest electronic design uses 6 transistors, 3 diodes, AC bias record system, powerful 700 MW amplifier, built-in 115 V . AC power supply. If power fails, batteries take over. Rewinds 200 ft . tape in $11 / 2$ min. Signal to noise: 40 db . Includes highly sensitive dynamic microphone with Start/Stop Switch,

Powerful $31 / 2^{\prime \prime}$ dynamic speaker, single lever funcmeter, fast forward, 2 -track record/play Tape, and Takerup Reel, Patch Cord, Earphone, 6 ' $D^{\prime \prime}$ - size batteries. Famous Panasonic ImDort. $3-\operatorname{In}$. Reell RQ-102. $95 / 8 \times 81 / 2 \times 3^{\prime \prime}$. Weight: $41 / 2{ }^{\prime} \mathrm{lbs}$. No. 31 E 270 Postpaid, add no money for shipping. $\$ 49.95$ 5-In. Reel RQ-152, with special extra features. Variable tone controi, doubles as volume control to monitor recordings with internal speaker, or earphone. Flus digital tape counter with reset button. Weight 7 lbs. Postpaid, add no money for shipping. 31C275, Net Each.
318206. Foot Switch for dictation. Net Ea....... $\$ 9.95$ 318208. Telephone Fick-Up. Net Each

5-IN. REEL RQ152
RECORDS UP 104 HOURS
$\$ 89.95$
MODEL RQ- 105

$$
\$ 39^{95}
$$

PANASOME SOL:D-STATE BATTERY TAPE RECORDERS

Start-stop remate microphcne - Constant speed Capstan drive.

- 115 V. AC aperation with odaptor - Voice actuation with Audio-Matic mike

Book size with full teatures like the higher-priced recorders. Ideal for toping letters, for meetings, classrooms conferences. Quick, easy and fun to make recordings with these low cost recorders. Constanti speed Capstan drive, $33 / 4$ and $17 / 8$ ips, permits interchange of tape with other recorders. Powerful $31 / 4^{\prime \prime}$ dynamic speaker for wonderfully cleor recordings even with music. Both models complete with tape, take-up reel, botteries and remote control dynamic microphone.

## PUSH-BUTTON MODEL RQ-105

Piano-key push-buttons control record, fost rewind, stop, play and fost-forward functions. Operates on With batteries. Shog. wt. 7 lbs.
No. 310266 . Quality Import. Net Each. $\$ 39.95$

## NEW LOW COST MODEL RQ-113

Operates anywhere - so compact lightweight. Size only $9 \times 31 / 4 \times 10^{\prime \prime}$
Shpg. wt
6
No- 39 A 252 Net Each
$\$ 29.95$

## ACCESSORIES FOR RQ105 \& RQ113

No. 318207 . Adaptor for 115 V. AC. Each....... $\$ 5.95$ No. 31B208. Telephone Pickup. Net Eoch........ $\$ 4.95$ No. 318206. Dictation Foot Switch. Net Ea.. $\$ 9.95$ No 31C264. Voice actuated Mike. Net Ea... $\$ 19.95$


A CARTRIDGE IN AND IT'S READY Easlest to operate tope recorder ever. Just slip a tope cartridge into the recorder ond ploy and record for up to one full hour., Truly portoble. Just $31 / 2$, "Dss; Size only $9 \times 45 / 8 \times 21 / 4$ ". Powered by 5 standors "C' flashlight batteries. Goes anywhere...plays anywhere. Big PM dynomic speaker ossures rich, beautiful sound reproduction. Frea. response $100-7,000$ cps. Remote dynomic microphone with stand. VU meter recording level indicotor. Fost forword ond rewind. Tape speed $17 / 8 \mathrm{ips}$. Complete with mike, private earset, carrying cose and shoulder strop, botteries and tope cortridge. Shpg. wt. 5 lbs.
No. 39 A251. Import Special. Each.
\$69.95 No. 11A563. Extra Tope Cortridges:. Eoch ....... \$3.56 No. 31 B207. Adoptor for 115 V. AC. Each....... $\$ 5.95$ *Cortridges are interchangeoble with Norelco, Wollensak, GE, etc., recorders.


## Noreten (commenta 420" <br> Norelco COMPLETELY SELF-CONTAIMED



PROFESSIONAL QUALITV FEATURES, PERFORMANCE ANO VERSATILITY WITTH COMPLETE TAPING CAPABILITIES FOR MIXING, PARALLEL PLAY, DUOPLAY AND MULTIPLAY.

- 4-track stereo record/playback. 4-track mono record/playback.

An amazing value truly unsurpassed by any other recorder in its price class. Highly desirable fram its handsome low silhouette decorator styling to its exceptional performance to please the most critical high fidelity listener. With its unusual versatility, which permits more toping capabilities than ever imagined, it has been designed with operating simplicity in mind
Push-button control function center for Record, Play, Fost Forward, Rewind ond pouse. Speciol bonus feature lets you presef recording level while tape is stationary. Magic eye recording monitor determlnes proper level to record. Tone control lets you select required boss or treble response. Monitoring focllities permit distening in during recording with headphones or through speakers. 4 digit push-button reset progrom indicotor.
Dual solid-state recording ond playback preamplifier and power amplifiers meet professional high fidelity standards. Has necessary power requirements for public oddress use in auditoriums, etc. Feotures world-renowned Norelco high efficiency speakers lone in detachable lid, other in cabineft. Freq. respanse: $40-18,000 \mathrm{cps} \pm 3 \mathrm{db}$. $\mathrm{Q}^{2} 71 / 2 \mathrm{ips} ; 60-15,000 \mathrm{cps} \pm 3 \mathrm{db} @ 33 / 4 \mathrm{pps} 60-$
 Signal to noise ratio: better than -45 db . Inputs: stereo mike, 2 for phono, rodlo, or tuner (mono or stereo). Outputs: external speokers, external amplifiers, stereo headphones. Supplied with professional stereo microphone-actuolly 2 mikes in one which outomatically seporates sound coming from each direc-
Special copabilities include: Mixing for recording of two programs simultaneously such as mike with radio or phano. Parallel playback for playing two programs sound. First recording mar be monitored ly. Duoploy for recording sound on play for simultoneous reccrd and playback. Recording second recording. Multiwhile recording on second track. Playback perfectly balanced combination of both recordings on second track. May be repeated unlimited number of times Smart feakwood cabinet decorator designed for home as well os profersional tise. Size $17 \times 14 \times 9^{\prime \prime}$. Complete with stereo mike, take-up reel, V. $6 C \mathrm{cy}$. AC. Shpg. wt. 22 lbs .

No. 31A293. Model 420. Each.
No. 31 2294. Foot Control. Eoch
$\$ 239.50$ Eoch
No. 31 B295. Stereo Heodset. Eoch....
$\$ 15.90$
$\$ 17.15$
No. 31A298. Telephone Pickup. Each
$\$ 7.45$

Lotest rage in tope recording ind litte wonder for its rise to swe unporalled popularity! Just snap in a tape cartridge, flick on the switch a record or playback. Loads unloads ond rape cartridge, flick on the switch to stops, winds, rewinds. Solid-state for instont use without worm-up. Plays 60 minutes with standard cartridge or 90 minutes with new long-play cortridge Tape speed $17 / 9 \mathrm{ips}$, Copstan drive for constant speed dual-track operation permitting interchange of tapes with other cartridge recorders.
Combination recording level/battery life meter to ossure finest recordings afways. Ulitra-sensitive remote control micraphone with built-in start/stop switch. Surprisingly fine tone quality with self-contained wide range speaker. Frea. amplifiers and heocos $\pm 3 \mathrm{db}$. Wow and flutter: $0.35 \%$. Outputs for externol amplifiers and heodphones. Inputs for mike, radio/phono or other recorder. Operates on just 5 standard " C " floshlight batteries. High impact plastic case Only $73 / 4 \times 41 / 2 \times 21 / 4^{\prime \prime}$. Weighs only 3 lbs. with batteries. Complete with black vinyl carrying case, mike, mike pouch (doubles as mike stand for conference) tape cortridge and potch cord.
No. 318224. Madel " 150 ." Eoch
$\$ 89.50$
No. 31A329. AC Adoptor/Botter
No. 31A299. Tape Maller. 10 for

## CAR MOUNT FOR MODEL " 150 "

for using Carry-Corder as tope system for your automabile. Simple to installmounts under dash. Complete with adoptor to work through auto rodio ampllfier and speaker conserving recorder botteries. Size $1112^{\prime \prime} \mathrm{L} \times 3^{\prime \prime} \mathrm{D} \times 5^{\prime \prime} \mathbf{2}^{\prime \prime} \mathrm{W}$ Shpg. wt. 2 lbs.
No.31832. Each
$\$ 29.50$


Surpasses all other battery-operated portable recorders in dependability, durability, and fine quality performance. Long a favarite of broadcasters and other professionals. Simple push-button operation. Bass/Treble tone controls. Combination Recording Level/Battery Life Meter. Copstan drive for constont 17 mbi speed. Dual track operation provides three full hours recording and ployback on a $4^{\prime \prime}$ reel of tape. Self-contained wide-range Norelca $4^{\prime \prime}$ speaker reproduces sound quality for superior to other recorders its size. Freq speaker reproduces cps. Ultra-sensitive dynamic mike. Output for external amplifier. Inputs for radio phono etc. High-impoct polystyrene case takes abuse Size $11 \times 33 / 4 \times 8^{\prime \prime}$ Weighs only 8 lbs. with batteries. Operotes on 6 "D" floshlight ceilis. $\$ 79.50$
No. 314327 . Each No. 31 A328. Eoch
No. 31A329. AC Adaptord Corrying Cose. Each ............................................ $\$ 7.90$ No. 31 A330. Remote Control
$\$ 19.90$


Preclsion quality of budget costl Rugged and dependable, tops in convenience and simplicity. Features outomatic record control to electronically set correct volume for recording; foolproof push-buttons for record, playback, wind, rewind, pause and stop; adjustable cantrols for on/off, volume and tone. Capstan tape. High efficiency $4^{\prime \prime}$ speaker for fine tope. High efficiency 4" speoker for fine tone qualfty. Freq. response 80-12,000 cps. Wow and flutter: less than $0.2 \%$. Inputs for mike, radio/phono. Outputs: Radio/Phono/TV, external omplifier
Handsome low profile polystyrene cobinet, $141 / 4 \times 10 \times 5^{\prime \prime}$.
No. 31c3i2. Net Each.
60 cy. AC.
$\$ 79.50$

## N○iz… ACcFBEO:TIFS

| C-60 Tape Cartridge. Dual trock $17 / 8$ ips. Fits Norelco 150, Woilensak, Pona- | HP-86 Headset. For 150 and 101. <br> No. 318303. Each |
| :---: | :---: |
| sonic, GE, Standard, etc. recorders. | CTM-86 Close Tolking Mike for 150 |
| No. 318225 (300 Ft.). Each.........\$2.95 | and 101. Cuts out background noise. |
| C-90 Tape Cartridge. As obove. No. 318300 . ( 450 Ft.). Eoch | No. 318302 . Eoch............. $\$ 29.25$ |
| FP-86 Foot Contral for 150 and 101. <br> No. 318301 . Each | TP-86 Telephone Plek-Up for 150,95 and 101. |

C-60 Tape Cartridge. Dual track 17/8 HP-86.Headset. For 150 and 101. ips. Fits Norelco 150, Woilensak, PanaNo. 31 B 225 ( 300 Ft .). Each......... $\$ 2.95$ C-90 Tope Cartridge. As obove. . 3 B300. (450 fi.). Eoch No. 318301. Each $\$ 17.75$ and 101 Cuts out backoround 150 No. 318302 . Each $\$ 29.25$ TP-86 Telephone Pick-Up for 150, 95 No. 318305. Each

## WOLLENEAK FULL STEREOPHONIC VERY POPULAR MODEL 1288 TAPE RECORDER

COMPLETE 4-TRACK STEREO


SOUND-
WITHSOLND

## SAVE \$91.00 WHILE LIMITED QUANTITY LASTS!

B-A REG. PRICE WAS $\$ 239.95$

## WALNUT BOOKSHELF SPEAKERS COHTAIN

 $6 \times 9^{\prime \prime}$ ELLIPTICAL WOOFER, \& $3^{\prime \prime}$ TWEETER WITH CROSSOVIR NETWORH- Studio performance in a living room setting.

Separate VU meters, tone and volume controls for each channel
Operates vertically or horizontally.
-A REC. PRICE WAS $\$ 239.95$

Features exclusive Tab Controls, permitting recarding and playback simultaneously
on separate channels. Designed for sound reproduction to satt-in reliability well-known to Wollensok users ... plus attractive styling to fit gracefully even in the living room. Wood-cosed bookshelf speakers provide the best stereo spacing in any size room. All these supert speakers provide the that compares with the lowest-cost stereo recorders. Records and plays 4 -trock stereo or mono of $33 / 4-71 / 2$ ips. Has separate volume and tone controls, with VU meters for each chonnel. Operates harizontally or ond fortically. Other advanced feotures ore fost forword and rewind with interlocking softety contrals ond automatic tape lifters; pilot light; manitor focility; self-ad-


Designed for case of operation and of operation and
flexibility of use. flexibility of use.
With these four With these four
tabs you have all tabs you have ell
record/ployback functions of youl fingertips.

## COLUMBLA MASTERWORK

 SOLID STATE PORTABLE TAPE RECORDERTAKES 7 -INCH REEL FOR EXTRA LONG PLAYING TIME


Best buy we've seen for the money. Specially imBest buy we've seen for the money. ot budget cost.
Simple to operate with push-button controls for Play/Stop/Rewind/Fost Forward. Also On/Off/Volume; Tone; Recard Lock; Digital tope footage counter; Recording level meter; and pilot light. Twa speeds $33 / 4$ and $71 / 2$ ips for up to 4 full hours recording. Rich toned sound through fine quolity $3 \times 9^{\prime \prime}$ oval speaker. Freq. response 100 to $10,000 \mathrm{cDs}$ of $71 / 2 \mathrm{ips}$. Accessory cords for recording from radio, TV or phono. Output jock for monitoring with earphones. Rugged all-wood case covered in two-tone gray leatherette meosures $12^{\prime \prime}$ wide, $51 / 8^{\prime \prime}$ high, $13^{\prime \prime}$ deep. Complete with sensitive mike, monitoring earphone, 600 ft . reel of tape, empty $7^{\prime \prime}$ reel and olligotor clip accessory cord. 110 volt 60 cy . AC. Shpg. wt. 18 lbs .
No. 31 B194. Imported.
Special Each.
$\$ 79.95$

## CONCORD HIGH FIDELITY TAPE REGORDERS! ALL SOLID STATE 3-SPEEDS - $71 / 2$, $33 / 4$ AND $71 / 8$ IPS.



BOTH THE MODEL $220 T$ AND 122 FEATURE STURDILY CONSTRUCTED SCUFF-RESISTANT VINYL COVERED CARRYING CASE

- Digital counter. on more expensive recorders.
- Storage for occessomies.

MODEL 220 DT DELUXE PORTABLE Work horse of the imdustry. Hundreds in use in language labs and ather commercial applicotion where excellent performance and long fime trouble free operation is absclutely essentiol. Push-button operations provide easy fool-proof cantrol of every function. Motor is varisync for flutter-free operotion Microphone is odvance designed hi-fidelity. Includes outomatic equalizatian, magic-eye level indicator; incorporotes feotures for setting of record level without tape moving, tore control, cue and edit button, $6 \times 4^{\prime \prime}$ oval speaker, 1 microphone input 20,000 ohm unbalanced, 1 -rodio phono 1,000 ohm unbolanced. Frequency response $\mathbf{~} \mathbf{C C}-15,000 \mathrm{cps}$ @ $71 / 2 \mathrm{ips}$, 40 $10,000 \mathrm{cps}$. @ $33 / 4 \mathrm{ips}$, 40-5,000 cps @ $17 / 8 \mathrm{ips}$. Output impedance 3 ohms. Size $12 \times 13 \times 71 /^{\prime \prime}$. Wt. lbs. Includes dynomic microphone, earphone,

- Takes 3, 5 and 7 "0 reels.
- All conirets on fop for ease of operien.
take-up reel, radio.'TV recording patch cord. Shpg.
wt. 27 Ibs,
$\$ 119.50$ No. 31 A276. Net Eoch.

MODLL 122 PORTABLE
A superb recorder featuring mony of the qualities of the 270T listed above. Has VU meter for orcurate setting of recording level. Single knob selects speed of $71 / 2,33 / 4$ or $1 / 8 \mathrm{ips}$. Other controts include volume, tone, fost forword, play, recond, rewind. Lorge ${ }^{\prime \prime}$ " high fidelity console type speoker provides highest sound quality. Input for uwxiliary microphone. Output 3 ohms for earphone lincluded Includes on speoker. Size $4 \times 6 / 2 \times 1$, wt. 17 ibs Notch cord and take-up reel.
No. $3182 \%$. Shpg. wt. 22 lbs . Net Eoch. $\$ 99.50$
No. 3182\%9. Shpg. wt. 22 lbs. Net Eoch. $\$ 99.50$


## \$14.95 FREE EXTRA BONUS

DELUXE STUDIO QUALITY STEREO HEADSETS-frequency response 25 $18, C 00$ cps. Gives the sensation of your ewr private music hall. With function box connector.

B-A's LOW PRICE


NOTHING DOWN
HUSKY OVAL 8-IN. SPEAKERS

# B-A DELUXE SOLID STATE FULL STEREO TAPE RECORDER 

## 4-TRACK STEREO RECORD/PLAY, SOUND-WITH-SOUND, $30^{\circ}$ TILT-UP FRONT PANEL PROFESSIONAL FEATURES

3 Speeds: $7 / 2,33 / 4,17 / 1$ ips for up to 16 hours recording

## HIGH QUALITY POCKETABLE SOLDSTATE TAPE RECORDERS

## take your cmoice of cartridge

Outclasses and out-performs other recorders selling for many $\$ \$ \$$ more. Attractively and expensively styled... it's portable, rugged and reliable. and reliable.
Husky 8 -ine Husky 8 -inch oval speakers powered by 6
watts of stereo give exceptional Wails of stereo give exceptional tone with $15,000 \mathrm{cos}$, usable frequency range of 50 15,000 cps, usable range of $20-20,000 \mathrm{cps}$. SOUND WITH SOUND permits recording one channel while playing the other channel, adding voice commentary to music; language or music practice, efc. One or both channels can be used for public address.
trols, are grouped fogether for each channel

Exiremely fast forward and rewind averages 120 ips. Inputs for microphone, radio/phono Outputs for external speakers. Signal to noise ratio: 45 db . Wow and flutter less than 0.25 RMS @ $71 / 2$ ips. Precision digital tape counter
Sturdy wood case covered with charcoal leatherette. Operates with lid closed over $7^{\prime \prime}$ reels. With matching senslive microphones for stereo recording. $110-120 \mathrm{~V}$. AC 40 watts. UL listed. Size $15 \times 153 / 4 \times 9^{\circ \prime} \mathrm{H}$. Shipg. Wt. 30 lbs.
No. 31C111
With Free Bonus Headphones. $\$ 149.50$

Here's engineering integrity and high quality without compromise by Standard, a world leader in electronics. Student or businessman, anyone desiring truly miniature size recorder's of outstanding dependability and convenience will choase of of these miniature gems. Both feoture capstan-drive to permit interchonge ers, optional AC operation and are complete with leather carrying cases and shoulder straps.

## SR-100 CARTRIDGE TAPE RECORDER

Just insert cortridge and you're ready for 60 minutes of recording and playback Simple controls for fast forward, rewind, record and play. Professional VU meter bottery-life indicotor, privote earset, and $8^{\prime}$ potch cord are other conveniences,
 teries. Complete with 3 tope cortridge.
$\$ 59.95$
No. 318120 . Shpg. wt. 4 lbs. Import Special, Eoch. No. 11 AS63. Extro Tape Cartridges. Each..
No. 31C133. Adoptor for AC Operotion. Each

## $\$ 3.56$ $\$ 7.95$

## SR-200 PUSH-BUTTON MINI TAPE RECORDER

 Our smallest copston-drive recorder, measures only $23 / 8 \times 42 / 5 \times 72 / 5^{\prime \prime}$ for true pocket-size convenlence. Amazingly simple to operote too! Four pianotype push buttons control entire operation-rewind, fast forward, record and play For extro versatility supplied with telephone pickup and extension speaker jack Records 50 minutes on 2 " tope. Operates on 6 "AA" pencell batteries. ShDg Wt. 41 lbs.$\$ 44.95$
B-A's AMAZING WRGH-FIDELITY SOLID-STATE PORTABLE RECORDER OPERATES ON 115 YOLT AC OR BATTERES

$$
59^{s}
$$

## OPERATES VERTICALLY OE HORIZONTALLY

Rugged and dependable with quality and features you would normally expect to pay $\$ 89.95$ and up for. Operates upright or ir lay-down position. Weighs just 7 bs. and aperates while being carried, 2 mikws: start-stop remote contral dynamic mike for "live" recordings; Vacu-mike for direct recording from radio, phono, telephone, musical iristmument, etc.-acheres to any resonant surface. Voice-actuated mike optional.
Music recordings playbock with astonishing high-fidelity quality. Freq. response 100 to $8,000 \operatorname{cps}$ at $33 / 4$ ips. Voice recordings ore unusually natural and clear. Fast, sure-action push buttan fingertip control of rewind, fost forward, playbock to 4 hours playing time. Dual speed (17 $7 / 8$ and $33 / 4$ ips) half-track capstan drive, $4^{\prime \prime}$ oval dynamic speaker, jacks for external speaker or earphone Inexpensive operation with $4^{\text {"D }} \mathrm{D}$ " loshlight batteries or plugs into 115 V . AC house current.
Luxurious leather covered case, Size, $4 \times 8 \times 11^{\prime \prime}$. Shpg. wt. 9 lbs. with botteries. No. 315288. Import Speciol, Eech.
\$59.95
OPTIONAL VOICE-ACTUATED MIKE. Starts and stops recorder automatically by Nound
\$19.95

No. 114946 , 2" Reel Mylar Tope. Each................49e 10 Each.................. $\$ 7.95 \mathrm{c}$
SUPER-SENSITIVE 5-TRANSISTOR SOLID-STATE HAND-HELD


[^0]
## MINNESOTA MINING "SCOTCH" BRAND TAPES 3 m tapes with cellulose acetate backing

Most widely used of all magnetic recording tapes. Smooth and flexible provides flowless sound reproduction of lowest cost. Its flexibility allows perfect head conformity, produces excellent wide range response.
TYPE 111 GENERAL PURPOSE STANDARD TAPE- $11 / 2$ MIL ACETATE. Regarded os the performonce standard of the recording industry. All-purpose first-choice of most engineers and recording fans for flawless sound repro-
duction. On easy threading clear plastic reels. $101 / 2^{\prime \prime}$ reel is aluminum. Stk. No. Foct. No. Reel Lgth. Wt. Mfg. List Each Quantity Price
 TYPE 120 "HIGH OUTPUT"-STANDARD PLAY- $11 / 2$ MiL ACETATE. Produces $100 \%$ more output, results in greater dynamic range, freedom from distortion or signal peaks
brilliant sound reproduction. A fons.
Stk. No. Fact. No. Reel Length wt. Mfg. List Each Quantity Price

$\qquad$
TYPE 190 EXTRA PLAY TAPE-1 MIL ACETATE. Gives 50\% greater time ThPE $11 / 2$ mil tapes on same reel size. On clear plastic reels except $101 / 2^{\prime}$ aluminum, NARTB type.
Stk. No. Fact. No. Reel Length wt. Mfg. List Each Quantity Price



NEW 3M HEAYY DUTY "TENZAR" BACKED TAPES
Priced only slightly higher than acetate-backed tapes, yet provides 15 times more wearobily. Perfect for educational black oxide coating. On clear weather use
TYPE 175 "TENZAR"-STANDARD PLAY-I $1 / 2$ MIL BASE.
Stk. No. Fact. No. Reel Length wt. Mtg. List Eoch Quantity Price
 $114756 \quad 175-1 / 4-1200$

## SCOTCH LEADER AND TIMING TAPE <br> AND SPLICING TAPE



## PLASTIC LEADER AND TIMING TAPE

For splicing onto ends of recorded tapes to prevent repeated breakoge; or between selec and timing. White. Write-on type.
No. IIAST8. Type 24-1W. $1 / 4^{\prime \prime} \times 12$ @ Each
. ............ 54 C


SCOTCA TYPE 41 SPLICING TAPE
Specially compounded, non-oozing. $3_{3}^{71}$ is applied lengthwise, others crosswise, then trimmed.

CONDUCTIVE CUEING AND REVERSING TAPE. Electrically conductive metal foil on tough Mylar bose with non-oozing adhesive back. Attoches directly toil on tough Mylar base with non-oozide of recordina tave without solicina. Re-usable. Mta. List $\$ 2.00$. No. 11 B729. Scotch Type $51^{1-7 / 32 S}$. $3^{\frac{3}{32}}{ }^{\prime \prime}$, wide $\times 150 \mathrm{in}$. Roli.
Net Each. .
$\$ 1.70$

## EMPTY CLEAR PLASTIC TAPE REELS IN SCOTCH BOXES

Capacity roting is for standard $11 / 2$ mil base tape

$1187287^{\prime \prime}{ }^{\prime \prime} 1200^{\prime} 5 \mathrm{oz} . \$ 1.0012$ @ Ea. $\$ 0.90$
TRUE-RUNNING $101 / 2 "$ REELS WITH BOXES
No. 11 A 603 . Aluminum NÁ Type with Flanges.
No. 11 A549. Plastic ElA Type (with 3 holes).
Choice Each. . . . . 83.00 ( 12 Ea.. . . . 52.70
scotch No. 12 END-OF-REL TAPE CLIPS
Clips securely to tape. Fits inside reel, won't distort.
No. 114186 . Pockoge of 10 Far

## HEW 3M "DYMARANGE" TAPE

Provides brilliont low noise recording of half the normal recording speedstwice the time, yet total fidelity plus economy. The No. 1 choice of professionals and advanced non-professionals.

TYPE 201 DYNARANGE_11/2 MIL ACETATE
Stk. No. Fact. No. Reel Lgth. Wt. Mfg. List Each Quantity Price $118496201-1 / 4-600 \quad 5^{\prime \prime} \quad 600 \quad 60 z . \$ 2.80 \$ 1.8712 @ E 0 . \$ 1.88$
 $\begin{array}{r}11 B 520201-1 / 4-2500 R O \quad 101 / 2^{\prime \prime} 2500^{\prime} 34 \mathrm{oz} .12 .20 \text {. } 1412 \\ \hline \text { TYPE } 202 \text { DYNARANGE- } 11 / 2 \mathrm{MIL} \text { POLYESTER }\end{array}$

TYPE 202 DYNARANGE- $11 / 2$ MIL POLYESTER
 200 12 oz. $5.10 \quad 3.4012$ @ Ea. 3.06 11 B579 202-1/4-2500RO $101 / 2^{\prime \prime \prime} \quad 2500^{\circ} 34 \mathrm{oz}$. 13.90 8.27 12 @ Eo. 8.34 TYPE 203 DYNARANGE-1 MIL POLYESTER



## 3M POLYESTER (MYLAR) TAPES

Extro strong, extra long lasting Polyester base withstands extremes of temperatures and humidity. The preferred tape for llong time storage, for private or business recordings to be played again and again.
TYPE 102-STANDARD PLAY-I $1 / 2$ MIL MYLAR. The most rugged longlasting recording tope bose made. Oxide ond recording characteristics are identical to type 111. On clear plastic reels. $101 / 2^{\prime \prime}$ reel is aluminum. Stk. No. Fact. No. Reel Length wt. Mfg. List Each Quantity Price
 $\begin{array}{lllllllll}11 A 871 & 102-1 / 4-1200 & 7^{\prime \prime} & 1200^{\prime} & 12 \mathrm{oz} . & 4.25 & 2.8312 @ & \text { Eo. } 2.55 \\ 11 A 872 & 102-1 / 4-2500-R O & 101 / 2^{\prime \prime} & 2500^{\prime} & 34 \mathrm{oz} .11 .35 & \mathbf{7 . 5 7} & 12 @ & \text { Eo. } & \mathbf{6 . 8 1}\end{array}$ TYPE 150 EXTRA PLAY TAPE-1 MIL MYLAR. Some size reel plays $50 \%$ longer than $1 / 2 \mathrm{mil}$ base tapas.
Stk. No. Foct. No. Reel Length wt. Mif. List Each Quantity Price 114544 150-1/4-900 $\qquad$ 7" 900 6 oz. \$3.60\$2.4012 @ Ea. 32.16 11 A545 150-1/4-1800 $\qquad$ $1800^{\prime} 12$ oz. 6.204 .1312 @ Eo. 3.72 TYPE 200 DOUBLE PLAY- $1 / 2$ MIL TENSILIZED MYLAR. Specially conditioned tough Dupont Mylar extra thin base, allows twice the normal record-ing-playing time compared to $11 / 2$ mil tapes. $200-48 \mathrm{R}$ is plastic EIA reel. Stk. No. Fact. No. Reel Length wt. Mfg. List Each Quantity Price $\begin{array}{llllll}11 A 778 & 200-1 / 4-1200 & 5^{\prime \prime} & 1200^{\prime} & 60 z . \$ 5.45 \$ 3.6312 @ E 0 . & 33.27\end{array}$
 TYPE 290 TRIPLE PLAY- $1 / 2$ MIL TENSILIZED MYLAR. Extro long ploy, with ultra-thin backing and cooting. Gives up to three hours of $33 / 4 \mathrm{ips}$ speed. 11 B708 290-1/4-1800 $\qquad$
 11 118887 290-1/4-3600 $\qquad$
TYPE 282 "SANDWICH" TAPE-STANDARD PLAY-I $1 / 2$ MIL MYLAR. OUTweors conventional tapes by up to 30 times. Micro-thin protective plastic shield over the recording surface entirely eliminates oxide rub-off, drostically reduces machine head wear. On clear plastic reels. Stk. No. Fact. No. Reel Length wt. Mfg. List Each Quontity Price 11 A873 282-1/4-600 $5^{\prime \prime}$ 600 6 oz. $\$ 3.10 \$ 2.0712$ @ Ea. $\$ 1.86$ 11 A874 282-1/4-1200 $\qquad$ $200^{\prime} 12 \mathrm{oz} .4 .95$ 3.30 12 @ Ea. 2.97
TYPE 151 SPECIAL LUBRICATED-1 MIL MYLAR. For repeoter mechanisms and cartridge tape ployers, Used in car stereo systems. Has black oxide with black surface lubrication on backing surface only,
$111 A 779$. $151-16 \mathrm{PR}$. $1 / 4^{\prime \prime} \times 1600^{\prime}$, $7^{\prime \prime}$ Reel. Ea.... S8.68 $12, \mathrm{Ea}$.


Tough plostic enclosure provides dust-free protection and sofe mailing at lowest postage cost. Sized to meet postal regulations. Highest quality tape. Good for 100's of recordings. Average wt. 3 oz.

Quantiry. Price

11 B635 200-1/4-300-LL $1 / 2$ Mil Polyester 118637 290-1/4-600-LL $1 / 2 \mathrm{Mil}$ Polyester

## SCOTCH RECORDING <br> CARTRIDGES

300, 1.851 .2312 @ Ea. 1.11



## GIBSON GIRL "STEREO 4" TAPE SPLICERS

Rapid, occurote splicing of 4 track, 2 track and single track tapes. Mokes diagonal cut. "Gibson Girl" trim prevents splicing tape adhesive from con tacting critical parts of recorder: All units feature blode centering odjust ment and replaceable cutter for lifetime accuracy
(1) TS-8D STEREO 4 DeLUXE TAPE SPLICER

See thru" windows indicate cur and "Trim" positions. Tape guide and fingers secure tape. Easy threading, integral tape dispenser with $100^{\prime \prime}$ roll of $1 / 2^{\prime \prime}$ splicing tope. Made of super-strong Implex. With instructions No. IIA704. Mfg. List $\$ 12.75$. Net Eoch
$\$ 7.65$
Same features as TS-8D excep 4 STANDARD TAPE SPLICER
steel and plastic. Easy except no "See-thru" windows. Made of plated stee and plastic. Easy threading, integral tape dispenser has roll af No. 114638 . Mfg tope. Wt. 12 oz .
$\$ 5.70$
Same as TS-4S without STEREO 4 JUNIOR TAPE SPLICER
Same as TS-4S without tope dispenser and splicing tape. Uses $3 / 8$
tope. Wt. 8 oz .
No. 11 A407. Mifg. List $\$ 7.25$. Net Each
$\$ 4.35$

## REPLACEMENT CUTTER KITS FOR ROBINS SPLICERS

No. 11 B192. Type RK-3. For TS-4S, TS-4J. Mfg. List \$1.50. Net Each 90 c


MAGNETIC BULK TAPE ERASERS. Better erosure without using your recorder. Reduces tope bockground noise. Takes only seconds to erose entire (7) ME-99. Erasure 3 to 6 db below normal erose head level. Handles reels up to $101 / 2^{\prime \prime}$ dia. $\times 1 / 2^{\prime \prime}$ wide. Size $33 / 4 \times 51 / 4 \times 63 / \mathrm{s}^{\prime \prime}$. 110 V .60 cV . AC. UL

(1) ME 77. Net Eoch. Mfg. List $\$ 46.00$
$\$ 27.60$ ${ }^{(1)} \times \mathrm{ME}^{\prime \prime}-77_{\text {Size }}$ Erosure 2 to 4 , ab below erase heod level. For reels up to $7^{\prime \prime}$ dia
 (8) ME-66. Hand-held bulk tope eroser. Erases tapes by moving unit over each side of reel. For $1 / 4^{\prime \prime}$ tapes, any size reel. Size $4 \times 21 / 2 \times 41 / 4^{\prime \prime}, 110 \mathrm{~V}$.
60 cy . AC, 4 amps. Wt. $4^{\prime \mathrm{lbs}}$. 60 cv . AC, 4 amps. Wt. 4 lbs.
No. 11 A996. Net Eoch. Mfg. List $\$ 19.95$ $\$ 12.00$
 No. 11 A997. Net Eech 4 . 4 lbs (II) HEAD DEMAGNETIZERS A List $\$ 16.66$. \$9.99 magnetism that accumulates in all recorder heads causing excessive noise HD-6 ss during recording and playback. Easy to use. For $110 \mathrm{~V} .60 \mathrm{cy} . \mathrm{AC}$. HD-6 Stondard Model. U/L listed. $45 / 8 \times 1 / 2^{\prime \prime}$ dio
No. 11 A794. Wt. I Det Eoch
HD- 3 Economy Model. $31 / 2 \times 11 / 4{ }^{\prime \prime}$ dia
No. 11 A998. Wt. 8 oz. Net Each.
$\$ 6.00$
$\$ 3.60$

(3) TK-9 TAPE EDITING WORKSHOP. Edit, splice, repair and combine topes easily. Workshop consists of two tope winders and "Stereo 4" Deluxe Tape Splicer on sturdy bose. Hondles all reels up to $7^{\prime \prime}$. Integral tape dispenser $1 / 2 \times 100^{\prime \prime}$ tape. Size $7 \times 14 \times 51 / 4^{\prime \prime} \mathrm{H}$. Wt. 1 lb .
No. 11 A987. Mfg. List $\$ 24$. 00 . Net Eoch
$\$ 14.40$
its cutting
(3) TS-6 "CUT-N-SPLICE" TAPE SPLICER. Dual control knob permits cutting of tapes ot $40^{\circ}$ or $90^{\circ} .25$ self-stick, easy to apply patches in tray buit No. 11 A988. Mfg. List $\$ 5.00$. Net Each.
$\$ 3.00$
(6) TS-5 "CUT-N-SPLICE" TÄPE SPLICING BLOCK. Metal tope guide. 25
self-stick patches. Patches and hand-held blade are in sliding tray built self-stick patches. Patches and hand-held blade are in sliding tray built No. 11 A989. Mfg. List $\$ 3.00$. Net Eoch
\$1.80


ROBINS MYLAR SPLICING TAPE
Special formula Mylar. Tackiness, thickness, strength and coldflow controlled for perfect, permonent splices. Use with "Stereo $4^{\prime \prime}$ splicers and Tape Editing Workshop above

| Stik. No. | Mfg. No. | Width |  | Lenath | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 114990 | TST-235 | 1/4" | $x$ | 300" | Ner Each |
| 11 A991 | TST-376 | $3 / 84$ | x | 275" | 59 c |
| 114992 | TST-501 | $1 / 2$ | x | 250 " | 59 c |
| 11 A993 | TST-750 | 374 " | $\underset{x}{ }$ | 150 " | 59 c |

SELF-STICK PATCHES. Use with TS-5, TS-6 Splicers
No. 11 A994. TST-233. Package of 25 For........

(1) EMPTY TAPE REELS OF EVERY SIZE. Perfectly molded of clear plastic tandard hub. Averag

| Stk. No. | Size | Net Price |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 114973 | $2^{\prime \prime}$ | 6 For 590 | 11A977 | Size $^{\prime \prime}$ | $\begin{aligned} & \text { Net Price } \\ & 4 \text { For } 59 \end{aligned}$ |
| 11 A974 | 21/2" | 6 For 59c | 114978 | $5^{\prime \prime}$ | 2 For 59c |
| 11 A975 | 3"' | 6 For 59 c | 11 A979 | 7'1 | 2 For 29 c |
| 114976 | 31/4" | 4 For 59 c | 114979 | 7 | 2 For 59c |

(2) LOW TORQUE 7" REEL. Larger hub reduces the effect of variable pull on ape caused by recorder take-up drive. Reduces wow and flutter, winds tape evenly. Copocity 1600 ft . $1 / 2 \mathrm{mil}$ tape, $1200 \mathrm{ft} .1 \mathrm{mil}, 800 \mathrm{ft}$. $11 / 2 \mathrm{mi}$ No. 11 A980. With Box.
Net Each.
(3) 3-INCH TAPE MAILING BOXES. For tope correspondence 59c
No. 11 A981. 12 Boxes For 59 C
(4) TAPE LOG DISCS. Easy indexing of $7 "$ tapes. Space for titles, tope speed, No. 11 A982. Pkg, of 15 For S9e
(5) "REEL-NEET" PLASTIC REEL HOLDERS. Holds 7" tape reels in position. Prevents worping. Two Tope Log Discs included.
12
(8) TITLE LABELS. Write or type. $2 \times 1 / 2^{\prime \prime}$, self- -+ icking ..... 59c
(1) TAPE "JOCKEY CLOTH", Cleans and lubricates tapes. Siliconenoted 11 A 769 . Pkg. of $\mathbf{3}$ For59c
(8) HEAD CLEANER. Removes accu
No. 11 A 768 . 2 Oz. Bottle. Each ..... 59c
© TAPE CLIPS. Keeps reels of tope from unwinding. Reusoble. ..... 59c
(10) REPLACEMENT TAPE RECORDER PRESSURE PADS. Pre-cut and U ..... 59
pods to fit No. 11 B75. Non-Adhesive. Large Assortment ..... 59c
No. 11 A986. Self-Stick ..... 59c
(1) FAST TAPE THREADER. Starts tope on reel eosily ..... 59c
(1) REEL HOLDERS. Holds reel on spindle. Prevents wobble.
No. 17A737. Per Pair. ..... 59c

## BULK TAPE <br> ERASER

$516^{95}$


IMPORT SPECIAL AT BIG \$\$\$ SAVINGS Professional quality! Erases a complete reel of tape quickly, easily and with greatest efficiency without rewinding. Simply place tope on reel on spindle of Eroser-takes just seconds. Permits improved, distortion free recordings by "quieting" topes 3 to 6 db . Far better than erasing on the average re corder. Accommodates tope reel from $3^{\prime \prime}$ to $101 / 2^{\prime \prime}$. Size of unit $71 / 2 \times 45 / 8 \times$ $35 / 6^{\prime \prime} \mathrm{H}$. Operates on 117 V 60 cy . AC. Also will demagnetize screwdrivers and other tools. Shag. wt. $81 / 2 \mathrm{lbs}$ No. 17A628. Special Each
$\$ 16.95$
RECORDING TAPE SPLICER
Produces speedy high quality splices with minimum effort. Has convenient spring positioned clips and guides to hold standard $1 / 4^{\prime \prime}$ recording tape in perfect alignment. Two position cutter first trims ends of tape diagonally, then after opplying splice, makes slightly curved edge cut removing all excess material without extra knife or scissors operations. On molded plastic base, $2 \times 31 / 8^{\prime \prime}$. Requires $1 / 2^{\prime \prime}$ splicing tape for best results. Shag. No. 11 C 610. Special Import Value

## SAVE! TAPE HEAD DEMAGNETIZER

## EASY-TO-USE AID FOR BETTER

 TAPE RECORDINGQuickly rids recorder of one common cause of high noise . .. the accumulotion of permanent magnetism in the recording, erase and playback heads Simple to operate, with instructions For 115 V. AC.
No. $17 A 415$. Import Special.. $\$ 3.95$


ROBINS MICHIGAN MAGNETICS TAPE RECORDER HEADS KEEP YOUR RECORDER IN TOP CONDITION

Precision mode, for replacement and stereo-conversion in hundreds of tope recorder models, Original equipment in approx. $90 \%$ of all U.S.A mode recorders; many are improved models of the original heads.

To Order, specify make and model of recorder and whether record, playback or erose heod is needed; or by using the FREE ROBINS HEAD TAPE REPLACEMENT GUIDE. A
structions.

Str. No.
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Description


# TAPE RECORDING ACCESSORIES 



## TELEPHONE PICKUP COILS FOR RECORDING

## BIG PRICE REDUCTION:

For Recording Conversations, Etc.
Requires No Wire Tapping. Makes possible recording phone conversations or loud speaking telephone when used with a standord recorder or mike amplifier. Connects in place of regular microphone. Highly sensitive and pfficient magnetic induction coil picks up both sides of telephone conversations. Installs by slipping under base of desk phone or by laying on top of only $1 / 4^{\prime \prime}$ thick. Shielded cable 56" long. \$1.85 No. 17B257. Net Each
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TAPE RECORDER
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(1) RCA Pin Plug to $1 / 4^{\prime \prime}$ Phone Plug Fully shielded. Highest quality. No. $17 \mathrm{B879}$.690 10 Lots, 590
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For Recording Direct from Radio, Phone or TV. Flexible $72^{\prime \prime}$ two conductor cable with attached insulated alligator clips and RCA pin plug. Perfest for direct electrical connection from radio, phono or TV speaker voice coil to input of recorder. Assures much better results than from the usual sound coupling between speaker and microphone. Comes with pin plug o phone plug adapter to fit any re

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Portable All Steel Platinum-gray baked enamel For protecting, storing and filing valuable recorded topes. Dividers for holding 12 tope cons, $9^{\circ}$ 11 1454. Chest only, for 7" cans. 11A753. Chest only, for $5^{\prime \prime}$ cons. Ea..

Steel tape reel cans
Dust-proof, mognetic-pronf containers above chest as illus. Shag. wt. 8 oz.


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 KITCONVERTS 2-TRACK STEREO OR
Easy to do merely change heads. Kits contain 4 track record/ploy head, alignment tope, hardware and No. 11A771. Mfg. List $\$ 18.00$. Net Each.......... $\$ 10.80$


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## B-A CUSTOM 30-WATT STEREO AMPLIFIER

Motchless performance and styling of a price only B-A can offer.
B-A custom 30S-6... all new stereo high fidelity amplifier. Features engineering design and quality of construction worthy of use in the finest stereophonic high fldellity music system.
Versatility of controls assure motchless performance from all program sources, whether records, tape or radio. Preamplifier properly equalized or
all magnetic cortridges. Phono inputs (2) provided all magnetic cortridges. Phono inputs (2) provic
for mognetic, crystal or ceramic cartridges. for magnetic, crystal or ceramic cartridges.
Beautiful gold anodized extruded panel with motching gold with brown inset knobs add elegance found only in the highest price ampliflers. Provides 30 wotts of sustained stereophonle power with 16 watts of musle power from each channel. Specificotions: Sustained Power Output ... 30 watts IHF 116 watts each chapnel). Music Power: 15 watts each channel. Frequency response: $t$ bandwidth: 45 to 2000 cDS at one wott. Power bandwidth: 45 to 20,000 cps at half power. Hormonic distortion: 511000 Cps). Intermodulotion distortion: $2 \%$ at 10 watts. Domping foctor 4.5 . Controls (7): 1-Power Off-On 2-Mode Switch,
3 -Rotory Selector 5witch, 4-Balance, 5-Loudness
 Volume Control, $6-80$ vs, 7 Treble. Input sensitivt ity: oux., tuner 0.25 volt, mag. phono .003 volt;
erystal phono .25 volt for rated output 1000 erystal phono. 25 volt or rared output 1000 eps . Outputs: 4, 8 , 16 ohms and high impedance for tape recorder. Hum and nolse 72 db tuner in-
put and 52 db phono input below rated output. Tubes (9) 4-6EU1, 4-EL84/6BO5, EZ81/6CA4. Fused line with 2 AC outlets for $110-120 \mathrm{~V} .60$ cps. AC. $131 / 2^{\prime \prime} \mathrm{W} \times 43 / 4^{\prime \prime} \mathrm{H} . \times 9^{\prime \prime} \mathrm{D}$ ShDa. wt. 17 libs. Less Cover
No. 33 B41. Model BA305-6. Net Eo...... \$64.95 Olied Walnut Wood Cabinet for above (as illus.).
No. 33 B43. Each................... $\$ 12.95$

- Brushed Gold Anodized Extruded Panel
- Beautifully Designed Cover

FREQUENCY RESPONSE 20-20,000 CPS

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Smart contemporary lines and straight forward approoch will appeal to you instantly. Beoutiful functional styling provides on adjustable component shelf for complete component versatility with plenty of spoce for changer, turntable, tope decks and records. Dimensions overall: $325 / 8^{\circ} \mathrm{H}_{\text {. " }} 6^{\prime \prime} \mathrm{W}^{\prime \prime}{ }^{\circ} \mathrm{D}$. Component shelf (adjustoble) $33^{\prime \prime}$ W. W., $15^{\prime \prime} \mathrm{D}$. Holds any size bookshelf speaker up to $253 / 4{ }^{\prime \prime}$ H. $\times 141 / 2^{\prime \prime} \mathrm{W}$. $\times 15^{\prime \prime} \mathrm{D}$. Lower storage areo $33^{\prime \prime} \mathrm{W}$. $\times 141 / \mathrm{m}^{\circ} \mathrm{D}$. Shpg. No. 40 C 64 .
Net Each
$\$ 79.50$


# B-A CUSTOM 44-WATT STEREO AMPLIFIER 



## MODEL B-A 44S-6

## HIGHEST QUALITY <br> AT LOWEST COST

Beautiful design and quality of construction for superior to amplifiers selling for considerably more. B-A's purchasing "know-how" brings you this exclusive amplifier with all the controls and basic requirements to provide the finest music reproduction regardless of program source. Not only outstanding in appearance but with specifications second to none. Read and compare.
Specifications: Power output 44 wotts stereo, 22 watrs per chonnel. Frequency response: $\pm 0.5 \mathrm{db}, 20-20,000$
cos ot 1 watt. Harmonic distor 18 watts. Intermodulation: distortion: $6 \%$ at $1000{ }^{\text {cps }}$ cps, 18 watts. Intermodulation: $2 \%$ ot 18 wotts. Domping foctor: 8. Controls (11): (11) Selector, Tope, Phono, (4) Buner, Aux: 15) Aux 2 ( 2 ( 1 Bolance; ( 3 ) Loudness: (4) Boss: (5) Treble; (6) Stereo-Mono Switch; (7) Filter Switch; (18) Contour Switch; (19) Off-On Switch;
(10) Speakers off-on, (11) Phones (stereo) (10) Speakers off-on, (11) Phones (stereo).

Input sensitivity: Tope 0.003 volt, Mag. phono 0.002 voit, Tuner, Aux.-1 and Aux.- 2 each 0.15 volt. Outpurs, 8 , 16 ohms ond high-impedance for fope re-corder-stereo phone lack on front ponel. Hum ond noise: tuner input - 75 db and phono input - 50 4 silicon rectifiers. Size $131 / 1$, ${ }^{(9)}$ 5-12AX7, 4-6BQ5,
 ponei with motching knobs.

No. 33846. Less Cover.
Net Each.
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# B-A CUSTOM AM-FM STEREO MULTIPLEX TUNER 



AND BUILT-IN
ANTENHA
FM Freq. Range
20-20,000 cps
High Sensitivity drift-free reception
HANDSOME MODERNISTIC STYLING

## MAGIC-BAR TUNING INDICATOR



HESS COVER

Rich elegant styling, mognificent performance ore blended into this superb quality tuner to provide optimum listening pleosure for even the most critiCarefully
Carefully designed ond brilliantly engineered for outstanding range, sensitivity and drift-free operation. Offers many feotures found only in much higher priced tuners... anather perfect example of B-A purchosing "knowhow" for providing greater value for the dollor.
Smooth, effortless tlywheel tuning, "Magic Bor" tuning indicator for precise, visual "on station" tuning, AFC for lock-in tuning on FM stotions... these are just o few of the many fine feotures built into this unit. FM section has on extro stoge of RF amplification for use in extreme fringe areas. Custom built-in multiplex section for receiving stereo FM broadcasts.
Specificotions: Frequency response: $\mathrm{FM} \pm 0.5 \mathrm{db}, 20-20,000 \mathrm{cDs}$.; $\mathrm{AM}, \pm 3.0$

db, 20-6,000 cps. Bondwidth: FM, IF 300 KC , balanced disc. 650 KC . AM 10 KC overall. Distortion: FM, $0.5 \%$ harmonic or intermodulation; $A M, 1.0 \%$ harmonic or intermodulation. Sensitivity: FM, 2 mv ; AM, 10 mv . Multiplex separotion: 30 db or better. Hum ond noise 60 db below, $100 \% \mathrm{mv}$. Multiplex Outputs: A-monaural FM-AM, B-FM multiplex stereo. Antenna: FM, 300 ohms nominal; AM, Litzwound ferrite rod. Controls: 1-power off-on; 2-AFC off-on; 3-selector for AM-FM Mono, FM Stereo, 4 -tuning. Tubes $/$ semi-conductors: $3-12 A T 7,3-6 A U 6,1-6 B E 6,1-12 A \times 7 A, 7$ germanium diodes, 1 sili-
 Finish, gold anodized with inset gold knobs.
No. 33092. AM-FM Steree. Tuner (Less Cover). Net Each $\quad \$ 89.95$
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## B-A/SHURE 7D STEREO MAGNETIC HIGH FIDELITY GARTRIDGE

## MADE EXCLUSIVELY FOR B.A BY SHURE, MANUFACTURER

OF WORLD.FAMOUS MTD-M3D CARTRIDGES
Perfect replacement for the popular Shure M7D M3D, Pickering U38AT, Empire 880, or any other equivalent high fidelity stereo magnetic type cortridge. There is absolutely no compromise in quality or performance at B-A's special low, low price. Frequency response 20 to $20,000 \mathrm{cps} .4-7$ 4 grams tracking. More than 20 db seporation at 1000 cps . Output valtage 4 mv per channel at 1000 cps . Recommended load impedonce: 47,000 N3D or N2rminals: 4 terminals adaptable to 3 terminol arms. Uses Shure No. 60B69. Speciol.......................
$\$ 9.95$

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YOU MUST EE SATISEIED OR YOUR MONEY BACK.

Frequency Response 20-20,000 cps $\pm 1 \mathrm{db}$.
Separate full range bass and treble control.

- Built-in preamplifier.
- Fine for Hi-Fi System at low cost - Inexpensive means for stero con version.
Use in pairs for a new stereo sys. tem.

USES FAMOUS EL84 AUDIO TUBES

The buy of a lifetime! Full 20 watts of power using the famous EL84 tubes in push-pull far the output. Strictly a sign of modern design and quality. plus completely equalized preamplification to handle your sound source be it magnetic cartridge or tape head, with inputs for ceromic cartridge or tuner. Popular "Low Boy" styling with rich brush bross finished face plate mokes Popular "Low Boy" styling with rich bitor onstom mounts in cobinet or wall, or sets in bookcose or on table top. sets in bookcose or on toble top. Spects . Hormonic distortion: $1 \%$ at 1000 cps . Specifications: Power output: less than $3 \%$ ot 12 wotts. Frequency response: $\pm$ 1 Intermadulation distortion: less bandidth: 10 watt $35-20,00 \mathrm{Jcps}$. Hum ond noise: tuner input -72 db ; phono -52 db below rated output. Damping factor
4.5. Controls (5): 1-selector-aux-funer-NARTB fope, RIAA phono, crystal phono; 2-lousness contour on-flat; 3-loudness; 4-bass -12 db to flot to +8 db at $50 \mathrm{cos} ; 5$-treble -12 db to flat to +8 db ot $10,000 \mathrm{cps}$. Input sensitivity: Aux tuner - 55 volt mag. phono -. 0045 valt, tapehead -. 0055 volt crystal phono -25 volt ot rated output. Output impedances: 4, 8, 16 ohm's and high impedance for tope recorder. Tubes: 2-12AX7, 2-EL84/6BQ5, I-6BW4 Fused output AC outlets.
For 110.120 volts $A C 50.60$ cycles. Size $11^{\prime \prime}$ W, $4^{\prime \prime}$ H, $7 \frac{1}{2} 2^{\prime \prime}$ D. Shpg. wt. 10 lbs . No. 33 A123.
$\$ 29.95$
No. $33 A 123$.
Net Erch. LLess Cover)
.$\$ 4.95$

## FISHER MATCHED TUBE COMPONENIS!

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MODEL FM-9OB

## FM STEREO TUNER

## $\$ 11950$ <br> LESS CABINET!

Wideband Stereo, perfectly matches X100-C at right.

- Automatic Stereo Indicator.
- D'Arsonval tuning Meter.

An extremely fine tuner feoturing high sensitivity and high fidelity FM stereo reception at an extremely low price. Features 3 IF stages and 2 wide-band limiters for excellent sensitivity and selectivity. "Stereo-Scan "indicator, signals when tuned to a station broodcasting in stereo. Precision Dirsonval tuning meter provides occurate pinpoint center-of-channel tuning. Switchable stereo futter reduces
 tivity 2.0 uv. Channel separation: Shpg. wt. 18 lbs . $110-120 \mathrm{~V} .60$ cycles AC. S. $\$ 119.50$ No. 31A63. Less Cobinet. Net Each No. $31 \mathrm{Bi1}$. Oiled Walnut Cabinet. Net Each
. 22.45

## FAMOUS FISHER 400 65-WATT FM-MULTIPLEX STEREO RECEIVER



Never before so much for so litile! Combines the tuner amplifier and controls of an advanced stereo system on one compact chassis. Simply connect a pair of speakers FM section ready to play - and outplay other systems.
FM section employs three tuned circuits for increased selectivity and rejection of unwanted signais. Tuned front end is completely shielded. Following the front end detector). The ratio detector which two stages of limiting (including the ratio detector). The ratio detector, which utilizes a matched pair of germanium diodes is linear over an extremely wide range. This results in accurate detection of even the most complex multiplex signals and in the lowest distortion or monophonic FM. Multiplex demodulator utilizes superior time-division method and incorporates Stereo Beam indicator, plus a stereo filter to eliminate background noise on weak multiplex signals without impairing the treble portion of the stereo program material. Stereo beam pube is also used as a tuning indicator, for microaccurate tuning n bath mono and stereo broadcasts.
Audio center includes all the most-wanted features, including tone controls, balance control, loudness compensation, a sharp eut-off high frequency filter, a speaker the Fisher frietion lape monitoring facilities. Separate bass and treble controls with the Fisher friction lock system, are provided for each channel. Monitored tape
recording and immediate playback, with unrestricted use of all audio controls are made possible by the exclusive Fisher Direct Tape Monitor system. A single selector switch combines all the furictions normally incorporated in separate and mode selectors, thes greatly increasing the convenience and simplicity of operation. Specifications: HD at 1 KC and rated output $.5 \%$. RMS power ( $.7 \%$ harmonic distortion at I KC, left/right) 28/28 watts. IM distortion ( $60 \mathrm{cps}+7 \mathrm{KC} 4: 1$ ) $8 \%$ at 30 watts both channels. Frequency resp. overall $25-25,000 \mathrm{cps} \pm 1 \mathrm{db}$. Freq. Power Amplifier Section $10 \cdot 40,000+0,-2 \mathrm{db}$. Hum and Noise 80 db below. resp. output. Channel separation (at 1 KC ) 50 db . Bass controls (total variation at 50 cas) 22 db . Treble controls (total variation at 10 KC ) 22 db . Input sensitivity (for rated output): Phomo, low 4.4 MV ; Phono, high 14 MV ; Tape Head 2.8 MV . Aux 280 MV FM Tuner Saction: usable serssitivity (IHF standard) 1.8 uv . S $/ \mathrm{N}$ Ratio ( $100 \%$ mod) 70 db . Selectivity (alternate channel) 60 db . IF rejection (at 100 MC 85 db mod.) reiection (at 100 MC ) 57 db . FM HP ( $400 \mathrm{cps}, 100 \% \mathrm{mod}$.) $5 \%$. FM 85 db . Image ion (at 1 KC ) 35 db . Capture ratio ( 2.5 db ). Calibration $\mathbf{~ m o d . ~ F M ~ s t e r e o ~ s e p a r a ~}$ Size $171 / 2^{\prime \prime} \mathrm{V}^{\prime} \times 53 / 4^{\prime \prime} \mathrm{H} . \times 13^{\prime \prime} \mathrm{D}$. Wt. $303 / 4 \mathrm{lbs}$. Shpg. wf. 37 lbs . $\$ 22950$ No.31B12. Walnut Cabinet for above.
$\$ 229.50$
521.20

## FISHER 500C 75-WATT FM-MULTIPLEX STEREO RECEIVER



The industry standard
. . incorporating the most advanced principles not only mum performance in also of human engineering." Capable of achieving max eatures new Nuvistor-Goldens of novice and audio connoisseur alike. FM section ivity, a wider overload margin and Low-noise nuvistor triodes, used for both mixer and of spurious and image signals degrae of mechanical and electrical stability, and a osciltator, provides a higher Signal is amplified by four wide-band IF stages and is converted to an audio signa by a wide-band ratio detector that utilizes two balanced germanium diodes. high amplification of these IF stages, combined wanced germanium diodes. The hree limiters (including the ratio detector) assures a maximum degree of free from noise and interference Aut matic stereo Beacon
Uunimg meter provides pin senses whether signal is monophonic or stereophonic ion, greatest separation and highest full complement of audio controls, including separate friction-lock secs and controls, high and low sharp-cut off filters, plus a front-panel bass and reble A four-position speaker selector switch is provided permitting theadphone jack as the control center for both the main set of speakers and the receiver to act peaker installations. The private listening with headphones. The exclusive Fisher Direct
monitoring while a tape is being recorded, followed by immediate playback with Adluse of all audio control facilities, without any change in cable connections Advanced circuitry is combined with superior, oversize output transformers to make this performance possible. A derived "third"power output is provided in addition to the left and right speaker connections for either center-channel use or
an extenslon speaker.
Specifications: HC at I KC. $5 \%$. RMS power ( $7 \%$ harmonic distortion at 1 KC eft/right) $32 / 32$ wa channel. Free. resp. $25-25,00 \pm \pm 1.5 \mathrm{db}$. Freq. resp. power amp section $5-45,000$ cps. $+0,-2 \mathrm{db}$. Hum and noise 80 db below rated output. Channel separation at 1 KC ) 5 db . Bass confrols (total variation at 50 cps ) 23 db Treble control total variation at 10 KC ) 23 db . Input sensitivity for rated output. Treble control mv ; Phono, high 13 mv ; Tape head 2.5 mv ; Aux. 230 mv . EM Tuner Section: usable sensitivity (IHF) 1.8 uv S/N 70 ivity a $100 \% \mathrm{mod}$. Selec65 db alternate channel 60 db . IF reiection 90 db (at 100 MC ). Image rejection 65 db (at 100 MC ). FM harmonic distortion ( $400 \mathrm{cps}, 100 \%$ mod.) $.5 \%$. FM stereo separation (at 1 KC) 35 db . Capture ratio 2.5 db . Calibration accuracy $.2 \%$. Drif No 3185 Size $171 / 2^{\prime \prime}$ W. $\times 53 / 4^{\prime \prime} H . \times 131 / 2^{\prime \prime} \mathrm{D}$. Wt. $361 / 2 \mathrm{lbs}$.
No. 3185 . Shpg. wt. 40 lbs. Special...
No. 31812 . Walnut Cabinet fer above.
$\$ 269.50$

# NEW FISIER SOLID STATE RECEIVERS! 

MOPEL 2201 55-WATT AM-FM STHREO REGEIVE:

- Frequency response 25 to 20,000 cps $\pm 1.5 \mathrm{db}$
- Āll Solid-State Front End
- Stereo Beacon
- Tuning Meter


# 00 <br> Liss CABINET 



## 0 O $11 i 1$ 3 $\theta$

PAY $\$ 14.00$ MONTHLY!

Never before such o high quality, outstonding solid-stote receiver for such o phenomenal low price! Quality and specifications ore equal to or better than comparable units of other manufacturers selling for for more. Features all new solid state construction.
Specifications: Amplifier Section: Frequency response 25 to $20,000 \mathrm{cDs} \pm 1.5$ db Harmanic distortion $.8 \%$ ot $1,000 \mathrm{cps}$. 1 M distortion $(60-7,000 \mathrm{cps}) 10 \%$ Power bondwidth, IHF (at 8 ohms) 28 to $30,000 \mathrm{cps}$. Sensitivity (for roted output). Phono low/high $3 \mathrm{mv} / 7 \mathrm{mv}$. Aux. 330 mv . Monitor 330 mv . Hum and noise (below rated output), valume at minimum - 80 db . Phono law 16 mv reference) - 55 db . Aux. ( 400 mv reference) - 65 db . Frequency resp. 25 to $20,000 \mathrm{cps} \pm 1.5 \mathrm{db}$. input impedance phono low 50,000 ohm. Aux. high $220,000 \mathrm{chm}$. Dumping foctor : greater thon 10 , volume control tracking 10 to
-50 db ) bette- than 2 db . Separation ( $7 \mathrm{t} 1,000 \mathrm{cps}$ ) phone and aux greotep than 45 db . Boss control range 17 db ot 50 cps . Treble control range 16 db ot $10,000 \mathrm{cps}$. Supsonic rumble filter 12 dt per octave below 20 cps . FM Tuner section: useable sensitivity, 1 HF 2.5 uv . H.D. less than $.5 \%$. S/N ratio 70 db . Selectivity, altemate chonnel, IHF: 50 db . Spurious response rejection 85 db lective frequencr rejection $60^{\prime} \mathrm{db}$. if frequency rejection 85 db . FM stereo sepomation 35 db . Copture ratio IHF 2.2 db . AM Tuner Section: Sensitivity (ferrite antennal 40 u . Selectivity 55 db . Image frequency rejection 80 db . If frequency rejectior 85 db . Dimensions: 15 lim " $^{\prime \prime} \mathrm{W}$., 4 A $^{\prime \prime \prime} \mathrm{H}_{\text {., }} 11^{\prime \prime} \mathrm{D}$ lbs.
No. 318.24. Less Cobinèt. Net Each 50 UN..................... Each
\$280.08 No. 31B28. Walnut Cabinet. Model 50UN. Net Eoch.

## FISHER MODEL SOOT 90-WATT FM STEREO RECEIVER

 HIGHFGT QUALIT,
## EXTRAORDNARY FULL FEATURED: <br> - All the Benefits of Solid State Circuitry. <br> - Finest Reolistic FM Sterea Reception. <br> - Automotic Stereo Beacon <br> - Tuning Meter.

PAY $\$ 16.00$ MONTHLY!

## - Mog gex maim Mo

## O Ollllo

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Fomous Fisher precision craftsmanship ossures years of listening pleasure. Provides finest reproduction. Modern rocker switches control loudness contour, muting, remote speaker control. Other front panel controls include on-0ff volume control, bass, treble, balance. Mode selector control for: Mono, Stereo Filtar, Stereo, Steré Tape, Tape L, Tape R, Tap
Heods, Phono, FM Auto, FM Mano ond Aux. Heods, Phono, FM Auto, FM Mono and Aux.
Specifications: Amplifier Section-Music power 90 watts, H.D. . $8 \%$ at 1,000 Specifications: Amplifier Section-M, Music
eps. Distortion $60-7,000 \mathrm{cps} .8 \%$, power bandwidth IHF 22 to $30,000 \mathrm{cps}$. Sensitivity: at roted output, phono low/high $3.5 \mathrm{mv} / 10 \mathrm{mv}$. Tape Head: 2.5 mv , aux. 200 mv , monitor 260 mv . Hum and noise (below rated output) phono low ( 6 mv reference) - 55 db . Aux. high ( 400 mv reference) - 65 db . Frea resp.; phono low 30 to $15,000 \mathrm{cps} \pm \mathrm{I} .5 \mathrm{db}$. Aux. 32 to $20,000 \mathrm{cps} \pm 1 \mathrm{db}$

50,000 ohms, -ape head 100,000 ohms. Aux. high 220 K ohms. Damping Factor reater than 13 . Volume control trackinc ( 0 to - 50 db ) better than 2 db . Sep aration (at $1,000 \mathrm{cps}$ ) phono greater tron 45 db . Tape head greoter than 45 db. Aux. greater than 45 db . Recorder output 250 mv . Bass control range 26 db at 50 cps . Treble control range 22 db at $10,000 \mathrm{cps}$. Rumble filter 2 db per octove bebw 20 cps . High frequeney filter ( 12 db per octave) - 3 db ot 5500 cps. FM Tuner Section: useable sensitivity IHF 1.8 uv. H.D. (ot 400 cps $100 \%$ modula-ion). Less than $.5 \% \mathrm{~s} / \mathrm{N}$ at $100 \%$ modulation (and 1 mv input) 50 db . Select wity, alternote channel $1 H=50 \mathrm{db}$. Spurious response rejection 90 db imoge frecuency rejection 80 db . IF freq. rejection 95 db . FM stereo sepo ration greater than 35 db . Capture rotia IHF. 2.2 db size $163 / 4$ S3 59 $121 /{ }^{\prime \prime} \mathrm{b}$. Shpg. wt. 25 lbs
$\$ 339.58$
No. 31B.26. Less Cabinet. Net Each.... JW.... Net Eoch
No. 31D14. Walnut Cobinet. Model 100 J .

## FISHER MODEL 700T 120-WATT FM STEREO RECEIVER  SOLD SUATE MODEL

 UNECUALLED IN PERFORMANGE AND z AGE OF OPF:ATIOK- Exclusive Super Synchrode Front End with Field Effect Transistors.
- Two RF stages.
- Sirx Tuned Circuits
- Four IF Stages.
- Four Gang Variable Capacitor.

PAY $\$ 19.00$ MONTHLY


## 30 Illioo 0.0

mode. Stereo separation reaches the limits of perfection
KC it is more than 40 db at 15 KC better than 30 db . Full versatility of control functions rom front panel inelude new Boxondallype feedbock networks in the dial bass and treble controls, removing all possibility of "bom" or harshness. Six position source control (Tape head, Phono, FM Au FM Stereo FM Mono. Aux) permits complete selection of program FM Auto. FM Stereo, FM Mono,, Aux permits complete Stereo, Stereo Tape, source. Five-position Mode selector (istening pleasure. Unique Direct Tape MoniTape L \& R) provide for maximum listening pleasure. Unitare without changing tor feature permits use of all controls Juring tape monitoring without playback of cable connections. In lost two positions. Tope $L$ and Tape R, loudspeakers simuleach of the "our tracks of " monophoric tape $163 / 4^{\prime \prime} \mathrm{W}$. $51 / 8^{\circ} \mathrm{H}$., $123 / /^{\prime \prime} \mathrm{D}$. Shpg. wt. 30 lbs No. 31A.27. Less Cabinet.
$\$ 424.58$


## WEW Electro\%oice SIEREO HIGH FIDELITY



## - 1177 50-WATT FM STEREO RECEIVER - 1178 50-WATT AM-FM STEREO RECEIVER

BEAUTIFUL STYLE...CAN
BE PLACED ANYWMERE

## SOLID STATE

SOLID STATE SMALL COMPACT SIZE - MAY BE STACKED OR SET SIDE BY SIDE



> AM-FM STEREO TUNER MODEL 1156


## 1155 FM STEREO TUNER

Sensitivity 2 UV. IHF. Selectivity, alternate channel down 60 db . Response, $\pm$ $1 \mathrm{db} .30-15,000 \mathrm{cps}$. Hum and noise, better than 60 db . below $100 \%$ modulation for full quieting. HD, less thon $11 / 2 \%$ ot $100 \%$ modulation. Cacture ratio 2.5 db . IF bandwidth, 250 KC . Chonne separation, better than 30 db . at 1 KC . SCA rejection better thon 40 db . Controls: tuning on/off, stereo/mono, AFC on/off. Size: $33 / 8^{\prime \prime} H^{\prime}, 83 / 8^{\prime \prime}$ W., $101 / 4^{\prime \prime} \mathrm{D}$. Shpg. wt. 8 lbs . $\$ 136.00$
No. 338285 . Net Eoch.,................. $\$ 13$ 1156 AM/FM STEREO TUNER
Feotures FM section described obove, plus AM tuning, AM/FM switch and built-in loopstick AM ontenno. Some size os Model 1155 , AM/FM switch and
No. 33B286. Shps. Wt. 110 Ibs. Net Eoch
$\$ 165.75$ 44 50-wht identical specifications as amplifier section of Model 1177 Receiver described of left. Same physical size os matching 1155 FM Stereo Tuner. $\$ 105.82$
No. 33 B284, Shpg. wt. 15 bs. Net Eoch.......................... $\$ 1020$

Over a decade of transistor research and application engineering by ElectroVoice contributes to the refinements offered in the 1100 Series components. Highest musical standards at very practical cost. Features all tronsistor design and capacitor limitations.

MODEL 1177 50-WATT FM STEREO RECEIVER
Computer-type program lights on front ponel indicate source
Amplifier Section: 25 watts per channel 1 HF music power. Freq. resp. at rated output $20-20,000 \mathrm{cps}$. $\pm 11 / 2 \mathrm{db}$; at 1 watt $20-30,000 \mathrm{cps} . \pm 11 / 2 \mathrm{db} . \mathrm{H} . \mathrm{D}$ 40 db . minimum ot $1,000 \mathrm{cps}$. 70 db . below rated output. Channel separation tape -60 mv . Output domping factor 35 of 8 ohms. Inputs tuner, auxiliary and Aux, Tape (high level). Controls: Selector (Phono-Tuner-Aux.), Bass, Treble, Balance, Volume and on/off switch, Stereo/Mono, Tope Manitor, Loudness, On/Off, Speaker On/Mute. Outputs: $4-16$ ohms per chonnel, stereo tape, headiphones (on front ponel). One switched, ane un-switched AC stereo outlet. Tuner Section: FM, see specs. on 1155 opposite column.
Size $33 / 8^{\prime \prime} \mathrm{H}_{\text {., }} 157 / \mathrm{s}^{\prime \prime} \mathrm{W}$. $101 / 4^{\prime \prime}$ deep (including cose).
Size $33 / 8^{\prime \prime} H^{\prime}$., $157 / 8^{\prime \prime}$ W. $101 / 4^{\prime \prime}$ deep (including cose)
No. $33 A 287$. Shpg. wt. 20 lbs . Net Eoch
No. 33 A287. Shpg. wt. 20 fbs. Net Eoch.
$\$ 238.00$
MODEL 1178 50-WATT AM-FM STEREO RECEIVER
As ebove but with AM tuning AM/FM Switch, and built-in loopstick AM antenno. Shpg. Wt. 23 lbs.
No. 33 A288. Net Eoch.
$\$ 267.75$

## ElectroVoics

FM STEREO-PHONO SYSTEM WIH 117 RECEIVER, GARRARD CHANGFR AND E-V SEVEN


## THE E-V SEVEN

Entirely new, ultra-compact two-way acoustic suspension system. High compliance 8 -inch boss driver for exceptional low-frequency response. $31 / 2^{\prime \prime}$ cone tweeter employs unique polyurethane cone domping to prevent "break-up" and mare siky-smooth highs. 2,000 cps. electrical crossover with continuously variable high-frequency level control to permit matching to individual room ocoustics. Response $50-15,000 \mathrm{cps}$. 50 watts peak. 8 ohms impedance. Size: weight 19 W. $\times 9^{\prime \prime}$ D. Finished in oiled walnut on all four sides. Net No. 33 A289. Net Each 24 lbs.
No. 33A289. Net Each.
$\$ 59.85$


# SCOTI SOUD-STATE STEREO COMPONENIS <br> . . . FEATURING NEW <br> (FET) FDELD <br> EFFECT TRANSISTORS! 

 FIEM EFFECT TAAMEISTORE LIIS YOU HEAR MORE STATIONS MOR: GLBARLY!

Provides unbeatable performance. Direct coupled silicon output transistors give rugged, full range performance; all-silicon IF strip provides three stages of if ruggelification plus three stoges of limiting action for optimum selectivity and stereo separation.
Specifications: Music Power Rating 65 -watts. Frea. resp. $18-25,000 \mathrm{cps} . \pm 1$ db . Power bandwidth $25-20,000 \mathrm{cps}$. Usable sensitivity 2.2 wv . Hum and noise phono - 55 db . Tuner- -80 db . Cross modulation rejection $75 \mathrm{db} .5 / \mathrm{N} 70 \mathrm{db}$.

Capture ratio 5 dt . Feotures dual loudness level control, separate bass and treble controls. Inouts for phono low, phono high plus ouxiliary switch for automatic stereo, mono; switch for left or right channel for separate balancing; noise motic stereo, mons; switen off main-remote switch, power on-off switch, low level filter switch. Speokers, off main-remote switching. Precision tuning, meter,
 Operates on
wt. 36 lbs . No. 31 A83. Less Cabinet. Net Eoch
\$259.95 PREDICATED 10 BECOME THE WORLD'S LARGEST SELLING SOLID STATE RECEIVER! MODEL 382-65 WATT


Recent improvements in AM broadcosting equipment plus the FCC's decision to split AM and FM programming have provided new interest in superior AM reception. The 382 provides all the qualities and specifications of the 342 listed above plus extremely high quality AM. Dimensions, same as Madel 342.995 36 lbs.
No. 31A88. Less Cabinet. Net Each
$\$ 299.95$
No. 31 B90. Olled Walnut Cabinet for Model 342 and 382. Net Eo... \$22.50

A COMPIETE AM-FM PHONO SYSTEM ACCEPTABLE TO TME MOST CRITICAL ENTHUSIAST WITH FURNITIRE TO MATCH THE FINEST DECOR.

# (BA Matchis compontri systams SAVE YOU EXTRA SSS 

B-A'S 30-WATT CUSTOM STEREO SYSTEM


NEW COMPACT
HIGH COMPLIANCE SPEAKER SYSTEMS


B-A'S 44-WATT STEREO AMPLIFIEA
NO. 49A163. COMPLETE SYSTEM AS MSTED, LESS COVER ...... $\$ 169.95$
Garrard 1-44-Wat* Stereo Amplifier,"less cover (see 33B46, page 16
Model
40 MKII ,
Shure M 3 D
Cartridge
c Bose
1-Garrard 40 MKII Automatic Turntable with Shure M3D Cortridge $G$ Bose (308216, 30C198, page 30) 2-Compat High Compliance 'speaker Systems (See 348275 50 Ft . of Speaker Cable.

No. 33848. Olled Wolnut Cover for above Amplifier. Each $\qquad$
B-A'S CUSTOM AM-FM STEREO MULTIPLジ TUNER


Matches obove two systems. (See 33D92, poge 16 for detoils).

FISHIE 5OOC 75-WATH FM GUZIIEO SYSUFM


No. 3' B12. Oiled Walnut Cabinet for Receiver. Each $\qquad$ FISHER BIOOC 50-WATT STEREO SYETEM

\$23995 AMP.
COVER
B-A DELUXE 4-WAY SPEAKER SYSTEMS

No. 31811. Oiled Woinut Cabinet for Amplifier. Each $\qquad$ FSHER FM-90B FM STEREO

Matches 50 -watt stereo system obove (No. 31A63, poge 17 for
details).

No. 31B11. Oiled Wolnut Cabinet for FM-90B Tuner. Eoch

# DECORATOR GRILLE FABRIC WOVEN ESPECIALLY FOR B-A BY ACOUSTONE 

Now, for the first time the same specially woven grille fabrics used by the notion's leading manufocturers of sound equipment are available for your own hi- fi , TV or other sound installations at B-A's low prices
These are not ordinary materials! Eoch was created by the finest designers, made of the highest quality materials, and woven especially for the transmission of sound. The patterns described below were corefully chosen from hun-
dreds of fabrics to give you just the right selection to blend with ony furniture style or wood tone. For your convenience suggested furniture styles and cabinet woods are noted with each pattern.
(1) Black Diamonds. Striking design of closely woven diagonal silver strands on field of midnight block. Recommended for use with ebony. Furniture style-modern.
No. 32 A303. $18 \times 24^{\prime \prime}$. Net Eoch $\$ 2.15$ No. 32A302. 36x36". Net Each $\$ 3.95$ (2) Cinnamon Royal. Distinguished design of dark brown horizontal yarns with interwoven metylic threads of glistening gold Background delicate dark interwoven metalic threads of goistening Furniture style traditionol. No. 32A305. $18 \times 24^{\prime \prime}$. Net Eoch $\$ 2.15$ No. 32A304. $36 \times 36^{\prime \prime}$. Net Each $\$ 3.95$ (3) Golden Glow. Rich golden horizontal stripes ogainst a muted bockground of creamy ton. For use with oll furniture styles. Woods-walnut, maple, cherry, fruitwood
No. 32A307. $18 \times 24^{\prime \prime}$. Net Each $\$ 2.15$ No. 32A306. $36 \times 36^{\prime \prime}$. Net Each $\$ 3.95$ (4) Colonial Homespun. Warm tons and browns with thin pencil type of dark (4) Colonial Homespun. Warm fons ondection for early American furniture brown moke this fabric an ideol selec
Woods-walnut, maple, cherry, fruitwood.
Woods-walnut, maple, cherry, truitwood.
No. 32 A309. $18 \times 24^{\prime \prime}$. Net Each $\$ 2.40$ No. 32A308. $36 \times 36^{\prime \prime}$. Net Eoch $\$ 4.75$ (5) Tahiti Cane-Naturol. One of our most populor potterns. Looks almost exactly like expensive notural cane. For use with all furniture styles, all woods.
No. 32A317. $18 \times 24^{\prime \prime}$ Net Eoch $\$ 2.40 \quad$ No. 32A316. $36 \times 36^{\prime \prime}$ Net Each $\$ 4.75$ (3) Tahiti Cone-White. Vertical fibers resemble notural cane. Pure white horizontal fibers edged with golden metallic threads produce gleaming high lights. For use with all furniture styles, oll woods.
No. 32 A 319 . $18 \times 24^{\prime \prime}$. Net Each $\$ 2.40$ No. 32 A 318 . $36 \times 36^{\prime \prime}$. Net Eoch $\$ 4.75$ (5) Tohiti Cane-Dork. Rich chocolate brown yarns used for horizontal weave For use with all furniture styles, all woods except ebony
No. $32 A 321$. $18 \times 24^{\prime \prime}$. Net Each $\$ 2.40$ No. $32 A 320$. $36 \times 36^{\prime \prime}$. Net Eoch $\$ 4.75$ (a) Egg-Shell White. Luxurious white suran yorn in a honeycomb design, with just a trace of Gold thread running horizontally for background. Ideal for light woods ond modern furniture styling. Also used by decorators for wall


SWITCHCRAFT MOLDED HI-FI CABLES


High quality connecting cobles for use with audio and high fidelity equipment, tape recorders, speoker extensions, or wherever jumper cords ore needed. Connectors ore molded in plastic directly to cable, with molded-in finger grip for easy removal from socket. Wire is ottractive chrome-gray All are shielded exeept which are unshielded.

| Stock | One End | Other End |  |  | Stock No. |  | Other End |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { No. } \\ 20 A 276 \end{gathered}$ | End (1) | End | Length <br> 6 Ft . | $\begin{aligned} & \text { Each } \\ & \$ 1.71 \end{aligned}$ | $\begin{gathered} \mathrm{No} \mathrm{O} \\ 204373 \end{gathered}$ | $\begin{aligned} & \text { End } \\ & \text { 15 } \end{aligned}$ | $\begin{aligned} & \text { End } \\ & (6) \end{aligned}$ | $\begin{aligned} & \text { Leng1 } \\ & 6 \mathrm{Ft} . \end{aligned}$ | $\$ 0.75$ |
| 204277 | (1) | $(2)$ | 6 Ft . | 1.32 | 204374 | (5) | (6) | 10 Ft | 1.08 |
| 204284 | (1) | (3) | 6 Ft . | 1.44 | 204331 | (2) | $(2)$ | 18 ln . | 69 |
| 204289 | (1) | (4) | 6 Ft . | 1.71 | 204332 | (2) | $(2)$ | 3 Ft . | 78 |
| 204290 | (1) | (5) | 6 Ft . | 1.32 | 204333 | (2) | (2) | 6 Ft . | 99 |
| 204291 | (8) | (8) | 6 Ft . | 1.71 | 20 B 245 | (2) | (2) | 10 Ft . | 1.32 |
| 204105 | (8) | (8) | 10 Ft . | 2.31 | 204110 | (2) | (2) | 25 Ft . | 2.31 |
| 204106 | (8) | (8) | 25 Ft . | 3.06 | 20A336 | (2) | (3) | 3 Ft . | 90 |
| 204330 | (8) | $(2)$ | 6 Ft . | 1.32 | 204337 | (2) | (3) | 6 Ft . | 1.17 |
| 204107 | (8) | (2) | 10 Ft . | 1.80 | 20 B 246 | (2) | (3) | 10 Ft . | 1.32 |
| 204292 | (8) | (3) | 6 Ft . | 1.44 | 204111 | (2) | (3) | 25 Ft . | 2.31 |
| 204311\%: | (8) | (7) | 6 Ft . | 1.26 | 20A375 | (2) | (4) | 6 Ft . | 1.62 |
| 20A109:\% | (8) | (7) | 20 Ft . | 1.98 | 204376 | $(2)$ | (5) | 6 Ft . | 99 |
| 204313 | (5) | (5) | 18 ln . | . 69 | 204377 | (2) | (5) | 10 Ft . | 1.32 |
| 204323 | (5) | (5) | 3 Ft . | 78 | 20A379*: | (2) | (6) | 6 Ft . | 60 |
| 204324 | (5) | (5) | 6 Ft . | 99 | 204112 | (2) | (6) | 18 In . | . 54 |
| 204325 | (5) | (5) | 10 Ft . | 1.32 | 204334 | (2) | (6) | 3 Ft . | 63 |
| 204326 | (5) | (3) | 18 In . | . 84 | 20A335 | $(2)$ | (6) | 6 Ft . | . 75 |
| 204327 | (5) | (3) | 3 Ft . | . 90 | 20A380 | (2) | $(6)$ | 10 Ft . | 1.08 |
| 20A328 | (5) | (3) | 6 Ft . | 1.17 | 204113 | (2) | (6) | 25 Ft . | 2.16 |
| 20A365 <br> 204372 | (5) | (3) | 10 Ft 3 Ft | $1.32$ | 20A381: | (2) | 7) | 6 | . 17 |


(1) WOVEN GRILLE CLOTH Modern design Finest quality with beau tiful topestry effect pattern Size Brown Ivory Price $\begin{array}{cccr}\text { Size } & \text { Brown } & \text { Ivory } & \text { Price } \\ 18 \times 20^{\prime \prime} & 11 A 45 & 16 A 434 & \$ 0.96 \\ 9 \times 18^{\prime \prime} & 11 A 46 & 16 A 435 & .44\end{array}$

RCA PHONO CONNECTORS

## RCA PHONO CONNECTORS Stk. No. Description Each 10 Ea.

$\begin{array}{rrrr}\text { Stk. No. } & \text { Description } & \text { Each } & 10 \text { Ea. } \\ \text { (2) } \\ 12 A 1087 & \text { Phono Plug } & 5 \mathrm{c} & 4 \mathrm{c} \\ \text { (3) } \\ 12 A 1088 & \text { Phono Jack } & \mathbf{6 c} & 5 \mathrm{c}\end{array}$ (3) $12 A 1088$ Phono Jack $6 \mathbf{c}$ 12 A676 Double Jack 12c 11 c
(B) Some Honeycomb Design as bottom left but has light silver grey back ground with beige threads running horizontally to form top and bottom edge of honeycomb
No. 32A339. $18 \times 24^{\prime \prime}$. Net Each $\$ 2.40$ No. 324338 . 36×36". Net Eoch $\$ 4.75$ (8) Same Honeycomb Design as obove but rich beige bockground with silver threads running horizontally to form top ond bottom edge of honeycomb No. 32A341. $18 \times 24^{\prime \prime}$. Net Each $\$ 2.40$ No. 32 A340. 36×36". Net Eoch $\$ 4.75$ (7) Rich Gold Diamond Pattern. Gives effect of rich gold diamonds with brown tone background. Best suited for provincial furniture. Moy be used with either side raised gold pattern.
No. 32A343. $18 \times 24^{\prime \prime}$. Net Eoch $\$ 2.15$ No. 32 A342. 36x36". Net Each $\$ 3.95$ (7) Same as above but with prominent beige diomonds and gald threoding surrounded by brown background. Reverse side has flat beige and brown diomonds surrounded by raised beige and gold. Best suited for use with Early American furniture
No. 32A345. $18 \times 24^{\prime \prime}$. Net Eoch $\$ 2.15$ No. 324344 . $36 \times 36^{\prime \prime}$. Net Eoch $\$ 3.95$ (8) Roised Circular Pottern. Predominant rich brown background highlighted by beige and gold harizontal threads. For use with all furniture styles, ideal with medium or dark woods.
No. 32A347. 18×24" Net Eoch \$2.15 No. 32A346. 36x36" Net Eoch $\$ 3.95$ (9) Contemporary Pattern of all Modern Design has gold horizontal threads intermingled with light beige on background of brown
No. 32A349. $18 \times 24^{\prime \prime}$. Net Each $\$ 2.15$ No. 32A348. 36 $25^{\prime \prime}$ Net Eoch $\$ 3.95$ (im) Contemporory Pottern has light beige design on brown bockground, two gold threods run horizontally at intervals of approximately $1 / 2^{" ~ s p a c i n g . ~}$ No. 32A351. 18×24". Net Each $\$ 2.15$ No. 32 A350. 36×36". Net Each $\$ 3.95$ (1i) Nubby Effect. Beoutiful gold and ton background highlighted by light beige nubby pieces spotted at random over entire area. No. 32 A353. $18 \times 24^{\prime \prime}$. Net Each $\$ 2.15$ No. 32A352. 36 $36^{\prime \prime}$. Net Each $\$ 3.95$


Two shielded insulated cables inside a common chrome gray plastic jacket provide for two completely isolated channels. Separately insulated shields minimize ground loop. Both imner jackets are calar coded for easy channel (1) and (1) Two Phono Plugs at each end.

No. 20 A 340.3 ft . length. Net Each
No. 20A445. 6 ft . length. Net Each.
No. 20A4462. 10 ft . length. Net Each
(1) and (2) Two Phono Plugs on one end and two stripped and tinned leads on other.
No. 20A463. $3 \mathbf{f t}$. length. Net Each
No. 20A466. 6 ft . length. Net Eoch No. 20A467. 10 ft. length. Net Each No 20A469. Net Eoch
FLEXIBLE "Y" CONNECTORS
Ideal for connecting stereo source to monaural
amplifier. Also used on some tope recorders. Groy
shielded coble 4" long.
Phono Plug to Two Phono Jacks.
No. 20A481. Type 330F1. Net Each. .... $\$ 1.35$
Phono Plug to One Phono Plug ond One Phono
Jack.
No. 20A482. Type 33CF2. Net Each. .... $\$ 1.35$
Phono Plug to Two Phono Plugs.
No. 20A483. Type 330F3. Nef Each ..... $\$ 1.35$


## ADAPTOR CABLES FOR FOREIGN BUILT

## TAPE RECORDERS, RADIOS

(1) Stereo Adaptor Cable. Plugs directly into Euro-pean-type 5 hole sockets usually found on Norelco, Korting, Grundig, Sony, Eiber tape recorders; Grundig rodios, Models SO-240-U, TM42, TM45 and many others. Permits use with Americon made microphones, headphones, earphones, extension speakers. ft . shielded cables, color coded, 5-pin
No. 208263. Type 330G. Each $\$ 3.60$ (2) Flexible Y-Adaptor. Converts Norelco, Grundig, Uner, Korting tape recorders using European-type phones, extension speakers, etc. 4 inch shielded jacks other end No. 20B264. Type 330 H . Each
$\$ 2.25$

# WORLDS FINEST SPEAKER SYETEM AMERICAN-MADE FOR B-A BY UNIVERSITY LOUDSPEAKFRS 

## EXCEPTIONAL VALUE

## $9{ }^{25}$  Dowa

## NEM, IMPROVED <br> A 3-WAY SYSTEM WITHOUT COMPARISON

> - Freq. resp. 25-40,000 cps.
> - Power handling capacity 40 watts.
> - Impedance, 8 ohms.
> - Size $24 \times 17 \times 111 / 4^{\prime \prime}$ deep.

Here is a speaker system that puts you on the conductors podium.
Beautiful MandRubbed Giled Walnut Enclosure than the finest Boss is handled by high compliance $12^{\prime \prime}$ woofer engineered specifically for the enclosure. Provides extended boss as low os 25 cps with less than now, considered impossible even for a speaker system of enormous proportions. Power hondling capacity 40 watts music power, but it is of such high efficiency thot optimum response is realized with omplifiers capable of no more than on undistorted 10 watt output.
Mid-range is a speciolized $8^{\prime \prime}$ direct radiator speaker for the reproduction of frequencies in the
$500-5000$ cDs rance. Perfectly ciency and responge. Perfectly matches the efficiency and response characteristics of the woofer and sphericon super tweeter. It provides excelleni
projection and dramotic presence. Viscous treated it rojection ond dramotic presence. Viscous treated "makes-way" for the unique frequencies, and makes-way for the unique tonal, purity of the sphericon. Equipped with on oirtight, sub-enclosure bosket assembly, it also prevents distortion
due to woofer-generated pressures inside the
cobinet.
The high frequency end is handled by world's finest high-frequency reproducer "The Sphericon Super Tweeter". Acknowledged by oudio engineers os the finest of its kind. Provides smouth response uD to planes for uniform highs to will dispersion in all plones for uniform highs to all parts of the room. spherical diffractor, the sphericon produces smand on oxis response, creating true realism. Enclosure
5 YEAR GUARANTEE See Page 28 No. 40 is 91 . Shpg. wt. 43 lbs. Net....... $\$ 99.95$

## SPECTACULAR NEW COMPACT HIGH COMPLIANCE SPEAKER SYSTEM!

IDEAL FOR USE WITH SOLID STATE AND TUBE AMPLIFIERS!



## $\$ 29{ }_{2}^{95}$

FUCL SMOOTH RESPONSE OVER ENTIRE AUDIO SPECTRUM!
-20-20,000 cps frequency respronse.

- Hondles up to 25 wotts power without break-up.
- Handsome solid walnut enclostire.
- Beoutiful decorotor gritle cloth blends with ony decor.

Compact, only $13^{\prime \prime} 9^{H} \times 10^{\prime \prime}$ W. $\times 7^{\prime \prime}$ D. A true bookshelf enclosure.

- American mode.

[^1][^2]
## NEW <br> B-A 12-INCH THREE-WAY <br> DIFFAXIAL <br> SPEAKER

ONLY SINCLE SPEAKER ASSEMBLY GAPABLE OF RESPONSE FROM 28-40,000 CPS


TWEETER FREQUENCY IN CYCLES PER SECOND

## \$72.00 VALUE

## handles

 35 WATTS INTEGRATED PROGRAM materialB-A SPECIAL PRICE


AMERICAN MADE
FOR B-A BY UNIVERSITY LOUDSPEAKERS

FULL 5 YEAR GUARANTEE
'For superior to ony $12^{\prime \prime}$ speaker we hove seen or heard at anywhere near this amazing low price.
Mode expressly for B-A by University; a leoder over the yeors in the production of audio products. This amazing speaker utllizes newest acoustical developments including the exclusive diffusicone principle and the fabulous new sphericon super tweeter.
Entire audio spectrum from 28 to $40,000 \mathrm{cps}$ are reproduced with rich deep true bass, full mid-ronge ond sporkling highs. High efficiency permits full "Concert" volume without distortion using omplifiers of only modest power, yet speoker is so rugged it can be used sofely with high-power amplifiers
as well. within 2 db to $22,000 \mathrm{cps}$. Power rating: 35 wotts integrated progrom material. Impedance 8-16 ohms. Crossover 1000 cps (mechonical), 3000 cps (electrical). Dimensions: 13"' overoll dia., $65 / 8^{\prime \prime}$ deep. Mounting: front or rear of baffle. 'Special features: rigid, die-cast frame. Rigid cup baffle to eliminate tweeter-woofer interference. High compliance suspension with ex-
clusive University critical edge damping. Shpg. Wt. Il lbs. $\$ 49.95$ No. 34A61. \#Guaronteed 5 Full Years (See Poge'28)
ABOVE SPEAKER IN BA'S FAMOUS DUCTED PORT "DIRECTOIRE"
Outperforms All Others of Comparable Size, Price
Enclosure is famous engineered ducted port developed to provide true big system response from bookshelf size enclosure. Reinforces bass end to glve the deep rich sound from even the lowest bass notes of a pipe
orgon. Rigidly constructed of $3 / 4^{\text {" }}$ American woinut veneer for resonance free performonce. Furnished with long heovy ducted tuned port, All four pide:/ are elegontly finished in Swedish oil walnut. Front is covered in attractive grille of interwoven cane, highlighted with gold strands. Size of enclosure is only $14^{\prime \prime} \mathrm{H} . \times 24^{\prime \prime} \mathrm{W} . \times 12^{\prime \prime} \mathrm{D}$.
Speaker is famous BA-12", 3 -way diffoxiol, made exclusively for B-A by University Loudspeakers. When incorporated with the "Directoire" every outstanding feoture of this speaker is permitted to perform at its optimum. The $28-40,000 \mathrm{eps}$ range is reproduced with its fullest presence. Rigid diecost construction of speaker when mounted to heavy $3 / 4^{\prime \prime}$ boffle board eliminates any possibility of distortion, often a problem with lighter weight type of enclosures. Hondles full 35 wotts of integrated program material without breakup, while still providing exceptional full range sound with even the lowest powered amplifiers. Sole "DIRECTIRE" ENCLOSURE only os listed above. Handes 8 " or $12{ }^{12}$ speakers.
No. 40 C98. Shpg. wt. 28 lbs. Net Each.
\$39.95


TWO FOR ${ }^{\text {s }} 1599^{4}$

## THE KARLSON ENGLOSURE KKHS <br> FOR 8, 12 AND 15-INCH SPEAKERS <br> If FACTARY ASSEMBLED WOULD $\cos \mathbf{\$ 4 2 . 6 0}$

## MADE EXCLUSIVELY <br> $\square$ FO: :

REQUIRES LESS POWER, PROVIDES MORE OYNAMIC RANGE
Ordinary systems 10 times their size connot produce sound with such enormous panoramic pres-


Actually better thon a horn enclosure 30 ft . long and $121 / 2 \mathrm{ft}$. in diameter of the mouth.

## ence. <br> CHOSEN TOR USE AT MOY. WCRED'S FAIR <br> SUGGESTED SPEAKER PLACTMENTS




Truly the connoisseurs choice. Small enough to fit the overage bookshelf yet gives a quality of reproduction and extended bass response totally beyond the normal capabilities of a one foot enclosure. With any good $8^{\prime \prime}$ speaker produces a bass range normally ottributed to large $15^{\prime \prime}$ systems. Their wide-area stereo presentation and tonal definition are also typical of the Karlson transducer perfection. When placed on their backs near a wall, the Karlson transducer perfection. Whatire wall. Small size and big performance sound seems to come from the entire wall. tomalmost any use. Of these enclosures makes them adaptabe toonbined with special back loading. Provides fundomental coupling to $1 / 2$ speoker resononce. No tuning required. Mrovides londing provides very smooth rich boss and practically eliminates Matched loading provides very smooth ilso minimizes cone motion giving true to pitch bass and unexcelled transient response. Amplifier loading is reto pitch bass and unexcelled transient response. Ampic range up to 100 sistrive efficiency $40 \%$ with overage speake. A A looding extends down to $2 / 3$
the speaker free field resonance. Smoath response down to 40 cps obtalnable with B-A's quality speakers. Dispersion for oll speakers is uniform for all frequencies within a solid angle of $120^{\circ}$ tilted $30^{\circ}$ upwards. Size $171 / 4^{\prime \prime}$ $\mathrm{L}_{\mathrm{K}} \times 113 / 4^{\prime \prime} \mathrm{W} . \times 10^{\prime \prime} \mathrm{D} .1 / 2^{\prime \prime}$ ponels. \% Wt. opprox. $14 \mathrm{lbs} . \$ 19.95$ No. 40B223. Deluxe Karlson Unfinished $8^{\prime \prime}$ Enclosure Kit. Net.... FOR $12^{\prime \prime}$ SPEAKER. Size $243 / 4 \times 163 / 4 \times 133 / /^{\prime \prime}$. Similar to $8^{\prime \prime}$ Unit obove but with $3 / 4^{\prime \prime}$ panels. Dynamic range of 110 db without distortion is normal. If foctory assembled would cost $\$ 99.95$. Shpg. wt. 50 lbs.
$\$ 49.50$ No. 40A221. Net Each
FOR $15^{\prime \prime}$ SPEAKER. Size $221 / 2^{\prime \prime} \mathrm{W} . \times 33^{\prime \prime} \mathrm{H} . \times 18^{\prime \prime} \mathrm{D}$. Similar to $8^{\prime \prime}$ Unit FOR $15^{\prime \prime}$ SPEAKER Size $221 / 2^{\prime \prime} \mathrm{W} \times 33^{\prime \prime} \mathrm{H}_{\mathrm{C}} \times 18^{\prime \prime} \mathrm{D}$. Similar to $8^{\prime \prime \prime}$ Unit
above but with $3 / 4^{\prime \prime}$ panels. Actually better than a horn enclosure $30^{\prime}$ long above but with $3 / /^{\prime \prime}$ ponels. Actually better than o horn enclosure $30^{\prime}$ long and $121 / 2^{\prime \prime}$ in diometer. Dynamic range $4 p$ to 120 do without distortion is normal. May be odapted for $12^{\prime \prime}$ or $10^{\prime \prime}$ speakers. If factory assembled would cost $\$ 129.95$. Shigg. wt. 60 lbs .
$\$ 69.50$

# B-A's NEW 3-AND 4-WAY SPEAKER SYSTEMS CUSTOM MADE BY ONE OF AMERICAS LEADING HI-FI SPEAKER MAKERS 

## B-A EXCLUSIVE

## THESE FANTASIIC LOW PRICES MADE POSSIBLE ONLY BY B-A's GIANT PUZCHASING POWFit



## NEW B-A's 12-INCH 4-WAY SPEAKER SYSTEM

## FREQUENEY RESPOWSE 25CPS TO BEYOND AUDIBILITY!

- Heavy $1 / 4^{4 *}$ hardvood enclosure.
- Compoct 24" W. x $17^{\prime \prime}$ H. x
$11^{\prime \prime} \mathrm{D}$.
- Beau-izul oiled walnut finish.
- Srillience zontrol.


[^3]NEW B-A's DELUXE HEAVY-DUTY 12-IN. 4-WAY SPEAKER SYSTEM
 believe it possible.... but our own sound men came up with it... the most fantastic speaker system yet for only $\$ 59.95$ Our management was so impressed by this unit that they have permitted us to make the following offer: If you don't believe this is the best speaker system for anywhere near this low, low price after hearing it, B-A will refund your purchase price plus transportation charges both ways.
Extra heavy duty 12 inch woofer, low mid-range heavy dury 6 inch speaker, high frequency whizzer, and super $31 / 2^{\prime \prime}$ ultra high frequency tweeter in a $3 / 4^{\prime \prime}$ solid wood tuned enclosure. Briliance control adjusts for personalized listening. Beaufiful oiled walnut finish on four sides makes this enc No. 40 C 198 . Shpg. wt. 50 lbs. Special Each..
\$59.95

## B-A SAVES YOU MORE

## BOOKSHELF 3-WAY SPEAKER SYSTEM



By popular demand a 3-way system to give even areoter performance than B-A's exceptional value 2 -woy system listed below. Larger size. 11" H. x $24^{\prime \prime}$ W. $\times 6^{\prime \prime} \mathrm{D}$. coblnet plus $8^{\prime \prime}$ heovy duty Alnico $V$ woofer, " $6^{\prime \prime}$ mid-range and $4^{\prime \prime}$ tweeter provide smooth response over oudio spectrum of from $20-20,000 \mathrm{cps}$. Ideal size lends itself for use in bookshelves, on table or on floor, either vertically or horizontally. Extra strong heovily reinforced enclosure is mode of $1 / 2^{\prime \prime}$ solid wood in oiled walnut. Internal brocing is screwed and glued in to eliminate any possible vibration. Construction is of quality usually found only in the much more expensive systems. Bock is $1 / 2^{\prime \prime}$ ehipwood scientifically ported for optimum response. Full 20 watt handling eapacity yet operates excellently on even the smallest amount of power. Beautiful cane grille fabric is enriched by gold threads running through it. Ameadily connected
American mode
No. 34A323. Shpg. wt. 18 lbs. Net Each
\$24.95

## HI-FI 8-IN. SPEAKER \& ENCLOSURE


St $\begin{gathered}\text { WITH } \\ \text { VOLUME }\end{gathered}$ CONTROL
FITS ANYWHERE - HAMGS ON WALL OR SITS ON TABLE

- Amazing bass.
- Picture frame front.
- Lightweight and easily movable.


## GENUINE HARDWOOD CABNETS IN OILED WALNUT FINISY

## FANTASTIC NEW MINI HI-FI SPEAKER SYSTEM

HO MONEY DOWN

PAIR $\$ 38.50$
A NEW DIMENSION IN SOUND
SOUND QUALITY UNSURPASSED BY COMPACT SPEAKER
SYSTEMS SELLING FOR OVER \$55.00

Only $10^{\prime \prime} \mathrm{H} . \times 6^{\prime \prime} \mathrm{W} . \times 65 / 8^{\prime \prime} \mathrm{D}$.... fits anywhere, bookshelf table, evc. pro vides depth and brilionce never befare possible in a speaker system in than High efficiency requires small power to drive. Works perfectly with any tube or solid state component. True bass response from the specially designed heary mognet woofer. Clear cris highs provided from highly efficient tweeter. Ideal for wide range mono perfect far compoct stereo systems Freq. resp. 40-20,000 cps. Designed for 8 or 16 ohms input.
348110
spec. Ea. $\$ 79.95$ Pair $\$ 38.501$


## COMPACT 2-WAY SPEAKER SYSTEM

 Use Horizontally or Vertically- True Hi-Fi, 20-2C,000

High efficiency type.

- Easily movable.
- Solid construction.


Sounds much bigger and more expensive than it is. Slim, unobtrusive enSounds much bigger and more floor, woll, bookshelf or toble. Lightweight ond portoble, it is easily carried from room-to-room. B-A's oudio experts were portable, it is easily corried from peformance-boss with impoct, clear midrange ond cleon highs. High efficiency type not to be confused 'with similor low efficiency speakers. Includes $8^{\prime \prime}$ speaker with Alnico $V$ magnet. Front mounted volume control permits stereo bolance and room level odjustments. Distinctive picture frome front styling. Oiled wolnut finish matches cone grill cloth. 10 wott power capacity covers even lorge rooms. 20-12,000 cDs, 8 ohms. $43 / 8^{\prime \prime}$ thin $\times 113 / 4^{\prime \prime} \times 113 / 4^{\prime \prime} .81 / 2^{\prime}$ coble. Americon mode. 95 No. 34A73. B-A Speciol, Net Each
$\$ 11.95$

## NOISELESS 4-INCH "WHISPER FAN"

## Beot the heat that wrecks the set! At last otruly silent oir mover. Mounts

 in cobinet or comportment of hi-fi, stereo, TV, hom gear, studio or industrial equipment, etc.-circulates cool currents of oir through chossis. Reduces costly foilures of "hot"" components such os tubes, tronsformers, filter condensers; minimizes drift; stabilizes, overoll performance, prevent rust formotion and settling of dust. A low-cost invesiment thot soves $\$ \$$ time, and annoyance.Noiseless and stotic-free, it does not interfere with sound reproduction or radio reception. Compact ( $411^{\prime \prime}$ sq. $\times 11 / 2^{\prime \prime} D_{\text {.) }}$ to fit ony enclosure, requires only $41 /{ }^{\prime \prime}$ " round mtg hole. Mounts to either push or pull air, Economicol 7 watt motor hos long-life pre-lubricated beorings, wiperotes for pennies a yeor. Sturdy reinforced plastic AC, 60 cycles. hordware. 1800 RPM. ${ }^{\text {No. 5C125. wt. } 3 \text { Ibs. Each... }}$.

Concert hall "Big Sound" from o genuine two-way speoker system in a compoct enclosure . .,. ofl of B-A's special budget price. Selected by our own oudio specialists for its smooth, plecsing $20-20,000 \mathrm{cps}$ high-ficelity ronge. Gives realistic high-efficiency performance even with fow Dower sound sources Use horizantolly or vertically an floor, bookzose, or table. Eosily carried from room to raom, or outdoors. Consists of powerful $8^{\circ}$ boss reproducer ond ${ }^{2}{ }^{2}$. tweeter in o scientificolly engineered enclosure. Port in 8 hordwood chip is boord bock, occentuotes bass response. Decorous slim lime styling. Cobin one grill solidly constructed with $1 / /^{\prime \prime}$ hordwood ond glued aints. Fine groin cone grill
cloth complements oil wolnut finish. Size $5^{3} \times 93^{4} \times 18^{\prime \prime}$. 8 ohms . $812^{\prime}$ coble cloth complements oil woinut finish. Size $4 \times 94 \times 18$. 81695 No. 34 A 72 B-A Special, Net Eoch


## MADE FOR B-A BY UNIVERSITY LOUDSPEAKERS

## B-A 8-INCH 2-WAY HIGH FIDELITY SPEAKER



Best 8-fn. Buy
COMPARE THE PRIC:
AMAZING RUIALITY \& PERFCRHANCE
Powerful 3/4
lb. cercmic magnet.
Freq. re.
sponse 70-
12,000 eps.
30 watt 5
power hendling ecpacity.

BUILT
TO PRECISE B-A REQUIREMENTS

Fantastic $8^{\prime \prime}$ 2-way speoker feotures on unusually smoath wide band response. Custom built ta B-A's exacting specifications by University Laudspeakers, a foremost manufocturer of the finest high fidelA speckers A. 2 -inch diameter vaice coil is coupled to a dual cone system. The low frequency section utilizes a curvelinear diaphragm which has a controlled response to 1500 eps. The high frequency radiator is driven through o mechanical crossover to proVide smooth response throughout the treble range. Voice coil precision working clearances are protected ogainst corrosion by electroploting. It is extremely shollow only $21 / 2^{\prime \prime}$ overall depth. Being of such design it can either be froat or rear mounted in an enclosure or in walls using stondord dimension studding.
Specitications: Freq. resp. 70-12,000 eps. Power hondling capacity, 30 watts. Imped 8 ohms. Nominal resonant freq. 55 cps . Crossover freq. 1500 cps . Dimensions : $81 / 4^{\prime \prime}$ dia $\mathrm{in}^{7} 1 / \mathrm{s}^{\prime \prime}$ baffle opening, $21 / 2^{\prime \prime}$ deep. Shpg. wf. $51 / 2$ ibs. No. ミ4B261. "Guaranteed 5 Full Years \$17.95

NEW B-A 12-INCH COAXIAL HIGH FIDELITY SPEAKER


Designed to provide the finest full range reproduction at the lowest possible price. Has heavy duty die cost fromes, the hallmork of fine loudspeokers. Two cones divide the sound, one for maximum bass reproduction and a second smaller cone for efficient mid-range to high-frequency performance. A unique feature is that $2-\mathrm{in}$. dia. electroplated voice coil. Contains deep voice coils, conductor remains in air gop even on longest excursions, preventing non-lineor operation charocteristics of wide diameter, short in walls or ceilings. in walls or ceilings.
Specifications: freq. resp. 35-14,000 cps. Progrom capocity 30 watts; 40 watts peak power. Reso 45 cps in free oir. Sensitivity roting: 43 db EIA Crossover: mechonicol, at 1500 cps . Imp. 8 ohms, Mounting: $41 / 4^{\prime \prime}$, holes equally spaced on $111 / 2^{\prime \prime}$ circle. Fits $111^{\prime \prime \prime}$ baffle opening
Size $12{ }^{\prime \prime}{ }^{\prime \prime}$ dio. $\times 35 / 8^{\prime \prime}$ deep behind panel. Net Wt
$51 / 2 \mathrm{lbs}$. Shpg. wt. $71 / 2 \mathrm{lbs}$.
No. 34 B 262 . ${ }^{\text {Guaranteed }} 5$
$\$ 21.95$
THAM A
SIMGLE
COMPETITIVE SPEAKER

## FREQUENGY

 RESPONSE5-14000 CP 5
HANDLES
20 WATTS PROGRAM MATERIAL

NEW B-A 12-INCH 3-WAY HIGH FIDELITY SPEAKER

## B-A SPECIAL <br>  <br> EXCEPTIONAL SOUND REPRODUCTOI AT <br> SURPRISING L0W cosT <br> FREQUENCY <br> RESPONSF <br> 35-40,000 CPS <br> MANDLES 30 WATTS PROGRAM MATERIAL 40 WATTS PEAK <br> WITH SPHERICON TWEETER

S-YEAR GUARANTEE ON ALL B-A LOUDSPEAKERS MADE BY UNIVERSITY, AGAINST DEFECTS IN MATERIALS OR WORKMANSHIP JUST RETURN TO US FOR FULL REPAIR OR REPLACEMENT.

Deep rich boss and clean clear treble from two: cones sphericon smooth peok-free highs from the famous to listen to sound was previously only availoble in higher priced speakers. The impressive list of "highpriced" feotures includes a new ceromic magnet, plus $2^{\prime \prime}$ voice coil on the woofer for larger excursions of the diaphragm with low distortion ... rugged diecost frome to ensure perfect olignment of all moving ports. Versatile: mounts in high fidelity speaker enclosures, in the wall or even in a closet. Its wide dispersion makes placement for less critical than ordinary speakers- even for stereo!
Specifications: Freq. resp. 35-40,000 cps. Power handling copacity 30 watts IPM. Crossover frequencies: mid-range- 1500 cps ; tweeter- 4500 cps .

Imp. 8 ohms. Nominal resonant frea. 45 cps Di-




PRESENTING THE VERY ULTIMATE IN MODERN RECORD PLAYBACK EQUIPMENT the MIRACORD 50 H \$149※ㅡㄹ

## CONCEIVED WITH THE IDEA OF CREATING THE FINEST AUTOMANUAL TURNTABLE EVER PRODUCED



The Miracord 50 H was designed exclusively for those who want the very finest in record playbock instruments. Every known design feoture and facility has been included in the Mirocord 50 H . Its greater distinction is the many exclusive feofures added to the deslgn to raise its standard of performance above the occepted norm for outomotic units.
Automatic or Manual is an easy one-step operation. You can ploy one record side continuously or ploy stock of up to ten. The motor storts when the tone orm is moved toword the record, whether you do it manuolly or by simply pressing the button morked with the record size.
The push-button console is the gentlest ever developed, and the easiest to opercte. Only the lightest touch of a single button selects and starts the outomatic function desired. For instonce, when you push the $12^{\prime \prime}$ button the turntoble starts revolving of $331 / 3$ RPM, and the tonearm moves exactly to the starting groove on your $12^{\prime \prime}$ record.
Tonearm-new balanced design and bearing suspension reduces total loteral friction to less than 0.4 gram. Resonance is shorply reduced by the use of square eross-sectional contour ond ocousticolly isoloted counterwelght. Movement of the tonearm is octuoted by a vernier drive which provides convenient non-slip control for bolancing tonearm and cortridge mass.

Interchongeoble cortridge insart occepts all stonciand cortridges, no soldering required. Cartridge makes positive contoct with internol spring-looded terminals. Etylus overhang adjustment allows the 5 OH to locote the stylus of the exoct distance from the pivot prescribed for optimum tracking accuracy and playbock cierformonse. The toneorm will track any catrige of its recommended stylus torce setting to less than $1 / 2$ girom.
Papst hysteresis motor assures you of broadecst studio quality by praviding "locked in" speed accuracy it drives the turntoble and record at the correct playing RPM, maintaining canstant motion regardless of voltage varlation. Built-in ceeing device permits the stylus to be located in ony selected groove in the record. Operation is simple ond precise, totally independent of the tonearm and turntable mechanism.
Illuminated speed indicator an the push-button claorly shows which of the $4-$ speeds $(78,45,331 / 3$ and $162 / 3$ RPM) you are using.
No. 30A1 16 . Mirocord 50 M . Less Cartridge and Base. Net Each....... 149.50 No. 30A116. Mirocord SOH. Lest Sartridge and Eliptic al Stylus. Net Ea...... \$149.51 No. 30A137. Miracord 50H with Piskering VI5 ATEE-2 Elliptical Stylus.... $\$$ t 49.51 No. 30A138. Mirocord 50H with PEkering /E Eifipical Stylus. Net Eoch.... $\$$ IS9.50

$$
\frac{B E N J A M I N}{M A R A O Q D}
$$

## AN EXCITING NEW CONCEPT IN RECORD CHANGERS

## the MIRACORD 40A

## ${ }^{5} 995$

WITH MATCHED ELAC 240 FACTORY INSTALLED CARTRIDGE

- Heavy 12-inch turntable platter. Ploys records manually or outomatically
Dynamically bolonced tonearm. $\quad$ - ingly or in sequence af up to 10
- Famous Miracord "feather-touch" push- records. buttons.


The Mirocord 40A is supplied with foctory-installed Eloc 240 cortridges as standard equipment. Factory installation means correct installation. It means that the cartridge is "rlght" for the unit, and is correctly angled and positioned in the orm to insure optimum tracking occurocy ond ploybock performance. The Eloc Bosed on the moving magnet principle, and equipped with a diamond stylus. OTHER FEATURES INCLUDE:
Heavy 12 inch turntable platter, lathe furned from solid one-piece die castings. Teflon-encosed, ball bearing roces insures smooth, steody, unwovering ratation. Dynamically balanced tonearm exhibits no sensitivity to turntoble tilt. Will track any cartridge ot recommended stylus force settings at below 1 grom.
"Feathertouch" push-bottons. The lightest touch of a button is all it takes to put the mechanism into outomotic ploy or reject. The arm responds gently, tenderly. No jumping, skipping or skating.
The motor is a 4 -pole induction type on the 40 A . The 40 H is equipped with of Papst Hysteresis motor thot insures broodcost studio performance regardless of
voltage variations.
Interchangeable insent accepts oll standard cartridjes, no soldering is necessary. A.s the retoiner is slipped into the arm, it mokes instant, positive electrical confact. Shpg wt. 16 lbs .
Mo. 30A98. Miracord 40A with factory installed Elec 240
$\$ 99.50$
Mognetic Mono-Stereo Diomond Stylus. Less Brise, Met Eoch................ $\$ 99.51$
No. 30A1 C3. Mirocard 40A with Shure M44E Ehtprical Stylus. Net Eo...... 90.51 No. 30A103. Mirocard 40A with Share M44E Ehlprical Strlus. Net Eo......... $\$ 99.51$
No. 30A1G5. Mirocord 40A with Pickerirg V15/ATE-2 Elliptical Stylus..... $\$ 99.51$ No. 30A165. Miracord 40A with Pickering V15/ATE-2 Elliptical Stylus..... \$99.51 MIRACORD 40 H . Some os model 40A but with Papst Hysteresis motor es de scribed in the 50 H obove.
$\$ 110.00$
No. No. 30Al15. Mirocord 40H with Plikering V15/ATE-2 Elplico Net Each.... $\$ 110.01$ No. 30A120. Mirocord 40H with factory installed Elor 240 Certridge........ $\$ 115.00$ Na. 30Al13. Miracord 40H with ACC 809/E Elliplical Stylus. Net Eoch....\$120.00

## ACCESSORIES FOR MODELS 50H, 40A AND 40H



# AUTOMATIC TURNTABLES 



## YOUR CHOICE OF ONE OF THESE THREE FAMOUS CARTRIDGES!

## MODEL 60 MKII AUTOMATIC TURNTABLE

Richly endowed with engineering feotures, refined to assure excellent reproduction with the latest ultra sensitive cartridges. Dynamically bolanced tone arm is the most advanced construction. Resonance and rumble has been further eliminated by o new resilient counter weight mounting. The orm system will track flowlessly $1 / 2$ gram, adjustable by a new stylus pressure control assembly Feotures: New manual cueing device, outomatic intermix; 4 -speeds: $162 / 3,331 / 3$ 45 and 78 RPM
Dimensions: $153 / 8^{\prime \prime}$ left to right, $131 / 8^{\prime \prime}$ front to rear, $47 / 8^{\prime \prime}$ above and $27 / 8^{\prime \prime}$ below motor boord. Shpg. wt. 12 lbs .
No. $30 C 202$.
OMKII Less Cartridge and Base. Net Each
$\$ 74.50$
No. 30B252. 60MKII with Shure M3D Cortridge. Net Each.............................. $\$ 74.5$
No. 308253. 60 MKII with Shure M44E Elliptical Stylus. Net Eoch. No. 308254. 60 MKII with Pickering V15/ATE-2 Elliptical Stylus. Net Eo... $\$ 84.50$
No. 308255. 60 MKII M75E Hi-Track Stereo Dynetic. Net .Eoch.............. $\$ 8.50$ <br> \title{
NEW <br> \title{
NEW <br> Garrard <br> $\$ 54.50$ <br> LESS CARTRIDGE AND BASE <br> <br> MODEL 50 MKII AUTOMATIC TURNTABLE
} <br> <br> MODEL 50 MKII AUTOMATIC TURNTABLE
}

Exciting new 50 MKII of a low price but with qualities comparable to the most expensive outomatic turntables. Features on excellent performing, llghtweight tubular type tone arm, with a resiliently mounted, fixed position counterweight. The low moss shell will accommodate all cartridges and the stylus pressure is set by moving a pointer along a gauge marked in groms, conveniently located on.
the side of the arm,
A first ot this amazing low price is the manual cueing and pouse device operated by a simple lever. This automatic turntable intermixes records of any size as well as functions as a manual plaver.
Specifications: 4 speeds: $162 / 3,331 / 3,45$ and 78 RPM. Minimum cabinet dimensions: $14^{\prime} / 9^{\prime \prime}$ left to right, $12 \frac{1}{2} 2^{\prime \prime}$ front to rear, $45 / 8^{\prime \prime}$ above and $27 / 8^{\prime \prime}$ below motor board. shog. wt. 9 lbs.
No. 30C200. 50 MK11 Less Cartridge and Bose. Net Each................... $\$ 54.50$
No. 30C188. 50MKII with Shure M30 Cartridge. Net Each. $\begin{array}{r}\$ 54 . . . . . . . . \\ \hline\end{array}$
No. 30 Cl 199.50 MKII with ADC 770 Cartridge. Net Each.
No. 30 B 256 . 50 MK 11 with Pickering V15/AT2 Cartridge. Net Each. $\qquad$

## NEW

## Garrand

## '37.50

LESS CARTRIDGE AND BASE
MODEL SP- 20 4-SPEED MANUAL RECORD PLAYER
4-Speed manual record ploying unit from Garrard. Ideal for manual playing records through high fidelity systems. Compact and efffient, recommended for quality audio-visual applicotions.
High demand for a unit of this quality and low price has brought this unit into high demond turntables as durability and ruggedness have been fully engineered into it, to furnide years of trouble-free service.
Features interchangeable plug-in head for any cartridge, magnetic or ceramic Full size weighted turntable. Automatic return of orm to rest and shut-off ofter full size weighted turntable. Automawic redjustoble stylus pressure. Compact size ploy. Arm is semi-counterbalonced with adjustable $31 / 2^{\prime \prime}$ above and $21 / 8^{\prime \prime}$ below only $143 / 8$.
Complete with line cord, 2 audio cables, plug-in shell.
Complete with SP20 Coss Cortridae and Bose Net Each
$\$ 37.50$
No. 30B257. SP20 with Shure M30 Cartridge. Net Each

## coordinated BASES BY...

Made of simulated ebony and walnut and highlighted with silver trim. Lightweight, strong and durable, an attractive companion accessory which enhances the appearance of each Garrard model. Can be used on top of furniture or housed in cobinetry. Provisions for eosy mounting of drawer slides hove been built into the underside of the bose.
No. 30A196. CB8. For 70, 88 Series and Type A
Net Each........................50 $\$ 5.50$ No. 30A193. CB10. For 20, 40, 50, 60 Series, AT6 and Auto-
slim. Net Eoch.............................................

## Garrard

## MOUNTING BOARDS

Smooth sanded unfinishey wood mounting boards. Overall size $16 \times 18^{\prime \prime}$. For use in cabinet mounting. Can be trimmed to size. Stk. No. Mfo. No. 30 B 286 MB 8 70, 88, A Fit: M
$88, \mathrm{~A}$ 308250 MB9 Lat $80^{\circ}$ Each
$\$ 2.25$ Lat 80 , 50,60 ,

$\$ 5.95$
5.95
3.80


## HIGH FIDELITY CARTRIDGES AND ACCESSORIES



## SHURE V-15 TYPI I DYNETIC WITH ELLIPTICAL STYIU』

fured urder rewly develcpet, urior foedented roit critical oudiophile. Monutoc io povide "perfectionist" refroutraton quality. Elliptical stylus Irazki of $15 \%$,
to guarl. Respanse $20-20,000$ aocidentally croppe, or tounced. Built-in stylus isf hanc-rubled wolnut $x$. $0100=$ Tracking fonce $3 / 4$ to $11 / 2$ grons. in beastiNo. 50 A 41 I, Each
587.50

Frovides excentional purity hrack EYNETIC WITH ELLIPTICAL 5 TYL US
cuality encepional purity of musio: reproduetion Desigred for use in the firest D003") $15^{\circ}$ diamond stylus for excellent trockurg. Built-in stylus guard. zee Mo. EOA 12 . Eoch

33950
Developed for use in fine qua ty high fidelity systeal STYLES sicned to prack af $3 / 4$ to $11 / 2$ grams. Proctu:es ostonishing distortion to is opplied. Tracking angls 75 z etracis inte artridge when excessive terse
 Mo. COB200. Foch redii

SHURE MHAE DYMETIC WITH ELLIPTICAL STYLUS
535.EO Desioned for use in automatic furtebles recurrirg o cartridge that will track in when excessive force is suoplied, z.emonsc $20-20,000 \mathrm{cps}$ : seporation 25 carridize Mo. ©OA413 Stylus dimonsions O(m)\& $\times$ Tcp rated MT cartridge with ertraerdinario DYNETIC
$\$ 34.50$
N2 20 dramond stilus Tracking ferce 2 grams.
Ho soBisi. Eash T... GOBIot. Each
$317 . E 5$
SHURI M3D DYNETIC
This sterco drnetie cartridge is the first choice of music lovers for both cutomatie changer and furntable u.e. 20-20, Coo cps response, 20 tb separat an, No. 60®15s. Each
$\$ 15 . \% 5$

## ADC STEREO CARTRIDGES

Uniguety cesigned ccriridges usiric "years ane od prinsiple" to provide ultronigh camplicnce and amazingly lat response through the limins of the of sio
opectrum. Stylus retracts inte cartudge when exeessive force is opplizd. shlus opectrum. Stylus retracts inte caritidge when excessive force is opplind. St, lus
assenbly slips out for quick, easy replocement. Frequency resporse of each 10 . 21, +00 sps separation $30 \mathrm{db}, 50-8,000 \mathrm{cps}$, al hove $15^{\circ}$ vertleal tracking argle
ADC-660/E with Elliptical Sy'us. For dutomarie turntables and changers cepcble of prerating at tracking roroes of $1 / 2$ to 3 grams. 8 MV output, Diomand No. 60 c 23 . Each
\$25.50
ADC-770. For gaod quality record changer that track from 2 to 6 groens. No. 60317 . Each.......... am.ond stylus.
$\$ 17.95$
Bi LDC-807/E WITH ELLISTICAL STYLUS. Ferfected ond optimized for Lse in the finest quelity automatic umtatles. Tracking force $11 / 2$ to 3 grams. N.s. 50A-417. Each
532.50 Super-lightweight, micrc-rr acnétic eortidee ELIPT CAL STYLUS ing Sty us" and potented rentacectle $V$-Cucrd ptylus assembly the recerd and diamond tip ot ir cleys. Tracking pressure $3 / 4$ to $1 / 2$ orarrs $15^{\circ}$
 Na. 50 A4 404 . Each

V15:AME-3 "DUSTAMATIC". Similar to obove with built-im ... \$39.95 Cleans recard grooves in advonce of the stydus-improves stoblith by preventing tetie orm from skating. Resparise $30-25,000$ ciss; 5 AV output; 35 db spoNo. 50 A 405 . Each
$\$ 44.55$ (0. FICKERINA V15/ATE-2 WITH ELLIPTICAL TTYLUS. For use in fine qua ity fion, tracks at $15^{\circ}$. Trocking pressue 2 to 5 grans.
$\$ 3<.55$
V15/ATE-3"DUSTAMATMC". Smilar to athove with built-ln recard brish. Rrans trocking force
Na. SOA407. Each.
$\$ 39.55$ 3) गCEERING V15/AT-2, Primurily designed for automatic urntables that volt 3 ge, 35 ob seporofion, tracks at i to 5 goms.

## ENPIRE 888 SERIES ELLPTICAL CARTRIDGES

## Excl ssive conical magnet structure reduces styhus tip mass, lowers overall weight of cartindge (weigh only 7 grors: for maximun efficiency ond extremely high

 ecmalionce. Ehannel seforation at each mare than 30 db , output voltigge \& MV Der shanrel. All have $15^{\circ}$ verticel tracking ongte.(8) EMPRE 888 SE. Designed for use in high avality manual and late radel zutomatic rumfobles. Response $5 \mathrm{t}_{\mathrm{t}} 32,000 \mathrm{cF} \cdot \mathrm{s} .3 \times .7 \mathrm{mil}$ bi-rodial elliptical diomond strius; trocking farce $1 / 2$ to 3 grams.
No. SOA400. Each.
$\$ 4495$
$2 \times 9$ nil bi-rodial elliptical tlicmand stylus, trocking force $1 / 2$ tc 3 gro
No. 6054

 32
and consistent channel separation wide-rone offers high compliance, wide channels, triple mu-metal shield against all possible hum sesponse on both (3) MODEL YR1000-7 This aganst all possible hum sources,

隹 response of stereo music. Flat respanse between 20 ta $20,000 \mathrm{cps}$ of 2 grams No. 608156 . 7 Mil diomond stylus
(3) MODEL VR-1000-5. Same fin auclity diomond stylus.
No. 60B157. Model VR-1000-5. Special, Net Each 60B158. Model DR-7D. Dia. Stylus for VR-1000-7. Each 60B160. Model DR-5D. Dio. Stylus for VR-1000-5. Eoch MV output, 30 db seporation. Tracking force 2 to 4 groms.
$60 A 68$. 5 mil diamond stylus. Net Eoch

> VR II VARIABLE RELUCTANCE HI-FI CARTRIDGES
$\$ 10.38$
Frequency response from $20-20,000 \mathrm{cps}$, slim design ond plug-in connections. Trocks ot only 6 groms. Triple, or single speed clip-in stylus. . 001 for Pre-omp listed below is required.

| Stk. No. | GE Cort. |
| :--- | :--- |
| (1) $20 \mathrm{B249}$ | $4 \mathrm{G}-040$ |
| 208250 | $4 \mathrm{G}-041$ |
| (1) 10 |  |
| 608144 | $4 \mathrm{G}-061$ |
| (1) 208248 | $4 \mathrm{G}-050$ |
| (11) 60 B 141 | $4 \mathrm{G}-052$ |

Applicafion
Single-ploy
Single-ploy
Single-Ploy
Single-ploy
Triple-Play
Triple-Play
Tip
0035
0015
001 D
$.0015-.0035$
$001 D-.0035$
Net Each
$\$ 5.85$
5.85
5.85
8.20
7.61
9.97

## (12) DUOTONE "ACOS" STEREO CARTRIDGE

Exclusive "Floating Needle Action" nullifies needle talk, allows greater comprecord face ossuring flawless, balanced reproduction a perfect $45^{\circ}$ to each monaural. Completely compatible for all reproduction in stereo os well as Response $40-15,000 \mathrm{css}$., output voltage types of furntables ond changers. separation 25 db .7 mll diamond, 3 mil sapphire spylil No. 60A76. Model GPS73SD. Net Each..........
$\$ 4.95$

 *FOr RPXO40 and RPXO41 not Interchangeable with clip-in stylus.
208227
608121 G-01D I Mil Sipphire G-050, 4G-040 4.09
(3) MODEL UPX-OO3C MONAURAL PHONO PREAMPLIFIER. Perfectly motched unit far above cartridges as well as any magnetic cortridge. Auto equalized far mike input with "Phon on both LP and sterea records. Also on mike Input. Complete with 7025 tube phona plug, and $A C$ cord. $35 / 8^{\prime \prime} \mathrm{W} . \times 35 / 3^{\prime \prime} \mathrm{L} . \times 33 / 4^{\prime \prime} \mathrm{H}$. Forput leod with No. 20835. Model UPX-003C.
$\$ 11.95$
© SHURE M65 STEREO PREAMPLIFIER. Self powered dual preomplifier tor sterea magnetic cartridges, stereo tape decks, or microphones. Ratory switch Frequency response 25 ta is,000 cos. Phono-Tape-Misrophone ar special functions. Has hum contral, twa ECC83 tubes 25 ta output. Channel separation 40 db. ECC83 tubes, phana jacks for input and

$\$ 24.00$


(1) 45 RPM RECORD ADAPTOR. Fits over standard spindle, allows playing of 45 RPM records. Durable plastic. No. 24A298. Type SA-45. Net Each
$15 c$
(8) CLEAN-SWEEP RECORD BRUSH. Large comel's hoir brush sweeps entire tracking surface of record removing dust and other particles. Pressure sensitive odhesive on base for easy mounting... swings out of the woy whe
$\$ 3.60$

## not in use. Wt. 6 oz . <br> No. 11 18180. Type RB-88. Net Ecch.

(3) PHONO LEVEL KIT. A level turntoble or record changer is a must for $\begin{array}{ll}\text { stereo reproduction. Kit includes } 4 \text { odjustoble rubber feet, circular } \\ \text { spirit level. } & \text { Wt. } 5 \mathrm{oz} \text {. }\end{array}$ No. 11 B139. Type ESK-4. Net Each $\$ 2.34$
 stylus, slot of end of scope for holding stylus steady. Pen type pocket clip.
$\$ 1.65$ No. 11 18241. Type $M X-1$. Eech. (3) RIM-REST PHONO CUSHION. Has groduated ridges for No. 11 Aloo6. Type PC-33, Wt. 6 oz.

## POPULAR PHONO \& RECORD ACCESSORIES


(1) RECORD BRUSH AND TONE ARM LIFT A unique combinution of a fine record brush thut sweeps records clean in front of needle, plus a tone arm lift for easy handing of tone arm. Clips
(6) METAL 4-SPEED PHONO STROBE DISC. Checks $16,331 / 3,45$ and 78 RPM speeds. Wt. 2

99c
(1) PHONO STROBE AND LIGHT KIT. Checks speed of chonger. \$1.20 No. 208390. Type ESK-5. Wt. 6 oz
(8) CHANGER AND TURNTABLE COVERS. Soft plastic covers prot dust, moisture, etc. For Garrard, Webcor, VM, Miracord, etc \$1.17 No. 11 B187. Type CC-1. $13 \times 131 / 2 \times 8{ }^{\prime \prime}$. Shpg. wt. 6 oz. Eo. ${ }^{\circ} 1.15$
 (9) "ROB-O-STAT" RECORD CLEANING KIT. Includes super-soft velvet and

foom opplicator mitt for cleoning record grooves, $11 / 2$ oz. bottle of AntiStatic detergent, pad for cleaning velvet side of mitt. $\mathrm{Wt} .1 / 2 \mathrm{ib}$. Ecch........... \$1.20 No. 11 B257. Type ESK-6. Wt . $1 / 2 \mathrm{lb}$. Eech. ecord core. (3i) DELUXE RECORD CARE KIT. Everything needed for optimum record care. | Contains stylus pressure gauge, stylus microscope, turnlift. |
| :--- |
| cleaning cloth Kleeneedle brush, record brush, tone arm lifh..... 2.70 | No. 11 B261. ESK-3A. Shpg. wt. I lb. Eoch.......... $\mathbf{\psi}$. . . (1i) "DISK-WHISK-KIT". Triple oction automatic record cleaner, clips on to tone arm. Flooting nylon brush and mohair cylinder loosens and removes dirt from grooves while record plays. Bottle of anti-stotic fluid contains silicone

lubricant and detergent. No. 11 B260. Type ESK-7 Each on ony arm. Mifg. list 98e

59c
(2) GARRARD PRESSURE GAUGE

This cccurate, ejsy to read gauge features 0 large, legible scale, visible this cccurate, ejsy a clejr plastic window, with widely spoced jram markings. Has o 5 -gram brass test weight which is used as a stondard, so that the scale can 5 -gram brass test weight which is uned as No. 16 B595
$\$ 2.95$ Model SPG3 Net Each

ELECTRO-WIPE STATIC ELIMINATOR RECORD CLOTM
Preserve your good records from hormful dirt and grit as well as static charge with one wipe! Eliminotes record "pop and click from vinyl aftrocted charges. Lubricates records for smoother needle operation, eliminates friction and static. Keeps grooves clean for true, clear fidelity, longer record life. Used by many broadcast stations and recording companies. No. 20C691.

## Net Eoch.

59c
(4) ANTI-STATIC RECORD CLEANER

For vinylite and all standard records. The aerosol spray action removes dust and deposits a microscopically thin film. The film grounds static electrically and makes records permanently dust free, 1 whis reduces surface noise ond increoses record life.
 No. 11 B634. 8 oz . CON. Precision made of finest optical parts. Wide angle lens shows a large, clear imoge of stylus, so that any wear or chipping can be instantly noted. The
 No. 60A153. Net Each.

## LEKTROSTAT RECORD CLEANING KIT



Entirely new opproach to the core and cleaning of, records, both LP and stereo. Actually cleans the grooves as well as the surface. Exclusive new formula fectures o non-gumming, ontistotic liquid detergent in a plastic squeeze bottle, plus a special tine-grain cloth applicalor which goes down into the record grooves to clean out abrosive dust, as well os remove stafic. Annoying hisses and crackles disappear like magic, music sparkles with new clarity Adds new life and brilionce to the
records. In handy plostic pouch.
No. IlA9. Lektrostot Kit. Net Eoch. $\$ 1.96$

## ROBINS HIGH FIDELITY STOP-O-MATIC

## AUTOMATICALLY SHUTS-

 OFF ENTIRE SYSTEM AFTERLAST RECORD PLAYS!
Now one can place a stack of records on the record chonger with no warry about turning equipment off. Just plug AC cords of record changer and amplifier into "Stop-O-Matic". Special built-in device automatically shuts-off amplifier ofter last record has played. (Note: Changer must have automotic shut-
off feature.)
No. $33 C 31$. For European Changers-Garrard, Collaro, Thorens, etc.

$$
\text { No. } 33 \text { C32. For U. S. made changers-Webcor, etc. }
$$

Choch.
$\$ 6.00$


(1) KLEENEEDLE BRUSH. Mounts on side of changer under tone arm so that needle passes through brush on every change cycle. Blobs of dust are reNo. 11 B207. Type NB-1. Net Each....
(3) METAL 3-SPEED PHONO STROBE DISC. Checks $331 / 3,45$ and 78 speeds. Wt. 3 oz.
No. 11 A999. Type PSD-3. Eoch.
No. 11 A999. Type PSD-3. Eoch.

sure from $1 / 2$ to 8 grams. Wt. $40 z$
(9) PACKAGE OF 50 SNAP INSERTS FOR 45 RPM RECORDS SNODS ..... 59hole of record for use an standard spindles of changers or players.59c
No.11A1002. Type PRA-50. Wt. 6 oz . Pockage For.
(3) TWO MIRACLE RECORD CLEANING CLOTHS AND CLIP-ON BRUSH Chemically treated cloths cantain silicone. Cleans and lubricates records.
Woshoble. Record brush clips on to tone orm, sweeps dust from records. 59 e
(8) THREE HI-FI STEREO RECORD CLOTHS. Anti-static cleaning ingredient (6) THREE HI-FI STEREO RECORD CLOTHS. An No. 11 Aloo1. Type PC-3. 3 For..
(8)RECORD SAVERS. Heavy, clear plastlc envelopes to protect records from scratches, dust, oil and dirt. For 12 " records. $59 c$
PKG. OF 144 FRICTION SPOTS FOR RECORDS (Nof lllus.). Thin $1 / 2^{\prime \prime}$ dio. PKG. OF dises for placement on and around inner circumference of records. Stops slippoge of records. Wt. 6 oz .
Stops slippoge of records. Wt. 6 oz.
No. 11 Aloos. Type PSF-1. Pkg. For.
59c


## AUDIO INSTALLATION ACCESSORIES

(1) FIBERGLAS ACOUSTIC INSULATION. Spun fiberglas material $1^{\prime \prime}$ thick eliminates standing waves and controls reverberation inside speaker any acoustic insulation application. $24 \times 60^{\prime \prime}$ size in plastic bog No. 11A398. Type 30-356. Each
(2) SLIDE DRAWER HARDWARE. Easy mounting of rodio chassis, record changers, recorders, etc. in custom cobinets, record compartments of consoles, etc. Made of İ" aluminum. Overall length ${ }^{1} 3^{\prime \prime}$. Travel lgth
No. 20A918. Per Pair..
(3) HEAVY-DUTY TYPE SLIDE DRAWER HARDWARE. Made of 16 gauge steel. Load capacity 50 lbs . Otherwise as above. Shpg. wt. 2 lbs. Load capacity So lbs.

## wollensak 3m

PRUTETMONET TAP MESOMDE:
.
PLAYBACK PREAMPS
cad
PLA Y:AGK AMPLIFIFR
NEVER BEFORE A TAPE TRANSPORT OF SUCM SUPERIOR QUALITY... WITH SO MANY PROFESSIONAL FEATURES!

## DARES ALL COMPARISON

B-A guarantees this to be the greatest value available anywhere on a professional lape Iransport. Just compare feature for feature with all others at B-A's extraordinary low price. It just can't be equalled.


## ALL AMERICAN MADE!

## revolutionary

 tAB CONTROLS
## $\mathrm{CH}-\mathrm{a}=$

Designed for ease of operation and Wiexibility of use. With these four tobs you have all record/playbock functians at your
fingertips.
A fine product, utilizing Wollensok's exclusive power-operated Tab Control Panel...t the last word in flexibility and ease of operation, until now used only in Wollensak's finest and most expensive tape recorders. Tob Controls permit simultoneous recording on one chonnel and playbock on the other for unusual ond exciting special effects.
Built for reliable service, already well-known to Wolcritical music ond sound reproduction to satisfy the most cellent for monitor applications. cellent for monitor applications.
Records and ploys 4 -trock stereo or mono at $33 / 4-71 / 2$ ips. Hos separate volume and tone controls, and VU tically. Other odvanced features ore fost forward and rewind with interlocking safety controls forward and rewind with interlocking safety controls and outomotic tope lifters; pilot light; monitor facility; self-adjusting brake system; built-in reel locks; automatic shutoff at end of tape; digital tape counter. Plays or records up to 6 hours stereo, 12 hours mono.
Frequency response: $50-17,000 \mathrm{cps} \pm 3 \mathrm{db} @ 71 / 2 \mathrm{ips}$;
$50-8,000 \mathrm{cps}+3 \mathrm{db} @ 33 / 2$ $50-8,000 \mathrm{cps} \underset{\mathrm{MS}}{ }{ }^{3} \mathrm{db} @ 33 \mathrm{ips}$. Wow and flutter $0.3 \%$ max. R $\bar{M} S$. Signal to noise ratio 45 db min. Power output, 6 wotts ( 3 wotts/channel EIA). Track width, $1 / 4$ trock $0.040^{\prime \prime}$ wide. Inputs: mike, radio/phono each channel. Outputs: external speakers. Pre-amo $10.5-1.5 \mathrm{~V} .1$, each chonnel. Shpg. wt. $30 \mathrm{lbs} \$ 119.00$
No. 31 C 239 . Size $113 / 8 \times 155^{7} \times 53 / 4$ " Each..... 19.0


SAVE \$50.00 WHILE THEY LAST!

- Separote VU record level meters for each channel.


## 

## AS USED IN RECORDERS

 SELIING FOR $\$ 150.00$
## AT AN AMAZING LOW PRICE NEVER BELIEVED POSSIBLE!

## NOTHING DOMK

COMPLETE WITH \$5.88 WALNUT BASE NOW!

- 3-Speeds: $17 / 8,33 / 4,71 / 2$ ips.
- Takes up to 7" reels. - Digital counter.
- $1 / 4$-Track stereo playback, record and erase heads.
- Simple controls-fully interlocked to prevent accidental erase.
- Fast forward-fast rewind.

Most fontostic tope deck we hove seen ot anywhere near this low, low price! Our testing lob staff was amazed at the high quality. Even in much higher priced units they had not seen such low wow and flutter. Every control performs its function positively, with the feel of a quality built product.
Ideal for custom installation in existing equipment for playback of high fidelity mono or stereo pre-recorded topes. May be connected directly into ony omplifier with tape head input for stereo playback or moy be used with B-A's Recording Preamp Adapfrom your high fidelity or moking recording directly from your high fidelity or stereo amplifier. Small compoct size makes it possible to install in very close areas. Overall deck size: $121 / 4^{\prime \prime} \mathrm{W}$., $83 / 8^{\prime \prime}$ specifications: RMS wow and flutter; better then Specifications: RMS wow and flutter; better thon @ 17/8 ips. Operates on 115 V .60 cycles AC. Tape head performance specifications: 4-track re-cord-ploybock head; Track widths: $0.043^{\prime \prime}$ ' gop: $0.0001^{\prime \prime}$. Inductance: 0.11 hy Output at 1 K'C from
EMI. Test tope TBTI $\left(71 / 2^{\prime \prime} / \mathrm{sec}\right)$. 0.56 mY Record EMI. Test tope TBTI $\left.171 / 2^{\prime \prime} / \mathrm{sec}\right): 0.56 \mathrm{mv}$. Record signal: 82 vo. Bios current $50 \mathrm{KC}: 0.55 \mathrm{MV}$. Record from own recording at $71 / 2^{\prime \prime} / \mathrm{sec} .1 \mathrm{KC}: 1.7 \mathrm{mv}$.
Output from own recording of $71 / 2^{\prime \prime} / \mathrm{sec}$. $3 \mathrm{KC}: 3.0$ mv . (Quoted for Scotch Brand Tape. Type 111 ). Complete with AC Cord and Audio Cables. Shpg. wt. 12 lbs .
No. 31 B 22 With $\$ 5.88$ Wolnut Base.
Net Each.
$\$ 59.95$
RECORDING PREAMP-ADAPTOR. A self-powered compoct unit designed by B-A's oudio experts ond built to our own specifications. This unit enobles you to record stereo or monoural topes with obove tope deck through the tope inputs of your present high fidelity stereo omplifier. Contoins oll necessory input jocks, switches, bios oscillotor circuit. $\$ 39.95$
No. 3ic46. Special Each....................
SENSITIVE CERAMIC MICROPHONE for obove tope deck. Small ond light-weight. Includes 5 ft . cord. (Less plug), 2 required for stereo recording. No. $208600 . \quad \$ 3.49 \underset{\text { for }}{2}$
Net Eoch........
\$6.63


# LEAR-JET AS-830-H STEREO 8 TAPE PLAYER FOR THE CAR 


nothing down

True stereophonic sound-1 hour and 20 minutes of thrilling, dimensional stereo play from each mounted in car doors. Fits any, car old or new Operation is automatic. Cartridge simply pushes into player slot to start music. No threading. Na changing to continuous loop tape plays endicaly, or of your choice. Playing stops simply by partially removing cartridge. All solid state circuit, 16 transistors, 4 diodes, precision electronic tape drive speed contral, less than $0.3 \%$ wow and flutter, tone, stereo balance and laudness contrals. 4 watts (RMS) output per channel, less than $5 \%$ distortion. Impedance 4 ohms. For 12 V . DC negative ground operation only. Mounts easily under dash. 8 " wide, $71 / 4 "$ deep, $23 / 4$ " H . Wt. 11 lbs No. 32 Cach .
$\$ 124.95$

## STEREO SPEAKERS FOR AUTO INSTALLATION

SURFACE MOUNTING. 2 speakers in baffles.
No. 32B109. Model AS-2. Poir For............ $\$ 14.00$ No. 32B109. Model AS-2. Poir For............. \$14.00
FLUSH MOUNTING IN-THE-DOOR with griles. FLUSH MOUNTING IN-THE-DOOR with griles.
No. 32C108. Model AS-4. Set of 4 For.......... $\$ 14.95$


LEAR-JET ASFM-830-H FM AUTO RADIO WITH STEREO 8 TAPE PLAYER
nOthing down
ADD TAPE STEREO AND WIDE-RANGE FM AT THE SAME TIME!
Combines in one unit, an all solid state FM broodcost rodio of superior quality and performance and the 8 track cortridge tape player described at left. Radio has outomatic frequency control for finest drift-free FM tuning and when you want to change to FM multiplex an adaptor accessory can be added (write for specifications and prices). Comes with FM multiplex switch and light indicator. Volume and tone controls function for both radio and tope player. Has edge lighted tuning dial, range $88-108$ MC. Circuit includes 22 transistors, 6 diodes, 7 MC. Circuit includes circuits, RF stage, double tuned IF's. High, 8 microvolts sensitivity. See specifications of tape player only at left for audio output and physical size. For 12 V . DC negative ground aperotion. Wt. 11 ibs.
No. 32B136.
Less speakers (at left). Net Each.... \$175.00
AM AUTO RADIO
WITH STEREO 8 TAPE PLAYER
In o single unit, a fine solid state $A M$ outo radio and the Stereo 8 tape ployer. Radio has RF stage, $A V C$, monual tuning. 20 transistors, 6 diodes. For 12 V . DC negative ground. Wt. 11 lbs . Less
Speakers. Speakers. 32C106. Model ASR-830-H. Net Ea.
$\$ 149.95$


LEAR-JET HSA-900 STEREO 8 TAPE PLAYER FOR YOUR HOME STEREO SYSTEM

## MOTHING DOWN

PLAY YOUR FAVORITE CARTRIDGE MUSIC SELECTIONS AT HOME TOO!
Small unit in high styled wood grained cabinet plays in horizontal or vertical position. Can be placed on top or hung from side or rear of your stereo furniture, with tape cartridge slot in most convenient position. Contains Stereo 8 tope drive, transistorized stereo pre-amp hoving output adjustable from 5 millivolts to over 1 volt RMS to drive your own power omplifier and speakers. Output imown power omplifier and speakers. Output imwide, $101 / 4^{\prime \prime}$ deep, $39{ }^{9}{ }^{\prime \prime} \mathrm{H}$. For 115 V .60 cy . wide, $101 / 4^{\prime \prime}$ deep, ${ }^{3} \frac{9}{1 / 4}$
No. 32C107.
No. N Each.
\$79.95
LEAR JET STEREO 8 SYSTEMS
ARE CONSTRUCTED TO
AIRCRAFT STANDARDS OF HIGH QUALITY
AND PERFORMANCE

## 8-TRACR STEREO CARTRIDGE TAPES

TOP SELECTIONS FROM:

- RCA - columbia - DECCA - A\&M DOT - KAPP ETC.

Please Specify Stock No. 23B49. Manufacturer and Tape No. When Ordering
Title and Artist Title and Artis
Moon River, Andy Williams
Days of Wine \& Roses, Andy Williams
People, Barbra Streisand
Color Me Barbra, Bartera Streisand
I Bon't Wanna Loose You, Baby Chad \& Jeremy Marty Robbins' Greatest Hits
My Fair Lady, Soundtrack
West Side Story, Soundtrack
The Shadow of Your Smile, Andy Williams
Stand By Me, Earl Grant
Too Many Rivers, Brenda Lee
Golden Medleys, Guy Lombardo
Golden Favorites, Wayne King
A Taste of Honey, Pete Fountain
Cocktails With Cavallaro
Licorice Stick, Pete Fountain
The Lonely Bull, Tijuana Brass South Of The Border, Tijuana Brass
Whipped Cream, Tijuana Brass
What Now My Love, Tijuana Brass
Look At Us, Sonny \& Cher
Pearly Shells, Billy Vaughn
The Golden Millions, Lawrence Welk Where Love Has Gone, Jack Jones Petula Clark In Love
We Love Paris, Ray Charles Singers
Doctor Zhivago, Soundtrack
This Is New, Righteous Brothers
Count Basie/Sarah Vaughan The Return of Roger Miller Zorba The Greek, Soundtrack Batman, TV Soundtrack Shindig, Various Artists The Tijuana Brass Volume 2 Modern Sounds In Country \& Western Column 2, Ray Charles Column 2, Ray Charles
Dimension 3, Enoch light

| Mfg. | Tape No. | Each |
| :---: | :---: | :---: |
| Col. -1 | 18-10-0008 | \$7.95 |
| Col.-2 | 18-10-0014 | 7.95 |
| Col.-3 | 18-10-0020 | 7.95 |
| Col. 4 | 18-10-0044 | 7.95 |
| Col. -5 | 18-10-0074 | 7.95 |
| Col. 6 | 18-10-0096 | 7.95 |
| Col.-7 | 18-12-0002 | 8.95 |
| Col. 8 | 18-12-0004 | 8.95 |
| Col. 9 | 18-10-0114 | 7.95 |
| Decca-1 | 6.4738 | 6.95 |
| Decca-2 | 6-4684 | 6.95 |
| Decca-3 | 6-4593 | 6.95 |
| Decca-4 | 6-4309 | 6.95 |
| Coral-1 | 6-57486 | 6.95 |
| Decca-5 | 6-8805 | 6.95 |
| Coral-2 | 6-57460 | 6.95 |
| A\&M-1 | L51-101 | 6.95 |
| A\&M-2 | L51-108 | 6.95 |
| A\&M-3 | L51-110 | 6.95 |
| A\&M-4 | L51-114 | 6.95 |
| Atco-1 | L45-33177 | 6.95 |
| Dot-1 | L15-25605 | 6.95 |
| Dot-2 | L15-25611 | 6.95 |
| Kapp-2 | L52-3396 | 6,95 |
| Laurie-1 | L36-2032 | 6.95 |
| MGM-2 | L13-4165 | 6.95 |
| MGM-3 | L13-6 | 7.95 |
| Moonglow-1 | L42-1003 | 6.95 |
| Roulette-1 | L22-52061 | 6.95 |
| Smash-1 | L39-67061 | 6.95 |
| Fox-1 | L54-4167 | 7.95 |
| Fox-2 | L54-4180 | 7.95 |
| Kapp-3 | L52-3431 | 6.95 |
| A\&M-5 | L51-103 | 6.95 |
| ABC-1 | L33-435 | 6.95 |
| Command-1 | L30-867 | 6.95 |



| Mfg. | Tape No. | Each |
| :---: | :---: | :---: |
| MGM-4 | L13-4204 | \$6.95 |
| MGM-5 | L13-4256 | 6.95 |
| MGM-6 | L13-4308 | 6.95 |
| MGM-7 | L13-4355 | 6.95 |
| Merc.-2 | L37-60914 | 6.95 |
| Merc.-3 | L37-61017 | 6.95 |
| Moonglow-2 | L42-1002 | 6.95 |
| Musicor-1 | L56-3054 | 6.95 |
| Philips-1 | L41-600196 | 6.95 |
| Roulette-2 | L22-25310 | 6.95 |
| Smash-2 | L39-67044 | 6.95 |
| Smash-3 | L39-67068 | 6.95 |
| Verve-1 | L14.8587 | 6.95 |
| Verve-2 | L14-8600 | 6.95 |
| Dot-3 | L15-25618 | 6.95 |
| ABC-2 | L33-505 | 6.95 |
| Crescendo-1 | L50-2018 | 6.95 |
| Kapp-1 | L52-3323 | 6.95 |
| MGM-1 | L13-4213 | 6.95 |
| Merc.-1 | L37-61041 | 6.95 |
| RCA-1 | P8S-1047 | 6.95 |
| RCA-2 | P8S-1071 | 6.95 |
| RCA-3 | P8S-1070 | 6.95 |
| RCA-4 | P8S-1009 | 6.95 |
| RCA-5 | P8S-1011 | 6.95 |
| RCA-6 | P8S-1093 | 6.95 |
| RCA- 7 | P8S-1066 | 6.95 |
| RCA-8 | P8S-1020 | 6.95 |
| RCA-9 | 08S-1006 | 7.95 |
| RCA-10 | 08S-1001 | 7.95 |
| RCA-11 | 08S-1003 | 7.95 |
| RCA-12 | R8S-1053 | 6.95 |
| RCA-13 | R8S-1033 | 6.95 |
| Camden-1 | C8S-1009 | 4.95 |
| RCA-14 | P8S-1112 | 6.95 |
| Buena-Vista-1 | 08BV-1001 | 7.95 |
| Laurie-2 | L36-2018 | 6.95 |




## AMPEX MODEL 6275 <br> VIDEO TAPE RECORDER



FOR HOME, OFFICE INDUSTRIAL AND INSTITUTIONAL USES

WORKS WITH ANY TV SET AS A MONITOR

## MINIMUM OF 500 LINES OF RESOLUTION ON CAMERA

## TODAY'S QUALITY VIDEO TAPE RECORDER ...COMPLETE WITH EXCLUSIVE AMPEX VIDEO CONTROL CENTER

Now you can record and irstantly pobback any TV pro- deo control center and 6 minute test pattern and reel. gram . . movie in sports events ... news high-lights, special occasions. meetings buaness activ training programs virually anything ais wont preserved in a permanent video tase. Exc usive Ampex Videc Cant-al Center permits your toses, whether taken from a TW progrom or recorded live in Recミive the plictures whise -hey are aty ekisting TV set. play them back instartly and save ham in bour perma. play them back instartly and save herr y your permaonather for future viewint Trypom while tow are recording used hundreds of vimes. Tapes can be erased and reVideo Tape Recorder; Repraducer in Walnut Case with

Heo control center and 6 minute test pottern and reel.
Model VR6275. Net.............................. \$1,495.00 Fideo Tope Recorder/Reproducer in Portable Carrying Cose, one 6 minute test pattern and reel. \$1,450.00 Vidicon Camera with Optical Viewfinder, VTR Remote Contol Unit and 25 MM F/1.4 Close Focus Lens. Includes tripod, cable, lens tissue, 2001 microphone without bose and lovalier. $\$ 589.95$ No, 40B320. Model CC6450. Net.... No. Minute Tape, min. length $1,475 \mathrm{ft}$. 60 Minute Tape min Net... 60 Minute Tope, min. length $2,950 \mathrm{ft}$.
No, 40 B 322 . $147-60$. Net................

## B-A CAN SUPPLY ALL AMPEX VIDEO TAPE AND PROFESSIONAL AUDIO TAPE RECORDING EQUIPMENT

## DELUXE FM/AM-FM STEREO PORTABLE COMPONENT SYSTER

## COMPLETE HOME EPGTERTAINMENT IN COMPACT MODERN STYLING:



## SOLID STATE CIRCUITRY

 FOR THSTANT PLAM- Dynapower speaker systems may be seporated up to 20 ft . for greoter sound separation.

> Fine qualliy viny! lominoted metol cose. - GE Man-Made Diomond Stylus.

- 14 wotts music power.


Portoble Camponent Systiem shown obove on Deluze Stond.

> NESTS TOGETMER INTO A SINGLE UNIT FOR CARRYING

## mothing DOWN

Enjoy the wonderful world af stereo from records or from the FM/AM, FM stereo tuner. Separate dial is provided for AM ond FM. Stereo star lights when you select - FM stereo station. General Electric deluxe automatic record changer hos professional eleven-inch turntoble. Accommodates up to six records for outomatic use. Lost record may be reployed or will shut-off of users discretion. Tonal/toneorm has built-in tracking pressure adjustment. Retractable ceramic cartridge feotures GE's Mon-Made diamond stylus (see worronty opposite page) for $162 / 3,331 / 3$ and 45 RPM records. Synthetic sapphire for $78^{\prime \prime}$ s.
14 watt solid state cmplifier provides instont scund.
Four audia controls for personolized listening pleasure: volume, treble, bass and balance.
45 RPM spindle ond holder included with set. Operates on $110-125 \mathrm{~V} .60$ cycle AC


Demae stand holds obove unit plus speokers.
No. 4ab269. Shpg. Wt. 10 lbs. Net.
No. 408269 . Shpg. wt. 10 lbs. Net


Every feoture you could ask for. Console qualify sound fiom a truly portable stereophonic phoncgrooh. Four Dynapower speakers, one twelve inch and on three inch in each wainut speaker enclosure. Enclosures may be separated up to twenty feet for areater stereo sound separation. Pawerful 40 watt peak music twenty feet for greater stereo sound separation instant sound, longer life and in creased reliability. Four audio contrais for persuralized listening plecsure-Loudcreased reliability. Four ouaio controis freble, Boss and Balance. Fomous General Electric outomatic record changer ness, Treble, Boss and Balance. Famous Generaciectic ates six feciords for outo with large transcription type turntable accammodotes six records matic play. Positive size-select indicotor ly, repeat lost record or shut-off automatically ar your discretion. GE exclusive fona 1 tonearm hos adjustable trocking pressure. Retractable ceromic cartriage hos *Man-mode diamond stylus or $162,331 / 3$, and ${ }^{2}$, chire for $78^{\text {s }}$. Extro feotures include stereo headphone jack for pr vate listening

 wt. 46 bss. special

## HIGH FIDELITY STEREO <br> IN A SMARTLY STYLED COMPONENT SET

> NOW TAKE THE FINEST STEREO COMPONENTS WITH YOU WHEREVER YOU GO!

ALL<br>SOLID<br>STATE

# GENERAL ELECTRIC OPENS UP A NEW WORLD OF SOUND AND STYLE . . . FOR THE FIRST TIME BIG I2-INCH DYNAPOWER SPEAKERS IN A PORTABLE 

PORTABLE STEREOPHONIC HIGH FIDELITY

# WITH FM-AM AND FM STEREOPHONIG MULTIPLEX RADIO 

> A GOMPLETE portable STEREOPHONIC STSTEM wherever You co:

## B-A's LOW PRICE




- Superb tonal quality. Freq. resp. 7016,000 cps.
© Diamond needle for all LP's-Mono and stereo.
Magnificent 4 speaker system-two $8^{\prime \prime}$ woofers plus two $4^{\prime \prime}$ tweeters.


## NOTHING DOWM

SOLID-STATE ALL TRANSISTOR AMPLIFIER AND TUNER


PHONO ONLY (Less Radio)

Completely modern ... tops in performance, looks and usability. Has all the musical capabilities of an expensive stereo hi-fi console with the convenience of smaller size and portability. Provides exceptional performonce from whotever the progrom source to please even the most critical listener. Foithfully reproduces stereo records and FM stereo broadcasts with all the depth and thrilling realism of the original performance. Adds new life and brilliance to mono recordsreceives static-free FM and sharp clear AM broadcasts.
Stereo Speaker Systems. Detachable swing-out wing enclosures each with large $\mathrm{B}^{\prime \prime}$ 15 ft spacing 1 JH . spacing for stereo separation.
4-Speed Stereo Record Changer. One of America's finest for dependable "traubietree operation. Plays a stack of 7,10 and $12^{\prime \prime}$ records intermixed of the same speed. Automatically shuts-off after lost record. 45 RPM spindle included. High quality wide-range ceromic stereo cortridge with diamond needle for LP's. Straight AC Powered Chassis. Provides 10 watts of stereo peak power with a
frequency response of $70-16,000 \mathrm{cps}$. Has 5 controls: Balance/AFC, Dual

Tone/On-Off, Dual Loudness, and Selector. Dual controls permit individual level adjustment of each channel. Stereo light indicates when FM stereo is being received.
Cobinet in striking planet black and walnut gramed vinyl with silver trim and knobs. Grille is mulfi-color blue-green providing a dramatic effect. Changer hides-away, conveniently swings down for ploying. Overall size $25 \times 135 / 8 \times 143 / 4$ wall speaker cobinets each $121 / 2 \times 41 / 4 \times 14 \pi / 4 \prime \mathrm{H}$. Brockets included for modern wall mounting of entire unit. $110-120 \mathrm{~V} .60 \mathrm{cy}$. AC. UL approved. Shpg.
wt. 44 lbs . No. 30B95. Net Each
$\$ 179.95$
PHONOGRAPH ONLY less radio. Six speaker system, $26^{\prime \prime}$ twin-cone woofers, two 4 mid-ronge with high-frequency whizzer cones. Response $30-20,000 \mathrm{cDs}$.
 No. 30096. Each.
$\$ 119.50$

PANASONIC LUCGAGE STYLE SOLD STATE STEREO PHOND WHH FM/AM RADIO

## UNVERSAL BATTERY OR AC OPERATION




## LUGGAGE STYLE CABINET

The ultimate in portable radio-phonos. More outsfanding feotures than any comparable unit at onywhere near this low price. Features oll solid state, 4 speed automatic Mini-Changer with automatic 45 RPM adaptor, ceramic stereo cartridge, flipover dual sapphire stylus, 4 separate controls; dual loudness, bass, treble and balance for complete flexibility. Four speaker systems: two $6 \times 4^{\prime \prime}$, and two $3^{\prime \prime}$ speakers in two separate balanced enclosures. ... speakers are detachable with eight feet cables for up to 16 feet of steres separation. Wide slide-rule dials makes tuning of stations easier and more occurate . . . whip antenna for strong and steady FM reception..convenient sure power with automotic switching of AC to botteries. 17 transistors and 7 diodes. Size $7{ }_{516}^{5}, 18 \frac{1}{6}, 135 / 8^{\prime \prime}$. Corrying wt. 22 lbs. Shpg. wt. 27 lbs. No. 30A325. Eoch
$\$ 149.95$

# B-A's "BEST BUY" STEREOPHONIC PHONOGRAPH DELUXE SOLID-STATE HICH FIDELHY COMPONENT ENSFMBLZ 

## CREATED TO PROVIDE "NO-CAMPROMISE" SOUND QUALITY IN COMPACT SIZE . . . TO FIT AHYWMERE . . . GO AWYWHERE <br> PRICED <br> WAY BELOW OTHER FAMOUS-NAME SYSTEMS

UNUSUAL FUNCTIONAL STYLING


Functional styling: 3 perfectly style - matched units assemble into one compoct unit for ease of partability.

- 25-watt transisforized amplifier has full frequency range of 40 . $18,000 \mathrm{cps}$.
* World-famous Deluxe Garrard changer with low-mass tone arm tracks of 2.5 grams.
- 4 speakers
grams woofers and two fweeters in resonant speaker cabinets.
* Master control panel has 5 audiophile controls.

Now! Save $\$ \$ \$$ and space too, with B-A's 1967 space-saver phonograph. People who "go for" the best musical reproduction they can get ore enthusiastically buying up similar models ot prices of $\$ 200$ and up.
It's a genuine component system with the unbeatable sound quality that true audiophiles 'demand in walnut hordwood finish to match home furnishings. that "bundles-up/" in seconds to ga in-or-out of the house, or in the car for special occasions. Tremendous size reduction is possible because of solid-state amplifiers, much smaller than tube models of the same power; and the refreshing new "styled-for-use" concept of construction.
Deluxe Gorrard Record Changer combines the features and performance of professional turntables with fully outomatic play. 11 " turntable is cushioned and precision-balanced, Low-mass tone arm, retractable ceramic cartridge ond diomond needle, float in the record groove with only 2.5 grams pressure, assuring long record life. Manuol and 45 RPM spindles ineluded.
Two 2-Way Speaker Systems in resonont tone chombers $141 / 2^{\prime \prime}$ wide, $103 / 4^{\prime \prime}$ high and $43 / 4^{\prime \prime}$ deep, sit on table or bookshelf, con be ploced wherever you like for the best stereo effect. Eoch two-way speaker system contoins a $6^{\prime \prime}$ woofer with o huge 9 oz . ceramic mognet, and a separote tweeter to reproduce all ranges of sound from vibrant boss tones to vivid highs.
Full 25 Watt Solid-State Stereo Amplifier has brood frequency range of $40-18,000 \mathrm{cps}$. 1 t 's ready to play the instant you turn it on. Cool operation increases life of omplifier.
5 Controls; Two loudness, Bass, Trebie and Balance permits adjustment of any tonal combination, volume level, and stereo bolonce just the woy you want it. 4 input jacks, two for
Radio/TV and two for tape recorder and 4 output jocks for speokers are provided.
$110-120 \mathrm{~V}$. AC only. Entire ensemble: $277 / 8^{\prime \prime} \mathrm{W}$. $101 / 2^{\prime \prime} H_{\text {., }} 16^{\prime \prime}$ D. U/L approved. Shpg. wt. 44 lbs.
No. 30B144. Special Each..
$\$ 139.95$


## ARVIN SOLID STATE GOMPONENI STEREO

 BUDGET STEREO II-FI TO PLEASE TME AUDYORILLEWalnut wood trim for furniture look. . Vinyl body for constont use.

This is the component-quality system you've always wanted .. couldn't find room for... would have to buy a piece ot otime or both. It's startling news to find one like this priced under $\$ 100: 00,50 \%$ or less the cost of the ones with the fomous high-fidelity names.
You can show its walnut elegonce in any room, and let your friends compare the sound with their expensive stereo systems or consoles.
Economy version of B-A's "best-buy" stereo listed obove, with many similar outstonding feotures:
4-Speed Deluxe Garrard Record Changer, with $11^{\prime \prime}$ turntable, is a fovorite high-fidelity component. Tone orm rides in the record groove with extremely light pressure. Turnover ceramic cartridge has diamond needle. Two-Way Speaker Systems. $6^{\prime \prime}$ woofers and tweeters with crossover networks combine to reproduce the full ronge of musical tones with sureness and power. remorkably like the best stereo systems.
Solid state stereo Amplifier, runs cooler, losts longer, and is lighter than tube units. Instont worm-up, it's ready to play the first record.
4 Amplifier Controis for Loudness, Balance, Bass and Treble odjust listening conditions in any degree to suit your personol toste. Input jacks for tape and tuner plus ouxiliary tuner switch. 45 RPM spindle included. Genuine wolnut vencer, 115 volt 60 cy . AC. Size $23^{\prime \prime} \mathrm{W} ., 81 / 2^{\prime \prime} \mathrm{H} .1214^{\prime \prime} \mathrm{D}$. No. 308176.
Shpg. wt. $301 / 2 \mathrm{lbs}$. Net Each.
$\$ 119.95$

 Mustang
FOR THE GOGO GROUP

Custom designed stand for extra convenience.

Slim, trim and youthful ...right-up-front in performance too! An outstanding value in sound, looks, convenience and durability.
General Electric 4 -speed automatic changer with dual styli plays all recordsstereo and monaural, all sizes 7, 10 and $12^{\prime \prime}$. 45 RPM spindle included. Automatically shuts-off or wilt repeat last record if desired. $9^{\prime \prime}$ turntable rubber matted for fullest record protection.
Solid state stereo amplifier requires no warm-up, plays instantly, three audio controls-separate right and left channel volume controls, and tone controlare conveniently mounted on front of changer. Detochable speaker wings, each with a $51 / 4^{\prime \prime}$ Dynacoustic speaker, can be separoted from the phonograph up to 12 ft . for true stereo sound
High-impact folystyrene cabinet folds-up for easy carrying-weight just 10 lbs. No. 304321.
Choice of Green or Ebony. Each
$\$ 59.95$
No. 30A 322 . Stand for above. Each


## Arvin

SOLID STATE COMPACT

## STEREO PORTABLE PHONOGRAPH

Compact and handsome . . . truly stylish. Never before a completely self-contained portable stereo phonograph to compare in looks, convenience or versatility. At home its a custom designed 3-piece stereo system with detachable speaker cabinets that separate up to 20 ft . for exciting stereo sound. On the go it folds into a streamlined portable so compact and lightweight it will amaze you
Uncompromising in sound quality. The instont play cool operating powerful AC solid state amplifier combines with two $4^{\prime \prime}$ stereo speakers to provide glorious room filling scund. Twin volume controls providereo speakers to provide glorious The world fomous BSR 4-speed automatic Mini-chonger plays records of all sizes and speeds-monoural and steren. Automatically shuts off ofter last record plays. 45 RFM spindle included. Turnover cartridge with dual sopphire styli. Rubber matted turntable to protect your treasured dises.
Attractive charcoal with silver trim. $193 / 4^{\prime \prime} \mathrm{W} . \mathrm{W}^{\prime \prime} \mathrm{H}^{\prime} ., 103 / 4^{\prime \prime} \mathrm{D} .105-120 \mathrm{~V}$.
60 cy. AC. Shpg. wt. 14 lbs .
No. 30B289. Each.
No. 30B289. Each.
$\$ 59.95$


## INCOMPARABLE Trimline 400 FOR EXCEPTIONAL TONAL QUALITY:



Truly magnificent . . . combines the fine listening pleasure of the concert holl with the convenience of true portability.
General Electric 4 -speed automatic record changer with retractable ceramic stereophonic cartridge features GE's exclusive Man-made diamond stylus for $162 / 3$, $331 / 3$ and 45 RPM records, synthetic sapphire for 78 's. Plays all records-all sizes with choice of automatic shut-off or repeat after last record plays. 45 RPM spindle included.
Solid state stereo amplifier provides 14 watts peak power with full-range frequency response. Has four audio controls-loudness, treble, bass and balance for personalized listening pleasure. Dttachable speaker wings with large $8^{\prime \prime}$ Dynapower speakers can be separated from phonogroph up to 12 ft . for desired tereo separation
Fine quality metal cose with vinyl laminoted covering for lasting beauty. $241 / 2$ W., $9^{\prime \prime}$ D. $141 / 2^{\prime \prime} \mathrm{W} .110-125 \mathrm{~V} .60 \mathrm{cy} . \mathrm{AC}$. Shpg. wt. 35 lbs .

No. Choice of Black, Brown or Green. Each.
$\$ 89.95$


## Arvin

DELUXE SOLID-STATE COMPONENT STYLE STEREO PORTABLE

- 4-Speoker stereo sound system
two big wooters and two tweeters.
- Deluxe changer with low mass tubu
lor tonearm, $1{ }^{\prime \prime}$ full size furntable
and diomond LP stylus.
- Seporate volume, stereo balance, boss
and treble controls.
- Frequency response 80-18,000 cps.


## PHONOGRAPH

## \$8995

Delivers breathtaking console-like sound. Made possible through space-age solid state electronics which allows finest high fidelity performance from a compact component style portable. Powerful tronsistorized AC stereo amplifier plus matched 4-speoker system with electronic crossover networks sssure flawless reproduction. Freq. response 80 to $18,000 \mathrm{cps}$. Speakers are detachable and separate up to 20 ft . for dramatic stereo effect. Deluxe 4 -speed ecord changer has such professional features as heavy 11 full size rubber motted turntable, occurote trocking low mass tubular tone orm, turnover ceromic cartridae with long life diamond LP needle for stereo and monaural, $162 / 3,3312$ and 45 RPM records, sopphire for $78{ }^{\prime} \mathrm{s}$, Automatically shuts off after last record.
Speoker cabinets fit over omplifier-ployer for easy luggoge-style carrying. At tractive arev with silver trim. $211 / 2^{\prime \prime}$ W.. $81 / 4^{\prime \prime} \mathrm{H}_{\text {., }} 14^{\prime \prime} \mathrm{D} .105-120 \mathrm{~V} .60 \mathrm{cy}$ AC. 45 RPM spindle included. Shpg. wt. $211 / 2 \mathrm{lbs}$.
No. 30A324. Each
$\$ 89.95$


Wow! What a terrific buy this is. Just think-a complete portable automatic phono at just pennies more than a record changer alone. Toke the "Swingmate" where the action is-so easy to carry. weighs just 11 lbs. High impoct scuff resistant cose takes abuse. Plays all monoural records with dual styli, all speeds $(331 / 3,45,78$ and 16 RPM $)$ all sizes 17,10 and $12^{\prime \prime}$ ). 45 RPM spindle included Automatic, shut-off after last record, Cr will repeat if desired. Fine tone quality from front mounted $2 \times 6^{\prime \prime}$ Dynacoustic speaker. Solid state amplifier for instont sound, longer life and reliability. Size $14^{\prime \prime} \mathrm{W} ., 141 / 4^{\prime \prime} \mathrm{D} .7^{\prime \prime} \mathrm{H} .110-125 \mathrm{~V}$ 60 cy . AC. Shpa, wt. 15 lbs.
Choice of Green or Beige.
No. 30c56. Eoch.
\$29.87
Mercury PORTABLE PHONOGRAPHS

## $\$ 3995$ <br> wirn inm suakie

s2995

> MORE THAN 250 HOURS ON JUST 6 ORDINARY FLASH LIGHT BATTERIES

TAKE THEM
ANYWHERE
Always ready
to play
instantly


## MERCURY FULL-FIDELITY

Take it wherever you go-instantly ready to play always-for pienics, beach, car, boat, potio, etc. Absolutely extroordinary ... all transistor amplifier combines with $4^{\prime \prime}$ Ticonal speaker to deliver truly amazing big set sound over a full frequency range, 90 to 8000 cps . Compatible cortridge with diomond needle for LP's, sopphire for 78's plays stereo or monoural records 710 or $12^{\prime \prime}$ at $331 / 3$, 45 or 78 RPM. Automatically shuts off at end of record. Operates at smooth constant speed always. Plays for months on just six ordinary flashlight cells. High impoct break-resistant plastic case $11 \times 71 / 2 \times 4^{\prime \prime}$. Weighs only $43 / 4$ lbs. including batteries.
No. 30099. (Less Batteries). New Low Price
$\$ 29.95$
No. 308314. AC Adaptor for 115 V. 60 Cy. AC. Each
......... $\$ 6.95$

## DELUXE 7-INCH SPEAKER MODEL

## OPERATES ON 115 V. AC WITH OPTIONAL ADAPTOR

Full rich sound comparoble to larger phonagraphs. Large $7^{\prime \prime \prime}$ ticonal magnet speaker, full 50-15,000 cps frequency range. Centrifugal motor govemor, lightweight tone arm, self-leveling feet. Modern style case in resilient twotone plastic with chrome trim. Size $121 / 4 \times 41 / 2 \times 91 / 8^{\prime \prime}$. Shpg. wt. 10 lbs . Less batteries.
$\$ 39.95$
No. 30088. Special Each.
volt 60 cy .


MICRO-ELECTRONIC DELUXE HI-FI
poRTA:BLE

## $\$ 44^{95}$

## GREATER RELIABILITY AND LONGER LIFE

Better tone quality, more deluxe appearance than B-A's $\$ 29.87$ model of left. Sleek and compact, lightweight and easy to carry. Big 5" speaker delivers Sleek and compact fille-range, room-filling sound. Volume and tone controls conveniently front-wide-range, room-filling sound. Volume and tone controls conveniently front-
mounted. Plays all mono and stereo recards, all sizes with compatible crystal mounted. Plarys al mono and stereo recarcs, ald shall repeat last iecord. 45 RPM cartridge and dual styli, Automatic shut-of or will repeat iost ectircuit assures greater reliability ond longer life. High-impoct polystyrene durable cabinet measures $131 / 2^{\prime \prime}$ reliability and longer life. High-impoct polystyrene warabie cabine 14 lbs. W., 30858 . Model V831. Choice of Ebony or Beige. Eoch.
$\$ 44.95$


## OUR LOWEST PRICE SOLID-STATE

Any youngster will be thrilled with this fuli-size grown-up GE phono. Ruggedly built to take bumps and brulses, yet light enough for easiest carry-about. Plays all 4 speeds, all sizes- 7,10 ond $12^{\prime \prime}$. Solid-state amplifier for instant playno warm-up needed. Big dynomic $4^{\prime \prime}$ Alnico $V$ speaker for pleasing tone and full roam volume, Scuff-resistant and washable white and blue polyethylene case. Con store ten 45 RPM records in lid. $131 / 2^{\prime \prime} \mathrm{W} .44 \frac{3^{\prime \prime}}{} \mathrm{H}_{\text {, }} 9^{\prime \prime} \mathrm{D}, 110-125 \mathrm{~V} .60$ Cy . AC. Shpg. wt. $61 / 2 \mathrm{lbs}$.
$\$ 16.88$ CY. AC. Shpg. wt.
No. 30 C 59 . Eoch.

OUR BIGGER SOUND SOLID-STATE
Perfect all purpose ployer. Front mounted Alnico $V$ speaker for fine tone quality. Powerful Instont ploy tronsistor amplifier for big room volume. Turnover cartridge with sapphire needles for all records-all sizes-- ill speeds. Mogic center for $45^{4}$
 No.' 30854. Eoch.

## TWO-SPEAKER FOR BETTER TONE

Two acoustically-motched PM speakers are front mounted for proper sound dispersion and resonance. Bass/Treble control permits odjustment of tone to any desired listening preference. Solid-state amplifier supplies maximum power for all requirements. High compliance turnover cortridge with two sapphire styil is compatible for playing monaural and stereo records. Pliays all speeds, all sizes. Foam rubber-mat cushions records on turntable. Luggoge style carrying cose covered in scuff-resistant washable pyroxylin, $151 / 2^{\prime \prime}$ W., 13 "D. 5 $/ 8$ H. 10.125 V. 60 cy. AC. Shps. wt.
No. 30 CiO . Choice of Red or Oilive. Each.
$\$ 24.95$

# CROWN RECORDS <br> I2-INCH LONG-PLAYING S갸킁 RECORDS 

 TRUE HI-FI STEREOPHONIC RECORDINGS
##  <br> 

No concession in quality has been made in order to provide the amazing low cost. Each record in attractive jacket and sealed in polyethylene. Specify Stock No. 23A36 and Record No.

## FACTASTIC <br> VALUE

## NOW ONIY

468. The In Crowd.
469. Daye Brubeck
470. Whipped Cream-The Lonely Bull, Mexicali Brass.
471. The Dave Clark Five
472. Shenandooh
473. Guitors A Go Go
474. Kansas City Star, King Of The Road. 478. Pete Fountoin.
475. Beer Gorden Piono
476. Guitars Go Country
477. Johnny Horton Sings
478. A Toste Of Honey, Mexicali Brass. 465. Square Donce With Colls.
479. Poika Porade
480. Ring Of Fire, Wolverton Mountoin.
481. Orgon Grinder Swing, Jimmy Smith
482. Beautiful Blue Howaii.
. Johnny Rivers, Jerry Cole-Feoturing Memphis.
483. Golden Goodies-Country \& West-
484. Trini
485. Trini Lopez-Featuring Sinner Man
486. Good Old Country Music.
487. Jesse Crawford ot the Organ
488. Romantic Hawaii.
489. Bummin' Around with Jimmy Dean
490. Doixa Dots $G$ Pnika Chips.
491. Dixieland Jubilee
492. Sonny Jomes © Other Country $E$ Western Hits
493. Music of the Wild West

Room Full Of Roses \& Other
Country Guitar Hits. Country Guitor Hits.
450. Mary Poppins.
169. Polynesia.
233. Sina-A-Long Party Songs.
267. Beoutiful Tangos
281. Razz Ma Tazz Ragtime Piono.
301. Howoiian Memories.
304. Howaiion Sunset.
312. Surfers Beat.
390. Washington Square.
386. Let's Have A Hootennany Vol. 1.
502. Honky Tonkin'
504. Bor Room Singing.
505. No Letter Todoy G Other Country 507. Piano Hits.

信.
10. Ballad Of The Green Beret.
512. Orange Blossom Special is Other Fiddle Fovorites
513. Rogt me Piono.
14. Last Date $\&$ Other Country Piano Fovorites.
15. Orgon Memories
517. Dixielond One Step.
519. Howoiion Love Songs.
490. In The Miller Mood
492. Downtown, Mexical Brass.
494. I Con't Stop Loving You, Etc.
496. I Wolk The Line, Etc.
97. Zorba The Greek of Tijwana Taxi, Mexicali Bross
498. Theme From Dr. Zhivago.
503. Michelle, Mexicali Brass.
6. Theme From Thunderbail, Mexicali Brass
509. Theme From Botman.
511. What Now My Love \& Spanish Flea, Mexicali Brass
516. Moke The World Go Awoy, Etc.
522. Dominique-from the Singing N
523. The Work Song, Mexicali Brass.
524. Mexicali Brass Go South of The Border.
526. The Mighty Pipe Organ.
528. Blue, Blue Day, Etc.
529. String Of Pearls, Tribute to Glenn Miller.
531. Cherokee, Tribute to Charlie Bar-
214. Beautiful Howoii.
440. Theme From Goldfinger and Others.
443. Golden Oldies-Country $\%$ Western.
444. The Best Of Bluegrass-Kentucky Mountain Boys.
446. Beoutiful Howaii.
447. Beer Barrel Piano
448. If I Didn't Care-The Ink Spots.

449: Discotheque.
533. Woodchopper's Boll, Tribute to Woody Herman
537. Pete Fountain $\boldsymbol{E}$ The Kings of 538. Beautiful
538. Beautiful Viennese Waltzes.
542. Mame $G$ Hello Dolly, Mexicai 44. Brass.
544. The Shodow of Your Smile, Mexi
cali Brass. cali Brass
462. Honky Tonk Piono.
463. Rodgers $G$ Hammerstein Fovorites.
464. The Best of Dixie.
518. Crazy Arms E Other CGW Fovor ites.
520. Once A Day $\&$ Other Steel Guitar Fovorites.
521. Buckaroo \& Other Guitar CEW Fa-
525. I'm Vorites.
525. I'm Gefting Sentimental Over You
527. Let's Donce-A tribute to Benny Goodmon.
532. More Bar Room Singing.
534. Don't Let The Stars Get In Your

535 Eyes-Country Piono.
53. Howaiton Wedding Song.
540. Viva Mexicali Bross.
543. Mexicali Brass Go Country.
545. Winter Wonderland, The Mexicali Brass.
331. Rusty and Doug-Grand Old Opry. 377. 12 String Guitar. Jim Helms.
434. Eddie Dean Sings.
441. Arriverderci Roma-Louis Martin-
elli and the Continentals.
120. Honky Tonk Piano Vol. 2.
239. Honky Tonk Piano Vol. 3.
151. The Mighty Pipe Orgon.
163. Blue Howaii, Sweet Leilani
104. A Toost to Tommy $G$ Jimmy Dorsey.
257. Ragtime Piano. Eorl Krause
210. Swan Lake Ballet. Carl Jergens Conducts Hamburg Philharmonic
56. Glenn Miller Memories, In The

Mood, Moonlight Serenade, etc.
430. Memory To Cowboy Copos
431. Blue Grass Gospel.
432. Memory of Hawkshaw Howkins
433. Country \& Western Fovorites.
435. Your Cheotin' Heart-Memory To Hank Williams.
436. Smoke Gets in Your Eyes and 437. Three Coins In The Fountain
438. George Whitman At The Hammond Orgon.
439. Songs Of Inspirotion
392. Sounds Of The Drags, The Blosters. 406. Dave Brubeck, Paul Desmond Quartet, Cal Tjoder Quortet.
428. Viennese Woltz Time
344. Country Gospel, J. M. Farley \& The Foggy River Boys.
277. Hormanica and The Blues.
230. Velvet Brass ond Percussion
144. The Ink Spots sing their greatest hits.
186. Country ond Western. Blue Tail Fly, Golden Slippers. Twongy Guitars of Billy Boyd. Mombo Boogie, Night Roc
259. Hhopin Favorifes.
302. Bosso Novo. Buddy Collett G Jazz Samba.
155. Neorer To God.
451. A Hank Williams Tribute.
453. Engine, Engine No. 9-Dang Me ond Other Country $G$ Western Favorites.
454. Hawaiion Tattoo.
455. Orgon Rhopsody.
456. Theme From The Greatest Story Ever Told and Other Religious Ever T
Hymns.
457. Al Hirt.
458. Trini Lopez Sings
459. Hank Mancini Favorites.
460. The Girl From Iponema, Fly Me To The Giri From Ipanema, Fly Me To
The Moon, Blame It On The Bossa

## FAMOUS AUDO BOOK UBRABY OF TALKING BOOKS

## THE BIBLE BROUGHT TO LIFE ON RECORDS



NEW TESTAMENT-King James version books. 260 chapters. Mfg. List $\$ 29.95$ No. 23C20. Per Album ( 26 Records) NEW TESTAMENT-Challoner-Rheims (Cotholic) version comp abridged narrated by the Rev. Robert I Gannon sersion complete and unNo. $23 C 22$.
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ther, Ruth, Psalms, Proverbs, Ecclesiastes, Solomon, and Isoioh.
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BOOK OF PSALMS Mig. List $\$ 6.95$.
No. 23C19. Per Album ( 6 Records)
PROVERBS, ECCLESIASTES, THE SONG OF SOLOMON
No. 23C149.
Per Album ( 4 Records)
$\$ 3.28$
BOOK OF JUDGES AND RUTH-Mfg, List $\$ 3.95$

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$\$ 1.96$
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42
Brings to life with thrilling realism the Bible . read aloud by one of America's finest professional readers. Every word is read correctly and reverently ... not a word has been changed or left out. Recorded at $162 / 3$ RPM on $7^{\prime \prime}$ unbreakable vinyl. ite records-each record plays for nearly an hour. A special adaptor is available for playing them on any phonograph capable of operating at any 4-speed Record Player.
Widely acclaimed by religious leaders, editors and laymen-ideal for the home, Bible classes, Sunday Schools, etc. Albums handsomely lacketed in simulated black leather with gold lettering.
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$\$ 19.97$

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$\$ 1.96$


All are recorded of $162 / 3$
RPM, and can be ployed on RPM, and con be ployed on
ony recard playcr copoble of
operating at $331 / 20$ RpM ony recard playcr copoble of
operating af $331 / 3$ RPM by
wse of odaptor shown below use of odaptor shown below,
or on ony 4 speed ployer.

## Alice in Wonderland

Children's Storytime Fovorites Child's Garden of Verses
Rip Van Winkle.
Gulliver's Travels
Wizord of Oz .
Adventures of Robin Hood Tales of Edgar Allen Poe. Famous Poems
Writings of Emerso Trial of Socrates. Ben Franklin's Autobiography Sonnets of Shakespeare.
Kipling's Just So Stories.
The Red Badge of Courage. Walden, Vol. I
Meditations of Marcus Aurelius
Dickens' A Christmas Carol.. The Adventures of Pinocchio Great Essays.
Adventures of Tom Sawyer Adventures of Sherlock Holmes Writings $\&$ Speeches of Lincoln Best of Mark Twain.
The Time Machine
The Call Of The Wild



## SPECIAL $16 \frac{2}{3}$ RPM ADAPTOR

All the Audio Book Records os shown here are recorded at $162 / 3$ RPM. They can be played on any phonograph or record changer capable of operating at $331 / 3$ RPM by use of this Adaptor. Simply place. Adaptor on the turntable and play os any other phonograph record. Mifg. List $\$ 2.95$
No. 23C10. Net Each No. 23C10. Net Each.
\$2.29

## RFPLAGEMENH PHONO GARURDDCFG



A wide selection of high quality cartridges designed for easy replacement of $90 \%$ of all makes. Crystal units are Rochelle-salt type especially treated to resist heat and humidity. Turnover cortridges have mil and 3 mil sapphre needes 78 RPM cartridges ore less needle. Any standard thumb-screw type needle will fit Average shpg. wt. 4 oz
type needle will fit Average shpg. Wt.
TURNOVER TWO-NEEDLE CARTRIDGES

| Stk | Cort. No | lllus. No. | Oufput Voltage | Response Cps | Element | Mfg. List | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 14B551 | 40TB | No. | 1.0 | 50-6000 | Crystal | \$8.45 | \$4.97 |
| 14.8550 | 62 TY | 3 | 1.0 | 50-7000 | Crystal | 7.95 | 4.67 |
| $14 \mathrm{C5} 37$ | $66 T 5$ | 2 | 3.0 | 50-5000 | Crystal | 7.25 | 4.27 |
| 148587 | 66 TY | 3 | 3.0 | 50-5000 | Crystal | 6.50 | 3.82 |
| $14 C 543$ | 120 | 4 | 3.0 | 30-11,000 | Crystal | 6.45 | 3.79 |
| 14 C 44 | $314 T S$ | 5 | 3.0 | 30-11,000 | Crystol | 5.45 | 3.20 |
| 14 C 545 | $410 \%$ | 6 | 0.8 | 50-6000 | Crystal | 6.50 | 3.82 |
| 14 BS 42 | 420 | 7 | 3.0 | 30-11,000 | Crystal | 5.45 | 3.20 |
| $14 \mathrm{C5} 52$ | 422 | 7 | 0.75 | 30-13,000 | Crystal | 5.95 | 3.50 |
| $14 \mathrm{C594}$ | 55T | $9$ | 0.7 | 30-15,000 | Ceramic | 7.95 | 4.67 |
| MICROGROOVE SINGLE NEEDLE CARTRIDGES |  |  |  |  |  |  |  |
| 14B541 | 408 $\dagger$ | 6 | 0.8 | 50-6000 | Crystal | 4.45 | 2.62 |
| $14 \mathrm{C564}$ | 414-1 | 8 | 3.0 | 30-11,000 | Crystal | 4.45 | 2.62 |
| ALL-GROOVE SINGLE-NEEDLE CARTRIDGES |  |  |  |  |  |  |  |
| 14B548 | 40-2 | 10 | 1.0 | 50-10,000 | Crystal | 6.50 | 3.82 |
| 148533 | 51-2 | 11 | 0.7 | 30-10,000 | Ceromic | 7.40 | 4.35 |
| 148584 | 66-2 | 12 | 3.0 3.0 | $50-5000$ $30-11000$ | Crystal | 4.95 4.45 | 2.91 |
| STANDARD SINGLE NEEDLE CARTRIDGES |  |  |  |  |  |  |  |
| 148547 | 12\% | 13 | 4.0 | 50-5000 | Crystal | 4.45 | 2.62 |
| 14B546 | 12U*: | 13 | 4.0-1.25 | 50-5000 | Crystal | 4.95 | 2.91 |
| Wess needle, any standard needle will fit. †Exact replacem |  |  |  |  |  |  |  |



## ASTATIC "SOUND-FLO" STEREO-MONAURAL CARTRIDGES

Popular plug-in type cortridges used as ariginal equipment in thousands of phonographs. Has highly sensitive ceromic element for clear wide-range response. Movement is precision engineered for high compliance, excellen transient response, and low distortion: 13 T Series ore stereo, 81 T monoural. 13 AT is same as $13 T$ except has wider range and higher compliance.

| Stk. No. | Type | Fig. | Response Cps | Needle Tip | Output Volts | Stylus Pressure | Mfg. List | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 14 A565 | $13 T$ | (1) | 20-15,000 | .75-53 | . 5 V . | $5 \mathrm{Gr}$. \$ | 5.95 | \$3.50 |
| 60473 | $137 \times$ | (1) | 20-15,000 | .70-35 | . 5 V . | 5 Gr. | 8.95 | 5.26 |
| $20 B 286$ | 1378 | (1) $G(2)$ | 20-15,000 | . $75-35$ | . 5 V . | 5 Gr . | 6.95 | 4.09 |
| 60B111 | 13T8x | (1) E(2) | 20-15,000 | .70-35 | . 5 V . | 5 Gr . | 9.95 | 5.85 |
| 144529 | 13 AT | (1) | 30-20,000 | . $7 \mathrm{~S}-35$ | . 3 V . | 6 Gr . | 7.95 | 4.67 |
| 60436 | I3ATX | (1) | 30-20,000 | 7D-3S | 3 V | 6 Gr . | 10.95 | 6.44 |
| 14 A593 | 81T | (3) | 30-15,000 | 1S-3S | 1.0 V | 6 Gr . | 3.95 | 2.32 |
| 60482 | 817X | (3.) | 30-15,000 | 1D-3S | 1.0 V | 6 Gr | 6.95 | 4.09 |

## ASTATIC CRYSTAL STEREO CARTRIDGES <br> 

Replacement for many imported cartridges such as Acos, Ronette, Telefunken, Vaco, etc. High quality Grystal cartridges have wide freareket, range and separotion. Type 76TSB and
bushing, and knob included. Shpg wt. 4 oz

| Stock No. | Cart. No. | Output Volts | Response Cps | Mfg. List | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (1) 14 C 577 | 70TS | 2.0 | 50-10,000 | \$7.25 | \$4.28 |
| (2) 144654 | 76TS8 | 2.0 | 50-10,000 | 7.95 | 4.67 |
| (1) $14 C 578$ | 80TS | 0.8 | 50-15,000 | 7.50 | 4.41 |
| (3) 144656 | 86TS8 | 0.8 | 50-15,000 | 850 | 5.00 |
| (3) 14 C 520 | 142 | 2.0 | 30-10,000 | 7.25 | 4.28 |
| (4) 148592 | 74 TS | 2.0 | 50-10,000 | 7.25 | 4.28 |

## (3) ASTATIC HIGH FIDELITY CERAMIC STEREO CARTRIDGE

Highest quality stereo cortridge used in thousands of the finest stereo consoles, direct replocement for m DB Has flip under needles Stondord $1 / 2^{\prime \prime}$ mounting centers. ration 35.4 oz . Has frip-under wt. 4 oz Sel No.60Cl42. Type 17. Sapphire Needies. Mfg. List $\$ 11.75$ Net Each.
No.60C143. Type 17D. Dia-Sopphire Needles. Mfg. List $\$ 15.75$ Net Eo. \$9.26

SONOTONE CERAMIC CARTRIDGES


1

MONAURAL CARTRIDGES
High quality, not affected by temperature or humidity. Provides high output, flat response without equalization. LB types are less bracket for narrow tone arms. 2TA type is new improved version of $2 T$ with higher compliance, lower tracking force. Also comes equipped with . 7 mil needle for playing
stereo records without damage, as well as all monaural records.

| Stk. No. | Fig. | Type | Response Cps | Needle Tip | Output Volts | Mfg. | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 14C580 | (1) | 1P-15 | 30-15,000 | 15 | 1 V . | \$6.10 | \$3.65 |
| $14 \mathrm{C581}$ | (1) | $1 \mathrm{P}-25$ | 30-15,000 | 25 | 1 V | 6.10 | 3.65 |
| $14 \mathrm{C583}$ | (2) | 2 TA-5 | 20-20,000 | .75-35 | 1 V | 7.40 |  |
| 144572 | (2) | 2 TA-LB-S | 20-20,000 | . 75 -35 | 1 V . | 7.40 | 4.44 |
| 60435 | (2) | 2TA-SD | 20-20,000 | 7D-35 | 1 V . | 10.80 | 8.48 |
| 148597 | (2) | $3 \mathrm{~T}-5$ | 20-20,000 | 15-35 | . 5 V . | 9.75 | 5.84 |
| 608135 | (2) | 37 | 20-20,000 | D-35 | 5 | 13.20 | 92 |

## STEREO CARTRIDGES

Highest quality ceromic stereo cartridges give optimum trouble-free performance with smooth, wide ronge response. All have flip-over needle assemblies for playing all records, all speeds, stereo and monoural. Universal terminal plug is supplied with all models except 8TA, facilitoting quick, easy replacement. Shpg. wt. 3 oz . All mountings $1 / 2^{\prime \prime}$ centers.

| Stk. No. | Fig. | Type | Needle Tip | Outpu Volts | DB Sepaation | $\begin{aligned} & \text { Response } \\ & \text { Cps } \end{aligned}$ | Mfg. List | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 204298 | 3 | 8TA4-S | . $75-35$ | 0.3 | 20 | 20-20,000 | \$11.00 | \$6.60 |
| 14B523 | 3 | 8TA4-577 | . $75-.75$ | 0.3 | 20 | 20-20,000 | 11.00 | 6.60 |
| 60B134 | 3 | 8 TA4-SD | .70-35 | 0.3 | 20 | 20-20,000 | 14.50 | 8.68 |
| 14 A567 | 4 | 10T2-S | . $75-35$ | 0.5 | 18 | 20-15,000 | 8.75 | 5.24 |
| 60475 | 4 | 10T2-SD | .7D-35 | 0.5 | 18 | 20-15,000 | 12.20 | 7.32 |
| 14 A657 | 5 | :16TAF-S | .75-35 | 0.65 | 25 | 20-12,000 | 8.20 | 4.90 |
| $60 \mathrm{Cl14}$ | 5 | *16TAF-SD | 70-3S | 0.65 | 25 | 20-12,000 | 11.65 | 6.98 |
| 14 A 658 | 5 | 18 TA-S | .75-35 | 1.0 | 25 | 20-12,000 | 7.55 | 4.52 |
| 608112 | 5 | 18TA-SD | .7D-35 | 1.0 | 25 | 20-12,000 | 11.00 |  |
| 60 B 127 | 5 | :916TAF-S | .75-35 | 0.42 | 28 | 20-20,000 | 9.65 | 5.78 |
| 608129 |  | 916TAF-SD | 70-35 | 0.42 | 28 | 20-20,000 | 13.10 | . |
| 60439 | 5 | 9TAF-S | $75-35$ | 0.4 | 30 | 20-20,000 | 11.15 | 6.67 |
| A40 | 5 | \% 9TAF-SD | .7D-3S | 0.4 | 30 | 20-17,000 | 14.60 | 8.7 |

SONOTONE SONO-FLEX NEEDLE
Bend it, knock, or flick it-the Sono-Flex stylus springs back into ploying position' without domoge. Connot be hormed by dropping tone arm, will not scratch records. One needle fits the following cartridges: 9T, 9TA, 9TAF, $9 T V$, $9 T A V$, $9 T A F V, 16 T, 16 T A F, 16 T A P, 916 T A, 916 T A F$
Stk. No. Type Point Sizes Mfg. List Net Each
 24A387D N9916F-D77 . 7 Mil . Dia. G. 7 Mil Diamond 6.00 3.5

SONOTONE STEREO Retractable CARTRIDGE (8) 21 TR Ceromic Cartridge with retractable mounting brocket. Retrocts into head of tone arm, eliminating scratched records and damaged needles from accidental dropping of tonearm. Response: entire audio hearing range: 0.60 No. 148530. Type 21TR +5. 7-3 Mil Sapphire Sono-Flex Needle. Each. . \$5.24
 22T High-Compliance Ceromic Cortridge with new standard mtg. bracket. Snaps in and out of brocket. Fits standard tone arms. Response: entire oudio hearing range; 0.30 output voltage; separation $24 \mathrm{db} ; 2-4$ grams No. 148563. Type 22T-5. 7-3 Mil Sopphire Sóno-Flex Needle. Each. .. \$5.24 No. 148563. Type 22T-S. ${ }^{\text {7-3 }}$ Mil Sopphire Sono-Flex Needle. Each. . $\mathbf{\$ 5 . 2 4}$
No. 14B596. Type 22T-SD. 7 Dio. -3 Mil Sopp. Sono-Flex Needle. Ea.. . $\mathbf{7 . 3 2}$


Exact replacement for the most popular type cartridges, E-V quality ossures top performance and fidelity. Needles: IS indicates sapphire tip, ID diamond tipboth for long playing records; 35 sapphire for 78 RPM records; 2S sapphire allpurpose tip for all mono records; 7 S sopphire tip for stereo records; 7 D diamond tip for stereo records.

| No. | Fig. E-V | Replacement For |
| :---: | :---: | :---: |
| 208403 | 56 | Monaural Plug-In |
| 608116 | 156 D | Monaurol Plug-In |
| 208398 | 66 | Stereo Plug-In |
| 608115 | 1660 | Stereo Plug-In |
| 608123 | 226 | Euphonics $\mathrm{E}-1, \mathrm{U}-1$ |
| 608137 | 2 26D | Euphonics E-2, U-2 |
| 608154 | 354 | RCA 108213, A, 110021 |
| 204672 | 4112 | Zenith-S-15780 |
| 208391 | 5 PT-2 | Mount for 56 Cortridge |
| 208399 | 5 PT-3 | Mount for 66 Cortridge |
| 14467 | 65100 D | Admiral 409C75-1; Tetrod 6-32D-A1 |
| 14468 | 65101 | Admirol 409C75-2; Tetrad 6-32S-A2 |
| 14469 | 7.51090 | Motorolo 59C63784A01; Tetrad 6-31D-M5 |
| 14470 | 751110 | Motorolo 59C63816A01; Tetrod 1-21D-M4 |
| 14.471 | 75112 | Philco 35-2876-1; P-1; Tetrod 6-11 SP-1 |
| 14472 | 751140 | Philco 35-2876-2, P-2, Tetrad 6-11 DP-2 |
| 14473 | 751150 | Philco 35-2877-1, P-4, Tetrad 6-11DP-4 |
| 14474 | 751160 | Philco P-5X; Tetrod 2-41D-P5X |
| 14475 | 751180 | V-M 36487-8, V-2; Tetrod 6-21D-V2 |
| 14476 | 751200 | V-M 36487-E, V-5; Tetrad 5-31D-V5 |
| 14477 | 7 5121D | V-M 36487-F, V-6; Tetrod 2-21D-V6 |


 for ail-groove, and "STD" for standard 78 RPM speeds, "TO" for furnover type. Select proper needie by Mfg. No. or illustration. Fig. Sti. No. Type No. Cartridge No. Needle No. Size Net Each (1) 244351 ACOS

| ASTATIC $\mathbf{8 1 . 4 9}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (8) | 244444 | 444 | 66,62 | K-78 |  |  |
| (3) | 24A445 | 445 | 66,62 |  | MG | .989 |
| (3) | 244354 | 393* | 55-T | $\mathrm{N}-55$ | TO | 1.8 |
| ¢ | 244340 | 340 | GC, 51 | G-AG | ÁG | 1.48 |
| 8 | 244370 | 370 | ${ }_{\text {AC }}{ }^{\text {c Series }}$ | A-1 | MG | -98 |
| 0 | 244372 | 372 | AC, AG | A-AG | AG | .88 |
| 8 | $\frac{24 A 310}{248314}$ | $\frac{310}{824}$ | 408. | N10-1J | MG | .88 |
| 8 | 248314 | 824 | 70TS, BUTS | N7-7 | Stereo |  |
| (6) | 244361 | 466 | 310,420 | N8-3 | Std. | . 8 |
| (8) | 244362 | 464 | 310,420 | N8-1 | MG | .9 |
| 8 | 244359 | 465 | 310, 420 | N8-2 | AG |  |
| (10) | 24 2342 | . 516 | $76 \mathrm{TS}, 86 \mathrm{TS}$ | N8-7 | Stereo |  |
| (10) | 244546 | 546* | 17,170 | N-4! | Stereo TO |  |
| (10) | 248321 | 567* | 133 | N50,51 | Stereo TO | 1.48 |
| (13) | 24A547 | 604** | 140,142,146 | N-60 | Stereo TO | 1.49 |
| (4) | 244617 | 617\% | 181 | N64 | Stereo TÖ | 1.48 |
| (1) | 24A619 | 619* | 138 | N70 | Stereo TO | 1.49 |
| ELECTRO-VOICE |  |  |  |  |  |  |
| (1) | 244322 | 506 | 21,26 | DI-I |  |  |
| ${ }_{8}^{8}$ | 24A574 | 574** | 132 | 2619 | Stereo TO | 1.49 |
| (8) | 244587 | 587* | 141 | 2620 |  |  |
| (8) | 244607 | 607* | 198 | 2624 | Stereo To | 1.49 |
| EUPHONICS |  |  |  |  |  |  |
| (13) | 24A541 | 541 | E1 |  |  |  |
| (3) | 248306 |  | "U" | 214 | Stereo Stereo | -999 |
| (16) | 24A399 | 566* | U-8, U-9 | 253 | Stereo | 1.49 |
| (19) | 244576 | 576* | U-10, U-11 | 255 | Stereo To | 1.49 |
| GENERAL ELECTRIC |  |  |  |  |  |  |
| $\begin{aligned} & \text { (4) } \\ & \text { (4) } \end{aligned}$ | $24 A 565$ | 565** | C-100 | R54154 | Stereo TO |  |
|  | 24A611 | 611* | C-500 |  | Stereo TO | 1.49 |
| MAGNAVOX - |  |  |  |  |  |  |
| (46) | $24 A 327$ | 395* | 560 Series | 560 | Twin | 1.49 |
| PHILCO |  |  |  |  |  |  |
| (14) | 244325 | 353** | 76 Series | 35 Series | Twin | 1.49 |

## DOURECOTON NEEDLES



Double the playing time of your favorite records with a stereo or LP diomond tip on both sides of the needle. The obsolete 78 RPM tip has been diamond point is hand records ployed are stereo or LP monaurol. Eoch have two .7 mil stereo diamond tips, except N2T and N3T, which have one .7 mil stereo and one 1 mil diamond point.

| Fig. | Stk. No. | Type No. | Cartridge No. | Needle No. | Net Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | 24A388D | 546DD-2ST | Astatic 17D | N41D | \$4.95 |
| (1) | 24A3890 | 565DD-2ST | G-E C-100 |  | 4.95 |
| (2) | 24A390D | 5330D-2ST | RCA 106, 108 | 110020 | 4.95 |
| (4) | 24A391D | 5030D-2ST | Sonotone 8T | N8TS | 4.95 |
| (4) | 24A394D | 52200-2ST | Sonotone 8TA | N8TA-S | 4.95 |
| (3) | 24A395D | $5440 \mathrm{D}-2 \mathrm{ST}$ | Sonotone 9T | N9TS | 4.95 |
| (3) | 24A396D | 553DD-2ST | Sonotone 16T | N16TS | 4.95 |
| (4) | 24A397D | 385DD-LP/ST | Sonotone 2T | N2TS | 4.95 |
| (4) | 24A398D | 460DD-LP/ST | Sonotone 3T | N3TS | 4.85 |

## RECOTON SET SCREW TYPE NEEDLES

 ALL GROOVE Sapphire tip needle. Truncatstondard records. Plays and stondard records. Plays all types of recordschanging needles. Mfg . List $\$ 2.00$ No. 20C79. Each Osmium tip needle. Otherwise same
as above. List $\$ 1.50$.
No. 20B81. Each . . . . . . . . 795


## 

[^4]

## DJAMOND REPLACEMENT NEEDLES

Protect your valuable record collection with a genuine hand polished diamond stylus. Diamond needles outlost other types by 5 times or more so can be obtained with a dical eosier, on records. Any of above needles when ordering.
Single Diamond Stylus. Net Each
"SD" to stock number when ordering
Diamond-Sapphire Stylus. Net Each.

## ASTATIC X-26 CRYSTAL CARTRIDGE

Replocement for General Industries recorder playback units. Uses regular cutting needles (not furnished). Moximum recording voltage 150 volts RMS. Frequency response to 6000 eps. Wt. $51 / 2 \mathrm{oz}$.; size $13 / 8 \times 5 / 8 \times 31 / 4 / 4$. Oxidized finish.
No. 14A532. Sh
14A568. Astatic M. wt. 10 ozs. Net Each...... $\$ 7.53$


## HOME RECORDING NEEDLES

Alloy Steel. Diamond Stellite. Diamond pol polished. Each needle ished. Cuts quie t, $256^{\prime \prime}$ records. Card for approximately 500 of 5 needles. $5^{\prime \prime}$ discs.


## AUDIO DEVICES <br> RECORDING DISCS

Engineered to the highest standards of the recording profession. Audio-Dises are recommended
 ing and movie studios: record-

ing. and movie studios: for all professional recordina apolicotions.
"YELLOW LABEL"-Double face, Popular choice for all general purpose recordings which require high, uniform quality. Ideal for volume production Stk. No.

| tk. No. | Size | Thickness | Pkg. Wt. | Pkg. of $\mathbf{2 5}$ |
| :--- | :--- | :---: | :---: | ---: |
| A9 | $10^{\prime \prime}$ | $.040^{\prime \prime}$ | 8 lbs | $\$ 30.00$ |
| A10 | $12^{\prime \prime}$ | $.050^{\prime \prime}$ | 14 lbs. | 63.25 |

"BLUE LABEL"-Double faced. Offers fine recording quality at a low price. Highly recommended for preliminary audition work, making test cuts, or general amoteur use. Aluminum base.

| stk. Na. | Size | Thickness | Pkg. Wt. | Pkg. 10 | Pkg. 50 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 114759 | $61 / 2^{\prime \prime}$ | . $035^{\prime \prime}$ | 1 lb . | \$5.80 | \$25.50 |
| 114760 | $8^{8 / 1}$ | .035"' | $11 / 2 \mathrm{lb}$. | +8.90 | \$25.00 |
| 114761 | $10^{\prime \prime}$ | .035' | 3 lbs . | 10.50 | 50.50 |

Sopphire recordin AUDIO POINTS RECORDING STYLI
recording studios, each meet the most exacting standards of broadcast and signal-to-noise ratio. Short dural shanks.

| Stk. No. | Type |  | Description |  |
| :--- | :---: | :---: | :---: | :---: |
| $\mathbf{2 4 A 3 7 6}$ | 14 | 78 RPM Sapphire Stylus | Mfg. List | Net Ea. |
| $\mathbf{2 4 A 3 7 7}$ | 20 | Microgroove Sopphire Stylus | $\$ 8.25$ | $\$ 5.34$ |
| $\mathbf{2 4 A 3 7 8}$ | 34 | Stellite Cutter Stylus | 8.25 | 5.34 |

## PRESENTING AMERICA'S NEWEST VALUE SENSATION IN MULTI-PURPOSE CABINETS!



FIRST TIME EVER A 40-IN CABINET
WITH 3-SLIDING DOORS AT SUCH
A SENSATIONAL PRICE $\ldots \ldots$.
EARLY AMERICAN $\quad$ FRENCH PROVINCIAL


FULL 40 INCHES LONG! choice of otcorator AND STVLE FINIS-AE STORES UP TO 400 RECORDS

THREE SLHDNGG
DOORS

## IMAGINE SO MUCH CABINET FOR SO LITTLE

Richly finished selected hardwoods, brass-colored hardware. $40^{\prime \prime}$ long, $26^{\prime \prime}$ high, $16^{\prime \prime}$ deep. Easy to assemble!

- Molds many books. Attractive room divider
- Handy as a bar. Useful liquor cabinet.
- Decorative TV stand. Ideal for picture window.
- Perfect as credenza. Ideal for stereo hi-fi phono.
- Brass finished period-matched hordware.

Above units shipped K.D. Shpg. wt. 30 Ibs.
No. 40A392. Modern Walnut Finish..........
No. 40A393. Modern Mahogany Finish....
$\$ 19.99$
No. 40A395. Early American Maple Finish.................................. $\$ 19.99$
No. 40A396. French Provincial Antique White \& Gold....... $\$ 10.99$
No. 40A398. Spanish Distinctive Fruitwood Finish ......... $\$ 19.99$


Mahogany Oak or Walnut Finish

RECORD STORAGE CABINET веиurtur \$ MODERN
STYLING


FULL $26^{\prime \prime}$ HIGH HOLDS 350 RECORDS HAS WIRE

5 DECOFATOR 6 COLORS


The finest stylling with ample space for 350 ecords. May be used as credenza, both sides, frort and back are finis7ed. Cornes knocked down, readily ossembled. Size $36^{\prime \prime} \mathrm{W}, 15^{\prime \prime} \mathrm{D}$, ¹'" $^{\prime \prime}$ H. Prov. White \& Gald
408307. Modern Style, Walnett 40B306. Modern Style, Mahogany 40B310. Eorly American, Maple 40B308. Spanish Style, Fruitwood 40B3il. Chinese Modern, Black \& Gald YOUR CHOICE
EACH.. $\$ 19.99$

Low cost, handsomely styled record cabinet stores up to $15012^{\prime \prime}$ records. Compoct, low boy design makes it ideal for limited space areas such as recreation rooms or dens... serves as lamp or end table. Snap out record dividers are easily removed for all kinds of storage use. Has full view sliding doors with bross door pulls. Supplied knocked down in handy "carry-ing-cose" corton. Easily ossembled in just minutes-requires no tools, bolts or screws. Sturdy hardboard and wood construction. $24^{\prime \prime} \mathrm{W}, 18^{\prime \prime} \mathrm{D}, 221 / 2^{\prime \prime}$ H. Shpg, wt. 18 lbs.
No. 40 A $257-$ Walnut YOUR CHOICE NET EACH..

No. 40A258-Mohogony No. 404259-Oak

NEW HIGH QUALITY TAMBOUR DOOR RECORD
STORAGE CABINET IN FIVE DECORATOR STYLES
FULL 40 INCHES LONG - SHIPPED READY TO USE... NO ASSEMBLY REQUHRED?
Truly the finest in modern croftsmanship. Highest style, designed to fit in with Truly the finest in modern crafsour doors slide oden and close easily. Holds up to 400 records. Richly finished. Shipped ready to use. Size, $40^{\prime \prime} \mathrm{W} . \times 26^{\prime \prime} \mathrm{H} . \times$ $16^{40} \mathrm{D}$. Approx. shpg. wt. 30 lbs . Shipped express or freight only.
No. 40B316. French Provinciol Style-White \& Gold Finish Net.
No. 40B316. French Provinciol Style-Solem Maple Finish. Net.
No. 40B317. Early American Syle-Slack \& Gold Finish. Net
No. 408313. Deluxe Modern Style-Mohogony Finish. Net.
No. 408313. Deluxe Modern Style-Mohogony No. 408314. Deluxe Modern Style-Soft Wolnut Finish. Net
No. 408314 . Deluxe Modern Style-Moft Woinut
No. 408315 . Sponish Style-Fruitwood Finish. Net.


HIGHEST QUALITY CONCERT SIZE GUITARS
ALL WITH STEEL REINFORCED NECK

3) CONCERT SIZE ALL MAHOGANY
STEEL FOLK GUITAR-AMERICAN MADE
Rosewood bridge and fingerboord--inlacid pearl position morkers, bound edges top and bottom, bound sound hole, white ornote pick guord. No . 40 A 227 . Shpo. wt. 8 lbs. B-A speciol $\$ 49.95$ No. 40A27. Shp, wt. Bobs. B-A Speciol
No. $40 B 168$ Corying Bor obove. Speciol. As obove with White Mople Top, tortoise guord..... $\$ 6.95$ No, 40B229. Shpg. wt. 8 lbs. B-A Specid
$\$ 49.95$
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$\$ 79.95$
4

## STANDARD SIZE STUDENT GUITAR

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## TEACH YOURSELF RECORD COURSES

> Learn basic chords, runs, slurs, eut time ond sol Records ond illustrated chorts. No. 23D73. Guitor. Eoch... No. 23D73. Guitar. Eoch
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- Screwed bridge. Inlaid Position Markers.
Handsome appearonce with fine tone quality makes this a spectaculor buy. This instrument will deliver lots of hogany body is a real lot of hard use. Genuine mamahogany finish. You'll morvel of the brilliantly full rich tone Shpa wt You'l morvel of the brilliantly full No. 40B169. B-A Speciol
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B-A's SPECIAL LOW PRICE

You always get fast, dependable oction from a B-A Electric Guitar. Precise odjustment of strings, frets, nut and bridges provide this. Teisco Del Rey's action is sensitive to your slightest touch. This fine oction lets you make beautiful music for hours on end .... with the greotest of eose.
The very finest materials and craftsmanship are the occepted standards. Advanced technological research and constant improvements are responsible for the new compression tremolo, the universolly adjustable floating bridge, the ultra high sensitive pick-ups, and many other innovotions which contributed towards the superb tonal quality of your teisco electric guitar.

## (3) DELUXE TWO PICK-UP ELECTRIC WITH TREMOLO

Beautifully styled double cut-owoy electric guitor with two adjustoble pick-ups; compression tremolo, friction free adjustable chrome poller bridge. Volume and tone controls. Neck is laminated for extra strength and features a 22 fret rosewood fingerboard with 10 inlaid position markers. An etched and polished striped plate protects the handsome lacquered finish. Length $38^{\circ}$. Shpg. wt. 12 lbs. No. 40 B 240 . B-A Special $\$ 39.95$
No, 40C157. Case for obove. B-A Special
$\$ 7.95$

## (2) DELUXE 3 PICK-UP ELECTRIC GUITAR WITH TREMOLO

Double cut-away three pick-up eiectric guitor with chrome compression fremolo; friction-free adjustable chromed roller brldge. Volume and tone controls and three standby switches. The removable, adustoble neck is laminated for extra strength and features a 22 fret rosewood fingerboard Beautiful lacquered hordwood body is shoped both front and back and is protected by an etched and striped plate. Length $381 / 4 \%$. \$59.95 No. 40C149. Shpg. wt. 14 lbs. B-A Special. No. 40C157. Contoured Cose
(3) TWO PICK-UP SLIMLINE GUITAR WITH TREMOLO

Beautiful detailed double cut-oway thin-Ine electric guitar with 2 ultra-sensitive, adjustable pick-ups. Friction free odjustable roller oble pick-ups. Fricton compression tremolo. Individul noiseless velvet-touch standby switches. Volum noiseless velvet-rouch stane delicately Volume and tone controls. The well decopative celluloid both front and bock, and is protected with a pick guard and control panel protected with a pick guard and control ponel lominated for extro strength and features a 19 fret rosewood fingerboard $39 \times 133 / 4^{\prime \prime} \mathrm{W}$ Shpe No. 408241. B-A Special.....
No. 40C157. Contoured Case
(4) SUPER DELUXE 4 PICK-UP Modern and versotile instrument has Modern and versalie instrument has everything for the protessional guitarist. universolly adjustable friction free deuniversolly adjustable friction free deluxe roller bridge. Chrome-pioted Go4 standby switches. Spring loaded muf:4 standby switches. Spring loaded mutler and 3 position selector switch for Solo/Rhythm and Super Bass sounds. The body is shaped and beveled front and bock for perfect body comtort. The slim fast oction neck is both renovable for extra strength and features a noted for extra strength and fealures a 22 fret rosewood fingerboard. All working surfaces of the beautitul lacquered striped chrome plate. Length $391 / 2^{\prime \prime}$. Shpo. wt 18 libs
No. 408242 -A Special
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## SINGLE PICK-UP ELECTRIC GUITAR

## $\Phi$ <br> 

COMPLETE WITH CASE, STRAP AND INSTRUCTION BOOK Benutifully designed double cut-owoy electrlc guitar feoturing an odjustable deluxe pick-up; adjustable chrome integral bridge and toil-plece. Volume and tone controls. The removoble steel reinforced neck features a 22 tret rosewood fingerboard with 10 inlaid position markers. Length $38^{\prime \prime}$
Guitar above complete with Cose, instruction book and strap. Ne. 408239. Shpg. wf. 16 lbs.
B-A Combinotion special.
$\$ 29.95$
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Na 40C157. Contoured Cose tor obove. B-A Special

## DRUM SETS AT B-A'S

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## PICADILLY COMPACT 4-PC. DRUM OUTFIT

Designed with the young drummer io mind. Gives drummen is mind. Gives lowless performance every in any drummer's style.
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All are of multi-ply Dura-tone shell construction. 4-Piece set comes complete with:
$12 \times 5$ " Power Snare-New "ropid response" snare for precise definition, fost stick rebound. Features tension head adjustment, and adjustable built-in tone control.
"tone-tuned" of Sixteen highly-polished pre-tensioned clamps keep this drum "tone-tuned" at all times
$10 \times 7^{\prime \prime}$ Tem-Tom-Feature: quick lock connector ond heovy plated steel key tension rods.
$12 \times 12^{\prime \prime}$ Tom-Tom. This larger Tom-Tom gives a deeper throatier sound. Complete with tension head adjustment and $10^{\prime \prime}$ chrome finished adjustable legs. Cymbal-1 $10^{\prime \prime}$ spun cross for brilliant, dramatic reverb.
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Bass Foot Pedal-Sturdy "tialanced-action" 3-ply felt beater ball.
Adjustable Snare Stand-Weat, easy-action stand adjusts in seconds for easy Bass Mufflery trovel.
Bass Muffler-For wide range tone control
2 Tension Keys-For precise tuning.
Specify Color: Black Diamond Peorl, Red Sparkle or Silver Sporkle. $\$ 99.95$
No. 40B273. Wt. 28 lbs. Complete es deseribed.............................. 95


4-PIECE DRUM SET
\$19950
9 PIECES IN ALL

Best drum bury we hove ever seen! Positively fantostic quolity of an amazing low price. Beautiful mother of peal finish. Available in block, red or white. HERE'S WHAT YOU GET:

1. $51 / 2 \times 14^{\prime \prime}$ Snare Drum. 6 ply 8 lulls, separate, triple flanged hoops, internal tone control, double throw-off with snare stand.
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9x13" Shell Mount Tom-Tom. © ply, separate tensions.
$16 \times 16^{\prime \prime}$ Floor Tom-Tom with legs, 5 ply, separate tensions
Deluxe Hi-Hot with 2- $4^{\prime \prime}$ cymbals.
1 Cowbell. 7. 1 Set Drum Sticks. 8, 1-18" Cymbol.
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Shipped in 2 cartons. $W+.85 \mathrm{lbs}$.
Complete set as described above. Specilly Color
No. 40B175. Special.

B-A's AMPLIFIERS REPRESENT THE BEST BUY AVAILABLE FOR BEGINNERS AND PROFESSIONAL MUSICIANS ALIKE!


## B-A AMPLIFIER WITH TREMOLO

 $\$ 5 \longdiv { 1 9 5 }$LESS TREMOLO \$39.95

- 5 watts output
- Three inputs.
- Advonced solid state circuitry.
- Heary duty oval speaker.

Tremolo foot switch included.
Provides finest reproduction with complete set of functions. Has heavy duty oval speaker for distortion free performance. Features tremolo speed and strength controls, chromed volume and tone controls, pilot light, fused. Acoustically designed solid wood enclosure covered with scuff-resistont black vinyl. Slanted front covered in co-ordinated black and silver grille cloth. Case size $191 / 4^{\prime \prime} \times 15^{\prime \prime} \times$ $8^{\prime \prime}$. Wt. $121 / 2 \mathrm{lbs}$.
$\$ 54.95$
No. 40B271. As above less Tremolo. Wt. 12 lbs. Eoch


## B-A STUDENT AMPLIFIER

## $\$-95$ <br> ALL SOLIDStATE

- 3 wotts output.
- Two inputs
- Chromed volume and tone controls - Oval speaker for big sound.

Power output and tone depth exceed all other comporably priced amplifiers on the morket today. All solid stote assures complete reliability. Feotures two inputs, volume, tone control, on/off switch. Oval speaker in on ocousticolly designed cabinet gives omazing performonce. Cose size $141 / 2 \times 113 / 4 \times 6^{\prime \prime}$. Weight $61 / 2 \mathrm{lbs}$.
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All replaceable gootskin heads. Single row jangles, 8" head.
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OELUXE DOUBLE ROW JANGLES
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mUSICAL IWSTRUMENT PICK-UP WITH TONE AND VOLUME CONTROL

Same tvpe, desian, and quality os the most expen sive pickups. Vibront response over the entire mu sical ranqe. Clamps to tork or strings without tools. Felt-base mike unif fits under strings, stides uo and down to create best tonal effect. Use with metalic stringed irstruments. Seporote tone and 8 volume control unit has mountina flange. With 8 ft coble and pluz. Bright chrome plate. Big No. 22C239. Special
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## CONTACT MIKE FOR MUSICAL INSTRUMENTS

 Operotes with music or public oddress omplifier like on ordinary crystal mike, except designed for direct mechanical contact 10 instrument. Provides brillianttone over entire musical range. Fine tone over entire musical range. Fine
tor guitors, pianos, etc. High output for guitors, pionos, etc. High output crystol element is high impedance type.
Housed in tiny gold onodized olumimum cose 1 ? ${ }^{\prime \prime \prime}$ long, $3 / 4^{\prime \prime}$ wide with slotted attachment bracket. Has 6 ft . shielded coble and brass phirne plug. Imported ot greot sovings. No. 17B593. Special, Net Ea.
\$2.79


# TEISCO DEL-REY GUITAR AMPLIFIERS! 

## NEWCOMB



## LOWEST PRICE BASS

 AMPLIFIER YET
## $\$ 64^{95}$

- Two inputs.
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- All solid state.

Never before a Bass Amplifier of such - fontostic low price! Feature packed with chromed volume and tone controls, pilot light, acoustically designed and hondsomely stvled solid wood enclosure covered with scuff-resistant black grained vinyl. Slont front for optimum sound projection is covered in black and silver
 No. 40 B254. Wt. 15 lbs . Net. $\$ 64.95$

## PROFESSIONAL 40-WATT AMPLIFIER

- Three inputs.
- Heovy magnet $12^{\prime \prime}$ speoker.
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A truly rugged combo-omplifier every feature the professional could desire. Three inputs. Controls for reverb tremolo depth and speed, bass and treble tones. On/off switch with standby position. The contrasting black and polished metal control panel hos satin finished metal knobs. $3 / 4$ " plywood case is covered with handsome scuff-resistant vinyl and a black and silver grille. Slant back legs, fit tightly to side of amplifier, allow better coverage of a large room by projecting sound upwards. Legs and case fittings ore bright chrome ploted 115 V . AC opera-
tion. Size $26^{\prime \prime} \times 20^{\prime \prime} \times 9^{\prime \prime}$. $\$ 199.50$ No. 40 B 255 . Wt. 40 lbs. Net.


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## SOUND <br> COLUMNS

- No hot spots - sound is equal throughout auditorium or hall.
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Model CS48. Most Procticol Model CS48. Most Procticol Column on the Morket. Combines exceptional directivity with portobility. Excellent efficiency, power handling peak 60 wotts. 25 foot cord and plug in "hide-oway". cord compartment - Extension jack and switch. $397 / 8$ No. 0 O62551/8 $\$ 69.50$ Net.
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ing switch. $\$ 139.50$ ing switch.
408253 . Net. $\$ 139.50$

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- COMPLETE STEREO SEPARATION - BRILLIANT REALISM - PERSONALZED PRIVATE LISTENING


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Provides absolute stereo separation and lets you hear startling new sounds from your favorite music. Reproducers fit snugly to your ears shutting out $95 \%$ of all outside noise-ossures you of intimate private listening without disturbing others.
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8 ft . cord and plug and jack assembly for hookup to speoker voice coil leads. Wt. 2 lbs.
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(2) KOSS MODEL K0727. New design, fully odjustable. Wide ronge, highly sensitive reproducers feature distortion less than $1 \%$. For $4-8-16$ ohm program source up to 60 watts per channel. Foom filled ear cushions are removable. New 8 ft . coiled cord adds convenience.
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$30-20,000 \mathrm{cps}, 4$ ohm impedonce. Hos 8 . cord and plug. No. 22A392. Shpg. wt. 2 lbs. Net Each.

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MODEL T-5. For connecting one ur two stereophones to existing stereo or monaural systems. Impedance $4-16$ ohms. Contains two volume controls far contralling sound level in each phone. Has two output jacks for stereo or monaural use. Equipped with speaker off-on switch for personalized listening. Shpg. Wt. 1 lb.
No. 22 a 387 . Model T-5. Net Eo. $\$ 8.95$ 20 Ft. 3-Cond. Extensian Cord for Stereo heodphones. Male plug one end, female jack other end. No. 228389. Model STEX-20. Wt. 8 oz. Net Each.


Has separate woofer ond tweeter in each phome with o miniaturized crossover network, plus an individual tweeter control for each phone. Ideal for listening to your prized records at full volume without disturbing others, procticing the orgon in privacy, monitoring stereo tape reconders. Styra-foam ear cushions, odjustoble heodbond, cord and 3-conductor plug included. Response $20-20,05$ cps. Impedance 6-8 ohms. No. 22A391. Model STM. Net Each
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(5) ENJOY PRIVATE LISTENING AT THE VERY

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B DELUXE STUDID QUALITY STEREO PHONES
WITH JUNCTION BOX—RESPONSE 25-18,000 CPS.
B-A hos sold hundreds of these exceptienally nice phones. Each earpiece actually contains a high quality wide-range miniature dymamic speaker with its own min ioture volume control for perfect stereo balance and beautiful tonal quality. Lightweight, soft foom rubber podted, comfortable to wear and well constructed. Has 7 ft . cord, $1 / 4^{\prime \prime}$ three-woy plug and junction box for 4-8-16 ohm amplifier output.
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KOSS MODEL A-1220 STEREO PHONE AMPLIFIER
A complete wide range stereo amplifier for A complete wide range stereo amplifier for
manitoring or listening, Cannects directly to preamp outputs of tope recarcier or FM tuner; or to a ceromic cortridge phon pickup. Seporate channel controls, jocks
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## DELUXE DAVIS CORNER ENCLOSURE

## FOR 8" AND 12" SPEAKERS

A completely enclosed baffle for corner or wall-ceiling with construction that assures it to be vibration and rattle free. Speoker opening is of bass reflex design assuring maximum bass response. Interior is lined with ocoustical insulation. Hi-fi Soran gritle moterial used in walnut or noturat blande Beautiful furniture finish Model C-8 for $8^{\prime \prime}$ speakers. Size $14 \times 121 / 2 \times 61 / 2^{\prime \prime}$ Shpg. wt. 7 lbs.
No. $34 A 175$. Net Each. $\$ 10.42$ Model C-12 for $12^{\prime \prime}$ speokers. Size $201 / 2 \times$ Shpg. wt. 12 lbs $73 / 4 \times 9^{\prime \prime}$.

No. 34A155. Net Eoch
$\$ 14.25$


## DAVIS HARDWOOD WALL BAFFLES

Built of solid hand rubbed furniture finished walnut or oak. Mortised and glued construction with $3 / 8^{\prime \prime}$ front panel and soran plastic grille. Strictly "at hame" in the finest panel ed interiors where beauty of design ond decor are essential For halls, school rooms, paging systems, wherever good. sound distrlbution is necessary. Complete with speaker mounting hardware and wall hanger. Shpg wts. : 8 inch 3 lbs.; 12 inch, 6 lbs. Stk. No. Speaker Size Stk. No. Speaker Size Finish $34 B 246$
$34 B 245$ 348245 Natural Wal
Blonde Oak $34 B 247$ 12", Notural Walnut

## COWEST PRICE ANYWHERE!

## PORTABLE SPEAKER CASE <br> TAKES 2-12 INCH SPEAKERS $14^{30}$

DUAL SPEAKER - AMPLFIER CASE. For TWO $12^{\prime \prime}$ speakers, amplifier space of $14 \times 161 / 4 \times 8^{\prime \prime}$; overall No. 40A131. Wt. 13 lbs. NET EACH........... $\$ 14.30$

## SWITCHCRAFT CONTROL UNITS


(1) MULTIPLE SELECTOR SWITCH. Accepts up to 5 input circuits with circuit switch connecting any one input to single output. Inputs are labeled-AM, FM, Phono, Tape and Aux. Tan finished, completely shielded housing. All inputs are phono jacks. Mounts to panel or
No. 20A198. Model 664. Net Each.


select any, one of 3 SWITCH. With one switch you con select any, one of 3 stereo inputs to one stereo output. ldeal for switching tope, tumer, or phono to amp. 4 $2^{\prime \prime} \times 2^{\prime \prime} \times 1^{\prime \prime}$. Whono jocks mounted on tan metal box No. 20Alig. Type 668 . Net Each. mounting hardware No. 20A179. Type 668. Net Eoch. (3) SPEAKER CONTROL WITH T-PAD. A constont $\$ 4.17$ pedance $T$-Pad mounted on notural brushed brass wall plate for remote control of any stereo, hi-fi, or PA system speaker. Ivory knob with black escutcheon, white letters. Rated 4 watts ( 15 wotts audio). Plate size $23 / 4 \times 41 / 2^{\prime \prime}$ Fits standord outlet box.
20A181. Type 651 With 8 Ohm T-Pad
20A182. Type 651-With 8 Ohm T-Pad Choice 20A182. Type 652-With 16 Ohm T-Pad Each Some as obove but furnished with 8 Ohm L-Pad.
No. 20A183. Type 656 . Net Eoch............

## MULTI-SPEAKER SELECTOR SWITCH

A seven-position switch mounted on an attroctive natural brushed brass wall plate. Selects ony one of 3 speakers, any 2 or 3 , or all at once. Ideal for remote speakers in different rooms of your home. Constant impedance maintained regordless of switch position. lvory knob "with black escutcheon, white letters. Plate size $23 / 8 \times 41 / 2^{\prime \prime}$, fits standord outlet box or can be mounted on speaker cabinet, No. 20A184. Type 655. Net Eoch.
$\$ 3.57$


## STATE TJHPMONE MNTERCOMS

AMAZING POWER \& CLARITY
Powerful solid state amplifier built into each handset. Only 2 " $C$ " flashlight batteries required for each handset. Simple to install with 2 conductor coble. Push button call system buzzes other handset. Seporate push-to-talk button. No curent drain when in standby. Each phone supplied with 5 ft, retroctile cord, junction box and wall hanger. Impoct resistont two-tone grey plasNo. 36C162 import value. No. 36C162
$\$ 19.95$
Speciol Per Poir............
No. $36 A 163$. Bottery Kit.
No. 2B54. 2 Cond. Coble
Per Ft...

# BA FOR THE BEST BUY IN SOUND SELECT FROM B-A's OWN QUALITY AMPLIFIERS 



# GUARANWED ONE FULL YEAR AGAINST DEFEGS IN MATERIALS AND WORKMANGHIP: 

Full Year Guarontee Covers Labor ond Parts. Just return the Amplifier to us and of our option we will repair

B-A's Amplifiers hove attroctive functional styling, in gray hammer loid finish, all have illuminated control panel, ore conservatively power rated with tube plote voltages well within the manufacturer's recommendation. Rated for continuous duty.
Larçer output transformers assure wide range frequency response All units hove push-pull output, with excellent output regulation Included ore constant voltoge oufputs for 25 and 70 volt lines, high input sensitivity with low noise and hum 10 fader type gain os antrol
for phono ouxiliary. All except the BA-10
reble controls and master volurae contro Exclusive features of the BA-=0, BA-35. BA-50 and BA-10C: two microphone channels, exclusive power monitor indicates jower outat booster amplifier output, silicor rectifier power supply (except BA-201

Changer phonograph top ovailatle.
All except BA-30 Wott Unive-s.al Mobile operate on 11C-125 V. AC 60 cycles only.

## B-A'S 35-WATT PA AMPLIFIER

Perfect power for small theatres, bands, churches, stores, auditoriums, carnials night clubs industrial plants, etc. Low price and quality construction vals, night clubs, its when used in rentals. Separate bass and treble tone assures extrop a conditions. Provides cov controls permits ad erage up to odded, (see next page)

Specifications: Tubes and Diodes: 2-6EU7, 6C4, 2-7868, 5 silicon rectifiers. Specifications: Tubes and Diodes: 2 Sensitivity: mic. .002 V .; phono and Frea. resp. $\pm$ do 01 V Controls: Microphone 1 , Mierophone 2, phono aux. 2 :'fag moster valume, bass, treble, power switch, output indicato and phono switch. Tone control range: bass +8 to eve adjust 50 mps . treble +7 to $-13 \mathrm{db} @ 10,000 \mathrm{cps}$. Output impedance 4 ( 16 ohm) 70 volt ( 143 ohm ), high impedance fo 4,8 ,年 $151_{4}^{\prime \prime} \mathrm{W} \times 6^{\prime \prime} \mathrm{H} \times 10^{\prime \prime} \mathrm{D}$ mic. 60 db be
$\$ 59.50$ Shpg. wt. 8 lbs.

## B-A's 10-WATT PA AMPLIFIER

Ideal for store demonstrations, auctions, clubs, churches, offices, classrooms etc. Full 10 watts of power for improved performance sufficient for 2-12 speakers. Separate volume controls permit mixing microphone and phono. Has two speaker autput sockets.
Specifications: Tubes-6EU7, 2-6BQ5,6V4. Freq. resp: $\pm 2 \mathrm{db} 40$ to 15,000 cps. Inputs: Mierophone (high imp.), phono, auxiliary. Sensitivity: Mic. 0035 V .; Phono and Aux. 25 V . for roted output. Controls: Microphone, phono and ouxiliary foder, tone, power switch. Outpur impedance: 4 , Phono 65 db ; Mic. 55 db below rated output. Dimensions: $101 / 2^{\prime \prime} \mathrm{W} . \times 5^{\prime \prime} \mathrm{H} . \times$ 61/2" D. Shpg. wt. 12 lbs
\$32.95
No. 33 B141. Net Each

## B-A's 20-WATT PA AMPLIFIER

Meets power requirements of chapels, clubs, schools, restourants, industrial Meets power requivemeins ofstems Ámple output for 4-12" PM speakers. Nows, orchestrircuit using 2-6BQ5/EL84 high output tubes gives wide range frequency response. Covers up to 50,000 square feet when used with trumpet type speokers
Specifications: Tubes--2-6EU7, 2-6BQ5/EL84, 1-6V4. Freq. resp. $\pm 2 \mathrm{db} 30$ to $15,000 \mathrm{cps}$. Inputs: 2 microphones (high impedance), phono, ouxiliary.
Sensitivity: Mic. 003 V .; phono and aux. 25 V . Controls: Mic. 1, Mic. 2, phono and oux. fader, master volume, boss, treble, power switch, output indicator level odjust. 'Tone control range: Bass 0 to -15 db ; Treble 0 to -15 db . Output impedance: $4,8,16$ ohms, 25 volt ( 31 ohms) , 70 volt ( 250 ohm ), high imp. for booster omplifer. Output regulation 3 db . Hum and noise: 'phono 75 db ; mic. 60 lb below rated output. Dimensions: $151 / 4$ W. $\times 6^{\prime \prime} \mathrm{H}^{2} \times 10^{\prime \prime} \mathrm{D}$. Shpg. wt. 17 lbs .
No. $33 \mathrm{Bl} \mathrm{S}^{2}$. (Less Phono Top). Net Each
$\$ 49.95$

## B-A's 60-WATT PA AMPLIFIER

Super amplifier conservatively rated for long life in continuious operation. Ideal for large installations such as ouditoriums, halls and stodiums, foc tories, fair grounds, airports, rail yards, hotels, outdoor gatherings, etc. Perfect for voice or music. It can be used with up to 12 trumpet type speakers or 16 cone type $12^{\prime \prime}$ PM speakers or any combination of the two types.
Specifications: Tubes and Diodes: 2-6EU7, 6C4, 2-6GT5, OA2, 5 silicon recspecifications: Tubes and do 20 to $20,000 \mathrm{cps}$. Inputs: 2 microphone (high tifiers. Frea. resp. $\pm$ phono. Sensitivity: Mic. 003 V., phono and aux imp.), phono, oux. mag. Phono. Contrals: mic. 1 , mic. 2 , phono and aux. fader, .3 V mag phono .013 . Contrals: mic. master volume, boss, treble, power swich, outpurs +8 to -15 db@50 mic 2-mog. phono switch. Tone control range. boss $10,800 \mathrm{cps}$ Output imp.: 4, $8,16 \mathrm{ohms}, 25$ cps; treble +7 to 70 volt ( 10.0 ohm ), 70 volt ( 84 ohm ) high imp. for booster ómplifier. Output requlation 2 db . Hum and noise: phorio 72 db , mic. 62 db below rated out put. Dimensions $151 / 4^{\prime \prime} \mathrm{W}^{\mathrm{W}} \times 6^{\prime \prime} \mathrm{H}^{2} \times 10^{\prime \prime} \mathrm{D}$. Shipg. wt. $45 \mathrm{lbs} . \$ 79.95$ put. Dimensions $151 / 4^{\prime \prime} \times 6^{\prime \prime} \times \times 1{ }^{\prime \prime} \mathrm{D}$

See next page for other fine buys in B-A Amplifiers and for
4 -Speed Phono Top for use with Amplifiers on this poge

B-A'S TOP-SELLING AMPLIFIER! 35-WATT So powerful \& dependable if answers $90 \%$ of all needs for PA amplifiers


B-A's 10-WATT $\$ 32^{95}$ nothing DOWN


B-A's 20-WATT

nothing DOWN


B-A's 60-WATT
$\$ 7995$
nothing
DOWN

## MORE OUISTATDING BUYS IN B-A's OWN AMPLIFIERS \& SYSTHMS



## NEW 35-WATT FM/AM RECEIVER FOR PAGING AND BACKGROUND MUSIC



Ideally suited for restauronts, stores, professional offices and factories. Provides a pleasant musical atmosphere as well as the functional utility of public address announcements. Music is automotically cut off at time of paging. Inputs are provided for phono, tape recorder or directly from head of tope deck. Engineered for continuous duty. Separate bass and treble controls. Phono/radio adjusted at time of installation for constant level
output.

Speclfications: FM 88-108 Mcs; AM 520-1640 KC. Sensitivity: $F M \quad 3.5 \mathrm{mv}-30 \mathrm{db}$ quieting; AM 5 $\mathrm{mv}-20 \mathrm{db} 5 / \mathrm{N}$. If bandwidth: FM $180 \mathrm{KC}-3$ db down; $\mathrm{AM} 8 \mathrm{KC}-3 \mathrm{db}$ down. Audio output power: 35 watts. Freq. resp. 50 to 15 K cps. $\pm 3$ db. Inputs: I Mic, with switch (hi-Z) convert to low with transformer. I phono (crystal or ceramic): 1 mag. phono or low level tope. Built-in FM line antenno. Audio sensitivity-Mic: 5 millivolts. Phono: 0.4 volts. Tape or mag. phono 5 mv . low mic. 5 mv . Hum and Noise: FM 55 db at 50 mv input. AM 45 db at hi-signol input. Hi phono: 70 ab below rated output. Mic. 65 db below rated output. Mag. phono 50 db belaw rated output.
Outputs: Speakers $4,8,16,25 \mathrm{~V}$. line, 70 V . line, booster and tope. Tuner: 68 K ohm $Z$. Tone Controls: Bass 15 db boost, 14 db cut at 50 cps Treble 14 db boost, -15 db cut at 15 KC . Tubes:
(2) $12 \mathrm{AT7}$, 11 ) 6 BA 6 , (2) 6 AU 6 , (1) 6 BE 6 , (3) 12 AX , (2) 6L6GC. Silicon rectifier for power and bias supply; 1 pair iN541 matched diodes for FM discriminatór: IN54! diode for AM detector.
Power consumption, 140 watts of 117 V .60 cy . AC
1.3 amps. Dimensions: $173 / 8^{\prime \prime} \mathrm{W}, 95 / \mathrm{H}^{\prime \prime} \mathrm{D}, 65 / \mathrm{B}^{\prime \prime} \mathrm{H}$. 1.3 amps. Dimen
Shpg. wt. 30 lbs .

No. 33 Alill



The modernistic design of this transistorized ampitfier provides a convenient way of obtaining 30 watts of audio power at ony location, mobile or fixed.
Operates anywhere... Dienics, outdoor meetings, on boats, planes, cars ...on 12 V . DC battery orle or 35 m . Ac. Low current drain of 22 amps idle or 3.5 amps of full power makes it easy on battery system
Specificotions: Frea. resp.: $\pm 2$ db 40 to 20,000 cps. Inputs: Microphone ( 50 to 250 ohms), phono (high impedance). Sensitivity: Mic. 0001 V . phono and oux. 15 V . Cantrols: mic., phono, and oux. fader, bass, treble, master volume with power switch. Tone control range: bass 0 to -15 db treble 0 to 15 db . Output impedance 4,8 , 16 ohms. Output regulation 2 db . Hum and nolse: phono 80 db , mic. 65 db . below roted output. Semicanductors: 6 tronsistors, 3 diodes. wt. 11 lbs. (Less Phono Top). $\mathrm{H} \times 81 / 2^{\prime \prime} \mathrm{D}$. Shpg
No. 33B146. Net Each
$\$ 84.95$
100-WATT PA AMPLIFIER
NO MONEY DOWN ON EASY TERMS


Where big power is required for large ouditoriums and mest outdoor areas. Provides up to 150,000 cubic feet of coverage with trumpet type horns. Specifications: Tubes and Diodes: 2-GEUT, 6C4, $4-6 \mathrm{GT5}, \mathrm{OA}, 5$ silicon rectiôiers. Freq. resp. $\pm 2$ db 20 to $20,000 \mathrm{cps}$. Inputs: 2 mic. (high imp.) phono, aux., mag. phono. Sensitivity: Mic. 003 Controls: mic 1 , mic. 2 , phono and aux. fader master volume, bass, treble, power switch, output indicotor level odjust, mic. 2 mag. phono switch. Tone control range: pass +8 to -15 db O) 50 cDs , treble +7 to - 13 db @ $10, \mathrm{cco} \mathrm{cps}$. Output imp. 16 ohms, 25 volt ( 6.25 ohm), 70 volt ( 50 ohm), high impedance for booster amplifier. Output regulation 2 db . Hum and noise phono 7.5 $151 /{ }^{\prime \prime} \mathrm{W}^{6} \times 6^{\prime \prime}$ below roted output. Dimensions: $151 / 4^{\prime \prime} W$. $\times 6^{\prime \prime} H^{\prime} \times 10^{\prime \prime}$ D. Shpg. wt. 35 lbs. No. 33 Bls
Net Each
$\$ 94.50$

## BOGEN AMPLIFIER ACCESSORIES


(1) SR-2 Remote Volume Control. Adjusts amplifier volume of 2 chonnels from up to 2000 feet For CHB35A, CHB50, CHB-100 and MXMA. Uses 3-cond. unshielded coble. $31 / 4^{\prime \prime} \mathrm{H} . \times 6^{\prime \prime} \mathrm{W} . \times 11 / 4^{\prime \prime}$ D. Wt. 2 lbs.

List \$15.65. Net.
(1) LPC-4 Four-Speed Matching Phono ToD. Attaches to top of CHB20A, CHB35A, CHB5O and CHB100... with tone arm cortridge, rubber turntable mot and built-in 45 cortridge, rubber Size $43 / /^{\prime \prime} \mathrm{H} . \times 13^{\prime \prime}$ W. $\times 91 / 2^{\prime \prime} \mathrm{DPM}$. Shpg. wt. 8 lbs. No. 33 A207. Mfg. List $\$ 41.50$. Net......... $\$ 24.90$

NO MONEY DOWN

## 4-SPEED PHONO TOP FOR B-A AMPLIFIERS

For oll B-A Amplifiers except BA1O and BA-Mobile. For ploying 78 , $45,331 / 3$ ond 16 RPM records. 117 V .60 cy .
No. 33 Bi69. Net Each................................ $\$ 17.95$ 4-SPEED PHONO TOP for $8-A \quad 30$-Watt Mobile Amplifier. Operates on $12-14 \mathrm{~V}$. DC.
No. 33 Bi 170 . Net Each................................................ $\$ 29.95$


52

## NEWCOMB 25-WATT TRANSCRIPTION PLAYER MOST ACCEPTED NAME IN THE SQUARE DANCE SET <br> $575 / 450$

 Provides the finest high fldelity reproduction possible, both music and voice, from a truly portable unit. Out stonding tone quality provided by GE variable reluctance cortridge coupled through necessary preamp, amplifier to highest quality $12^{\prime \prime}$ dual-cone 30 wott speaker. Player has a separate treble, bass tone control that does not offect mike. Seporote controls permit mixing of mike and phono volume. Switches provided for filtering voice ond phono. Output jacks for two speakers, olso for "phono" delivers phono signal only; useful for caller or M.C. Who wonts to monitor music without interference from own voice and "all" used to feed entire program to external amplifier, amplified monitor, or tope recorder. Motor is heavy 4 -pole deluxe unit. One jack for mike and another for ouxiliary equipment. Complete unit in single split cose with speaker mounted in lid. Size $163 / 4$ $\times 161 /{ }^{2} \times 1314^{\prime \prime}$. Net wt. 35 lbs . Shpg. wt. $40 \mathrm{lbs} . \mathrm{Mfg}$.list $\$ 231.95$. list $\$ 231.95$. Net.... $\$ 154.50$
No. 338119 .
(3) LK-5 Control-Guard Locking Plate with Key Protects tampering of controts. for With Key. CHB35A, CHB50 and CHB100. $3^{i \prime} \mathrm{H}_{\mathrm{M}} \times 151 / 2^{11}$ W. No. 33A208. Wt. I lb.Mfg. List $\$ 9.90$. Net.. $\$ 5.95$ (3) No. 338142 . LK-9 some as above but for MIN 30 and MTA60. List $\$ 14.85$. Net Each....... $\$ 8.90$

## 41195: <br>  <br> EV664 <br>  <br> B-A's <br> 35-WATT PORTABLE SYSTEM



## Completely self-cantained

Features B-A's 35 watt featureapacked amplifier (listed on preceding page.), two heavy duty 6.8 oz . $12^{\prime \prime}$ speakers, each complete with $35^{\circ}$ coble ond plug, split type carrying case size $15 \times 17 \times 20^{\prime \prime}$ provides separote baffles for the two speakers plus convenient secure carrying case for the omplifier. Your choice of Electro-Voice regular $\$ 85.00$ list 664 cardioid dynomic microchone or the new Electro-Voice $\$ 49.50$ list 951 high quality erustal mierophone. Both mikes hove on-off switch, $18^{\prime}$ detachable cable and plug and are supplied with B-A's leader value floor stand adjustable from $35^{\prime \prime}$ to $64^{\prime \prime}$. Amplifier operates from $117 \mathrm{~V}^{\circ} 60$ cy AC. Shpg. wt. 74 Jbs. Supplied less phono top. B.A's 35 Watt System with E-V 664 Dynamic Mike.
No. 49494 . Net.
$\$ 119.50$
B-A's 35 Wott System with $E-V \$ 5 i$ Crystal Mike. No. 49A95.
$\$ 104.95$
338169. 4-Speed Phono Top for obove... $\$ 17.95$

# BOCEX "CHB" SERIES AMPLIFIERS FOR EVERY NEED! 

## ALL 4 SHARE THESE qUALTTY FEATURES

MORE USEABLE FEATURES THAN OTMER AMPLIFIERS SELLING FOR MUCH MORE!

- Designed for continuous, heovy duty operation.
- Pratection against clrcuit damage from shorting or accidental removing of speaker lines
- Remote control circuit permits adjustment of volume from distances UD to $200 Q$. fect with remote accessory listed at left. (On all except 20-Watt)
- Memory markers to aid in returning controls to pievlously determined level.s. Master volume control.
- More reserve power. Wide frequency response 20-20,000 cps. for maximum clarity and Intelligibility.
- Simultoneous mixing of three input signals: two micro phones and a tuner or phonograph. All accept magnetic phonograph cartridge and tope recorder
- Constant voltage outpult taps simplify the addition of matching transformers for multiple speaker systems.
- Separate bass and treble controls.
- Additional accessories include phonograph top ond tam per proof locking cover
- Two loudsieaker plug-in sockets plus screw in terminals.
- Output impedances 4, 8, and 16 ohms, 25 V . line 118 ohm) 70 V . line ( 143 ohm ).


## NOTHING DOWN



## 20-WATT PA AMPLIFIER

Extremely versatile amplitier meets requirements for small auditoriums restaurants, - paging systems, etc. For areas up to 50,000 square feet. Frequency response of $20-20,000 \pm 2 \mathrm{db}$ gives excellent quality music os well quency response of as vaice reproduction. 3 inputs, ane high impedonce microphone, two oux as valce reproduction. Hi-level. Hum and noise -65 db mike, -80 db aux (Fader) Hi-impedonce, Hi-leve. Hum and noise 125 db microphone, 100 db aux. Sensitivlty below roted output. Gain 125 millivolt. Controls: 1-Mike, I-Aux (Foder),


 from 105-12 wt. 18 lbs. $\mathbf{N}$. 33 A228. Model CHB20A. Mfg. List $\$ 102.35$ Net

## 35-WATT PA AMPLIFIER

Ideally suited for use in areas of lower noise levels and up to 40,000 cubic feet when used with trumpet type speakers. Power output 35 watts. Inputs for 2 mikes ( 125 db goln; 4 MV sensitivity), high impedonce; 1 mognetic phono (115 db gain; 12 MY sensitivity) and 2 aux. ( 100 db gain; 2 volt sensitivity), high impedonce, high level. Controls ore Mike \#1 VolumeMike \#2 Volume, Fader for 2 ouxiliary inputs-Master Volume-Bass-Treble-Power Switch-Magnetic Phono Switch, provision for remote control of Mike \#1 and Mike \#2 or magnetic phono. Tubes (6) 1-6EU7, 2-7868 $1-12 A \times 7$,1-6CA4, $1-6 C 4,165-125 \mathrm{~V}$. AC. $50-60 \mathrm{cy}$. Size $63 / 4^{\prime \prime} \mathrm{H} . \times 153 / 4$ W. $\times 10^{\prime \prime} \mathrm{D}$. Shpa. wt. $18^{\prime} \mathrm{lbs}$

No. 33 A236. CHB35A Mfg. List $\$ 124.85$. Nef Eoch
$\$ 74.90$

## 50-WATT PA AMPLIFIER

Conservatively rated for long life in continuous operation. For groups up to 8,000 people or areas up to 60,000 cubic ft . when used with trumpet type speakers. Inputs for 2 mikes ( 120 db gain; 5 MV sensitivity), high type speakers. magnetic phono 1110 db goin; $15^{\text {M }}$ MV sensitivity), 2 oux.

 Volume, Mike \#\#2 Volume, Foder for Switch, provision for remote control oreble, Power Switch, Magnetic Manatic Phono. Tubes (5) 1-6EU7, 1-12AX7, of Mike \#1 and Mike \#2 ar Magnetic Phono ubes V . $\mathrm{AC}, 50-60 \mathrm{cy}$. SIze

$\$ 88.40$


## 100-WATT PA AMPLIFIER

Provides ample power for large auditoriums and vast outdoor oreas. Provides up to 150,000 cubic feet of coveroge with trumpet type horns. Inputs: 2 Mike ( 125 db gain; 5 MV sensitivity), high imp.; molt sensitivity) ( 115 db gain; 15 MV sensitivity), 2 aux, ( 100 db goin; . 3 volt $\# 2$ Volume, high impedance, high level. Controls: Mike \#' Volume, Mike \#\# Voleh MaoFader for 2 aux, inputs, Master Volume, Boss, Treble, Power Switch, Magnetic Phono Switch, provisions for remate control of Mike 華l and Mike \#t or mag. phono. Tubes $173 / 4^{\prime \prime}$ W. $\times 1^{\prime \prime} 0^{\prime \prime} \mathrm{D}$. Shpg. wt. 26 1bs. $\$ 119.90$ No. 33A237. CHB100. Mfg. List \$ $\$ 99.85$. Nef Each.

See Preceding Page for Bogen Amplifier Accessories

## NEW BOCEN MTA SOLID STATE AMPLIFIERS



Advonced solid state circuitry (except MTA10 output for a lifetime of continuous performance.

BOGEN MTA-10 10-WATT SOLID STATE AMPLIFIER Perfect for low power installations where continuous operation is important. Feotures full 10 watts rms @ less than $3 \%$ distortion. With peak power of 20 wotts. Feotures 1 microphone, 1 aux and 1 optional input.
Specificotions: Power resp. $\pm 2 \mathrm{db} 50-16,000 \mathrm{cps} @$ 10 watts with less than $5 \%$ distortion. Freq. Resp.: $\pm 2 \mathrm{db} 50-20,000 \mathrm{cps}$. Goin : Mic. 105 db . Aux. 95 db . Hum and Noise (weighted). Aux. - 80 db (weighted). Sensitivity: Mic. 0.4 MV . Aux. 0.2 V . Tone Controls: Treble (Y: MC) -23 db. Inputs: 1 Mic. (low-imp, hilevell, 1 for optional WTM-1 (500/600 ohms) transformer, I bridging. Output Imped.: 4 and 8 ohms; 16 ohm bal.; 25 V.C.T. ( 60 ahms bol.); 70 V. $(500$ conductors: 3 silicon, 2 germanium, 2 silicon diode rectifiers. Power required; 30 W ., 120 V . AC $50 / 60$ rectifiers. Power size: $105 / \mathrm{g}^{\prime \prime} \mathrm{W}, 61 / 2^{\prime \prime} \mathrm{D}, 5^{\prime \prime \prime} \mathrm{H}$. Shpg. wt. 10 lbs . Mfg. List $\$ 124.90$. 33Big1. Model MTA-10. Net Eoch......... \$74.95 Built-in protection ogoinst shorted or open specker lines.

No. 33B189. PMC-1. Plug-In Magnetic Cortridge Module for MTA-30 and MTA-50. Converts mike input to mag. phono/tape. Mfg. List $\$ 9.85$.
Net Eac
BOGEN MTA-6Q 60-WATT SOLID STATE AMPLIFIER Where big power is needed under continuous opero this unit has. all the requirements. Provides peak
power of 110 wafts with 60 watts rms @ less than $3 \%$ distortion. Features 3 microphones and 2 oux. inputs. specificotions: Power Resp.: $\pm 2 \mathrm{db} 40-10,000 \mathrm{cps}$ @ 60 wotts with less than $5 \%$ distortion. Freq. resp.: $\pm 1 \mathrm{db} 7-20,000 \mathrm{cps}$. Gain: Mic. 125 db . Aux. 110 $\frac{\mathrm{db}}{}$. Hum and nolse (below rated output) Mic. - 60 db . Aux. -72 db . Sensitivity: Mic. 0.38 MV Aux. 0.15 V . Tone controls: Treble $(10 \mathrm{KC})+9 \mathrm{db}$ ta puts: 3 Mic. (200 ohm unbol.) converts to 200 ohm puts: 3 Mic. 1200 ohm unbal.) converts to 200 ohm bol. with T525U or to mag. phono/tope head with plug-in PMC-1, 2 oux on fader control. Output Imped.: bal. $2.6,8$ and 16 ohms; 25 V . C.T. ( 10.4 ohms) bal.; 70 V . ( 82 ohms) bol. Printed Circuit Boards: 5 plug-in Semiconductors: 13 all silicon transistors, 7 diodes. Power required : 115 watts $105{ }^{-}$ 125 V. AC $50 / 60 \mathrm{cps}$. Size: $121 / 2^{\prime \prime} \mathrm{W} .93 / /^{\prime \prime} \mathrm{D}$ $41 /{ }^{\prime \prime}$ H. Shpg. Wt. $183 / 4$,
33 B184. Model MTA-60.
Net Each
33 B 188.5525 U Transformer. Net Each
$\$ 149.95$

BOGEN MTA-30 30-WATT SOLID STATE AMPLIFIER Suited for all medium power requirements. Made to stand up under continuous operation. Provides peak power of 60 watts with 30 wotts rms @
distortion. Features 3 microphone ond 2 oux. inputs. Specificotions: Power Resp. $\pm 2 \mathrm{db}$ 40-12,000 cps @ 30 W . with less then $5 \%$ distortion. Freq. Resp.: $\pm 1 \mathrm{db} 30-20,000 \mathrm{cps}$. Goin: Mic. 125 db . Aux. 110 db . Hum and noise (below rated output) Mic. -58 db . Aux. -70 db . Sensitivity: Mic. 0.33 MV . Aux. 0.15 V . Tone Controls. Treble ( 110 KC ) +10.5 db to -10 db ; Boss $(50 \mathrm{cps})+10 \mathrm{db}$ to -10.5 db. Inputs: 3 mic. ( 200 ohm unbal.) converts to 200 ohm bol. with T525U or to mag. phono/tope heod with plug-in PMC-1, 2 oux. on foder control. Output Imped.: 4, 8, 16 ohms; 25 V . C.T. ( 16 ohms) bal. $70 \mathrm{~V} .(163$ ohms) bal. Printed Circuit Boords: 5 plug-in. Semiconductors: 13 oll sifican transistors, 6 diodes. Power required: 75 W. $105-125 \mathrm{~V}$. AC , $50 / 60 \mathrm{cps}$ or $24-30 \mathrm{~V}$. DC. Size: $121 / 2^{\prime \prime} \mathrm{W}, 93 / 4^{\prime \prime} \mathrm{D}$,
$41 / 2^{\prime \prime} \mathrm{H}$. Shpg. wt. 16 lbs . Mfg. List $\$ 199.85$. 33 A190. Model MTA-30. Net Each
\$119.90

JENSEN PROFESSIONAL SERIES SPEAKERS
WITH NEW CERAMIC MAGNETS FOR DISTRIBUTED SOUND


Provides outstanding performance with the New Synto-6 Ceramic Magnet on
$8^{\prime \prime}$ speakers and Alnico $V$ on $10^{\prime \prime}$ and $12^{\prime \prime}$ speakers Gives $v e r y$ high spech intelligibility and music quality at modest cost. Rugged corrosion and weather-resistant construction for long trouble-free life in corrosion and protected outdoor locations. 8 ohm impedonce. JENSEN PROFESSIONAL SERIES 8, AND 12-IN, SPEAKERS

| Fig. | Stock No. | Size | Mag. Wt. Oz. | Power Watts | Ronge Freq. | Spkr. <br> Depth | V.C. Dio, | Jensen <br> . No. | Net Wt. | Net Each | 10 Lots Eoch |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | $34426$ | $8^{\prime \prime}$ | 10.0 | 16 | 30-14M |  |  |  |  |  |  |
| (2) | 344343 344342 | 8"1 | 16.0 | 20 | $30-14 M$ $30-15$ | 43/4" | 1 | $K 950$ $H 970$ | 31/4 | $\$ 16.38$ 28.65 | \$14.73 |
| (2) | $34 A 342$ $34 A 27$ | 8'1 $8^{\prime \prime}$ | 10.0 100 | 12 | 30-18M | $3^{3 \prime}{ }^{\prime \prime}$ |  | F858 |  | 12.06 | 10.85 |
| (8) | $34 A 27$ 34428 | $8^{\prime \prime}$ | 10.0 | 12 | 30-18M | $31{ }^{18}$ | j"' | C855 |  | 7.94 | 7.15 |
| (3) | 344345 | \% $8^{\prime \prime}$ | 10.0 | 12 |  |  |  | C850 |  | 7.61 | 6.85 |
| (3) | 34429 | $8^{\prime \prime}$ | 6.0 | 11 | 2M | 218. |  | DCA850 | $21 / 2$ | 7.94 | 7.15 |
| (3) | 34 A344 | * $8^{\prime \prime}$ | 5.4 | 10 | $30-12 \mathrm{M}$ | 218" |  | C840 | , | 6.44 | 5.79 |
| (2) | 34430 | $8^{\prime \prime}$ | 4.8 | 10 | $30-18 \mathrm{M}$ | $2 \cdot$ |  | DCA830 |  | 5.88 | 5.29 |
| (4) | 344340 | 8" | 1.47 | 9 | $60-13 \mathrm{M}$ | $2 \cdot$ |  |  | 15/8 | 5.88 | 5.29 |
| (4) | 34A341 | 8"' | 2.5 | 10 | 40-13M |  |  | P830 |  | 3.27 4.35 | 2.94 |
| (4) | 344333 | 12"' | 27.0 | 20 | 30-15M | 514., |  | CI2NC | $81 / 4$ | 4.35 31.52 | 3.92 |
| (4) | 34 A32 | $12^{\prime \prime}$ | 6.8 | 14 | $30-15 \mathrm{M}$ | $41 / 2^{\prime \prime}$ |  | Cl2NC | $81 / 4$ | 31.52 |  |
| (4) | $34 A 33$ | 12" | 4.64 | 13 | $30-15 \mathrm{M}$ | $4{ }^{\frac{1}{18}}{ }^{\prime \prime}$ | 1" | CI2SC | 6 | 9.97 9.15 |  |

JENSEN MUSICAL INSTRUMENT SPEAKERS


Highly special devices designed to give the correct musical quality required distortion at loud volume and; the power capability to reproduce without Features:
Features: voice coils with hi-temp enamel coatings and phenolic bobbins fofficiency Syntox processed fibre cone material resistant to break-up. High


 | (2) 34437 | $342^{\prime \prime}$ | 16.0 | 50 | $61 / 5^{\prime \prime}$ | 8 | $11 / 2^{\prime \prime}$ | EM1202 | 7.0 | 60 | $7 \prime \prime$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| (2) | 8 | $11 / 2^{\prime \prime}$ | EM 1501 | $101 / 2$ Lbs. | 21.57 |  |  |  |  |  | :EM1202 and EM1501 alsn Accordion SDeakers.

Guoranteed agoinst shatter and diophragm BASS GUITAR SPEAKERS


## CONGERT HIGH-IMP. 45 OHM INTERCOM SPEAKERS



| Fig. | Stock No. | Size | Magnet Wt. | Power Watts | Speaker Depth | Jensen No. | Shpg. Wt. | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | 344375 | $3{ }^{\prime \prime}$ | 1.47 | 4.0 | $17 / 8^{\prime \prime}$ | P3V45 | 6 Oz . | \$2.94 |
| (1) | 34 A 376 | $3 \times 5$ ", | . 68 | 4.0 | $2^{\prime \prime}$ | $\mathrm{P} 3 \times 5 \times 45$ | 8 Oz , | +2.78 |
| (1) | 34 A 380 | $2 \times 6^{\prime \prime}$ | 1.47 | 4.0 | $23 / 8{ }^{\prime \prime}$ | P2X6V45 | 8 Oz . | 3.56 |
| (1) | 344370 | 4", | 1.00 | 4.5 | $23^{16}$ | P4W45 | 10 Oz . | 2.99 |
| (1) | 344357 | 5"' | 1.00 | 5.0 | $231{ }^{3}$ | PSW45 | 100 Oz . | 3.18 |
| (1) | 344381 | $8^{\prime \prime}$ | 2.5 | 10 | $31 / 4^{\prime \prime}$ | P8T45 | $11 / 2 \mathrm{Lbs}$. | 5.26 |

\footnotetext{
ig. stk No. PROFESSIONAL SERIES HORNS-DRIVERS


## JENSEN REPLACEMENT CONGERT AND VIKING SERIES



(3)


(4)

Includes new sizes and mognet weight to provide a complete range of serv ice replacement and original equipment

| Fig. | Stock No. | Size | Mognet Wt. | Power Watts | Speaker Depth | Jensen No. | Shpg. Wt. | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | 344372 | $3^{\prime \prime}$ | . 68 | 3.5 |  |  |  |  |
| (1) | 344373 | $31 / 2 .$ | $.68$ | $\begin{aligned} & 5.3 \\ & 4.0 \end{aligned}$ | $\begin{aligned} & 1 / 2 \prime \prime \\ & 13 / 4 \end{aligned}$ | $\begin{aligned} & \$ 3 K 7 \\ & \$ 35 K 7 \end{aligned}$ | $6 \mathrm{Oz}$ $60 z$ | \$2.02 |
| (1) | 344374 | $3 \times 5$ " | 55 | 3.2 | $13 / 4{ }^{\prime \prime}$ | $\$ 3 \times 5 \times 5$ |  | $\begin{aligned} & 2.02 \\ & 2.13 \end{aligned}$ |
| (1) | 344371 | $4^{\prime \prime}$ | . 68 | 4.5 | $17 /{ }^{\prime \prime}$ | $44 K 7$ | $8 \mathrm{Oz}$ | 2.13 1.84 |
| (1) | 344364 | $4^{\prime \prime}$ | 1.47 | 5.0 | 2 1/" | - P 4 V 3 | $8 \mathrm{8Oz}$. | 1.84 2.65 |
| (1) | 344365 | $4 \times 6{ }^{\prime \prime}$ | . 68 | 4.5 | 17/8" | T $4 \times 6 \mathrm{~K} 7$ | $8{ }_{8}^{80 z}$. | 2.65 2.48 |
| (4) | 344366 344367 | $4 \times 6^{\prime \prime}$ | 1.47 | 5.0 | 21/4" | TP4×6V3 | 12 Oz . | 2.71 |
| (1) | $34 A 367$ 344382 | $4 \times 8^{\prime \prime}$ | 1.00 | 6.0 | 25/8", | $\cdots 4 \times 8 \mathrm{~W} 9$ | 14 Oz . | 3.02 |
| (1) | 344359 | $5^{\prime \prime}$ | 1.00 1.47 | 5.5 | 17/8." | 75 K 5 | 8 Oz . | 1.67 |
| (1) | 344360 | $51 / 4$. | . 68 |  | 21 | IPSV3 | 10 Oz . | 2,74 |
| (5) | 344361 | $5 \times{ }^{\prime \prime \prime}$ | 1.00 | 6.5 |  | \% $525 \mathrm{K7}$ | 8 Oz . | 2.23 |
| (5) | 344362 | $5 \times 7^{\prime \prime}$ | 1.73 | 8 | 2 N | \$15 $5 \times 7 \mathrm{~W}$ | 1 Lb . | 2.75 |
| 5 | 344363 | $5 \times 7 \times$ | 10.00 | 10 | $\frac{217 \%}{}$ |  | 1 Lb . | 4.22 |
| 3 | 344354 | $5 \times 7{ }^{\prime \prime}$ | 1.0 | 6 | 2 12. | T+C5×7RD3 | 2 Lbs. | 6.59 |
| (5) | 344353 | $6 \times 9^{\prime \prime}$ | 1.0 | 7.5 | 33 | +5X7WM | 1 Lb . | 3.44 |
| (5) | $34 A 350$ | $6 \times 9$ | 1.00 | 7.5 | 33/8 | +6X9WM | $11 / 4$ Lbs. | 3.49 |
| 5 | $34 A 351$ | $6 \times 9^{\prime \prime}$ | 1.47 | 7.5 |  | I*6x9w3 | $11 / 4$ Lbs. | 3.08 |
| 5 | $34 A 352$ | $6 \times 9$. | 10.00 | 11 | 3/4 | P6x9V3 | $11 / 4 \mathrm{Lbs}$. | 3.94 |
| 1 | 344348 | $6^{\prime \prime}$ | . 68 | 6.0 | 23/8" | 9\%C6X9RD3 | 2 Lbs . | 9.53 |
| (1) | 344349 | $6^{\prime \prime}$ | 4.8 | 7.5 | $2{ }^{18}$ | ${ }^{\text {C6K73 }}$ | 10 Oz . | 2.24 |
| (2) | 344337 | $8^{\prime \prime}$ | 1.00 | 8.0 | 31/4" | 1C6T3 $\times 8 \mathrm{~W} 3$ | $11 / 2$ Lbs. | 4.62 |
| (2) 3 | 344338 | $8^{\prime \prime}$ | 2.50 | 10 | 314", | s8W3 | $11 / 4$ Lbs. | 3.02 |
| (2) 3 | 344383 | $8^{\prime \prime}$ | 10 | 12 | 3 | 9 TP8T3 | $11 / 2$ Lbs. | 4.73 |
| (3) | 344336 | $10^{\prime \prime}$ | 1.73 | 10 | $4{ }^{\prime \prime}$ | -1C8R8 | $21 / 4 \mathrm{Lbs}$. | 6.76 |
| (3) 3 | $34 A 334$ | $12^{\prime \prime}$ | 1.73 | 11 |  | 910510 | 2 Lbs. | 4.64 |
| (3) 3 | 34 A335 | $12^{\prime \prime}$ | 4.8 | 12 | $\begin{aligned} & 43 / 4 \\ & 6 \end{aligned}$ | $112 J 10$ 101273 | 21/2 Lbs. | 5.41 |

jack and soldering terminals. favorites. Features both combination pin-tip cone. Il Indicates 3.2 ohm Imp. Simp. indicates 8 e $8-10-20-40$ Ohms. $\ddagger$ Dual JENSEN WEATHERMASTER SERIES

cones. WP402, 502, 602 have moisture-proof and fungus impregnated fiber gaskets and adhesives, unoffected by heat).

## INTERCOM TALK-BACK \& PAGING SPEAKERS



Andoor or outdoor systems requiring concentrated to fit the needs of small areas with low output

Model 1B-A. World's most widely used medium power speaker, with full response to 250 cps . Tropicalized capocity and improved lower frequency operation. 90 degree wide angle dispersion. Freq for trouble-free lifetime cps. Universal swivel mtg. bracket. Size $101 / 4^{\prime \prime}$ dia. $\times 91 / 4^{\prime \prime}$ deep. Shpg.
 Model MIL-A. 7.5 wott. Full range. Improved lower frequency $\$ 1.90$ 350 cps . Excellent for limited areas ond filling in "dead" spots. Tropicalized, hermetically sealed. Frequency response $350-13,000$ cps. 120 degree dispersion. Has universal swivel mtg. bracket. Size 7 tz dia No. 344106 Model
No. 34 Alo6. Model MIL-A. 8 -ohm voice coil. Net Each
\$17.85
MODEL CIB-A 25-WATT FULI RANGE Wide speaker with built-in hermetically sealed driver angle $60^{\circ} \times 120^{\circ}$ dispersion intelligibility and noise penetration. Exclusiver. Delivers high output with 250-13,000 cps response. Excellent "talk-bock" characteristics. Steel reinforced fiberglass/polyester horn gives superior acoustic qualities and resistance to physical abuse. New Omni-Lok swivel brgcket directs where desired. Size $73 / 8^{\prime \prime} \times 14^{\prime \prime} \times 12^{\prime \prime}$. Shpg. wt. $51 / 2$ lbs $\$ 2780$ MODEL OP8 30-WATT FULL RANGE OUTDOOR SPEAKER. New design
$\$ 27.60$ of Implex, a practically indestructible material efficiency available. Molded woter, oil, a practically indestructible material, impervious to weather, salt bracket assures smooth and even extremes. Die-cast lever lock mounting vertically with positive fing even movement $360^{\circ}$ horizontally and $180^{\circ}$ sponse $250-13,000$ cps fingertip locking in any position. Frequency re113 , diogonol coross math dispersion. Impeedonce 8 ohms. $\$ 23.42$

(1) UNIVERSITY TRUMPETS LESS DRIVERS

All metal reflex trumpets for deep sound penetrotion with a narrow sound penetration angle. SMH for voice only. Fully weatherproof.

| Stock No. | Mfgrs. Model | Bell Dio. | Horn Length | Cutoff | $\begin{gathered} \text { Dis- } \\ \text { persion } \end{gathered}$ | Wt. Lbs. | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 40423 | PH | 201/4" | $153 / 4^{\prime \prime}$ | 150 CPS | $85^{\circ}$ | 11 | \$23.70 |
| 40422 | SMH | 151/4"' | 12" | 200 CPS |  | 9 | 20.70 |
| 34B184 | Cobraflex 2 | 101/4" | $181 / 2 \times 91 / 4$. | 200 CPS | $120 \times 60^{\circ}$ | 11 | 28.70 |

(2) UNIVERSITY ALL WEATHER DRIVER UNITS

Otfer highest quality sound possible. All are hermetically sealed. To be used with reflex trumpets or radial projectors. $13 / 8^{\prime \prime}$ - 18 thread.

| Stk. No. | Mfg. <br> Model | Full <br> Ronge <br> Wotts | Range <br> Cps. | V.C. <br> Imp. | Shpg. Wt. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Llbs. |  |  |  |  |  | | Net |
| :---: |
| Each |

$\dagger$ Transformer Impedance: ID-40T-45/122/250/500/1000/2000 Ohm. IDTransformer impedance; 1000/2000 ohm
$60 \mathrm{~T}-16 / 80 / 165 / 250 / 500 / 1000 / 2000$ ohm.
T 70 V Line Power Taps: ID-40T-40/20/10/5/2.5 watts. ID-60T-50/30/20/ 10/5/2.5 watts.

## NEW BI-DIRECTIONAL BAFFLE

Modern compact design provides sound in two directions from any single 8 -inch speaker. Heavy 18 gauge spun aluminum. Base steel reinforced. Mounts to $4 \times 4$ outlet box or directly to wall or ceiling. Satin aluminum is finish coated with colorless locquer, con act as primer. Mfg. List $\$ 18.00$.
No. 34C93. Net Each
$\$ 9.72$


SPEAKER DIFFUSER GRILLES
Rigid non-rattle construction of heavy 20 gauge steel. Attractive beige finish can be used as supplied or repainted to match room decor. Designed to mount over opening after speaker is installed.
Stk. No. Sixe No. Ea. 6 @ Each

| Stk. No. | Sixe | No. Ea. | 6 @ Each |
| :--- | :---: | :---: | :---: |
| 33A49. | $6^{\prime \prime}$ | $\$ 1.77$ | $\$ 1.57$ |
| 33A50 | $8^{\prime \prime}$ | 1.87 | 1.67 |
| $33 A 51$ | $10^{\prime \prime}$ | 1.97 | 1.77 |
| $33 A 52$ | $12^{\prime \prime}$ | 2.97 | 2.37 | $\begin{array}{llll}33452 & 12^{\prime \prime} & 2.97 & 2.37\end{array}$



## 8 OHM L-PAD AT LOW COST

For speaker volume control. Simply insert in line between amplifier and speaker to adjust speaker volume independently of other speakers in the system. 2-section wire wound ceramic insulation. Handles speaker power to 6 watts. shaft, $3 / 8^{\prime \prime}$ long. $3 / 8^{\prime \prime}$ bushing
No. 17 A410.
\$1.39
$\stackrel{4}{4}$
$\$ 5.00$


## B-A MONEY-SAVING OFFER!

UNIVERSITY PY TRUMPET AND JENSEN 30-NATY DRIVER

## BOTH FOR <br> $\$ 3195$



PH TRUMPET
$\$ 23.70$ JENSEN DRIVER
16.50

PURGHASED SEPARATELY WOULD COST
$\$ 40.20$
PH University trumpet and 30 wott Jensen driver, on unbeotable combina tion for performance and reliability. Re-entrant horn provides more volume over entire range. Low frequency cut-off tho cps. 4 air column length. $85^{\circ}$ dispersion. $203 / /^{\prime \prime}$ bell dia. $153 / /^{\prime \prime}$ long less driver. Overall response 70 $12,000 \mathrm{cps}$. Peak power 16 ohm impedance. 60 watts.
No. 49A144. Shpg. wt. 16 lbs. Special Net Each
\$31.95

## FLUSH MOUNTING WALL AND CEILING BAFFLES



AT LOWEST COST EVER!


#### Abstract

(1) Inexpensive 91/4" Diameter Brushed Aluminum Ceiling or Wall Mounting Baffle. Perfect for extension speaker or backoround music installations. 8" speaker mounts by two screws. Secures to wall or ceiling by two wood screws, toggle bolts or mollys. Shpg. Wt. l lb. \$1.49 10 @ Each. \$1.27 No.34A74. Net Each.. \$1.69 4 @ Each.. \$1.49 10 @ Each... $\$ 1.27$ (2) Beautiful Aluminum Ceiling Mounting Baffle with baked white enamel finish. 8" speaker mounts directly to baffle by four screws supplied. Four holes in $1 / 2^{\prime \prime}$ flange orea permit mounting baffle to ceiling with wood screws, moilys or toggle boits. 125/8" diameter. Ceiling hole size $81 / 2^{\prime \prime}$ dio. No.34A75. Net Eoch . . $\$ 2.754$ @ Eoch. . S2.39 10 @ Each... $\mathbf{S 2} 2.24$ 34A227. As above in Brushed Aluminum. Net Each...... Net Each. $\$ \mathbf{3} 4.28$ 344228 . As above in Brushed Aluminum for $12^{\prime \prime}$ Speaker. Net (3) Round $10^{\prime \prime}$ Diameter Spun-Aluminum Baffle takes $8^{\prime \prime}$ speaker. Mounts directly to ceiling or wall by wood screws, toggle bolts or mollys. Edge has No.34A76. Net Eash...\$1.59 4 @ Eoch...\$1.39 10 @Each...\$1.19



(4) Flush Mounting Wall or Ceiling Baffle. $10^{\prime \prime}$ square, mounts $8^{\prime \prime}$ speaker Attractive brushed aluminum with beveled edges. Mounts readily with wood screws, toggle bolts or mollys. Perfect for background music systems. If desired may be painted to match any decor. Shpg. Wt. 1 10. @ Each. $\mathbf{N 2 . 2 9}$
 lip. Designed to replace a block of acoustical tite. To install, you need only remove block of acoustical tile ana replace with this unit. Takes any
 (5) NEW $125 / 8^{\prime \prime}$ Round White High impoct Styrene Grille. Mounts any 8 : speaker by self-topping screws supplied. May be attoched to wall or ceiling by wood screws, toggle bolts or moltys. Can be painted any color desired. No. 34C96. Net Each. . $\$ 1.854$ @ Each...\$1.45 $10 @$ Each... $\$ 1.24$ (b) $10^{\prime \prime}$ Square White Plastic Grille with Concentric Spirals. Vesigned to add beauty as well as camoutiage the speaker. Mounts any $8^{\prime \prime}$ speaker. Attaches to wall or ceiling by wood screws, toggle bolts or mollys. Con be No. 34 A80. Net Each.. \$2.69 4 @ Each.. $\$ 2.5510$ @ Each...s2.40

## WALL BAFFLES PRICED SO LOW!



Attractive non-resonant solid is $^{\prime \prime}$ " wood baffles with hot-glue dove-tailed loints for strength and rigidity. Heavy plywood front panel gives improved acoustic tone and extra strength for mounting speaker. Richly grained walnut brown cloth tabric wides clean with a damp cionds easily with any surrounding. Ideal for schools, clubs, hall-any location where good sound distribution is essential.

| Stk. No. | Speaker Size | High | Wide | Deep | Wt. | Net Ea, |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 34 Bl 15 | 5peak ${ }^{\prime \prime}$ | $71 / 2{ }^{\prime \prime}$ | $51 / 2^{\prime \prime}$ | $41 / 2^{\prime \prime}$ | 1 lb . | \$2.10 |
| 348182 | $6^{\prime \prime}$ | 81/2, | $71 / 2{ }^{\prime \prime}$ | 5 | $11 / 4 \mathrm{lb}$. | 2.70 |
| 348159 | $8^{\prime \prime}$ | 101/2" | $93 / 4$ ", | 61/2", | $11 / 2 \mathrm{lb}$. | 3.15 |
| $34 \mathrm{B1} 160$ | $10^{\prime \prime}$ | 121/4" | $111 /{ }^{\prime \prime}$ | $73 / 4{ }^{\prime \prime}$ | $21 / 4 \mathrm{lb}$. | 3.98 |
| 348161 | $12^{\prime \prime}$ | $14^{\prime \prime}$ | 131/4" | $9{ }^{\prime \prime}$ | 3 lb . | 4.57 |

BELDEN 2-WIRE SPEAKER CABLE
Type 8782. Bare copper flexple stranded size 24 parollel conductors; chrome vinyt plastic insulitan; Cable diameter 100 Ft ....... $\mathbf{\$ 1 . 4 7} \mathbf{1 0 0 0} \mathbf{F t} . . .$.

NEW FANON-MASCO HAND-SIZED TRANSISTORIZED MEGAPHONES


MV-2. Durable high-impoct plastic case with built-in microphone. Exceptional range over lo 50 yords. Small compact size, only $4^{\prime \prime} H^{\prime \prime} 7^{\prime \prime} \mathrm{L}, 21 /{ }^{\prime \prime}$ W. Weighs
only $11 / 2$ bs. Operates on 8 penlight cells. Has handy wrist strap and press-toonly $11 / 2$ lbs. Operates on 8 penlight cells. Has handy wrist strap ond press-to-
talk switch with locking feature for continuous talking. High quality magnetic taik switch with locking feature for continuous talking. High quality magnetic
microphone provides clear distinct voice quolity. Color, sea green. Shpg. wt. 3 lbs.
No. 36B198. MY-2. Net Each
$\$ 14.95$
MY 4 . Penlight Cells for above. (Requires 8.) Each
MV-4. Exceptionally efficient 5 -transistor for all outdoor-indoor coverage such os fire department, police dept, ond other municipal organizations. Ruggedly con-
structed of soun aluminum with bated proof mike. Operates on 4 standord " $D$ " cells. 5 transistors in closs a weathercircuit. Pistol grip switch. Weighs only $41 / 2$ bs. Size, $71 / 4^{\prime \prime} \times 13^{\prime \prime}$ overall. Shpo. wt. $51 / 2 \mathrm{Clbs}$. MV-4. Net Each
No. 36 C 199 ., MV-4.
$\$ 44.95$
No. 21A1. "D" Cell Batteries for
Each.


## FOR INDOORS-OUTDOORS PAGING, PA AND MUSIC

## $\$ 795$

$\$ 1295$


2

$$
V^{s} 12^{95}{ }^{595}
$$



## PAGING SPEAKER

Natural tone poging speaker for universal application. Wide angle $90^{\circ}$ spread Smocth frequency range, free of peaks, cuts out unintelligible lows and highs outdoor use. 180 swivel mount with screw flange 5 watt, for indoor or 8 ohms. 5 inch horn opening, $53,8^{\prime \prime}$ long. With wire lead. No. 22G94. Shpg. wt. 2 Ibs. Import Soecial
$\$ 7.95$ Enjoy outdoar music on lown, porch ${ }^{(2)}$ OUD AND PAGING HORN
metal bell projector horn completely weatherproots Cone speaker. Allows musical range not possible with reflex heavy duty 5 inch base and flange with wing nut Will stand by itself for portable use. High 8 efficiency, wide range, for good outdoor coverage. Two-tone grey 8 , ${ }^{2}$, High

3) COMPACT PAGING PA SPEAKER
$\$ 12.95$
Wide 120 dispersion angle, compoct size with full power driver unit reflex applicotions. Provides high sound penetration wedium power public oddress clarity. Leave outdoors in any weather, or use indoors. Response 300-13,500 cps. Swivel U-bracket mtg., $28^{\prime \prime}$ wire leod. 8 watts. 8 ohms. $6^{\prime \prime}$ bell, $5^{\prime \prime}, 5 \mathrm{D}$ Shpg. wt. 5 lbs.
port Special
$\$ 12.95$
Rugged, high power
tively roted 12 watts. Will handle up to 20 watts of power. Waterproof rustproof, shockproof. Driver is completely enclosed. Gives crisp, Waterproof, $\begin{array}{ll}\text { angle response even in high noise level areas. } 340-7000 \mathrm{cps} \text {. } 5 \times 8 \text {, wide- } \\ 8^{\prime \prime} & 5 \text { horn, }\end{array}$ No. 34 Cl 43 s . Grey hammertone. U-bracket and wire lead CDS

5-WATT 70V. and 25 V. LINE TRANSFORMERS MATCHES 4 TO 8 OHM VOICE COILS IN MULTIPLE SPEAKER SYSTEMS


Enobles volume adjustment ot each speaker in the system. Provides excellent wide range response. Primary impedance tops $1000,2000,4000$, 8000 and 16,000 ohms. For mounting No. $1785222-70 \mathrm{~V}$. Choice $\$ 1.19$
No. $178491-25 \mathrm{~V}$. Eoch No. 178491-25V. Eoch
10 Lots, Eo. $\mathbf{\$ 1 . 0 7} \quad 25$ Lots, Eo. 99 c Topped for $10,5,2$ HEAVY DUTY 10 WATT @ 70 V .
$15 / 8 \mathrm{H}$. Wt. $13 / 4 \mathrm{lbs}$. Imported or watts. Secondary 8 ohms. Size $2 \times 11 / 2 \times$ $15 /{ }^{\circ}$ H. Wt. $13 / 4 \mathrm{lbs}$. Imported of big sovings!
17 C 544 . Ea..... $\$ 1.89 \quad 10$ Lots Ea..... $\$ 1.69 \quad 25$ Lots Eo..... $\$ 1.49$ 56
. 1.69 Lots Eo. .
$\$ 1.49$

## Electro-Voice weatherproof FULL RANGE SPEAKERS



## PORTABLE

MUSICASTERS FOR TRUE HI-FI SOUND OUTDOORS! MUSICASTER TM-A speaker system with true high-fidelity pertormance, Compact and portable, has sturdy aluminum diecast housing. Finished in Steel Gray, it protects the weotherproof cone speaker and extends boss response through back-loaded folded horn. Can be mounted anywhere or used as a portable speaker. Ideal for square dances, school auditoriums, clubs outdoor hi-fi or anywhere that music and voice must be reproduced with maximum clarity.
Provisions for mounting 70.7 -volt line transformer inside. Frequency recapacity 60 ,000 eps. 8 ohms impedance. Dispersion $120^{\circ}$. Power handling cupacity 60 wotts peak. Sound pressure level 110 db . Size $211 / 2 \times 211 / 2$ $\times 81 /{ }^{2 \prime \prime}$ Shipping wt. 34 lbs .
No. 34 A 277 . Musicaster MB-1-Mounting bracket for Musicaster in neat flat-against-wall \$84.80 No. 37A221. Model MR-1 Moumt. Net Eoch. ........................ S3.53 An exciting new development in ouxiliory speakers by Electro-Voice. Light-
weight, easily moved from place housing is molded of a new wander plastic material similor to Steel Gray air travel luggage. No problem ever with scuffing, chipping, or peeling. The eight-inch cooxiol speaker unit is specially designed for portable peling. The high fidelity use. Other distinctive features include an attractive outdoor front trim ring and facilities for permanent mounting on antractive die-cast resp. 70 to $13,000 \mathrm{cps}$. Power handling capacity 30 watts peak. Imp. 8 No. 34 B191
SONOCASTER-I-TM. Special

## MINIATURE WATER-PROOF REFLEX SPEAKER

- For CB, Ham,
Paging.
- Handles 3 watts.
- Penetrates high
noise levels.

Outstanding new concept in speaker design Unlimited in applications. Penetrating quality makes it ideal for CB and Ham mobile work as well as for paging where a high noise level makes the typical cone speaker ineffective. Small size, only $31 / 4^{\prime \prime}$ dia. and $2^{\prime \prime}$ deep. Yoke type mounting bracket mounts by two holes, mounting under dash, or under hood for listening outside of car. Impedance 8 ohms, Shpg. No. 22C97. Import special ............ \$4.95


## WALL REMOTE SPEAKER

> WITH VOLUME CONTROL

Attractive, high-impact molded Styron baffle Momplete with $5^{\prime \prime}$ speaker and volume control. Molded screw slot for wall muunt.
color. 5 watts. Shipping weight No. 22Cl04.


## OUTDOOR WEATHER-PROOF SPEAKER

irtually indestructible, weatherproof and
dustproof. Ideal for outdoor extensions, dustproof. Ideal for outdoor extensions,
patios, pools, barns, as mobile communifor use where corrosive atmosphere destroys other speakers. Resp. 100-10,000 cps. Stands up to 50 G 's shock, up to 100 volts RMS. 3.2 ohm V.C. imp. Tempera$\begin{array}{ll}\text { ture extremes }-80^{\circ} \mathrm{F} \text {. to } 160^{\circ} \mathrm{F} \text {. Size } \\ 4 \times 4 \times 21 / 2^{\prime \prime} & \text { D. Rapidly }\end{array}$ $4 \times 4 \times 21 / 2^{\prime \prime}$ D. Rapidly connects by RCA type pin pack.
No. 22C309. Special.
$\$ 5.95$


SAME AS SPECIFIED FOR USE IN U.S. o. 22C309. Special................... \$5.95 ATOMIC SUBMARINE

NEW 8-IN. "Music-Mini" OUTDOOR WEATHER-PROOF SPEAKER duction os well as voice. Perfect for bockground music installatical reproduction os well as voice. Perfect for bockground music installations indoors trol if desired-other knock-out plugs permit Connects fast ond easy by terminals on back. Key sonsformer mounting. Connects fast ond easy by terminals on back. Key slots permit quick ohms. Freq. resp. 70 to $13,000 \mathrm{cps}$. Shpg. wt. 5 lbs . $1 / 4$ deep. 1 mp .8

# Electro-VOice microphones for every purpose 

## UNI-DIRECTIONAL "CARDIOID" MICROPHONES



## FAMOUS DYNAMIC MODEL 664

POPULAR CHOICE FOR PERFORMANCE, RUGGEDNESS, VERSATILITY
Especially recommended for PA service; Especially sechoommender, clubs, recording, communica-thons-truly the work horse of the microphone tions-
field!
Built
Built to take rough treatment, yet o superb per-
former saunding smooth ond natural on voice former sounding smooth ond natural on voice ond music.
Response $40-15,000 \mathrm{cps}$.
-58 db output. Has on-off switch, 16 tt. detochable cable. High impedance or 150 ohm low impedance by moving
 No. 29A200-satin Chrome No. 298191—Non-Refl. Grey
$\$ 49.98$
Gold Finished Model 664 No. 29B192. Mig. List $\$ 90.00$. Net Each $\$ 52.92$ Matching Stands for 664 (Inset) No. 29A408-Grey. Net Each No. 29B193-Gold. Net Each.


## DYNAMIC MICROPHONES

FOR HAND OR STAND TOP CHOICE FOR ENTERTAINERS, COMBOS, ETC.

MODEL 635A OMNIDIRECTIONAL—For exacting professional needs in recording, broadcasting and high quality PA. Four stage "pop" and dust filter completely eliminates need for external wind screen. Response $60-15,000 \mathrm{cps}$. 150 ohm low. impedance only. Output - 55 db . Size $1 \frac{13}{}{ }^{\prime \prime}$ dia., $5 \mathrm{f}^{\prime \prime} \mathrm{lg} .18 \mathrm{ft}$. cable, Connon XLR3-11 connector, stand odoptor
$\$ 48.22$
No. 29B202. Mfg. List $\$ 82.00$. Net Each
MODEL 627 CARDIOID Directional pickup reduces feedback, permits higher
audio levels. Rugged chrome metal cose and internal shock mount resists damaudio levels. Rugged chrome metal case and internal shock mount resists dam-
oge. Response $60-12,000 \mathrm{cps}$. High impedance. Output- 58 db . On-off switch. $16 \mathrm{ft}^{\circ}$. ottached coble. $7^{\prime \prime} \mathrm{lg} . \mathrm{g}^{3 / 4^{\prime \prime}} \mathrm{dio}$.
16 ft . attached coble. $7^{\prime \prime} \mathrm{lg} . .^{3 / 4} 4^{\prime \prime}$ dio
$\$ 39.20$
No. 29A162. Wind screen, prevents "pops", breath, wind blast.
$\$ 4.90$


NEW MODEL 674 "CONTINUOUSLY VARIABLED" CARDIOID
Rejects side and rear pickup of all frequencies. Has 3-position rumble filter. Finest choice for professional PA, clubs, churches and recording where semi-permanent stand mounting is desired.' Response $60-15,000 \mathrm{cps}$. Output - 57 db . Impedance Hi Z and 150 ohms. Detachable 16 ft t cable. On-off switch, swivel $5 / 8^{\prime \prime}-27$ mount. Satin chrome finish. Mifg. List $\$ 100.00$.
$\$ 58.80$
No. 29B204. Net Each.

No. 298195. Non-Refl. Grey. Each
$\$ 64.68$
Gold Finished Model 676
 No. 29B189-Grey. Net Each.
$\$ 15.43$
MODEL 644 SOUND SPOT DYNAMIC-Most directlonal PA microphone yet! Has forthest front pickup, better than 2.5 times that of non-directional types, yet works close-up, too. Range $40-10,000$ cps. High output, - 53 db. Dual high or low impedance. Satin chrome. $34^{\prime \prime}$ dia., $16^{\prime \prime}$ long extension tube. Rear dia. $2 \mathrm{R}^{\prime \prime}$. 16 ft . detorhoble cable.
\$64.68 Stond mounting. 41 ozs. Fits Desk stand of left obove.
No. 29 Al98. Mifg. List $\$ 110.00$. Net Each................ MODEL 951 CARDIOID CRYSTAL-Very populor wide-range all-purpose PA mike with fine discrimination ogainst unwanted sounds. Range $50-1,00$ cps. Output - 60 db high impedance, on-off $\$ 32.05$
detochable cable. ${ }^{13 / 4} 188$. Mist $\$ 54.50$. Net Each
NON-DIRECTIONAL CERAMIC AND CRYSTAL
03 官

Feotures uniform sound pickup from all directions. "Acoustalloy" diophrogm for wide range, blast-proof long-lite operation. 636, 630, 623 have on-off switch, 18 tt . detachable cable, swivel $5 / \mathrm{g}^{\prime \prime}-27 \mathrm{mtg}$. and chrome satin finish. 641 hos 6 ft . coble, no swivel. $647 \mathrm{~A}, 624$ and 924 are lavalier type with neck cord, sup-
port clip, 18 ft attached cable. 647 A size, $3 / 4^{\prime \prime}$ dia., $33 / 4^{\prime \prime} \mathrm{lg} .624,924$ ore


| Stk. No. | E-V Type | Imped. Ohms | $\begin{gathered} \text { Response } \\ \text { Cps } \end{gathered}$ | Output Level | Mfgrs. List | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 29A197 | 636 | Hi or Lo | 60-13,000 | - 58 db . | \$72.50 | \$42.63 |
| 29 A196 | 630 | High | 60-11,000 | - 55 db . | 52.50 | 30.87 |
| 29A194 | 623 | Hi or Lo | 60-12,000 | - 56 db . | 57.00 | 33.52 |
| 29B257 | 641 | High | 70-10,000 | - 57 db . | 39.50 | 23.23 |
| 29B158 | 647A | High | 60-12,000 | - 60 db . | 82.50 | 48.51 |
| $29 \mathrm{B261}$ | 624 | High | 100-7,000 | - 56 db . | 45.00 | 26.46 |

## 

## ChOOSE THE PICKUP PATTERN

UNI-DIRECTIONAL: Cordoid or heort shaped pickup pottern reduces sound pickup from rear and sides, increoses pickup from front. Absolutely essential in reducing acoustic howl and echo commonly associated with PA systems. Also allows user to move with greater freedom while
in front of microphone. Excellent all-purpose type for high quality PA in front of $m$
NON-DIRECTIONAL: Near equal sound pickup from all sides. Excellent for paging, home recording and communications where the sound is close to microphone and room is normally quiet ond free of echo.

## DETERMINE ELEMENT TYPE

 DYNAMIC: Used indoors or out. Generally very rugged and most capable of all for faithful wide range response. lonse cables.CRYSTAL: Generally lowest in cost, giving faithful reproduction with high output. High impedance only. Used widely for all indoor services. CERAMIC: More rugged than crystal types and generally applicable where crystal microphones have been used. Fine indoors and out.

Fine high impedance mikes for paging, communications, home recording, Types 911 ond 926 hove tilt $5 / 8^{\prime \prime}-27$ stand mounting, 18 ft . coble. Type 911 has off-on switch. 727 SR has relay control switch. 727 ond $7275 R 1 / 2 \mathrm{ft}$ desk stand, slip out easily for hand, also have $5 / 8^{\prime \prime \prime}-27$ adaptor and $81 / 2$ for relay control in Ham, CB and paging. Communications gray finish. Base $43 / 6 \times 43 / 4 \times 9^{\prime \prime} \mathrm{H}$. $16^{\prime}$ cable.

| Stk. No. | E-V Type | $\begin{aligned} & \text { Type } \\ & \text { Element } \end{aligned}$ | Response Cps. | Output Level | Mfgrs. List | Net Eoch |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 29A186 | 911 | Crystal | 50-10.000 | - 50 db . | \$37.50 | \$22.05 |
| 29A187 | 924 | Crystal | 60-8,000 | -60 db. | 23.50 | 13.82 |
| 298258 | 926 | Crystal | 60-8,000 | - 60 db . | 29.50 | 17.35 |
| $29 A 182$ | 727 | Ceramic | 60-8,000 | -55 db . | 20.00 | 11.76 |
| 294183 | 727 SR | Ceramic | 60-8,000 | -55 db . | 23.50 | 13.82 |
| 29B181 | 719 | Ceramic | 70-7,000 | -56 db . | 27.50 | 16.17 |



E-Y PROFESSNONAL NMCROPMONES B-A's Professional Audio Department can handle all your requirements for Broadcast, TV, Studio and Recording microphones and will arrange for prompt ship-


## SHURE MICROPHONES OF HIGHEST QUALITY <br> POPULAR NEW "SPHERE" MICROPHONES <br> UNI-DIRECTIONAL CARDIOID DYNAMICS



These rugged new dynamic microphones are recommended for entertaimers, terviewers, singing groups, etc. Spherical screen noise. Adaptable to hond or stond use. 533 and 585 h pove , blast ond wind 15 ft . detachable cable. 565 has dual impedance and 18 ft . detachableh and Satin chrome finish, black trim ond block swivel $5 /$ '" $^{\prime \prime}-27$. detachable coble. impedance types are recommended where long mike $5 / 8^{\prime \prime}-27$ stand odaptor. Low A95A transformer of right for matching low impedance mikes to high impedance amplifier input. Average size $61 / 2^{\prime \prime}$ approx impedance mikes to high impedonce


## NEW LAVALIER UNIDYNE III CARDIOID



## MULTI-PURPOSE DYNAMIC MICROPHONE

FOR HAND-TO-STAND, LAVALIER OR GOOSENECK MOUNTING Most versatile of the "problem solving" Unidyne 111 series. Smoll size and
 With 20 ft . 2 -cond. coble. Lovalier cord ond clip supplied. Use A $25 \mathrm{~B}^{\text {s }}$ swivel for stond mounting or screw directly onto gooseneck of any length. GooseNo. 29B222. Model 545L. Net Each........................... \$41.16

## S円UFE MICROPHONES FOR PAGING,

BASE STATION AND MOBILE COMMUNICATIONS


## RUGGED AND DEPENDABLE-BEST FOR VOICE

Model 430. Controlled magnetic microphone, recommended for general PA paging or communications use. Hand-to-stand slip-in swivel mounting adapts to $5 / 8-27$ stands or fittings. Dual high or low impedance, $60-10,000 \mathrm{cps}$ response $\overline{\mathrm{No}} \mathrm{S2}$ 29A211. Model 43 ft cable.
\$22.64
NEW ADJUSTABLE HEIGHT COMMUNICATIONS MIKES Integrated mike ond stand design CB - AMATEUR RADIO justment of $21 / h^{\prime \prime}$. Makes design with appealing new look allows height ad$10{ }^{5 / 3 "}$ overall. Push-to-talk switch bar operates microphone and extends to trol. Has optional switch locking feáture. Rugged controlled macnetic element in Model 450 Dispatcher has response of $100-9000 \mathrm{cps}$. Model 4444.
response response $300-3000$ eps. especially tailored for Ham SSB for both press-totolk and Vox operation. Output -52 db . 7 ft cable. Base size $4 \times 511^{\prime \prime}$ deep Constructed entirelv of tough "Armo Dur". Sabpg. wt. 3 lbs. $\$ 29.10$
No. 29B325. Model 450 "Dispotcher". Net Each. No. 29B326. Model 444. Ham Mike. Net Eoch

SHURE MOBILE MIKES- 400 SERIES WITH ARMO-DUR HOUSING All hove high quality coiled cord ond press-to-talk switch for relay con trol. Identical replacements for police, toxi, commercial 2 -way radio. Ex-
cellent for amateur ond CB service cellent for amateur and CB service. Coses are proctically indestructible.
$414 A-414 \mathrm{~B}$ are new smaller size Ranger II Series, 2 and 414A-414B are new smaller size Ranger 11 Series, 21 is noise cancelling, close talking type, fine for ham and CB work.

| Stock No. | Shure Type | $\begin{gathered} \text { Type } \\ \text { Element } \end{gathered}$ | Response Cps. | Switch Circuit | Net Eoch |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 294219 | 104B | Carbon |  |  |  |
| 294220 | 104A | Carbon | $\begin{aligned} & 300-4000 \\ & 300-4000 \end{aligned}$ | DPST | \$17.64 |
| $\begin{aligned} & 29 \mathrm{~B} 212 \\ & 29 \mathrm{~B} 213 \end{aligned}$ | 414 A 414 B | Hi-Z Mag. | 200-4000 | DPDT | 19.40 |
| 298242 | 201 | Ceramic | $200-4000$ $200-4000$ | DPDT | 19.40 |
| 29B270 | 202 | Ceramic | 200-4000 | SPST | 11.76 |



I $545 s$

UNIDYNE
55SW


## FOR SOLVING REVERBERATION AND FEED - BACK PROBLEMS MODEL 580SA UNIDYNE

For economy PA systems and improved home recording, giving superb performance at lowest cost. Slips out of stand swivel mount for hand-held use. dia. 15 ft attached cable. Shpg. wt. 3 lbs .
No. 29B214. Chrome 580SA with Switch. Net Each
$\$ 34.69$
545 SERIES UNIDYNE III
Approaches the theoretical ideal Cardioid pickup pottern ot all frequencies providing extended range music and speech pickup for highest quality pro fessional PA and recording music and speech pickup for highest quality pro Response $50-15,000 \mathrm{cps}$.
545 s hos swivel stand mount: 545 sps. Output -55 db . Dual high or low impedance
 No. 29A208. Sotin Chrome 545 (less stand). Net Each
$\$ 49.98$
No. 29A366. Black 533 B Desk stand). Net Each
$\$ 55.86$
$\$ 8.82$
No. 29A366. Black S33B Desk Stand. Net Each

Famous for dependoble indor SERIES UNIDYNE II
Famous for dependoble indoor and outdoor service in regular or rugged duty. Response 50-15,000 cps. Output -55 db . Selectable 35-50, $150-250$ o high impedance. Tilt head, detachable 18 ft . cable. Size $73 / 8 \times 23^{3} \times 31 / 0$ Wt. 3 lbs.
No. 29A207. Sotin Chrome Model 55S. Net Each.
$\$ 48.80$


CABLE TRANSFORMER FOR LOW IMPEDANCE MIKES NEW SMALL SIZE WITH INTEGRAL CONNECTORS Allows use of long microphone line without usual loss of amplifier matchiag any $35-50$ inimes hum pickup. Installs of pedance mike to high impedance omplifier input low imshielded, rugged construction with omplifier input. Fully input and Amphenol MCIF output. Size $3 / 4^{\prime \prime} \mathrm{D}$. $21 / 2^{\prime \prime}$, Shpg. wt. 80
$\$ 10.29$


## NON-DIRECTIONAL DYNAMICS

MODEL 51 SONODYNE
address time favorite for schools and public oddress work where luggedness and high outResponse essentiol. Excellent for tape recorders. Has optional off-on switch, multi-imped dbe. selector switch for $35-50$, $150-250$ or high impedance. Satin chrome cose, lifetime tilt head mount for $5 / 8^{\prime \prime}-27$ stand. $5_{15}^{3} \times 31 / 8 \times 21 / 8^{\prime \prime}$ Shpg. wt. 3 lbs
No. 29B229.
No. 298229 ,
Model 5 St
Nos. With
Switch. Net Eo. $\mathbf{\$ 3 0 . 2 8}$ Each Each
MODEL 540 S SONODYNE II
Sharp appearance, adjustable frequency response, dual impedance, high or mal range $60-13,000 \mathrm{cDs}$ with any other microphone near the price. Nor telligiblity in paging and communications. Tor "tailoring" "to best voice in chrome and black. Detachable 15 ft . cable. Off-on switch.
No. 298231. Model 540s. Shpg. wt. 3 lbs. Net Each........ \$29. 37

## SHURE LAVALIER MICROPHONES



Rugged dynomic mikes having frequency response specially engineered for lovalier use. 560 size $33^{3}{ }^{\circ \prime \prime} \times 11 / 3^{\prime \prime} \mathrm{D}$. high or low imped. 570 s size $3 / 4^{\prime \prime}$ dia., has, on-off switch, re-
sponse $50-12,000 \mathrm{CDs}$. $50-250 \mathrm{ohm}$ imped. Attached ligh sponse 50-12,000 cps. 50-250 ohm imped. Attached light weight cables.

| Stock <br> No. | Shure <br> No. | Output <br> Level | Cable <br> Length | Net <br> Eoch |
| :---: | :---: | :---: | :---: | :---: |
| $29 \mathrm{B268}$ | 560 | -56.5 db. | 18 ft | $\$ 24.99$ |
| $29 \mathrm{B269}$ | 570 S | -59 db. | 30 Ft | 61.74 |

## SHURE MIKE ACCESSORIES

S38B stand fits A-25 swivel odopter supplied with mikes specified.

| Stk. No. | Type |
| :--- | :--- |
| $29 A 225$ | S38B |
| $29 A 226$ | A25B |
| $29 A 364$ | A22L |
| $29 A 356$ | R5 |
| $29 A 357$ | RSB |
| $29 A 360$ | $R 10$ |
| $29 A 354$ | R |

Round Stand for foription 415430 Net Each
Round Stand for 415,430
$5 / 8 "-27$ Swivel for $415,430 \quad 535,545$
$\$ 2.65$
3.23
$\begin{array}{ll}5 / 8^{\prime \prime}-27 \text { Swivel for } 415,430,535,545 \\ \text { Neck Cord (Not Ilustroted) Fits } 1 / \text { dic. slim types } & 3.23 \\ 2.65\end{array}$
Neck Cord (Not Hustrated) Fits ," dic. slim types 2.65
Mike Cortridge, Hi-Z Cont. Maognetic
$\begin{array}{ll}\text { Mike Cortridge, Hi-Z Cont. Magnetic } & 6.47 \\ 150-250 \text { Ohm Cort. } 21 / 4^{\prime \prime} \mathrm{D} . \times 7 / 8^{\prime \prime} \mathrm{T} \text {. } & 6.47\end{array}$
$\begin{array}{ll}150-250 \text { Ohm Cort. } 21 / 4^{\prime \prime} \mathrm{D} . \times 7 / 8^{\prime \prime} \mathrm{T} \text {. } & 6.47 \\ \text { Carbon Button } 2^{\prime \prime} 0 . \mathrm{D} \times 5 / 8^{\prime \prime} \mathrm{T} \text {. } & 5.00\end{array}$
$\begin{array}{ll}\text { Carbon Button 2" O.D. } \times 5 / 8^{\prime \prime} \mathrm{T} \text {. } & 5.00 \\ 1000 \text { Ohm Maqnetic Cart. } 1^{\prime \prime} \mathrm{D} & \mathbf{7 . 3 5}\end{array}$

## TOP－RATED TURNER AND

THE NEW TURNER

## ヶひ

 TRANSISTORIZED BASE STATION MICROPHONEPuts the zip back into your CB set and keeps it up to full strength Features a two transistor preamp With volume control－gives up to 50 times the output level you now have．Just dial your desired signal for maximum modulation all the time．You can even work close or far away from the microphone，or change the output for a big or little voice．Has tailored frequency re－ sponse $300-3500 \mathrm{cps}$ ，exclusive touch－to－talk and lock on－off switch－ ing．Works with all tube or tran－ sistor sets．
Blue and chrome finished．Attached coiled cord．
No． 298295 ．Net Each $\$ 29.11$


THE NEW TRANSISTORIZED MOBILE $M+2$ MIKE WITH VOLUME CONTROL


Adds range to CB mobiles because of．full voice power．Has built－in transistor pre－amp with volume control that lets you adjust your modulation for the best perform－ ance．Has tailored frequency re－ sponse， $350-3500$ cps．press－to－ olk switch， 5 ft ．coiled cord internal transistor amplifier takes power from internal battery．Wired or relay switching．Mtg No．298276．Net Ea．$\$ 23.23$

TURNER COMMUNICATION MICROPHONES UNMATCHED EXCELLENCE FOR AMATEUR AND CB MOBILE AND BASE STATIONS EXCELLENT CHOICE FOR ALL 2－WAY RADIO AND PAGING CALL SYSTEMS


DESK MIKES FOR BASE STATION OR PAGING．
Most popular microphone made for desk use．Operates by touch bar on－off switch，or lever lock switch．Comes with 7 ft coble wired for relay control Response $100-8000 \mathrm{cps}$ ．Deluxe light grey hammertone and chrome finish $73 / 4^{\prime \prime} H^{\prime}, 51 / 2 \times 5^{\prime \prime}$ base．Mfg．list $\$ 23.50$ ．Shpg．wt． 3 lbs
Madel 254D is excellent for paging service and for low impedance transistor－ zed CB transceivers．Output -66 db
$\$ 13.82$ No．29B285．Model 254X．Crystal．Output -48 db ．Net Each $\$ 13.82$ No．298286．Model 254C．Ceramic．Output -54 db ．Net Each

## ＇SINGLE SIDEBAND＂DESK MIKE

Specially toilored voice response for maximum communications intelligibility Response $300-3,000$ cps．Operates by touch bor on－off switch，lever lock switch or VOX，in reloy controlled circuits．Lustrous black and chrome．Size as above．Mfg＇．List $\$ 26.50$ ．Shpg．wt． 3 lbs ．
No．298380．Model 454 X ．Crystal．Wutput－db．Net Each．．．$\$ 15.58$ No．29B379．Model 454C．Ceramic．Output－52 db．Net Each． MOBILE MICROPHONES
Model 350C．Most widely used microphone for mobile CB．Improves per－ formance by upgrading audio quality．Response $80-7000 \mathrm{cps}$ ．Output－54 db．Rugged ceramic interior，extra tough cyco Wired for relay control．Wt． 1 lb ．Mfg．List $\$ 12.50$
$\$ 7.35$
No．29B283．Model 350C．Net Each．．．．．．．．．．．．．．．．．．．．．．．． $30-7000$ cps．Tough cycaloc cose， 5 ft ．coiled cord．Wired for relay control．Wt．I lb．Mfg．List $\$ 12.50$
No．29B321．Net Each
$\$ 7.35$


## ASTATIC AND TURNER MICROPHONE CARTRIDGES

Like new performance for old mikes．Eosily installed．Fit models listed exactly．Eosily adopted to many others

| Stk．No． | Manufacturer | Type | Fits Mikes $\quad$ N | Net Each |
| :---: | :---: | :---: | :---: | :---: |
| 29A396 | Astotic | MC－151 Crystal | JT30，T3 | \＄4．12 |
| 294397 | Astatic | MC－127 Ceramic | JT30，T3 | 4.12 |
| 29A398 | Astotic | $\mathrm{MC}-320$ Crystal | D－104 | 5.59 |
| 294399 | Astatic | MC－321 Ceramic | D－104، D－104C | 4.12 9.70 |
| 29A400 | Astatic | MC－563 Dynamic | 10 D | 9.70 |
| 29 A 401 | Astatic | MC－206 Crystal | 10 C 10 ${ }^{\prime \prime}{ }^{\prime \prime}$ | 4.12 |
| 29A383 | Turner | 13 C Dynamic | $9 \mathrm{D}, 33 \mathrm{D}, 2^{\prime \prime} \mathrm{D} . \times 7 / \mathrm{m}^{\prime \prime}{ }^{\prime \prime}$ | 6.46 4.70 |
| $29 A 384$ $29 A 385$ | Turner | ${ }_{23}{ }^{23}$ Crystal |  | 4.70 4.70 |
|  | Turner | 21 A Crystal |  | 3.82 |
| $29 \mathrm{B293}$ | Turner | 21C Ceromic | 350C，254C， $1{ }^{\text {易＂}}$ D．${ }^{1} / 2^{\prime \prime}$ | 3.82 |
| $29 \mathrm{B313}$ | Turner | 27 Crystal | 454x | 3.82 |
| 298314 | Turner | 35599A1 | ＋2 | 4.70 |

ASTATIC MICROPHONES
TURNER UNI－DIRECTIONAL CARDIOID DYNAMIC MIKES



NEW MODEL 600 DYNAMIC．True cardioid pickup reduces rear and side re－ sponse，wipes out room echo and occoustic feedback problems without sacrific－ ing sound quality．Excellent chaice for PA and recording．Response 50－1 tough cycaloc grille． $15 / 8 \times 5^{4}$ long．Off－an switch， 12 ft ．cable， $5 / 8-27$ mike stand cycalac Stile．wt． 3 lbs．Mfg．List $\$ 59.50$ ．
$\$ 34.98$
No．29B315．Net Each．
of technica uniformity near perfect cardioid pickup and frequency response．＂Live＂at front＂dead＂to sounds from rear，allows close up or moving abaut with great freedom．Cures feedback problems．
Response $40-15,000 \mathrm{cps}$ ．High or low impedance selection．Output，high－ 55 $\mathrm{db} ; 150$ ohms，-79 db ．Professional Connon XLR 4 pin connector， 20 ft. cable．Very outstanding mechanical and appearance design．Shock mounted for cable．Very outstanding service．Withstands extremes of temperature and humidity．Slips from $5 / 8^{\prime \prime}-27$ tilt stand adaptor for hand held use．Satin chrome， $1: 1^{\prime \prime}$ dio．， $6 / 6^{3 \prime} \mathrm{lg}$. Stand illustrated not supplied．
No．29B319．Model S－500 with On／Off Switch．Mfg．List $\$ 87.50$ ．\＄51．45 Net Each

GOLD FINISHED MODEL 500
Very popular for church installations．Specifications as above
No．29B303．5500G．Mfg．List \＄97．50．Net Each
$\$ 5.59$
$\$ 59$
No．298300．Chrome C－7 Stand．Net Each

## TURNER NON－DIRECTIONAL MICROPHONES <br> 

Model 304C Ceromic．Unique microphone＂kit＂with oll the accessories you will ever need－desk stand－stand adaptor，lovalier clip and cord．Universal hold it，wear it－set it up anywhere．It＇s OK where heat and humidity
are a problem． 950 Dynamic．Slender high impedance PA and recording mike．
Model 58 Lavalier Dynamic．Tiny，professional quality，dual impedance h or 150 ohms．With neck cord and clip．

| Stock <br> No． | Turner <br> Type | Response <br> Cps． | Output <br> Level | Cable <br> Length | Mfg． <br> List | Net <br> Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2 9 A 3 6 9}$ | $304 C$ | $60-10,000$ | -60 db | $12^{\prime}$ | $\$ 16.50$ | $\$ \mathbf{9 . 7 0}$ |
| 29 A 377 | 95 D | $100-10,000$ | -58 db | $20^{\prime}$ | $\$ 42.50$ | $\mathbf{2 4 . 9 9}$ |
| 29 A 375 | 58 | $60-13.000$ | -60 db | $25^{\prime}$ | 57.00 | $\mathbf{3 3 . 5 2}$ |

## ASTATIC HAM MICROPHONES



Specially toilored trequency response gives＂punchy＂high intelligibility on crowded bonds．
Chrome adaptor furnished with 5 ft ．cable permits use with any $5 / 8^{\prime \prime}-27$ stand with cord outside of adoptor as illustroted
＂G＂stand grip bar operates DPST mike and relay control，can be locked＂on＂ if desired．Model UG－8 stand has DPDT switch with all leads terminated in base．
Adapts to any circuit． impedance．Average shpg．wt 2 lbs．With stand 5 lbs．

| Stk．No． | Astatic Type | Element Type | $\begin{gathered} \text { Response } \\ \text { Cps } \end{gathered}$ | Output Level | Mfg． List | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 294393 | D104 | Crystal | 30－7500 | -46 db ． | \＄31．00 | \＄18．23 |
| 294395 | 10 D | Dynamic | 300－3000 | －52 db． | 39.70 | 23.34 |
| 294402 | GD－104 | Crystal with G Stand |  |  | 51.20 59 | $\begin{aligned} & 30.10 \\ & 35.22 \end{aligned}$ |
| 29A404 | G－10－D | Dynamic with G Stand |  |  | 29.90 |  |
| $29 A 405$ 298389 |  | Grip－to－talk Stand only Grip－to－talk Stand only | （Read descrip | above） | 24.95 29.95 | $\begin{aligned} & 14.67 \\ & 17.61 \end{aligned}$ |
| 29B389 | UG－8 | Grip－to－talk Stand | （Read descrip |  |  | 59 |



ATLAS "VELVET ACTION" MICROPHONE STANDS
No Slipping - No Rottle - No Noise - No Scrotching - No Wear Feature full Grip, jam-proof clutch for easy height adjustment, functionally designed "Anti-tip" bases with chrome cover or scuff-proof baked on gray
wrinkle finish, and life-time super chrome plated tube assemblies Msilc uses $7 / 8^{\prime \prime}$ and $5 / 8^{\prime \prime}$ tube; MS-20 and MS $25,11 / 8^{\prime \prime}$ and $7 / 8^{\prime \prime}$ tube. MS- 25 has controlled "air lock" cushion for extra quiet collapse of stand. All hove $5 / \mathrm{g}^{\prime \prime}-27$ top thread. MS-11C, MS-14G and MS-20 have new low profile boses.


 (2) Gold Floor Stand. Same size as MS-1IC above.
No. 32B13. Model MS-14G. Wt. 13 lbs . Mfg. List $\$ 18.75$. Net Ea... $\$ 11.25$ (1) DELUXE "THREE-LEGGED" FLOOR STAND. Heavy cast iron base podded on each leg. 15" dia. Very stoble and more convenient to use since base chrome "toe room". Demountable 2 -section gun metal grey wrinkle bose, full No. 32B4. Atlos CS-52. Mfg. List \$12.50. Net Each.
$\$ 7.50$
BOOM ATTACHMENT. An extremely versatile device to center mike over best pickup area. Can be attached to any stand hoving $5 / 8$ "-27 thread. Ideal for piano and similar pickup where obstacles make regular mike stand impossible to use. All swivel parts are die-cost resulting in smooth operation and secure locking positions. 32 inch boom is chrome plated. Wt. $31 / 2 \mathrm{lbs}$.
No. 32B14. Atlos BB-1. Mfg. List $\$ 8.50$. Net Each
$\$ 5.10$

## (8) "FLEXO" MIKESTER Clamp-On Desk or Pulpit Boom Stand. Has univer-

 sally odjustable spring controlled floating arms. Clomps to any desk or pulpit; positions microphone in $36^{\prime \prime}$ arc in ony direction-the BEST Pulpit or 'Desk Stand! Weight, 6 lbs.No. 31 A50. "FLEXO" MIKESTER Pulpit or Desk Stand. Net Eo.
(7) TOUCH-TO-TALK DESK STAND. Dependable, DPDT switch action for relay control, paging, radio communications. May be locked "on", or in stantly released. Chrome and groy. 7" H., $51 / 8^{\prime \prime}$ dio.
No. 208688. Electro-Voice 428. Mtg. List $\$ 17.50$. Net Eoch
$\$ 10.29$
(8) "STREAMLINED" DESK STAND. Feotures concealed rear cable exit and tunctional design. Perfect for any mike. Gun metal and chrome with rubber No. 20A944. Atlas DS-10. Mifg. List $\$ 6.00$. Nef Each.
$\$ 3.60$
(1) SWITCHBOARD MIKE SUPPORT for overhead mounting. Has cable feed through ot mike end of $12^{\prime \prime}$ flexible orm. Swivel of base joint lets arm and mike swing aside. 13 ll . bose, grey wrinkle enameled.
No. $32 \mathrm{B6}$. Atlas SB-1. Mig. List $\$ 18.00$. Net Each (10) ATLAS "CHESTY" MIKE SUPPORT. HAROS Wire frame and flexible gooseneck hold mgs around neck on lovalier cord. No. 32A213. Atlas NS-1. Mfg. List $\$ 6.50$ Net Eoch hands!
(ii) CLAMP-ON BRACKET, Holds securely on flat surface $2^{\prime \prime}$ thick or less. Chiome $6^{\prime \prime}$ long tube, $5 / 8^{\prime \prime}-27$ thread. Wt. 2 lbs.
No. 20A601. Atlas $B C-1$. Mfg. List $\$ 4.00$. Net Each....................... $\$ 2.40$ (12) MULTI-PURPOSE BRACKET. Swivels $350^{\circ}$ at bose or up and down, with positive stops. Moving parts spring looded. Needs no locking adjustments. Length $123 / 4^{\prime \prime}$. $5 / 4^{\prime \prime}-27$ threoded. Wt. 3 lbs. Length $123 / 4^{\prime \prime}$. $5 / /^{\prime \prime}-27$ threoded. W $W+3$ lbs.
No. 20A798. Atlos US-2. Mfa. list $\$ 9.50$
(18) NEW DELUXE BANQU. Mfa. list \$9.50. Net Each.........................\$5.70 chrome $58^{\prime \prime \prime}-7 / 8^{\prime \prime}$ BANQUET STAND. Adjustable height $141 / 2^{\prime \prime}$ to $26^{\prime \prime}$. Super chrome $5 s^{\prime \prime}-7 / 8^{\prime \prime}$ brass tubes. New full chrome low silhouette base of trim modern design. Wt. $51 / 2 \mathrm{lbs}$

## . $\$ 6.45$ <br> $5 / 8^{\prime \prime}-27$ MIKE MOUNTING ACCESSORIES <br>  <br> List $\$ 10$ <br> ES

## MICROPHONE GONNEGTORS AND AccESSORES



Durable professional type connectors for audio equipment. Standard on many types of mierophones, amplifiers and recorders. ( 3 conductor). Mating units are polarized and equipped with a latchlock device to prevent accidental disconnection. Housing finish is nickel satin. (1) and (2) have serrated finger take up to is" O.D. coble. Shpg. wt. 2 oz .

| take up to | a O.D. cab | Shpg. wt. 2 oz. | 1-9 | 48 |
| :---: | :---: | :---: | :---: | :---: |
| Stk. No. |  | Description | Eac | 1.18 |
| (1) 12C257 | XLR-3-11C | female cable plug | \$1.29 | 51.18 |
| (2) 12C259 | XLR-3-12C | male coble plug | 1.13 | 1.03 |
| (3) 12 Al 94 | XLR-3-15 | $90^{\circ}$ female plug | 3.38 | 3.77 |
| (4) 12 C 260 | XLR-3-31 | female wall recpt. | 1.93 | 1.77 |
| (5) 12 C 261 | XLR-3-32 | mole wall recpt. | 1.10 | . 01 |
| (8) 124193 | XLR-3-42 | $90^{\circ}$ male mike recpt. | 1.39 | . 27 |
| (7) 12B291 | XLR-3-13 | femole wall recpt. | 1.85 | 7 |
| (8) 12 B 293 | XLR-3-14 | male wall recpt. |  | . 96 |
| (8) $12 \mathrm{B295}$ | XLR-3-13N $\times$ LR-3-14N | temale panel recpt. | 2.14 | . 59 |



## SWITCHCRAFT Y-CONNECTOR

For two mikes in parallel to o single input. Has $25 / 8^{\prime \prime}-27$ male connectors and one female. Nickel ploted finish. 97 c
No. 124307 . Type 25 Y. Net Each.....................

## AMPHENOL MIKE SWITCH

Male one end, female on other, mates with all standard $5 / 8^{\prime \prime}-27$ Male one entact connectors. Push-to-talk or slide switch for permasingle contact connectors. nent contact. Shorts ocross circuit in "OFF" position. wt. 2 oz. Stk. No. Type $\quad 1-49 \mathrm{Ea} .50-249 \mathrm{Ea} .250 \mathrm{Ea}$. $\begin{array}{llll}\text { Stk. No. } \\ \text { 12A316 -MCIS } & \mathbf{\$ 1 . 9 8} & \$ 1.63 & \mathbf{\$ 1 . 3 9}\end{array}$

## SWITCHCRAFT "MINI-MIX" 2 INPUT MIXERS

Accommodates two high impedance microphones or pickups, each with separate goin control for mixing. Control knobs ore recessed. Case
 with attroctive brown tinish and nickeled occessories. Wt. 4 oz .


311 hos standard length $1 / 4^{\prime \prime}$ dia. phone plug output with extended shouider to fit recorders with recessed jacks 313 has short $1 / 4^{\prime \prime}$ dia. plug required for late model Revere and Wollensok recorders
(1) 128454. Type 311, Phono Jock Inputs, Phone Plug Output. Net Eo (1) 12A232. Type 313, Short length phone jock inputs, short
(2) 12B450. Type 315, Phone Jack Inputs, Mike Conn. Output. Net Ea $\$ 4.67$ (3) 12B455. Type 320, Male Mike Connectors In, Female Out. Net Ea.............. \$4.67

## (1) 20A259. Type 340, Same as type 310, less volume controls. Net Ea

NEW SWITCHCRAFT TRANSISTORIZED 2-INPUT "MIX-AMP" PRE-AMPLIFIERS


## VERY <br> POPULAR <br> WITH <br> MUSIC

Internal pencell powered transistor amplifier compensates for "losses" from usual resistance type mixers. increases oup 20 to $20000 \mathrm{cps}+1$ db; over-all gain 6 impedance "Ho amplif 25 . Respor " $1 / 4$ dia. 6 db at HI impedance, 25 m a phone plug, output 2 -conductar fini-plug on $12^{\circ}$ cable Adaptor to standard 1/4 phone plug supplied.
No. 20B294. Type 503. Net Each As above except with standard $1 / 4^{\prime \prime}$ dia. lang shoulder phone plug output No. 208295 Jype 504. Net Each


Professional style audio connectors made for rugged service. Connectors are 3 -contact, polarized with exclusive grounding lug on all units. Shells are made of die-cost zinc, satin nickel finish. Inserts are of high-impact plostic. Woll plates fit standard single gang electrical outlet boxes.

| Stk. No. | Type | Description N | Net Eoch |
| :---: | :---: | :---: | :---: |
| (1) 12B348 | A3F | Female Cable Plug-with Neoprene Stroin bushing | \$1.32 |
| (2) 12B349 | A3M | Male Cable Plug-with Neoprene strain bushing | 1.12 |
| (3) 12B350 | B3M | Male Panel Receptacle-Mts. in 1"hole w/nut | 1.71 |
| (4) 12B351 | C3M | Male Panel Receptocle-Mts. in $3 / 4^{\prime \prime}$ hole $\mathrm{w} / \mathrm{screws}$ | 82 |
| (5) 204681 | C3F | Female Panel Receptacle-Mts. in $11 / 4^{\prime \prime}$ hole w/screws | $5 \quad 1.82$ |
| (8) 204682 | D3F | Femole Ponel Receptacle-Mts. in $11 / 4$ " hole $\mathrm{w} / \mathrm{screws}$ | $5 \quad 1.88$ |
| (7) 204683 | G3M | Male Wall Plate-Brass finished. Fits outlet box | 2.94 |
| (7) 204684 | G3MS | Male Wall Plate-Brushed stainless steel | 3.23 |
| (8) 204685 | H3M | Dual Male Wall Plote-Brass tinished | 4.50 |
| (8) 204686 | H3MS | Dual Male Wall Plote-Brushed stainless steel | 4.80 |
| (8) 208285 | J3F | Female Wall Plate-Bross finished | 2.76 |
| (4) 208287 | J3FS | Female W/all Plate-Brushed Stainless stee! | 3.06 |
| (iv) $20 B 288$ | K3F | Dual Female Wall Plate-Brass finished | 4.06 |
|  | K3FS | Duol Female Wall Plate-Brushed stainless steel | 4.35 |

READY-MADE MICROPMONE CABLE $25-\mathrm{ft}$. long with $5 / 8^{\prime \prime}-27$ Universal connect (use as male or femal

## SWITCHCRAFT TRANSISTORIZED MIXERS

## 4-channel high impedance stereo-

 monaural mixer featuring built-in transistor amplifier in each of two stereo channels with individual gain controts on each input. "StereoMono" switch allows all 4 inputs to be used monaurally. Amplifier powered by 9 volt battery (included) overcomes usual loss encountered in resistance type mixers and provides a 6 db goin. Low noise level, low distortion, frequency response 20 to 20,000 cps. Inputs are phone jacks, phono jacks output. Modern styling with ton finish, brown knobs with gold metallic $6^{\prime \prime} \mathrm{L} \times 2^{\prime \prime} \mathrm{H}^{\prime} \times 3^{\prime \prime} \mathrm{D}$. Rubber mounting feet. Shpp. wt. 3 lbs. 22.05信 Tronsistarized Monoural Mixer. Same os above except single t fier and 4 inputs for moncurol use only.No. 20A197. Model $301 T R$. Mixer. Net Each.

## SWITCHCRAFT SHIELDED ADAPTORS






Provides a convenient means of coupling various cambinations of phono and mike leods interchangeably with positive noise free electrical connections In sturdy brass nickel plated housings 11 Ir $^{\prime \prime}$ long, ${ }_{32}{ }^{3}$ Stock No. Type (1) 12B225 332 A (2) 12 B 226 334A (3) 12 B 227 3 36 A (3) $128228 \quad 338 \mathrm{~A}$ (5) 20 A 484336 B (6) $12 \mathrm{~B} 230 \quad 345 \mathrm{~A}$ (7) 128231346 Input Phone Jock Connector Phone Jack Mole Mike Connector Phone Jock Phono Jock Two Phock Tip Jacks
Phono Jock Female Mike Connector Femole Mike Connector Phono Plug Connector Phono Plug Connector Phono Jock Phone Plug Phone Plug

## HIRSCHMAN MULTI-POLE PLUGS



Small, shielded plugs with molded-on strain reliefs. Mate with input and output jacks on many foreign built tope recorders and radios including Norelco, Sony, Uher, Telefunken, Korting, Dual, Kuba, etc. Shpg. wt. 2 oz. Stik. No. Type
(17B282 MAS3 (1) 178282 1) 178283 (1) 178293 (2) 178294 (3) 178295

## MAS3

MAS5
MAS5S
MAS30
MAS50
MAS5OS
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## NEW DELUXE TALK-A-PHONE INTERCOMMUNICATION

THE ACCEPTED SYMBOL OF QUALMTY AND DEPFNDABILTY! THERE'S A TALK-A-PHONE FOR


## MASTER-REMOTE SELECTIVE SYSTEMS



## AVAILABLE IN NORMAL POWER OR HIGH POWER MASTERS

Permits use of up to 5 remotes with T-LM-5 or T-AC-5406 master or up to 10 remotes with T-LM-10 or T-AC-5411 master. Master can talk and listen to any remote individually, more than one remote at once or to all
remotes at same time. Remotes can originate calls to master, but cannot remotes at same talk to each other.
Remotes can operate as private ar non-private. When in non-private remotes can be answered from distance. Master is always private, and connot be "eavesdrapped on.
Only one master can be used in master remote systems. Master is only station that needs power. Masters size $101 / 2^{\prime \prime} \mathrm{W} . \times 83 / 4^{\prime \prime} \mathrm{D}$. $\times 31 / 8^{\prime \prime} \mathrm{H}$. Wt. 7 lbs. Case is grey vinyl elad and brushed chrome. Remotes size $71 / 2$ " W. $\times 83 / 4^{\prime \prime} \mathrm{D} . \times 27 / 8^{\prime \prime} \mathrm{H}$. Wt. $41 / 2 \mathrm{lbs}$. Finished in grained baked enamel and brushed chrome. Wall mounting remote model T-LR-3R is $61 / 2 \times 41 / 8 \times 2^{\prime \prime}$ D. Two types of masters are available, one for normal noise oreas (offices, etc.) the other for hi-noise oreas (foctories, etc.)
T-LM-5 NORMAL POWER MASTER for us to 5 remotes. For 120 V . AC-DC No. 33A223. Mfg. List \$64.00.
Net Each
$\$ 37.50$
T-LM-10 NORMAL POWER MASTER for up to 10 remotes. AC-DC.

Mist \$79.00. Net Each
$\$ 46.25$
T-AC-5406 HI-VOLUME MASTER for up to 5 remotes. For 120 V . 60 cy
AC only.
No. $33 A 225$. Mfg. List $\$ 79.00$. Net Each.
\$46.25
T-AC-5411 HI-VOLUME MASTER for up to 10 remotes. For 120
AC only.
No. 33A26. Mfg. List $\$ 95.00$. Net Each.
T-LR-3M DESK STYLE REMOTE.
No. 33C263. Mfg. List $\$ 22.50$. Net Each
$\$ 55.50$

T-LR-3R FLUSH WALL MOUNTING REMOTE.
No. 33C264. Mfg. List $\$ 22.50$. Net Each.
\$12.95
cable 5303 listed with two station system above.


## B-A CAN SUPPLY ALI TALK-A-PHONE UNITS

B-A can supply all Talk-A-Phone Units even though not listed. We will be glad to assist you in determining your requirements. Just send us a rough layout where units are to be used, and what you expect each station to be capable of accomplishing. 8 -A's sound experts will design a system for you, giving you an immediate reply. Just address your request to Dept. 81.

## SYSTEMS FOR HOME, OFFICE AND INDUSTRY!

EVARY PURPOSE - OMLY TAIK-A-PHONE MAS EYBRYTHING, DOES EVARMIHNG!

## ALL NEW TALK-A-PHONE WIRELESS INTERCOM SYSTEMS

- NO INSTALLATION
- NO WIRING - NO CABLES - JUST PLUG IN AND TALK



## Featuring the Exclusive

TALKARHAONE "GONIC-GATE"
 The Sonlc Gate circuit effectively suppresses line noises and hum by 30 db while system is in actual operation, a's well as when in Stand-By position.


## QUALITY 2-STATION WIRELESS SYSTEM

Highest quality wireless system works where others won't. Provides reliable communications where permanent or wired installations may not be practical. Ideal for offices, factories, stores, homes, apartments, nurseries, farms, etc. Operates over distances as long as system is plugged into outlets that are on same power company service transformer. Additional units may be added for operation of as many stations as desired on a common talk basis (al stations hear all conversations)
Modern design cabinets, are finished in charcoal grey and brushed chrome. Station measures $101 / 2^{\prime \prime} \mathrm{W}$. $\times 83 / 4^{\prime \prime} \mathrm{D}$. $\times 31 / 8^{\prime \prime} \mathrm{H}$. Each station plugs into $110-120 \mathrm{~V}$. AC or DC.
T-LC-33 2-STATION SYSTEM. Complete with 2 wireless stations. Ready to plug-in. Wt. 16 lbs.
$\$ 85.50$
List \$146.00. Net System
$\$ 42.75$ T-LC-17 ADDITIONAL SINGLE WIRELESS
No. 33 A2 42 . Mfg. List $\$ 73.00$. Net Eoch

## BUY FROM B-A O. EASY TERMS—NOTHING DOWN

## OPTIONAL CRADLE PHONE ACCESSORY

 FOR ANY STATION WIRELESS OR WIREDFits any Master or Remote units except flush mounting. Available at $\$ 35.00$ per unit extra. When ordering units add "H" to Stock Number

## 12 OR 6 STATION WIRELESS SELECTIVE TALK SYSTEMS

## ALH MASTER SYSTEM

12 station master provides up to 6 separate pairs of conversations when 12 masters ore used. Each master can select one station to talk to, leaving balance of channels open for other masters to use. Conferences can also be set up. 6 station master operates in same way except only 3 separate pairs of conversations may be held simultaneously.
Masters are $14^{\prime \prime} \mathrm{W} . \times 83 / 4^{\prime \prime} \mathrm{D} . \times 31 / 8^{\prime \prime} \mathrm{H}$. In charcoal grey with brushed chrome. Wt 12 lbs
T-LCM-8912 12-STATION SELECTIVE WIRELESS MASTER.
$\$ 95.80$
No. 33 A211. Mfg. List \$164.00. Net Each
$\$ 85.50$
T-LCM 8906 6-STATION SELECTIVE WIRELESS MASTER.
No. 33A212. Mfg. List \$146.00. Net Each

## MASTER REMOTE SYSTEM

Use as many masters of above, according to master capacity, then add as many Remotes as you desire. Remotes can only talk on channel they are made for. Remotes on same channel can also converse with each other but all stations on that channel will hear conversation. Remotes match masters in oppecrance. Size $101 / 2^{\prime \prime}$ W. $\times 83 / 4^{\prime \prime} \mathrm{D}$. $\times 31 / 8^{\prime \prime} \mathrm{H}$. Wt. 7 lbs. No. 33A213. T-LCS901-Channel 1. Mfg. List $\$ 84.00$. Net....................... $\$ 49.00$ No. 33A214. T-LCS902-Channel 2. Mfg. List $\$ 84.00$. Net............................ $\$ 49.00$ No. 33A215. T-LCS903-Channel 3. Mfg. List $\$ 84.00$. Net........................ $\$ 49.00$ No. 33A216. T-LCS904-Channel 4. Mfg. List $\$ 84.00$. Net....................... $\$ 49.00$ No. 33A217. T-LCS905-Channel 5. Mfg. List $\$ 84.00$. Net..................................... $\$ 49.00$
No. 33A218. T-LCS906-Chonnel 6. Mfg. List $\$ 84.00$. Net...........

## NEW TALK-A-PHONE COMBINATION SYSTEMS (INTERMIX OF MASTER AND REMOTES)



Masters and kemores can be intermixed with up to a total of 10 masters. Masters only need be connected to power line.
Two types of Masters cre available for normal noise level or hi-volume units for noisy areas such os factories, etc.
Sub-Stations do not require connection to an electrical outlet. Start a system with 2 or more stations (at least one must be a Master). Add Masters or Subs later as needed. Works for pennies a day. Masters can call and corry on a conversation with any other station selectively, or with any group of stations simultaneously. Several separate 2 -way conversations can be held of the same time without interfering with one another. Sub-Stations function "non-privately"; thus Sub can reply of a distance, and Master can monitor Sub. If desired,' Sub can be exclusive to one or more Masters. Subs cannot originate calls or converse with each other.
Built-in "control enables Masters to be switched "private" or "non-private" Built-in control enables Masters to be and remain in position desired. Persons at "non-private", Masters can reply ot a distance without operating controls. When Master is switched "private", other stations cannot listen-in. Masters can receive swills from other Masters whether in "private" or "non-private" position. In this system, Sub-Stations are always "non-private".
Wiring requirements: for Master to Master use either 6210 for 5 station Master or 6226 for 10 station Master; for remote measure only length Master or nem remote back to nearest master using 6902 wire listed below. Master in vinyl clad grey and brush chrome. Remote in motching gray, grained baked enamel and brush chrome. Masters size: $101 / 2^{\prime \prime} \mathrm{W} . \times 883 / 4^{\prime \prime}$ grained baked enamel and brush chrome. Masters size: $71 / 2^{\prime \prime} \mathrm{W} . \times 83 / 4^{\prime \prime} / 2 \mathrm{D}, \times 27 / \mathrm{m}^{\prime \prime} \mathrm{H}$. $\mathrm{D}_{\mathrm{W} .} \times 4 \frac{31 / 8^{\prime \prime}}{} \mathrm{lbs}$.

T-CL-5 5-STATION NORMAL POWER MASTER. No. 33A219. Mig. List \$77.OO. Net Each..............
T-CL-10 10-STATION NORMAL POWER MASTER.
No. 33A220. Mfg. List $\$ 92.00$. Net Eoch..
T-AC-605 5-STATION HI-VOLUME MASTER.
No. 33A221. Mfg. List \$92.00. Net Eoch.......
T-AC-610 10-STATION HI-VOLUME MASTER.
No. 33A222. Mfg. List $\$ 107.00$. Net Each....
T-LR-2M DESK STYLE REMOTE for ony master.
No. 33 B250. Mfg. List $\$ 22.50$. Net Each.
$\$ 44.95$

T-LR-2R Same as Desk Remote except for flush wall mounting. Wall open ing $41 / 8^{\prime \prime} \mathrm{W} \times 41 / 8^{\prime \prime} \mathrm{H} \times 2^{\prime \prime} \mathrm{D}$. Stainless steel front panel measures 4 h $^{\prime \prime}$
square. Wt. 4 lbs.
No. 33 B 251 . Mfg. List $\$ 22.50$. Net Each.
$\$ 12.95$
6210 (5 PAIR) CABLE for interconnecting T-CL-5 oir T-AC-605 Masters. For use indoors or outdoors. Approx. O.D. Hi". Wt. per 100 ft .5 lbs No. 2A226. Mfg. List per ft. 27 c . Net Per Ft 6226 (13-PAIR) CABLE for interconnecting T-CL-10 or T-AC-610 Masters For indoor or outdoor use. Approx. O.D. 5/8". Wt. per 100 ft .12 lbs
No. 2A227. 2 . 24 c. Net, Per Ft............................................ 37 c
6902 (2-CONDUCTOR) CABLE for connecting T-LR-2M, or T-LR-2R to nearest Master. Approx. O.D. 10". Wt. per 100 ft .1 lb .
No. 2A228. Mfg. List per ft. $41 / 4 \mathrm{C}$. Net, Per Ft.

# ALL NEW BUILT-IN HOME INTERGOMS 

AM-FM RADIO OR AM RADIO PLUS INTERCOM THROUGHOUT THE HOUSE
REMOTE SPEAKERS FOR USE WITH MASTERS

(1) Full Transistor Master

(3) Deluxe AM Radio Master

(3) $\underset{\substack{\text { Remote } \\ \text { Rem. }}}{ } \mathrm{Hi}^{2} \mathrm{Fi}$

(3) 5-in. Full Range

HOUSEHOLD PRODUCTS

## FULL-TRANSISTOR FM-AM INTERCOM-RADIO MUSIC SYSTEM

## s101 33 MFG. $\$ 152.00$

REQUIRES ONLY 3 CONDUCTOR CABLE TO REMOTE SPEAKERS

- Up to 10 Remote Stations - 10 transistors, 9 diodes. - Large ceramic master speaker. - Easy to install.

2021B Hi-Fi Speaker Remote. 8" coaxial hi-fi accessory speaker for in side use. Exclusive "Talk-Listen" button for intercom and door-answering Al controls removable if desired and mount in separate bezel (furnished which can be mounted in two-gang wall box. Decorative piece furnished No. 36 Al 32. Shpg. wt. 6 lbs. Mfg. List $\$ 19.75$. Eoch
$\$ 13.17$
with Rough-in Kit
Never before so many features in a luxury set at a budget price! New all-call lever at the master lets you "page" every room, with speakers, at the same time. Each person can answer without walking to their remote speaker to operate the controls. Local-distance switch for best reception of both local and distant radio stations on master station. Adjustable automatic "Intercom-Override." Tuner adapts for backgrcund music only, intercom section can be left inoperative. ideal for backprafessional offices. Economical to use... operates on no more current than a large electric clock. Master panel controls include 10 station selector switches talk-listen witch, volume control, tone control, master volume control, Phono-AM-FM tatk-listen switch, separate AM and FM tuning controls. Master unit oly Phono-AM-FM selector in Prame. Use with your choice of remote type units listed right. Choice of two No. 36C146-2 Model 2067. Egg Shell White \& silver Anadired. Net... \$101.33 No. 36C135-2 Model 2068. Colonial Copper \& Copper Anodized. Net


## (2) 2053 AND 2054 AM RADIO MASTERS

Contains only AM Radio and permits using up to 8 remote stations. Other
functions are the same Specifications:
 $834^{\prime \prime}$ H. $15 / /^{\prime \prime} \mathrm{D}$. Requires length 3 cond. wire to each remiote. Comes com Mote with rough-in box See right for remote
Madel 2053 Silver anodized Deluxe AM-Radio Master.

Na. 36 C 766 . Mf
LTON SURFACE MOUNT ELECTRONIC CHIME
Rich riew wolnut wood-grain finish cover. Traditional styling. Basket-weave grille cloth and gold ornoments. Adjustoble for eight or 4 notes for front door, ! note for rear door, different note for third door. $814^{\prime \prime \prime}$ wide $\times 12^{\prime \prime \prime}$ high
$\times 33 / 8^{\prime \prime}$. Transformer included $\times 33 / 8$ Transformer included.
No. $36 \mathrm{~A} 104 . \mathrm{Mtg}$. list $\$ 41.95$. Net Each
$\$ 25.17$
L73 "ELECTRONIC" bUILT-IN DOOR CHIME
Connects directly with Nutone Radio-Intercom Systems, 1 ,
laying chime tone to all laying chime tone to all rioms with speaker, or will operote independently as chime when intercom system is turned off. Two notes front door, one note rear and odjustable volume
control. Gold anodized bezel with
 101.0 B tronsformer included. Mfg. list $\$ 18.95$ squal wi. ${ }^{\times}$lbs.
$\$ 11.37$

## DELUXE NUTONE FULL-TRANSISTOR INTERCOM-RADIO MUSIC SYSTEM


(1) FN-AM Master, Walnut Frome
$\$ 53.79$
\$53.79
 No. 36A124. Nef Each

(3) 5" Wide Range

(4) 8-in. Potio Speaker

5) Door

Completely new 11 transistor 5 diode AM-FM master with AFC, provides
drift-free performance on FM with high fidelity response through large $6 \times 9^{\prime \prime}$ drift-free per
oval speaker.
Master has volume control; tone contral; selector switch for phono, AM, FM
FM.AFC; master volume control intercom FM.AFC; master volume control; intercom master tolk-listen switch; with arate tuning dials for AM and FM. Electric doar thime listen switch; sepbe added to sound clear signols throughout entire house.
Extremely versatile when incorporated in system of up to 16 remotes listed has function switch which permits it to shut off radio but retoin its intercom feolure. Two tolk-listen switehes ore provided one for answering intercom side remates ond moster, and one for onswering door remote. A volume position permits onswering at a distance persomal listening level. Standby tion by using 8 -wire coble listed of right, permits contimplified installocoble from remote to remote without returting to moster. Low power consurption and low heot permit economical 24 hour a doy operotion.

[^5]
## REMOTE SPEAKERS FOR USE WITH TRANSISTOR MASTERS

(3) Model 2572 Hi Fi 8" Inside Speoker. "Break-away control ponel can be emoved for mounting as a separate remote control. Includes "snap-in" panel to replace the removed control-pancl on large speakers. Rotary oom intercom function switch and separate tolk-listen levers for room-to. oom infercom and for doar answering. Bezel frame furnished for mounting Shpg wh. 7 lbs.
No. 36C158 Net Each
$\$ 18.01$
(3) Model 2570 Wide Range $5^{\prime \prime}$ Inside Speaker. Desert sond
controls. Talk-listen levers for inside and for door onswering.
No. 36C178. Net Each
$\$ 11.18$
(4) Model 2573 Weatherproof Aluminum Patio Speaker. Includes an 8-wire remote-control unit which mounts in a standard two-gang wall box supplied with rough-in box less studding woll box. No. 36Cl76.

## Net Each

$\$ 18.00$
(3) Model 2571 Door Speaker. Needs no switch. Inside speakers cantrol calls.

Mounts in wall, ceiling or soffit. Block ond gold anodized finish with rough-
in box. Shpg, wt. 8 lbs.
No. 36 C 179 . Net Each
\$8.51
8-Conductor Cable,
No. 24225 . Per Ft ..

## BEGT BUYS IN FANON INHE:GOM SEIS!



## DELUXE 2-STATION WIRED INTERCOM

 high gain, push-puli amplifier for quality sound. Attractive high impoct styrene cabinets. Pilot ight on Master to show when system is on. Buith-Talk-Lock Ac power supply. position for dictate. setpt Separate valume control on Mev when system witch. $21 / 2^{\prime \prime}$ speakers. Smartly finMaster On-Off switch. $21 / 2$ shed cabinets, overall size: $43 / 8 \times 51 / 8 \times 11 / 2^{\prime \prime}$. Weight with 50 ft . of coble $21 / 2 \mathrm{lbs}$.No. 36A360. Model 1600
$\$ 15.95$
2-Station System.................. Remote
$\$ 15.95$
No. 36A362. Model 161. Outdoar Remote
No. 36A363. Model 162. Indoor Remote..


2-STATION WIRE-LESS INTERCOM

For use on $117 \mathrm{~V} . \mathrm{AC}$. No wirina required other than standard 117 V . AC house sockets. Pilot light on Moster shows system is on. Built-in 117 V . AC power supply. Talk-Listen switch with Talk-Lock position on each master. Valume control on each master, seporate On-Off switch. Smartly finished in beige with walnut trim. $21 / 2^{\prime \prime}$ speakers. Overall size of each unit $5^{\prime \prime} \times 41 / 4$ " $\times 13 / 4$. Weight of system 4 . tional
\$29.95
No. 36A364. Model 1640 2-Storion System. Model 1641 . Single
No. 36 A365. Eoch.


## 2-CHANNEL WIRELESS 2-STATION INTERCOM

Provides 2 chonnels of communicotions so units may Provik to one unit independent of other units that are added (4 units). Two buttons ore provided: 1 for channel A (on 225 KC ) ; 1 for channel B (on 160 KC . Each chonnel has exclusive lock-out filter that prevents cross-talk between units when used in close proximity. No intollation required. simply plug into AC outlet on same power line. Can be used between buildings or moved buttons, tolk-listen-lock to trols: A and B channel buttons, tolk-listen-lock to dictate switch, on-off volume control. $91 / 2 \times 4 \times 21 / 2$ Nor 36A366. Model FIW-2. $\$ 59.95$ No. $36 A 367$. FIW-1 Single Station tor abave.... $\$ 31.50$

## E-STATION MASTERRTO-MASHER OR

 MASTER-TO-REMOUE MUERGOMSSINGLE 5-STATION MASTER
Utro-sensitive intercom with 3 -transistor circuit with high goin, push-pull omplifier for quality sound. Contained in attractive high impoct styrene cabinet. Pilot light shows when unit is on. Built-in dicto. Ac power supply. Taik-Listen switch with Talk-Lock position Volume control, On-Off circuit to signal moster even when system is ofs. with Model $161^{\prime}$ Outdoor switch. Smortly finisned. $21 / 2$ speoker. Each of the four Remotes may be Remote and Model 162 ndorall size $43 / 8 \times 51 / 8 \times 11 / 2^{\prime \prime}$ Weight $1 / 214$. spoken to individually 605 .
No. 36A361. Model 1605. ADDITIONAL UNITS FOR USE WITH ABOVE MASTER $\$ 5.25$ No. 36A362. Model 161. Outdoor Remote No. 36A363. Model 162. Indoor Remote..

## ALI TRANSISTOR MOME INTERCOM SYSTEM



COMPLETE 5-STATION SYSTEM


HIST PRIGE $\$ 89.95$
$\$ 5.85$

- Requires no AC
- Requir
power.
- Run wire only to
each remote.
- Operates for months
on 9 V . battery.
- Absolutely-Ho-shock or fire hazard.


A completely trensistorized flush-wall intercom system. Provides room to oom communicasion from moster to remotes or from remotes to remotes. Additional feoture permits one or more rooms to "monitor" any other room Ar rooms for "baby sitting" listening in on a sick patient, etc.
or rooms for "oaby sitting fed by the fact that when master "talk-listen" Long battery life is "ssured is no current drain. However any remote may switch is in "stondby" there is ho his "talk-listen" switch which couses o "beep" tone of the master.
beep" tone of the master. master panel enables the master to select any Five selectar switches ofe stations by setting the proder switches to either "on or several or "monitor." Complete system: master, 3 indoor remotes, door remote, 200 ft . 3 -conductar cable, all rough-in material. (Less bot ery). 5 th , 200 . Stition permits additional remote to be odded se below. Sth switch position permits $\$ 53.85$

MODEL 1605

## ${ }^{95}$ EACH

## 7 AND 13 STATION MASTER- 5

 TO-MASTER or MASTER: TO-REMOTE INTERCOMS 6 ather stations in All-Master or Mastes to Remote system One selector position and Master can be connected to PA system for poging and "hands-free" talkbock reply from a speaker in PA system ta Model PR-15 paging relay is required). Cable requirement: moster-r-Master. wire plusNo. 36 A368. Madel FI-7. Master Unit, Each.解 2 PR-15 Paging Relays to engage paging/t$\$ 43.50$

Remote Stations for use with F1-7 and FI-13. Same size and style as Master Remote can be made private or non-private independently of one another $\$ 9.95$
desired. Shpg. Wt. 4 lbs . No 36 A370. Model FIR, Remote Unit............. Fi Serles Mosters. Mounts at Special Paging/Talkbock Relay for use with fi 2 selectors on F1-13. Cable requirements from Master to PR-15 is I wire plus one wile, shielded. $\$ 21.50$
No. 36 A371. PR-15.
$\$ 21.50$
 2.18
1.52

[^6]1.96
1.12
1.74
1.32
1.31 1.31
1.10 1.10
1.51

## RCA BLACK \& WHITE BLACK PICTURE TUBES TV PICIURE Worst

al All materials and parts are new except for the envelope to re-use to meet the spected prior to retinal. To insure safe standard or the rival shipped via express only
KOR PICTURE TUBES

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25.00

25.00 |  |  |
| :--- | :--- |
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| $8 A 43$ | 2FBP22 |
| $8 B 42$ | 21FJP22 | $\qquad$ 54 114.66 TUBES

RCA BLACK \& WHITE SILVERAMA Type it. Net





$\begin{array}{lll}22.17 & 8 A 27 & 21 Z P 4 C \\ 18.67 & 8 \text { AR } & 212 A H P 4 / A U P 4 \\ 0.67 & \text { 8A39 } 23 \text { ABPA/AN/BKP4 }\end{array}$ | 3.67 | $8 A 31$ | $23 B L P A / A N / B K$ |
| :--- | :--- | :--- | :--- |
| 30.67 | 8 Al | $23 L P 4 / B N / H P 4$ | $\begin{array}{ll}8 A 32 & 23 E P 4 \\ 8 A 37 & 23 F P 4 A / K P / M P /\end{array}$ WP

2AAEP/AN/DP/ZP

$24 C P 4 B / O P / T P /$ | wt. |
| :---: |
| cts. |
| 26 |
| 27 |
| 30 |
| 26 |
| 26 |
| 31 |
| 31 |
| 36 |
| 44 |
| 43 |
| 43 |
| 3 |
| 3 | | 19.60 |  | MFA AEP/AN/DP/ZP4 | 39 | 25.0 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 22.33 | $8 A 30$ | $24 A P 4 B / Q P / T P /$ | 39 | 25.0 | $8 A 18$ AO/CU

$8 A 21$ 21AVP4C/AUPA
21CBP4A/FLP4A
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satisfaction!

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| 1 | $8 A$ |
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8467
8471
$8 A 73$
$8 A 90$
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## DELUXE 2-STATION <br> WIRED INTERCOM

## \$15\%

Ultro-sensitive . . has a 3-tronsistor carcuit with high gain, push-pull amplifier for quality sound. Attractive high impoct styrene cabinets. Pilot light on Master to show when system is on. Built-in 117 V position for dietote Beeptone clreuit wo signal Master position for dictote. Beeptone circuit to signal Master even when system is off. Separote volume control on Master On-Off switch. $21 / 2^{\prime \prime}$ speakers. Smartly fin-
ished cabinets, overall size: $43 / 8 \times 51 / 8 \times 11 / 2^{\prime \prime}$. Weight with 50 ft . of cable $21 / 2 \mathrm{lbs}$.

No. 364360 . Model 1600
2-Station System.
No. 36A362. Model 161. Outdoor Remote
$\$ 15.95$
No. 36A363. Model 162. Indoor Remote

## 2-Station WIRE-LESS INTERCOM

For use on 117 V . AC. No wirina required other than standard 117 V. AC house sockets. Pilot light on Moster shows system is on. Built-in 117 V . AC on moster supply. Tolk-Listen switch with Tolk-Lock posifion on each master. Volume control on each master, separote On-Off switch. Smartly finished in beige with separote On-Oft switch. Smartly finished in beige with
wolnut trim. $21 / 2^{\prime \prime}$ speakers. Overall size of each whit $5^{\prime \prime} \times 41 / 4^{\prime \prime} \times 13 / 4^{\prime \prime}$. Weight of system 4 lbs. Additional Single station units can be odded (Model 1641 below).
No. 36A364. Model 1640 2-Station System $\$ 29.95$ Model 1641 . Single Station, for use with above.



## 2-CHANNEL WIRELESS \$ 095 2-STATION INTERCOM

Provides 2 channels of communications so units may talk ta one unit independent of other units that are odded ( 4 units). Two butfons are provided. for channel A (on 225 KC ) ; 1 for channel B (on 160 KC ). Each chonnel has exclusive lock-out filter that prevents cross-tolk between units when used in close proximity. No intallation required. . simply plug into AC outlet on same power line. Can be used between buildings or moved from room-to-room. Controls: $A$ and $B$ channel buttons, talk-listen-lock to dictote switch, on-off volume contral. $91 / 2 \times 4 \times 21 / 2$ For desk or wall. Beige finish. Shpg. wt. 4 lbs . No. 36A366. Model FIW-2.
2 station.
$\$ 59.95$
No. 36 \$367. FIW-i Single Station for above....\$31.50

## E-STATION MASTER-TO-MASHIA OR MASTER-TO-REMOTE INHEIGOMS

## SINGLE 5-STATION MASTER

Ultro-sensitive intercom with 3 -tronsistor circuit with high goin, push-pull amplifier for quality sound. Contained in attractive high impoct styrene cobinet. Pilot light shows when unit is on. Built-in 117 V . AC power supply. Tolk-Listen switch with Talk-Lock position for dictate. Beeptone circuit to signal master even when system is off. Volume control, On-Off switch. Smortly finished. $21 / 2^{\prime \prime}$ speaker. For use with Model 161 Oufdoor
Remote ond Model 162 Indoor Remate. Eoch of the four Remotes may be Remate and Model 162 Indoor Remate. Eoch of the four Remotes may be
spoken to individually Overall size $43 / 8 \times 51 / 8 \times 11 / 2^{\prime \prime}$. Weight $11 / 2 \mathrm{lbs}$.
 Moster Unit, Eoch

ADOITIONAL UNITS FOR USE WITH ABOVE MASTER
No. 36A362. Model 161. Outdoor Remote
No. 36 A363. Model 162. Indoor Remote.

## ALL TRANSISTOR HOME INTERCOM SYSTEM



[^7]
## MODEL <br> 1605

## 195 <br> EACH

## TELEPMONE AMPLIFIER

## ALLOWS ROOM FULL OF PEOPLE TO HEAR AND TALK ON SAME TELEPHONE



Allows everyone in the room to heor or speak over the phone with perfect clority A voluable osset and convenience in business offices for conference colls, in shops, or offices to free your hands for other tosks while you tolk, in
homes, sick rooms, kitchen, bedroom halmost everv homes, slick rooms, kitchen, bedroom
almost everywhere
Completely porttable, transistor and battery powered, requires no instollation of any kind. In use, the telephone handset is ploced on top the unit much like returning the hondset to the normol telephone crodie. Automotically the Hransistor amplifier turns on providing room volume for everyone to hear Has extension specker ond odjustable volume control. When conversotion is completed the phone is simply returned to its normol position. Cose is dur-
oble break-resistant oolsstyrene tostic able break-resistont polystyrene plastic.

25 FOOT TELEPHONE EXTENSION CABLE


## CONVENIENT IN THE HOME OR OFFICE

Standord style 4 prong plug and socket os used with regular telephones.
Fully ossembled with durable re sistant plastic 25 ft . 4 -wire cord. Fine for telephone-intercoms etc. Shipping wt. 1 pound. No. 2 B 209.
Speciol Each

TELEPHONE TYPE PLUGS AND JACKS


Patterned like popular "telephone plugs" and interchangeable with them. Standard wire type, with code marked screw infercom systems, phones, etc. Surface intercom systems, phones, etc. Surface
iack, for exposed wiring, mouns with 2 screws. Flush iack, for concealed wiring, trews fittings and wall plate for standard electrical outlet box. (Box not supplied). electrical outhet box. (Box not supplied).
Specify lvory or Brown.
89
178275. Surface Jack

89 c
$.59 e$
.51 .79

## BELDEN COILED CORDS FOR TELEPHONES



Spade terminals and metal card clamp at
toched, vinyl insulated.
$\begin{array}{cccc}\text { Stk. } & \text { Beld } & & \\ \text { No. } & \text { No. } & \text { Cond. Length } \\ 29 B 244 & 8495 & 3 & 10^{\prime \prime} \text { to } 41 / 2^{\prime \prime} \\ 298245 & 8494 & 4 & 10^{\prime \prime} \text { to } 4 / 2^{\prime \prime}\end{array}$
Net Eoch $\$ 1.31$ TELEPHONE PICK-UP COIL FOR RECORDING

HAS JIFFY RUBBER Fits all telephones - picks up both sides of conversations. 35
shielded coble. Only $11 / 2^{\prime \prime}$ long. coble. Only No. 111 C 253 . Import Spec. 89 c


WHEELER SOUND POWERED TELEPHONE HANDSETS
Two to 12 may be used in or outdoors. No fire or shock hozords. No botteries used! 2 -woy talking up to 25 miles over 2 -conductor twisted wire os listed below.
Impact resistant handset with $31 / 2 \mathrm{ft}$. rubber cable and rubber insulated ${ }^{\text {clips }}$ for quick connections. No. 37 A337. Model SPT102. Net
$\$ 12.62$ No. 2C192. 2-Conductor wire: $100 \mathrm{Ft} \ldots . . . . .99 \mathrm{c} \quad 1000 \mathrm{Ft} .$.
. $\$ 8.75$

## BATTERY-OPERATED TELEPHONES 3 POPULAR STYLES FOR DEPENDABLE 2-WAY COMMUNICATIONS MODERN TELEPHONE SET

DIAL NUMBER.


Talk and hear-loud and clear-anywhere . . indoars or out with this exciting new phone set. Provides exceptional voice transmission for hundreds of uses--perfect for room to roum, house to goroce form use, etc Unique dial automatically lights when receiver is litted. Diol, signal bell at other end rings until phone is answered. Made of towah hiah-impact styrene. Complete with 25 ft cable and simple instruztions. Shpo. wt 3 lbs No. 37A449. Less Batteries
$\$ 6.88$
No. $37 A 450$. Bottery Kit. 14 " $D$ " Floshlight Celis)
56
HAND PHONE SET

## WITh SIGNAL

## BUZZERS

Powered by self-contained flashlight batteries 1935 Eveready or equivalent) and operated over two-conductor wire for distances up to I mile with exceptionally fine speech reception, telephone. Each phone is equipped with built-in push-button signal buz zer Ideal for TV installers, construction gangs, portable communication syshomes, for emergency uses, etc, so simple in operation it can also bo used by children for ploy.
Molded of break-resistant high im poct styrene. Complete with 25 ft coble. Shpo. wt. 2 lbs.
Less Botteries. Per Poir
(1) $7 ?$

No. 37A383. Battery Kit. Eact. 28 c No. 2B19. 2-Cond. Vinyl Covered Wire for either phone set.
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BELL RINGS WHEN PHONE IS DIALED!
Nationally advertised Brumberge phones of high-impoct block styrene Provides amazing results for the surregular telephones with excellent voice reception. Convenient to use Just pick up receiver, dial and signal bell rings at other and until phone is onswered. Fine for house to parage house to house room to room garage, opplicotions. Complefe with 25 ft cable and simple instructions. Shpg. wt. 4 lbs. Less Botteries,
No. 37 Big5. Per Pair.
No. 21Bi71. Battery Kit. Each 5Ef


## WORNER ELECTRONIC RECEPTIONIST

SOUNDS CHIME WHEN LIGHT BEAM IS INTERRUPTED

Compact single unit with exciter lamp, phota-cell tube, and twa lenses. Prajects o beam of light across any enreflects beom back into photocell Breaking of this beam by any person or moving objiect operates built-in relay which in turn sounds chime furnished.
Perfect for professional offices, stores, factories, homes-anywhere
Grey hommertone metal cose, size only $83 / 8 \times 61 / 2 \times 25 / 8^{\prime \prime}$. For 115 volts, 60 cy. AC. Shpg, wt. 8 lbs. 948.88
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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 024 | \$2.40 | \$1.18 | \$1.06 | \$0.94 | 6AV6 \$1 | 78 | 71 | 63 | 6F6G | \$5.80 | \$2.84 | \$2.56 | \$2.27 | \$ | \$2.35 | \$1.15 | 1.04 | 92 |
| O24G | 2.45 | 1.20 | 1.08 | \$0.94 | 6AW8A $\quad 3.60$ | 1.76 | 1.59 | 1.41 | 6FH5 | 3. | 1.54 | 1.39 | 1.23 | 12AV5GA | 4.50 | 2.21 | 1.98 | 1.76 |
| 1B3GT/1G3G |  | 1.35 | 1.21 | 1.08 | 6AX4GTB $\quad 2.50$ | 1.23 | 1.10 | . 98 | 6FV6 | 4.00 | 1.96 | 1.76 | 1.57 | 12AV6 | 0 | 78 | 1 | 63 |
| 1K3/1J3 | 2.75 | 1.35 | 1.21 | 1.08 | 6AX5GT 3.25 | 1.59 | 1.43 | 1.27 | 6FY5/EC97 | 2.75 | 1.35 | 1.21 | 1.08 | 12AV7 | 3.40 | 1.67 | 1.50 | 1.33 |
| $1 \mathrm{R5}$ | 3.25 | 1.59 | 1.43 | 1.27 | 6AY3B 2.90 | 1.42 | 1.28 | 1.14 | 6GB5 | 3.80 | 1.86 | 1.68 | 1.49 | $12 \mathrm{AX4}$ |  | 1.25 | 1.12 | 1.00 |
| 155 | 3.05 | 1.49 | 1.35 | 1.20 | 6AZ8 5.50 | 2.70 | 2.43 | 2.16 | 6GF7 | 4.8 | 2.38 | 2.14 | 1.90 | $12 A Y 7$ | 4.85 | 2.38 | 2.14 | 1.90 |
| 174 | 3.05 | 1.49 | 1.35 | 1.20 | 6BA6 1.90 | 93 | . 88 | . 75 | 6GH88A | 3.20 5.60 | 1.57 2.74 | 1.417 | 1.25 2.20 | 12Az7A | 2.85 | 1.40 | 1.26 | 1.12 |
| 144 | 3.05 | 1.49 | 1.35 | 1.20 | $\begin{array}{ll}\text { 6BA7 } & 5.85 \\ 68 A 8 A & 4.00\end{array}$ | 2.87 1.96 | 2.58 1.76 | 2.29 | 6GJ5A | 3.60 | 1.89 1.89 | 2.70 | 1.51 | $1284 A$ | 3.05 | 1.49 | 1.35 | 1.20 |
| 1 l | 2.65 2 | 1.30 | 1.17 | 1.04 | $\begin{array}{ll}\text { 6BA8A } & 4.00 \\ \text { 6BC5 } & 2.25\end{array}$ | 1.96 1.10 | 1.76 .99 | 1.57 .88 | 6GM5 | 3.85 3.05 | 1.89 | 1.75 | 1.20 | 12 la | 1.60 | . 78 | . 71 | . 63 |
| $1 \times 2 \mathrm{~B}$ | 2.90 | 1.42 | 1.28 | 1.14 | 6BC8 3.75 | 1.84 | 1.65 | 1.47 | 6GM6 | 2.75 | 1.35 | 1.21 | 1.08 | 12BD6 | 2.35 | 1.15 | 1.04 | . 92 |
| 2AF4B | 3.80 | 1.86 | 1.68 | 1.49 | 6BD6 2.35 | 1.15 | 1.04 | . 92 | 6GW8/ECL86 | 63.05 | 1.49 | 1.35 | 1.20 | 12 l | 2.10 | 1.96 1.03 | 86 | 82 |
| $2 A V 2$ | 2.20 | 1.08 | . 97 | . 86 | 68D11 5.05 | 2.47 | 2.23 | 1.98 | $6 G \times 7$ $6 G Y$ | 3.60 | 1.76 2.25 | 1.59 | 1.81 | 12BH7A | 2.90 | 1.42 | 1.28 | 1.14 |
| ${ }_{2} \mathbf{2 B N 4}$ | 2.75 | 1.35 | 1.21 | 1.08 | $\begin{array}{ll}\text { 6BE6 } & 2.40 \\ 6855 & 335\end{array}$ | 1.18 | 1.48 | . 31 | ${ }^{6} \mathrm{H} 6$ | 4.30 | 2.11 | 1.90 | 1.69 | 12BK5 | 3.75 | 1.84 | 1.65 | 1.47 |
| $2 \mathrm{CY5}$ | 3.30 4.50 | 1.62 2.21 | 1.46 1.98 | 1.29 | 6BF5  <br> 6BF6 3.35 <br> 1.95  | 1.64 .96 | 1.48 | . 76 | 6HB7 | 3.35 | 1.64 | 1.48 | 1.31 | 12BL6 | 2.95 | 1.45 | 1.30 | 1.15 |
| 2 l | 3.85 | 2.21 | 1.98 | 1.51 | 6BG6G 6.10 | 2.99 | 2.69 | 2.39 | 6HG5 | 2.70 | 1.32 | 1.19 | 1.06 | 12BQ6GTB | 4.20 | 2.06 | 1.85 | 1.65 |
| $3{ }^{3}$ | 3.20 | 1.57 | 1.41 | 1.25 | 6BH6 2.75 | 1.35 | 1.21 | 1.08 | 6HJ5 | 5.80 | 2.84 | 2.56 | 2.27 | 12BR7 | 3.05 | 1.49 | 1.35 | 1.20 |
| 3 AL5 | 1.95 | . 96 | . 86 | . 76 | 68H8 4.00 | 1.96 | 1.76 | 1.57 | 6HK5 | 3.90 | 1.91 | 1.72 | 1.53 | $12 \mathrm{BT3}$ |  | 1.40 | 1.26 | 1.12 |
| 3 AU6 | 2.20 | 1.08 | . 97 | . 86 | $68 \mathrm{HH11} 3.90$ | 1.91 | 1.72 | 1.53 | 6H25 | 5 | 2.70 | 2.43 | 2.16 | $12 \mathrm{BY7}$ A | 3.05 | 1.49 | 1.35 | 1.20 |
| 3 3V6 | 2.20 | 1.08 | 97 | . 86 | 6816  <br> $68 K 4 B$ 2.75 <br> 85  | 3.70 | 1.21 | 2.08 | $6 J 5$ | 3.70 | 1.81 | 1.63 | 1.45 | 12BZ7 | 4.15 | 2.03 | 1.83 | 1.63 |
| $3 \mathrm{BC5}$ | 2.45 | 1.20 | 1.08 | . 96 | $\begin{array}{ll}\text { 6BK5 } & \\ 685\end{array}$ | 1.72 | 1.54 | 1.37 | 6J5GT | 3.70 | 1.81 | 1.63 | 1.45 | 12CA5 | 2.85 | 1.40 | 1.26 | 1.12 |
| $38 N 6$ 3 BU8 | 3.65 | 1.74 | 1.57 | 1.39 | 6BK7B 3.55 | 1.74 | 1.57 | 1.39 | 6J6A | 2.65 | 1.30 | 1.17 | 1.04 | 12CU5/12C5 | 2 | 1.35 | 1.21 | 1.08 |
| $3 \mathrm{BZ6}$ | 15 | 1.05 | . 95 | . 84 | 6BL7GTA 4.40 | 2.16 | 1.94 | 1.72 | 617 | 5.00 | 2.45 | 2.21 | 1.96 | 12 l |  | 1.35 | 1.215 | 1.08 |
| 3 CA 3 | 3.20 | 1.57 | 1.41 | 1.25 | $6 \mathrm{6L8}$ 6 $\quad 3.75$ | 1.84 | 1.65 | 1.47 | 6J10 | 5.00 | 2.45 | 2.215 | 1.96 | $120858 /$ |  | 1.27 |  |  |
| $3 \mathrm{3CB6}$ | 2.15 | 1.05 | . 95 | . 84 | $\begin{array}{ll}68188 \\ 68 N 4 A & 2.90\end{array}$ | 1.42 | 1.28 | 1.14 | 6JJ6A | 6.00 | 2.94 | 2.65 | 2.35 | $12 \mathrm{GW6}$ | 4.25 | 2.08 | 1.87 | 1.67 |
| $3 C S 6$ $3 C Y 5$ | 2.75 | 1.35 | 1.21 | 1.08 | 6BN4A | 1.47 | 1.32 | 1.18 | 6JH6 | 2.45 | 1.20 | 1.08 | 96 | 12057 | 4.05 | 1.98 | 1.79 | 1.59 |
| 3CY5 | 3.5 | 1.84 | 1.65 | 1.61 | 6BN8 3. | 1.54 | 1.39 | 1.23 | 6JM6 | 4.15 | 2.03 | 1.83 | 1.63 | 12DT8 | 3. | 1.74 | 1.57 | . 39 |
| 30k6 | 2.30 | 1.13 | 1.01 | . 90 | 6BQ5 2.65 | 1.30 | 1.17 | 1.04 | 6JN6 | 3.85 | 1.89 | 1.70 | 1.51 | 120 W 7 | 3.05 | 1.49 | 1.35 | 1.20 |
| 3DT6A | 2.35 | 1.15 | 1.04 | . 92 | 6BP6GTB 4.10 | 2.01 | 1.81 | 1.61 | 6J56 | 7.30 | 3.58 | 3.22 | 2.86 | 12 l |  | 1.52 | 1.38 | 1.14 |
| $3 \mathrm{FH5}$ | 3.25 | 1.59 | 1.43 | 1.27 | 6BP7A $\quad 3.75$ | 1.84 | 1.65 | 1.47 | 6JT6A | 4.95 | 2.43 | 2.18 | 1.94 |  |  |  |  |  |
| 3GS8 | 3.55 | 1.74 | 1.57 | 1.39 | 6BR8A 3.85 | 1.89 | 1.70 | 1.51 | 6JZ8 | 3.55 | 1.74 | 1.57 | 1.39 | 12 HC | 100 | . 91 | 1.72 | . 53 |
| 3 HQ5 | 3.85 | 1.89 | 1.70 | 1.51 | 6BS3A $\quad 3.30$ | 1.62 | 1.46 | 1.29 | ${ }_{6 K 7} 6 \mathrm{~K} 7$ |  | 2.45 | 2.21 | 1.96 | 12 JB6A | 5.65 | 2.77 | 2.49 | 2.21 |
| $3 \mathrm{C4}$ | 3.35 | 1.64 | 1.48 | 1.31 | 6BS8 | 1.84 | 1.65 | 1.47 | $6 \mathrm{KE8}$ | 5 | 2.62 | 2.36 | 2.10 | $12 \mathrm{JT6A}$ | 4.95 | 2.43 | 2.18 | 1.94 |
| 354 | 3.40 | 1.67 | 1.50 | 1.33 | 6808  <br> $68 W 4$ 3.40 <br> 685  | 1.67 1.35 | 1.51 | 1.08 | $6 \mathrm{KMM6}$ | 8.20 | 4.02 | 3.62 | 3.21 | 12L6GT | 3.55 | 1.74 | 1.57 | 1.39 |
| 3V4 4 BC 8 | 2.60 | 1.27 | 1.15 | 1.02 | $\begin{array}{ll}68 W 4 \\ 68 X 7 G T & 5.75\end{array}$ | 1.35 2.74 | 2.24 | 1.08 2.20 | 6KR8 | 4.25 | 2.08 | 1.87 | 1.67 | 12547 | 4.40 | 2.16 | 1.94 | 1.72 |
| $4 \mathrm{BQ7A}$ | 4.15 | 2.03 | 1.83 | 1.63 | 6BY6 2.75 | 1.35 | 1.21 | 1.08 | $6 \mathrm{KU8}$ | 80 | 2.35 | 2.12 | 1.88 | 12547 GT | 4.40 | 2.16 | 1.94 | 1.72 |
| 4BZ6 | 2.10 | 1.03 | . 93 | . 82 | 68Y8 2.70 | 1.32 | 1.19 | 1.06 | $6 \mathrm{KV8}$ |  | 2.87 | 2.58 | 2.29 | 12567 | 4.30 | 2.11 |  |  |
| $4 \mathrm{4CB6}$ | 0 | 1.08 | 97 | . 86 | 6826 | 1.84 | 1.63 | 1.47 | $6 \mathrm{KZ8}$ | 3.40 | 1.67 | 1.50 | 1.33 | 12567 | 4.00 | 1.96 | 1.76 | 1.57 |
| 4DK6 | 2.55 | 1.25 | 1.12 | 1.00 | $6 \mathrm{BZ7} 3.75$ | 1.84 | 1.65 | . 6.47 | 6 6 6 | 8.80 | 4.31 | 3.88 | 3.45 | 12 SK 7 GT | 4.00 | 1.96 | 1.76 | 1.57 |
| 4DT6A | 2.10 | 1.03 | 1.93 .59 | 1.82 | $\begin{array}{ll}684 & 1.75 \\ 6 \mathrm{C5} & 5.35\end{array}$ | 2.86 | 2.36 | 2.10 | ${ }^{6 L 6 G G C}$ | 4.55 | 2.23 | 2.01 | 1.78 | $12 \mathrm{SL7GT}$ | 3.55 | 1.74 | 1.57 | 1.39 |
| 4GX7 | 3.60 2.95 | 1.76 | 1.59 | 1.415 | $\begin{array}{ll}6 C 5 & 5.35 \\ 6 C 9 & 5.50\end{array}$ | 2.62 | 2.43 | 2.16 | $6 \mathrm{L7}$ | 6.95 | 3.41 | 3.06 | 2.72 | $125 N 7 G T A$ | 2.80 | 1.37 | 1.23 | 1.10 |
| 4HA7 | 3.05 | 1.49 | 1.35 | 1.20 | $6 \mathrm{ClO} \quad 3.70$ | 1.81 | 1.63 | 1.45 | 6LB8 | 4.70 | 2.30 | 2.07 | 1.84 | 12507 dit |  | 1.84 | 1.65 |  |
| $4 \mathrm{HC7}$ | 3.05 | 1.49 | 1.35 | 1.20 | 6CA4 $\quad 2.30$ | 1.13 | 1.01 | . 90 | 6LE8 | 5.55 | 2.72 | 2.45 | 1.37 | 12 V GGT | 3.75 | 1.84 | 1.65 | 1.47 |
| 4HT6 | 2.55 | 1.25 | 1.12 | 1.00 | 6CA7 5.35 | 2.62 | 2.36 | 2.10 | $6 \mathrm{6LM8}$ | 4.5 | 2.03 | 1.83 | 1.63 | 12 W GGT | 3.75 | 1.84 | 1.65 | 1.47 |
| 5 AM8 | 4.05 | 1.98 | 1.79 | 1.59 | 6CB5A 9.35 | 4.58 | 4.12 | 3.67 | 6 6M1 | 4.5 | 2.23 | 2.01 | 1.78 | $12 \times 4$ | 1.95 | 96 | . 86 | 76 |
| 5AN8 | 4.45 | 2.18 1.18 | 1.96 | 1.74 | 6CB6A 6CD6GA | 1.03 2.70 | 2.93 | 2.16 | 6N7 | 5.05 | 2.47 | 2.23 | 1.98 | 13 EM7 | 4.85 | 2.38 | 2.14 | 1.90 |
| 5AR5/GZ34 | $4 \begin{array}{r}2.40 \\ 4.25\end{array}$ | 1.18 2.08 | 1.87 | 1.94 | 6CF6 2.75 | 1.35 | 1.21 | 1.08 | 6, 7 | $5.50{ }^{\circ}$ | 2.70 | 2.43 | 2.16 | $13 \mathrm{GF7}$ | 4.70 | 2.30 | 2.07 | 1.84 |
| 5AS4A | 3.45 | 1.69 | 1.52 | 1.35 | 6CG7/6FQ7 2.35 | 1.15 | 1.04 | . 92 | 654A | 2.35 | 1.15 | 1.04 | . 92 | 158DII |  | 1.49 | +1.15 | 1.90 |
| 5 54T8 | 3.80 | 1.86 | 1.68 | 1.49 | 6CG8A $\quad 3.10$ | 1.52 | 1.37 | 1.22 | 6SA7 | 4.40 | 2.16 | 2.64 | 2.73 | 17 AX4GTA |  | 1.49 | 1.35 | 1.20 |
| $5 \mathrm{5AV8}$ |  | 1.89 | 1.70 | 1.51 | 6CH8 | 2.74 | 1.47 | 1.49 | ${ }_{6 S C 7}$ | 4.40 | 2.16 | 1.94 | 1.72 | 17 C 5 | 2.20 | 1.08 | . 97 | . 86 |
| $5 \mathrm{B8}$ | 5.50 | 2.70 | 2.43 | 2.16 | $6 \mathrm{CL6}$ - 3.8 | 1.86 | 1.68 | 1.49 | 6SC7 | 3.70 | 1.81 | 1.63 | 1.45 | 17C9 | 7.15 | 3.50 | 3.15 | 2.8 |
| 5BK7A | 3.75 400 | 1.84 | 1.65 | 1.47 | 6CM6 3.35 | 1.84 | 1.48 | 1.31 | 6SG7 | 4.70 | 2.30 | 2.07 | 1.84 | 17 D 4 | 3.05 | 1.49 | 1.35 | 1.20 |
| 5BR7A | 4.00 | 2.96 | 1.85 | 1.65 | $\begin{array}{ll}\text { 6CM6 } & 2.75\end{array}$ | 1.35 | 1.21 | 1.08 | 6SH7 | 5.35 | 2.62 | 2.36 | 2.10 | 170Q6B | 3.95 | 1.94 | 1.74 | 1.55 |
| 58R8 | 3.2 | 1.06 | 1.85 | 1.23 | 6CM8 4.05 | 1.98 | 1.79 | 1.59 | $6 \mathrm{SJ7}$ | 4.15 | 2.03 | 1.83 | 1.63 | 17 EW 8 | 2.75 | 1.35 | 1.21 | 1.08 |
| $5 \mathrm{CL8A}$ | 3.85 | 1.89 | 1.70 | 1.51 | 6CN7 4.00 | 1.96 | 1.76 | 1.57 | 6SJ7GT | 3.90 | 1.91 | 1.72 | 1.53 | 17JG6A |  | 2.82 | 2.54 | 2.75 |
| 5EW6 | 3.05 | 1.49 | 1.35 | 1.20 | 6CQ8 3.30 | 1.62 | 1.46 | 1.29 | 6SK7 | 4. | 2.08 | 1.87 | 1.67 | $19 \mathrm{AL4GTA}$ |  | 1.74 | 1.57 | 1.39 |
| $5 \mathrm{GM6}$ | 2.80 | 1.37 | 1.23 | 1.10 | $6 \mathrm{CS56}$ | 1.30 | 1.08 | . 1.96 | 6SK7GT |  | 1.64 | 2.43 1.48 | 2.31 | 19 T 8 | 4.05 | 1.98 | 1.79 | 1.59 |
| $5 \mathrm{GX7}$ | 3.60 | 1.76 | 1.59 | 1.41 | $6 \mathrm{CS7}$  <br> $6 \mathrm{CU5}$ 2.80 <br> Cl  | 1.32 | 1.19 | 1.06 | 6SN7GTB | 2.70 | 1.32 | 1.19 | 1.06 | 20 E27 | 3.40 | 1.67 | 1.50 | 1.33 |
| 5HB7 | 2.75 | 1.35 | 1.43 | 1.27 | $\begin{array}{ll}6 \mathrm{CU5} \\ 6 \mathrm{CU} 8 & 2.40\end{array}$ | 2.16 | 1.94 | 1.72 | 6SQ7 | 3.85 | 1.89 | 1.70 | 1.51 | 22BW3 | 3.05 | 1.49 | 1.35 | 1.20 |
| 5 56 | 3.25 2.50 | 1.59 | 1.43 | . 1.28 | $\begin{array}{ll}6 \text { CW4 } & 4.60\end{array}$ | 2.25 | 2.03 | 1.80 | 6SQ7GT | 3.55 | 1.74 | 1.57 | 1.39 | 25BQ6GTB | 4.40 | 2.16 | 1.94 | 1.72 |
| 5LJ8 | 4.10 | 2.01 | 1.81 | 1.61 | 6CX8 4.25 | 2.08 | 1.87 | 1.67 | 6T8A | 3.35 | 1.64 | 1.48 | 1.31 | 25 C 5 | 0 | 1.08 | 7 | . 8 |
| 5 T 8 | 4.20 | 2.06 | 1.85 | 1.65 | $6 \mathrm{CY5} 3.45$ | 1.69 | 1.52 | 1.35 | $6 T 9$ | 3.70 | 1.81 | 1.63 | 1.45 | $25 \mathrm{CD6G}$ |  | 2.82 | 2.54 | 2.33 |
| 5U4GB | 2.10 | 1.03 | . 93 | . 82 | 6CY7 3.05 | 1.49 | 1.35 | 1.20 | 6U8A | 3.10 | 1.52 | 1.37 | 1.22 | 25DN6 |  | 1.92 | 1.62 | . 1 |
| 508 | 3.10 | 1.52 | 1.37 | 1.22 | 6 6Z25 4.10 | 2.01 | 1.81 | 1.61 | $6 \mathrm{6V3A}$ | 3. | $\underline{1.79}$ | 2.61 | 1.78 | 25L6GT | 2.95 | 1.45 | 1.30 | 1.1 |
| 5 53A | 3.50 | 1.72 | 1.54 | 1.37 | $\begin{array}{ll}\text { 6D10 } & 3.85 \\ 60844 & 3.05\end{array}$ | 1.89 | 1.75 | 1.20 | 6 V 6 | 6.35 | 3.11 | 2.80 | 2.49 | 25 W 4 GT | 2.55 | 1.25 | 1.12 | 1.00 |
| 5 5 4 GA | 3.55 | 1.74 1.84 | 1.57 | 1.37 | $\begin{array}{ll}\text { 6DA4 } \\ \text { 6DE4 } & 3.05 \\ \text { D }\end{array}$ | 1.49 | 1.35 | 1.20 | 6 V 6 GTA | 2.40 | 1.18 | 1.06 | - 2.94 | 25Z6GT | 3.25 | 1.59 | 1.43 | 1.2 |
| $5 \times 88$ | 3.75 1.75 | 1.84 .86 | 1.65 | 1.47 | $\begin{array}{ll}\text { 6DE4 } & \\ \text { 6DE6 } & 2.40\end{array}$ | 1.18 | 1.06 | . 94 | 6 W 4 GT | 2.30 | 1.13 | 1.01 | . 90 | $33 \mathrm{GY7}$ | 6.05 | 2.96 | 2.67 | 2.37 |
| 5 Y 4 G | 3.40 | 1.67 | 1.50 | 1.33 | 6DE7 3.65 | 1.79 | 1.61 | 1.43 | 6W6GT | 2.95 | 1.45 | 1.30 | 1.15 | 35 C | 2.10 | . 1.35 | . 93 |  |
| 523 | 3.95 | 1.94 | 1.74 | 1.55 | 6DJ8 | 1.89 | 1.74 | 1.51 | $6 \times 4$ | 1.60 | . 78 | . 71 | . 63 | 35L6GT 35 W 4 | 1.25 | . 61 | 1.55 | . |
| 6 68 | 6.45 | 3.16 | 2.84 | 2.53 | 6DK6 6 | 1.10 | . 1.48 | 1.88 | $6 \times 5 \mathrm{GT}$ $6 \times 8$ | 3.00 | 1.47 | 1.33 | 1.18 | 35 Y 4 | 4.50 | 2.21 | 1.98 | 1.7 |
| 6AB4 | 2.45 | 1.20 | 1.08 | 2.16 | $\begin{array}{ll}\text { 6DN7 } & \\ \text { 6D05 } & 7.35\end{array}$ | 1.64 3.85 | 1.48 | 3.08 | $6 \times 8$ $6 Y 6 \mathrm{GA}$ | 4.05 | 1.98 | 1.79 | 1.59 | 35Z5GT | 2.20 | 1.08 | . 97 | . 8 |
| 6AF3/1852 | $2 \begin{array}{r}5.50 \\ 3.10\end{array}$ | 1.52 | 1.37 | 1.22 | 6DQ6B/6GW6 4.20 | 2.06 | 1.85 | 1.65 | $7 \mathrm{Cu7}$ | 2.45 | 1.20 | 1.08 | . 1.96 | 36AM3B | 1.55 | 76 | 68 | . 6 |
| 6AF4A | 3.75 | 1.84 | 1.65 | 1.47 | 6DR7 4.10 | 2.01 | 1.81 | 1.61 | $7 \mathrm{C5}$ | 3.35 | 1.64 | 1.48 | 1.31 | 50A5 | 5.85 | 2.87 | 2.58 | 2.2 |
| 6AG5 | 2.85 | 1.40 | 1.26 | 1.12 | 6DS4 4.60 | 2.25 | 2.03 | 1.80 | 757 | 7.50 | 3.68 | 3.31 | 2.94 3 | 50B5 | 2.60 | 1.27 | 1.15 | 1.0 |
| 6AG7 | 6.20 | 3.04 | 2.73 | 2.43 | 6DS5 | 1.62 | 1.56 | 1.29 | 7F8 7 | 8.25 7 | 4.04 3.48 | 3.64 3.13 | 3.23 2.78 | 50EH5 | 2.30 | 1.13 | 1.01 |  |
| 6AH4GT | 3.25 | 1.59 | 1.43 | 1.27 | 6DT5 | 1.74 | +1.57 | . 80 | 8AW8A | 3.65 | 1.79 | 1.61 | 1.43 | $50 \mathrm{HC6}$ | 2.40 | 1.18 | 1.06 |  |
| 6AH6 | 4.40 | 2.16 2.21 | 1.98 | 1.76 | 6DT6A 6DT8 | 1.74 | 1.57 | 1.39 | $8 \mathrm{BQ5}$ | 2.75 | 1.35 | 1.21 | 1.08 | 50L6GT | 2.85 | 1.40 | 1.26 | 1.1 |
| 6AK6 | 2.90 | 1.42 | 1.28 | 1.14 | 6DW4B $\quad 3.50$ | 1.72 | 1.54 | 1.37 | 8CG7/8FQ7 | 72.35 | 1.15 | 1.04 | - 92 | 60FX5 | 2.60 | 1.27 | 1.15 | . 8 |
| 6AL5 | 1.75 | . 86 | - 77 | . 69 | 6E5 5.65 | 2.77 | 2.49 | 2.21 | 8CW5A | 2.55 | 1.25 | 1.12 | 1.00 | 80 |  | 2.35 | 2.12 | 1.8 |
| 6AM8A | 3.25 | 1.59 | 1.43 | 1.27 | 6EA7 5.20 | 2.55 | 2.29 | 2.04 | 8GJ7 | 3.25 | 1.59 | 1.43 | 1.27 | EM84/6FG6 |  | 4.68 | 4.21 | 3.7 |
| 6AN8A | 3.75 | 1.84 | 1.65 | 1.47 | $\begin{array}{ll}\text { 6EA8 } & 3.00 \\ 6 E B 8 & 40\end{array}$ | 1.47 | 1 1.32 | 1.18 | 9 988 | 3.40 2.65 | 1.67 | 1.50 | 7 1.34 | 11723 M | T 4.50 | 4.28 2.21 | 1.98 | 1.7 |
| 6AQ5A | 2.70 | 1.10 | 1.99 | 1.06 | $\begin{array}{ll}6 E 88 & 4.45 \\ 6 E J 75\end{array}$ | 1.74 | 1.57 | 1.39 | 10alil | 4.55 | 2.23 | 2.01 | 1.78 | 5879 | 3.85 | 1.89 | 1.70 | 1.5 |
| 6AQ7GT | 4.10 | 2.01 | 1.81 | 1.61 | 6EM5 3.20 | 1.57 | 1.41 | 1.25 | $10 \mathrm{DE7}$ | 3.50 | 1.72 | 1.54 | 41.37 | 5881 | 4.35 | 3.10 | 2.79 | 2.5 |
| 6AS5 | 2.75 | 1.35 | 1.21 | 1.08 | 6EM7 4.80 | 2.35 | 2.12 | 1.88 | $12 \mathrm{AB5}$ | 3.30 | 1.62 | 1.46 | -1.29 | 6973 | 4.25 | 2.37 | 1.87 | 1.1 |
| 6AS8 | 4.00 | -1.96 | 1.76 | 1.57 | 6ER5 3.55 | 1.74 | 41.57 | 1.39 | $12 A D 6$ | 2.60 | 1.27 | 1.15 | 1.02 | 7025 A | 2.80 | 3.31 | 2.98 | 2.6 |
| 6AT6 | 2.05 | 1.00 | - 90 | - 80 | 6ET7 4.00 | 1.96 | 21.76 | 1.57 | 12AE6A | 2.75 | 1.35 | 1.26 | 1.12 | 7189 | 2.85 | 1.40 | 1.26 | 1.1 |
| 6AT8A | 4.00 3 | -1.96 | (1.76 | 1.37 | $\begin{array}{ll}\text { 6EU7 } \\ \text { 6EV5 } & 2.85\end{array}$ | 1.40 | -1.26 | 1.12 | 12 ALS | 2.10 | 1.03 | + 93 | - 82 | 7199 | 4.45 | 2.18 | 1.96 | 1.7 |
| 6AUSGT | 4.65 | 2.28 | 2.05 | 1.82 | 6EW6 2.35 | 1.15 | 1.04 | . 92 | 12 AQ 5 | 2.45 | 1.20 | 1.08 | 8.96 | 7355 | 3.10 | 1.52 | 1.37 | 1. |
| 6AU6A | 1.95 | -96 | . 86 | . 76 | 6EW7 5.50 | 2.70 | 2.43 | 2.16 | 12AT6 | 1.75 | 86 | - 177 | . 69 | 7408 | 3.35 | 1.64 | 1.48 | 1 |
| 6AU8A | 4.40 | 2.16 | ¢ 1.94 | 1.72 | $6 \mathrm{~F} 5 \quad 5.50$ | 2.70 | 2.43 | 2.16 | $12 \mathrm{AT7}$ | 2.85 | 1.40 | 1.26 | -1.12 | 7591 A | 2.80 | 1.37 | 1.73 | - |
| 6AV5GA | 4.70 | - 2.30 | 2.07 | 1.8 | 6F6 5.80 | 2.84 | 2.56 | 2.27 | 12AU6 | 2.00 | 98 | 8 | 8.78 | 868 | 3.85 | 1.89 | 1.7 |  |

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| 8445 | HR／21FJP22A | － 5 | 128.07 | 25．00 | 103.0 \％ |
| 8 A46 | HR／25AP22A | c． 2 | 168.00 | － | 138.00 |
| 8447 | HR／25BP22A | 52 | 156.67 | Ex．00 | 126.65 |

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| $8 A 48$ | 21CYP22A | 45 | $\$ 98.16$ | $\$ 25.100$ | $\$ 73.36$ |
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| $\begin{aligned} & \text { Stk. } \\ & \text { No. } \end{aligned}$ | Type | W． Lbs． | Nef Eoch | $\begin{aligned} & \text { Sth. } \\ & \text { No. } \end{aligned}$ | Type | W\% Lbs. | Neê Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 848 | 7BJP4／AT／AV／CE | 7 | \＄20．77 | 8815 | E1DFP4／CEFA | 26 | \＄27．08 |
| 8410 | 78P4D／AP／JP | 20 | 13.67 | 8 B 25 | 21DSP4／CKF： | 27 | \＄24．3 |
| 867 | 7CSP4／BV／BW | 3 | 26.50 | 8423 | こ1EP4C | 30 | 24.30 |
| 8433 | －7DKP4／DTP4 | 3 | 26.50 | 8822 | E1EOP4／EMP4 | 26 | 30.95 |
| 1889 | 7DSP4／BR／BZ／ |  |  | 8 酐 | E1FP4D | 26 | 24.8 C |
|  | CK／DLP4 |  | 22.17 | 8.27 | $21 Y P 4 E$ | 31 | 17.60 |
| 88812 | 7HP4C／RP4 9AJP4 | 20 | 18.67 30.67 | $8 \times 28$ | －12P4C | 31 | 17.6 C |
| 88435 | 9AVP4／XP／／P4 | 19 | 30.57 | 8 8a39 | 23AHP4／AUP4 | 36 | 38.36 |
| 8 A38 | －9AYP4／BW／AXP4 | 9 | 30.67 30.67 | ${ }_{8} 8$ ¢ 26 | Z3BLP4／AN．Bく | 44 | 42.67 |
| 8813 | 9BT／YP4 | 19 | 30.67 | $8{ }^{8} 132$ | $23 E P 4$ | 43 | 39.96 |
| 8418 | 2IAMP4B／AC／ |  |  | $8 \times 37$ | Z3FP4A |  |  |
|  | A $2 / C U$ | 27 | 19.60 |  | Wpa |  |  |
| 84.21 | AVP4C／AUP4 | 31 | 22.33 | 8430 | 24AEP／AN／Dッ／ZP | 39 | 25.07 |
| 8417 | －CBP4A／FLP4A | 27 | 78.39 | 8 829 | 24CP4B／QP／7P／ |  |  |
| 8820 | －1DEP4／CZ／DA | 25 | 27.08 |  | ＞P／$/ \mathrm{ZP} 4$ | 39 | 25.07 |

## B－A TV PICTURE TUBES



| Stk．No． | Type | w Lbs． | Net | Si．a．No． | Type | $\begin{aligned} & \text { Wit } \\ & \text { Lbs. } \end{aligned}$ | Net <br> Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 B 52 | $9 \mathrm{9P4A}$ | ． 5 | \＄23．77 | 8467 | 20CP4／DP | 28 | \＄19．33 |
| 3 A50 | 108P4A | － | 18.30 | 8471 | $21 \mathrm{AC/AM} / 4 \mathrm{PP} 4 \mathrm{~A}$ | 27 | 15.95 |
| 3855 | 11 CP 4 |  | 21.10 | 8a73 | $2 \ A V / A \cup P 4 B$ |  | 18.26 |
| 3 A51 | 12LP／KP4A | 14 | 18.00 | 8490 | $21 \mathrm{CB} / \mathrm{FLP}+1$ | 27 | 15.05 |
| 3492 | $14 A J / A V P 4$ | 14 | 23.33 | $8 \wedge 95$ | 21CE／DFP4 | 24 | 23.3 C |
| 3857 | 14QP4／HP4 | 14 | 23.83 | 8 8113 | 21 CQP 4 | 24 | 23.30 |
| 3863 | 16AU／BFP4 | 4 | 22.16 | 8A102 | 21DA／DE／CIP4 | 24 | 23.0 |
| BA54 | 16 GP 4 B | 4 | 19.33 | 8382 | 2102 | 27 | 20.80 |
| 3456 | $16 \mathrm{KP} / \mathrm{RP} / \mathrm{TP4A}$ |  | 14.60 | 8A114 | $21 \mathrm{DS} / \mathrm{CXP4}$ | 27 | 19.76 |
| 34106 | $1781 / A V / A T / B U P 4$ | 18 | 18.66 | 8476 | $21 E P 45$ | 34 | 20.43 |
| BA59 | 178P4B／JP4 | 21 | 15.10 | 8A115 | 21EO／FAP 4 | 24 | 23.30 |
| 3494 | 17BZ／CW／CKP4 | 13 | 21.30 | $8 \pm 78$ | $21 F P 40$ | 24 | 20.43 |
| BB68 | $17 \mathrm{CFP4}$ | 13 | 20.30 | 8886 | 21 FD／EAP 7 | 28 | 29.67 |
| 8460 | 17 CP 4 | 13 | 20.16 | 8480 | 21 WP4A | 29 | 19.68 |
| 3497 | 17CS／BW／BYP4 | 13 | 21.30 | 88119 | 2 XP4A | 29 | 19.88 |
| $5 \mathrm{B69}$ | 17DA／DRP4 | 13 | 25.83 | 8＾83 | 21 YP4A | 29 | 14.88 |
| 34101 | 1700p4 | 13 | 21.80 | 8＾85 | $21 \mathrm{ZP4B}$ | 29 | 14.88 |
| 34108 | $1705 /$ CWP4 | 13 | 21.80 | 8 887 | 23 AHP4 | 36 | 28.67 |
| 34109 | 17DXP／OZP4 | 13 | 21.80 | 8 ESO | 23ALP4 |  | 30.67 |
| 3488 | $17 \mathrm{HP4/RP4B}$ | 19 | 15.88 | 8A116 | 23 AN／BK，こPA | 44 | 36．33 |
| 3462 | 17LP4／VP4 | 20 | 16.50 | 8E96 | $238 \mathrm{JP4}$ |  | 28.67 |
| 3465 | 170P／U／YP4A | 20 | 16.50 | ${ }^{36} 58$ | 238 TP 4 | 44 | 36.33 |
| BB70 | 19ABP4 | 19 | 27.30 | 84117 | 23C／HP4 | 43 | 36.33 |
| 38118 | 19AF／AUP4 | 25 | 29.00 | 8699 | 23 CBP4 | 43 | 36.337 |
| 84110 | 19AP4B | 20 | 21.27 | 8 E 107 | $23 E P 4$ | 43 | 36.33 |
| 34111 | 19AJP4 | 19 | 24.16 | 85120 | 23F／K／MA／P4 |  | 30.33. |
| 84105 | 19AV／XP／ZP4 | 19 | 24.16 | 8 8121 | $23 J P 4$ | 43 | 36.33. |
| BA112 | 19AY／AXP4 | 19 | 24.16 | 84104 | $24 A E / Z P / T F 4 A$ | 40 | 23.95 |
| 8872 | 198DP4 | 25 | 22.66 | 84122 | $24 A H / A . F A$ | 34 | 34．501 |
| 8B74 | 19EHP4 | 19 | 28.66 | 84123 | 24 BEP 4 | 34 | 39.95 |
| 8879 | $19 E N P 4$ | 17 | 28.66 | 8 A124 | 24CP4 | 38 | 23.95 |

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| $\begin{aligned} & \text { Tube } \\ & \text { Type } \end{aligned}$ | Make | $\begin{aligned} & 1-4 \\ & \text { Each } \end{aligned}$ | $\begin{aligned} & 5-15 \\ & \text { Each } \end{aligned}$ | Tube Type | Make | $\begin{aligned} & 1-4 \\ & \text { Each } \end{aligned}$ | $\begin{aligned} & 5-15 \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 O2 | RCA | 1.32 | 1.14 | NL-610/7723 | N | 11.40 | 10.26 |
| 043 | RCA | 1.54 | 1.33 | NL-615 | N.E. | 10.05 | 8.89 |
| $0 \times 4 \mathrm{G}$ | RCA | 1.86 | 1.62 | NL-623 | N.E. | 13.35 | 11.45 |
| 0 B 2 | RCA | 1.37 | 1.19 | NL-635/7019 | N.E. | 13.00 | 11.70 |
| $00^{3}$ | RCA | 1.50 | 1.30 | NL-635L/7020 | N.E. | 13.50 | 12.15 |
| OD3 | RCA | 1.44 | 1.24 | NL635P/6930 | N.E. | 14.15 | 12.73 |
| $063 / 8542$ | Amp. | 2.30 | 12.09 | NL-664L | N.E. | 26.00 22.15 |  |
| ELC1B | Elec. | 15.10 4.15 | 13.40 3.55 | NL678 | N.E. | 49.00 |  |
| 114 | RCA | 1.50 | 1.30 | NL-710/6011 | N.E. | 12.70 | 12.09 |
| 1 P 37 | RCA | 6.50 | 5.94 | NL-710L/7518 | N.E. | 14.20 |  |
| 1839 | RCA | 3.15 | 2.85 | NL-714 | N.E. | 10.00 |  |
| 1 P 40 | RCA | 4.80 | 4.37 | NL-716 | N.E. | 12.50 | 5 |
| 1 P 41 | RCA | 6.00 | 5.44 | NL-740/6856 | N.E. | 21.70 |  |
| 2-01C | Eim. | 18.00 | 17.80 | NL740L/7022 | NE. | 22.30 |  |
| $2 A P 1 A$ | RCA | 19.00 | 17.76 | NL-740P/6857 | NE. | 22.10 | 25.29 |
| 2BP1 | RCA | 20.10 |  | NL-760 | N.E. | 29.40 | 26.46 |
| ${ }_{2 C 39}{ }_{2}$ | RCA | 29.75 29.30 | 26.37 | NL-760 | N.E. | 29.40 | 26.46 |
| 2 C 40 A | RCA | 34.00 | 33.00 | 807 | RCA | 3.40 | 3.08 |
| 2021 | RCA | 1.29 | 1.10 | WL-807 | Wes. | 3.15 | 2.86 |
| 2D21w | RCA | 2.90 | 2.48 | 810 | RCA | 28.60 | 28.32 |
| 2 E24 | RCA | 6.45 | 5.86 | 8114 | RCA | 7.15 | 6.51 |
| 2 E26 | RCA | 3.75 | 3.36 | 812A | RCA | 7.60 | 6.87 |
| WL-2E26 | Wes. | 3.75 | 3.36 | 813 |  | 24.25 3.60 | 33.80 3.22 |
| 2×2A | RCA | 3.95 | 3.58 | 816 | RCA | 34.60 | 3.22 |
| 344 | RCA | 1.25 | 1.04 | 828 | RC | 34.50 |  |
| 3 35 | RCA | 2.03 | 1.76 | $829 B$ | RCA | 61.85 |  |
| $3 \mathrm{B25}$ | RCA | 9.15 | 8.31 | ${ }^{833 A}$ | RCA | 61.20 | 61.18 |
| 3828 | RCA | 7.00 11.98 | 6.37 10.78 | 866A | Amp. | 3.24 3.10 | 2.91 2.79 |
| $3 \mathrm{CX100A}$ | Eim. | 26.50 |  | WL-866A | Wes. | 3.10 | 2.79 |
| 30224 | RCA | 34.30 |  | 868 | RCA | 6.30 | 5.72 |
| NL-C3J/AL | N.E. | 14.60 | 13.52 | 872A | RCA | 10.85 | 9.87 |
| 3RP1 | RCA | 17.95 |  | 884 | RCA | 2.28 | 1.97 |
| 3RPIA | RCA | 27.65 |  | 918 | RCA | 6.30 | 5.72 |
| $3-4002$ | Eim. | 34.00 | 30.60 | 919 | RCA | 9.65 | 8.80 |
| 4-65A | Eim | 27.00 | 23.75 | 922 | RCA | 3.80 | 3.45 |
| 4 -125A | Eim | 36.00 | 32.40 | 923 | RCA | 4.70 | 4.29 |
| 4-250A | Eim. | 46.50 | 41.85 | 925 | RCA | 5.00 | 4.58 |
| 4.400A | Eim. | 48.00 | 45.00 | 927 | RCA | 6.00 | 5.44 |
| 4-1000A | Eim. | 131.50 |  | 929 | RCA | 3.45 | 3.15 |
| 4 CX 250 B | Eim. | 35.60 | 31.25 | 930 | RCA | 4.95 | 4.51 |
| 4 Cx 300 A | Eim | 54.00 |  | 931A | RCA | 12.30 | 11.16 |
| $4 \times 1504$ | Eim | 23.15 | 20.31 | 934 | RCA | 5.75 | 5.22 |
| $4 \times 2508$ | Eim | 35.60 | 31.25 | 955 | RCA | 7.05 | 6.35 |
| $5 \mathrm{BP1A}$ | RCA | 35.05 |  | 991 | RCA | 1.01 | . 87 |
| $5 \mathrm{CP1A}$ | RCA | 37.90 |  | NL-1012A | N.E. | 99.00 |  |
| 5R4GYB | RCA | 2.03 | 1.76 | NL-1013A | N.E. | 245.00 |  |
| SUPI | RCA | 17.95 |  | NL-1016A | N.E. | 155.00 |  |
| 6A56 | RCA | 3.43 | 2.98 | NLI051A | N.E. | 65.00 |  |
| 6AS7G | RCA | 4.93 | 4.26 | NL1052A | N.E. | 99.00 | ........ |
| 6AS7GA | Wes. | 4.93 | 4.26 | NL-1081 | N.E. | 75.00 | ...... |
| 6AU6WB | RCA | 1.88 | 1.15 | NL-1082 | N.E. | 107.00 |  |
| 6BL8/ECF80 | Amp. | 1.88 | 1.16 | 1612 | RCA | 5.77 | 4.99 |
| 6BM8/ECL82 | Amp | 1.45 | 1.39 | 1614 | RCA | 4.93 | 4.26 |
| 6CA7/EL34 | Amp. | 2.60 | 2.55 | 1616 | RCA | 15.10 |  |
| 6EJ7/EF184 | Amp. | 1.93 | 1.09 | 1619 | RCA | 6.23 | 5.39 |
| 654 | RCA | 4.02 | 3.48 | 1620 | RCA | 7.55 | 6.54 |
| NL-C6J | N.E. | 28.10 |  | 1621 | RCA | 3.85 | 3.30 |
| NL-C6JL | N.E. | 29.40 |  | 1622 | RCA | 5.35 | 4.60 |
| 1246 | RCA | 3.36 |  | 1624 | RCA | 7.90 | 7.16 |
|  | RCA | 2.53 | 2.25 | 1625 | RCA | 5.50 | 5.00 |
| G234/5AR4 | Mul. | 2.15 | 2.05 | 1626 | RCA | 3.75 | 3.23 |
| EL37 | Mul. | 3.55 | 3.29 | 1629 | RCA | 2.04 | 1.77 |
| KT66 | Mul. | 3.76 | 3.59 | 1635 | RCA | 4.20 | 3.63 |
| DM70/1M3 | Mul. | 1.20 | 1.10 | 2050 | RCA | 2.37 | 2.05 |
| KT77 | Mul. | 4.45 | 4.15 | WL-2050 | Wes. | 2.37 | 2.05 |
| EF80/6BX6 | Mul. | 1.52 | 1.45 | 20504 | RCA | 2.03 1.40 | 1.76 |
| E280/6V4 | Amp. | . 75 | . 73 | 4450 |  | 1.40 | 1.26 |
| ECC81/12AT7 | Amp. | 1.42 | 1.37 | WL5551A/652 | Wes. | 65.00 |  |
| EM81/60A5 | Amp. | 1.40 | 1.36 | W55552A/651 |  |  |  |
| E281/6CA4 | Amp. | . 98 | . 89 | 5557 | RCA | 9.50 | 8.55 |
| ECC82/12AU7 | Amp. | 1.15 | 1.12 | 5558 \% | RCA | 17.50 | 15.75 |
| ECF82/6U8 | Mul. | 1.55 | 1.45 | NL5563A | N.E. | 50.00 |  |
| ECL82/6BM8 | Mul. | 1.45 | 1.36 | 5581 | RCA | 4.85 |  |
| UCL82/50BM8 | Amp. | 1.43 | 1.39 | 5582 | RCA | 6.30 | 5.72 |
| 83 | RCA | 1.89 | 1.63 | 5583 ${ }^{\text {NL-5632/C3J }}$ | RCA | 8.75 12.70 | 7.94 12.09 |
| ECC83/12AX7A | A Amp. | 1.20 | 1.15 | NL-5632/C3J 5642 | N.E. | 12.70 3.53 | 12.09 |
| EM84/6FG6 | Amp. | 1.50 | 1.49 | 5651A | RCA | 1.78 | 1.50 |
| ECC85/6A08 | Amp. | 1.50 | 1.45 | 5654: | RCA | 2.41 | 2.09 |
| EF85/6BY7 | Mul. | 1.52 | 1.45 | WL-5654/ |  |  |  |
| EC86/6CM4 | Amp. | 2.60 | 2.56 | 6AK5W | Wes. | 2.41 | 2.09 |
| ECC86/6GM8 | Amp. | 2.18 | 2.11 | NL-5665/C16J | N.E. | 52.50 |  |
| EF86/6267 | Amp. | 1.30 | 1.27 | 5670* | RCA | 2.45 | 2.12 |
| EL86/6CW5 | Amp. | 1.70 | 1.19 | 5672 | RCA | 2.27 | 1.97 |
| E88CC/6922 | Amp. | 4.87 | 4.22 | 5675 | RCA | 8.95 | 8.08 |
| ECC88/60J8 | Amp. | 2.13 | 2.09 | 5678 | RCA | 2.30 |  |
| KT88 | Mul. | 5.90 | 5.49 | NL-5684/ |  |  |  |
| EBF89/6DC8 | Mul. | 1.53 | 1.42 | C3J/A |  |  |  |
| E290/6X4 | Mul. | . 80 | . 73 | NL-5684NE | N.EA | 16.70 3.37 | 15.61 2.91 |
| EF94/6AU6 | Mul. | .98 23.50 | 21.15 | 5686 | RCA | 3.37 4.05 | 2.91 3.47 |
| 1007H | Eim. | 23.50 59.00 | 21.15 | 5687 | RCA | 8.75 | 7.56 |
| 2507 H | Eim. | 38.50 | 34.65 | 5692 | RCA | 8.25 | 7.13 |
| 304 TL | Eim. | 80.00 | 77.77 | 5693 | RCA | 6.60 | 5.70 |
| 408A | RCA | 4.95 | 4.26 | 5696 | RCA | 1.95 | 1.67 |
| 502A | RCA | 2.28 | 1.97 | 5725 | RCA | 3.15 | 2.70 |
| $575 A$ | RCA | 21.00 |  | 5726 | RCA | 1.55 | 1.33 |
| NL-604 | N.E. | 11.80 | 10.62 | 5726/6AL5W | RCA | 1.55 | 1.33 |
| NL-604L | N.E. | 13:00 | 11.70 | 5727 | RCA | 2.90 | 2.47 |
| NL-606 | N.E. | 21.40 23.50 |  | $5749 / 6 \mathrm{BA} 6 \mathrm{~W}$ 5750 | RCA | 2.20 3.45 | 1.90 3.10 |


| $\begin{aligned} & \text { Tube } \\ & \text { Type } \end{aligned}$ | Make | $\begin{gathered} 1-4 \\ \text { Each } \end{gathered}$ | $\begin{aligned} & 5-15 \\ & \text { Each } \end{aligned}$ | Tube Type | Make | $\begin{aligned} & \text { 1-4 } \\ & \text { Eoch } \end{aligned}$ | $\begin{aligned} & 5-15 \\ & \text { Eoch } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5751\% | RCA | 2.55 | 2.19 | 6660/6BA6 | RCA | 1.01 | . 84 |
| 5751WA | RCA | 2.55 | 2.18 | 6661/6BH6 | RCA | 1.34 | 1.10 |
| 5762/7C24 | RCA | 240.00 | 223.20 | 6662/68J6 | RCA | 1.29 | 1.06 |
| 5763 | RCA | 2.45 | 2.12 | 6663/6AL5 | RCA | . 92 | . 77 |
| 5814A* | RCA | 2.35 | 2.03 | 6669/6AQ5A | RCA | 1.06 | . 89 |
| 5814 WA | RCA | 2.40 | 2.03 | 6677/6CL6 | RCA | 1.85 | 1.49 |
| 5820A | RCA | 1100.00 |  | 6678/6U8A | RCA | 1.62 | 1.32 |
| 5823 | RCA | 1.72 | 1.48 | 6679/12AT7 | RCA | 1.50 | 1.22 |
| 5867 | Amp. | 30.00 | 28.12 | 6680/12AU7A | RCA | 1.22 | 1.00 |
| 5876A | RCA | 7.30 | 6.65 | 6681/12AX7A | RCA | 1.26 | 1.02 |
| 5886 | RCA | 5.00 |  | 6686 | Amp. | 4.10 | 6...0. |
| 5894 | Amp. | 25.00 | 22.90 | 6688 | Amp. | 6.80 | 6.60 |
| 5915 | RCA | 1.62 | 1.40 | 6689 | Amp. | 3.85 | 3.62 |
| 5963 | RCA | 1.36 | 1.17 | 6883 | RCA | 4.30 |  |
| WL-5963 | Wes. | 1.36 | 1.17 | 6883 B | RCA | 5.40 | 4.86 |
| 5964 | RCA | 1.55 | 1.33 | WL-6922 | Wes. | 4.87 | 4.22 |
| 5965 | RCA | 1.92 | 1.65 | 6939 | Amp. | 12.00 | 10.78 |
| 6005/6AQ5W | RCA | 3.23 | 2.80 | 6953 | RCA | 7.80 | 7.08 |
| 6007 | Amp. | 1.72 |  | NL-6989/ |  |  |  |
| 6008 | Amp. | 2.50 |  | C6J/KL | N.E. | 29.45 | 26.51 6.08 |
| 6012 | RCA | 7.65 | 6.63 | 7043 | RCA | 6.75 | 6.08 |
| NL-6014/C1K | N.E. | 11.80 | 11.66 | 7054 | RCA | 1.54 | 1.33 |
| 6072 | RCA | 3.90 | 3.51 | 7056 | RCA | . 92 | . 80 |
| 6073 | RCA | 3.00 | 2.55 | 7059 | RCA | 1.48 | 1.29 |
| 6080 | RCA | 5.33 | 4.62 | 7060 | RCA | 1.75 | 1.50 |
| 6082 | RCA | 5.60 | 4.84 | 7061 | RCA | 1.29 | 1.12 |
| 6083 | Amp. | 14.25 | 12.83 | 7062 | Amp. | 2.39 | 2.22 |
| 6084 | Amp. | 3.30 |  | 7094 | RCA | 35.45 | 35.41 |
| 6085 | Amp. | 3.30 | 3.26 | 7119 | Amp. | 2.95 | 2.50 |
| 6111 | RCA | 3.70 | 3.19 | 7163 | RCA | 1.25 | 1.12 |
| 6112 | RCA | 4.15 | 3.55 | 7167 | RCA | 1.41 | 1.23 |
| 6136* | RCA | 2.70 | 2.32 | 7189 | Amp. | 1.35 | 1.19 |
| 6146A | RCA | 4.35 | 3.94 | 7316 | Amp. | 1.40 | 1.17 |
| $6146 \mathrm{~B} / 8298 A$ 6146 W | RCA | 5.20 6.75 | 4.72 6.08 | 7360 | RCA | 3.77 | 3.26 |
| $\begin{aligned} & 6146 W \\ & 6159 \end{aligned}$ | RCA | 6.75 4.80 | 6.08 | 7551 | RCA | 3.37 | 2.92 |
| 6159 | RCA | 4.80 5.60 | 4.36 5.08 | 7558 | RCA | 3.49 | 3.02 |
| 6159 W | RCA | 6.75 | 6.07 | 7586 | RCA | 3.35 5.20 | 2.88 4.46 |
| 6189/ |  |  |  | 7788 | Amp. | 9.75 |  |
| 12AU7WA | RCA | 3.70 | 3.18 | 7895 | RCA. | 3.35 | 2.88 |
| 6197 | RCA | 2.30 | 2.03 | 7983 | Amp. | 6.30 |  |
| 6201 | RCA | 2.95 | 2.55 | 8008 | RCA | 11.80 | 10.73 |
| 6201 | Amp. | 2.95 2.69 | 2.55 | 8008 AX | Amp. | 10.85 | 9.73 |
| 6202 | RCA | 2.69 2.15 | 2.33 | 8013A | RCA | 19.80 | 18.03 |
| 6227 | Amp. | . 3.05 | 2.92 | 8032 | RCA | 4.95 | 4.50 |
| 6267/EF86 | Amp. | . 1.30 | 1.27 | 8056 | RCA | 5.00 | 4.29 |
| 6293 | RCA | 5.95 | 5.37 | 8058 | RCA | 13.25 | 11.48 |
| 6336 A | RCA | 19.04 | 16.45 | 8077/7054 | RCA | 1.50 | 1.30 |
| 6350 | RCA | 1.85 | 1.60 | 8203 | RCA | 3.80 | 3.29 |
| 63604 | Amp. | . 4.95 | 4.26 | 8233 | Amp. | 3.25 |  |
| 6386 | RCA | 7.38 | 6.66 | 8393 853 $801614 W A$ | RCA | 3.45 5.60 | 2.96 |
| 6417 | RCA | 3.33 | 2.89 | 8532/634WA | RCA | 5.60 | 4.84 |
| 6463 | Amp | . 3.50 | 2.74 | 9001 | RCA | 5.38 4.14 | 4.86 3.58 |
| 6472 | RCA | 14.75 | 12.88 | 9002 9003 | RCA | 5.38 | 4.65 |
| 6550 6570 | RCA | 4.59 10.30 | 3.98 9.37 | 9003 9005 | RCA | 8.05 | 7.25 |
| 6570 $6626 / 0 A 2 W A$ | RCA | 10.30 3.35 | 9.37 2.87 | 9006 | RCA | 2.70 | 2.43 |

## READOUT TUBES BY NATIONAL ELECTRONICS

A practical in-line display device with the best readability,

longest life. They are rugged, non-fading, all electronic and highly economical. Pleasing red-orange glow provides good readobility under all lighting conditions. Monufactured under license from Burroughs Corp. Operates at 170 volts. 1 , 1 , Special sockets listed below. Write for technical data. (1) Char. Size Each | Mfg. No. | Fig. Char. Size Each Mfg. No. | Fig. Char. Size Each |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NL809 | (1) $0.6 \ln . ~$ |  |  |
| 18.25 | $\mathrm{NL} 8421 / 5092$ | (1) $0.6 \operatorname{In}$. | $\mathbf{1 5} 5.75$ | NL809 NL8422/5991 NL6844A

|  |  | OCKETS FOR |  |
| :---: | :---: | :---: | :---: |
| Stk. No. | Mfg. No. | For Tube Types | Net Each |
| 41413 | RTS-1 | NL8421/5092, 6844A | \$0.80 |
| 41414 | RTS-2 | Same as RT5-1 except commercial grade | .75 |
| 41415 | RTS-3 | NL7009 | . 80 |
| 41416 | RTS-4 | NL5991 | -85 |
| 41A17 | RTS-S | NL8091 ${ }^{\text {NL } 804 \text { NL } 803 \text { NL843 }}$ | . 280 |
| 41812 | RTS-11 | NL804, NL803, NL843 | . 40 |

## NEW RCA PHOTOCONDUCTIVE CELLS

## Semiconductors-Diodes



All RCA Semiconductors are available 1000 and up and technical prices on any RCA type. TRANSITRON Semiconductors are
built to the highest quality and design. Contact B-A for all Transitron types, factory OEM prices up to 5000 pieces.
Book.
EXPLANATION OF MANUFACTURERS CODE USED IN THIS LISTING: RCA-Radio Corporation of America; Tran.-Transitron; IR_International Rectifier; GE_General Electric; Amp._Amperex; Sarkes_Sarkes Tarzian. CONVENIENT NUMERICAL LISTING-ORDER BY MFG. NUMBER and STOCK NUMBER


## Rectifiers, Transistors

GENERAL ELECTRIC Semiconductors cover the reploc
and hobby field. AMPEREX incorporotes the latest dethe production of Semiconductors which can be depended on for highly which can be depend
$\square$ SARKES TARZIAN Semiconducfor products ore all ovailable of B-A. For any quantity or any Sarkes Tarzion type contact B-A for latest price Technical dota is available.

## NEW TYPES ADDED AS THEY BECOME AVAILABLE . . Send us your orders... billings will always be at latest prices effective on shipping date.

CONVENIENT NUMERICAL LISTING-ORDER BY MFG. NUMBER and STOCK NUMBER

G.E. TRANSISTORS-DIODES

## 

G. E. Universal

Replacement Transistors
types listed will replace most every transistor used in radio and television Interchongeability chart supplied with Specify St Mfg. No. Description Fig. Each GE-1 PNPRF-IF Mo. Description GE-1 PNPRF-IF-Mixe PNP AF Amp PNP Power Amp
PNP Power Amp PNP Power Amp
NPN RF-AF Mixer NPN RF-AF Mix
NPN RF-Mixer NPN IF Amp NPN IF Amp. NPN AF Amp PNP IF-RF-Os
NPN AF Amp. NPN RF-Con.-Osc.
(3) VAC-U-SEL DUAL DIODES

Replocement for phose detectors. Type 6GDI is series connected, 6GC1 com-

mon cathode, 6 GXI common onode. No. 41 A21. Type 6GDI. Choice Each | No. 41 A22. Type 6GC1. | $1-99$ |
| :--- | :--- |
| No. 41 A23. Type 6GXI. | 600 | (3) Universal replocement for TV Set Rectifiers. 60 amp peak rating Stock GE No. Aurrent Amp PIV Eoch

No. GE
 4.44 COLOR TV RECTIFIERS Stk. No, GE No. Description Eoch 41 A 24 GECR-1 $21 / 2 \times 1 / 4^{\prime \prime}$ Focus $\$ 3.72$ $\begin{array}{lll}41 A 24 \text { GECR-2 } & \text { "1/4" Boost } 1.47 \\ 41 A 24 \text { GECR-3 } & \text { Sq. Conv } & 1.02\end{array}$ No. 25A 233. Latest Edition No. 254233 . Latest Edition.....\$2.00
No. 25 B97. Hobby Manual. . $\$ 1.60$

Just a few RCA SK types will replace over 4000
25B100 Replocement Guide FREE with your order.

| Stk. No. | RCA Type | Fig. | Description | Net Eoch |
| :---: | :---: | :---: | :---: | :---: |
| 41 A234 | SK3003 | (1) | 9 V . AF Dr. Output | 50.98 |
| 41 A235 | SK3004 | (1) | 15 V. AF Dr. Output | . 98 |
| 41 A236 | SK3005 | (1) | RF-IF-Osc. AM | 1.17 |
| 41 A237 | SK3006 | (3) | RF-IF-Osc. AM-FM | 1.26 |
| 41 A238 | SK3007 | (3) | RF-IF-Osc. All Wave | 1.26 |
| 41 A239 | SK3008 | (1) | RF-IF-Osc. Auto-Radio | 1.23 |
| 41 A240 | SK3009 | (4) | AF-Power Auto-Radio | 2.34 |
| 41 A241 | SK3010 | (1) | AF-Dr-Output | 1.26 |
| 41 A242 | SK3011 | (3) | RF-IF-Osc. | 2 |
| 41 A243 | SK3012 | ( ${ }^{\text {a }}$ | AF-Power Auto | 4.38 |
| 41 A226 | SK3013 | (4) | Motched Pair SK3009 | 4.88 |
| 41 A227 | SK3014 | (4) | AF-Auto-Hi-Fi | 3.15 |
| 41 A228 | SK3015 | 4 | Matched Poir SK3014 | 6.30 |
| 41 A229 | SK3016 | 7 | Rect. 500 V. 750 MA | . 63 |
| 414230 | SK3017 | (8) | Rect. 600 V. 750 MA |  |
| 414231 | SK3018 | (2) | NPN VHF TV-FM | 1.35 |
| 41 A 232 | SK3019 | (2) | NPN UHF TV-Osc. |  |
| 41 A233 | SK3020 | (1) | NPN AF-Amp.-Dr. | 1.17 |


Substitution
Handbook
Howard Sams. Com-
plete guide covering
American and for-
eign listings, how to
select replacements.
Has terminal and
polarity guide.
No. $16 \mathrm{~B} 573 \mathrm{~S} \mathbf{5 0}$
Eah

## 103 Simple



## International Rectifiers, Photo Cells



Produced by the world's largest industrial rectifier manu
relioble performance, advanced design and o wide selection
Fig. (A) INDUSTRIAL SELENIUM STACKS
*Three terminal full wave center tapped, all others single phase bridge.

| Stock No. | Mfg. No. | Input" DC Output Volts AC Volts Amps |  |  | $\begin{aligned} & \text { Size } \\ & \text { Inches } \end{aligned}$ | $\begin{aligned} & 1-9 \\ & \text { Each } \end{aligned}$ | $10-99$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 298345 | J14Cl: | 36 | 14 | 1.5 | $11 / 2 \times 11 / 2 \times 1 / 8$ | \$1.52 | \$1.29 |
| 298346 | J14C5\% | 36 | 14 | 4.8 | $3 \times 3 \times 1 / 8$ | 3.90 | 3.3 |
| 174297 | J29804 | 36 | 29 | . 4 | $1 \times 1 \times 11 / 2$ | 1.70 | 1.44 |
| 41 A59 | J2981 | 36 | 29 | 1.5 | $11 / 2 \times 11 / 2 \times 1 / \frac{2}{2}$ | 2.48 | 2.10 |
| 298333 | $J 2985$ | 36 | 29 | 4.5 | $3 \times 3 \times 25 / 8$ | 7.02 | - |
| 41460 | J2988 | 36 | 29 | 8.4 | $4 \times 4 \times 25$ \% | 10.25 | 8.25 |
| 298163 | J29817 | 36 | 29 | 17. | $6 \times 5 \times 31 / 4$ | 15.35 | 2.88 |
| 41461 | J5881 | 72 | 58 | 1.5 | $11 / 2 \times 11 / 2 \times 21 / 4$ | 4.90 | 4.15 |
| 298336 | J5885 | 72 | 58 | 4.5 | $3 \times 3 \times 4$ 年 | 13.98 | 11.83 |
| 298339 | J11681 | 144 | 116 | 1. | $11 / 2 \times 11 / 2 \times 3$ 掊 | 8.81 | 7.64 |

Fig. (A) BATTERY CHARGING TYPES
JD4346B is a universal fast charge type, fits most 100 omp units. Other types may be used singly or in multiples for vorious circuits.


| Stk. No. | Míg. No. | Fig. | Peak Volts | Current Ma | 1.9 Ea | 10-99 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 17836 | 2 E 4 | C | 400 | 250 | 30.55 | 50.50 |
| 174223 | 5 E4 | C | 400 | 450 | . 85 | - 6 |
| 17 A171 | 10D2 | E | 200 | 1000 | . 50 |  |
| 170167 | 1004 | E | 400 | 1000 | . 68 |  |
| 17 D168 | 1006 | E | 600 | 1000 | . 87 |  |
| 178291 | SD500 | D | 400 | 750 | . 67 | 5 |
| 41469 | 5 MA4-D | F | 400 | 1000 | . 82 |  |
| 41470 | 5MA4-DK | $F$ | Kit of 2 | With Holder | 1.70 | 1.5 |
| 41471 | DDO4 | G | Dual Dio | de Com. Cath | 1.55 | 1. |
| 41472 | DD05 | G | Dual Dio | de Series Con | . 5.5 |  |
| 41473 | DD06 | G | Dual Dio | de Com. Ano | .48 |  |


| LOW TO MEDIUM POWER SILICON RECTIFIERS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fig. D Low Leakage Type <br> Roted 1.8 omp with heot sink, 1.3 in free air. Popular Top Hat design. |  |  |  | (H) IRC 1.3 Amp Silicon Rectifiers High temperoture. Rugged, hermetically sealed, 100 to 1000 volt. |  |  |  |
|  |  |  |  |  |  |  |  |
| Order by | Stk. No. | 41449 \& | Mfg. No. | Stk. No. | Mrg. No. | PRV | Eoch |
| Mfg. | PRV | 1-99 | 100 Up | $\begin{aligned} & 41 A 214 \\ & 41 A 215 \end{aligned}$ | $\begin{aligned} & 10 \mathrm{Cl} \\ & 10 \mathrm{C} \end{aligned}$ | $\begin{aligned} & 100 \\ & 200 \end{aligned}$ | $10.32$ |
| N | Vo | Each | Ea | 414216 | 1003 | 300 |  |
| OB1 | 100 | 30.50 | 30.37 | 414217 | 10.4 | 400 |  |
| 1082 | 200 | . 5.5 | . 40 | 414218 | 10 C | 500 |  |
| 1083 | 300 | . 65 | . 51 | 414219 | 10 C 6 | 600 |  |
| 1084 | 400 |  |  | 414220 | 10 C 8 | 800 |  |
| B6 | 600 | 0 | O | 414221 | 10 Cl | 1000 |  |

## COLOR TV CARTRIDGE RECTIFIER

(11) The most needed silicon replacements. $61-8968$ used as voltage booster rectifier and $61-8969$ used as focus rectifier, replacing the
IV2. Direct replacement in RCA, Magnecord, Philco, Emerson, Packard Bell, Sylvania and Zenith. 41A140. 61-8968. 800 PR Volts. 1-9 Ea... $\$ 1.20$ 10-99 Ea... 51.08 41A141. 61-8969. 6500 PR Volts. 1-9 Eo... $\$ 2.95$ 10-99 Ea... $\$ 2.65$

## SILICON FULL WAVE BRIDGE ASSEMBLIES

MINIATURE SIZE-COMPLETELY INSULATED
Type 10DB6A is universal replacement rectifier for Europeon Radios, Hi-Fi, TV, Amplifiers and Recorders made by Grundig, Telefunken, Mertź, Phillips, etc.

| Stk. No. | Mifg. No. | PIV | Amps | Net Each |
| :---: | :---: | :---: | :---: | :---: |
| 41 A143 | 100B2A | 200 | 1.8 | \$2.50 |
| 414144 | 10DB4A | 400 | 1.8 | 2.75 |
| 41 A145 | 10DB6A | 600 | 1.8 | 3.05 |
| 414146 | 10088A | 800 | 1.8 | 80 |
| 41 A223 | 100bioa | 1000 | 1.8 | 0 |

## EXPERIMENTERS MOTOR

Special Anti-Frietion Bearing Type-Designed to operote directly from the power supplied by Solar Cells. ects. Runs on 1.5 to 6 volts at 30 to 40 MA. Conrecting a number of the cells listed above in series paraliel will operate the motor.
No. 41A126. EPSO. Each

B-A is your one-stop source for all International Rectifier items. See JEDEC listing on previous pages for other Zeners \& Rectifiers.

## ZENER DIODES FOR EVERY PURPOSE



COMMERCIAL (1) WATT SIZE 2

Order By Stk. No. 41 AB G Mfg. No


## FLANGELESS

SILICON RECTIFIERS
For stable applications over a wide temperoture

|  | FLANGELESS | 1.2 AMP |  |  | FLANGELESS | 6 AM |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| stk. No. <br> 414178 | Mfg. No. <br> IN1907 | $\begin{gathered} \text { Peok } V \text { V. } \end{gathered}$ |  | Stk. No. | Mfg. No. | Peak $V$. | 1-99 E |
| 414179 | IN1908 |  | -1.40 | 41A188 | 1 N 2103 | 50 | \$0.5 |
| 41 A180 | IN1909 | 200 | 1.80 | 41A189 | 1 N2104 | 100 |  |
| 414181 | IN1910 | 300 | 2.4 | 414190 | - N2105 | 200 |  |
| 414182 | 1 N1911 | 400 | 2.85 | 414192 | IN2107 | 300 400 |  |
| 41 A183 | 1 N1912 | 500 | . 7 | 414193 | 1N2108 | 500 |  |
| 414184 | 1N1913 | 600 |  |  |  |  |  |
| 414185 | 1 N1914 | 700 | 70 |  | FLANGELESS | . 75 AMP |  |
| 414186 | IN1915 | 800 |  |  | 1N2610 | $100$ | \$0.55 |
| 414187 | IN1916 | 900 | 70 | $414195$ | 1 N2611 | $200$ |  |
|  | FLANGELESS | . 75 AMP |  | 41 A196 | 1 N 2612 | 300 |  |
| Case pos | sitive types. |  |  | 414197 | 1N2613 | 400 |  |
| 414202 | 1 N3639 | 200 |  | 41 A198 | 1N2614 | 500 |  |
| 414203 | IN3640 | 400 | 73 | 414199 | 1N2615 | 600 |  |
| 41 A204 | iN364 1 | 600 | 05 | 414200 | IN2616 | 800 |  |
| 41 A205 | 1N3642 | 800 | . 4 | 414201 | 1N2617 | 1000 |  |



## INTERNATIONAL SUN BATTERY-PHOTO CELLS Converts sunlight to electricity for many interesting projects for the experimenter, hobbyist, science classes as well as useful commercial applications. A 24 page handbook supplied with each cell is chuck full of ideas, suggesting circuits for solar powered transistor radios, controlling relay circuits, light ray guns, burglar alarms, light meters and many others. The " $S^{\prime \prime}$ types are the same as use teries in our space vehicles. <br> | $\begin{array}{l}\text { teries in our space vehicles. } \\ \text { Stock }\end{array}$ | Míg. No. |  |  |  | Fig. |
| :--- | :--- | :--- | :--- | :--- | :--- |$\quad$ Mox. Outpu <br>  <br> (2)

## TRANSISTOR SOLAR RADIO PACKS

Uses sunlight to produce power for operating 4.5 and 9 volt transistor radios. At the same time a constant charge is being applied to the radio battery. Leads have battery terminals for quick solderless connection. Pack con be attached to "radio or cabinet by means of a unique pad. Size $3 \times 13 / 4 \times$ $3 / 8$. Weight 6 oz . Complete with instructions
No. 17D323. Mfg. No. SP9G13C، 9 Volt 13 MA.
Your
Choice Eoch

## SOLAR PHOTOCELL

## EXPERIMENTER KIT

Contains a selection of selenium, silicon and cadmium sulfide solid state photocells. An instruction monua wook circuit diagrams and experiments, plus aboist No. 41 A127. K421 Kit. Each................... $\mathbf{5 5 . 9 5}$

# Thermistors, Photocells, Semiconductors 

## FENWAL THERMISTORS

Thermistors are thermal resistors of ceromic material combined with metals to obtain a definite decrease in resistance as temperature is increased. Features close tolerance and stability with tiferature measuring device.

For Thermistor applications booklet request No. 25A93. FREE

| Stock No. | Mig. | Fig. | $\begin{gathered} \text { Ohms } \\ 25^{\circ} \end{gathered}$ | Ratio | $\begin{aligned} & 1-9 \\ & \text { Each } \end{aligned}$ | $\begin{aligned} & \text { 10-Up } \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 44A201 | GA51J | A | 100K | 10.3:1 | \$2.70 | \$2.16 |
| 44A202 | GA51P2 | B | 100K | 10.3:1 | 2.00 | 1.60 |
| 44A203 | GB32J2 | A | 2 K | 7.3 :1 | 2.70 | 2.16 |
| 444204 | GB32P8 | B | 2 K |  | 2.35 | 1.88 |
| 44 B 214 | GD25] 1 | A | 500 | 5.1 1 | 3.24 | 2.80 |
| 448220 | J825J1 | C | 500 | 6.9:1 | 1.00 | .80 |
| 448221 | J831J |  | 1 K |  | 1.00 | . 8 |
| 444205 | JA3511 | C | 5 K | $9.1: 1$ | 1.00 | 8 |
| 444206 | KA3ILI | C |  | 9.1.1 | -85 | .88 |
| 444207 | LB21J1 | $\stackrel{C}{C}$ | 100 | 6.9:1 | .85 | . |
| 448211 | NB111 | C | 10 | 9.9:1 | 1.85 |  |
| 444208 | QA51 | D | 100K |  | 1.25 | . 96 |
| 444209 | RB33L1 | D | 3150 | 7.1 | 1.20 | - |
| 44A210 | RB41LI | D |  |  |  |  |
| 44 A 212 | WA2IWI | E | 100 | 9.19:1 | 1.25 | 1.00 |
| 44 A213 | WBIIW1 | E | 10 | 6.9:1 | 1.25 | 1.00 |

THERMISTOR BASIC APPLICATION KIT
G701. Contains 10 glass bead and rod thermistors. Resistance values from 3 K to 135 K ohms. Complete with applications manual and therm..............9.95 No. 448222. Per Kit Each

## CLAIREX PHOTO CELLS



Small size-low cost-highly dependable. A type for every purpose in designing light control equipment, for industrial computers, dota processing, phomotion, computers, dota processing for phperimental and hobby use. The new low voltperimental ( 60 volts) units are ideal in transisoge ( 60 volts) Units are indeal ine power disjpation of $1 / 2$ watt all others ore 75 MW . For technical design data reques



|  |  |  | Max. Volts |  |  |  |  | Max. Volts |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Stk. No. } \\ & 20 A 12 \end{aligned}$ | Mig. No. <br> CL5M4L | Fig. | $\begin{aligned} & \text { Volts } \\ & 60 \end{aligned}$ | $\begin{aligned} & \text { Each } \\ & \$ 1.60 \end{aligned}$ | 20A18 | CL605L | (8) |  | $\$ 1.60$ |
| 20A16 | CL5M5 | (1) | 300 | . 50 | 20419 | CL703 |  | 300 |  |
| 20417 | CL5M5L | 1 | 60 | . 50 | 20a20 | CL |  | 60 | 5 |
| 20441 | CL504 | (1) | 250 | O | 20423 |  | 4 | 60 | 5 |
| 20A61 | CL504L | 1 | 60 |  | 20.2 | CL705L | (4) | 60 | 5 |
| 20463 | CL505 | (1) | 250 | 50 | 20824 | CL705 | (4) | 60 | . 5 |
| 20464 | CL505L |  |  | 50 | 20426 | CL903 | (3) | 250 | . 6 |
| 20445 | CL60 |  | 300 300 | 5 | 20427 | CL903A | (3) | 250 | . 5 |
| 20466 | CL603A | (3) | 300 | .75 | 20828 | CL903L | (3) | 60 | . 5 |
| 20470 | CL603AL | (2) | 60 | .75 | 20432 | CL904 | (3) | 250 | . 5 |
| 20447 | CL604L | (3) | 60 | . 75 | 20433 | ${ }^{\text {CL }}$ | $\stackrel{3}{3}$ | 50 |  |
| 20442 | CL605 | (3) | 300 | 1.60 | 20434 | CL905HL | (3) |  |  |

## 

## DESIGNERS PHOTO CELL KIT

Selection of 5 photo conductive cells varying in sensitivity, spectral response, speed and size. Complete with detailed technical informátion.
Ideal for design, experimental and research projects No, 20A43. Net Each

## SPECIAL INTERNATIONAL RECTIFIERS

SILICON RECTIFIER TUBE REPLACEMENT


A plug-in replacement for 5U4, 5AW4, 5AZ4, 5T4, 5AU4, 5V4, 5 Y3, $5 Z 4$. Contains a surge limiting resistor which adds to its practically unlimited iife. Lower forward voltage chat No. 41C26. Type ST-14. Eoch
$\$ 4.20$

## IR CONTACT PROTECTORS



To prevent arcing of relay and switch contacts. Highly reliable of very low cost. Small cartridge with pigtail leads. Consists of 2 selenium cells back-to-back for best protec eircuit.

|  | AC T' | PES | Eoch | Stack | DC Mff. | $\begin{aligned} & \text { PES } \\ & \text { V. DC } \end{aligned}$ | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 41490 | sivip | 26 | \$0.63 | 41 A75 | S2V1P | 44 | \$0.83 |
| 41492 | S5V5P | 130 | 1.00 | 41 A77 | S6V2P | 132 | 19 |
| 41498 | S5Y5P | 130 | 1.12 | 41478 | S7V2P | 154 | .90 |
| 41 A99 | S6Y6P | 156 |  | 41A81 | S6Y2P | 132 | 78 |
| 41 A102 | S5Z5P | 130 130 | 2.12 | 41486 41487 | S6W2P | 132 | 1.83 2.87 |
| 41 A104 | S5W5P | 130 | 3.22 | 41A87 | S6W2P | 132 | 2.87 |

## MP100 METER PROTECTOR

## MAKES ALL. MULTIMETERS BURNOUT PROOF

Simply install across metec terminals of sensitive meters up to 100 uo on VOM's, Wheatstone and Kelvin Bridge instruments. It also protects against test lead reversal. No. 41A89. Net Each
. 81.98
SILICON CONTROL RECTIFIER KIT
No. K505. Deluxe ossortment of five, 50 to 200 voit, describing 12 practical projects. Ideal for schools labs, experimenters, etc No. 41 A62. Complete Kit


MEDIUM CURRENT SERIES
M SERIES CLIP-IN TYPE-Popular for service and industrial applications Body ${ }^{32}$ " ferrule $1 / 4^{\prime \prime}$. All are 500 mil . 100 Up . CLIP IN MTG. FOR M SERIES
Stk. No. Mo. Stk. No. Mig. No. $600 \mathbf{\$ 0 . 8 6} \mathbf{1 7} \mathbf{~} \mathbf{0 . 7 0}$ 128843. Single Mitg. Each...... 12 c 178354 M 500400 .89... 69 17B355. Dual Mtg. Each.

COLOR TV RECTIFIER REPLACEMENTS
 Specify S
(5) (S) Tube Replacement Type
(3) NEW HIGH VOLTAGE TYPE
lugs is acting, 3/" Epoxy Tubular Avolanche Design longer life
stk. No Mifg. No Replaces $1-24$ etk No. Mfg No PIV MA 1-24 $\begin{array}{llllllll} \\ 174203 & \text { S5017 OR OL4-5Y4-6X5\$12.00 17A187 HVC } 180 & 1800 & 250 & 3.35\end{array}$ $17 A 207$ S5251 5U4-5Y3 etc. 6.10 17A2 HVC240 24002503.60 $\begin{array}{lllllllll}17 A 211 & S 5130 & 866 A-3828 & 22.50 & 17 D 188 & \text { HVC400 } & 4000 & 200 & 4.00 \\ 17 B 37 & 55991 & 5 A U 4-5 U 4 & & 17 A 3 & \text { HVC500 } & 5000 & 200 & 4.15\end{array}$
 (9)-(10) NEW SILICONE AVALANCHE BRIDGE RECTIFIERS

Avoilable from 2 to $500 \mathrm{amp} D C, 30-560$ volts. For complete detoils write for engineering bulletin 25A106

| engineering | bulletin 2 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stk. No. | Mgf. No. | PIV | DC Amps. | Size <br> $3 / 4 \times 9$ " |  |  |
| 17 A 4 | 56211 | 200 | 2 | $3 / 4 \times 16$, | +2.45 | 2.13 |
| 17 A 5 | 56211-1 | 400 | 2 | $3 / 4 \times 1{ }^{1 / \prime}$ |  | 2.26 |
| 17A6 | S6211-2 | 600 | 2 | $3 / 4 \times 8^{6}$. |  | 5 |
| 1748 | 56211-3 | 800 | 2 |  | 3.11 | 2.85 |
| 1749 | S6121-1 | 200 | 6 | $113 \times 18$ | 3.32 |  |
| 17 AlO | 56121-3 | 400 | 6 | $1.95 \times 8{ }^{\text {P }}$ | 4.64 |  |
| $17{ }^{\text {1 }}$ | S6121-5 | 600 | 6 | $118 \times{ }^{3} 5^{\prime \prime}$ | 6.65 | 6.68 |

## MPROVED HIGH CURRENT RECTIFIERS

hard solder of each junction. Half wave units for single or polyphase use. Engineering bulletins covering applications and eircuit data available on request. Last letter : $N$, negative base, $P$, positive. ${ }_{18}^{7}$ " base and 10-32 stud.
Current OEM prices always opply. Request quantity quotes.
(1) 6 Amp silicon stud Type

Specify Stk. No. 17 A 18 and Mfg.
Mfg.


N Negative Base: P Positive. 25 Amp Stud Rectifiers
N, Negotive Base; P, Positive. $1 / 4-28$ threaded stud. When Ordering


## SARKES TARZIAN KLIPVOLT

(4)limine overload voltage peaks present in silicon recti fier cir eliminate overiood voltage pe use of Klipvolt units wilt increase reliability of .rectifier circuits, without affecting circuit operation and at lower overall cost. To aid in selection of prope Klipvolt units request Stock No. 25 Al 19 Booklet ot NO CHAR
For mse in AC circuits. Avg. wt. 3 oz. For use in DC circuits. Avg. wt. 3 oz Order by Stk. No. 17 Cl 46 and Mfg. No. Order by Stk. No. 17 C146 and Mfg. No

| Mfg. No. | RMS Volts | Amps | Sizo |  | $\begin{gathered} 1-9 \\ \text { Each } \end{gathered}$ | $\begin{gathered} 10-99 \\ \text { Each } \end{gathered}$ | Mfg. No. | $\begin{gathered} \text { DC } \\ \text { Volts } \end{gathered}$ | Amps | $\begin{aligned} & \text { Size } \\ & \text { L. } \\ & \hline \end{aligned}$ |  | $\begin{gathered} 1-9 \\ \text { Each } \end{gathered}$ | $\begin{aligned} & 10-99 \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L. | W. |  |  |  |  |  |  |  |  |  |
| S-487 | 35 | 2.5 | 13/8 | 1 | \$0.87 | \$0.78 | S-550 | 27 | 5.5 | , |  |  |  |
| S-490 | 140 | 2.5 | $17 / 8$ | 1 | 1.83 | 1.65 | S-550A | 27 | 11.0 | 11/8 | $11 / 4$ | .94 1.68 | . 8.49 |
| S-490A | 140 | 4.5 | $17 / 8$ | 11/4 | 2.62 | 2.36 | S-553A | 108 | 11. |  |  | 1.68 | 1.87 |
| S-490B | 140 | 8.0 | 17/8 | 1.6 | 3.36 | 3.02 | S-553B | 108 | 20.0 | 13\% |  | 2.08 | 1.50 |
| S-493 | 280 | 2.5 | 23\% | , | 3.11 | 2.80 | S-556 | 189 | 5.5 | 13 |  |  | 1.50 |

## Ohmite Power Resistors

## 31/4-5-11 WATT SERIES 99 MOLDED RESISTORS

## $\longrightarrow\left(\begin{array}{l}\text { OHMIFE } \\ 10.000\end{array}\right.$

Compoct, wire wound vitreous enameled resistors
offer the convenience of axial enameled resistors Especially suited for printed circuit terminal board, and point-to-point wiring applications
 Specify Stock No. and Resistance on orders

| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 22 | 82 | 400 | 1200 | 5000 | 18,000 |
| 1.5 | 25 | 100 | 470 | 1500 | 5600 | 20,000 |
| 2 | 27 | 120 | 500 | 1800 | 6000 | 22,000 |
| 3 | 30 | 150 | 560 | 2000 | 6800 | 25,000 |
| 4 | 33 | 180 | 600 | 2200 | 7000 | 27,000 |
| 5 | 39 | 200 | 680 | 2500 | 7500 | 30,000 |
| 7.5 | 40 | 220 | 700 | 2700 | 8000 | 33,000 |
| 10 | 47 | 250 | 750 | 3000 | 8200 | 39,000 |
| 12 | 50 | 270 | 800 | 3300 | 9000 | 40,000 |
| 15 | 56 | 300 | 820 | 3900 | 10,000 | 47,000 |
| 18 | 68 | 330 | 900 | 4000 | 12,000 | 50,000 |
| 20 | 75 | 390 | 1000 | 4700 | 15,000 |  |

31/4-WATT AXIAL-LEAD RESISTORS. In values from 1 to 10,000 ohms

| Value | $1-9$ Ea. | $10-24$ Ea. | $25-99$ Ea. | $100-249$ Ea. |
| :---: | ---: | ---: | ---: | ---: |
| 1 to 1000 ohms | .59 | .50 | .41 | .35 |
| 1200 to 5000 ohms | .62 | .53 | .43 | .37 |
| 5600 to $10,000 \mathrm{ohms}$ | .66 | .56 | .46 | .40 |

5-WATT AXIAL-LEAD RESISTORS. Available in above values from 1 Ohm to 25,000 Ohms
Specify Stk. No. 15 A1017 and Resistance Value when ordering.

| Value | $1-9$ Ea. | $10-24$ Ea. | $25-99$ Ea. | $100-249$ Ea. |
| :---: | :---: | ---: | ---: | ---: |
| 1 to 1000 ohms | .62 | .53 | .43 | .37 |
| 1200 to 5000 ohms | .66 | .56 | .46 | .40 |
| 5600 to 10,000 ohms | .70 | .60 | .49 | .42 |
| 12,000 to 20,000 ohms | .78 | .66 | .55 | .47 |
| 22,000 to 25,000 ohms | .82 | .70 | .57 | .49 |

11.WATT AXIAL-LEAD RESISTORS. In values from 1 to 50,000 Ohms

Specify Stk. No. 15 A1018 and Resistance Value when ordering.

| Value | $1-9$ Ea. | $10-24$ Ea. | $25-99$ Ea. | 100-249 Ea. |
| :---: | ---: | ---: | ---: | ---: |
| 1 to 1000 ohms | .68 | .58 | .48 | .41 |
| 1200 to 5000 ohms | .73 | .62 | .51 | .44 |
| 5600 to 10,000 ohms | .84 | .71 | .59 | .50 |
| 12,000 to 20,000 ohms | .95 | .81 | .67 | .57 |
| 22,000 to 40,000 ohms | 1.00 | .85 | .70 | .60 |
| 47,000 to 50,000 ohms | 1.12 | .95 | .78 | .67 |

OHMITE 8-12-20 WATT "BROWN DEVILS" WITH NEW HIGHER RATINGS


Small size wire wound units with wire leads for con venient mounting. Extra sturdy, vitreous enameled caating provides lasting protection from humidity and
 Specify Stock No and Resistance on
Specify Stock No. and Resistance on all orders.

| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $.5 \%$ | 25 | 300 | $1100 \ddagger$ | 4500 | $13,500 \% \ddagger$ | 50,000 |
| 1 | $30 \ddagger$ | 350 | 1200 | 5000 | 15,000 | 55,000 |
| $1.5 \ddagger$ | $35 \ddagger$ | 400 | 1250 | 6000 | $16,000 * \ddagger$ | 60,000 |
| 2 | $40 \ddagger$ | $450 \ddagger$ | 1500 | 7000 | $17,500 \ddagger$ | 65,000 |
| 3 | 50 | 500 | 1750 | 7500 | $18,000 \% \ddagger$ | 70,000 |
| 4 | 75 | $600 \ddagger$ | 2000 | 8000 | 20,000 | 75,000 |
| 5 | 100 | $650 \% \ddagger$ | 2250 | $8500 \% \ddagger$ | $22,500 \ddagger$ | 80,000 |
| $7.5 \ddagger$ | $125 \ddagger$ | 700 | 2500 | 9000 | 25,000 | 85,000 |
| 10 | 150 | 750 | $2750 \% \dagger$ | 10,000 | 30,000 | 90,000 |
| $12 \ddagger$ | 200 | 800 | 3000 | $11,000 \% \ddagger$ | 35,000 | 95,000 |
| $15 \ddagger$ | $225 \ddagger$ | 900 | 3500 | $12,000 \% \ddagger$ | 40,000 | 100,000 |
| $20 \ddagger$ | 250 | 1000 | 4000 | 12,500 | 45,000 |  |

8-WATT, FORMERLY 5-WATT "BROWN DEVILS". Values from 1 Ohm to 25,000 Óhms except values morked:". Specify Stk. No. 15 Bio23 and yalue

| Value | $1-9$ Ea. | $10-24$ Ea. | $25-99$ Ea. | $100-249$ Ea. |
| :---: | ---: | ---: | ---: | ---: |
| 1101000 Ohms | .52 | .44 | .36 | .31 |
| 1100 to 5000 Ohms | .55 | .47 | .39 | .33 |
| 6000 to 10000 Ohms | .58 | .49 | .41 | .35 |
| 12,500 to 20,000 Ohms | .65 | .55 | .46 | .39 |
| 22,500 to 25,000 Ohms | .68 | .58 | .48 | .41 |

12-WATT, FORMERLY 10-WATT "BROWN DEVILS". Values from . 5 Ohm to so, onms except those values marked $\dagger$. Specify Stk. No. 15 Bi006 and value when ordering

| Value | 1-9 Ea. | 10-24 Ea. | 25-99 Eo. | 100-249 Ea. |
| :---: | :---: | :---: | :---: | :---: |
| i 5 to 1000 Ohms | .57 | . 48 | 25-99 | 100-249 Ea. |
| 1100 to 5000 Ohms | $.81$ |  | . 40 | $.34$ |
| 6000 to 10,000 Ohms 11,000 to 20,000 Ohms | .70 | .60 | $.43$ | -37 |
| 11,000 to 20,000 Ohms | .79 | .67 | $49$ | 2 |
| 22,500 to 40,000 Ohms | .83 | - |  | 7 |
| 45,000 G 50,000 Ohms | .93 | .79 |  |  |
| 20-WATT "BROWN DEVILS". Available in above values from .5 Ohm to 100,000 Ohms except values marked $\ddagger$. Specify $\mathbf{S t k}$. No. 15 B1010 and value. |  |  |  |  |
| Value | 1-9 Ea. 10-24 |  | 25-99 Ea, 100-249 Ea. |  |
| . 5 Ohms | .95 | . 81 | 25-99. | 100.249 Ea. |
| 1 to 1000 Ohms | .68 | . 58 | .48 | 47 |
| 1200 to 5000 Ohms | .70 | .60 | . 48 | 41 |
| 6003 to 10,000 Ohms | .83 | .71 | 48 | 42 |
| 12,500 to $20,000 \mathrm{hmms}$ | .85 | 72 | 58 | 50 |
| 25,000 to 40,000 Ohms | .99 | 82 | 68 | . 51 |
| 45,000 to 60,000 Ohms | 1.15 | 84 | 69 | . 59 |
| 65,000 to 80,000 Ohms | 1.37 | . 98 | .81 | 69 |
| 85,000 to $100,000 \mathrm{Ohms}$ | 1.57 | 1.38 | 8 | .82 |

## OHMITE DIVIDOHMS

Vitreous enameled over resistance wound on eramic core. Dividohm supplied with one slider and two mounting brackets. Tolerance $\pm 10 \%$. Specify Stock No. and Resistance on all orders.

| 10, 25 AND 50-WATT VALUES |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| 1 | $20 \ddagger$ | 300 | 1250 | 4500 | 10,000 | 60,000 |
| 2 | 25 | $350 \ddagger \ddagger$ | 1500 | 5000 | 12,000 | 80,000 |
| 3 | 50 | 400 | 2000 | 6000 | 15,000 | 100,000 |
| $4 * \dagger$ | 75 | 500 | 2250 | 7000 | 20,000 |  |
| 5 | 100 | $600 \dagger \ddagger$ | 2500 | 7500 | 25,000 |  |
| $7.5 \ddagger$ | 150 | 750 | 3000 | 8000 | 30,000 |  |
| 10 | 200 | 800 | 3500 | $8500 \dagger$ | 40,000 |  |
| $15 \ddagger$ | 250 | 1000 | 4000 | 9000 | 50,000 |  |

10-WATT ADJUSTABLE DIVIDOHM. Size $13 / 4 \times_{18 \prime \prime}^{5 \prime}$. Wt. 2 oz . Available in above values from 1 Ohm to 10,000 Ohms except values marked $\%$. Specify Stk. No. 15B1011 and Value when ordering.

| Value | $1-9$ Ea. | $10-24$ Ea. | $25-99$ Ea. | $100-249$ Ea. |
| :---: | :---: | :---: | ---: | ---: | ---: |
| 1 to 1000 Ohms | 1.14 | .97 | .80 | .68 |
| 1250 to 50000 hms | 1.18 | 1.00 | .83 | .71 |
| 6000 to 10,000 Ohms | 1.27 | 1.08 | .89 | .76 |

25-WATT ADJUSTABLE DIVIDOHM. Size $2 \times \frac{9^{\prime \prime}}{}$. Wt. 2 oz . Available in Stock No. 15 B1501 and Value when ordering. except values marked $\dagger$. Specify n ordering

| Value | $1-9$ Ea. | $10-24$ Ea. | $25-99$ Ea. | $100-249$ Ea. |
| :--- | :---: | ---: | ---: | ---: |
| 1 to 1000 Ohms | 1.29 | 1.10 | .90 | .77 |
| 1250 to 5000 Ohms | 1.32 | 1.12 | .92 | .79 |
| 6000 to 10,000 Ohms | 1.42 | 1.21 | .99 | .85 |
| 12,000 to 20,000 Ohms | 1.47 | 1.25 | 1.03 | .88 |
| 25,000 Ohms | 1.61 | 1.37 | 1.13 | .97 |

50-WATT ADJUSTABLE DIVIDOHM. Size $4 \times{ }^{1^{\prime \prime \prime}}$. W W. 4 oz . Available in above values from ohm to 100,000 Ohm except values marked $\ddagger$. Specify Stock No. 15B1506 and Value when ordering.

| Value | 1-9 Ea. | 10-24 Ea. | 25-99 Ea. | 100-249 Ea. |
| :---: | :---: | :---: | :---: | :---: |
| 1 Ohm | 2.12 | 1.80 | 1.48 |  |
| 2 to 1000 Ohms | 1.88 | 1.43 | 1.18 | 1.21 |
| 1250 to 5000 Ohms | 1.71 | 1.45 | 1.20 | 1.03 |
| 6000 to 10,000 Ohms | 1.80 | 1.53 | 1.26 | 1.08 |
| 12,000 to 20,000 Ohms | 1.92 | 1.63 | 1.28 | 15 |
| 25,000 to 40,000 Ohms | 2.11 | 1.79 | 1.48 |  |
| 50,000 to 60,000 Ohms | 2.29 | 1.95 | 1.60 | 7 |
| 80,000 Ohms | 2.54 | 2.16 | 1.78 | 5 |
| 100,000 Ohms | 2.70 | 2.30 | 1.88 | 2 |

100 AND 200-WATT VALUES

| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 5 | 100 | 1500 | 15,000 | 40,000 |
| 2 | 10 | 250 | 2500 | 20,000 | 50,000 |
| 3 | 25 | 500 | 5000 | 75,000 |  |
| 4 | 50 | 1000 | 10,000 | 30,000 | 100,000 |
| $100-W A T T$ | ADJUST |  |  |  |  |

100-WATT ADJUSTABLE DIVIDOHM. Size $61 / 2^{\prime \prime} \times 3 / 4^{\prime \prime}$. Wt. 8 oz. Available in above values. Specify Stock No. 15B1508 and Value when ordering.

| Value | 1-9 Ea. | 10-24 Ea. | 25-99 Ea. | 100-249 |
| :---: | :---: | :---: | :---: | :---: |
| 1 to 3 Ohms | 2.73 | 2.32 | 1.91 | 1.64 |
| 4 to 1000 Ohms | 2.11 | 1.79 | 1.48 | 1.27 |
| 1500 to 5000 Ohms | 2.17 | 1.84 | 1.52 | 1.23 |
| 10,000 Ohms | 2.30 | 1.96 | 1.61 | $1 \cdot 38$ |
| 15,000 to 20,000 Ohms | 2.44 | 2.07 | 1.71 |  |
| 25,000 to 40,000 Ohms | 2.70 | 2.30 |  |  |
| 50,000 Ohms | 2.78 | 2.36 |  |  |
| 75,000 Ohms | 3.02 |  |  | - |
|  |  |  | 2.11 | 81 |
| 100,000 Ohms | 3.22 | 2.82 | 2.32 | 1.99 |

200-WATT ADJUSTABLE DIVIDOHM. Size $101 / 2^{\prime \prime} \times 11 / 8^{\prime \prime}$ Wt. I lb. Avail able in above values. Specify Stock No. 15 B1512 and Value when ordering

| Value | 1-9 Ea. | 10-24 Ea. | 25-99 Ea. | 100-249 Ea. |
| :---: | :---: | :---: | :---: | :---: |
| 1 to 5 Ohms | 4.32 | 3.67 | 3.02 | 2.59 |
| 10 to 1000 Ohms | 3.34 | 2.84 | 2.34 | 2.00 |
| 1500 to 5000 Ohms | 3.41 | 2.90 | 2.39 | 2.05 |
| 10,000 Ohms | 3.59 | 3.05 | 2.51 | 2.15 |
| 15,000 to 20,000 Ohms | 3.77 | 3.20 | 2.64 | 2.26 |
| 25,000 to 40,000 Ohms | 3.86 | 3.28 | 2.70 | 2.32 |
| 50,000 Ohms | 3.96 | 3.37 | 2.77 | 2.38 |
| 75,000 Ohms | 14 | 3.52 | 2.90 | 2.48 |
| 100,000 Ohms | 4.34 | 3.69 | 3.04 | 2.80 |

ADJUSTABLE BANDS FOR DIVIDOHMS
Screwariver type adjustables lugs for obove power resistors. Has silver con-
tact button.

| Stk. No. | For | $1-9$ Ea. | $10-24$ Eo. | 25-99 Ea. |
| :--- | :--- | ---: | ---: | ---: |
| $15 A 1012$ | 10 Wott Size | .14 | .12 | .10 |
| $15 A 1014$ | 25 G Watt Size | .14 | .12 | .10 |
| $15 A 1015$ | 100 Watt Size | .14 | .12 | .10 |
| $15 A 1528$ | 200 Watt Size | .23 | .20 | .10 |

OHMITE LITTLE DEVIL RESISTOR ASSORTMENT
Molded plastic cabinet with all selected re-
sistors for servicemon and builder. 40 values five drawers with eight compartments each for quick and easy visual check on stock Size " $9^{\prime \prime}$ lang, $43 / 4^{\prime \prime}$ high and $51 / 4^{\prime \prime}$ stack. No. 33 B 143. CAB-4 Asstmt.
150 1/4-Watt. EACH. No. 33B137. CAB-10 Asstmit.
150 1/2-Watt. EACH...
No. 33 B138. CAB-2 Asstmt.
125 1-Watt. EACH .....
No. 33B136. CAB-3 Asstmt.
125 2-Wott. EACH . . . .


# Composition \& Precision Resistors 



## OHMITE "LITTLE DEVIL" RESISTORS

Molded insulated composition resistors in four sizes, $1 / 4,1 / 2,1$ and 2 watts. Tiny in size but hove exceptional ruggedness, stability and current carrying capacity. All Liffle Devils" are EIA coded. Meet all test requirements of high humidity cluding salt water immersion and high humitity tests. Have high insulation break-down voltage, used at their full wattage rotings at $70^{\circ} \mathrm{C}\left(158^{\circ}\right.$ F) ambient temperature and dissipate heat rapidly

EIA Values-Specify Stock No. and Resistance

| Ohms | Ohms | Ohms | Ohms | Ohms |  | Ohms |  | Megohms Megohms |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 10 | 82 | 680 | 5,600 |  | 47,000 |  | 0.39 | $\begin{aligned} & 3.3 \\ & 3.9 \end{aligned}$ |  |
|  | 12 | 100 | 820 | 6,800 |  | 56,000 |  | 0.47 |  |  |
|  | 15 | 120 | 1,000 | 8,200 |  | 68,000 |  |  |  |  |
| Si-Watt | 18 | 150 | 1,200 | 10,000 |  | 82,000 |  | 0.68 | 5.66.8 |  |
| Size Only | 22 | 180 | 1,500 | 12,00015,000 |  | 0.1 Meg.0.12 Meg. |  |  |  |  |
| $2.7$ | 27 | 220 | 1,800 |  |  | 0.82 1.00 | 6.88.2 |  |  |  |
| 3.3 | 33 | 270 | 2,200 | 18,000 |  |  |  | 0.15 Meg. |  | 1.2 | 10.0 |  |
| 3.7 | 39 | 330 | 2,700 | 22,000 |  | 0.18 Meg . |  | 1.5 | 12.0 |  |
| . | 47 | 390 | 3,300 | 27,000 |  | 0.22 Meg . |  | 1.8 | 15. |  |
|  | 56 | 470 | 3,900 | 33,000 |  | 0.27 Meg 0.33 Meg . |  | 2.2 | 22.0 |  |
| 8.2 | 68 | 560 | 4,700 | 39,0 | 000 |  |  |  |  |  |
| Quantity prices apply to One Value Only. |  |  |  | Eoch | $\begin{array}{r} 5- \\ 49 \\ \text { Each } \end{array}$ | $\begin{gathered} 50- \\ 99 \\ \text { Each } \end{gathered}$ | $\begin{aligned} & 100 \\ & 249 \\ & \text { Each } \end{aligned}$ | $\begin{array}{r} 250- \\ 499 \\ \text { Each } \end{array}$ | $500-1000$999 OverEach Each |  |
| Na. 15 Al 2.7 Ohms 27 Ohms | $\begin{aligned} & 003.1 / 2 \\ & \text { to } 22 \\ & \text { to } 22 \end{aligned}$ | hms eg. |  | . 14 | . 12 | $\begin{aligned} & .077 \\ & \hline \end{aligned}$ | $\begin{aligned} & .055 \\ & .05 \end{aligned}$ | $\begin{array}{r} .055 \\ .045 \\ \hline \end{array}$ | $\begin{aligned} & .044 \\ & .04 \\ & \hline \end{aligned}$ | $\begin{array}{r} .037 \\ .034 \end{array}$ |
| No. 15 A 1 <br> No. $15 A 1$ | 002. 004. 005. | Watt att, Watt, | \% | .12 .18 .24 | .10 .15 .20 | $\begin{aligned} & .06 \\ & .09 \\ & .15 \end{aligned}$ | $\begin{aligned} & .05 \\ & .06 \\ & \hline 11 \end{aligned}$ | $\begin{aligned} & .04 \\ & .055 \\ & .096 \end{aligned}$ | $\begin{aligned} & .032 \\ & .05 \\ & .088 \end{aligned}$ | .03 <br> .045 <br> .082 |

## OHMITE OHMS LAW CALCULATORS



Pocket size slide rule with parallel resistance scale side and Ohms Law Calculator with full instructions on the other side.

25c
Durable Plastic Model. Same as obove but imperviaus to wear. No. 14B304. NET EACH. COLOR CODE GUIDE FOR RESISTORS. Here is one of
the handiest Color Code Guides for Resistars ever de-
 vised. Standard El No. 16A116. Each

10 c

## IRC PRECISION RESISTORS TYPE CE



Evaporated metal film series in $1 / 8,1 / 4,1 / 2$ watt sizes Has special moisture resistant $M$-coat identified by its gray color. Leads $11 / 2^{\prime \prime}$ long, alloy coated for positive trouble-free soldering, especially desirable in dip soldering to printed circuits. Has very low

| Stock No. | IRC Type | Watts | Ohms Range | 1-24 | 25.99 | $\begin{gathered} \text { Price E } \\ 100-249 \end{gathered}$ | $\begin{aligned} & \text { ach } \\ & 250-999 \end{aligned}$ | 1000-Up |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 42B2 | CEA <br> CEA | $1 / 8$ | $\begin{aligned} & 10-99 \\ & 100-500 \mathrm{~K} \end{aligned}$ | $\begin{array}{r} 50.99 \\ .85 \end{array}$ | $\begin{array}{r} \$ 0.48 \\ .44 \end{array}$ | $\begin{array}{r} 50.32 \\ .30 \end{array}$ | $\begin{array}{r} \$ 0.21 \\ .17 \end{array}$ | $\begin{array}{r} \$ 0.18 \\ .14 \\ \hline \end{array}$ |
| $\begin{aligned} & 42 B 7 \\ & 42 B 7 \end{aligned}$ | $\begin{aligned} & \text { CEB } \\ & \text { CEB } \end{aligned}$ | $\begin{aligned} & 1 / 4 \\ & 1 / 4 \end{aligned}$ | $\begin{aligned} & 10-99 \\ & 100-1 \mathrm{Meg} . \end{aligned}$ | $\begin{array}{r} .89 \\ .85 \end{array}$ | $\begin{aligned} & .46 \\ & \hline \end{aligned}$ | $\begin{aligned} & .32 \\ & .30 \end{aligned}$ | $\begin{array}{r} .21 \\ .17 \\ \hline \end{array}$ | $\begin{array}{r} .18 \\ .14 \\ \hline \end{array}$ |
| 42B4 | $\begin{aligned} & \text { CEC } \\ & \text { CEC } \end{aligned}$ | $1 / 2$ | $\begin{aligned} & 10-99 \\ & 100-1.5 \mathrm{Meg} \end{aligned}$ | $\begin{aligned} & .99 \\ & .54 \end{aligned}$ | $\begin{aligned} & .48 \\ & .28 \\ & \hline \end{aligned}$ | . 32 | $\begin{array}{r} 21 \\ .11 \\ \hline \end{array}$ | $\begin{aligned} & .18 \\ & .095 \\ & \hline \end{aligned}$ |

Order by stock number and resistance value. Use the decade chart of values below os a guide, multiply by $10,100,1000$, etc. to higher values. Each resistor listing shows the lower and upper limits available. *Preferred values

STANDARD DECADE OF RESISTANCE VALUES




$5.62 *$
5.76
5.90
6.04
$6.19 \%$
6.34
6.49
6.65
$6.81 *$
6.98
7.15
7.32


IRC NEW RECTANGULAR METAL GLAZE INFINITE RESOLUTION TRIMMER


Model 450 in compoct RJ-12 package is ideal for printed board
design Meets MILL-R - 22097 design. Meets MILL-R-22097 specs. It is small,
$11 / 4^{\prime \prime}$ long, $.19^{\prime \prime}$ wide, .3i $5^{\prime \prime}$ high. $11 / 4^{"}$ long, $19^{\prime \prime}$ wide, $.315^{\prime \prime}$ high.
Has leads type $450-00$ or pins Has leads type $450-00$ or pins
$450-10$ Offers infinite resolu-450-10. Offers infinite resolution, Metal Glaze reliability, mechanical stability, exceptional high er resistance values. Tolerance $10 \%$-electrical rotation 22 turns, has stops and slip clutch- $1 / 2$ watt, 300 volts. Order by stock number and resistance. Choice of 100,200 , 200 , and 1 Meg.
$5,000,10,000,20,000,50,000100,000,200,000,500,000$ ohms and
$\begin{array}{llllllll}\text { No. 43A166. Type 450-00. Choice } & 1-9 & 10-24 & 25-49 & 50-99 & 100-249\end{array}$

IRC CARBON INSULATED RESISTORS
$5 \%$ and $10 \%, 1 / 4,1 / 2,1,2-$ Watt Sizes
$\mathrm{B}-\mathrm{A}$ offers low manufacturers' net prices in quantities listed below to industrial, design engineering, laboratory, manufacturing, and other accounts who have need for top quality, colorcoded, insulated resistors. Conform $100 \%$ to E1A code, JAN and MIL-R-II specifications in both $1 / 4,1 / 2$ and 1 watt types, and in 2 wat sizes from 100 ohm to 1 meg. Every value listed is in Kansas City stock for immediat
delivery in quantity. Sizes: $1 / 2$-watt $28 \times{ }^{\circ}{ }^{\prime \prime}$.
 However, 100 or more total may be assorted for maximum quantity price in any combination of wattages or tolerances, providing 50 minimum of each value is ordered. All values listed below are in stock in $5 \%$ tolerance. $10 \%$ tolerance values available only in values listed in bold face.

| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Meg. | Meg. | Meg. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| These | 10 | 68 | 470 | 3300 | 22,000 | 0.15 | 1.00 | 6.8 |
| Values | 11 | 75 | 510 | 3600 | 24,000 | 0.16 | 1.1 | 7.5 |
| in | 12 | 82 | 560 | 3900 | 27,000 | 0.18 | 1.2 | 8.2 |
| GBT $1 / 2$, | 13 | 91 | 620 | 4300 | 30,000 | 0.20 | 1.3 | 9.1 |
| GBT1' | 15 | 100 | 680 | 4700 | 33,000 | 0.22 | 1.5 | 10.0 |
| 2.7 | 16 | 110 | 750 | 5100 | 36,000 | 0.24 | 1.6 | 11.0 |
| 3.0 | 18 | 120 | 820 | 5600 | 39,000 | 0.27 | 1.8 | 12.0 |
| 3.3 | 20 | 130 | 910 | 6200 | 43,000 | 0.30 | 2.0 | 13.0 |
| 3.6 | 22 | 150 | 1000 | 6800 | 47,000 | 0.33 | 2.2 | 5. |
| 3.9 | 24 | 160 | 1100 | 7500 | 51.000 | 0.36 | 2.4 | 16.0 |
| 4.3 | 27 | 180 | 1200 | 8200 | 56,000 | 0.39 | 2.7 | 18.0 |
| 4.7 | 30 | 200 | 1300 | 9100 | 62,000 | 0.43 | 3.0 | 20.0 |
| 5.1 | 33 | 220 | 1500 | 10,000 | 68,000 | 0.47 | 3.3 | 22.0 |
| 5.6 | 36 | 240 | 1600 | 11,000 | 75,000 | 0.51 | 3.6 | 1/4 |
| 6.2 | 39 | 270 | 1800 | 12,000 | 82,000 | 0.56 | 3.9 | wot |
| 6.8 | 43 | 300 | 2000 | 13.000 | 91,000 | 0.62 | 4.3 | Sixe |
| 7.5 | 47 | 330 | 2200 | 15,000 | 0.1 Meg. | 0.68 | 4.7 | to |
| 8.2 | 51 | 360 | 2400 | 16,000 | 0.11 Meg. | 0.75 | 5.1 | Meg |
| 9.1 | 56 | 390 | 2700 | 18,000 | 0.12 Meg . | 0.82 | 5.6 | Meg. |
|  | 62 | 430 | 3000 | 20,000 | 0.13 Meg . | 0.91 | 6.2 | Only |


| Stock No. | Type $\mathcal{G}$ Woftage | Tol. | $\begin{gathered} \text { 1-9 } \\ \text { Each } \end{gathered}$ | $10-49$ Each | $\begin{gathered} 50-99 \\ \text { Each } \end{gathered}$ | Each | $\begin{gathered} 250-49 \\ \text { Eoch } \end{gathered}$ | Each | $\begin{aligned} & 1000 \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15B1027 | GBT-1/4 | 5\% | . 26 | . 22 | . 19 | . 11 | . 095 | . 08 | . 065 |
| $15 \mathrm{B1} 028$ | GBT-1/4 | 10\% | .13 | .11 | .09 | . 126 | . 086 | . 073 | . 045 |
| 15 B 1000 | GET-1/2 | 5\% | . 24 | . 22 | .1975 | . 129 | . 043 | . 032 | . 023 |
| 15 B 1024 | GBT-1/2 | 10\% | . 12 | 10 | . 075 | . 196 | . 145 | . 125 | . 085 |
| 15B1001 | GBT-1 | 5\% | .36 | .32 | .28 | . 194 | . 065 | . 058 | . 04 |
| 15 B 1025 | GBT-I | 10\% | . 18 | .15 | . 37 | . 259 | . 216 | . 204 | . 15 |
| $15 A 1007$ $15 A 1008$ | SR-2 | 10\% 10\% | . 24 | .43 .22 | . 19 | . 129 | . 108 | .102 | . 08 |

IMPORTANT: Specify Stk. No., Value, Wattage and Tolerance when ordering.
IRC BWH MOLDED WIRE-WOUND RESISTORS
The new IRC BWH resistor gives exceptional stability, reliability and lang term life characteristics of a wire-wound unit, and provides low ohmage resistances not available in composition resistors. This one resistor can be used as a $1 / 2$-watt resistor at $137^{\circ} \mathrm{C}$. ambient, a 1 -watt resistor ot $115^{\circ} \mathrm{C}$ ambient, ar as a 2 -watt resistor of $70^{\circ}$ C. ambient. Meets ar exceeds wat MIL-R-11C performance requirements. Size is the same as the GBulation is resistor above, 225 dia. $X$. ${ }^{\prime}$ 's exclusive thermosetting materials. Noise plastic housing molded with are negligible. All values listed below are available in $5 \%$ and shelf drift are negligibe. A $10 \%$ values.

IMPORTANT: Specify Stock No., Value and Tolerance When Ordering
METAL FILM PRECISION RESISTORS


 Tolerance, those in bold face are $10 \%$ values

| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.24 | 0.75 | 2.4 | 7.5 | 24 | 75 | 240 | 750 |
| 0.27 | 0.82 | 2.7 | 8.2 | 27 | 82 | 270 | 910 |
| 0.30 | 0.91 | 3.0 | 9.1 | 30 | 91 | 330 | 1000 |
| 0.33 | 1.0 | 3.3 | 10 | 33 | 10 | 360 | 1100 |
| 0.36 | 1.1 | 3.6 | 11 | 36 39 | 110 | 390 | 1200 |
| 0.39 | 1.2 | 3.9 | 12 | 39 | 120 | 390 | 1300 |
| 0.43 | 1.3 | 4.3 | 13 | 47 | 150 | 470 | 1500 |
| 0.47 | 1.5 | 4.7 | 15 | 47 | 160 | 510 |  |
| 0.51 | 1.6 | 5.1 | 18 | 56 | 180 | 560 |  |
| 0.56 | 1.8 | 5.6 | 18 | 56 | 200 | 620 |  |
| 0.62 | 2.0 | 6.2 | 20 | 68 | 220 | 680 |  |
| 0.68 | 2.2 | 6.8 | $\underline{22}$ | $1-99$ <br> Each | $\begin{gathered} 100-249 \\ \text { Each } \end{gathered}$ | $\begin{gathered} 250.499 \\ \text { Eoch } \end{gathered}$ | $\begin{gathered} 500-999 \\ \text { Each } \\ \hline \end{gathered}$ |
| No. 15A1009. Type BWH 5\% Tol. 0.24 ohms to 9.1 ohms 10 ohms to 1000 ohms 1100 to 1500 ohms |  |  |  | $\begin{array}{r} \$ 0.48 \\ .30 \\ .33 \\ \hline \end{array}$ | $\begin{array}{r} 50.285 \\ .18 \\ .198 \\ \hline \end{array}$ | $\begin{array}{r} 80.189 \\ .12 \\ 132 \end{array}$ | $\begin{array}{r} 30.149 \\ .09 \\ .099 \\ \hline \end{array}$ |
| $\begin{aligned} & \text { No. } 1 \\ & 0.27 \\ & 10 \text { oh } \\ & 1200 \end{aligned}$ | 1019. s to 8 to 100 1500 .oh | $\begin{aligned} & \text { e BWH } \\ & \text { hms } \\ & \text { hms } \\ & \text { s } \end{aligned}$ | \% Tol. | $\begin{array}{r} .24 \\ .18 \\ .18 \end{array}$ | $\begin{aligned} & .144 \\ & .108 \\ & .108 \\ & \hline \end{aligned}$ | .096 <br> .072 <br> .072 | .084 .058 .058 |

$15 A 110$. Waft NR25. Size $7 / 8 \times \frac{1}{3} \frac{1}{2}{ }^{\prime \prime}$. $10 \mathrm{hm}-1 \mathrm{Meg}$. Each.


## Industrial Controls \& Power Rheostats



MODEL "E" $121 / 2$ WATT Dio. $7 / 8^{\prime \prime}$. Depth $11^{\prime \prime \prime}$. Shaft $1 / 8^{\prime \prime}{ }^{\prime \prime}$, ond No. 5007 dial plate


## IRC MULTI-TURN PRECISION POTENTIOMETER AND "REVODEX" DIALS

Precision, high reliability multiturn controls. Features close resistance ond linearity

## Prerance.

(1) Model 5000. Sub-miniature precision pot, 10 -turn, 1.5 watts, only $1 / 2^{\prime \prime}$ dia., Th'" L. Res. tolerance $10 \%$, linearity tol, $1.0 \% .1 / 4$, shoft, $1 / 2^{\prime \prime}$ long. Available in following values: $100,500,1 \mathrm{~K}, 5 \mathrm{~K}, 10 \mathrm{~K}, 25 \mathrm{~K}$, and 50 K ohms. No. 42B40. Model 5000. Net Eoch.
(3) Model 7500. Minioture precision pot, 10 -turn, 3 watts $3 / 4^{\prime \prime}$ dio., $1 \mathrm{~h}^{\prime \prime}$
 No. 42B42. Madel 7500. Net Each................................ $\$ 12.50$ (3) Model HD150. Stondard, 10 -turn rugged pot, rated at 5 watts, case size is $11 / 2^{\prime \prime}$ dio. $\times 2^{\prime \prime}$ L. Resistance tolerance $3 \%$ linearity tol. $0.25 \%$. $1 / 4^{\prime \prime}$
shoft, $1 / 2^{\prime \prime}$ long. Available in following values: $500 ; 1 \mathrm{~K}, 2 \mathrm{~K}, 5 \mathrm{~K}, 10 \mathrm{~K}, 20 \mathrm{~K}$, $30 \mathrm{~K}, 50 \mathrm{~K}, 100 \mathrm{~K}$ ohms
No. 42B43. Model HD150. Net Eoch
$\$ 10.00$
(1) Full Ronge "REVODEX" Dials. For use with above micropots. Gives occurate readings to one part of 1000 . Finger tip locking action locks dial without shiffing the reading. Body of dial mounts directly on pot bushing and knob attoches to shaft. Dia. $1^{\prime \prime}$, pot shaft dia. $1 / 4^{\prime \prime}$
42A58. Model RD412 Block Finish. Your Choice
Eish. Eoch
58.25
(5) Direct Reading "REVODEX" Dial. Even when used above eye level $17 / 8 "$ size gives a direct reoding with 3 numbers grouped for fool-proof reading. Full range 000 to 999 to indicate full ten turns. Knobs are secured directly to pot shaft for virtually no bocklosh. Dia. $17 / 8^{\prime \prime \prime}$, pot shaft dia. $1 / 4$
42A57. Model RD-6. Clear Finish.

OHMITE MOLDED COMPOSITION CONTROLS


Used in commercial and military electronic applications where highest
quality and dependability are most quality and dependability are most 2 watts of Type AB style, rated a Resistance element is a thick, solid molded ring for longer life and smoother operotion. All units are dust and splash proof, fungus and corrosion resistant meet oll specs. of MIL-R-94. Type CMU militory desig-
nation RV4NAYSD; CLU, RV4LAYSA.
CU has $2^{\prime \prime}$ round shaft, CMU has
slotted shaft with locking nut. Shipg. All ore $18^{\circ} 3^{\prime \prime}$ dia. $1 / 4^{\prime \prime \prime}$ dia. shofts.


## MALLORY 4-WATT WIRE WOUND CONTROLS



TYPE "M" RHEOSTATS
4 WATT. $15 / /^{\prime \prime}$ dio. Two terminal knurled shaft $11^{" 1} \mathrm{~L}$. Linear taper.

## Stock

 No.14 Al24 $14 A 126$ $14 A 128$ MIORK 10 1.00 Amps. $\begin{array}{llll} & \text { M20RK } & 20 & .45 \text { Amps. } \\ 14 A 132 & \text { M50RK } & 50 & 28 \text { Amps. } \\ 14 A 135 & \text { M }\end{array}$ $\begin{array}{lllll}14 A 135 & \text { MIOORK } & 100 & .28 \text { Amps. } \\ 10 \text { Amps. }\end{array}$ Any of the obove Type "M"
Rheostots. Net Eoch......... 3 ?

## HEAVY DUTY TYPE "E" POT

 $3^{\prime \prime \prime} \mathrm{L}$. Grounded contact arm. 3 ter-
minals. Linear taper.
Stock Mallory Res. Net


## TYPE "M" POTENTIOMETERS

4 WATT. Controls used os voltage dividers, TV hold or focus controls, anywhere a rugged wirewound pot is Has three terminal is insulated. Linear taper, $1000 \mathrm{~V} . D C$ breakdown. voltage. Dia, $15 / 8^{\prime \prime}$ with $3 / 8^{\prime \prime}$ threaded btock Mallory $1 / 4$ knurled shoft $32^{\prime \prime} \mathrm{L}$. $\begin{array}{lccc}\text { Stock } & \text { Mallory } & \text { Ohms } & \text { M.A. } \\ \text { No. } & \text { Type } & \text { Res. } & \text { Cap. } \\ 148268 & \text { M1OPK } & 10 & 630 \text { M.A } \\ 14 A 138 & \text { M25PK } & 25 & 400\end{array}$ $\begin{array}{llrr}148268 & \text { MIOPK } & 10 & 630 \text { M.A. } \\ 14 A 138 & \text { M25PK } & 25 & 400 \text { M.A. }\end{array}$ $\begin{array}{llll}14 A 139 & \text { M } 30 \text { PK } & 30 & 300 \text { M.A. }\end{array}$ $\begin{array}{llll}14 A 141 & \text { M50PK } & 50 & \text { 280 M.A. } \\ 14 A 144 & \text { M1OOPK } & 100 & 200 \text { M. }\end{array}$ $\begin{array}{llll}14 A 144 & \text { M100PK } & 100 & 200 \text { M.A. } \\ 14 A 145 & \text { M } 200 \text { PK } & 200 & 140 \text { M. }\end{array}$ $\begin{array}{llll}14 A 146 & \text { M400PK } & 200 & 140 \mathrm{M.A} . \\ & 1400 & 100 \mathrm{M.A} .\end{array}$ $\begin{array}{llrr}14 A 147 & \text { M500PK } & 500 & 90 \text { M.A. } \\ 14 A 149 & \text { M1MPK } & 1,000 & 63 \text { M. }\end{array}$ $\begin{array}{llll}14 A 150 & \text { M2MPK } & 1,000 & 63 \text { M.A. } \\ 14 A 151 & \text { M } 3 \text { MPK } & 2,000 & 45 \text { M.A. }\end{array}$ $\begin{array}{llll}14 A 151 & \text { M } 3 \text { MPK } & 3,000 & \text { 37M.A. } \\ 14 A 153 & \text { MSMPK } & 5,000 & 28 \text { M.A. }\end{array}$ $14 A 154$ M10MPK 10,000 20 M.A Above Type " $M$ "
$14 A 156$ M20MPK 20,000 14 M.A. bove Type "M" $\qquad$
$\begin{array}{llll}14 \mathrm{B232} & \text { El00MP } & 100 \mathrm{~K} & \mathbf{3 . 3 0} \\ 14 \mathrm{~B} 234 & \text { E150MP } & 150 \mathrm{~K} & \mathbf{3 . 3 8}\end{array}$
4A158 M50MPK 50,000 144159 M70MPK 70,000 ..... \$1.74
Type " $M$ " Control Shafts. Can be extended by addition of DS-36 ..... 33c

## Replacement Controls, L\& T Pads

MALLORY VW 5-WATT Wire-Wound Controls Miniature type with only a $3 / 4^{\prime \prime}$ diameter body. Ideal for applications where space is ot a prerotation 305 degrees, electrical 275 degrees. Breakdown voltage 900 volts AC, RMS. Has standard $3 / 8^{\prime \prime}-32$ bushing, $3 / 8^{\prime \prime}$ long. ( $1 / 4^{\prime \prime}$ shaft $2^{\prime \prime}$ long) Supplied with mounting nut and washer. Available in resistance values listed below. Shag. wt. $20 z$ Res.
Ohms


## WW -20



## MALLORY MLC SUB-MINIATURE CONTROL

 switch is rated of 2 amp 125 V . AC. Available in switch is listed below with or
values
linear taper. Shpg. wt. 1 oz . linear taper. Shag. Wt. Oz.
TYPE MLC LESS SWITCH
 $\begin{array}{ll}14 A 933 & \text { MLC13L } \\ 14 A 934 & \text { MLC252A }\end{array}$ $\begin{array}{ll}14 A 934 & \text { MLC252A } \\ 14 A 9355 & \text { MLC53A } \\ 14 A 936 & \text { MLC } 53\end{array}$
$\qquad$


| 144940 | MLC15L | 1 Meg | 4 | $14 A 958$ | MLCl6AS | Meg | 1 |
| :--- | :--- | ---: | :--- | ---: | :--- | :--- | :--- | :--- |
| $14 A 941$ | MLC25L | 2 Meg | 4 | $14 A 959$ | MLCI6LS | 1 Meg | 4 | Your Choice,

Net Each

# $\$ 1.14$ Your Choice, <br> Taper 1 is audio, Taper 4 is linear. 

No. 12B1205. KNOB for $1 / 8^{\prime \prime}$ shaft MLC Controls. Each

# $\begin{array}{ll}\text { Str. No. } & \mathrm{M} \\ 14 A 951 & \\ 14 A 952 & \mathrm{M} \\ 14 A 953 & \mathrm{M} \\ 14 A 954 & \mathrm{M} \\ 14 A 955 & \mathrm{M} \\ 14 A 956 & \mathrm{M} \\ 14 A 957 & \mathrm{M} \\ 14 A 958 & \mathrm{M} \\ 14 A 959 & \mathrm{M} \\ \text { Your Choice } \\ \text { Net Each } \\ \text { Taper } 4 \text { is } \\ \text { C Controls. } \\ \text { WITH }\end{array}$ 

## MALLORY CONTROLS W

Push-in to turn off, pullout to turn on. . leave
volume control always set ot the same desired listening volume control always set ot the same desired listening
level. Adds amazing new operating convenience to Hi-Fi amplifier, radio or TV set. Carbon element type control is complete with push-pull SPST switch rated 3 amps at 125 volts AC. Sta. No. Type Resistance Taper Sta. No. Type Resistance Taper $\begin{array}{llllllll}148843 & \text { PP 15A } & 100 \mathrm{~K} \text { Ohms audio } & 148846 & \text { PP 55L } & 500 \mathrm{KOhms} & \text { lin. } \\ 148844 & \text { PP P254A } & 250 \mathrm{~K} \text { Ohms audio } & 148847 & \text { PP 16A } & 1 \text { Megohm audio }\end{array}$

Your Choice,
et Each, Control with Switch
$\$ 1.35$
MALLORY "L" AND "T" \& NEW "LA" PADS
Std. 15 Audio "Wats (4 watts $D C$ ( $1 /{ }^{\prime \prime}$ deep; $T$ pad is 1 lit" deep. Both have $1 / 4^{\prime \prime}$ shaft $2^{\prime \prime}$ long with 3 " " bushing. Space-saver 10 Audio watts 13 watts SC) RL and RT pad are compactly designed. RT pad is $17 / \mathrm{m}^{\prime \prime}$ deep; RL
 with 1 " bushing, $1 / 4^{\prime \prime}$ shaft, $\frac{15}{2} \overline{5}^{\prime \prime}$ long. All are complete with mounting hardware, knob, and dial plate


NOTE: For Quantity Prices on above L \& T Pads, subtract 5\% for 10 to 24 Pieces; 10\% for 25 to 49 Pieces (Not Assorted).

## IRC REPLACEMENT CONTROLS

IRC "Q" CONTROLS


Standard Radio and TV replacement controls. Small size, $1{ }^{\prime \prime}$ " diameter with universal $3^{\prime \prime}$ shaft. Will meet most every replacement requirement with no additional special parts needed. Use type
Shpg. wt. 4 oz.


NET EACH $\qquad$ $\$ 1.02$

EXPLANATION OF IRC CONTROL TAPERS
"A" Linear. "C" Logarithmic for audio. "H" Tapped logarithmic. "D" Right hand semi-logarithmic for bias, contrast and picture control. "Sp" Logarithmic for audio compensation

## (1) IRC MULTISECTIONS



Factory assembled Multisections designed to attach to the standard control, like a switch, making it a dual type for use with standard controns of left.
Type 76 switches may then be added where required. Wt. 2 oz .


CHOC
$\$ 1.35$
(2) SNAP-ON SWITCHES

Type 76-1 S.P.S.T. Switch
60 c
No, 14B506. EACH. ....
No. 14B507. EACH.
60c

TAPPED "Q" CONTROLS


MALLORY 2-WATT WIRE WOUND POTENTIOMETERS



## MALLORY "LL" STEREO L-PAD

A dual L-Pad designed as stereo balance or master volume control of low level, low impedance audio circuits. Consists of two separate L-pads mounted in a piggy-back arrangement and operated by a common shaft for convenient adjustment of both channels from one control panel. Extra long " "bushing allows mounting in speaker
cabinets. Shaft length $11 / 2^{\prime \prime}$. 15 watts rat cabinets. Packaged with knob, mtg. nuts, in structions and two-faced dial plate.
Str. No. Type Impedance Net Each

| $15 A 627$ | $L L 8$ | 8 Ohms | $\mathbf{8 5 . 7 0}$ |
| :--- | ---: | ---: | ---: |
| $15 A 635$ | $L L 16$ | 160 hms | $\mathbf{5 . 7 0}$ |



MALLORY VOLUME CONTROL ACCESSORIES

## MOUNTING BRACKET

5
14A186. RB-249. $21 / 2^{\prime \prime}$ centers
mounting bracket. Each..


Calibrated 0-10 in proper degrees matching rotation of various volume controls and rheostats.
0 ; Type 395 for
'M" and "WW" controls.
No. 14A162; Type 397 for use with carbon controls.
No. 14A163; Type 398 for carbon
14A189. RS-242. Extension shaft $1 / 4 x$ $4^{\prime \prime}$ with $3^{-12}$ ". flat. 576

## Volume Controls, Pots, L\&T Pads

## CENTRALAB 5-WATT WIRE WOUND CONTROLS



Rated a full 5 watts, in a 2 watt size and at 2 wott price. Only $1 \frac{3}{3}{ }^{\prime \prime}$ " diameter $x$ " ${ }^{\prime \prime}$ " deep. has $3^{\prime \prime}$ long, full round $1 / 4^{\prime \prime}$ aluminum shoft. Bushing is standard $3 / 8^{\prime \prime}$ long, $3 / 8-32$ thread. $295^{\circ}$ rotation. Shpg. wt. 4 oz .

| Res. Ohms | Mfg. No. | Res. Ohms | Mfg. No. | Res. Ohms | Mfg. No. | Res. Ohms | Mfg. N |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | WW-010 | 25 | WW-250 | 400 | WW-401 | 7500 | WW-75 |
| 2 | WW-020 | 30 | WW-300 | 500 | WW-501 | 10 K | WW-1 |
| 3 | WW-030 | 40 | WW-400 | 750 | WW-751 | 15 K | WW-15 |
| 4 |  | 50 | $w W-500$ | 1000 | WW-102 | 20 K | WW-20 |
|  | $\begin{aligned} & \text { ww-050 } \\ & \text { ww-060 } \end{aligned}$ | 60 | WW-600 | 1500 | WW-152 | 25K | WW-25 |
| 8 | ww-080 | 00 | WW-750 | 2000 | WW-202 | 30 K | WW-303 |
| 10 | WW-100 | 00 | WW-201 | 2500 | WW-252 | 40 K | WW-403 |
| 15 | WW-150 | 250 | $w W-251$ | 3000 4000 | WW-302 | 50 K | WW-503 |
| 20 | WW-200 | 300 | WW-301 | 5000 | WW-502 |  | WW-75 |
| When Ordering Specify Resistance Value and Stack No. 148303. |  |  |  |  |  |  |  |
| 10 hm to 7500 Ohms $10,15,20,25,30 \mathrm{~K}$ Ohm $40 \mathrm{~K} \mathrm{Ohm}, 50 \mathrm{~K} \mathrm{Ohm}$ 75 K Ohm, 100 K Ohm |  |  | $\begin{aligned} & \text { Each } \\ & 1-9 \end{aligned}$ |  | Eac | ach |  |
|  |  |  | 9 |  | 5- | 105 | 00-2 |
|  |  |  | 1.59 | 1.43 | . | 1. | \$0.8 |
|  |  |  | 2.01 | 81 | 1.68 | 1.59 | 1.51 |
|  |  |  | 2.46 | 2.22 | 2.05 | 1.95 | . 8 |

## CENTRALAB HOT MOLDED POTENTIOMETERS



Model 12. Molded composition controls, designed to meet MIL-R-94B environmental and test requirements, offer exceptionally long life and noise-free operotion. Totolly enclosed and sealed against moisture and dirt.
(2) Features increased high voltage stability due to wide clearance between bushing and collector track. Rated ot 2.25 wotts at 70 degrees C. Size 1 B $^{7}{ }^{\prime \prime}$ dio., 5/8" deep. All values ore lineor toper at $20 \%$ tolerance. Available in following resistance values. Order By Stock Number and Resistance.
$\begin{array}{cccccccc}\text { Ohms } & \text { Ohms } & \text { Ohms } & \text { Ohms } & \text { Ohms } & \text { Ohms } & \text { Ohms } & \\ 50 & 250 & 1,000 & 5,000 & 25,000 & 100,000 & 500,000 & 2.5 \mathrm{Meg} \\ 100 & 500 & 2,500 & 10,000 & 50,000 & 250,000 & 11 \mathrm{Meg} & 5 .\end{array}$ (1) Type HMS hos standard $3 / /^{\prime \prime \prime}$ bushing with $1 / 4^{\prime \prime}$ stainless steel, slotted shaft $21 / 2^{\prime \prime}$ long. Meets MIL designation RV4NAYSK. (8) Type HML has $3 /$ "' $^{\prime \prime}$ locking type bushing wit
$5 / 8^{\prime \prime}$ long. Meets MIL designotion RV4LAYSA.

## trk. No. Type 1-9Ea. $10-24 \mathrm{Ea} . \quad 25-49 \mathrm{Ea} . \quad 50-99 \mathrm{Eo} . \quad 100-249 \mathrm{Ea}$

 $\begin{array}{lllllll}14 A 217 & \text { HMS } & \$ 1.95 & \$ 1.76 & \$ 1.63 & \$ 1.47 & \$ 1.20 \\ & \text { HML } & \mathbf{2 . 5 5} & 2.30 & 2.13 & 1.92 & 1.35\end{array}$
## CENTRALAB L-PADS AND BRIDGED T-PADS



Constant impedance attenuotors. Rated 20 watts audio. Size $1{ }^{5}{ }^{\prime \prime}$ dia., $1 \mathrm{It}^{\prime \prime}$ deep fits outlet boxes. Has $3 / 8^{\prime \prime}$ bushing with $1 / 4^{\prime \prime}$ round shaft, $17 / 8^{\prime \prime}$ long Complete with gold anodized dial plate, black knob, instructions. Wt. 6 oz (1) L-Pad Attenuators. Centralab Model WL. 4, 8, 16, 500, 600, 1000,1250
2000,2500 ohm values.
$\begin{array}{lccccc}\text { Stk. No. } & 1-9 \mathrm{Ea} & 10-24 \mathrm{Ea} . & 25-49 \mathrm{Ea} . & 50-99 \mathrm{Ea} . & 100-249 \mathrm{Ea} . \\ 14 \mathrm{~A} 221 & \$ 3.57 & \$ 3.21 & \$ 2.98 & \$ 2.83 & \$ 2.68\end{array}$ (2) Bridged T-Pad Attenuators. Model WDT. 4, 8, 16, 500, 600 ohm values
 (3) Wall Outlet Plate for above controls. Made to fit standard outlet boxes No. 14A218. Brushed Gold anodized finish. Model AK-34. Net Ea. .....
No. 14A220. Brushed Aluminum No. 14A220. Brushed Aluminum anodized finish. Model AK-35. Net Ea... ©0c (9) Adapter Bushing for mounting, above controls in thick panels or enclosures
Fits ony control with standard $3 / 8$, bushing No. 14A223. Type AK-31. Brass Adaptor. Net Each................. STEREO TWIN COMPENTROLS—Designed especially for stereo preamplifiers and stereo control centers,
these twin compentrols provide synchronized compensation to channels in a stereo system. complete with $3^{\prime \prime}$ shaft, mtg. hordware (less
$\begin{array}{lcccccc}\text { Stk. No. Factory Na. Front Ohms Rearohms } \\ 14 \mathrm{~A} 348 & \mathrm{C} 2-70 & 1 \text { Meg. } & \text { Ret Each } & 5 \text { Each } \\ & & 1 \text { Meg. } & \$ 3.30 & \$ 2.97\end{array}$

## MALLORY COLOR TV CONTROLS

MALLORY TYPE HVC. Replacement controls for odjusting the 3 high voltage red, green and blue circuits. Specifically isolate the control from the hi-voltage.
No. 14C725. HVC63L. 6000 ohm
No. 14C726. HVC155L. 1.5 meg
$\begin{array}{rr}1.24 & 25.49 \\ \$ 1.02 & \$ 0.92 \\ 1.02 & .92 \\ 1.02 & .92\end{array}$


MALLORY TYPE MRC. Convergence controls with printed circuit
14A479. MRCIOP. 10 Ohm knob, nylon case. 1.5 watts.
$\begin{array}{ll}\text { 14A479. MRCIOP. } 10 \mathrm{Ohm} & 144482 . \mathrm{MRCIOOP} .100 \mathrm{Ohm} \\ 14 A 480 . \mathrm{MRC} 30 \mathrm{P} .30 \mathrm{Ohm} & 144483 . \mathrm{MRC}\end{array}$
14A481.MRC6OP. 60 Ohm 14A483.MRCI20P. 120 Ohm Your Choice
1-9 Each
$66 c$
4484.
$10-49$
Each

78


60 c

IRC-CTS SPECIAL CONTROLS


WIREWOUND TRIMMERS
Fully enclosed, insulated nylon rotor, cross slot adjustment. 2 watt, linear taper Type pilis. Twist Both have printed circuit board terminals.
Type pl15. Twist tob mounting for printed circuit board.
Type 117 have rivet ear mountings.

 U201 Series. MINIATURE CARBON TRIMMERS 1/8 WATT Arrow indicator knob $\pm 20 \%$
adjustment. Snap-in shelf supporting knob, slotled for front or rear serewdrive $\times 201$ series



## (1) IRC-CTS RV4 3-WATT COMPOSITION CONTROLS

$11^{\prime \prime}$ dia. locking bushing type $7 / 8^{\prime \prime}$ slotted shoft, $1 / 2^{\prime \prime}$ long. Completely enclosed construction. Linear toper. Carbon-Ceramic element, long-life, no noise. Mill No. RV4LAYSD-CTS No. 96LT
Available in $100,250,500,1,000,2,500,5,000,10,000,25,000,50,000,100,000$ 250,000,500,000 ohms and I Meg.
Your Choice Each
$\begin{array}{llllllll}\text { No. 14A21. } & 1-34 & 35-49 & 50-64 & 65-99 & 100 & \text { Up }\end{array}$
Type 300, Style RVG 7 R $1 / 2$-WATT COMPOSITION CONTROLS $\$ 1.53$ Control diameter $1 / 2^{\prime \prime}$. Requires only $3 / 8^{\prime \prime}$ mounting space behind the mong bushing stability, carbon-ceramic element. Linear toper Available in $100,250,500,1,000,2,500,5,000$
$250,000,500,000$ ohms and 1 Meg. Your Choice Eoch No. 14 A20.
 Compact, fully enclosed $18^{\prime \prime}$ dio with locating UND CONTROL
$3 / 8^{\prime \prime}$ mtg. sleeve. Linear taper $+10 \%$ locating lugs. Has $1 / 4^{\prime \prime}$ shoft, $3^{\prime \prime}$ long, Available in 10, 15, 20, 25,50,100,200,250,500, 1,000, 2,000, 2,500, 3,000, No. 1447 . Choice Eoc
 1/4" long, printed circuit type terminals. Choice of tapers, power rating $1 / 4$ " dia., tolerance $+20 \%$ Audio taper all Type MC-Less Switch
$1,000 \begin{array}{lllll}\text { M, } 000 & \text { MCS With SPST Switch }\end{array}$ $\begin{array}{llllllll}1,500 \% & 5,000 & 10,000 & 50,000 & 250,000 & 500,000 & 2,500 * & 5,000 \\ 2,000 & 100,000 & 500,000 * & 1 \mathrm{Meg} \% & 5,000 \% & 10,000 *\end{array}$ $\begin{array}{llll}\text { Your Choice Eoch } & 1-24 & 25-49 & 500 \% \\ \text { N } & 50-99 & 100-174\end{array}$
 With Switch
ORDER BY STOCK NUMBER AND RESISTANCE VALUE
1.80
1.40

## 500,000 OHM VOLUME CONTROL WITH SWITCH

 Most needed of all controls * at at
terrific sovings! Regular $7 / 8^{\prime \prime}$ midget size with $11 / 2^{3 \prime}$ long flatted shaft and finest brass hardware. Very smooth operating. Regular SPST switch per-

HAMILTON-HALL FUSED RESISTORS
 KIT OF 10 ASSORTED 5 WATT FUSED RESISTORS


In Handy Clear Plastic Box. The contents of this assortment are the most popular sizes needed in $90 \%$ of the repair jobs 9 and 22 ohm. All top quality. Selected from the listing above.
GLO-BAR RESISTORS
Used in TV sets having string series filament circuits os produced by GE, Motorola, Sears, Hoffman, Teletone and others. Resistance decreases with rise in temperature
No. Mfg. No. Res. Hot @ MA Load Repl. Mfg. No.
20 Ohms, 600 MA GERRW05 $\begin{array}{ll}20 \text { Ohms, } 600 \mathrm{MA} & \text { GE RRWO51 } \\ 19 \text { Ohms, } 600 \mathrm{MA} & \text { Motorola 6R720260 }\end{array}$ 35 Ohms, 600 MA GE RRWO54 100 Ohms to 20 Ohms hot. univ. repiacement
$17 \mathrm{C} 416 \mathrm{HG}-20$
$\begin{array}{ll}178318 & H G-19 \\ 17 C 442 & H G-35\end{array}$
$\begin{array}{ll}17 C 442 & H G-35 \\ 178319 & H G U\end{array}$

## Electrolytic Condensers

AEROVOX Sub-Miniature ELECTROLYTICS


Type PTT-PWE.

TWIST-LOK ELECTROLYTIC CAPACITORS
MALLORY - AEROVOX - SPRAGUE

Plastic cas e Hermetically sealed dry electrolytic copocitors. tubular, fully in- $85^{\circ} \mathrm{C}$. Designed to withstond the severe re-
sulated. For quirements for television and rodio replacement. sulated. For quirements for television and rodio replacement, transistorized circuitry
electronic assemblies. electronc charssemblies. $A-1 / 45 / 8, \ldots \quad B-1 / 4 \times 3 / 4, \ldots ;$


## 

100 and up quantiti
3 V. DC Working
$\begin{array}{rl}3 & \text { V. DC Working } \\ 1-9 & 10.49 \\ \text { Soch Each Each } \\ \text { Stk. No. Sire Mfd. }\end{array}$
Stk. No. Si
15 B 12
where necessary. Twist Locks May Be Assorted to Obtain 10 Lot Price-Average wt. 8 or.



THREE SECTION TYPES

| 10-10-10 | 350 | $1 \times 1 / 2$ | 158621 | $\$ 1.44$ 1.56 | $\$ 1.30$ 1.46 | $\begin{aligned} & 40-20-20 \\ & 40-30-20 \end{aligned}$ | $\begin{aligned} & 250 \\ & 150 \end{aligned}$ | $\begin{array}{ll}1 & \times 3 \\ 1 & \times 2\end{array}$ | $\begin{aligned} & 15 A 757 \\ & 15 A 512 \end{aligned}$ | $\begin{aligned} & \$ 1.74 \\ & 1.50 \end{aligned}$ | $\begin{aligned} & \$ 1.57 \\ & 1.35 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10-10-10 | 450 | $1 \times 2$ | 15A276 | 1.56 | 1.46 |  |  |  |  |  |  |
| 10-10-10 | 475 | $1{ }^{1} \times 3$ | 158474 | 1.62 | 1.46 | 40-30-30 | 475 | 13/8x | 15 A747 | 3.09 | 2.78 |
| 10-20-30 | 350 | $1 \times 21 / 2$ | 158302 | 1.05 | 1.49 2.85 | -40-40-10 | 450 | $13 / 8 \times 3$ | 158453 | 2.52 | $2.27$ |
| 10-100/80 | 400/350 | 13884 | 158303 | 3.66 | 2.85 | 40-40/20 | 150/25 | $1 \times 11 / 2$ | 158672 | 1.44 | 1.30 |
| 10/100/200 | 450/200/25 | $1 \times 31 / 2$ | $15 A 356$ | 2.04 | 1.84 | 40-40/20 | 450/25 | $13 / 8 \times 2$ | 15A433 | 2.37 | 2.13 |
| 15-10/20 | 350/25 | $1 \times 11 / 2$ | 158473 | 1.50 | 1.35 | +40-40-40 | 150 | $1 \times 2$ | 15A435 | 1.56 | 1.40 |
| 15-15-10 | 450 | $1 \times 3$ | 158472 | 2.64 | 2.38 | 40-40-40 | 450 | $13 / 3 \times 3$ | 158467 | 2.94 | 2.64 |
| 20-10-10 | 450 | 1 x 2 | 158673 | 1.79 | 1.59 | 40-40/100 | 450/200 | $13 \% 3$ | 15A743 | 2.97 | 2.67 |
| 20-10/20 | 350/8E | $1 \times 11 / 2$ | 15A283 | 1.53 | 1.38 | 50-40-30. | 150 | $\times 11 / 2$ | 15A447 | 1.62 | 1.46 |
| 20-10/20 | 450/25 | $1 \times 18 /$ | $15 A 711$ | 1.62 | 1.46 | $50-40-30$ $50-50-50$ | 150 150 | 1 x 13/4 | 154742 | 1.80 | 1.62 |
| 20-20/20 | $350 / 25$ | $1 \times 11 / 2$ | 158481 | 1.68 | 1.51 1.54 | $50-50-50$ $50-50 / 20$ | 150 $150 / 25$ | $1{ }_{1}^{1} \times 3 \times 1$ | 158468 | 1.59 | 1.43 |
| 20-20/20 | 400/25 | $1{ }^{1} \times 13$ | $15 A 509$ 158465 | 1.71 2.16 | 1.54 1.94 | $50-50 / 20$ $60-30-10$ | $150 / 25$ 450 | $13.8 \times 3$ | 15 A745 | 2.70 | 2.43 |
| 20-20-20 | 450 | $13 / 5 \times 2$ | 158465 154428 | 1.16 1.83 | 1.94 1.65 | $\begin{aligned} & 60-30-10 \\ & 60-40-20 \end{aligned}$ | $\begin{aligned} & 450 \\ & 150 \end{aligned}$ | 1 1 $\times 2$ | 15 C 210 | 1.65 | 1.48 |
| $20-20 / 20$ $20-20 / 60$ | $450 / 25$ $475 / 450$ | 1 $\times 2$ | $15 A 428$ $15 A 714$ | 1.83 2.91 | 1.65 2.61 | $\begin{aligned} & 60-40-20 \\ & 60 / 200-140 \end{aligned}$ | $\begin{aligned} & 150 \\ & 200 / 150 \end{aligned}$ | 13/8x ${ }^{1}$ | 15A476 | 2.88 | 2.56 |
| 20-20/60 | 475/450 | $17 / 8 \times 31 / 2$ | 15A714 | 2.91 1.95 | 2.61 | 80-20/20 |  |  |  | 1.62 | 1.46 |
| 30-20-10 | 350 $350 / 25$ | $\begin{array}{ll}1 \\ 1 \\ 1\end{array} \times 2$ | $15 A 815$ 158470 | 1.85 1.86 | 1.75 1.67 | $80-20 / 20$ $80-40-20$ | $150 / 20$ 450 | ${ }_{1}^{1} \times 2 \times 3 / 2$ | 158668 | 3.24 | 2.92 |
| $30-20 / 20$ $30 / 30 / 20$ | $350 / 25$ $350 / 300 / 25$ | $\begin{array}{ll}1 & \times 2 \\ 1 & \\ \\ 1\end{array}$ | 158470 158630 | 1.86 1.89 | 1.67 1.70 | $80-40-20$ $80-60-60$ | 450 350 | $138 \times 3$ $13 / 8 \times 314$ | 15 1816 | 3.33 | 3.00 |
| 30/30/20 | $350 / 300 / 25$ | 1 $\times 2$ | 158630 $15 A 511$ | 1.89 2.85 | 1.70 2.56 | $80-60-60$ $80-60 / 400$ | 350 $150 / 10$ | $1 / 8 \times 3 / 2$ $1 \times 3$ | 115A816 | 2.19 | 1.97 |
| $30-30-20$ $30-30-30$ | 475 450 | $13 \times 2$ $13 / 6 \times 2$ | $15 A 511$ $15 A 744$ | 2.85 2.61 | 2.56 2.35 | $80-60 / 400$ $100-10 / 80$ | $150 / 10$ $400 / 350$ | $1{ }_{3} \times 3 \times 31 / 2$ | 15A427 | 2.19 3.66 | 3.29 |
| 30-30-30 | 450 | $\frac{13 \times 2}{13 / 62}$ | $\frac{15 A 744}{\text { 15A818 }}$ | 2.61 | 3.10 | $100-10 / 80$ $100-20 / 20$ | $400 / 350$ $400 / 50$ | $13 / 8 \times 3$ | 1154399 | 2.88 | 2.69 |
| $40-10-10$ $40-20 / 20$ | $\begin{aligned} & 475 \\ & 150 \end{aligned}$ | $13 / 8 \times 2$ $1 \quad \times 2$ | 154818 $15 B 495$ |  | 3.10 1.29 | 140-100-20 | 300 | $13 / 8 \times 4$ | 15A355 | 3.45 | 3.10 |
| $40-20 / 20$ $40-20 / 20$ | $\begin{aligned} & 150 \\ & 150 / 25 \end{aligned}$ | $\begin{array}{ll}1 \\ 1 & \times 11 / 2 \\ \end{array}$ | 158495 $15 A 432$ | 1.44 1.38 | 1.29 1.24 | 140-100-20 | 300 | $1{ }^{18 x}$ | 1035S |  |  |
| FOUR SECTION TYPES |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | $13 / 8 \times 31 / 2$ | 154726 | \$3.21 | \$2.89 |
| 10-10-10-10 | 450 | $13 / 3 \times 2$ $13 / 4 \times 2$ | $\begin{aligned} & 15 A 439 \\ & 15 B 483 \end{aligned}$ | $\$ 2.01$ 2.10 | $\$ 1.81$ 1.89 | $40-40-10 / 100$ $40-40-20-10$ | $300$ | $13 \times 8 \times 21 / 2$ | 15 A727 | 2.73 | 2.46 |
| 10-10-10-10 | 500 | $13 / 8 \times 2$ | 158483 158304 | 2.10 3.06 | 1.89 2.39 | 40-40-20/20 | $350 / 25$ | $13 / 8 \times 3$ | 15A822 | 2.82 | 2.54 |
| 10-100/20-30 | 400/50 | $13 / 8 \times 212$ | 158304 | 3.06 | 2.39 | 40-40-20-20 | 450 | $13 / 8 \times 3$ | 15A827 | 3.33 | 3.00 |
| 20-10-10-10 | 450 | $13 / 8 \times 2$ | 158638 | 2.22 | 2.00 | 40-40-30/20 | 150/25 | 13 \% $\times 2$ | T5A437 | 1.86 | 1.67 |
| 20-20-20/20 | 400/25 | $188 \times 21 / 2$ | 154515 | 2.31 | 2.08 | 40-40/30-30 | 450/350 | 13/6x4 | 苟A824 | 3.54 | 3.19 |
| 20-20-20-20 | 450 | $13 / 8 \times 21 / 2$ | 15A440 | 2.82 | 2.54 | 40-40-40/40 | 450/25 | $13 / 8 \times 3$ | t5A825 | 3.31 | 2.97 |
| 20-20-20-20 | 475 | $1318 \times 21 / 2$ | 15B482 | 3.12 | 2.81 | 40/60/60-100 | 75/200/350 | $13 / 8 \times 4$ | H58295 | 3.96 | 2.96 |
| 20/80-20/50 | 450/200/50 | 13/8x2 | 15 A721 | 2.49 | 2.24 | 40/80/100/25 | 400/350/200/50 | $13 / 8 \times 31 / 2$ | T5B484 | 3.57 | 3.21 |
| 30-30-30/40 | 150/25 | $13 / 8 \times 2$ | 15A723 | 1.86 | 1.67 | 50-50-50/20 | 150/25 | $13 / 8 \times 2$ | 154730 | 2.13 | 1.92 |
| 30-30-40-40 | 450 | 13 ¢ $\times 3$ | 158306 | 3.63 | 2.83 | 60-40-20/200 | $150 / 10$ | $13 / 8 \times 2$ | 154819 | 2.10 | 1.89 |
| 35-35-10-5 | 450 | 13/8x ${ }^{1}$ | 158644 | 2.79 | 2.51 |  |  |  | 15A820 | 2.22 | 2.00 |
| 40-20-10-10 | 475 | $1^{3} 8 \times 3$ | $15 A 829$ $15 A 763$ | 3.06 2.79 | 2.76 2.51 | $80-40-30-100$ $80-60-40-20$ | $\begin{aligned} & 150 / \\ & 350 \end{aligned}$ | $18 / 8 \times 31 / 2$ | 15 A475 | 3.84 | 3.46 |
| 40-20-20/40 | 450/25 | $13.8 \times 3$ | $15 A 763$ 158466 | 2.79 2.70 | 2.51 2.43 | 80-60-40-20 |  |  |  |  |  |

MALLORY HI-TEMPERATURE TUBULAR ELECTROLYTICS
For TV replacement. Special Hi-Temperature Fabricated plate design with 5 inch flexible leads and mounting strip.

| Cap. Mfd. | Volts DC | $\begin{gathered} \text { Size } \\ \text { Inches } \end{gathered}$ | Stock No. | Price Each | Cap. Mfd. | Volts DC | $\begin{gathered} \text { Sise } \\ \text { Inches } \end{gathered}$ | Stock No. | Price Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 200 | 200 | $11 / 8 \times 33 / 8$ | 15 B 330 | \$1.84 | 5/30/140/200 | 300/200/350/200 | $11 / 2 \times 43 / 8$ | 158362 | \$4.06 |
| 140 | 300 | $11 / \times 27 / 8$ | 15B331 | 2.05 | 10/40/80/100 | 450/300/400/50 | $11 / 1843$ | 158361 | 3.07 3.83 |
| 5-200 | 200 | 11/8x31/8 | 15B3488 | 2.05 | 20-20-40-40 | 450 | 11/484/8 | 158363 | 3.63 2.58 |
| 100-60/100 | 300/50 | 11/4x $3^{5 / 8}$ | 16B381 | 2.74 | 40-20-20-20/50 | 300/50 | 14, ${ }^{3}$ | 15828 | 2.50 |

## Electrolytic Capacitors

## TUBULAR ELECTROLYTIC CAPACITORS

(C)

SPECIFY BRAND DESIRED, CAPACITY AND STOCK NUMBER 6 WORKING VOLTS DC-SINGLE SECTION

| Cap. Mfd. | Stock No. | C-D | Manufacturer Aero- Malvox lory |  | Sixe Inches | Price Each$1-24 \quad 25-4950-99$ |  |  | $\begin{aligned} & 100- \\ & \text { UP } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 5 \\ & 25 \end{aligned}$ | $\begin{aligned} & 158900 \\ & 158904 \end{aligned}$ | $5-6$ |  |  | $3 / 8 \times 1{ }^{1 / 8}$ | \$0.48 | \$0.35 | \$0.27 | \$0.22 |
| 25 50 | $\begin{aligned} & 158904 \\ & 158905 \end{aligned}$ | $\begin{aligned} & 25-6 \\ & 50-6 \end{aligned}$ |  |  | $3 / 8 \times 1$ 1/8 | 10.48 .57 | + 0.37 | 10.27 .29 | +0.22 |
| 100 | 15 A973 | 100-6 | 1100 |  | 3/8x | . 57 | . 41 | . 32 | . 26 |
| 250 | 154974 | 250-6 | 1110 |  | $1 / 2 \times 16$ | . 72 | . 50 | . 39 | . 31 |
| 500 | 154975 | 500-6 | 1120 |  | $1 / 2 \times 1$ \% | .81 | . 61 | . 49 | . 39 |
| 1000 | 154607 | 1000-6 | 1120 | 610 | $5 / 8 \times 1$ if | . 1.14 | .73 .89 | . 57 | .45 |
| 2000 | 158261 | 2000-6 | 1145 |  | $3 / 4 \times 2$ | 1.38 | 1.04 | . 89 | . 55 |



| 25 WORKING VOLTS DC-SINGLE SECTION |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20 | $\begin{aligned} & 15 A 241 \\ & 15 A 925 \end{aligned}$ | $10-25$ $20-25$ | 1250 | 22 | $3 / 8 \times 1 \frac{1}{16}$ | . 60 | . 42 | . 33 | . 26 |
| 25 | 15A242 |  | 1260 |  | $3 / 8 \times 18$ | . 60 | . 43 | . 34 | . 27 |
| 50 | 15 A243 | 25-25 $50-25$ | 1260 | 26 | $3 / 8 \times 1 \frac{1}{1 / 8}$ | . 60 | . 44 | . 35 | . 28 |
| 100 | 15A244 | 100-25 | 1270 | 2501 | $1{ }^{2 \times 1}$ | . 66 | . 47 | . 37 | . 30 |
| 250 | 154799 | 250-25 | 1270 | 2501 | $1 / 2 \times 1 \frac{1}{16}$ | . 81 | . 57 | . 45 | . 36 |
| 500 | 154800 | 500-25 |  | . | $1{ }^{1} \times 16$ | 1.02 | . 79 | . 62 | . 49 |
| 1000 | 15 B760 | 1000-25 |  | . . . | $58 \times 1$ tf | 1.38 | 1.07 | . 83 | . 67 |
| 2000 | 158784 | 2000-25 |  |  | 3/4 | 2.37 | 1.82 | 1.42 | 1.14 |


|  | 50 WORKING VOLTS DC-SINGLE SECTION |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
| 1 | 158134 | 1-50 |  | 31 | $3 / 8 \times 1 \frac{1}{16}$ | . 54 |  |  |  |
| 2 | $15 B 431$ | 2-50 |  | 302 | $3 / 8 \times 1 \frac{1}{16}$ | . 54 | .39 .39 | .31 | . 24 |
| 5 | $15 A 236$ | $5-50$ |  | 30 3 |  | . 64 | . 42 | .31 .32 | . 24 |
| 10 25 | $15 A 237$ $15 A 238$ | 10-50 | 1320 | 32 | $3 / 8 \times 18$ | . 60 | . 42 | . 33 | . 27 |
| 10 50 | $15 A 238$ $15 A 239$ | $25-50$ $50-50$ | 1340 | 36 | $1 / 2 \times 18$ | . 63 | . 44 | . 35 | . 28 |
| $\frac{50}{100}$ | 15A239 | 50-50 | 1350 | 39 | $1 / 2 \times 1 \frac{1}{18}$ | . 72 | . 51 | . 40 | . 32 |
| $\begin{aligned} & 100 \\ & 150 \end{aligned}$ | 154240 154801 | 100-50 | 1360 | . . | $1 / 2 \times 18$ | . 84 | . 59 | . 46 | . 37 |
| 250 | $\begin{aligned} & 15 A 801 \\ & 15 A 802 \end{aligned}$ | 150-50 |  |  | $58 \times 1{ }^{7}$ | . 93 | . 66 | . 51 | . 41 |
| 500 | 154839 | 250-50 |  | . $\cdot$. | $3 / 4 \times 1{ }^{\top}$ | 1.05 | . 87 | . 64 | . 51 |
| 1000 | 15 B785 | 1000-50 |  |  | $1 / 8 \times 1$ | 1.44 | 1.11 | . 86 | . 69 |
| 2000 | 154788 | 2000-50 |  |  | $13 / 8 \times 23 / 4$ | 2.52 3.48 | 1.93 2.60 | 1.49 | 1.20 |


| 150 WORKING VOLTS DC-SINGLE SECTION |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cop. <br> Mid. | $\qquad$ | C-D | Manuf Aerovox | cturer Mal. lory | Size <br> Inches | 1-24 | $\begin{aligned} & \text { rice E } \\ & 25-4 \end{aligned}$ | $50-99$ | $\begin{aligned} & \text { 100- } \\ & \text { UP } \end{aligned}$ |
| 4 | $15 A 221$ | 4-150 | 1400 |  | $3 / 8 \times 1 \frac{1}{16}$ | . 60 | . 43 | . 33 |  |
| 8 | $\begin{aligned} & 15 A 222 \\ & 15 A 951 \end{aligned}$ | $8-150$ 12.150 | 1405 |  | $1 / 2 \times 1$ e | . 63 | . 43 | . 34 | . 27 |
| 12 | $\begin{aligned} & 15 A 951 \\ & 15 A 224 \end{aligned}$ | $12-150$ $16-150$ |  | 44 | $1 / 2 \times 1 \frac{1}{16}$ | . 66 | . 42 | . 36 | . 29 |
| 20 | 15 A225 | 20-150 | 1440 | 44 45 | $1 / 2 \times 1$ | .69 .72 | .49 50 | . 38 | . 31 |
| 30 | 154226 | 30-150 | 1460 | 45 | $1 / 2 \times 1{ }^{1 / 6}$ $3 / 4 \times 1{ }^{7} 4$ | . 72 | . 50 | .39 .43 | .31 .34 |
| 40 | 154227 | 40-150 | 1470 | 48 |  |  |  |  | . 36 |
| 50 80 | $15 A 228$ | $50-150$ | 1480 |  | $3 / 4 \times 1 / 4$ | . 84 | . 58 | . 45 | .36 .37 |
| 80 100 | $\begin{aligned} & 15 A 789 \\ & 15 A 797 \end{aligned}$ | $\begin{aligned} & 80-150 \\ & 100-150 \end{aligned}$ |  | $\cdots$ | $7 / 8 \times 1$ 偻 | . .96 | . 68 | . 56 | . 43 |
| 150 | 15 15817 | $100-150$ $150-150$ |  |  | $7 / 8 \times 2$ | 1.05 | . 78 | . 54 | . 46 |
| 250 | 158828 | 250-150 |  |  | $\times 28$ | 1.14 | . 82 | . 63 | . 51 |
| 300 | 158289 | 300-150 |  | 499 | $\times 319$ $\times 318$ | 1.53 | 1.11 | .86 .84 | . 69 |


| 250 WORKING VOLTS DC-SINGLE SECTION |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 5 \\ & 8 \end{aligned}$ | $15 B 262$ |  |  | 50x | \|fx|1/4 | \$0.63 | \$0.48 | \$0.35 |  |
| 8 | $\begin{aligned} & 15 B 870 \\ & 15 B 263 \end{aligned}$ | 8-250 |  |  | $1 / 2 \times 174$ | $\$ 0.63$ .69 | $\begin{array}{r}\$ 0.48 \\ .54 \\ \hline\end{array}$ | \$0.35 | $\$ 0.30$ .39 |
| 12 | $\begin{aligned} & 158263 \\ & 154884 \end{aligned}$ | 12-250 |  | 52 | $\{3 \times 13 / 4$ | . 72 | . 55 | . 43 | . 35 |
| 20 | 15 B264 | 20-250 |  | 55 | $3 / 4 \times 1 \frac{15}{18}$ | . 75 | .57 .66 | .44 .52 | . 36 |
| 40 50 | 15 B 265 | 40-250 |  | 58 | $3 / 4 \times 1{ }^{1 / 8}$ | .81 .93 | . 66 | . 52 | . 41 |
| 50 100 | $\begin{aligned} & 158266 \\ & 158267 \end{aligned}$ | $50-250$ $100-250$ |  | 59 1265 | $18.8 \times 178$ | .93 1.02 | .76 .83 | .59 .64 | . 47 |
| 200 | $\begin{aligned} & 158267 \\ & 15 C 786 \end{aligned}$ | $100-250$ $200-250$ |  | 1265 | $1 \times 2{ }^{10}$ | 1.47 | . 98 | . 76 | . 61 |
| 200 | $15 \mathrm{C786}$ | 200-250 |  | . . . | $13 / 8 \times 31 / 8$ | 2.10 | 1.28 | 1.00 | . 80 |

350 WORKING VOLTS DC-SINGLE SECTION

| 5 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 158284 |  |  | 6 C | $13 \times 13 / 4$ | . 63 | . 50 | 35 | . 30 |
| 20 | 158285 158286 |  |  | 62 | $13 \times 13 / 4$ | . 75 | . 61 | . 44 | . 36 |
| 60 | 158287 | 20-350 |  | 65 | $3 / 4 \times 1 \frac{7}{18}$ | . 87 | . 68 | . 52 | . 42 |
| 100 | 15 B288 | $100-350$ |  | 68 | $\times 2$ | 1.17 | . 91 | . 71 | . 57 |
|  |  |  |  | 69 | $\times 3$ | 1.53 | 1.11 | . 86 | . 69 |


|  |  | 50 WOR | NG | TS | -SIN | SECT |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 154377 | 2.450 |  |  | $5 / 8 \times 1{ }^{16}$ | . 66 | . 52 | . 40 | . 32 |
| 4 | 154496 | 4-450 |  |  | $5 / 8 \times 1{ }^{16}$ | . 69 | . 53 | . 42 | . 32 |
| 8 | 15A201 |  |  | 70 | $11 \times 13 / 4$ | . 72 | . 56 | . 43 | . 35 |
| 8 10 | 154202 154203 | 8.450 10.450 | 1715 | 71 | $3 / 4 \times 1$ T ${ }^{\frac{7}{6}}$ | . 75 | . 59 | . 46 | . 37 |
| 12 | 154203 15 A204 | 10.450 12.450 | 1720 | 72 | $3 / 4 \times 1{ }^{7}{ }^{7}$ | . 78 | . 62 | . 47 | . 38 |
| 16 | 15A205 | 12-450 | 1725 | 74 | $3 / 4 \times 1{ }^{3}$ | .81 | . 64 | . 50 | . 40 |
| 20 | 154206 | 20-450 | 1735 | 75 | 7/8×1 | .84 .93 | .65 .73 | . 53 | . 42 |
| 30 | 154948 | 30-450 |  |  | $1 \times 2$ |  |  |  |  |
| 40 | 154207 | 40-450 | 1750 | 78 | $1 \times 2$ | 1.02 | .80 | . 62 | .50 52 |
| 50 | 154748 | 50-450 |  | 7 | $1 \times 2$ | 1.26 | . 83 | . 64 | . 62 |
| 60 | 158424 | 60-450 |  | 795 | $1 \times 3$ | 1.26 | 1.97 | .75 | . 60 |
| 80 | 154796 | 80.450 |  |  | $1 \times 3.9$ | 1.48 | 1.08 | .83 | . 67 |
| 100 | 158425 | $100-450$ |  |  | $1 \times 3$ 1568 | 1.68 1.92 | 1.28 | .87 1.15 | .69 .92 |
| 200 | 154610 | 200-450 |  |  | $13 / 8 \times 41 / 8$ | 1.92 3.00 | 1.48 2.50 | 1.15 | .92 1.56 |
| 500 WORKING VOLTS DC-SINGLE SECTION |  |  |  |  |  |  |  |  |  |
| - | 154402 | 8-500 | 1805 |  | $3 / 4 \times 1{ }^{\frac{7}{6}}$ | . 78 | . 61 |  |  |
| 10 | 15 B423 | . . . . . . |  | 81 | 18013/4 | . 81 | . 67 | . 49 | . 38 |


| Cap. Mfd. | Stock No. | C-D | Manufacturer Aero- Malvox lory |  | Sixe Inches | Price Eoch$1-24 \quad 25-4950-99$ |  |  | $\begin{aligned} & 100- \\ & \text { UP } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 | 154652 | 12-500 |  |  | $3 / 4 \times 1 \frac{1}{6}$ | . 84 | . 66 | 50-81 |  |
| 16 20 | $\begin{aligned} & 15 A 403 \\ & 15 B 426 \end{aligned}$ | $16-500$ $20-500$ | 1820 |  | $7 / 8 \times 116$ | . 90 | . 70 | . 54 | . 43 |
| 30 | $\begin{aligned} & 158426 \\ & 15 B 292 \end{aligned}$ | $20-500$ $30-500$ |  | 83 | $78 \times 2$ | . 96 | . 74 | . 60 | . 47 |
| 600 WORKING VOLTS DC-SINGLE SECTION |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 12 | 158429 | 12-600 |  | 92 | $18 \times 215$ | 1.77 | 1.35 | 1.05 | . 84 |
| 16 | $15 A 724$ $15 A 405$ | $12-600$ $16-600$ |  |  | $1 \frac{16}{16} \times 3$ | 1.65 | 1.24 | . 96 | . 78 |
| 20 | 154725 | $\begin{array}{r} 16-600 \\ 20-600 \end{array}$ | 1880 |  | $1 \frac{1}{16} \times 3$ | 1.89 | 1.52 | 1.18 | . 94 |
| 700 WORKING VOLTS DC-SINGLE SECTION |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 16 | 158755 | $\begin{aligned} & 8-700 \\ & 16-700 \end{aligned}$ | . . . | . . . | $1{ }^{15} \times 3 \times 8{ }^{\frac{8}{18}}$ | 1.47 2.10 | 1.12 | . 87 | 69 |
| 25 WORKING VOLTS DC-DUAL SECTION |  |  |  |  |  |  |  |  |  |
| 25-25 | 15A450 | ... |  | 26 | 13x11/4 | \$0.84 | \$0.84 | \$0.72 |  |
| 150 WORKING VOLTS DC-DUAL SECTION |  |  |  |  |  |  |  |  |  |
| 20-20 | 154230 | 2215 |  | 45 |  |  |  |  |  |
| 20-30 | 158462 | 3215 |  | 45 | 7/8× $\times 1 /{ }^{1 / 6}$ | 1.92 | . 80 | .76 | . 61 |
| 20-40 | 15 A463 | 4215 |  |  | $7 / 8 \times 1$ t | 1.05 | . 81 | . 63 | . 41 |
| $30-30$ $40-40$ | 154400 | 3315 | 2175 |  | $7 / 8 \times 1$ ti | 1.08 | . 81 | . 63 | . 51 |
| $40-40$ $50-30$ | 15A984 | 4415 |  |  | $78 \times 2$ | 1.11 | . 88 | . 63 | . 51 |
| $50-30$ $50-50$ | $15 A 401$ | 5315 | 2200 |  | $7 / 8 \times 2$ | 1.17 | . 88 | . 67 | . 53 |
| $50-50$ $80-40$ | $15 A 449$ | 5515 | 2210 |  | $\times 2$ | 1.26 | . 89 | . 69 | . 56 |
| $\begin{array}{r}80-40 \\ 80-50 \\ \hline\end{array}$ | 15A438 | 8415 8515 | . . . | 4975 | $\times 2{ }^{3} 18$ | 1.32 | 1.16 | . 90 | . 72 |
| 80-50 | 15 B55 | 8515 |  |  | $\times 21 / 2$ | 1.38 | . 97 | . 76 | . 61 |
| 450 WORKING VOLTS DC-DUAL SECTION |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 8-8 \\ & 10-10 \end{aligned}$ | $\begin{aligned} & 15 A 209 \\ & 15 A 979 \end{aligned}$ | $\begin{aligned} & 8045 \\ & 1145 \end{aligned}$ |  |  |  | 1.02 | . 88 | . 83 | . 67 |
| $10-10$ $20-20$ | $\begin{aligned} & 15 A 979 \\ & 15 \text { A980 } \end{aligned}$ | $\begin{aligned} & 1145 \\ & 2245 \end{aligned}$ |  |  | $7 / 8 \times 2$ | 1.17 | . 88 | . 67 | . 53 |
| 40-40 | 15B434 | 4445 |  |  | $\times 3$ | 1.50 | 1.39 | . 89 | . 71 |

TRIPLE SECTION TYPES

| Mfd. | Volts | Stk. No. | Monufocturer | Size Ins. | $\begin{gathered} 1-9 \\ \text { Ea. } \end{gathered}$ | $\begin{gathered} \text { 10-49 } \\ \text { Ea. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20-20-20 | 150 | 154803 |  |  |  |  |
| $20-20 / 20$ | 150/25 | $15 A 441$ | Mallory-TCT3053 | $\begin{aligned} & 7 / 8 \times 1 / 1 \\ & 18 \times 21 / 4 \end{aligned}$ | \$1.32 | $\$ 1.20$ .1 .19 |
| 30-30-30 | 150 | 15 A442 | Mallory - TC3113 | $118 \times 21 / 4$ | 1.41 | 1.19 |
| $40-20-20$ $40-30-20$ | 150 150 | $15 A 613$ $15 A 614$ | Mallory-TCT3114 | $18 \times 21 / 4$ | 1.35 | 1.25 |
| $40-40-20$ | 150 | $15 A 614$ $15 C 347$ | Mallory-TCT3105 | $1 \frac{1}{18} \times 13 / 4$ | 1.38 | 1.26 |
| 40-40-40 | 150 | 15C347 | Malory-TCT3116 | $1 \frac{1}{18} \times 21 / 4$ | 1.41 | 1.30 |
| 50-30/20 | 150/25 | 15 A444 | Sprague-TVA3430 |  | 1.47 1.59 | 1.33 |
| $50-50 / 20$ | 150/25 | 15 A445 | Sprague-TVA3436 | $7 / 8 \times 2{ }^{18}$ $18 \times 2$ | 1.59 | $\begin{aligned} & 1.34 \\ & 1.37 \end{aligned}$ |
| 60-50-20 | 150 | 15 C 90 | Mallory-TCT3119 | 168 $18 \times 27 / 8$ | 1.65 | 1.37 1.36 |
| 80-40-20 | 150 | 15B546 | Mallory-TCT3117 | 118 | 1.65 | 1.36 |
| 80-50-50 | 150 | $15 C 384$ | Mallory-TCT3118 | $1 \frac{1}{16} \times 4$ | 1.86 | 1.47 |

## C-D NON-POLARIZED ELECTROLYTICS TYPE BRNP

For use where no DC voltage is present such as crossover networks and bootstrap fiters. Same physically as Blue Beovers

| Cap. <br> Mfd. | Stock No. | $\mathrm{No}_{\mathrm{o}}$ | Volts | Sixe | $1-24$ | ice Each | 50.99 | 100- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1000 | $15 A 1513$ | 1000-3 | ${ }^{3}$ | $7 / 8 \times 2$ " | \$1.29 | \$0.92 | \$0.77 | \$.0.62 |
| 500 | $15 A 1514$ | 500-10 | 10 | $3 / 4 \times 1,{ }^{\prime \prime}$ | 1.20 | \$0.92 .91 | \$0.77 | \$. 0.62 |
| 4 | 15A1515 | 4-25 | 25 | $5 / 8 \times 1{ }^{16}$ | . 75 | . 54 | . 44 | . 33 |
| 4 | $15 A 1517$ | $4-50$ | 50 | $5 / 8 \times 1{ }^{16}$ | . 75 | .54 .54 | . 44 | . 33 |
| 10 | 15A1516 | 10.400 | 400 |  | .75 .93 | . 54 | . 44 | . 33 |
| 20 | $15 \mathrm{B1518}$ | 20-400 | 400 | $1 \times 21^{18}$ | 1.20 | . 91 | . 75 | . 43 |



## AEROVOX BCD UPRIGHT ELECTROLYTIC

3 WORKING VOLTS DC

| Cap. Mfd. | Stock No. | Aeroyox No. | Size Inches | 1-24 | $\begin{aligned} & \text { Price } \\ & 25-49 \\ & \hline \end{aligned}$ | $\text { ch } 50-99$ | $\begin{aligned} & 100- \\ & \mathbf{U}_{\mathrm{p}} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \hline 50 \\ & 100 \\ & 500-50 \end{aligned}$ | $\begin{aligned} & 15 A 928 \\ & 154929 \\ & 154977 \end{aligned}$ | $\begin{aligned} & 3050 \\ & 3100 \\ & 3 \times 50050 \end{aligned}$ | $\begin{aligned} & 3 / 8 \times 5 / 8 \\ & 3 / 8 \times 3 / 4 \\ & 5 / 2 \times 1 \end{aligned}$ | $\begin{array}{r} \$ 0.75 \\ .84 \end{array}$ | $\begin{array}{r} \$ 0.40 \\ .42 \end{array}$ | $\begin{array}{r} \$ 0.35 \\ .37 \end{array}$ | $\$ 0.28$ .29 |


| 1 | 154933 | 15001 | ${ }_{18}^{5 \times 5 / 8}$ | . 75 | . 40 | 35 | 28 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 154934 | 15005 | ${ }_{16}^{16} \times 5 / 8$ | . 75 | . 40 | . 35 | . 28 |
| 10 | 154935 | 15010 |  | . 75 | . 40 | . 35 | . 28 |
| 25 | 154936 | 15025 | $38 \times 5 / 8$ | . 75 | . 40 | . 35 | . 2 |
| 100 | 154938 | 15050 | $3 / 8 \times 3 / 4$ | . 75 | . 42 | . 37 | . 29 |
| 300-100 | 158940 | $15 \times 300100$ | $1 / 2^{\times 1 / 4}$ | 1.90 | . 44 | . 39 | . 31 |

25 WORKING VOLTS DC

| 1 | $15 A 949$ | 25001 | $5 / 6 \times 5 / 8$ | .75 | .40 | .35 | .28 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 5 | $15 A 950$ | 25005 | $1 / 6 \times 5 / 8$ | .75 | .40 | .35 | .28 |
| 10 | $15 A 963$ | 25010 | $16 \times 5 / 8$ | .75 | .40 | .35 | .28 |
| 25 | $15 A 964$ | 25025 | $38 \times 5 / 4$ | .75 | .42 | .37 | .29 |
| 50 | $15 A 970$ | 25050 | $1 / 2 \times 3 / 4$ | .84 | .46 | .40 | .32 |
| 75 | $15 A 976$ | 25075 | $18 \times 1$ | .90 | .46 | .40 | .32 |

50 WORKING VOLTS DC

| 1 | $15 A 978$ | 50001 | $8 \times$ | $5 / 8$ | .75 | .40 | .35 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 10 | $15 A 983$ | 50010 | $3 / 8 \times$ | 5 | .28 |  |  |
| 25 | $15 A 989$ | 50025 | .75 | .40 | .35 | .28 |  |

# Special Electrolytic Capacitors 

MALLORY COMPUTOR GRADE CAPACITORS

$\binom{-\infty}{1}$Type CG high copacity units for filter and storage use in powe supplies, computers, telephone networks, high grade test instruments or wherever extreme reliability is required. Temperature range -20 to $+85^{\circ} \mathrm{C}$. Capacity tol. 0 . 3 to 150 WVD . Insulating sleeve furnished. An exten sive listing of over 150 copocities and voltage ratings ovailable, write for bulletin 9-282.

| Stk. No. | Mfg. No. | Cop. Mfd. | V. DC |  | Size | 49 E. | U |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 158314 | CG4352U10F1 | 43,500 | 10 |  | $\begin{aligned} & \times 41 / 8, ", \\ & \times 55,0 \end{aligned}$ | $\$ 8.25$ | $\$ 6.48$ |
| 15 C 396 | CG533U15G1 | 53,000 | 15 |  | $\times 558^{\prime \prime \prime}$ | $9.30$ | $\begin{aligned} & 7.30 \\ & 1.35 \end{aligned}$ |
| 15 C 395 | CG152U25A1 | 1,500 8,500 | 25 |  | ${ }^{8 \times 2} 8^{8 \prime \prime}$ |  | 3.07 |
| 158315 | CG852U25D1 | 8,500 | 35 |  | + $\times 218^{\prime \prime}$ | 1.98 | 1.49 |
| 154391 | CG112U35A1 | 1,100 | 35 |  | $\times 3 \times 1{ }^{1}$ | 1.89 | 2.73 |
| 15 C392 | CG472U35K1 | 4,700 | 35 | 2 | $\times{ }^{\times 3} \times$ | 3.46 | 2.73 |
| $15 C 393$ | CG243U35G1 | 24,000 | 35 |  |  |  | 6.07 |
| 158316 | CGI4U50F1 | 10,000 | 50 | 2 |  | 3.47 | 2.72 |
| 15 C369 | CG452U50D1 | 4,500 |  | 2 |  | 4.47 |  |
| 15 C370 | CG345IU75DI | 3,450 | 75 | 3 | $\times 418$ | 7.05 |  |
| 15C371 | CG822U75F1 | 8,200 |  | 3 | $\times 4$ 叹, | 7.25 | 5.70 |
| 158317 | CG2251U100D1 | 2,250 | 100 | 2 | x418, | 4.12 | 3.23 |
| 158318 | CG1551U150D1 | 1.550 | 15 | $\frac{3}{3}$ | $\times{ }^{1}$ | 9.87 | 7.78 |
| 15 C 394 | CG562U150G1 | 5,600 | 150 | 3 | $\times{ }^{\times 1} 1810$ | 9.87 | 3.54 |
| $15 C 372$ | CGI3T200D1 | 1,000 | 200 | 2 | $\times 418$ | 4.51 |  |
| 15B319 | CG82T250D1 | 800 | 250 | $\frac{2}{2}$ | x418, | 4.72 |  |
| 15 B320 | CG72T300DI | 700 | 300 | 2 | x419, | 4.72 |  |
| 158321 | CG551T350D1 | 550 | 350 | 2 | $\times$ |  |  |
| 158322 | CG241T450D1 | 240 | 450 | 2 | $\times 41 / 8$ | 3.42 | 2.69 |

## MALLORY TYPE RP AC CAPACITORS

## CONTINUOUS DUTY (Motor Run

For heavy duty $A C$ applicotions such as motor running, fluorescen ballasts, ete. Widely used on air conditioner motors, oil burners, etc. Sealed metal cose, oil filled, non-inflommable providing a high safety factor and long life. Tol. $\pm 10 \%, 330 \vee \mathrm{AC}$. Quick mounting brackets below for RP type
Stk. No. Mfg. No. Mfd. Dia. Lgth. Each Stk. No. Mfg. No. Mfd. Dia. Lgth, Each


 15 A487 RP3 $\quad$ Vertical Mounting Brackets for RP, HC $\&$ CG Types
 $\begin{array}{llll}15 A 895 & \text { VR4 } & 11 / 2 \text { ta } 11 / 4, " & 14 \mathrm{c} \\ 15 A 897 & \text { VRG } & 13 / 4 \text { to } 1 \text { tion } & \text { 14c }\end{array}$

## MALLORY HI-CAPACITY DRY ELECTROLYTICS

INDUSTRIAL TYPE CAPACITOR. For filtering dry disc rectifiers, electric fence controls or terminals and verticol mounting bracket. Plostic case provides complete insulation.
see lower left for mounting brackets.
see (HC) Polarized; (NP) Nonpolarized

| Mfd. | Volts | Mfg. No.* | Size | Stk. No. | 1-9 Ea. | 10-24 Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6000 | 10 | HCIO60A | $11 / 2 \times 41 / 8$ | 158992 | \$5.20 | \$4.46 |
| 2000 | 15 | HCIS20A | $17.78 \times 298$ | 158993 | 5.47 |  |
| 4000 | 15 | HC1540A | 1 1\% $\times 4 \%$ | 158994 | 5.37 | 4.81 |
| 6000 | 15 | HCI560A | $118 \times 38$ | 158995 | 6.62 | 4.82 |
| 1000 | 25 | HC2510A | $1{ }^{1 / 4} \times 294$ | 154790 | 3.19 | 2.73 |
| 2000 | 25 | HC2520A | $1{ }_{15} \times 38$ | 15A791 | 5.15 | 4.79 |
| 4000 | 25 | HC2540A | ${ }^{18}$ | 15 1793 | 3.33 | 2.86 |
| 500 1000 | 50 50 | HC5010A | ${ }_{17}^{18} \times 3 \times 3$ | 15 A794 | 4.25 | 3.85 |
| 2000 | 50 | HC5020A | $118 \times 39$ | 154795 | 5.06 | 4.34 |
| 4000 | 50 | HC5040 | $21.84 \%$ | 154713 | 7.32 | 6.27 |
| -000 | 150 | HC15010A | $118 \times 4 \%$ | 15 A717 | 6.44 | 6.52 |
| 500 | 200 | HC20005A | $118 \times 38$ | 154729 | 5.53 | 4.74 |
| 200 | 300 | NP3025 | $2{ }_{2} 18 \times 4 \%$ | 158765 | 7.00 | 6.00 |
| 300 | 450 | HC45003 | $21.04 \%$ | 15 A732 | 8.47 | 7.28 |

MALLORY MOTOR STARTING CAPACITORS


Housing is water and oil proof molded bokelite. Easily installed, universally interchangeoble with capacitors of like dimensions and ratings. All are for $110-\mathrm{T}_{\mathrm{o}} 25$ volt AC motors, exyou may use the Mfd. rating on original capacitar and select the same or next higher Mfd. capacity. Size toble No. (1): $11_{5}^{7} \times 23 / 4$, No. (2): $11_{5}^{7} \times 33 / 8$, No. (3): $118 \times 43 / 8$. Wt. $1 / 2 \mathrm{lb}$.


## Mylar-Paper-Polystyrene Capacitors

CORNELL-DUBILIER CAPACITOR ASSORTMENTS


Assortment of DPMS Dipped Poper Mylars. sists of 95 selected 600 volt DPMS capacitors No. 15 B901. (Cabinet Free) Each. 18.75 Assortment of PM Molded Mylor Tubulars. Consists of 95 selected 600 volt PM molded mylor
No. 158902. (Cabinet Free) Each. S18.90 Assortment of WMF Wrapped Mylar Tubulars. tubulars from . 001 through $.47 \mathrm{mfd} . \$ 1530$

## CORNELL-DUBILIER

DIPPED PAPER MYLARS
TYPE DPMS radial lead design ideal for present day printed tiple dipped process mylar-poper Perfectly seoled by multiple dipped process, mylar-paper dielectric. High temperature -55 to $+125^{\circ} \mathrm{C}$. Tol. $\pm 10 \%$

200 VOLT


600 VOLT

| Mfd. | Size | Stk. No |  | $\begin{gathered} \text { ch } \\ 25-29 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| . 022 | . $35 \times .85$ | 15A688 | \$.15 | \$.12 |
| . 047 | . $45 \times .85$ | 154694 | . 18 | +. 13 |
| . 15 | . $47 \times 1.2$ | 154699 | . 21 | . 15 |
| . 15 | . $54 \times 1.2$ | 158731 | . 24 | .17 |
| . 22 | . $59 \times 1.3$ | 154733 | . 27 | . 20 |
| . 47 | . $73 \times 1.6$ | 15A805 | . 36 | . 26 |
| 400 YOLT |  |  |  |  |
| . 015 | . $39 \times .69$ | 158830 | . 15 | 10 |
| . 015 | . $43 \times .69$ | 158847 | .15 | .11 |
| . 02 | . $39 \times .85$ | 15 B831 | .18 | . 13 |
| . 022 | . $4 \times .85$ | 15B780 | . 18 | .13 |
| . 047 | . $41 \times 1.15$ | 158846 | . 21 | .14 |
| . 05 | . $41 \times 1.2$ | $15 \mathrm{B833}$ | . 21 | . 14 |
| . 068 | . $54 \times 1.2$ | 15B781 | . 24 | .17 |
| 15 | . $5 \times 1.2$ | 158834 | . 24 | . 17 |
| . 15 | . $56 \times 1.3$ | 158782 | . 30 | .20 |
| . 22 | . $62 \times 1.5$ | 158783 | . 36 | . 25 |
| . 25 | . $6 \times 1.6$ | 158835 | . 36 | . 25 |



## COMPACT TUBULARS

## Cornell-Dubilier WRAPPED MYLAR WMF

Encased in sigh density plastic. Moisture proof high end sealed with unis. Temperature range - $55^{\circ}$ to $125^{\circ}$ C stable long lite rder by Stock No. for each group and capacity.

Stk. No. 15 A996 100 WVDC


## MALLORY PVC MYLAR CAPACITORS

PLEXIBLE BLUE POLYVINYL COATED lat, space saving shope, min. size. Rodial copper leads dexibe printed circuitry as well as conventional wiring. by soldering iron heat. Very low drift, 40 to $105^{\circ}$ unaffected range. Tol. $\pm 10 \%$. Sizes are thickness and length.

Order by Stk. No, and Mfd. Copacity Stk. No. 15 C 410.100 V . DC Working Stk. No. 15 B 421.400 V . DC Working $\begin{array}{lllllllll}\text { Mfd. } & \text { Size } & 1-9 & 10-49 & 50-99 & \text { Mfd. Size } & 1-9 & 10-49 & 50.99 \\ 018 & 78 \times 32 & \$ 0.15 & \$ 0.12 & \$ 0.09 & 47 & 50\end{array}$





MOLDED TUBULAR CAPACITORS
Sprague TM-Difilm Block Beauty tubulars are dual dielectric (Mylar poper) with rock hard cose of noninflammable mica filled molded material. Black perature conditions. Double marked for easy identifi-
 $D-1 / 2 \times 11 / 2^{\prime \prime} ; E-5 / 8 \times 17 / 8^{\prime \prime} ; F-3 / 4 \times 21 / 8^{\prime \prime} ; G-3 / 4 \times 21 / 4^{\prime \prime} ; \mathrm{H}^{\prime} \mathrm{H}=1 \times 21 / 2^{\prime \prime}$ Specify stock number ond value when ordering. 2TM Serjes 200 V. No. 15 A3 Cap. Size Price Eoch 100 . Cap. 6 TM Series 600 V. No. $15 A 7$ Mfd. Inches $1-9 \quad 10-24 \quad 25-99 \quad 249$ Mrice Size Price Eoch SAT 100


## CORNELL DUBILIER PM SERIES

 Cornen-Dubilier PM Series is an all Mylar dielectric capocitor in molded non-inflammable case impervious Feotures high stability under extreme temperature conCORTre CORLDEDILIER $\mathrm{J}-1 \times 21 / 8$ ". Specify Stock number and value when ordéring

## PM Series 200 V. No 15422 PM Series 600 V. No. 15424

 Cap. Size Price Each 100. Mfd. Size Price Each 100 Mfd. Inches 1-9 10-24 25-99 249 N001 A $\$ 0.21$ 10-24 25-99 249 $\begin{array}{rrrrrrrrrrr}\text { Mrd. } & \text { Anches } & \$ .9 & 10-24 & 25-99 & 249 & .001 & \text { A } & \$ 0.21 & \$ 0.15 & \$ 0.12\end{array} \$ 0.09$ .0.0
.0

## ${ }_{.01} \mathrm{PM} \underset{\mathrm{B}}{ } \mathrm{Series} 400 \mathrm{~V}$. No. 15 F 23

| PM Series | 400 | V. No. $15 A 23$ |  | .027 | D | .21 | .15 | .12 | .09 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| .01 | B | .15 | .11 | .09 | .08 | .033 | D | .21 | .15 | .12 | .09 |
| .022 | C | .18 | .12 | .09 | .08 | .039 | D | .21 | .15 | .12 | .09 |
| .033 | D | .18 | .12 | .09 | .08 | .047 | E | .24 | .15 | .12 | .10 |
| .047 | D | .18 | .12 | .09 | .08 | .05 | E | .24 | .15 | .12 | .10 |
| .05 | D | .18 | .12 | .09 | .08 | .082 | E | .27 | .20 | .16 | .12 |
| .1 | E | .21 | .16 | .12 | .10 | .1 | F | .27 | .20 | .16 | .12 |
| .22 | G | .27 | .23 | .21 | .18 | .22 | G | .42 | .38 | .30 | .25 |
| .25 | G | .30 | .28 | .26 | .21 | .25 | H | .45 | .43 | .40 | .32 |
| .47 | I | .45 | .40 | .31 | .27 | .33 | I | .54 | .44 | .38 | .35 |
| .56 | I | .48 | .43 | .38 | .33 | .47 |  | .75 | .67 | .52 | .42 |
| 1.00 | J | .75 | .69 | .62 | .49 | .5 | I | .75 | .67 | .52 | .42 |

## NEW MALLORY POLYSTYRENE CAPACITORS

Styrocaps. A combination of polystyrene and high purity aluminum foil are used to produce this remarkable new sulation resistance, Working range -40 tage 500 . Tolerance $\pm 5 \%$. Temperoture mica, poper $8{ }^{\circ} \mathrm{C}$. Highly reliable, low priced. Replaces through 270 mylor and ceromic types. Size table 5 $5000 \mathrm{mmf} .19-47 \mathrm{D} \times .59 \mathrm{~L} . ; 5000$ through 10,000

mmf . $45-.59^{\circ} \mathrm{D} \times .79 \mathrm{~L}$


## Contact B-A for Factory OEM Prices for Larger Quantities



# Capacitors \＆Capacitor Testers 

TRW ELECTRONICS INSTRUMENT GRADE CAPACITORS FOR HIGH RELIABILITY

TYPE 663UW MYLAR SUB－MINIATURE TUBULAR
Plastic film encased，epoxy end fill．Highly stable，long life．Temperature range to $85^{\circ}$ C． $10 \%$ tolero


## Stk．No Mifd．

| Stk．No． | Sixe |
| :--- | :--- |
| Mfd． | $.156 \times 1 / 2$ |
| .001 | $.156 \times 1 / 2$ |
| .0022 | $.156 \times 1 / 2$ |
| .0033 | $.156 \times 1 / 2$ |
| .0047 | $.156 \times 1 / 2$ |
| .0668 | $.156 \times 1 / 2$ |
| .01 | $.203 \times 5 / 8$ |
| .022 | $.218 \times 5 / 8$ |
| .033 | $.234 \times 3 / 4$ |
| .047 | $.265 \times 3 / 4$ |
| .068 | $.281 \times 7 / 8$ |
| .1 | $.328 \times 1$ |
| .33 | $.438 \times 11 / 8$ |
| .47 | $.468 \times 1 / 4$ |
| .68 | $.562 \times 11 / 4$ |
| 1.00 | $.593 \times 11 / 2$ |
| 2.00 | $.812 \times 13 / 4$ |

$-6000 \mathrm{ALL}$
Your Choice Each
$1-2$
0.6 $82{ }^{50}$


## TYPE 6OIPE 50 VOLT MYLAR

Slim line type for tronsistor circuitry．Mylor non－inductive extended foil construction．Moisture tight，Epoxy cose．Excellent temperature stability．601PE offers higher stability，better reliobility of greate economy thon ceramic equivalents．All are $50 \mathrm{~V} .10 \%$ tolerance

Specify B－A Stock No． 15 A899 and Capacity when ordering．

Mfd．$w$ Size D．1－2425－4950．99 Mid．W．Size D．Each Each | Mfd． | W． | H． | D．Each Each | Each | Mfd． | W． | H． | D．Each Each |  | Each |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| .01 | .31 | .56 | .18 | $\$ .75$ | $\$ .45$ | $\$ .32$ | .068 | .53 | .50 | .22 | $\$ .95$ | $\$ .57$ |
| $\$ .41$ |  |  |  |  |  |  |  |  |  |  |  |  |
| .015 | .31 | .56 | .18 | .78 | .47 | .34 | .1 | .65 | .53 | .24 | 1.03 | .62 |
| .022 | .36 | .56 | .18 | .83 | .50 | .36 | .15 | .67 | .65 | .26 | 1.08 | .65 |
| .033 | .53 | .40 | .19 | .87 | .52 | .37 | .22 | .73 | .69 | .31 | 1.16 | .69 |
| .031 |  |  |  |  |  |  |  |  |  |  |  |  |
| .047 | .53 | .45 | .20 | .91 | .55 | .40 | .33 | .81 | .75 | .31 | 1.24 | .75 |
| 0 |  |  |  |  |  |  |  |  |  |  |  |  |

Other tolerances and 35 and 600 volt units are also available．

## TYPE X663F METALIZED MYLAR

Ultra－miniature，lightweight，long life capacitors．These highly $6000 \cdot \mathrm{All}$ stable instrument grade units are ideal where spoce saving is a
 -99
.26
.28
.28
.29
.29
.31
.32
.32
.32
.34
.37
.40
.43
.46
.68 CORNELL－DUBILIER METALIZED CAPACITORS MPY

## － $125^{\circ} \mathrm{C}$－SPACE SAVING <br> －MOISTURE RESISTANT

Type MPY．Metalized paper dielectrie encased in
moisture proof tri－clad cose， $25^{\circ} \mathrm{C}$ withe，wax
non－leaking，operates up to $125^{\circ} \mathrm{C}$ ．Without de－roting

| Mfd． | Stk．N Sixe | ${ }_{1-24}^{15 B 6}$ | $\begin{aligned} & 200 \text { Vol } \\ & 25-49 \end{aligned}$ | 50－99 | Mid． | $\begin{aligned} & \text { Stk. No. } \\ & \text { Size } \end{aligned}$ | $\begin{aligned} & 1588 \\ & 1-24 \\ & \hline \end{aligned}$ | $\begin{aligned} & 400 \text { Yolt } \\ & 25-49 \\ & \hline \end{aligned}$ | 50－99 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ． 022 | 1／4＊5／8 | S0．45 | 0.34 | 0.26 | ． 022 | ${ }^{5} \times 5 \times 5$ | 0.45 | 0. | \＄0．28 |
| ． 047 |  | － 45 | ． 34 | ． 28 | ． 047 |  |  |  |  |
|  | $3 / 8 \times 5 / 8$ | 4 | ． 38 | ． 30 |  |  |  |  |  |
| 2 |  | 8 | 47 | ． 44 | ． 47 | 5 | 86 | 2 |  |
| ． 47 |  |  |  | 43 | 1.00 | － $4 \times 1$ 格 | ． 32 | 99 |  |
| ． 0 | 59 |  | 10 | 88 | 2.00 | 避× $\times 13 / 8$ | 1.74 | 31 | ． |

stk．No． 15 A21 600 VOLT

| d． | e | 24 | 25 | 50.99 |  | Sixe | 1－24 | 25－49 | 50－99 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01 |  | \＄0．4 | 3 | ． 26 | 47 | $5 \times 1{ }^{7}{ }^{711}$ | \＄1．14 | 0.86 | \＄0．67 |
| ． 0 |  | ． 54 |  | ． 32 | 1.0 | 颜×117＂， | 44 | 8 |  |
| ． 1 | $3 \times 181 / 8^{\prime \prime}$ | ． 6 | 5 | 35 | 2.0 | 52x $\times 23 /{ }^{\prime \prime}$ | 2.10 |  |  |

AEROVOX MOLDED SILVER MICA CAPACITORS


AEROVOX DIPPED SILVERED MICAS
Smaller size．Radial leads．－ $55^{\circ}$ to $125^{\circ} \mathrm{C}$ tempera－
ture range．Meets MIL C－5B tests．Dipped plastic coated
 ADick．All are 500 volt except 300 V ．tType ADM 19，Size $5 \frac{1}{3} \times \frac{1}{3} \times{ }^{7} 5^{7}$


NEW SPRAGUE TO－6 CAPACITOR ANALYZER INCLUDES BURN－OUT－PROOF METER


Moderotely priced，laboratory quality and accur－ acy．Meosure capacity up to 2000 mfd ．in five overlapping ranges．Special 1 mmf ．to 100 mmf range．Safely tests low voltage trectly on meter， itors．Insulation resistance reod directly on meter， up to 50,000 megohms．No guessing wirectly on bulbs，Leakage current neasu（up to 600 volts meter with exact roted volt factor measured by available）applied．Power factor measured bidge Wien bridge．Mogic－eye tube simplifies bridge balancing ond power factor meosurements．Push button switching speeds operation．Size
Wt． $121 / 2$ lbs．
NEW MERCURY ELECTRONICS MODEL 1400 IN－CIRCUIT CAPACITOR TESTER

Save valuable time by testing capacitors in the circuit without unsoldering and resoldering．
Short Test：detects shorted copacitors of all types in－circuit with shunt resistance to 6 ohms Open Test：detects open copacitors
with shunt resistance as low as 15 ohms
Value Test：indicates copacitor value in－circuit from 2 to 450 mfd
Hi－Leak Test：sensitive to 150 megohm－Tests at 300 volts DC

## Ceramic Capacitors, Delay Relays

## SPRAGUE CERAMIC CAPACITORS

 GENERAL PURPOSE TYPES

## SPRAGUE TYPE TG

MINIATURE DISCS FOR TRAANISTOR CIRCUITRY, 50 VOLTS DC WORKING Designed for transistor, coupling and by-pass.
Stk. No. Mfg. No. Mfd. $\quad$ 100-| Stk. No. Mfg. No. Mfd. $100-$

| N. | Mrg. No. | Mrd. | $1-99$ | $\begin{gathered} 100- \\ 249 \end{gathered}$ | Stk. No. | Mfg. No | Mfd. |  | 100 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 158552 | TGD50 | . 005 | .15 | . 09 | 158554 |  |  | 1-99 |  |
| 158553 | TGS10 | .01 | .15 | .08 | 158555 | TGS30 | . 05 |  |  |
| 158557 | TGS20 | . 02 | .15 | .11 | 15 B 556 | TGP10 | .10 | 30 |  |

## SPRAGUE TYPE BL

2000 VOLT CERAMIC DISCS FOR BUFFER APPLICATIONS


## SPRAGUE HIGH VOLTAGE DISCS

TYPE $30 G A 3000$ W.Y.D. C. GENERAL PURPOSE

| Stk. No. | Mmf. | Size | 1-99 | $\begin{aligned} & 100- \\ & 249 \end{aligned}$ | Stk. No. | Mmf. | Size | 1.99 | $\begin{array}{r} 100- \\ 240 \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15 A869 | 10 | $3 / 8$ | . 15 | .10 | 154877 | 220 |  |  |  |
| 158385 154874 | 50 | $3 / 4$ | . 15 | .10 | 15A386 | 500 | 8 | -15 | 0 |
| $15 A 874$ $15 A 875$ | 68 | 3/4 | . 15 | .10 | $15 A 868$ | . 0022 | 8 | .21 | 1 |
| 154876 | 150 | 8 | -15 | . 10 | 154873 | . 002 | 8 | .21 | .15 |


| TYPE 75GA, 7500 W.Y.D.C. GENERAL PURPOSE |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 158387 | 47 | $3 / 4$ | . 42 | :32 | (1583884 | 100 470 | 3/4 |  |  |

## SPRAGUE TEMPERATURE COMPENSATING DISCS

 Stk. No. Mmf. Size $\quad \frac{100}{}$ NPO ZERO DRIFT WITH TEMPERATURE- 1000 W.V.D.C.| 154767 | Mor. | Size | 1-99 | $\begin{gathered} 100 \\ 249 \\ \hline \end{gathered}$ | Stk. No. | Mmf | Size | $1-99$ | $\begin{aligned} & 100 \\ & 249 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15A767 | 1.5 | $3 / 8 \times 88$ | . 15 | .06 | 158335 | 25 |  | . 15 |  |
| $15 A 768$ $15 A 769$ | 1.5 2.2 | 3/6 ${ }^{3 / 8}$ | .15 | .06 | 158336 | 33 | $32 \times 89$ $32 \times 88$ 32 | .15 | .06 |
| $15 A 769$ 154770 | 2.2 | $3 / 8 \times 8{ }^{6} 9$ $3 / 8 \times 89$ | .15 | .06 | 158337 | 47 | $3 \times 88$ 308 308 | . 15 | . 06 |
| 154771 | 4.7 | $3 / 8 \times 36$ | .15 | .06 | 158338 | 68 | $3 / 4 \times 8.5$ | .15 | . 07 |
| 154772 | 6.8 | $3 / 8 \times 8{ }^{8}$ | .15 | .06 | 15B339 | 100 | $3 / 4 \times 12$ | .15 | .07 |
| 15 B332 | 10 | $388 \times 3$ | .15 | .06 | 15B340 | 150 | $8{ }_{3} \times 1.8$ | .15 | .10 |
| 158333 | 15 | $3 / 8 \times 3.2$ | .15 | .06 | 15B379 | 220 | $3 x_{2}^{6}$ | .18 | . 12 |
| 158334 | 22 |  | .15 | . 06 | 158380 | 270 |  | $\begin{array}{r} 18 \\ .24 \end{array}$ | .12 |



## CENTRALAB TRANSMITTING CERAMICS



## AMPERITE TIME DELAY RELAY

Thermostatic rype hermetically sealed, unoffected by altitude, moisture or other atmospheric conditions. Contacts are SPST tandard type
diameter, have octal bose. Miniature type $x$ l $1 / 4^{\prime \prime}$ moximum pins $\times 7 / 8^{\prime \prime}$ diameter with 9 pin miniature base.

See ordering information below.
 NORMALLY OPEN CONTACTS

NORMALLY CLOSED CONT.

| Delay Sec. | 6.3 | $2_{26}^{\text {Heater Voltage }}$ |  | 115 | $\begin{aligned} & \text { Delay } \\ & \text { Sec. } 6.3 \end{aligned}$ | $26$ | $115$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 |  |  | 26N02 |  |  |  |  |
| 3 | 6 NO 3 6 NO |  | $\begin{aligned} & 26 \mathrm{NO}_{3} \\ & 26 \end{aligned}$ | $\begin{aligned} & 15 \mathrm{NO} \\ & 115 \mathrm{NO} \end{aligned}$ | $\begin{aligned} & 26 C 2 \\ & 3 \\ & \hline \end{aligned}$ | $\begin{aligned} & 26 C 2 \\ & 26 C 3 \end{aligned}$ | $\begin{aligned} & 115 c 2 \\ & 115 c 3 \end{aligned}$ |
| 8 | 6N05 | $12 \mathrm{NO5}$ | 26NO5 | 115 NOS | 56 C 5 | 26 C 5 | 115 C 5 |
| 10 | 6NOIO |  |  | 115 N08 | 8 |  | $115 C 8$ |
| 15 | 6 NO 15 | 12 NO | 26 NO 15 | 115N010 | 10.15 | $26 C 10$ | $115 C 10$ |
| 20 | 6 NO 20 | 12 NOT | 26 NO 20 | 115 NO 20 | $156 C 15$ 206020 | $26 C 15$ | $115 c 15$ |
| 30 | 6 NO 30 | $12 \mathrm{NO} \mathrm{S}^{\circ}$ | $26 N 030$ | 115 N030 | 306 C 30 |  | 115 C 20 |
| 45 | 6NO45 |  | 26NO45 | 115 NO45 | 3060 | $26 C 30$ | $115 \mathrm{C} 30$ |
| 60 | 6N060 | 12 N 060 | 26N060 | 115 N060 | $60^{\circ} 6 \times 60^{\circ}$ | 26С் $60{ }^{\circ}$ | 115 C60 |
| 90 20 | 6 NO 90 |  | 26N090 | 115 N090 | 90 6C90 | 26C90 | 115 C90 |
| 180 | 6 NO 120 | 12NO120 | 26NO120 | 115 No120 | 120 6C120 | 26C120 | $115 c 120$ |
| 180 | 6 NOI 80 | . . . . . | 26NO180 | 115 NO180 | 1806 C 780 | 26C180 | 115 C 180 |

No.20B805. STANDARD OCTAL BASE TIME DELAY RELAY. For standard No 20B806 No. 20B806. 9-PIN MINIATURE TIME DELAY RELAY. For 9-pin minioture fype specify our stock number and odd $T$ to Amperite type number.
26 NO 180 , 115 NO 180 , 26 Cl 180 , 115 C 180 not available in Min $9-\mathrm{Pin}$ Your Choice of any type,

## CENTRALAB GENERAL PURPOSE <br> CERAMIC DISCS TYPE DD

Highly efficient general purpose capacitor. Durez insulation wit overall protective coating for maximum protection against hu
midity and voltage breakdown. 1000 DC volts working, 600 V Tolerance $10 \%$ through 1500 Mmf ., bolonce guaranteed mini- 600 V mum value. Size $156^{\prime \prime}$ moximum thickness, 5 thru 820 mmf . $290^{\prime}$ dia.: 1000 thru $2500.385^{\prime \prime}$ dia., 3300 thru 6800.59 dia., .01 is $.69^{\prime \prime}$ dia. and .02 is $.92^{\prime \prime}$ dia.


CENTRALAB HI-CAPACITY LOW VOLTAGE DISCS TYPE UK, UKIO, DA, CK, DDM
For transistor circuits requiring high capacity and very low power factor combined with small size and light
weight.


## CENTRALAB ZERO CHANGE TYPE TCZ

precise applications or capacitance standards. Show zed in precise applications or capacitance standards. Show zero
change from $-20^{\circ}$ to $85^{\circ} \mathrm{C}$. Tubular type, 600 V . DC .5 through 39 mmf . size.$^{\prime \prime}$ dio. $x^{\prime \prime} .^{\prime \prime}$; 43 through $68 \mathrm{mmf} .2^{\prime \prime}$ dio. $\times .69^{\prime \prime} ; 00 \mathrm{mmf} .225^{\prime \prime} \times .86^{\prime \prime}$. Tol. $\pm .25 \mathrm{mmf}$ through
$10 \mathrm{mmf} ; 2 \%$ through 100 mmf .
Stk. No.
15A260
15 1260
$15 A 268$
$15 A 269$ $15 A 269$
$15 A 277$
$\begin{array}{llc}\text { Your Choice 1-24 Ea...... 30c } & 24 \\ \text { 25-99 Ea. }\end{array}$
Stk. No.
154309
154310
154311
$15 A 312$
$2.23 c$
$\begin{array}{crr}\text { MMf. } & \text { Stk. No. } & \text { Mmf } \\ 27 & 15 C 373 & 47 \\ 33 & 15 C 374 & 62 \\ 39 & 15 C 375 & 68 \\ 43 & 15 C 376 & 100 \\ 100-249 & \text { Ea. } & \ldots . .20 c\end{array}$

## CENTRALAB NEG. 750 TYPE TCN

Shows negotive copocity of 750 parts per million per degree $C$
rise in temperoture. 600 V . DC. Size 3.3 through 100 mmf .
$.2 x .4 ; 120$ through 180 mmf . $2 x .69 ; 240 \mathrm{mmf} . .225 \times .86 ; 300$ $.2 x .4 ; 120$ thro
mmf. $285 \times 1.16$

$300 \mathrm{Mmf} .1-24$-Ea............45c 25-99 Ea......35e 100-249 Eo...
CENTRALAB CERAMIC TRIMMERS


Type 825. Provides precision odjustment with smooth linear Chonge per degree rotation. Minioture size, $53 \times 1{ }^{12}$ " wide. 500 negative change 300 and $500^{\prime}$ parts per million per degree $C$.

## Stk. No. Mmf. Type Stk. No. MMf. Type Stk. No. Mmf. Type $\begin{array}{lllllllll}15 A 567 & 1.5-7 & \text { NPO } & 15 A 569 & 4-30 & \text { N500 } \\ 15 A 568 & 3-12 & \text { NPO } & 158516 & 5-20 & \text { N300 } & 1570 & 7-45 & \text { NSOL }\end{array}$ 15 A568 3-12 NPO 15 B516 5 -20 N300

Your Choice, 1-9 Each. .......... \$1.17 10-24, Each......... 98 c


## CENTRALAB CERAMIC FEED-THRU CAPACITORS <br>  <br> Type FT <br> Type MFT

FT Feed-thru. Efficient RF bypassing MFT Feed-thru. $875^{\prime \prime}$ overall length, with terminals to support other com- $15^{\prime \prime}$ dia. Efficient low cost, solder ponents or use as tie points. Toler- flange mtg. For modern space saving ance $20 \%$ for 1000 mmf, and +50 circuit design. 500 valts DC.
$\mathbf{s t k}$. No for 1500 mmf . 500 WV DC. Stk. No. Mmf. Toleronce $1-24 \quad 25-49$
$\begin{array}{lllllllll}\text { Stk. No. } & \text { Mmf. } & 1-24 & 25-49 & 158522 & 50 & 10 \% & 30 c & 24 c \\ 158658 & 1000 & 75 c & 60 c & 158527 & 100 & 10 \% & 30 c & 24 c \\ 15 B 659 & 1500 & 75 c & 60 c & 15 B 532 & 1000 & G M V & 30 c & 24 c\end{array}$
rices and Off-Shelf Delivery

# Voltage Control Transformers 



Compact industrial duty voltage control outo-formers wound on toroidal cores. Variable output is from zero to $17 \%$ above line voltage for all except types with " $N$ " suffix in Mfg. No. The " $N$ " types ore limited to yine with "E" suffix in No. are intended for permanent mounting on table, panel or in-conduit line. Portable units with " $F$ " suffix have line cord, outlet and or inse. Open frame types hove screw terminal boord with clearly marked schemotic. VT2OB is fully enclosed, surface mounting. VT4, VT4N, VT8, VT8N and VT20 shafts can be extended from either end for ponel or bench mounting. All have low resistance brush contact of exclusive Ohmite design, which for years has distinguished famous Ohmite rheostats, and feature long life with low maintenance, voltage regulation independent of load, no wove form distortion and very low temperature rise.
wove form distortion ond with competitive units of similar ratings. VTO2E and VTO2F 50 cycle ratings apply only if overvoltage feature is not used.

| Stock No. | Mfg. No. | Input <br> Volts Cycles |  | Output |  | Wi. Lbs. | Size | $\begin{gathered} 1-9 \\ \text { Each } \end{gathered}$ | 10-24 Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
| 37C304 | VT1 | 120 | 60 | 0-120/132 | 1.0 | 1.5 | $27 / 8 \times 17 / 16$ | \$8.00 | \$ 7.20 |
| 37 C 312 | VT1N | 120 | 60 | 0-120 | 1.2 | 1.5 | 27 \%14 | 8.00 | 7.20 |
| 37 C 317 | VT02 | 120 | 60 | 0-120/132 | 1.75 | 2.25 | $27 / 0 \times 2$ 囱 | 9.00 | . 10 |
| 37 D 322 | VT02N | 120 | 60 | 0-120 | 2.0 | 2.25 | 27820 ${ }^{5}$ | 9.00 | .10 |
| 378287 | VTO2E | 120 | 50-60 | 0-120/132 | 1.4 | 2.8 | 41/4x31/4 $\times 21 / 2$ | 14.00 | 12.60 |
| 378288 | VTO2F | 120 | 50-60 | $0-120 / 132$ | 1.75 | 3.2 | $41 / 4 \times 31 / 4 \times 21 / 2$ | 15.50 | 13.95 |
| 37 C 326 | VT3 | 120 | 60 | $0-120 / 132$ | 2.6 | 3.0 | $27 / 8 \times 2{ }^{3 / 56}$ | 10.50 | 9.45 |
| 378328 | VT3N | 120 | 60 | 0-120 | 3.0 | 3.0 | $27 / 8 \times 2$ \% | 10.5 | 9.45 |
| 37B289 | VT4 | 120 | 50-60 | $0-120 / 140$ | 3.5 | 5.25 | 4 $48 \times 4 \%$ | 14.00 14.00 | 12.60 12.60 |
| 378292 | VT4N | 120 | 50-60 | 0-120 | 4.75 | $\frac{5.25}{7.8}$ | 4 $6 \times 478 \times 41 / 2$ | 14.00 20.50 | 18.45 |
| 378294 | VT4F | 120 | 50-60 | 0-120/140 | 3.5 7.5 | 7.8 10.25 | $6 \times 478 \times 41 / 2$ $51 / 2 \times 51 / 4$ | 20.50 18.00 | 18.45 16.20 |
| 378295 | VT8 | 120 | 50-60 | 0-120/140 | 7.5 10.0 | 10.25 10.25 | 51/2 $51 / 2 \times 515$ | 18.00 | 16.20 |
| 378296 | VT8N | 120 | 50-60 | $0-120$ $0-120 / 140$ | 10.0 6.0 | 10.25 13.5 |  | 23.00 | 20.70 |
| 378297 378299 | VT8E | 120 | $50-60$ $50-60$ | 0-120/140 | 6.0 7.5 | 13.5 13.8 |  | 24.50 <br> 50.00 | 22.05 |
| 37 B 299 <br> 37 B <br>  <br>  | VT8F | 120 | $50-60$ $50-60$ | 0-120/140 | 20.0 | 13.8 22.0 | $5 \% \times 81 / 10$ | 50.00 | 45.00 <br> 49.50 |
| 378305 | VT20B | 120 | 50-60 | 0-120/140 | 20.0 | 22.5 | 75/8x81/8x47/8 | 55.00 | 49.50 |

## SOLA CONSTANT VOLTAGE TRANSFORMERS


(1) STANDARD SINUSOIDAL TYPE CVS

Hormonic-free, static-magnetic line voltage regulotors having ultra-fost regulating action. Response time 1.5 cycles or less. Output voltage Less than within $\pm 1 \%$ with input voltage variation os great os $\pm$ in suited for critical $3 \%$ total RMS harmonic content in output; therefore we have exposed core, instruments and systems. Aminals in outlet box, Fig. (1) obove. end housings and screw terminals in outlet box, fig.


Superior POWERSTAT VARIABLE TRANSFORMERS WITH "POWRKOTE" HIGH TEMPERATURE INSULATED COILS


For precise variable $A C$ voltoge control from zero up to or above line voltage with full rated current ovailoble over the entire range. Design is highly efficient auto-former type with single winding over toroidal core. Extremely low heoting, zero woveform distortion and excellent regulation from no lood to full load. Gold alloy ploted commutator, virtually maintenance free. Uncased types 10B, $21,116 \mathrm{BU}, 117 \mathrm{BU}, 126 \mathrm{U}$ and 216 BU are panel mounting. Portable types 116B, 216B and 2PF136B hove input cord and output receptacle. Cosed types 117 BT and 217BT for bench or wall mount have enclosed terminal board. Other cased types 126, 136B, 226, 236B, 1156 D and 1256D for behind panel, bench or wall mount exposed terminals. Current is moximum for a con-stont-current load. KVA is moximum for a constant-impedance load.

| Stock No. | Mfr's. No. | $\frac{\text { Input }}{\text { volts }} \text { Cycies }$ |  | Output Volts Amps. |  | KVA | Dia. | ${ }_{\text {Depth }}^{\mathrm{ze}}$ | $\begin{aligned} & \text { Wt. } \\ & \text { Lbs. } \end{aligned}$ | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 37A239 | 10B | $\begin{aligned} & 120 \\ & 120 \end{aligned}$ | $\begin{aligned} & 50 / 60 \\ & 60 \end{aligned}$ | $\begin{aligned} & \hline 0-120 \\ & 0-132 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2.25 \\ & 2.25 \\ & \hline \end{aligned}$ | $\begin{aligned} & .36 \\ & .30 \\ & \hline \end{aligned}$ | 24.3 | 21/6" | 2.4 | \$ 9.00 |
| 37 A240 | 21 | $\begin{aligned} & 120 \\ & 120 \end{aligned}$ | $\begin{aligned} & \hline 50 / 60 \\ & 50 / 60 \end{aligned}$ | $\begin{aligned} & 0-120 \\ & 0-140 \end{aligned}$ | $\begin{aligned} & 4.5 \\ & 4.5 \end{aligned}$ | $\begin{aligned} & .78 \\ & .63 \\ & \hline \end{aligned}$ | $3{ }^{17}$ | 3㮩" | 5.5 | 14.00 |
| 37A241 | 116 BU | $\begin{aligned} & 120 \\ & 120 \\ & \hline \end{aligned}$ | $\begin{aligned} & 50 / 60 \\ & 50 / 60 \\ & \hline \end{aligned}$ | $\begin{aligned} & 0-120 \\ & 0-140 \end{aligned}$ | $\begin{aligned} & 10.0 \\ & 10.0 \\ & \hline \end{aligned}$ | $\begin{aligned} & 1.6 \\ & 1.4 \end{aligned}$ | $47 / 8^{\prime \prime}$ | 45/8" | 12 | 18.00 |
| 37 A 242 | 116B | $\begin{aligned} & 120 \\ & 120 \end{aligned}$ | $\begin{aligned} & 50 / 60 \\ & 50 / 60 \\ & \hline \end{aligned}$ | $\begin{aligned} & 0-120 \\ & 0-140 \end{aligned}$ | $\begin{aligned} & 10.0 \\ & 10.0 \\ & \hline \end{aligned}$ | $\begin{aligned} & 1.6 \\ & 1.4 \\ & \hline \end{aligned}$ | 49/6" | $61 / 2^{\prime \prime}$ | 12 | 26.00 |
| $\begin{aligned} & 37 B 224 \\ & 37 A 225 \\ & 37 B 226 \end{aligned}$ | $\begin{aligned} & 117 \mathrm{BU} \\ & 117 \mathrm{BT} \\ & 126 \mathrm{U} \end{aligned}$ | $\begin{aligned} & 120 \\ & 120 \\ & 120 \end{aligned}$ | $\begin{aligned} & \hline 60 \\ & 60 \\ & 50 / 60 \end{aligned}$ | $\begin{aligned} & 0-120 \\ & 0-120 \\ & 0-120 \end{aligned}$ | $\begin{aligned} & 12.0 \\ & 12.0 \\ & 15.0 \end{aligned}$ | $\begin{aligned} & 1.8 \\ & 1.8 \\ & 2.4 \end{aligned}$ | $\begin{gathered} 45 / /^{\prime \prime} \\ 5^{\prime \prime} \end{gathered}$ | $\begin{aligned} & 47 / 8^{\prime \prime \prime} \\ & 61 / 2^{\prime \prime} \end{aligned}$ | $\begin{aligned} & 12 \\ & 12 \end{aligned}$ | $\begin{aligned} & 20.00 \\ & 25.00 \end{aligned}$ |
|  |  | 120 | $30 / 60$ $50 / 60$ | $0-140$ | $\begin{aligned} & 15.0 \\ & 15.0 \\ & \hline \end{aligned}$ | $\begin{array}{r} 2.4 \\ 2.1 \\ \hline \end{array}$ | $6^{\prime \prime}$ | $57 /{ }^{\prime \prime}$ | 17 | 34.00 |
| 378232 | 126 | $\begin{aligned} & 120 \\ & 120 \end{aligned}$ | $\begin{aligned} & 50 / 60 \\ & 50 / 60 \end{aligned}$ | $\begin{aligned} & 0-120 \\ & 0-140 \end{aligned}$ | $\begin{aligned} & 15.0 \\ & 15.0 \end{aligned}$ | $\begin{aligned} & 2.4 \\ & 2.1 \end{aligned}$ | $6^{\prime \prime}$ | $57 /{ }^{\prime \prime}$ | 17 | 39.00 |



|  | Mfg. No. | $\begin{gathered} \text { Input } \\ \text { Volts!Cycles } \end{gathered}$ |  | Volts | ut Amps | KVA | Dia. | epth | Wt. Lbs. | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 37A341 | 136B | $\begin{aligned} & 120 \\ & 120 \end{aligned}$ | $\begin{aligned} & 50 / 60 \\ & 50 / 60 \end{aligned}$ | $\begin{aligned} & 0-120 \\ & 0-140 \end{aligned}$ | $\begin{aligned} & 22.0 \\ & 22.0 \end{aligned}$ | $\begin{aligned} & 3.4 \\ & 3.1 \end{aligned}$ | 73/4" | $61 / 6^{\prime \prime}$ | 25 | \$ 55.00 |
| 37 A342 | 2PF136B | $\begin{aligned} & 120 \\ & 120 \end{aligned}$ | $\begin{aligned} & 50 / 60 \\ & 50 / 60 \end{aligned}$ | $\begin{aligned} & 0-120 \\ & 0-140 \end{aligned}$ | $\begin{array}{r} 22.0 \\ 22.0 \\ \hline \end{array}$ | $\begin{aligned} & 3.4 \\ & 1 \end{aligned}$ | $7^{3 / 4}{ }^{17}$ | 6\%10" | 26 | 72.00 |
| 37B26 | $\begin{aligned} & 1156 \mathrm{D} \\ & 216 \mathrm{~B} \end{aligned}$ | $\begin{aligned} & 120 \\ & 240 \\ & 240 \\ & 240 \end{aligned}$ | $\begin{aligned} & 50 / 60 \\ & 50 / 60 \\ & 50 / 60 \\ & \hline \end{aligned}$ | $\begin{aligned} & 0-140 \\ & 0-240 \\ & 0-280 \end{aligned}$ | $\begin{array}{r} 50.0 \\ 3.5 \\ 3.5 \end{array}$ | $\begin{aligned} & 6.6 \\ & 1.2 \\ & \hline \end{aligned}$ | $\begin{array}{r} 144^{7 n} \\ 5 \frac{3}{12} n \end{array}$ | $\begin{aligned} & 81 / 2^{\prime \prime} \\ & 61 / 2^{\prime \prime} \end{aligned}$ | 79 | $\begin{array}{r}130.00 \\ 29.00 \\ \hline\end{array}$ |
| 37B265 | 216BU | $\begin{aligned} & 240 \\ & 240 \end{aligned}$ |  |  | $\begin{aligned} & 3.5 \\ & 3.5 \end{aligned}$ | $\begin{gathered} 1.2 \\ .98 \end{gathered}$ | $47 / 8{ }^{\prime \prime}$ | 45/8" | 12 | 22.00 |
| $\begin{aligned} & 377266 \\ & 37 \mathrm{~B} 267 \end{aligned}$ | $\begin{aligned} & 226 \\ & 217 \mathrm{BI} \end{aligned}$ | $\begin{aligned} & 240 \\ & 240 \\ & 240 \\ & 240 \end{aligned}$ | $\begin{aligned} & 60 \\ & 50 / 60 \\ & 50 / 60 \end{aligned}$ | $\begin{aligned} & 0-240 \\ & 0-240 \\ & 0-280 \end{aligned}$ | $\begin{aligned} & 5.0 \\ & 7.5 \\ & 7.5 \end{aligned}$ | $\begin{aligned} & 1.7 \\ & 2.4 \\ & 2.1 \end{aligned}$ | $\begin{aligned} & 5 \frac{3}{3 \prime \prime} \\ & 65 \%{ }^{\prime \prime} \end{aligned}$ | $\begin{aligned} & 63 / 0^{\prime \prime} \\ & 53 / 8^{\prime \prime} \end{aligned}$ | 12 | 28.00 39.00 |
| 37A343 | 236B | $\begin{aligned} & 240 \\ & 240 \end{aligned}$ | $\begin{aligned} & 50 / 60 \\ & 50 / 60 \end{aligned}$ | $\begin{aligned} & 0-240 \\ & 0-280 \end{aligned}$ | $\begin{aligned} & 10.0 \\ & 10.0 \end{aligned}$ | $\begin{aligned} & 3.1 \\ & 2.8 \end{aligned}$ | 73/4n | $61 /{ }^{17}$ | 25 | 55.00 |
| $\begin{aligned} & 37 \mathrm{~B} 268 \\ & 37 \mathrm{~A} 186 \end{aligned}$ | $\begin{aligned} & 1256 \\ & 146 \end{aligned}$ | $\begin{aligned} & 240 \\ & 120 \\ & 120 \end{aligned}$ | $\begin{aligned} & 50 / 60 \\ & 50 / 60 \\ & 50 / 60 \end{aligned}$ | $\begin{aligned} & 0-280 \\ & 0-120 \\ & 0-140 \end{aligned}$ | $\begin{aligned} & 28.0 \\ & 30.0 \\ & 30.0 \end{aligned}$ | $\begin{aligned} & 7.8 \\ & 4.2 \\ & 4.2 \end{aligned}$ | $147 / 8^{\prime \prime}$ $93 / 6{ }^{\prime \prime}$ | $81 / 2^{\prime \prime}$ $47 / 8^{\prime \prime}$ | 79 | 130.00 94.00 |
| 37 Al 18 | 246 | $\begin{aligned} & 240 \\ & 280 \end{aligned}$ | $\begin{aligned} & 50 / 60 \\ & 50 \end{aligned}$ | $\begin{aligned} & 0-240 \\ & 0-280 \end{aligned}$ | $\begin{aligned} & 15.0 \\ & 15.0 \end{aligned}$ | $\begin{aligned} & 4.6 \\ & 4.2 \end{aligned}$ | 911/3 | 47/8 ${ }^{\prime \prime}$ | 30 | 94.00 |

All Superior Powerstats are available from B-A at Lowest Prices

## SOLA TV-APPLIANCE AUTOMATIC

## LINE VOLTAGE REGULATOR

Banishes flicker and distortion from Television screen due to line voltage variations caused by home applionces or other electric powered devices. Unit plugs into AC socket and has outlet for the TV power cord. Turns on automatically-no extra switching. Input line volfage may at $115 \mathrm{~V}+3 \%$. Size $81^{x} \times 71 / 4 \times 41 / 2^{\prime \prime}$ put holds steady of for $300 \mathrm{~W} ., 20$ lbs. for 180 W.

| Stk. No. | Sola Type | Watts | List | Net Eech |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 31831 | CVA72104 | 300 | $\$ 41.00$ | $\mathbf{S 3 2 . 8 0}$ |
| 31843 | CVA72103 | 180 | 38.00 | 30.40 |



## NEW SOLA COLOR TV AUTOMATIC REGULATOR

Utilizes the Solo harmonic free principle which delivers a stable sine wave output. Eliminates one major cause of color set instability. Input 95-130 V
 No. 31A42. Type CVA72107. Mfg. list $\$ 60.00$.
Net Each
$\$ 48.00$
All Products of Ohmite, Superior \& Sola are available from B-A

## Stancor Transformers

##  <br> MICROPHONE AND LINE INPUT TRANSFORMERS <br> UNIVERSAL OUTPUT TRANSFORMERS

10 W . power rating; others mike to grid. VE and TD Mon tor line to line shielded for low hum pickup. A4779 is for SE and TD mountings are fully shielded for low hum pickup. A4779 is for Sgl. or PP grids, all others for
single grid. Wt. I lb.

## INTERCOM, TRANSCEIVER, PHONE PATCH TRANS.

 Madulation and speaker output auto-transformer, used in citizens band and

## INTERSTAGE TRANSFORMERS

A-53, single $7 \mathrm{~K}-20 \mathrm{~K}$ ohm plote to single grid. A471I Pp $7 \mathrm{~K}-\mathrm{i}$ Wt. 1 Lb .) 10 MA , ors

| Stock No. | Mfr's. No. | Turns Ratio | Mitg. | $\begin{aligned} & \text { Size } \\ & \text { H.W.D. } \end{aligned}$ | Net Each |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-8 | 10-24 | 25-49 | 50-98 |
| 134359 | ${ }^{\text {A53 }}$ | 1:3 | A | $13 / x^{23 / 8 \times 1 / 2}$ | 2.34 | 2.11 | 1.99 | 1.87 |
| ${ }_{13 \text { 13A }} 1308$ | ${ }_{\text {A53 }}{ }^{\text {C }}$ C | 1:2 | A | $13 \times 23.8 x^{13} / 8$ | 2.57 | 2.31 | 2.18 | 2.06 |
| 13 A 7 | ${ }^{\text {A } 63} \mathbf{C}$ | 1:3 | A | ${ }_{15}^{13} \times 2 \times 2{ }^{2} \times 1 x^{13 / 8}$ | 2.74 | 2.47 | 2.33 | 2.19 |
| 13 A 10 | A4711 | 1:1 | ${ }_{\text {A }}$ | ${ }_{1}^{5} / 8 \times 21 / 6 \times 11 / 2$ | 3.22 3.85 | 2.90 3.47 | 2.74 3.27 | 2.58 3.08 |

DRIVER TRANSFORMERS
(Avg. Shpg. Wt. 3 Lbs.)
imped. 10 K ohms. Mtg. A.

| Stock No. | Mfr's. No. | Turns Ratio | $\begin{aligned} & \mathrm{DC} \\ & \mathrm{MA} \end{aligned}$ | $\begin{gathered} \text { Size } \\ \text { H.W.D. } \\ \hline \end{gathered}$ | Net Each |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| $\begin{aligned} & \text { 13A15 } \\ & \text { 3B } 111 \end{aligned}$ | $\begin{aligned} & \mathrm{A} 4713 \\ & \mathbf{A 4 7 2 3} \end{aligned}$ | $\begin{aligned} & 2: 1 \\ & 3: 1 \end{aligned}$ | $30$ |  |  | 2.25 | 2.13 | 2.00 |
|  |  | $3: 1$ | $30$ | $15 / 827 / 8 \times 11 / 2$ | 2.55 | 2.30 | 2.17 | 2.04 |

## PLATE MODULATION TRANSFORMERS

Pri. imped. A3812, IOK C. T. A3845, IOK C. T.

| Stock No. | $\begin{aligned} & \text { Stancor } \\ & \text { No. } \end{aligned}$ | Suggested Mod. Tubes | Class "C" <br> Load Ohms. | ${ }_{W}^{\text {Audio }}$ | $\begin{aligned} & \text { Mtg. } \\ & \text { Fig. } \end{aligned}$ | Dimensions <br> H. W. D. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13 A613 | A-3812 | 9K6 19 |  |  |  |  |  |



UNIVERSAL POLY-PEDANCE MODULATION TRANSFORMERS

| Stock No. | $\begin{aligned} & \text { Stancor } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Audio } \\ & \text { Watts } \end{aligned}$ | $\begin{aligned} & \text { Max. D. C. ma } \\ & \text { Pri. } \end{aligned}$ |  | $\begin{gathered} \text { Mtg. } \\ \text { Fig. } \end{gathered}$ |  | $\begin{aligned} & \text { nens } \\ & \text { W. } \end{aligned}$ |  | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 13 \mathrm{B155} \\ & 13 \mathrm{~B} 156 \end{aligned}$ | $\begin{aligned} & \mathrm{A}-3893 \\ & \mathrm{~A}-3894 \end{aligned}$ | $\begin{array}{r} 60 \\ 125 \\ \hline \end{array}$ | $\begin{aligned} & 180 \\ & 225 \\ & \hline \end{aligned}$ | $\begin{array}{r} 180 \\ 225 \\ \hline \end{array}$ | $\begin{aligned} & \mathrm{D} \\ & \mathrm{D} \\ & \hline \end{aligned}$ | $4{ }_{4}^{43} 4$ | $\begin{aligned} & 31 / 6 \\ & 4 \end{aligned}$ | $\begin{aligned} & 41 / 6 \\ & 45 \% 6 \end{aligned}$ | $\begin{array}{r} \$ 15.72 \\ 20.64 \end{array}$ |

## CONSTANT 70.7 V. LINE TO VOICE COIL TRANS.

for matching speakers to amplifier output allowing desired power leve without need for separate speaker level controls. To determine transformer $Z=$ transformer impedance $p=$ given power step use formula $Z=K / P$ where for 70.7 V . A8084 hos 8 ohm sec., $A 8105$ hos $4 / 8 \mathrm{ohm}$ sec.; $K=$ oll others $4 / 8 / 16$ ohm.

| Stock No. | Mfr's. No. | Power Steps In Watts | $\begin{aligned} & \text { MIg. } \\ & \text { Type } \end{aligned}$ | H. ${ }^{\text {Size }}$. | Net Each |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-9 |
| 138178 | A8084 | 4/2/1/.5 |  |  |  |  |  |  |
| 13 A415 | 18103 | .25/12 $16 / 8 / 4 / 2$ | A | 15/6x $27 / 8 \times 15 / 8$ | 2.91 | 2.62 | 2.47 | 2.33 |
|  |  | 1/5 | J | 23/4x21/4x 3 | 5.44 | 4.90 |  |  |
| $\begin{aligned} & 13 A 414 \\ & 13 A 252 \end{aligned}$ | ${ }_{\text {A8102 }}$ | 8/4/2/1/.5 | J | $2 \times 15 \% 18{ }^{1}$ | 3.97 | 3.57 | 3.37 | 3.18 |
|  |  | . $62 / .31$ | 0 | $13 \times 8{ }^{3} / 8$ |  |  |  |  |
| 134575 | A8080 | 5/4/3/2/1 | Q | 13 923.9138 | 3.22 | 2.82 2.80 | 2.75 2.74 | 2.59 |
| 13A361 | A8081 | 10/9/8/7/6 | J | $2 \times 2$ \% 15 \% | 7. 54 | 3.19 | 3.74 | 2.58 2.83 |
| 13 A362 | A8082 | $\begin{gathered} 15 / 14 / 13 / 12 / \\ 11 \end{gathered}$ | J | 23/42 $27 / 8511 / 4$ | 4.30 | 3.87 | 3.61 3.66 | 2.83 3.44 |

LINE TO VOICE COIL TRANSFORMERS A8101 and A7947 are type $Q$ mtg. others type J. Wt. . 4 to 2.2 lbs

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | Mfr's. | Primary Ohms | Sec. <br> Ohms | Audio Watts | $\begin{aligned} & \text { Size } \\ & \text { H.W.D. } \end{aligned}$ | Net Each |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-98 |
| 13816 | A8101 | 500 | 6-8/3.2 | 5 |  |  |  |  |  |
| 13825 | A3883 | 500 | 15/8/6/4 | 25 |  | 3.85 | 3.47 | 3.27 | 1.59 3.08 |
| 13837 | A7947 | $\begin{array}{r} 2000 / 1500 \\ 1000 / 500 \end{array}$ | 6-8/3.2 | 2 | 156920401\% |  |  | 3.27 |  |
| 13 A532 | A8104 | 3000/2000/ |  |  | 15/9x24/2x17e | 3.29 | 2.96 | 2.8 | 2.63 |
|  |  | 1500/1000/500 | 16/8/4 | 10 | 296x296x13/ | 4.77 | 4.29 | 4.05 | 3.82 |

A3825, for single tube 0.3 to 4 ohm sec.; A3849, 02 to 21 ohm sec. A3852, A3830 for PP tubes have 05 to 122020 onm A3830, A3852 are J mtg., all others $Q \mathrm{mtg}$.

| Stock No. | Mfr's. No. | Primary | Watts | $\begin{aligned} & \text { Size } \\ & \text { H.W.W. } \end{aligned}$ | Net Each |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-8 | 10-24 | 25-49 | 50-99 |
| 13 19 9 | A3856 | 4K to 14 K | 4 | $13 / 8 \times 23 / 8 \times 18 / 3$ | 3.20 | 2.88 | 2.72 |  |
| 13 A 20 | A3823 | 4 K to 14 K | 8 | 15/8x $\times 1 / 4 \times 11 / 2$ | 3.79 | 3.41 | 3.22 | 3.53 |
| ${ }^{13 A} 4614$ | A3825 | 1.5 K to 4.5 K | 8 | $2 \times 3141518$ | 3.04 | 2.74 | 2.58 | 2.43 |
| $13 A 27$ $13 A 22$ | A3849 | ${ }_{\text {PP }} 1.5 \mathrm{~K}$ to 10 K | 10 | $15 / 9 \times 278 \times 11 / 2$ | 3.65 | 3.29 | 3.10 | 2.92 |
| 13A26 | A3852 | PPP 4K to 14K | 18 20 | 230 $\times 22^{1 / 8} \times 2$ | 4.57 4.89 | 4.11 | 3.88 | 3.66 |

OUTPUT TRANSFORMERS-SGL. PLATE TO V.C
A3336 has $3 \%$ and $6 \%$ primory taps used in hum reduction A3337 S mtg.., others A mtg. Avg. wt. 5 lbs.

| Stock No. | Mfr's. No. | Impedance |  | Watts | $\begin{aligned} & \text { Size } \\ & \text { H.W.D. } \end{aligned}$ | Net Each |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Pri. | Sec. |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 134378 | A3332 | 2000 | 3.2 | 3 | 13/6x ${ }^{21 / 8 \times 1}$ | 1.57 | 1.41 |  | 1.26 |
| $13 \mathrm{B126}$ | A3876 | 2000 | . | 5 | $13 / 8 \times 23 / 8 \times 13 / 8$ | 1.67 | 1.50 | 1.42 | 1.34 |
| 13 1412 | A3336 | 2500 | 3.5 | 5 |  | 2.30 | 2.07 | 1.96 | 1.84 |
| 138322 | A3328 | 4000 | 3.5 | 3 | 15 $8 \times 2481818$ | 1.62 | 1.46 | 1.38 | 1.30 |
| 13A338 | A3309 | 5000 | 3-4 | 3 | 180821/813/8 | 2.19 |  |  | 1.75 |
| 138127 | A3877 | 5000 | 3 |  | $13 / 8 \times 23 / 8 \times 13 / 8$ | 1.67 | 1.97 1.50 | 1.42 | 1.75 1.34 |
| ${ }_{1}^{138839}$ | A3337 | 5000 | 6 -8 | 10 | 2\%6256x18/4 | 2.57 | 2.31 | 2.18 | 2.06 |
| 138323 | A8092 | 5000 | 3-4 | 8 | 11/2x11/2x27/8 | 2.49 | 2.24 | 2.12 | 1.98 |
| 13 A34 | A3878 | 7000 | 4 | 5 | $13.8 \times 23 / 8 \times 1{ }^{3} / 8$ | 1.74 | 1.57 | 1.48 | 1.38 |
| 13A533 | A8114 | 7600 | 3.2 | 5 | $13 / 6 \times 23 / 2 \times 13 / 8$ | 2.22 |  | 1.89 |  |
| 13 A375 | A3329 | 8000 | 3.5 | 3 | $13 \% 62481{ }^{1}$ | 1.62 | 1.48 | 1.38 | 1.30 |
| 13 1 128 | A3879 | 10000 | 4 | 5 | $13 / 8 \times 23,8 \times 13 / 8$ | 1.70 |  | 1.45 | 1.36 |
| 13 A366 | A3327 | 25000 | 4 | 5 | $1388 \times 2388 \times 138$ | 2.14 | 1.53 | 1.85 | 1.71 |

OUTPUT TRANSFORMERS PP PLATES TO V.C.
Indicates $500 / 250 / 15 / 8 / 4$ ohms except A3304 and A3311 do not hove 250 ohms. A3800, A3801, A3304 and A3311 style C mtg. Others similar to A. Wt. . 4 to 4.8 ibs.


## TUBE TO LINE TRANSFORMERS

 Sec. A3250, $500 / 333 / 200 / 125 / 50$ ohms. Sec. A3841 500 ohms. A3250Pri. $15 \mathrm{MA} \mathrm{DC} . \mathrm{A} 3841 \mathrm{Pri}$.60 MA DC. $10 \mathrm{~W} . \mathrm{Q}$ and J mtg. respect.

| Stock No. | Mfr's. No. | Primary Ohms | $\begin{aligned} & \text { Size } \\ & \text { H.W.D. } \end{aligned}$ | Not Each |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-8 | 10-24 | 25-49 | 50-99 |
| 13A377 | A3250 | Sgl. $20 \mathrm{~K} / 10 \mathrm{~K} / 5 \mathrm{~K}$ Plate |  |  |  |  |  |
| 13A250 | A3841 |  | ${ }_{2}^{2} x 3^{1 / 4 x l^{3} / 4}$ | 4.62 | $\begin{aligned} & 4.16 \\ & 5.36 \end{aligned}$ | 3.93 | 3.70 |

## CATHODE RAY TUBE POWER TRANSFORMERS

For use with type $2 \times 2$ rectifier tube in holf-wove high voltoge supply. The P8150, TD Mtg.; P8151 and P8178, C Mtg.; P8178 has additional Fil. 6.3 V . @ 0.6 A

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \hline \text { Mr's.s. } \\ & \text { No. } \end{aligned}$ | H.V. | $\begin{aligned} & \text { Sec. } \\ & \text { MA } \end{aligned}$ | $\begin{gathered} 2.5 \mathrm{~V} . \\ \text { @ } \end{gathered}$ | $2.5 \mathrm{~V}$ | $\begin{aligned} & \text { Size } \\ & \text { H.W.D. } \end{aligned}$ | $\begin{array}{\|c} \text { Wt. } \\ \text { Lbs. } \end{array}$ | 1-9 | 10-24 | 25-49 | 50-99 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13B246 | P8150 | 1550 | 1.5 | 1.75A |  | 31 x $\times 3 \times 2 \times 1 / 2$ | 1.8 | 9.99 | 8.99 | 8.49 |  |
| 13 A 628 | P8178 | 1800 | 2.0 | 1.8 | 2.2 | $37 / 8 \times 31 / 4 \times 31$ | 5 | 11.70 | 10.53 | 8.49 9.95 | 7.99 9.36 |
| 138262. | P8151 | 2400 | 5.0 | 2A | 2A | $48 \times 38 \% \times 37$ | 6.4 | 14.79 | 13.31 | 12.57 | 11.83 |

Triad TRANSISTOR POWER SUPPLY TRANSFORMER


For use with power tronsistors and silicon rectifiers to produce HV DC from 12 Volt DC. Highly efficient epoxy molded toroid design. Typical circuit included.
Others for $6 \mathbf{V}$ and 28 V DC input are available from factory stock. Prices quoted on request.

Order by Group Stock No. 26A159 and Triad type.

| Triad | DC Outpu 1 From Rectifier | Max. Watts | Dimensions W. | Net Prices, Each |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Type |  |  |  | 1-9 | 10-24 | 25-49 |
| TY-78 | 250 V . 100 MA | 25 | Dis. 13/4", H. 11/4" | \$14.72 | \$13.25 |  |
| TY-79 | 300 V . © 200 MA | 60 | Dia. 133/n, H. $1^{\prime \prime}$ " | 14.72 | 13.25 | 11.93 |
| TY-81 | 375 V . 200 MA | 75 | Dia. ${ }^{2 / 4}{ }^{\prime \prime} \mathrm{H}^{\prime}$. | 15.19 | 13.67 | 12.30 |
| TY-84 | 600 V . © 200 MA | 120 | Dia. 23/4", H. $13 / 8{ }^{\prime \prime}$ | 21.57 | 19.41 | 17.47 |
| TY-86 | 425V. @ 350 MA | 150 | Dia. 21/4", H. $13 /{ }^{\prime \prime}$ | 21.80 | 19.62 | 17.66 |

FOR PRODUCING 115 V .60 CY . AC POWER FROM 12 V . DC SOURCE. Upright mounting, fully shielded power transformers for use in transistorized circuits. Diagram included.

Order by Group Stock No. 26A159 and Triad Type
$\begin{array}{ll}\text { Triad ACOutput Max. } \\ \text { Type } & \text { From Transformer Watts Dimensions }\end{array}$



## Stancor Transformers

## AGPA

TRANSISTOR AUDIO TRANSFORMERS
Designed especiolly for transistor applications. Highest quality throughour Types TA-15, TA-16 and TA-17 are transformers for a 30 watt transisto mobile modulator using P.P. 2N278's. Ask for No. 25A125. Bulletin 545 Showing modutator circuit. TA-61 Turns Rotio: Pri. to $1 / 2 \mathrm{Sec}, .1: 1$, All A mtgs except TA-17 is C mtg.; TA $56, \mathrm{~J} \mathrm{mtg}$.; TAS7 5 mtg .

| Stock No. | Type No. | Use | Ohms. Imp. |  | $\begin{aligned} & \text { DC } \\ & \text { MA } \end{aligned}$ | Power Watts | Ht . | Base Area | Net Each |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Pri. | Sec. |  |  |  |  | 1-9 | 10-24 | 2549 |
| 13 A 806 | TA-1 | Input | 600CT | 10 | 20 | 0.05 | 010 | 196 | \$2.37 | \$2.13 | \$2.01 |
| 13 A814 | TA-15 | Mike | 50-100 | 10 | 50 | 5.11W | 9 | 19 | 2.00 | 1.80 | 1.70 |
| 13 A807 | TA-2 | In.Stg. | 100 CT | 10 CT | 100 | 0.25 | $11 / 6$ | $\begin{array}{lll}21 / 8 & 13 / 8 \\ 276 & 13 / 8\end{array}$ | 2.24 | 2.02 2.00 | 1.90 1.89 |
| 13 A808 | TA-3 | In.Stg. | 100 | 1000 CT | 100 | 0.25 | 13/8 | 27/E13/8 | 2.22 | 2.00 | 1.89 |
| 13 A809 | TA-4 | In.Stg. | 500 CT | 5000 CT | 12 | . 03 | 136 | 276 | 3.15 | 2.84 | 2.68 |
| 13 A818 | TA-52 | In.Stg. | 500 CT | 500CT |  | . 3 | ${ }_{96}^{96}$ | 15/8 8 \% | 3.74 | 3.37 | 3.18 |
| 13 A810 | TA-7 | Driver | 100 | 100 CT | 100 | 0.5 | $15 / 8$ | $\begin{array}{lll}2 & 13 / 8\end{array}$ | 2.19 | 1.97 | 1.86 |
| $13 A 815$ | TA-16 | Driver | 20 | 36 CT | 400 | IW | 136 | 216 | 2.24 | 2.02 | 1.90 |
| 134821 | TA-58 | Driver | 100 | 200 CT | 200 | . 5 | 11/4 | $2 \quad 11 / 4$ | 2.60 | 2.34 | 2.21 |
| 13 A822 | TA-59 | Driver | 500 CT | 200CT | 50 | . 5 | 11/6 | $211 / 4$ | 2.67 | 2.40 | 2.27 |
| 13 A823 | TA-61 | Driver |  |  | * | . | 159 | $23 \cdot 11 / 2$ | 3.14 | 2.83 | 2.67 |
| 134811 | TA-9 | Output | 1000 | 4/8/16 | 10 | 0.2 | $3 / 4$ | 198 8 | 5.89 | 5.30 | 5.01 |
| 13 A812 | TA-10 | Output | 2000 CT | 4/8/16 |  | 0.2 | $13 / 4$ | $19 \%$ | 6.00 | 5.40 2.00 | 5.10 1.89 |
| 13 A813 | TA-12 | Output | 20CT | 8 | 500 | 10.0 | 13/8 | 17611/2 | 2.22 | 2.00 | 1.89 |
| 13 A816 | TA-17 | Mod. | 8CT | 7500/5000 |  | 35 W | 31/8 |  | 7.85 | 7.07 | 6.67 |
| 13 A817 | TA-50 | Output | 9 tap | (a) 4 | 920 | 10 | 2 | $13 / 811 / 2$ | 3.22 | 2.90 | 2.74 |
| 13 A819 | TA-56 | Output | 48CT | 3.2/8/16 | 550 | 10 | $2{ }^{3} 6$ | 21/82 | 3.57 | 3.21 | 3.03 |
| 13 A820 | TA-57 | Output | 100CT | 3.2/8/16 | 500 | 10 | 2 3/4 | 27/8 2 | 3.74 | 3.37 | 3.18 |
| 13 A824 | TA-62 | Output | 25 | 4 | 400 | + | $13 / 8$ | $2{ }^{13} \times 11 / 2$ | 2.40 | 2.16 | 2.04 |

## TRANSISTOR POWER TRANSFORMERS

## For powering transistorized devices from $A C$ line

Primaries, 117 V .60 cy . AC. TP-2, TP-3 and TP-4 have tapped primary to obtain lower secondory voltage. :TP-1, for bridge rectifier has two separate secondaries rated $13-18$ volts AC @ 900
style mount except TP-2, TP-3 ore Fig. A.

| Stock No. | Stancor No. | Secondar \} AC Volis | $\begin{aligned} & \mathrm{DC} \\ & \mathrm{MA} \end{aligned}$ | $\text { H. } \stackrel{\text { Size }}{W} .$ |  | D. | Wt. Lbs. | Net Prices Each |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 1-9 |  | 10-24 | 25-49 |
| 13 A793 | TP-1 | -13-18 | ${ }^{-900}$ | 3 | 3 |  | 21/2 | 2.75 | \$5.60 | \$5.04 | \$4.76 |
| 13 A632 | TP-2 | 10/20CT/40CT | 100 | $15 / 8$ | 2\% | 15/8 | 0.7 | 4.52 | 4.07 | 3.84 |
| 13 A633 | TP-3 | $10 / 20 \mathrm{CT} / 40 \mathrm{CT}$ | 300 | 21 | $3{ }^{3}$ | 2 | 1.5 | 6.07 | 5.46 | 5.16 |
| 13 A637 | TP-4 | $10 / 20 \mathrm{CT} / 40 \mathrm{CT}$ | 1000 | 33 | $25 / 8$ | 3 | 3.25 | 10.19 | 9.17 | 8.66 |

## STANCOR MINIATURE 300 MW TRANSISTOR AUDIO

300 MW Open frame style with coded wire leads. Size, 150 milliwatt units $35^{\prime \prime}$ be-
 units $13 / 8^{\prime \prime}$ between holes, $\mathrm{f}^{\prime \prime}$ high, $15 / 8^{\prime \prime}$ wide, $3 / 4^{\prime \prime}$ deep, wt. 1.2 oz indicates 300 MW units. All others roted 150 MW .

| Stock No. | Stancor No. | Application | Turns Ratio | Imped. Pri. | Ohms Sec. | Net Each |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 1-9 | 10-24 | 25-49 |
| 134827 | TA24 | In. Stg. | 10.0:1 | 500CT | 50 K | \$3.99 | \$3.59 | \$3.39 |
| 134829 | TA27 | In. Stg | 4.08:1 | 1200 | 20 KCT | 3.99 | 3.59 | 3.39 |
| 13 A830 | TA30 | In. Stg. | 1.00:1.22 | 5 KCT | 7.5 CT | 4.00 | 3.60 | 3.40 |
| 13 A831 | TA31 | In. Stg. | 1.00:1.41 | 5 KCT | 10 KCT | 3.99 | 3.59 | 3.39 |
| 13 A832 | TA34 | 1n. Stg. | 6.97:1 | 10 K | 200 CT | 4.22 | 3.80 | 3.59 |
| 13 A833 | TA35 | In. Stg. | 2.24:1 | 10K | 2 KCT | 3.99 | 3.59 | 3.39 |
| 13 A834 | TA38 | In. Stg. | 1.72:1 | 500 CT | 150 CT | 4.05 | 3.65 | 3.44 |
| 134837 | TAd7 | Input | 1.00: 14.1 | 1000 CT | 200,000CT | 3.99 | 3.59 | 3.39 |
| 13 A825 | TA21 | Output | 5.53:1 | 500 CT | 4,8.16 | 4.19 | 3.77 | 3.56 |
| $13 A 826$ | TA23 | Output | 5.65:1 | 600 CT | 4.8.16 | 4.57 | 4.11 | 3.88 |
| 13 A 828 | TA25 | Output | 6.75:1 | 825 CT | 4,8.16 | 3.99 | 3.59 | 3.39 |
| 13 A835 | TA+1 | Output | 5.00:1 | 400 CT | 4.8,16 | 3.99 | 3.59 | 3.39 |
| 13 A836 | TAt2 | Output | 5.60:1 | 500 CT | 4,8.16 | 3.99 | 3.59 | 3.39 |

VERY TINY TRANSISTOR TRANSFORMERS ONLY $1 / 2$ INCH LARGEST DIMENSION

## 89c <br> FINEST QUALITY IMPORT AT TERRIFIC SAVINGS

Exceptionally small, nicely constructed. Equivalent domestic made units would cost many times more. The righ types for building transisto radios, tiny oudio or mike amplifiers, etc. Mtg. tobs and wire leads.

No. 17C693. Input. Pri. imped. 200K ohms. Sec. 1000 ohms. Choice Each
No. 17C694. Driver. Pri. imped. 10 K ohms. Sec. 2000 ohms. 89 c
No. 17C695. Output. Pri. imped. 500 ohms. Sec. 8 ohms $10 @$ Ea. 79 c
B-A IS YOUR AUTHORIZED STANCOR INDUSTRIAL DISTRIBUTOR Telephone or write for fast service
俗
Kansas City, Mo., Area Code 816, BA 1-4266
Denver, Colorado, Area Code 303, $222-8986$

## PT <br>  <br> PGPC <br>  <br> PS

## POWER TRANSFORMERS

Top quality well within industry standards. All primaries for 117 V .50 cy . AC. Type PM, full shielded horizontal mtg. P ond PC, enclosed upright ritg. TO PROVIDE APPROX, 260 V. DC TO CONDENSER INPUT FILTER

| Stock No. | Mfr's No. | $\frac{\text { H. V. Sec. }}{\text { V. CT. MA }}$ |  | 5 V . <br> (a) | $\begin{gathered} 6.3 \mathrm{~V} \\ \mathrm{CT} \text { @ } \end{gathered}$ | $\begin{aligned} & \text { Size } \\ & \text { H.W.D. } \end{aligned}$ | Wt. <br> Lbs. | Net Each |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-9 |  |  |  | 10-24 | 25-49 | 150-9 |
| 13A381 | PC 8402 | 480 | 55 |  | 2A | 2A | 3 5/6x $\times 2 / 8 \times 23$ | 2.4 | \$5.87 | \$5.28 | 54.99 | \$4.70 |
| 13 A382 | PC. 8403 | 500 | $\begin{array}{r} 70 \\ 90 \\ 120 \end{array}$ | 2 A | $\begin{gathered} 2.5 \mathrm{~A} \\ 3 \mathrm{~A} \\ 3.5 \mathrm{~A} \end{gathered}$ | $\begin{aligned} & 35 \times 25 / 8 \times 31 / 8 \\ & 35 / 8 \times 3 \times 31 / 2 \\ & 4 \times 31 / 4 \times 31 / 2 \end{aligned}$ | $\begin{aligned} & 3.2 \\ & 4 \\ & 4.9 \end{aligned}$ | $\begin{array}{r} 7.02 \\ 7.90 \\ 10.30 \end{array}$ | $\begin{aligned} & 6.32 \\ & 7.11 \\ & 9.27 \end{aligned}$ | $\begin{aligned} & 5.97 \\ & 6.72 \\ & 8.76 \\ & \hline \end{aligned}$ | $\begin{aligned} & 5.62 \\ & 6.32 \\ & 8.24 \end{aligned}$ |
| 13 A383 | PC 8404 | 520 |  | 2 A |  |  |  |  |  |  |  |
| 13 A384 | PC 8 | 510 |  | 3A |  |  |  |  |  |  |  |
| FOR USE WITH CHOKE INPUT FILTER, VR-TUBE REGULATED SUPPLY, OR HIGHER YOLTAGE WITH CONDENSER INPUT FILTER |  |  |  |  |  |  |  |  |  |  |  |
| Type P and PC, enclosed upright mtg. P8356, and P8355 for TV replacement do not have CT on 6.3 V . fil. |  |  |  |  |  |  |  |  |  |  |  |
|  | Mfr's No. | H.V.Sec. |  | 5 V. <br> (a) | $\left\|\begin{array}{c} 6.3 \mathrm{~V} \\ \mathrm{CT} \text { @ } \end{array}\right\|$ | $\begin{aligned} & \text { Size } \\ & \text { M.W.O. } \end{aligned}$ | Wt. <br> Lbs. | Net Each |  |  |  |
| Stock No. |  | V. CT. MA |  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 13 A668 | P 8356 | 540 | 315 | 3 A | 8.8A | 33 | 6.5 | 12.65 | 11.39 | 10.75 | 10.12 |
| 13 A648 | P 8355 | 570 | 310 | 3 A | 9.5 A | 35/6x | 6.5 | , |  |  |  |
| 13 A578 | PC 8406 | 650 | 40 | 2 A | 2 A | $38 / 0 \times 258 \times 23 / 4$ | 2.4 |  |  |  |  |
| 13A386 | PC 8407 | 650 | 55 | 2 A | A | $3 \mathrm{~m} \times 22^{8 / 8} \times 3 \times 31 / 8$ | 3.2 5.8 | 6.90 10.94 | 6.21 9.85 | 5.87 9.30 | 5.52 8.75 |
| 13813 | PC 8422 | 650 | 150 | 3 3 | 5 SA | 4 $\times 31 / 2 \times 31 / 4$ | 5.8 3.8 | 10.94 8.49 | 7.84 | 7.22 | 6.79 |
| 13 A339 | PC 8408 | 680 | 70 | 2 A | $2.5 A$ | $\begin{array}{ll}3583 & x 3 / 8 \\ 3583 & \times 3 / 8\end{array}$ | 4.8 | + 10.48 | 9.43 | 8.91 | 8.38 |
| 13 13888 | PC 8409 PC 8410 | 700 | 90 120 | 2 A | 3.5A | $35 \times 3 \times 3 \times 3 / 4$ $4 \times 31 / 4 \times 33 / 4$ | 4.5 5.5 | 10.48 <br> 10.04 | 9.04 | 8.91 8.53 | 8.03 |
| 13 A389 | PC 8410 | 720 | 120 | 3A | 3.5A | $4 \times 31 / 4 \times 33 / 4$ | 5.8 | 113.80 |  |  |  |
| 13 A390 | PC 8411 PC 8412 | 750 800 | 150 200 | 3A | $4.5 A$ 5 A | $456 \times 35 / 8 \times 4$ $4 / 4 \times 4 \times 4$ | 5.8 8.2 | 14.37 | 12.42 12.93 | $\begin{aligned} & 11.73 \\ & 12.21 \end{aligned}$ | $\begin{aligned} & 11.04 \\ & 11.50 \end{aligned}$ |

FOR USE WITH $6 \times 5,6 \times 55,6 \times 4$ OR SELENIUM RECTIFIER
\%PS8415 and PA8421 do not hove CT on high voltage winding.

| Stock No. | Mfr's. No. | H.V. Sec. |  | 5 V. <br> (a) | $\begin{gathered} 6.3 \mathrm{~V} \\ \text { CT (a) } \end{gathered}$ | $\begin{aligned} & \text { Size } \\ & \text { H.W.D. } \end{aligned}$ | Wt. Lbs. | Net Each |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | V. C | MA |  |  |  |  | 1.9 | 10-24 | 25-49 | 50-99 |
| 13830 | PS8415 | *125 | 15 |  | .6A | $2 \times 2^{3 / 6 \times 13}$ | . 7 | 2.69 | 2.42 | 2.29 | 2.15 |
| 13832 | PA8421 | -125 | 50 |  | 2 A | $23 / 4 \times 3{ }^{3} \times 21$ | 1.5 | 4.22 | 3.80 | 3.59 | 3.38 |
| 13B84 | PS8416 | 250 | 25 |  | 1A | $235 \times 2{ }^{1}$ ¢ $x^{3}$ | 2.2 | 3.23 | 2.90 | 2.74 | 8 |
| 13 A394 | PC8418 | 460 | 50 |  | 2.5 A | 3\% $/ 6 \times 23 / 8 \times 25 / 8$ | 2.2 | 5.34 | 4.81 | 4.54 | 4.27 |
| 13 A395 | PC8419 | 480 | 70 |  | 3A | $38.8 \times 28$ /827/8 | 2.6 | 6.12 | 5.51 | 5.20 | 4.90 |
| 13 A618 | PC8420 | 520 | 90 |  | 4A | $31 / 2 \times 3 \times 31 / 2$ | 3.5 | 7.14 | 6.43 | 6.07 | 5.71 |

## STANCOR SELENIUM RECTIFIER TRANS.

Variable tap isolated primary and sethin anges shown in vide output voltoges in 12 steps within ranges shown. In many cases will fill the need for custom mode special voltage transformers at great savings in cost and time. DC output voltages are based on conventional circuits employing dry disc selenium rectifiers and high capocity ilfers. RT-2
 $51 / 8 \times 3$ T $\times 41 / 4$ H. Wt. 9.1 bs.: RT- $208,51 / 4 \times 33 / 4 \times 43 / 4 \mathrm{H}$.
 RT-408, $43 / 8 \times 71 / 2 \times 53 / 8$ H., wt. 26.5 C., RT-4012, 5

| Stock No. | Stancor No. | Rect. Ckt. | AC Volts Range | $\begin{gathered} \text { DC } \\ \text { Amps. } \end{gathered}$ | DC V. Out. Res. Load | DC V. Out. Cap. Load | 1-9 | 10-24 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13A734 | RT-201 | CT <br> Bridge | $\begin{aligned} & 11.7-29.4 \\ & 11.1-28.5 \end{aligned}$ | $\begin{aligned} & \hline \mathbf{2} \\ & 1.25 \end{aligned}$ | $\begin{aligned} & 3.3 \text { to } 11.2 \\ & 7.4 \text { to } 23 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3.5 \text { to } 13.8 \\ & 8.7 \text { to } 30 \\ & \hline \end{aligned}$ | \$ 5.55 | \$ 5.00 |
| 134735 | RT-202 | CT <br> Bridge | $\begin{aligned} & 12.2-29.7 \\ & 12.2-29.7 \end{aligned}$ | $\begin{aligned} & 4 \\ & 2 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3.7 \text { to } 11.1 \\ & 8.9 \text { to } 24.3 \\ & \hline \end{aligned}$ | $\begin{array}{r} 4 \text { to } 14.7 \\ 10.8 \text { to } 33 \end{array}$ | 7.72 | 6.95 |
| 13 A736 | RT-204 | CT <br> Bridge | $\begin{aligned} & 11.7-29.2 \\ & 11.8-29.2 \end{aligned}$ | $\begin{aligned} & 8 \\ & 4 \end{aligned}$ | $\begin{aligned} & 4.3 \text { to } 12 \\ & 8.8 \text { to } 24 \end{aligned}$ | $\begin{array}{r} 4.5 \text { to } 14.5 \\ 11.4 \text { to } 32.4 \\ \hline \end{array}$ | 9.95 | 8.96 |
| 13 A 737 | RT-206 | CT <br> Bridge | $\begin{aligned} & 12-29.8 \\ & 12-29.6 \end{aligned}$ | $\begin{array}{r} 12 \\ 6 \end{array}$ | $\begin{aligned} & 8.4 \text { to } 11.5 \\ & 8.4 \text { to } 24 \end{aligned}$ | $\begin{aligned} & 3.9 \text { to } 14.4 \\ & 10 \text { to } 32 \\ & \hline \end{aligned}$ | 14.24 | 12.82 |
| 134738 | RT-208 | CT <br> Bridge | $\begin{aligned} & 12.2-29.2 \\ & 12.1-29.2 \end{aligned}$ | $\begin{array}{r} 15 \\ 8 \end{array}$ | $\begin{aligned} & 3.9 \text { to } 11.4 \\ & 8.7 \text { to } 23.7 \end{aligned}$ | $\begin{array}{r} 4.4 \text { to } 14.8 \\ 10.4 \text { to } 32.5 \\ \hline \end{array}$ | 17.95 | 16.16 |

## HIGH CURRENT FILTER CHOKES

For use with selenium rectifiers in DC power supplies. Mtg. similar to RT series transformers obove with leads instead af lugs. RMS voltage rating 1500 V . C2690 and C2691 have dual windings; first rating is series, second parallel.

| Stock No. | Mfr's. No. | Ind. Hys. | DC Amps. | Ohms Res. | $\begin{aligned} & \text { Size } \\ & \text { H.W.D. } \end{aligned}$ | Wt. Lbs. | Net Price |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 1-9 | 10-24 | 25-49* | 50-99 |
| 13 A276 | C2690 | 0.3\&.075 | 182 | 3 \& 75 | $31.827 / 8 \times 31 / 4$ | 5 | \$8.59 | \$7.73 | \$7.30 | \$6.87 |
| 13 A277 | C2691 | 80 MH | 2.5 8 | 0.6 \& |  |  | 11.95 | 10.76 | 10.16 | 9.56 |
|  |  | \& 20 MH | d 2 | 0.15 .75 | $3,1 \times 31 / 8 \times 3$ 25 | 1.9 | 3.95 | + 3.56 | 3.36 | 3.16 |
| $13 A 550$ 13 A551 | C2685 C 2686 | 035 | 2 | 725 425 | $33 / 8 \times 27 / 6 \times 3$ | 3.4 | 6.90 | 6.21 | 5.87 | 5.52 |
| 13 A552 | C2687 | 01 | 8 | 15 | $3{ }^{3} \times 35 \times 31 / 4$ | 5.3 | 9.04 | 8.14 | 7.68 | 7.23 |
| 13 A553 | C2688 | 01 | 12.5 | 11 | $41 / 8 \times 31 / 6 \times 31 / 2$ | 5.9 | 10.50 | 9.45 | 8.93 | 8.40 |
| 13 A554 | C2689 | . 005 | 22.5 | . 03 | $41 / 2 \times 41 / 2 \times 37 / 8$ | 11.9 | 15.14 | 13. | 12.87 | 2. |

## "VERSATILE" CSONTROL TRANSFORMERS

Three isolated 12 V , secondaries, one with $C T$, provide $6,12,18,20,24$ and 36 $V$. output with varying current capacity by using series or parallel connections. $S$ mtg. 8" leads

| Stock No. | Stancor No. | Amps Each Sec. | H | Size W | D | 1-9 | $10-24$ | $\begin{aligned} & \text { Each } \\ & 25-49 \end{aligned}$ | 0-99 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $13 \mathrm{B669}$ | P8361 | 0.10 | $13 / 4$ | 11/2 | $13 / 8$ | \$3.39 | \$3.05 | \$2.88 | \$2.71 |
| 138670 | P8362 | 0.15 | 2 | $13 / 4$ | 15/8 | 3.50 | 3.15 | 2.88 | 2.80 |
| $13 \mathrm{B678}$ | P8363 | 0.25 | 23/8 | $13 / 4$ | 2 | 3.67 | 3.30 | 3.12 | 2.94 |
| $13 \mathrm{B679}$ | P8364 | 0.50 | $23 / 8$ | 21/8 | 2 | 4.25 | 3.83 | 3.81 | 0 |

## Stancor Transformers, TV Components

# 風 <br> A <br> c <br>  <br> NV <br>  <br> 5 <br> 5 <br> TD <br>  

## SMOOTHING FILTER CHOKES

C2318 insulated for 2000 V . RMS; C1001, C1421, for 3000 V .; all others 1500

| Stock No. | Mfr's. No. | Hys. | MA | Ohms | Fig. | $\begin{aligned} & \text { Sixe } \\ & \text { H.W.D. } \end{aligned}$ | Wt. | Net Each |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | 1-9 | 10-24 | 25-49 |
| ${ }^{13} \mathbf{N} 51$ | ${ }^{\text {C1515 }}$ | 20 | 15 | 900 | A | $15882^{7 / 8 \times 11 / 2}$ | 7 | 2.60 |  |  |
| $\begin{aligned} & 13 A 590 \\ & 13 A 41 \end{aligned}$ | C2318 | 12 | 30 | 400 | A | 13882381313 | 5 | 2.20 | 1.98 | 1.87 |
| 13 A 41 | $\mathrm{C} 1706$ | 4.5 | 50 | 300 | ${ }_{\text {A }}$ | $13.8 \times 29 \% 13 / 8$ | 4 | 1.49 | 1.34 | 1.27 |
| 13 A 61 13 A 22 | C1279 | 8.5 | 50 | 400 | A |  | 7 | 1.85 | 1.67 |  |
| $13 A 42$ $13 A 43$ | C1707 | 7 | 50 | 550 | A | $13 / 823 \% 1313$ | 4 | 1.74 | 1.57 | 1.48 |
| 13 A43 13 A 44 | C1003 | 16 | 50 | 580 | A | $2 \times 31 / 813 / 4$ | 1.1 | 2.37 | 2.13 | 2.01 |
| 13 A44 | $\mathrm{C1708}$ | 13 | 65 | 500 | A | $2 \times 31 / 513 / 4$ | 1.1 | 2.67 2.67 | 2.40 | 2.27 |
| 13 A 45 | C1002 | 15 | 75 | 400 | A | 21/4333/421/4 | 1.7 | 3.15 | 2.84 | 2.27 2.68 |
| 13 A4t 13 A597 | ${ }^{\text {C1709 }}$ | 8 | 85 | 250 | A | $2 \times 31 / 4 \times 2$ | 1.4 | 2.70 | 2.43 | 2.30 |
| $13 A 597$ | C 2305 | ${ }_{5}^{5}$ | 100 | 300 | TD | 24 $4 \times 238 \times 2$ \% | 1.5 | 3.89 | 3.50 | 3.31 |
| 13448 13449 | C1001 | 10.5 | 110 | 225 | A | 26/884 x21/4 | 2.3 | 4.02 | 3.62 | 3.42 |
| 13449 | C1421 | 7 | 140 | 165 | C | $3516 \times 25 / 8 \times 28 / 8$ | 2.5 | 5.14 | 4.63 | 4.37 |
| 13A638 | C2304 | 2.3 | 150 | 60 | A | $2 \times 314 \times 1 \%$ | 2.5 | 2.57 | 2.31 | 2.18 |
| 13447 | ${ }^{\text {C1710 }}$ | 1 | 150 | 200 | A | 25/8x ${ }^{\text {a }}$ x21/4 | 2.2 | 4.22 |  |  |
| 13 13 13 c2303 | ${ }_{\text {C2327 }}$ | 1.5 | 200 300 | 85 | A | $15 / 6 \times 27 / 211 / 3$ | . 8 | 2.19 | 1.97 | 1.86 |
| 13 C 203 13 A 600 | ${ }^{\text {C2326 }}$ | 1. | 300 | 43 | A | 21/4x33421/4 | 1.7 | 3.27 | 2.94 | 2.78 |
| ${ }_{13}{ }^{1638}$ | ${ }^{\text {c2334 }}$ | 2.8 | 300 | 60 | A | $25 / 8 \times 21 / 44$ | 2.5 | 4.12 | 3.71 | 3.50 |
| 13 A638 | C23 | . 8 | 375 | 25 | A | $21 / 2 \times 31 / x^{2}$ | 1.5 | 4.12 | 3.71 | 3.50 |

FILAMENT TRANSFORMERS
Primaries for 117 V .60 cy . AC. P6456, P6454, P6308, P6309 have top for P6134, P6433, P6464, P8190 P6466, p81 except P8389, P8190 and P6469.

| Stock No. | Mfr's. No. | Socondary |  | Test Volts | Mitg. Flg. | $\begin{gathered} \text { Size } \\ \text { H.W.D. } \end{gathered}$ | Wt. | Net Each |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | V. | (G) A. |  |  |  |  | 1-9 | 10-24 | 25-49 |
| 134335 | P4026 | 2.5 | 1.5 | 2500 | A | $13 / 8 \times 27 / 8 \times 11 / 3$ |  | 3.32 | 2.98 | 2.82 |
| 138138 | P6133 | 2.6 | 5 | 7500 | S | $24 \times 356 \times 21 / 4$ | 1.5 | 4.30 | 2.98 3.87 | 2.82 3.66 |
| 13828 | P6454 | 2.5 | 10 | 7500 | S | $31 / 8 \times 3 \mathrm{~B} \times 21 / 2$ | 2.5 | 4.67 4.67 | 3.87 4.20 | 3.66 3.97 |
| 130141 | P3060 | 2.5 | 10 | 10000 | 8 | $31 / 2 \times 27 / 8 \times 21 / 2$ | 2.5 | 4.67 7.70 | 4.20 6.93 | 3.97 6.55 |
| 13A389 | P6467 | 5 | 3 | 2500 | A | ${ }_{2}^{3 \times 38082}$ | 2.5 1.4 | 7.70 3.65 | 6.93 3.28 | 6.55 3.10 |
| 13823 | P5000 | 5.0 | 6 | 2500 | C | $31 / 8 \times 2 \frac{1}{2 \times 3}$ | 3.1 | 6.60 | 5.94 | 5.61 |
| 134830 | P6433 | 5 | 15 | 2500 | B | $31 / 8 \times 21 / 2 \times 27 / 8$ | 3.1 | 8.39 | 7.55 | 7.613 |
| 134281 | P6465 | 6.3 | 6 | 1500 | A | $13 / 8 \times 23 / 8 \times 13 / 8$ | ${ }^{3} .4$ | 2.24 | 2.02 | 1.90 |
| 13821 | P8389 | 6.3 | 1 | 1500 | A | $188811 / 2 \times 278$ | 6 | 2.22 | 2.02 2.00 | 1.89 |
| 13899 | P6134 | 6.3 | 1.2 | 3000 | A | 18 8 $\times 23 / 4 \times 13 / 4$ | 8 | 2.39 | 2.15 | 2.03 |
| 134401 | P8190 | 6.3 | 1.2 | 5000 | A | $2 \times 31 / 4 \times 18 / 4$ | 1 | 3.10 | 2.79 | 2.84 |
| 134402 | P6466 | 6.3 | 3 | 2500 | A | $2 \times 35 \times 2$ | 1.4 | 3.62 | 3.26 | 3.08 |
| 13A329 | P6456 | 6.3 | 6 | 2000 | A | $21 / 4 \times 35 / 8 \times 21 / 2$ | 2 | 4.29 | 3.86 3.86 | 3.08 3.65 |
| 138146 | P3064 | 6.3 |  | 2500 | B | $31 / 8 \times 21 / 2 \times 27 / 8$ | 2.4 | 5.80 | 5.22 |  |
| 138147 | P6308 | 6.3 | 10 | 2500 | B | $31 / 2 \times 27 / 8 \times 23 / 8$ | 3.4 | 7.34 | 5.22 6.61 | 4.83 6.24 |
| 13A631 | P6464 | 6.3 | 10 | 2000 | C | $31.2 \times 3 \times 31 / 6$ | 3.5 | 7.64 | 6.88 | 6.49 |
| 13 A721 | P6309 | 6.3 | 20 | 2500 | B | $45 / 8 \times 3 / 4 \times 3$ | 6.7 | 11.19 | 10.07 | 9.51 |
| 134336 | P6458 | 10 | 5 | 2000 | NV |  |  |  |  |  |
| 134330 | P6461 | 10 | 10 | 2000 | C | $37 / 8 \times 31 / 1835 / 8$ | 5.0 | 5.34 9.67 | 8.70 | 4.84 8.22 |
| 138192 | P8130 | 12.6 | 2 | 1500 | A | 23 x $\times 31 / 1 \times 2$ | 1.4 | 3.95 | . 5.56 | 8.22 3.36 |
| 134331 | P8358 | 12.6 | 3 | 1500 | A | $2 \times 31 / 4 \times 2$ | 1.4 | 4.82 | 4.34 | 4.10 |
| 138211 | P6469 | 25.2 | 1 | 1500 | A | $2 \times 31 / 4 \times 2$ | 1.4 | 3.69 | 3.32 | 3.14 |
| 13 A332 | P8357 | 25.2 | 2 | 1500 | A | $28 / 8 \times 4 \times 21 / 4$ | 2.2 | 5.95 | 3.36 | B. 06 |

AUTOMATION CONTROL TRANSFORMERS


Typical opplications: Relays, solenoids, control volves, small motors, elec tronic tubes, heoting elements, low voltage lighting, signal lamps, buzzers bells etc. Duol winding primaries are connected parallel for 115 V . in series for 230 ; 50-60 cy. AC. Dual secondaries also may be connected series or parallel. J mtg. except P6378 and P6379 are BV type.

|  |  | SecondaryParallelSeries |  | V. A. | Wt. | $\stackrel{\text { Size }}{\text { H. W. D. }}$ | $\begin{gathered} \text { Net Prices } \\ 1-9\|10-24\| 25-49 \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13824 | P6375 | 6 V ¢ 2 A . | 12 V. 1 A . | 12 | 1 |  | \$3.67 | \$3.30 | \$3.12 |
| 13AE2 | P6376 | 6 V @ 4A. | 12 V @ 2 A . | 24 | 1.5 |  | 4.30 | 3.87 | 3.66 |
| $\begin{aligned} & \text { 13A623 } \\ & \text { 13A69A } \end{aligned}$ | P6377 | $12 \mathrm{~V}, \mathrm{~B}_{1}$ 4A. | 24 V . @ 2 A . | 48 | 2.5 | 31.88 | 5.35 | 4.82 | 4.55 |
| 13 A624 13 A627 | P637 | 12 V . @ 1 | 24 V . @ 24. | 96 192 | 4.3 | $31 / 2 \times 27 / 8 \times 3$ | 6.70 | 7.83 | 7.40 |
| 13 A62 | P637 |  | 24 V . @ 8A. | 192 | 8 | $41 / 8 \times 33 / 4 \times 31$ | 4.25 | 12.83 | 12.11 |

FULLY ENCLOSED CONTROL TRANSFORMERS NORMAL REACTANCE TYPE-PRIMARY: 115 V. 50/60 CPS
For relays, solenoids, signals, etc. May be operated continuously in ambient temperatures up to $50^{\circ} \mathrm{C}$. at rated capacities. Meet $U / L$ requirements for air-cooled transformers. $8^{\prime \prime}$ leads approved for standard code wiring.

| $\begin{array}{r} \text { Stock } \\ \text { No. } \end{array}$ | Mifg. No. | Secondary |  | V.A. | WL. | $\text { H. Size } \begin{aligned} & \text { W. D. } \end{aligned}$ |  | Net Prices \| 10-24 | 25-49 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13.345 | NCF-2450 | 24 | 2.1 | 50 | 31/2 | 23/4 | $3 \quad 31 / 4$ | \$8.02 | \$7.22 | \$6.82 |
| 134346 | NCF-2475 | 24 | 3.15 | 75 | $41 / 2$ | 3 | $31 / 238$ | 8.92 | 8.03 | 7.58 <br> 1.16 |
| 13.2347 | NCF-24100 | 24 | 4.15 | 100 | 51/4 |  | 314 $3+1$ | 11.95 | 10.76 | 10.16 |



## STANCOR LINE VOLTAGE

 CONTROL TRANSFORMERSLINE ISOLATION 50/60 CY. AC INPUT
Eliminates most shock hozard becouse of possible grounded circuits within the equipment. A necessity when testing $A C-D C$ sets. Built-in electro-static shields P6410 is $K$ style with line cord and plug on input receptacle on output.
P6460 in $k$ mig. With line cord, top switch and receptacle
P6415 and P6161 for service work has line cord and three output receptacles
$\left.\begin{array}{c|c|c|c|c|ccc|c|c|c|c}\hline \begin{array}{c}\text { Stock } \\ \text { No. }\end{array} & \begin{array}{c}\text { Mif's. } \\ \text { No. }\end{array} & \begin{array}{c}\text { Watts } \\ \text { Max. }\end{array} & \begin{array}{c}\text { Input } \\ \text { Volts }\end{array} & \text { Output } \\ \hline \text { Volts }\end{array}\right)$

230 TO 115 V. STEP-DOWN AUTO-TRANSFORMERS A.C. is the standard . A.C. devices in areas where $220 \mathrm{~V} ., 50$ or 60 Cy . receptacle mounted on supply voltage. All types hove 110 V., A.C. plug-in P6287 is $K$ style except output receptocle is on top.

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Stock No. \& Mir's. No. \& Watts Max. \& H. \& $$
\begin{aligned}
& \text { Size } \\
& \text { W. }
\end{aligned}
$$ \& D. \& Wt. Lbs. \& 1-9 \& 10-24 \& 25-49 <br>
\hline 13 A317 \& P6287 \& 40 \& 31/2 \& $21 / 1$ \& 27 \& 2.2 \& \$ 7.60 \& \$ 6.84 \& \$ 6.48 <br>
\hline 134318 \& P5063 \& 100 \& 4 \& $31 / 4$ \& $31 / 4$ \& 4.5 \& 7.60

9.87 \& 6.84
8.88 \& 6.46
8.39 <br>
\hline 13482 \& P5064 \& 150 \& 436 \& $35 / 8$ \& $35 / 8$ \& 5.2 \& 11.19 \& 8.88
10.07 \& 8.39
9.51 <br>
\hline $13 \mathrm{B151}$ \& P5065 \& 300 \& $43 / 6$ \& 4 \& 41/8 \& 8.8 \& 14.77 \& 13.29 \& 9.51
12.55 <br>
\hline 13 A296 \& P6141 \& 500 \& 43/4 \& 4 \& 51\% \& 13.7 \& 19.55 \& 17.60 \& 16.62 <br>
\hline
\end{tabular}



B-A WILL SELECT YOUR
TV REPLACEMENT PARTS FOR YOUI

| EXACT REPLACEMENT FLYBACK TRANSFORMERS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stk. No. | Stancor No. | Net Each | Stk. No. | Stancor No. | Net Each |
| $138477$ | A8130/HO159 | \$9.00 | 134839 | HO282 | \$9.90 |
| 138478 138479 | A8131/HO160 | 7.80 | $13 A 840$ | H0293 | 9.90 |
| 138480 | A8135/HO164 | 11.10 | 13 A841 | H0301 | 8.10 |
| 138481 | A8224/HO173 | 10.38 | $13 A 842$ | H0304 | 9.00 |
| $13 \mathrm{B482}$ | A8231/HO180 | 9.96 | 134843 | H0305 | 9.90 |
| $13 \mathrm{B483}$ | A8234/HO183 | 8.80 | 134844 $13 A 845$ | HO315 | 9.00 |
| 138484 | A8235/HO184 | 6.00 |  |  |  |
| 138485 | A8244/HO194 | 9.00 | 13 1847 | $\begin{aligned} & \text { HO331 } \\ & \text { HO344 } \end{aligned}$ | 9.80 |
| 138486 | A8248/HO198 | 11.10 | 13 A848 | H0346 | 9.00 |
| 138487 | A8252/HO202 | 8.10 | 13 A849 | H0347 | 9.00 |
| $13 \mathrm{B488}$ | A8253/HO203 | 8.10 | 13 1850 | H0350 | 9.00 |
| 138489 | A8254/H0204 | 8.10 | 13 A851 | H0353 | 9.00 |
| 138490 | A8255/H0205 | 8.10 | 134852 |  |  |
| 138491 | A8263/H0213 | 8.10 | 134853 | H0363 |  |
| 138492 | A8265/HO215 | 10.20 |  |  |  |
| 138493 | A8285/H0235 | 9.00 | $13 A 855$ | HO367 | 9.80 |
| 138494 | A8292/H0242 | 8.10 | 134856 | H0375 | 9.00 |
| 138495 | A8296/HO246 | 8.10 | 134857 | H0377 | 9.00 |
| 138496 | H0254 | 8.10 | 134858 | H0378 | 0 |
| 134497 | H0271 | 8.10 | 134859 | $\begin{aligned} & 103 / 8 \\ & \mathrm{HO} \end{aligned}$ |  |
| 138499 | HO280 | 10.38 | $13 A 860$ | H0601C |  |
| 13 A838 | H0281 | 11.10 | Ave | shipping weigh |  |

VERTICAL DEFLECTION OUTPUT TRANSFORMERS

| Stk. No. | Stancor No. | Net Each | Stk. No. | Stancor No. | Net Eoch |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 134502 | A8112/VO83 | \$3.47 | 138646 |  |  |
| 134503 | A8123/V087 | \$3.47 | 138647 | $\begin{aligned} & \text { VOIOl } \\ & \text { volo } \end{aligned}$ | \$3.76 |
| 13 A504 | A8140/V088 | 6.95 | 138652 | V0108 | 3.22 |
| 13 A505 | A8141/V089 | 4.80 | 134660 | V0109 | 6.27 |
| 134506 | A8143/V091 | 3.95 | $13 \mathrm{B661}$ | voll 1 | 4.02 |
| 134507 | A8144/VO92 | 3.67 | 134662 | Vol12 | 4.12 |
| 138643 | A8148/V096 | 3.95 | 138663 | Voll | 4.12 |
| 138645 | A8149/V097 | 3.34 |  |  | 4.32 |
|  |  |  | $138665$ | Volz | 4.00 |

STANCOR DEFLECTION YOKES

| Stk. No. | Stancor No. | Net Each | Stk. No. | Stancor No. | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 138400 | DY-2A | \$9.30 | 13B446 | DY-32A | \$11.10 |
| $13 \mathrm{B403}$ | DY-8A | 9.30 | 138447 | DY-36A | 10.80 |
| 138404 | DY-9A | 9.30 | $13 \mathrm{B448}$ | DY-38A | 10.20 |
| 138406 | DY-10A | 9.90 | $13 \mathrm{B449}$ | DY-39A | 9.90 |
| 138407 | DY-11A | 10.20 | 134450 | DY-40A | 10.80 |
| $13 \mathrm{B413}$ | DY-13A | 10.38 | 138451 | DY-41A | 10.20 |
| 134429 | DY-14A | 9.30 | 138452 | DY-42A | 10.80 |
| 138430 | DY-15A | 8.30 | 138453 | DY-44A | 10.80 |
| 138431 | DY-16A | 10.80 | 138454 | DY-45A | 13.20 |
| 134432 | DY-23A | 10.80 | 138455 | DY-46A | 12.00 |
| 134436 | DY-26A | 11.40 | 138456 | DY-53A | 13.20 |
| 138442 | DY-27A | 11.40 | $13 C 457$ | DY-54A | 13.20 |
| 138445 | DY-28A | 8.10 | 134465 | DY-56A | 11.10 |

## TV BRIGHTENERS \& SERVIGE ADS

## WANT A BETTER PICTURE?

## pe wem Perma-Towe-brichteners



SIMPLE TO INSTALL - NO WIRING - JUST PLUG-IN ADD MONTHS TO LIFE OF WEAK OR FAILING PICTURE TUBES FOR PICTURE TUBES WITH DUODECAL BASE
6.3 V . FILAMENTS-BOOST TO 7.8 V . Model C201-Series or Parallel 0.6 A. Filaments $\$ 1.46$ Model C40i-Parallel 0.3, 0.45 or 0.6 A. Filoments. Model C401-Paraliel No. 29A101. Net Eech Model C402--Series Filaments only. 87c No. 29A102. Net Eoch. 87c

## UNIVERSAL "TU-BRITE"

"IF THE BASE IS RIGHT, THE BOOST IS RIGHT Completely universol, series or parallel, regordless of heate rating. No chorts to check. Has slide switch for series or paraliel. Will not endanger delicate filloments through too much voltage boost. Mig. List $\$ 3.75$. No. 29854. Model C-202. Duodecal Bose. No. 29B55. Madel C-212. $110^{\circ}$ Button Base No. 29856. Model C-222. $110^{\circ}$ Shell Base.

Choice Eoch

NEW HUE-BRITES FOR COLOR Brings out the lost shorpness and detail of fading colo picture tubes. Fits. 12 pin bose. C501 for paralel 6.3 V 0.18 A. fils.: C-5 11 for 6.3 Round Tubes. No 29B58. Model C-51, For Rentangulor Tubes.
No. 29B46. Model C-511. For Recter

## $\$ 5.73$

 Your Choice Each
"NU-BRITE" TV TUBE RESTORER
Corrects dozens of picture tube foults. Simple eure for open cothode, heater to cathode short, open control grid, contral grid to cathode short, low emission or combination óf obove. For series or parallel, electrostatic or mognetic focus tubes. Wt. 1 lb .
$\$ 3.90$

## PICBOOST "DUZ-ALL"

 COMPLETE TV PICTURE TUBE SAVER

Warks on either series or porallel filaments, Isolated windings correct filament-cathode "shorts". Variable con trol permits selection of exact amount of voltage boost needed. Contralled increase in very small steps stretches picture tube life many times thot available with fixed voltage boosters. Fully enclosed in metal cose $61 / 2^{\prime \prime}$. $x$ $21 / 4^{\prime \prime} \times 15 / 8^{\prime \prime \prime} \mathrm{H}^{\prime \prime}$ Mounts inside set. With instructions


## TV PICTURE TUBE "BRIGHTENER"

DIM PICTURE TUBES RESTORED TO NEW BRILLIANCE Makes dull smoggy pictures bright and crisp, extends life for many months. Works with electrostatic and magnetic picture tubes in sets hoving parallel tube filaments. Very simply installed iust plugs-in. No. 20A339.87c ${ }_{\text {for }}^{6}$
\$4.79


STANCOR COLOR TV DEGAUSSING COIL SHARPENS COLOR BY REMOVING PIX TUBE MAGNETISM
A service tool "must" for every shop. Ruggedly constructed to withstond years of abuse. Has in-line cord switch. Complete instructions included. Very easy to use No. 134340


TUBE GUARD
Eliminates voltage surge, main couse of TV and radio fallure. Feeds current slowly while tubes and parts worm-up. Minimizes replacement costs. For TV, radios, $\mathrm{Hi}-\mathrm{Fi}$, recorders, CB -all types of electronic equipment. No. 17 B215 Special Each
$\$ 1.19$

## Miller RF \& IF Coils



AIR CORE BROADCAST BAND COILS
High gain, four-bank Litz wire wound secondaries, hight impedance primaries.
Tune $540-1700 \mathrm{KC}$ with 365 mmfd . condenser. Tune $540-1700 \mathrm{KC}$ with 365 mmfd . condenser.
$\begin{array}{llll}\text { (1) Unshielded ( } 5 / 8^{\prime \prime} \text { D. } \times 21 / 8^{\prime \prime} & \text { H.) } & \text { (2) Shielded ( } 13 / 8^{\prime \prime} \text { Sq. } \times 21 / 2^{\prime \prime} \text { H.) } \\ \text { Stk. No. Miller No. Description } & \text { Eoch }\end{array}$ Stk. No. Miller No. Description Eoch Stk. No. Miller No. Description Eoch $\begin{array}{llllllll}17 A 935 & 43-A & A n t e n n o & 1.15 & 17 A 940 & 44-A & A n t e n n a & 1.26 \\ 17 A 936 & 43-R F & R F & 1.09 & 17 A 941 & 44-R F & R F & 1.26 \\ 17 A 938 & 43-C & \text { 2-Winding Osc. } & 1.09 & 17 A 943 & 44-C & 2-W i n d i n g ~ O s c ~ & 1.26\end{array}$ $\begin{array}{lllllll}17 A 938 & 43-C & 2 \text {-Winding Osc. } 1.09 & 17 A 941 & 44-R F & R F & 17 A 943 \\ 1749-C & 2 \text {-Winding Osc. } 1.26 \\ 1.26 & 45-C & \text { TappedOsc. } & 1.09 & & & \end{array}$

## (3) SHIELDED AIR CORE MINMATURE COILS

 Ultra compoct. 3/4" sq. $\times 2^{\prime \prime}$ H. Tune with 365Order by Group Stock No. 17 A698 ond Miller No
Order by Group Stock No. 17 A 698 ond Miller No.
Description $140-425 \mathrm{KC}$ Net Ea, $540-1700 \mathrm{KC}$
$\begin{array}{ll}\text { Antenna } & X-101 \mathrm{~A} \\ \text { AC Net Ea, 540-1700 KC Net Eo. 2.1-6.3 MC Net Ea. }\end{array}$ $\begin{array}{lllllll}\text { Antenna } & X-121 A & 1.76 & A-121 A & 1.62 & B-121 A & 1.62 \\ \text { RFStage } & X-121 R F & 1.76 & A-121 R F & 1.62 & B-121 R F & 1.62 \\ \text { Oscillator } & X-121 C & 1.76 & A-121 C & 1.62 & B-121 C & 1.62\end{array}$

## (4) MINIATURE ADJUSTABLE COILS

Extremely compact iron core units $1 / 2^{\prime \prime}$ dia. $\times 11 / 2^{\prime \prime}$ long. Tune 540.1600 KC with ony condenser hoving moximum copacity between 250 and 450 mmfd. Oscillator cails track with IF amplifier between 100 and 550 KC . Type 70-OSC has primary and tapped secondary; 69-0SC has copacity coupled winding. Clip mtg. in is" hole. A-320C, two winding type; A-321C, topped. UNSHIELDED SHIELDED
Stk. No. Miller No. Description Each Stk. No. Miller No. Descriptlon Each 174932 70-A Antenno 1.26 178524 A-320A Antenno $\$ 1.91$ $\begin{array}{llllllll}17 A 933 & 70-R F & R F & 1.26 & 178528 & A-320 R F & \text { RF } & \mathbf{A} \\ 17 A 934 & 70-O S C & \text { Oscillator } & 1.12 & 178546 & \text { A-320C } & \text { Oscillotor } & 1.91 \\ 17 A 650 & 69-O S C & \text { Oscillator } & 1.12 & 17 B 547 & \text { A-321C } & \text { Oscillator } & 1.91\end{array}$

## (4) COMPACT UNIVERSAL OSCILLATOR COIL <br> Iron core odiustoble for trocking with variable condensers hoving max. value

 between 250 and 450 mm fd. in all types of circuits with all types of tubes. Size $5 / 8^{\prime \prime}$ dia. X $11 / 2^{\prime \prime}$ high. Spring mtg. Clips fit $16^{\prime \prime}$ dia. hole. RF range $500-1800 \mathrm{KC}$. IF range $100-550 \mathrm{KC}$. 4 oz .No. 17 A 956 . Miller No. $71-0 S C$. Net Each.
. $\$ 1.62$

## (5) ADJUSTABLE ALL-WAVE RADIO COILS

High Q shielded. $3 / 8 \times 2^{\prime \prime}$. Tune with 365 mmfd . condenser. Order by Group Stock No. 17 A 699 and Miller No. Net Each

| Description | $140-420 \mathrm{KC}$ | $540-1700 \mathrm{KC}$ | $1.7-5.5 \mathrm{MC}$ | $5.5-18 \mathrm{MC}$ | $12-36 \mathrm{MC}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Antenno | $\times 5495 \mathrm{~A}$ | A5495A | B5495A | C5495A | D5495A |
| RFStoge | $\times 5495 R F$ | A5495RF | B5495RF | C5495RF | D5495RF |
| Std. OsC. | $\times 5495 \mathrm{C}$ | A5495C | B5495C | C5495C | D5495C |
| Topped Osc. | X5496C | A5496C | B5496C | C5496C | D5496C |

## SHIELDED SUB-MINIATURE OSCILLATOR COIL

Perfect companion to miniature $1 F$ 's below. $3 / 8^{\prime \prime} \mathrm{sq} ., 5 / 8^{\prime \prime} \mathrm{H}$. Tunes with No. 17 B790. Miller Type 2021. Net Each
$\$ 2.08$
UNSHIELDED TRANSISTOR OSCILLATOR COILS
 2020 ond 2022 ore 5 lug type for single tronsistor oscillator-mixer. 2023 is 6 lug type for two transistor oscillator and mixer.


## FM RF COILS AND TUNING CONDENSER



## FM STEREO MULTIPLEX INDUCTORS

Specialized high quality coils for constructing a top-notch FM stereo system. These coils and the recommended circuitry enable separation of the complex FM Stereo broodcast signal to obtain right and left hand sound channels. All 5 coils are needed for the
complete system. Shielded $3 / 4^{\prime \prime} \mathrm{sq}$.$\times Tig" high. Wt. 2$ oz. eo. Type Description Net Ea. Stk. No. Type Description N

| Stk. No. 17B505 | $\begin{aligned} & \text { Ty } \\ & 13 \end{aligned}$ |  | Net Ea. | Stk. No. | T | n | Net Ea: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 178507 | 135 | 保 |  | 17B517 | 354 | 19 KC | \$2.50 |
| $17 \mathrm{B509}$ | 135 | Shunt Band Pass | 1. | 17852 | 3 | 8 KC Out |  |



## CAPACITY RELAY COIL

Basic oscillator coil for constructing a capocity operated control system for displays, show windows, alarms, etc. System would control when a provide automatic $\times 21 / 4^{\prime \prime} \mathrm{H}$. With typical wiring diagram. Shpg. wt. 4 oz $7 / 8^{\prime \prime}$ dia. No. 174655. Type 695. Net Each
$\$ 2.32$
HIGH QUALITY
AIR CORE AND
IRON CORE IF
TRANSFORMERS
(1) $\mathbf{3} / \mathbf{4}$ " Miniature "K-Tran" Iron Core IF's

Standard chossis type clip mounted iF 's for general replacement and new $2^{\prime \prime} \mathrm{H} . \mathrm{H}^{2}+12 \mathrm{H6}, 12 \mathrm{C} 6^{2}$ have top and bottom. Silver mica condensers. $3 / 4^{\prime \prime} \mathrm{sq}$. Stk. No. Type Description Net Ea. Stk. No. Type Description Net Ea. 17 B 683 12H1 262KC Input $1.71 \quad 17 \mathrm{~A} 895 \quad 12 \mathrm{WI} 1500 \mathrm{KC}$ Input 1.94 $17 \mathrm{B687}$ 12H6\% 262 KC Output 1.76 $\begin{array}{llllllll}17 A 886 & 12 C 1 & 455 \mathrm{KC} \text { Input } & \mathbf{1 . 5 9} & 17 A 889 & 1463 & 100 \mathrm{MC} \text { Input } & \mathbf{1 . 9} 1 \\ 17 A 887 & 12 \mathrm{C} 2 & 455 \mathrm{KC} \text { Output } & \mathbf{1 . 5 9} & 17 \mathrm{~A} 990 & 1464 & 10.7 \mathrm{MC} \text { Discr. } & \mathbf{2 . 2 0}\end{array}$
 $17 \mathrm{B501}$ 12C45 455 KC Discr. 2.65

For use where selectivity and stability ore important. $3 / 4 \times 3 / 4 \times 2^{\prime \prime} \quad \mathrm{H}$.
Type 1709 has 2.5 KC bandwidth. $\mathrm{i} 710,3 \mathrm{KC}$ bandwidth; $1730,15 \mathrm{KC}$ bandType 1709 has 2.5 KC bandwidth. i $710,3 \mathrm{KC}$ bandwidth; $1730,15 \mathrm{KC}$ band-
width. 1725 and 1726 are for 455 KC crystal filter circuits. 1770 is double tuned Stk. Na. Type Description Net Eo. Stk. No. Type Description Net Ea,

 1785421725 Filter Input

3/4" "K-TRANS" FOR PRINTED CIRCUITS
Same construction as standard chassis mount series above, except for terminals and mounting. Designed especially for replacement ond new construction on modern circuit boords.
Stk. No. Type Description Net Ea. Stk. No. Type Description Net Eo.
 (2) $\mathbf{3 / 4}$ " Miniature "J"'-Tran Iron Core IF's $\mathbf{2 . 2 9}$

Modern top-tuned type. Hos hollow hexogonai-hole cores which permit either double or single ended tuning. Snop fostener mount. $3 / 4^{\prime \prime} \mathrm{Sq} . \mathrm{I}^{\prime \prime}$ High. With diode filter condenser. Special types $14 \mathrm{C7}$ and 14C8 are for battery radios, $14 C 9$ and 4 Cl (or AC-DC rodio. 6270 olso interstoge.
$\begin{array}{lllllll}\text { Stk. No. Type Description Net Ea. Stk. No. Type } & \text { Description Net Eo. } \\ 17 \mathrm{~A} 360 & 14 \mathrm{HI} & 262 \mathrm{KC} \text { Input } \\ \mathbf{\$ 1 . 7 6} & 17 \mathrm{~A} 38 \mathrm{i} & 14 \mathrm{C} 8 & 455 \mathrm{KCOOutput} \$ 1.62\end{array}$
 $\begin{array}{llllllll}17 A 368 & 14 H 6 * & 262 \mathrm{KC} \text { Output } & \mathbf{1 . 8 5} & 17 \mathrm{~A} 385 & 14 \mathrm{Cl} 10 & 455 \mathrm{KC} \text { Output } & \mathbf{1 . 6 2} \\ 17 \mathrm{~A} 369 & 14 \mathrm{Cl} & 455 \mathrm{KC} \text { Input } & \mathbf{1 . 6 2} & 17 \mathrm{~A} 387 & 6270 & 4.5 \mathrm{MC} \text { Input } & \mathbf{1 . 7 6} \\ 17 \mathrm{~A} 370 & 14 \mathrm{C} 2 & 455 \mathrm{KC} \text { Output } & \mathbf{1 . 6 2} & 17 \mathrm{~A} 388 & 6271 & 4.5 \mathrm{MC} \text { Rotio } & \end{array}$ $\begin{array}{llllllll}17 A 379 & 14 C 7 & 455 \mathrm{KC} \text { Input } & \mathbf{1 . 6 2} & 17 \mathrm{~A} 388 & 6271 & 4.5 \mathrm{MC} \text { Rotio } \\ \text { 1.62 } & & & & \end{array}$
2.91
(3) $12 / \mathbf{z}^{\prime \prime}$ Midget IF's_Mica Trimmer Tuned_-2'" High

Double tuned construction for excellent gain and selectivity.
Description IRON CORE

AIR CORE
455KC Input 174909 Ol2-Cl $\$ 2.21$ 17A635 112-C1 Net Ea.
$\begin{array}{lllllll}455 K C \text { Interstage } & 17 A 473 & 012-C 2 & \mathbf{2 . 2} & 17 A 635 & 112-C 1 & \mathbf{5 2 . 1 5} \\ 455 K C \text { Fullwave Output } & 17 A 911 & 012-C 3 & \mathbf{2 . 2} & 17474 & 112-C 2 & \mathbf{2 . 1 5}\end{array}$
$\begin{array}{llll}455 \mathrm{KC} \text { Fullwave Output 17A911 } & 012-\mathrm{C3} & \mathbf{2 . 2 1} \\ 455 \mathrm{KC} \text { Holfwave Output } & 17 \mathrm{~A} 912 & 012-\mathrm{C} & \mathbf{2 . 2 1}\end{array}$
(4) Low Cost Universal IF Transformers

AIR CORE-CERAMIC TRIMMERS- $\mathbf{2 1}^{1} \mathbf{2}^{\prime \prime}$ HIGH
Stk. No. Description NetEa. Stk. No. Description Net Ea. 17 A 917 312Cl 455 KC Input $\$ \mathbf{\$ 1 . 9 1} 17 \mathrm{~A} 919$ 312C4 455 KC Output $\$ 1.91$
(5) $\mathbf{1 3 / 8}$ " Permeability Tuned Transformers

For unmatched stability. Capacitors are zero drift silver micos. Both tuning slugs accessible from one side of shield can. Can size $13 / /^{\prime \prime}$ square, $31 / 4^{\prime \prime}$ high except BFO which is $21 / 4^{\prime \prime}$ high Wt. 6 oz . F.W., full wove. H.W., half wave.

|  | 455 KC |  | 1500 KC |  |  |
| :--- | :--- | :--- | :--- | :--- | ---: |
| Description | Stk. No. | Miller No. | Stk. No. | Miller No. | Net Each |
| lnput | $17 A 921$ | $912-C 1$ | $17 B 931$ | $912-W 1$ | $\mathbf{\$ 2 . 9 1}$ |
| lnterstoge | $17 A 922$ | $912-C 2$ | 178944 | $912-W 2$ | $\mathbf{2 . 9 1}$ |
| Output(F.W) | 178930 | $912-C 3$ | 178945 | $912-W 3$ | $\mathbf{2 . 9 1}$ |
| Output (H.W.) | $17 A 924$ | $912-C 4$ | 178946 | $912-W 4$ | $\mathbf{2 . 9 1}$ |
| B.F.O. | $17 A 925$ | $912-C 5$ | $17 B 947$ | $912-W 5$ | $\mathbf{2 . 2 6}$ |

10.7 MC Transistor FM/IF TRANSFORMERS Double tuned famous "J" Tran construction permitting both primary and secandary to be adiusted from either top or bottom Designed specifically for transistor type 2 N 1745 or equivalent $3 / 4 \mathrm{sq}, 2^{\prime} \mathrm{H}$. Bondwidth ratings are at 3 db point. Type 1605 ,
320 KC peak to peak: $1606,310 \mathrm{KC}$ peak to peak. New, improved designs.
Stk. No.

| Type | Reploces Type | Description | , | , | . |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1601 | 1463-TI | 1 st IF, 214 KC Bandwidth | 27K | 300 | 3 |
| 1602 | 1 463-T2 | 2nd IF, 195 KC Bandwidth | h 27 K | 300 |  |
| 1603 | 1463-T3 | 3rd IF, 195 KC Bandwidth | 75K | 300 |  |
| 1604 | 1464-TD | Discrim. 630 KC Pk . to Pk. | . 27K |  |  |
| 1605 | 1465-TRD | Rotio Det. with Diodes | - lOK |  | 4.70 |

## TV ANTENNA COUPLING TRANSFORMERS

Improves TV reception by permitting use of 72 ohm or 52 ohm cooxial lead from antenna to TV set. Greatly reduces ghost and noise pickup. System requires two transformers, one at antenna, other at set.
No. 17C560. Type 6161. 52/300 or 300/52 Ohms. Each.. $\$ 1.91$

## Miller Coils, Forms, TV Coils, Ferrite Antennas



## Miller sLug tuned CERAMIC COIL FORMS

Precision made of ceramic material meeting Jan 1-19 Grade 5 Specs., silicone impregnated to reduce moisture absorption. All have two adjustable solder terminal clips except type 66A022 which has molded ceramic terminal ring providing highest possible coil Q . With single hole mtg. hardware.
Miller With Slug For With Slug For With Slug For Form Size Mig. Type $\quad 1.0-20 \mathrm{MHZ}$ 2.0-40 MHZ 40-300 MHZ Dia. Lgth. Hole Each


## MILLER SLUG TUNED PHENOLIC COIL FORMS

Constructed of impregnated tubing that can be certified to MIL-P-79B type PBG Specs. Mechanically stronger than ceramic, exhibiting extremely low loss. With 2 adj. solder rings, except 22 A series has 4 lugs.
Miller With Slug For With Slug For With Slug For Form Size. Mtg. Net
 $\begin{array}{llllllll}20 A 0000 & 17 B 951 & 178952 & 178953 & .375 & 1.125 & .252 & \text {.88 } \\ 21 \mathrm{AO} 000 & 17 \mathrm{~B} 962 & 17 \mathrm{B963} & 17 \mathrm{B964} & .500 & 1.937 & .252 & \mathbf{1 . 3 5}\end{array}$

## MILLER HIGH "Q'" SLUG TUNED WOUND COILS ON CERAMIC FORMS $1 / 4^{\prime \prime}$ DIA. $x$ 1/8" LONG




COIL SELECTOR CHART FOR PHENOLIC FORM COILS ABOVE
Shows proper coil for use in circuits intended for the various amateu bands when parallel capacitance is known.

| Band | 40 MMFD | 90 MMFD | 130 MMFD |
| :---: | :---: | :---: | :---: |
| 1.8 MC ( 160 Mtrs ) | 20A224RB | 20A825RBI | 20A685RBI |
| 3.6 MC ( $75 / 80 \mathrm{Mtrs}$ ) | 20A475RB1 | 20A225RBI | 20AlSjRBI |
| 7.2 MC ( 40 Mtrs ) | 20A155RBI | 20A686RBI | 20A336RBI |
| 14.2 MC ( 20 Mtrs ) | 20A336RB1 | 20A156RBI | 20A106RBI |
| 21.3 MC (15 Mrs) | 20Al56RB1 | 20A136RBI | 20 A 227 RBI |
| 28.0 MC ( 10 Mtrs ) | 20A827RBI | 20A107RBI |  |

## MILLEN COIL FORMS

 mounting. Dic. "" $\times 5 / 8^{\prime \prime}$ long. No. 17A1107. No. 45000. Each No. 45004 with 4 prongs for standard tube base socket No. 17All08. Each No. 45005 with 5 prongs far standard tube base socke No. 17All09. Each

MILLER HIGH Q FERRITE ROD ANTENNAS


Highest quality Litz wire, wound on low loss ferrite cores. Takes place of antenno coil, hank or loop. Range 540-1650 KC.


## MILLER TV COILS

B-A CAN SUPPLY ALL MILLER COIL PRODUCTS Order stating Miller No.; Miller Coil Guide and Cotalog will be supplied FREE on request with
an order. No. $25 A 101$. ASK FOR IT.
(1) 4.5 MC INTERCARRIER SOUND IF COMPONENTS

Iron core single and double tuned. Discriminotor is Foster-Seeley type. Di mensions $11 / 8^{\prime \prime}$ sq. $\times 21 / 8^{\prime \prime} H$. except 1469,1470 and 1480 , without shield 6203,6204 and 6205 are miniature $3 / 4^{\prime \prime}$ sq., 2" high.

| S |  |  | Ne | Stk. | Type | Description | Net Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 174533 | 1466 | Input-Int. Stg. | \$2.09 | 174893 | 6204 | Discrim. | \$2.20 |
| 17A534 | 1467 | Discrim. | 2.41 | 174537 | 1470 | Trap | 1.03 |
| 17 A535 | 1468 | Ratio Det. | 2.50 | 17B451 | 1480 | Quadrature | , |
| 17 A536 | 1469 | Pick Off | 1.13 | $17 \mathrm{B783}$ | 1481 | Quadroture | 8 | 17A535 1468 Ratio Det. $\quad \mathbf{2 . 5 0} 17$ B451 1480 Quadrature 17 A536 1469 Pick Off. Stg 1.9417 A894 6205 Rotio Det (2) HORIZONTAL OSCILLATOR G SYNC. CONTROL COILS Permeability tuned shielded assemblies for use in horizontal sweep oscillator and automatic frequency control circuits. Maximum size $11_{16 " ~}^{7} \mathrm{sq} . \times 21 / 2^{\prime \prime} \mathrm{high}$ $\begin{array}{lcc}\text { Stk. No. Type } & \text { Osc. GSync. Freq. GPhase Stabilizer }\end{array}$ $\begin{array}{lll}174538 & 6210 & \text { Sync. Stabilizer, } 16-42 \mathrm{mh} . \\ 17 \mathrm{C} 578 & 6211 & \text { Sync. Stabilizer, } 16-42 \mathrm{MH}\end{array}$

174581 Horiz.Osc., tapped 12-35 mh
17 A582 6324 Horiz. Osc., tapped 60-130 mh.
2.21
1.62
1.62
1.62
1.82

On molded plastic forms axcept phen over resistor
On molded plastic forms, except" dia . $\times 7 / 8^{\prime \prime}$ long; All video Peaking Coils Type 6175 Filament
T's' dia. $\times 3 / 8^{\prime \prime}$ long.
Order by Group Stock No. 17 A697 and Miller No. Net Each
. 82 c Micro Hy. Miller No. Micro Hy. Miller No. Micro Hy. Miller No

| icro Hy. Miler No. | Micro Hy. | Miller | No. | Mil |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.8 | 6175 | 100 | 612 | 250 | 6181 |
| 20 | 6152 | 120 | 6153 | 300 | 6155 |
| 36 | 6176 | 180 | 6180 | 470 | 6138 |
| 60 | 6110 | 200 | 6154 | 500 | 6174 |

With mtg . clip to fit ADJUSTABLE WIDTH CONTROLS widely used in low With mig. clip to fit ribency oscillator circuits and as adjustable RF chokes

| Stock | Miller | Indu |  |  | Miller |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Miller Type | Induet. Milli-Hy. | Net | Stock | Milier | Milli-Hy. |  |
| 178739 | 6313 | .5-5 | 1.29 | 178747 | 6321 | 1-5 Topped | . 29 |
| 17B740 | 6314 | 2.5-17 | 1.29 | $17 \mathrm{B748}$ | 6322 | 1.5-10 |  |
| 17B741 | 6315 | 4-30 | 1.29 | 17B749 | 6323 | .5-5 Tapped | 35 |
| 178742 | 6316 | 4-30AGC | 1.76 | 17 A582 | 6324 | 60-130 Tapped | 62 |
| 178744 | 6318 | .3-3 | 1.21 | 178764 | 6330 | 45-215 | . 76 |
| 178745 | 6319 | 15-60 | 1.62 | 178720 | 6195 | .185-1 | 8 |
| 17C590 | 6320 | .3-3 Tapp | 1.23 | 178727 | 6199 B | . $5-1.7$ | 1.12 |

## SUPER POWERFUL RADIO ANTENNAS

REPLACES LOOPS AND ANTENNA HANKS FOR GREATLY IMPROVE PERFORMANCE

(1) SUPEREX FLAT LOOPSTICKS

OR JAPANESE TRANSISTOR RADIOS
Adjustable to match tuning condenser in set. Actually peps up performance Decause of extremely high sensitivity. Net Each
No. 14C81. Model 1FT-600, $11 \frac{1}{6}$ "long. Net Each.
$\qquad$
FOR THE ULTIMATE IN SENSITIVITY
Sliding coil odjustment provides perfect tuning motch.
No. 14 C83. Model 2F, $23 / 4^{\prime \prime}$ long. Net Each,
No. 14A37. Model 3F, 35/8" long. Net Each
No. 14A38. Model 7F', 7" long. Net Each. . . . . . . . . .
With odjustment knob and circuits. Most popular for experimenters who like
to build tiny crystal radios.
No. 14 A 85 . Model VL. Net Each. . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
(3)POWERFUL "VARI-TENNA" FOR TUBE RADIOS

- Boosts sensitivity and goin up to 25 times over old loops and hanks. Completely adjustable by screwing "slug" in and out. Smoll enough to fit any set. Also popular for ${ }^{5}$ mounts in ${ }_{16}$ hole. Mg. list $\$ 1.25$
No. 14C89. Model VT. Net Each.
Micrometer adjustment for maximum LOOPSTICK
match. 2" long, ${ }^{\frac{7}{16} "}$ diameter.
No 14C86. Model VLT-240 For $365-410 \mathrm{Mmfd}$. Tuning Cond. Net Ea No. 14 C87. Model VLT-950. For 75-365 Mmfd. Tuning Cond. Net Eo... 730 (4) SUPER ENERGIZED FERRI-LOOPSTICK FOR TUBE RADIOS
- Even more powerful than the Vari-Tenna.

Has larger ferrite core, fully adjustable, by sliding in and out of coil form Hos larger ferrite core, fully adustox. 4". Clip mounts in $\mathrm{I}^{5}$ " hole or with brocket supplied. Mtg. list $\$ 1.50$. ?8, No. 14 C94 Net
(3) EXTRA POWERFUL $7^{\prime \prime}$ KING-SIZE LOOPSTICK FOR TUBE RADIOS - Outperforms them all.

Almost like odding another stage of amplification to the set. Gives amazing performance becouse of extreme high Q of ment for "peaking." With mounting brocket. Mtg. list $\$ 2.25$. No. 14C277. Net Each.

## Instrument Control Knobs \& Dials

## NEW MILLER VERNIER PANEL DIALS

 FEATURE HAIR-LINE POINTER AND TRUE PROFESSIONAL APPEARANCEAS LOW AS


## 5809

Easy reading 0.100 log. ging scale plus 6 self colibrating scales on the larger models, 4 on the smaller MD-5. Drives ore smooth octing vernier. MD- 7 and MD-8 have dual speed fast tuning 6 to 1 ratio with fine tuning 36 to 1 rotio over 6-division portion of the scole. Frome is black wrinkle finished, extending, $1 / 2^{\prime \prime}$ from ponel. For

| Stock No. | Miller No. | Tuning Rotio | W. | H. | Nef Eoch |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $29 \mathrm{C59}$ | MD-5 | 9 tal | 61/4" | $41 / 8$ | \$8.09 |
| $29 \mathrm{C60}$ | MD-6 | 9101 | $7 \%^{\prime \prime}$ | $478^{\prime \prime}$ | 8.82 |
| $29<61$ | MD-7 | 36 tol 66 tol | 61/4" | $41{ }^{\prime \prime}$ | 14.72 |
| 29C62 | MD-8 | 36 to 166 to 1 | $73^{\frac{1}{4}}{ }^{\prime \prime}$ | $47 /{ }^{\prime \prime}$ | 14.70 |

## PANEL DIALS FOR RECEIVERS AND TRANSMITTERS



POPULAR MILLEN MIDGET DIAL WITH PRECISION 8:1 RATIO
Right for today's minioture size equipment. Calibrated black. Fits $1 / 4^{\prime \prime}$ shafts. Shing. wt. I ib. $4 \times 31 / 4^{\prime \prime}$. Flat No. 29A91. Millen 10039 . Net Each.
Not. 56.30

## GROTH TURN COUNT DIAL

## REGISTERS FRACTIONAL TURNS TO 99.9



For use on multi-turn devices such os roller coil inductance inductuners, multi-turn potentiometers and vacuum capacitors. Mounts on front panel by 4 corner screws or the shoft bush ing. Hos removable $1 / /^{\prime \prime}$ shoft extending $11 / 2^{\prime \prime}$ behind dlal. Dial No. 29A64. TC2 Dial ( $21 /$ g' " dial dia.) . $^{3 / 8}$ thick. Shpg. wt. 8 oz Net Each
$\$ 5.50$
No. 29A65. TC3, (3" dial dia.). Net Each
35.75

## NATIONAL CONTROL KNOBS



HRT, MRT-M


MRM HRB


HG

Precision type, for finest equipment. All for $1 / 4^{\prime \prime}$ dia. shaft. Types HR, HFP have aluminum insert. Furnished with $1-8-32$ slotted head set screw except type HFP hos 2-5-40 Allen head set screws set $90^{\circ}$ apart and HRT series which hove $2-8-32$ slofted head set screws $90^{\circ}$ apart. Additional height on type HFP
due to skirt extension is 166 . HRS series dial is 1 ? dia. Av. shon wt. 1 oz Stk. No. Mfg. No. Color Description Net 100200


## DIAL CORD AND SPRING

 $168431.026^{\prime \prime}$ dia. Thin 100 Ft. 88 c $168432.028^{\prime \prime}$ dia. Med. 100 Ft 78 c $16 \mathrm{~B} 433^{\circ} .038^{\prime \prime}$ dia. Large 100 Ft .98 c Kit of 25.6 slizes for any ing Kir of 25 . 6 sizes for any job.
No. 11 Air. Kit of 25

DAVIES INSTRUMENT AND CONTROL KNOBS WITH SPUN SILVER INLAY


Dress up knobs for panels and equipment. Precision molded of tough block plostic, gloss finished. All have $1 / 4^{\prime \prime}$ hole and set screw. Fig 2 series has white filled pointer line on skirt.

| Fig. | Stk. No. | Type | Size | Net Each | 10 E | h |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | $12 A 1213$ | 4100 | $11 / 8^{\prime \prime} \mathrm{D} \times 5 / 8^{\prime \prime} \mathrm{H}$. | 44 c | 38 c | 37 c |
| (1) | $12 A 1214$ | 4101 | $178^{\prime \prime} \mathrm{D} \times \times 3{ }^{\prime \prime}{ }^{\prime \prime} \mathrm{H}$. | 45 c | $41^{\circ}$ | 37 c 38 c |
| (1) | 12A1215 | 4102 | $158^{\prime \prime} \mathrm{D} \times 3 / 4{ }^{\prime \prime} \mathrm{H}$. | 52 c |  | 44 c |
| (1) | $12 A 1216$ | 1913 | $1180 \mathrm{D} \times{ }^{5 / 8}{ }^{\text {H. }}$. | 38 c | 34 c | 32 c |
| (8) | $12 A 1217$ | 1925 | $11 / 4^{\prime \prime} \mathrm{D} \times 34^{\prime \prime} \mathrm{H}$. |  | 25 c | 24 |
| (3) | 12 A1218 | 1930 | $11 / 2^{\prime \prime} \mathrm{D} \times 7 / 8^{\prime \prime} \mathrm{H}$. | 40 c | 38 c | 34 c |
| (3) | 1241229 | 1940 | $2^{\prime \prime} \mathrm{D} . \mathrm{x}+8^{\prime \prime} \mathrm{H}$. | 54 c | 48 c | 46 c |

Modern fluted ALL BLACK WITH WHITE LINE POINTER
ment Fluted, skirted siyle like used on most professional electronic equipfinish flow tessly molded af very durable, heat resistant black plastic, gloss (6), on skirt only of Fig. (1). Fio. (3) for dual shaft soncentric Fig. (3), (3) and bination of type 1910 ond 1920 sizes. All ore set screw type for $1 / 4$ " shaft


QUALITY KNOBS FOR ALL PURPOSES


Set screw knobs for $1 / 4^{\prime \prime}$ shaft. (1), (3) and (3) have brass insert

| Fig. | Stk. No. | Type | Size | Net E0. | 10 Ea . | 100 Ea . |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | 128432 | 4104 | 11/2", D, 3/4"H | . 44 |  | . 37 |
| 1 | 12440 | 4108 |  | . 54 | .49 | . 47 |
| (8) | $\begin{aligned} & 12 A 37 \\ & 12 A 38 \end{aligned}$ | 41000 4102 P | 11/8\%, 泩", H | . 36 | . 32 | .30 |
| (3) | 12434 | 4100 | $11 / 8,{ }^{\text {¢ }}$, ${ }^{\text {H }}$ | -29 | -35 | 8 |
| 3 | 12A35 | 4102 | $15 / 8{ }^{\prime \prime}, 3^{\prime \prime}{ }^{\prime \prime} \mathrm{H}$ | . 27 | -21 | 23 |
| (3) | 12A36 | 4103 | $23 / 8{ }^{\prime \prime}{ }^{\prime \prime} / 8^{\prime \prime} \mathrm{H}$ | . 40 | . 36 | . 34 |



Lustrous black molded bokelite with white filled pointer line. For $1 / 4^{\prime \prime}$ shaft. All are set screw type. "Indicates brass insert type. For 100 lots, not assort-
ed, deduct $15 \%$ from Each price ed, deduct $15 \%$ from Each price.

|  | k. No. | Size | Color | Each | 10, Eo. |  | Stk. No. | Sixe | Color | Each | 10, Es. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 19 \\ & 18 \end{aligned}$ | $12 A 1203$ | $1 \%^{3 / 1}$ | 81. | 15 c | 14 c | (8) | 12A693 | Sis. | B1. | 14c | 13, |
| (1) | 12826 <br> 12A1204 | $11 / 8$. | 81. | 12 c | 11 c | $8$ | 12445 | " | 81. | 8 C | 13 c |
| 8 | 12827 | 117. | 81. | 15c | 25 c | (7) | $12 \mathrm{l}{ }^{12} 103$ |  | Red |  | 8 |
| 8 | 124919 | 11:' | 81. | 14 c | $12^{\circ} \mathrm{c}$ | (6) | 12 A 43 |  | 8 Bl 8. | $14{ }^{\text {c }}$ | 13 c |
| ( 6 | 124920 | 1\%" | 81. | 11 c | 0 c | (8) | 12 A42 | 2" | Red |  | 15 c |
| (3) | 12 A 692 | $1{ }^{\prime \prime}$ | 81. | 12 c | 11 c | (8) | 1281034 |  | BI. | 21 c |  |



| Stk. No. | Description | $1-4$ | 5.9 |  |
| :---: | :---: | :---: | :---: | :---: |
| 144850 | 1/1/"Dio. Block-1/4" Shoft.Ohmite 5150 |  |  |  |
| 144115 | 1"'Dia. Black-1/4" Shaft | $28 c$ |  |  |
| 14 A849 | $3 / 4$ " Dia. Black-1/8" Shaft. Ohmite 5151 | 28 c | $25{ }_{c}^{\text {c }}$ |  |

## CLOCK-RADIO KNOB KIT <br> 

Mondy Kit of 25 Miniature Knobs. 5 each white, black, red, brown and clear Fit 18 split shafts on clocks, electric range controls, clock radios, etc. 12 dio., $1 / 2$ long. Import Savings.
No. 17B143. Por Kit of 25. Special. Shipg. wt. 1 lb.
99 c

# Variable Condensers-Dial Accessories 


(1) HAMMARLUND MC-MCD The popular high quality steatite insulated midget condenser. Stable two bearing design, $1 / 4$ shaft extends for to the front and cadmium plated brass plates. Mounts on base or with single plates. Mounts on base Air gap . $024^{\prime \prime}$. *Semi-circular plates (straight line capacity) all others are mid line plates (straight line wave length).
Av. shpg. wt. 7 oz .
17A58* MC2OS
17A59\% MC35S
17A60\% MC5OS
17 M 62 MC75
17A63: MCTM
$\begin{array}{llrr}17 A 63 * & \text { MCIOOS } & 80 & 7.3 \\ 100 & 8.3\end{array}$
$\begin{array}{lllll}17 A 64 & \text { MC100M } & 100 & 7.7 & \mathbf{2 . 9 0} \\ 17 A 65 \% & \text { MC140S } & 140 & 10 & \mathbf{3 . 1 5} \\ 17 A 68 & \text { MC } 250 \mathrm{M} & 250 & 12 & \mathbf{3 . 7 0}\end{array}$
$\begin{array}{lllll}17 A 68 & \text { MC250M } & 250 & 13.5 & \mathbf{3 . 7 0} \\ 17 A 69 & M C 325 M & 320 & 13.5 & \mathbf{4 . 2 0}\end{array}$

| MCD DUAL CONDENSERS |
| :---: |
| 17 A1147 MCDIOOM 100 | $\begin{array}{llll}17 A 1148 \text { MCD } 40 M 140 & 7.8 & 8.35\end{array}$

(2) HAMMARLUND BUTTERFLY

Precision desion for VHF ond UHF Precision design for Vhr and stator. Perfect symmetry for dual splat stator circuit and isolated rotor $03^{\prime \prime}$. Size $13 / 8^{\prime \prime}$ application. Air gap . 3 " Size $11 / 2$ deep. Shpg. wt. 1 lb .

(3) HAMMARLUND HF MICROS Very efficient in critical high frequency circuits. Steatite insulation. Equipped with special wide front bearing. Plate spacing . 015 . *Have .045 spacing. Shpg' wt. 6 Maz. Min. NET
Stock Mfr's Max. Min Stock Mir's Max. Min. NET

No. Type Mmf. Mmf. EACH | No. | Type | Mmf. Mmf. EACH |  |
| :--- | :--- | :--- | :--- |
|  | HF-15 | 17.5 | 2.8 |
| $17 A B 5$ | HF- | S5 | 30 | $\begin{array}{lllll}17 A 85 & \mathrm{HF}-35 & 36 & 3.2 & \mathbf{1 . 4 0} \\ 17 A 86 & \mathrm{HF} 50 & 52 & 3.7 & \mathbf{1 . 6 0}\end{array}$ $\begin{array}{llrlr}17 A 86 & \mathrm{HF}-50 & 52 & 3.7 & \mathbf{1 . 6 0} \\ 17 A 87 & H F-100 & 102 & 5.3 & \mathbf{1 . 8 0} \\ 17 A 88 & \mathrm{HF}-140 & 142 & 6.3 & \mathbf{1 . 9 5}\end{array}$ $\begin{array}{llrrr}17 A 88 & H F-140 & 142 & 6.3 & \mathbf{1 . 9 5} \\ 17 B 89 & * H F-15-X & 15 & 3.6 & \mathbf{1 . 3 0} \\ 17 A 90 & \approx H F-30-X & 30 & 5.2 & \mathbf{1 . 7 0}\end{array}$ (4) HAMMARLUND APC MICROS Particularly adaptable to S.W. Steaadjustment. Shpg. wt. 4 Oz .

$\begin{array}{lll}\text { Stock Mfr's Max. Min. NET } \\ \text { No. Type } & \text { Mmi. Mmf. EACH }\end{array}$
 $17 A 82$ APC-50 $17 A 83$ APC-140 SHAFT TYPE APC $A P C-B$ has $1 / 4$ inch shaft, otherwise exact same size as APC illustrated above. Shaft length $1 /{ }^{\prime \prime}$

| $17 B 91$ | APC- $25 B$ | 25 | $3 . \$ 1.30$ |
| :--- | :--- | :--- | :--- |
| $17 B 92$ | APC- $50 B$ | 50 | 3.9 | $\begin{array}{llrrr}17892 & \text { APC-50B } & 50 & 3.9 & 1.40 \\ 17893 & \text { APC-100B } & 100 & 5.5 & 1.70\end{array}$

##  <br> (1) <br>  <br> (2)

JOHNSON SUBMIDGETS

CERAMIC TRIMMERS AND PADDERS

|  | No. | MMFD. | g. | Each | 10 Ea . |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 17 A77 | 3-30 | A | \$.29 | . 26 |
|  | 15A1527 | 9-180 | A | . 32 | . 30 |
|  | 15A1524 | 25-280 | A | . 38 | .35 |
| ic | 15A1526 | 80-480 | A | . 47 | 43 |
| India Ruby mica dielect | 15A1522 | 65-340 | B | . 58 | . 51 |
| Type A: $3 / 4^{\prime \prime} \times 5 / 8^{\prime \prime}$ Type B: 7/8'xi8' | 15A1523 | 275-970 | B | .71 | . 67 |

## 

\section*{DIAL ACCESSORIES, $1 / 4$ " COUPLINGS, SHAFTS <br>  <br> High quality American made $1 / 4$ " shaft accessories. " $M$ " items are Millen; <br> | Fig. | Stk. No. | Description | Net Ea. | Fig. | Stk. No. | Description | Net Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | 17A612 | M10021 Marker | \$. 21 | (7) | 12A10 | Bearing W/6" Shaft | \$0.52 |
| (2) | 178799 | M10050 Dial Lock | . 54 | (8) | 12A1361 | NTX 10 Ins. Cplg. | 0.67 |
| (3) | 17 A 611 | M10061 Shaft Lock | . 40 | (9) | 12A1360 | J250 Steatite Cplg. | 1.05 |
| (4) | 12A11 | John. $3^{\prime \prime}$ Flex Shaft | . 60 | (10) | 178706 | M39005 Univ. Joint | . 60 |
| (4) | 12A12 | John. $6^{\prime \prime}$ Flex Shaft | . 86 | (11) | 178704 | M39016 Hi Volt Cplg. | . 60 |
| (5) | 1245 | Brass 1/x $12^{\prime \prime}$ Shaft | . 29 | (12) | 12A1184 | $\mathrm{Br} 1 / 4 \times 1 / 4$ " Coupling | . 20 |
| (5) | 1247 | Ins. 1/4x12" Shaft | .33 | (12) | $12 \mathrm{B1185}$ | $\mathrm{Br} 1 / 4 \mathrm{x}^{3 / 8}{ }^{\prime \prime}$ Coupling | . 20 |
| (6) | 12A1359 | John. Shaft Bearing | .19 | (13) | 12A1196 | Br Extend $13 /{ }^{\prime \prime} \mathrm{L} 1 / 4 \times 1 /{ }^{\prime \prime}$ | . 25 |
| (7) | 12A9 | Bearing W/3 ${ }^{\prime \prime}$ Shaft | . 37 | (13) | 12 B 1197 |  | . 25 |

## National RIGHT-ANGLE DRIVE

For coupling $1 / 4^{\prime \prime}$ shafts. Zinc housing and gears. Overall length $41 / 2^{\prime \prime} \cdot 1 / 4^{\prime \prime}$ condensers, ete. Wt. 6 oz. 431 condensers, etc. Wt. 602.


## MILLER 2-GANG MIDGET TYPE

Type 2110 . Osc. section $10-78 \mathrm{mmfd}$. Ant. section $10-$ 130 mmfd . Counter clockwise rotation. 12 mmfd . trim No. 17 B985.
s2.06
Net Each.

Type 2112. Osc. section $10-365 \mathrm{mmfd}$. Ant. section 10 365 mmfd. Counter clockwise rotation. 12 mmfd trim-

No. 29A76. Net Each....
mers on each section. size $218 \times 1$ is $15 / 8$
32.51

Cut Section Superhet Type 555.27. Planetory drive for precise tuning. 2 -gang, RF section 10 to 365 mmfd. Osc section
$10.0 z$
10. oz

No. 17A580. Net Each
$\$ 3.15$

## TEKNI-CAL PANEL MARKING DECAL SETS

 ADD CUSTOM PROFESSIONAL APPEARANCE TO EQUIPMENT - Economical - Permanent - Neat AppearanceQuick, easy, transfer labels for permanent marking of Electronic Instruments and equipment. Many sets contain 1000 or more marks, titles, symbols, etc., of appropriate sizes for their purpose. Alphabet sets include $1 / 8^{\prime \prime}, 1 / 4^{\prime \prime}, 3 / 8^{\prime \prime}$ and $1^{\prime \prime}$ complete sets of let ters and numerals. Specify' Stock No. and Color.


## DATAK INSTANT LETTERING DRY TRANSFERS

Not a decal . . . goes on instantly . . looks like printing. Transfers dry to proctically any surface metal, wood, glass crisp and opaque, with no background film.
Applies to panels, chassis, meter faces etc. by rubbing over lettering as it appears on see-thru backing sheet, giving professional appearance to equipment. Each kit contains hundreds of markings. Specify cotor.
No. 20A687. Titles for Electronic Equipment. Black or White. Contains 24 sheets, hundreds of reprinted titles. For.
No. 20́A678. Refill Alphabet. 12 sheets Black or White.
No. 20A679. Refill Numerals. 12 sheets Black or White.
No. 20A689. Terminal \& Chassis Marking Kit. Black or White
No. 20A690. Meter G Dial Marking Kit 968. Asst‘d. Black, White and Red
Contains 12 sheets $5 \times 8^{\prime \prime}$
Contains 12 sheets $5 \times 8$
No. 20A694. Datak Pro

$\$ 4.95$

Type M. Miniature air capacitors, Ideal for compact equipment. Mounts through panel, can be either screwdriver or knob odjustment
Steatite end plate only $5 / 8 \times 3 / 44^{\prime \prime}$, A A" " dia. slotted shaft extending $1 / 4 / 4$, from bushing and mount in $1 / 4^{\prime \prime}$ hole. Rigidly soldered rotor and stator as750 -volt R.M.S. Av. wt. 6 oz .
(1) SINGLE SECTION-TYPE M Stock Mfg. Cap. Mmf. Ne $\begin{array}{lcc}\text { Na. } & \text { No. } & \text { Min.-Max. Each } \\ 14 A 311 & 160-102 & 1.5 \\ 5.0 \\ \mathbf{1 4 A 3 1 2} & \mathbf{0 . 9 0}\end{array}$ $\begin{array}{rrrrr}14 A 312 & 160-104 & 1.8 & 8.7 & 0.99 \\ 14 A 313 & 160-107 & 2.3 & 14.2 & 1.00\end{array}$ $\begin{array}{lllll}14 A 313 & 160-107 & 2.3 & 14.2 & 1.00 \\ 14 A 314 & 160-110 & 2.7 & 19.6 & 1.10\end{array}$ $\begin{array}{llllll}\text { (8) } & \text { BUTTERFLY—TYPE M } \\ 14 A 316 & 160-205 & 1.8 & 5.1 & \mathbf{1 . 3 0} \\ 14 A 317 & 160-208 & 2.2 & 8 & \mathbf{1 . 4 5}\end{array}$

## ONE, TWO AND THREE GANG <br> SEMI-MIDGET CONDENSERS <br> 65 MMFD PER SECTION

With ball bear- Stk. No. Sec. Size Net Each ing rotors, heavy $19 \mathrm{Al212} 13^{3} \times 23 / 4 \times 22^{7 / 1} \$ 1.20$ brass rotor con toct springs and


FOR PRINTED BOARD MOUNTING ramic is steatite. Screwdriver adjustment.
(3) PRINTED CIRCUIT TYPES

Stock Mfg. Cap. Mfd. Net No. No. Min. Max. Each
$14836189-1-5$
$4 \mathrm{H361}$ 189-1-5

HIME TYPE (4)

## OHNSON TYPE U \& V

 SUB-MINIATURES148363
$4 A 365$ 89-4-
4A366 189-6-
(4) SERIES V SUB-MINIATURES
size $.5 \times .563$. Terminals at rear.
$14 A 370 \quad 193-4-5 \quad 13$. 1.4
70
72
74

## Panel Lights, Sockets



For use with replaceable lamp cartridges. Choice of colors. Flat end types availoble legend (numbers or singly or grouped os a dota strip.
(1) Mounts in $3 / 8^{\prime \prime}$ hole. Remavable from front. Aluminum with black anodized finish. Accepts all lamp cortrldges, neon
12 c532. S1. 22100 Up 934
Each... 934

## LAMP CARTRIDGES

Use with holder above or individually mntd. thru panel with connectors or speed clip shown below. Lamp dia. $3^{9} 2^{\prime \prime}$.

Incandescent Series
Order by stock number ond color. Chorce of colors: Red, Green, Amber, Fig. No. Volts Amps

| Fig. No. | Volts | Amp | 1 - | 100 |
| :---: | :---: | :---: | :---: | :---: |
| 12 C 35 | 6.3 | . 2 | \$1.17 | \$0.89 |
| $12 C 534$ | 6.3 | . 2 | 1.17 | 9 |
| 128528 | 14 | . 08 | 1.17 | . 89 |
| 128527 | 14 | . 08 | 1.17 | 89 |
| 12 C 26 | 28 | 04 | 7 |  |
| 12 C 525 | 28 | 04 | 7 |  |

Neon Lomp Cortridge
With built-in resistor. Use same os stock number ond obove. Order by Red, Amber, White, Yellow, Clear.

Series 45 With NE-2E Lamp
Stock Volts Each

 | (2) | $12 C 521$ | 105 to 125 | $\$ 1.14$ | $\$ 0.91$ |
| :--- | :--- | :--- | :--- | :--- | 45 H With $\mathrm{NE}-2 \mathrm{H}$ Hi-Brightness Lomp (3) 12 C523 AC Only $\quad 1.14 \quad .91$

PERMANENT DATALITE
(1) Dialco \#249-7841 Datalites with permonent built-in nean. NE-2E lamps. Stovepipe lens, two insulated
 O.D. Hos built-in iook resistor for Red, Yellow, White or Clear. No. 12A896. Each Net....

7538 CONNECTORS AND
 XP50 Cortridge connector, molded No. 12C419. Net Eoch. ...... 155 XP51 Speed clip. Self-retaining spring steel tubular device. Holds lamp seNo. 12C438. Net Eoch. XP12 Aluminum sleeve, pherolic in No. 12C428. Net Each.

625

## COMPLETELY SEALED TYPE

(5) Oil-Tight Dialco \#103-3101 heovy duty industrial type. Gasket sealed against oil, water or dust. Front lamp replacement. $1^{\prime \prime}$ hole mitg. Chrome finish. Uses S6, 115 Volt bulbs. UL listed. Foceted lens for $180^{\circ}$ viewing. Less bulb. Specify red, green, amber or clear.
12A974. Ea.. $\$ 2.6410$ Ea. $\$ 2.40$ POPULAR LOW COST TYPE (B) Dialco \#810410 $\mathrm{ld}^{\prime \prime} \mathrm{mtg}$. For low voltage miniature boyonet lamps. UL listed. Smooth $1 / 2^{\prime \prime}$ iewel. Front panel removable bulb. $21 / 4^{\prime \prime}$ long for ponels up to $3 / 8^{\prime \prime}$. Solder terminals, less lamp. Specify color, red, green, amber or white.

## No. 12A825. Ea...96c 10 Ea.goc

ATTRACTIVE LOW COST TYPE
(B) Diolco \#812210. For low voltage minioture bayonet lomps.
Bulb replaceable from the front. $21 / 4^{\prime \prime}$ long, requires $\mathrm{HV}^{\prime \prime}$ ", mounting hole for ponels up to $3 / /^{\prime \prime}$ thick. Solder terminals. Smooth jewel with $1 / 2^{\prime \prime}$ nickel plated brass mounting.
White or Blue, Less Iompen, Amber No. 12A885. Ea...82c 10 Eo. 77 c POPULAR I INCH LENS
(7) Diolco, \#32-3101 $1^{\prime \prime \prime}$ mtg. hole, Uses 56,115 Volt bulbs. Faceted $1^{\prime \prime}$ listed. Chrome ploted holder. Specify color, red, green, amber or clear. 12A1165. Ea. $\$ 1.46 \quad 10 \mathrm{Ea}$. $\mathbf{\$ 1 . 3 3}$ DOME LENS TYPE
(C) Dialco \#951310, for low voltage miniature boyonet base lomps. Popular dome lens, front removable lamp. mounts in tis hole. Two solder teroz. Supplied less lamp. Specify color, red, green, amber or cleor.
No. 124835 . Eo. 87 c 10 Ea .82 c
NEON INDICATOR LIGHTS

## BUILT-IN RESISTOR

(8) Dialco \#95-0408 popular dome lens. Ne51 Neon built-in resistor for using NE5 1 Neon bulb on 105-125 V. Lgth UL" listed. Requires tess mounting hole. amber, white or clear.
12A666. Eo....99c 10 Eo....95c
Dialco \#95-0463 for high brightness NESIH Neon bulbs. Produces six times more light than regular NE5 1. Delamp. Specify color, red, amber, white or clear.
12A972. Eo....99c 10 Ea....95c Replocement plostic caps for 95-0408 and 95-0463 listed above. Specify color red, omber, white or clear No. 12A973. Eo.

10 Eo. 18 c

## DRAKE NEON INDICATORS

## 左

## $\square$ <br> [5]

$\rightarrow 1$

$$
-20-20-20
$$

HR117. Attrac
解 formany applications in rodio, hi-fi., electronics equipment, appliances toys, etc. Mounts in $1 / 7^{\prime \prime}$ hole by means of a snap-in plug. Has leads for direct connection to $/ 710-125$ volt AC-DC. Assembly is complete with high brightness type long life neon bulb ond built-in limiting resistor Specify choice of color-Red, Clear.


Drake No. 110-022 Flushlite. For use on 110-125 volts AC or DC. One piece tronslucent dome construction. Mounts with two screws. Mtg. Ctrs. $11 / 2^{\prime \prime}$. Bose, fi" wide. $17 / 8^{\prime \prime}$ long. Ideal for line failure indicators. Specify Choic
No. 12A994.
$495 \quad \begin{aligned} & 10-49 \\ & \text { Each. }\end{aligned}$
446

## Each.

ach.
Drake Type 105 Post-Lite. Low cost, attractive, long life indicator units. One piece body and Jewel of polystyrene. Mounts in $1 / 2{ }^{\prime \prime}$ hole. Extends $3 / 4^{\prime \prime}$ in front of panel and 1 , !1" behind. For AC or DC volt use, hos built-in resistor and high brightness neon bulb. Easy to install. Specify
Colorless or Red.
No. 124995 . Each
(7)
(8) Dialco 95-9108. Enclosed type for
(11)
 use with NE5I and NE51H miniature bayonet neon bulbs. Use on 115-120 volts. Plastic dome lens. Solder terminals. Length 2 It "' requires tlo" mounting hole. UL listed. Less bulb, Specify color: Red, Amber, White or No. 12
No. 12A886. For NE5.J Bulb.
No. 124887 For NE51H No. 12A887. For NE51H high brightness bulb.
$.87 \mathrm{c} 10 \mathrm{Ea} .$.
$82 c$
(9) Dialco 162-8430. Sub-Miniature Series. Far use with No. 327, or 328 series. For use with No. 327 , or 328
bulbs. Solder terminals. Front mounting in $15^{\prime \prime}$ hole. Bulb front removoble. Oyeroll size $13_{3}{ }^{3} \times 5 / 8^{\prime \prime}$. Wt. $11 / 2$ plied less bulb specify lens. SupPellow, Blue, White or Clear.
12A555. Ea.. $\$ 1.21{ }^{\circ} 10$ Eo.
. $\$ 1.13$
SUB-MINIATURE SERIES (10) Dialea \#101-5030. Uses tiny
flange type bulbs No. flonge type bulbs No. 327 or 328 , of panel in remoble, Mounts from front of panel in ha" hole. Two terminal, fully insulated. Overall length $13 / 8^{\prime \prime}$; 3/4 W.D. Specify Red, Green, Amber 2 oz.
(i1) DIALCO. $1 / 2^{\prime \prime}$ faceted jewel, removable from front for easy access to bulb. Mounts in 17 "' hole. Specify color, red, green or amber. Less lamp.
12Al161. Min. boyonet sacket.
Eo.......50c 10 Eo........ 46 c
(13) DIALCO. Economical ongle bracket assemblies. With $1 / 2^{\prime \prime}$ convex jewel Mount in ${ }^{\text {b }}$ " hale. Bracket held by threaded shonk of lens holder. Bulb accessible from rear. Specify color, red, green or omber.
No. 12A1156. Miniature
screw socket. Ea...34c 10 Ea. 31 c
No. 12A1157. Miniature
bayonet socket. Eo. $34 \mathrm{C} \quad 10 \mathrm{Ea} 31 \mathrm{c}$
13) Dialco 80-0901. Attractive torpedo wide-view lens mounted in one inch nickel ploted screw cap. For use with 56 screw base condelabra 115 volt lomp, installed from the front. UL opproved. Side screw terminals. Length behind ponel $2^{\prime \prime}$, mounts in $1^{\prime \prime}$ hole. Specify color: Red, Green or Amber. Less lamp.

## LEECRAFT SOCKETS FOR SMALL LAMPS



MINIATURE SCREW BASE


WEDGE BASE WIRE TERM.
For 158 -159 Lamps
12B706
K0c

## SPECIAL SOCKETS


(1)
(1) HOODED PANEL LIGHT For front panel illumination. Polished nickel plated hood rotates to direct light. $1 / 2^{\prime \prime} \mathrm{mtg}$. hole. Bulb removable 12B246. Johnson 147-330. For Min. Sc. bose lamps. Ea. No. 128247. Johnson 147-329 90 C No. 128247. Johnson 147-329. 998
For Min. bay. bose lamps. Ea..

## SINGLE CONTACT CANDELABRA

 Same cons526
(3) MILLEN 33991 SOCKET

Double Contact Candelobra for type 991 VR tube or neon lamps. Also fits standard outo lamps
No. 12A1421. Eoch.

63 c

MINIATURE BAYONET BASE

${ }_{128704}^{\text {Double contact }{ }^{\text {b }} \text { bose** }} \mathbf{3 0 c} \quad \mathbf{3 5 c}$ CANDELABRA BAYONET
PILOT LIGHT JEWELS


Red, Green or Amber. A B

| Sth. No. | Si | Lens | Fig. | Eoch |
| :---: | :---: | :---: | :---: | :---: |
| 12A829 | 3/4"' | Smooth |  | 5.2 |
| 12 A1159 | 1/2"' | Smooth | A | 1 |
| 128710 | 1/2 | Faceted | B |  |
| 12A830 | ${ }^{\text {P }}$ | Smooth | A | 18 |
| 128709 | ${ }^{18}$ | Foceted | B |  |

SURFACE MTG. SOCKETS
BAKELITE SCREW BASE
For minioture bose lomps.
No. 20A343. Eo... 15 c No. 20A343. Ea... 15 c
For candelabro base lamps. No. 20A342. Eo.... 16 c

## BAKELITE CLEAT

For Rtandard screw
lamps.
No. 20A341. Eo.... 25 c


PILOT BULB REMOVER


Handles hard
to get bulbs
grode rubber
grode rubber.
No. 168561 . Net Each to get bulbs
easily. High

## Panel Indicators \& GE Lamps



EXTENDED SERVICE PILOT AND INDICATOR LAMPS
Feature minimum of 5000 hours life, flat top bulb, slide or bayonet bases. 6 to 120 volt. Special Note: Type 120 PSB or 120 MB offers the smallest size incandescent indicator lomps available for operation directly on 105-120 volt line, no resistor required. Fig (2) lamps may be used in any miniature bayonet pilot light ossembly.

| Fi | o. | Fig. Stk. No. | Mfg. No. | Volts | Amps | $1-9$ | 10-99 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (i) 12A1684 | 6PSB | (8) 12A1691 | 6 MB |  | . 14 | \$46 | \$.40 |
| (1) 12A1685 | 12PSB | (3) 12 A 1692 | 12 MB | 12 |  | . 46 |  |
| (1) 1241686 | 24 PSB | (3) 12 A 1693 | 24MB | 24 | . 073 | . 48 |  |
| (1) $12 A 1687$ | 28PSB | (3) 12A1694 | 28MB | 28 | . 04 |  |  |
| (1) $12 A 1688$ | 48PSB | (2) 12A1695 | 48MB | 48 | . 053 | .46 |  |
| (1) $12 A 1689$ | 60PSB | (2) 1241696 | 60 MB | 60 | . 05 | . 46 |  |
| (1) 12 Al 690 | 120PSB | (2) 1241697 | 120 MB | 120 | . 025 | 8 |  |

(3) UNIVERSAL HOUSING FOR SLIDE BASE LAMPS

Supplied less end caps-make cap selection from listing below. Nickel plated finish. Rated 75 wotts, 125 volts. U/L listed. Hos combinotion Amp slide-on

. 56 c
(4) 12A1680. Jeweled. Choice of Red, Green, Blue or Amber.
3) 12A1681. Transporent. Choice of Red, Green, Rlue, Amber, Yellow or Cleor. (3) 12 A1683. Opaque. Choice of Red, Green, Yellow or White.
(6) 12 A 1682 . Fluted. Choice of Red, Green, Blue, Amber or Cleor.

YOUR CHOICE, $1-9$ Eoch... 18 c $10-99$ Éach... $17 \mathrm{c} 100-499$ Each... 15 c


## (1) ESP LONG LIFE INDICATOR LIGHTS

Slide base series feoture 5000 to 15,000 hour life, hove positive positioned filoments for moximum signal efficiency. Very low current

| Stk No. | Lomp No. | Volts | Amps | 1-9 Ea. | 10-99 Eo. 100-499 Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 12 A1698 | 6ESP | 6 | . 035 | \$0.46 | \$0.40 \$0.38 |
| 12A1699 | 12ESP | 12 | . 035 | . 46 | .40 . 38 |
| 12A1700 | 24ESP | 24 | 035 | .46 | .40 .38 |
| 12 A1701 | 28ESP | 28 | . 035 | .46 | .40 . 38 |
| 12A1702 | 48ESP | 48 | . 035 | 51 | 48.42 |

(2) INDICATOR TYPE HOUSINGS E LENS CAPS (For ESP Lamps) TYPE BOI53 SOCKET. Made of block nylon, installed from front of panel and secured with Tinnermon nut. Keyed to take 0160 round or 0170 square lens. Attractive low eost units.
No. 12 A1719. $1-9$ Each. . 28 c $10-99$ Each... 25 c $100-499$ Each... 23 c (3) \& (4) ROUND OR SQUARE LENS

Order by stock number and specify color. Specify: Red, Clear, Amber, White, Green, Blue or Yellow.
(3) No. 12 A1720. Round Series 0160 Your 1-9 Ea. $10-99$ Ea. $100-499$ Ea. (3) No. $12 \mathrm{Al721}$. Square Serics 0170 Cholce 19 c 17c 15 c

## INDICATOR TYPE CARTRIDGE

The finest quality in signal lamp devices. Have two pin base and fit the housing and caps below. Housings are black onodized aluminum to Mil specs. A-8625. Mounts in $3 / 8^{\prime \prime}$ hole. Lenses are polycarbon for high temperatupe operation. Available in two styles, five colors each.
(1) LONG LIFE, LOW CURRENT CARTRIDGE LIGHTS $\begin{array}{lcccrr}\text { Stock No. } & \text { Lamp No. } & \text { Volts } & \text { Amps } & 1-9 \text { Eo. } & 10-24 \text { EO. } \\ 12 A 1711 & 909 & 6 & .035 & \mathbf{S 0 . 9 7} & \$ 0.87 \\ 12 A 1712 & 918 & 12 & .035 & \mathbf{9 7} & .87 \\ 12 A 1713 & 933 & 24 & .015 & \mathbf{9 7} & \mathbf{8 7} \\ 12 A 1714 & 938 & 28 & .035 & .97 & .87 \\ 12 A 1715 & 941 & 48 & .035 & \mathbf{1 . 0 0} & \mathbf{8 0}\end{array}$

## (2) HOUSING FOR LAMPS LISTED ABOVE

 MATCHING LENS
(3) No. 12A1717. Transparent. Specity Amber, Cleor, Red, Blue or Green.
(9) No. 12 A1718. Tronslucent. Specify Yellow, White, Red, Blue or Green.

CHOICE 1-9 Each.....26C 10-24 Each..... 25 C 25-99 Each
$24 c$

## (1) PILOT TYPE CARTRIDGE LIGHTS

Voltage range from 6 to 120 volts. Very long life, conventional two pin plug-in base. Clear glass permits choice of lens color. Use lens shown under indicator type lamps above.
Stk. No. Lam
$12 A 1703$
$12 A 1704$
$12 A 1704$
$12 A 1705$
$12 A 1706$
12 A1706
$12 A 1707$
$12 A 1709$

| No. | Voltage | Amp. |
| :---: | :---: | :---: |
| 21 | 6 | .8 |
| 31 | 12 | 2.0 |
| 41 | 24 | 1.7 |
| 51 | 28 | 1.1 |
| 61 | 48 | 2.5 |
| 71 | 60 | 3.0 |
| 81 | 120 | 3.0 |


| $1-9 E 0$ | $10-24$ |
| :---: | :---: |
| $\$ .97$ | $\$ .87$ |
| .97 | .87 |
| .97 | .87 |
| .97 | .87 |
| .97 | .87 |
| .97 | .87 |
| .97 | .87 |

MINIATURE GE LAMPS
(A)

8
8
8
0
0
0

| (1) |
| :---: |
| (E) |
| (il |



(A) Tubular-Min. Screw Base | Cat. Mazdo YOUR COST |
| :--- |
| No. No. Volts Amps Each for 10 | $\begin{array}{llllll}16 A 153 & 40 & 6.3 & 0.15 & \mathbf{- 1 4} & .81 \\ 16 A 151 & 41 & 2.5 & 0.50 & .21 & 1.27 \\ 16 A 155 & 46 & 6.3 & 0.25 & .14 & .81 \\ 16 A 156 & 48 & 2 & 0.06 & \mathbf{2 1} & 1.27\end{array}$ $\begin{array}{lllllll}16 A 156 & 48 & 2 . & 0.06 & .21 & 1.27 \\ 43 A 156 & 335 & 28 & .04 & 1.45 & 8.76\end{array}$ (B) Tubular-Min. Bayonet Base

| $16 A 158$ | 43 | 2.5 | 0.50 | .21 | 1.27 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $16 A 159$ | 44 | 6.3 | 0.25 | .14 | .81 | $\begin{array}{llllll}16 A 166 & 51 & 6.8 & 0.20 & .13 & .79 \\ 16 B 138 & 53 & 12 & .12 & .13 & .79 \\ 16 A 167 & 55 & 6.8 & 0.40 & \mathbf{1 3} & .79 \\ 16 B 139 & 57 & 14 & .24 & .13 & .79\end{array}$ Note: Deduct $10 \%$ from 10 lot price in quan all lamps.

per type for all $\qquad$

$\begin{array}{lrrrr}16 A 149 & 407 & \text { FLASHER } 20 \\ 168337 & 502 & 5.1 & \text { (C) } 162 \\ 168 & .99\end{array}$ 160309. Seoled Beam. 4.7 volts.
Mazda $\# 4546$. Eoch........ $\mathbf{\$ 1 . 4 5}$
(L) BULBS FOR NEW HIGH INTENSITY AND MEDICAL LAMPS


#### Abstract

16C237. Type 1156.12 V . sgl. contoct boyonet base. Ea... $44 \mathrm{c} 10 \mathrm{Ea} . .26 \mathrm{c}$


 168226. Type 1133. 6 V. sgl. contact bayonet base. Ea... 39 c c 10 Ea... 23 c 168343. Type 14936 V. double contact bayonet base. Ea... 1.02 10 Ea. 6 ic
## S6 CANDELABRA BASE 110-120 V. BULB

6 wotts, clear glass, candelabra base. For indicator and other needs. No. $16 A 168$.
Net Each.....21c Lots
Bayonet Base 656DC. Same as above exxe with double cont Boyonet base 6s60c. 10
boynet bose.
No. 16 C162. Ea..33c Each .........30c Each .........27c No. 16C162. Ea. . 33 c Each
$27 c$


## NEON TYPES

Cleor Standard Screw Base Cleor glass neon filled glow lamps.
Have built-in resistor. For $110-125$ Have built-in
volt $A C$ or $D C$


## 16 145 Condelabra Screw Bose

16 A 45 | Condelabra Screw Bose |  |  |
| :--- | :--- | :--- |
| NE45 | $1 / 4$ | .81 |
| 155 |  |  | Double Contact Condelabro Bay. Base No. Type Wotts Eoch $10 @$ Eo. $\begin{array}{lllll}16 A 147 & \text { NE32 } & 1 & 1.14 & .91 \\ 16 A 148 & \text { NE48 } & 1 / 4 & .67 & 54\end{array}$

Miniature Boyonet Base Type Requires 200 M ohms for NES 1 and 56 M ohms for NE5 IH high-brightness type to use on $105-125$ volts. Used extensively in neon panel indicators.
168170 NE5 $1 / 25$. $20 \quad .16$ 16 A150 NESIH $\cdots \quad .20 \quad .18$

Used Midget Flonge Type Used in panel indicators. NE-2D sistor, NE-2J Hi-brightness requires 30 K resistor to use on $110-125 \mathrm{~V}$ Stk. No. Type Each 10 Ea. $\begin{array}{llll}\text { Stk. No. } & \text { NE2D } & 78 \mathrm{c} & \mathbf{6 2 c} \\ 16 C 206 & \text { NE2J } & 78 c & \mathbf{8 2 c}\end{array}$

## NE2 1/25 Wott Neon

Unbased, with 2 wire leads. Bulb is $1 / 4^{\prime \prime}$ dia. $1 \frac{1}{18}$ " long. Requires 200,000 ohm series resistor for $105-125 \mathrm{~V}$ operation.
16A140. Eoch. . 10 c c 10 For... 88 c Have blue gon Glow LAMPS Have blue glow with limited ultra violet content. For $110-125$ volts $A C$ or DC. AR4 requires series 15 K resistor, AR9 200K.
Stk. No. Type Wotts 1-9 10 Ea. $\begin{array}{lllrr}\text { Stk. No. } & \text { Type } & \text { Wotts } & 1-9 & 10 \text { Eo. } \\ 16 D 265 & \text { AR-1 } & 2 & \$ 1.90 & \mathbf{S 1 . 5 2} \\ 16 D 266 & A R-3 & 1 / 4 & .86 & .68 \\ 16 D 267 & A R-4 & 1 / 4 & .75 & .68\end{array}$ $16 D 267$ AR-
$16 D 283$ AR

## SYLVANIA END CAPS \& SOCKETS


(1) End Caps. Fit directly on ESP-PSP lamps.

No. 12A1675. Speclfy Red, Yellow, White, Green, Blue. Choice Each . . . . . . 7 c
(3) No. 12A1676. Rectangulor Socket. Each.

No. 12A1677. Round Sacket. Each

## Buss Fuses \& Mountings

BUSS GLASS TUBE FUSES
Formerly Called 3AG


Quick-octing general purpose fuses
for rodios, amplifiers, etc. Rated 250 $\checkmark$. UL Approved. Size $11 / 4^{\prime \prime} \times 1 / 4^{\prime \prime}$


BUSS ABC CERAMIC TUBE FUSES


## LOW VOLTAGE FUSES

All the following ore
various jengths shown.
BUSS AGC FUSES, 32 VOLT Formerly Called 3AG


BUSS AGA FUSES, 32 Volt Formerly Called IAG

|  | Former | Coll | IAG |  |
| :---: | :---: | :---: | :---: | :---: |
| 14448 | 5 | 5/8 | \$0.23 | 53.80 |
| 14449 | 7.5 | 5/8 | . 23 | 3.80 |
| 14A50 | 10 | $5 / 8$ | . 23 | 3.80 |
| 14A51 | 20 | $5 / 8$ | . 23 | 3.80 |
| 14A57 | 30 | 5/8 | .23 | 3.80 | BUSS AGW FUSES, 32 Volt

 bUSS SFE FUSES, 32 Volt
For Auto, Radio, Instrument Protec

| 14492 | 4 | 5/8 |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 14495 | 6 | $3 / 4$ | 23 | - |
| 14496 | $71 / 2$ | 7/8 | . 20 | 3.30 |
| 14497 | 9 | $7 / 8$ | . 20 | 3.30 |
| 14498 | 14 | 11 | .18 | 3.00 |
| 14499 | 20 | $11 / 4$ | .18 | 3.00 |
| 14A100 | 30 | 17 | . 23 | 3.80 |



96

## with <br> \section*{h}

FUSETRON FUSES
Dual-Element, Slow Blowing
Formerly Called 3AG


High time lag withstands heavy surges-quick on shorts. Used in cir-
cuits having high inductive or capacitotive starting loods. Sizes to 1 for 250 V , UL listed; $12 / 10^{33}$ to $61 / 4$ for 125 C , UL listed; 8 to 30 for 32 V. $11 / 4 \times 1 / 4^{\prime \prime}$

$\begin{array}{cccc}\begin{array}{c}\text { Stock } \\ \text { No. } \\ \text { Buss Amps } \\ \text { No. Rating }\end{array} & 5 & 100 \\ \text { For } & \text { For }\end{array}$ $14 A 524 \mathrm{MDL}{ }^{\frac{1}{2} 2} \quad \$ 1.45 \$ 24.00$ | $14 A 525 \mathrm{MDL}$ | 1.9 | 1.45 |
| :--- | ---: | ---: |
| $14 A 526 \mathrm{MDL}$ | $\$ 24.00$ |  |
| $1 / 10$ | 1.05 | 18.00 | | $14 A 526$ | MDL | $1 / 10$ | 1.05 |
| :--- | :--- | :--- | :--- |
| $14 A 527$ | $\mathbf{M D L}$ | $1 / 8$ | 1.05 |
| $14 A 538$ | MDL | 18.00 | 1 |
| $14 A 539$ | MDL | 1.05 | 18.00 |
| 1 | 1.05 | 18.00 | 1 |

> 1 1 1 1 1 1 1

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\begin{aligned}
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$14 A$
$14 A$

## FAST ACTING FUSES



For protection of delicate equipment meters, etc. Glass enclosed; $1 \times 1 / 4{ }^{\prime \prime}$ Approved. Voltage rating: $1 / 200$ to


| Stock No. | Amps Rating | $\stackrel{5}{5}$ | $\begin{gathered} 100 \\ \text { For } \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| 14A275 | 1/200 | \$2.1 | 36.00 |
| 14A276 | 1/100 | 1.90 | 32.00 |
| 144391 | ${ }^{3}$ | 1.70 | 28.00 |
| 14A392 | 1 | 1.05 | 17.50 |
| 144396 | 1/8 | .75 | 12.50 |
| 144397 | 1/4 | . 60 | 8.50 |
| 14A504 | 3/8 | .50 | 8.50 |
| 14A505 | 1/2 | . 50 | 8.50 |
| 14A508 | $3 / 4$ | . 60 | 8.50 |
| 14A509 | 1 | .30 | 5.00 |
| 14A510 | $11 / 2$ | .30 | 5.00 |
| 14A511 | 2 | .30 | 5.00 |
| 14A512 | 3 | .30 | 5.00 |
| 14A513 | 5 | . 20 | 3.30 |

## BUSS AGS FUSES

 Formerly Called 4AG

## BUSS INSULATED <br> TWIN CLIPS

For easy replacement of TV pigtail fuses
without soldering. Takes ordinary fuse without pigtail on one ide. Other side snaps fuse in $T V$ set No. 124628 . Ea. 14 c
10 For

LIMITED CURRENT BAYONET TYPE C AND N FUSES Design safeguards againstuse of wrong size and type lock-type boyonet hoiders. UL listed. Regular Type C 250 V


## MINIATURE TYPE GMA

less. Size $5 \mathrm{MM} . \times 20 \mathrm{MM}$. $1.197 \times$ $\left..769^{\prime \prime}\right)$. Order by both stock number and amps.


BUSS PANEL MOUNTED FUSEHOLDERS


Bayonet type knob which grips fuse tightly;
pulls it from
knob is removed Terminals when to withstand severe service. Molded block phenolic body with flat Molded black phenolic body with flat spot for supplied for use in drilled holes. Fits panels up to is" thick. UL listed.
panels up to $\mathrm{re}^{\prime \prime}$ thick. UL listed.
Stock Mfg. Fuse
No. No. Size

## 

 Only $15 /{ }^{\prime \prime}$ " long extends just
ig." behind
front Takes $1 / 4 \times 11 / 4^{\prime \prime}$ fuses, converts to ${ }^{3^{3} 2^{\prime \prime}} \times 11 / 4^{\prime \prime}$
$f$ y 5 es $y^{\prime \prime}$ changing knob. Body molded phe-
nolic, will withstand severe vibration, shock, other environmental conditions. Corry copacity: 15 amps 250 *Requires $5 / 8$ " mounting hole. Requires $1 / 2^{\prime \prime}$ mounting hole.

| Stock No | Mig. No. | Fuse Sixe | Net <br> Each |
| :---: | :---: | :---: | :---: |
| 14C140 | HLF* | $1 / 4 \times 11$ | 7 |
| 14C108 | HCL* | ${ }^{9} \times 11 / 4^{\prime \prime}$ | 37 c |
| $14 C 748$ | HMB $\dagger$ | $1 / 4 \times 11 / 4{ }^{\prime \prime}$ | 37 c |
| $14 C 749$ | HMM $\dagger$ | $1 / 4 \times 11 / 4^{\prime \prime}$ | 376 |

LAMP INDICATING FUSEHOLDER

|  |  |  |
| :---: | :---: | :---: |
| phenolic body. Transporent knob permits indicating light to be readily |  |  |
|  |  |  |
| seen. HKL uses neon type lamp; HKR |  |  |
| on incondescent type for indicating |  |  |
| open fuse. Mounts in $5 / 8^{\prime \prime}$ hole, overoll length 2 得". |  |  |
|  |  |  |
| Stock | Buss Circuit No. Voltage | Net |
| 14A180 | HKL 90.250 |  |
| 4 4 205 |  |  |
| C734 | HKL-X 90-250 |  |

PANEL MOUNTED FUSEHOLDER
Serew type knob.
Molded phenolic
body. Attoched to
panel with screws
or rivets. Strong
coil spring pro
vides contact
pressure on ends
of fuse.

## FUSE ASSORTMENTS



# Littelfuse, Fuses \& Drake Indicators 

3AG STANDARD FUSES LITTELFUSE SERIES $\mathbf{3 1 2 0 0 0}$


Quick-octing general purpose fuses for
rodios, amplifiers, etc. Roted 250 V . radios, amplifiers, etc. Roted
UL Approved. Size $11 / 4^{\prime \prime} \times 1 / 4^{\prime \prime}$.

| Stock No. | Amps. Rating | Box of 5 | $\begin{aligned} & 100 \\ & \text { For } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 124891 | 1/100 | 51.82 | \$32.00 |
| 124892 | 1/32 | 1.68 | 28.00 |
| 124857 | 1/16 | . 75 | 12.50 |
| $12 \mathrm{B827}$ | 1/10 | . 75 | 12.50 |
| 124858 |  | . 75 | 12.50 |
| 12 A964 | $15 / 100$ | . 75 | 12.50 |
| 12 A965 | 75 | . 76 | 12.50 |
| 12 A963 | 3/16 | .75 | 12.50 |
| 1241113 |  | . 51 | 8.60 |
| 12 A966 | 3/10 | . 51 | 8.50 |
| 124859 | 3/8 | . 51 | 8.50 |
| 12A1114 | 1/2 | . 51 | 8.50 |
| 12 A1115 | 9/4 | . 51 | 8.50 |
| 12A1116 | 1 | . 30 | 5.00 |
| $12 \mathrm{B8} 28$ | $11 / 4$ | .30 | 5.00 |
| 12 A1117 | $11 / 2$ | . 30 | 5.00 |
| 128836 | 16/10 | . 30 | 5.00 |
| 1241118 | 2 | . 30 | 5.00 |
| 128844 | $21 / 2$ | . 28 | 4.70 |
| 12 A1120 | 3 | . 28 | 4.70 |
| 124860 | 4 | . 38 | 6.50 |
| 124861 | 5 | . 39 | 8.50 |
| 124862 | 6 | . 39 | 6.50 |
| 12 A967 | 8 | . 60 | 10.00 |



Medium acting for low voltoge (up to 32 V.) opplications. Heaters, auto radio, lights, cigor lighter, clock, etc. Length $5 / 8^{\prime \prime}$, dia. $1 / 4^{\prime}$

| Stk. No. | Amps | Box of 5 | 100 For |
| :--- | :--- | :--- | ---: |
| $12 A 1237$ | 1 | $\$ 0.30$ | $\$ 5.00$ |
| $12 A 1238$ | 2 | .30 | 5.00 |
| $12 A 1239$ | $21 / 2$ | .30 | 5.00 |
| $12 A 1240$ | 3 | .28 | 4.70 |
| $12 A 1241$ | 5 | .23 | 3.75 |
| $12 A 1242$ | 6 | .23 | 3.75 |
| $12 A 1243$ | $71 / 2$ | .23 | 3.75 |
| $12 A 1244$ | 10 | .23 | 3.75 |
| $12 A 1245$ | 15 | .23 | 3.75 |
| $12 A 1246$ | 20 | 23 | 3.75 |
| $12 A 1284$ | 25 | 23 | 3.75 |
| $12 A 1285$ | 30 | .23 | 3.75 |

## 7AG 303000 SERIES



Full size $7 / 8 \times 1 / 4^{\prime \prime}$ for low voltage (up to 32 V .). Used in outomobile cir| Stk. No. | Amps | Box of 5 | 100 For |
| :--- | :---: | ---: | ---: |
| $12 A 1305$ | 1 | $S 0.30$ | $\$ 5.00$ |
| $12 A 1306$ | $21 / 2$ | .20 | 3.30 |
| $12 A 1307$ | 4 | .20 | 3.30 |
| $12 A 1308$ | 6 | .20 | 3.30 |
| $12 A 1096$ | 15 | .23 | 3.75 |
| $12 A 1097$ | 20 | .23 | 3.75 |
| $12 A 1301$ | 30 | .23 | 3.75 |

High time lag withstands heavy surges cultick on shorts. For 125 , cercept $61 / 4 \mathrm{amp}$. G , for 32 $\vee$. Size $11 / 4 x^{1 / 4} 4^{\prime \prime}$

## 3AG "SLO-BLO" FUSES LIttelfuse series 313000



| Ster | A. |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Stock No. | Amps Roting | $\begin{gathered} 5 \\ \text { for } \end{gathered}$ | $\begin{aligned} & 100 \\ & \text { For } \end{aligned}$ | voltoge for the circuit |
| $\begin{gathered} \mathrm{No} \mathrm{O} \\ 12 \mathrm{~B} 821 \end{gathered}$ | ${ }_{1}^{\text {Roting }}$ | S1.44 |  |  |
| 124946 | 1/32 | 1.44 | 24.00 | panel. Mounts |
| 124947 | 1/16 | 1.05 |  | No. |
| $12 A 602$ | 1/10 | 1.05 |  | 128883 344125A |
| $12 A 906$ <br> 124948 | $1 / 15 / 100$ | 1.05 |  | 1288843442504 |
| 128824 | . 175 | 1.05 |  | Fuse M |
| 124949 |  | 1.05 |  |  |
| 12 A 604 | $2 / 10$ | 1.05 |  |  |
| 124605 | $1 / 4.10$ | 05 |  |  |
| $12 \wedge 950$ |  | 1.05 |  |  |
| ${ }^{12 A 907}$ | 4/10 | . 05 | 17 | (12Fo |
| $12 A 606$ | 6 | . 05 |  | Littelfus |
| 12 l 1952 | 7/10 | 05 | 17 | Litt |
| 28601 |  | 05 |  | 12Al130. For 3AG, |
| 90 | $8 / 10$ | 5 | 17 | (3) Mounts dir |
| ${ }_{12 \wedge}{ }^{2} \times 1953$ | 2/10 | 9 |  | $12 \mathrm{Al133}$. For 8AC |
| $12 \wedge 954$ | 11 | . 99 | 16.6 | Eoch |
| $12 A 955$ $12 A 956$ | $1 / 2$ | 99 | 18. | (9) Spring clips for |
| 124608 |  | 99 | 16.5 | 12A1134. 12 for 28 |
| 124957 | 28 | 75 |  | Universal In-Li |
| - 1288809 |  | . 75 |  |  |
| 124958 | 3 2/10 | .75 | 12.50 |  |
| 12 126610 |  | . 75 |  |  |
| 12 A959 | $51 / 4$ | . 75 | 12 |  |
| 12 A894 |  |  | 12.5 |  |

length spring supplied
holder
No. 12B881. 150145. Eoch
... 355


Has Clear plastic cap which lights when the fuse blows. Fits all $3 A G$ voltage for the circuit it is to be used in. All are the same physical panel. Mounts in $5 / 8^{\prime \prime}$ hole.
Stk. No. Mfg. No. Voltoge Eoch 128884 344250A 200-250 1.62

## Fuse Mountings



For above ponel connections.
12A1129. For 8AG, "" fuse. Eo.. . 16 c
$12 A 1130$. For $3 A G, 11 / 4^{\prime \prime}$ fuse. Eo. 16 c
(3) Mounts directly on meter terminal. Littelfuse No. 383002 Each
fuses only …...32c (3) Spring clips for any length $1 / 4{ }^{\prime \prime}$ 1241134.12 for 28 c 100 \$1.90 Universal In-Line Molder Fits all fuses from SFE $1 / 2$

## LITTELFUSE HOLDERS

ecting Stk. No. Mfg. No. 1-99 Ea. 100 Up

|  |  | I LITTELFUSE CIRCUIT BREAKERS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | A complete ronge of high quality circuit breakers. Rated ot 125 V . AC. Actual size $13 / 4^{\prime \prime} \mathrm{L}$, $18^{\prime \prime} \mathrm{H}, 1 / 2^{\prime \prime}$ D., with universal length reset button. Resets by simply pushing in the button. Overload protection for radio, TV, amplifiers and mony other applications. New, higher amperages for color applications. |  |  |  |  |  |  |  |
| Stock No. | Míg. <br> No. | $\begin{aligned} & \text { Trip } \\ & \text { Roting } \end{aligned}$ | Net <br> Eoch | $\begin{aligned} & 5 \\ & \text { For } \end{aligned}$ | Stock No. | Mfg. No. | Trip Roting | Net Eoch | For |
| 12A1313 | 8151.75 | 1.75 | \$0.78 | \$3.25 | 12A1323 | 8153.25 | 3.25 | \$0.78 | \$3.25 |
| 12 B 1318 | 815002 | 2 | . 78 | 3.25 | $12 A 1324$ | 815004 | 4 | . 78 | 3.25 |
| 1241319 | 8152.25 | 2.25 | . 78 | 3.25 | $12 A 1325$ | 81504.5 | 4. | . 78 | 3.25 |
| 12A1320 | 81502.5 | 2.5 | . 78 | 3.25 | 1241332 | 815005 | 5 | 78 | 3.25 |
| 1241321 | 8152.75 | 2.75 | . 78 | 3.25 | $12 A 1333$ | 815006 | 6 | 78 | 3.25 |
| 12 A1322 | 815003 | , | . 78 | 3.25 | 1241334 | 81 | 7 | . 78 | 3.25 |

## DRAKE MONEY-SAVING INDICATOR LIGHTS



Permanently installed Hi -Brightness neon lamp assembly ready to operate on 125 volts AC. Gives that new modern oppeorance to Hi-Fi appliances Ham gear and signol or indicator panels at a very low cost. Choice of two mountings. One-plece nylon body ond lens construction. Size: body dia. 3/8 Fig (1) and (3) $1 \frac{1}{3}{ }^{\prime \prime}$ long; (3) and (4) $1 \frac{1}{2}{ }^{\prime \prime}$ long. Specify Color: Red, White or Amber.
(1) Snop-In Type flush lens.

LOW COST DELUXE QUALITY INDICATORS MINIATURE PERMANENT NEON TYPE


MINEON TYPE 118. Operate directly on 115 volt AC. Mount from rear through panel up to $3 / 8^{\prime \prime}$ thick in $03 / 8^{\prime \prime}$ hole. Lucite lens. Choice of fluted or flat end. Lucite lens $\frac{1}{l}$ dia. Solder terminals. Built-in
High brightness type. Spedfy Color: Red, Yellow, Cotorfess and Translucent White.
(3) Fluted Lens Type. Specify Color.

No. 128714 . 1-9 Each. S.................... Color.
Flat End Lens Type. Specify Color. 92 c 10-24 Ea............ 83 c No. 128715. 1-9 Each..............92c 10-24 Ea................... 8 c (7) NO. 168 E INSTRUMENT LIGHT

Hood type for illuminoting front of panel on instruments and equipment. Has miniature boyonet socket. Mounts from front in panels up to do in $1 f^{\prime \prime}$ diameter hole. Bulb replaceable from front.
1t" diameter hole. Bulb replaceable from fro
No. 128716. 1-9 Each............ $\$ 1.55$
10-14 Ea.
$\$ 1.40$

## Potter \& Brumfield Relays

ATTENTION INDUSTRIAL BUYERS
B-A offers you factory Net Prices! Sove time-we ship from stock. Use
this quontity discount schedule. For all this quontity discount schedule. For all except mercury wetted types.
Deduct from the single lot price shown $5 \%$ for 25 to 50 relays of a type, $10 \%$ for
Mercury wetted

We con GENERAL PURPOSE TYPES


## MEDIUM DUTY MR POWER RELAYS

or small motors,

## ansmitters and

 enerol purpose use 60 cy AC .6 wotts. colls silver contocts amps, 115 V . AC non-inductive. Size $2 \frac{51}{5} \times 1+\frac{1}{6} \times 1 \frac{1}{3} 2^{\prime \prime}$ for single pole- $2 \frac{18}{8} x$ ris 2 for double pole.Stk. No. Type Contacts Coil V. Each 19A1405 MR5A SPDT 6AC 3.65 $\begin{array}{llrl}19 A 1417 & M R 5 A & \text { SPDT } & 24 A C \\ 3.65 \\ 19 A 1406 M R 5 A & \text { SPDT } & 115 A C & 3.65\end{array}$ $\begin{array}{lll}19 A 1406 M R 5 A & \text { SPDT } & 115 A C \\ 19 A 1333 M R 5 A & \text { SPDT } & 230 A C \\ 4.10\end{array}$ $19 A 1333$ MR5A 19A1316 MR5D $19 A 1318$ MRSD \begin{tabular}{llll}
$9 A 1407$ \& MRI SPDT $110 D C$ \& 3.90 <br>
\hline

 

$19 A 1319 M R I I A$ \& DPDT \& GAC \& 5.15 <br>
\hline
\end{tabular} $19 A 1419 \mathrm{MRIIA}$ DPDT

$19 A 1408 \mathrm{MRIIA}$ DPDT $19 A 1408 \mathrm{MRIIA}$ DPDT $19 A 1320 \mathrm{MR11D}$ DPDT $\begin{array}{ll}19 A 1334 M R 14 A & \text { 3PDT } \\ 19 A 1440 M R 14 A & \text { 3PDT }\end{array}$ $19 A 1422 \mathrm{MR14A}$ 3PDT

(408)

## ENCLOSED PLUG-IN

## KRP SERIES

Choice of 5 or 10
Amp. Contocts
mall size long life reloy for dependable use in outomation control, comnunicotions switching, etc. Enclosed $1 \frac{1}{2} \times 2^{\prime \prime}$ high. 10 amp contacts on KRP types ending in G, all others on 5 amps. Octal base for type P5 are 5 amps. Octal base for type P5 and Stk. No. Type Contacts Coil V. Eoch 9A1354 KRPSA SPDT 115AC 5.70 9A1390 KRP5AG SPDT $115 A C 5.85$ $\begin{array}{lll}19 A 1391 K R P I I A G ~ D P D T ~ & \text { 6AC } 6.55 \\ 19 A 1357 K R P 1 \mid A & \text { DPDT } & 12 A C \\ 6.35\end{array}$

 $19 A 1382 \mathrm{KRPIIA}$ DPDT $24 A C 6.35$ $19 A 1392$ KRPIIAG DPDT 24 AC 6.55 | $19 A 1439 K R P I 1 A$ |
| :--- |
| $19 A 1393$ KRPIIAG DPDT $115 A C$ |
| 115.35 |
| 6.55 | $19 A 1383$ KRPIID DPDT 6DC 6.30

 9A1395 KRPIIDG DPDT $12 D C 6.50$ $\begin{array}{llll}19 A 1385 K R P I \| D \\ 19 A 1396 K R P I \mid D G ~ D P D T ~ 24 D C ~ & 6.30 \\ 194 C & 6.50\end{array}$ $19 A 1358$ KRPIID DPDT $110 D C 6.95$ | $19 A 1462 K R P 14 A$ |
| :--- |
| $19 A 1397 K R P 14 A G$ |
| 3PDT $115 A C$ |
| 19.90 |
| 8.20 | $19 A 1328$ KRP14D 3PDT $12 \mathrm{DC} \mathbf{7 . 8 0}$ $\begin{array}{lll}19 A 1359 K R P 14 D & \text { 3PDT } & 24 D C \\ 19 B 1350 & \text { KRP14DG } \\ 19 & \text { 3PDT } & 24 D C \\ 8.15\end{array}$ 9B1351 KRP14DG 3PDT IlODC 8.75

## KCP SENSITIVE TYPE

## Plate Circuit Relays

Same appearance as KRP above. Operates on 125 MW for SP, 250 MW for DP, and 375 MW for $3 P$. $1 / \mathrm{s}^{\prime \prime}$,
silver contacts rated 2 amps. square $\times 2^{\prime \prime}$ high. Wt. 3 omps. KCP5 and KCPII have 8 pin base and Stk. No. Type Cont. Ohms Each 19 A 1353 KCP5 SPDT $5 \mathrm{~K} \$ 6.30$ $\begin{array}{llll}19 A 1312 & K C P S & \text { SPDT } & 10 K \\ 19 B 1352 K C P 11 & \text { DPDT } & 2.5 \mathrm{~K} & 6.60\end{array}$
 $\begin{array}{llll}19 A 1533 & \text { KCPI1 } & \text { DPDT } & 10 K \\ 19 A 1311 & 7.15 \\ 19 C P 14 & \text { 3PDT } & 10 K & 8.65\end{array}$


## KRP-N

 INDICATOR TYPESome as regular KRP reloys with indicating lamp
to show current or to show current or voltcircuit. Wt. 3 oz . All have 10 amp contacts
Stk. No. Mfg. No. Contacts Coil V. Eoch 19B1364KRPIIAN DPDT $115 A C \$ 7.50$ $19 \mathrm{B1379}$ KRP14AN 3PDT $115 A C \quad 9.15$


## SMALL LIGHT DUTY KA RELAY <br> DC and 60 Cy .

High quality, all purpose relay. UL listed. Silver contacts, choice, 5 or 10 amps. Single 6-32 stuch mounting with locating tob. Solder lug terminals. Size $137^{\prime \prime} \times 1 \frac{13}{2 \prime \prime} \times 1+1^{\prime \prime}$ high. 110
V . DC Coil res. 10,000 ohms. Wt. 2

## oz

## Stk. No. Type Contact Rating 5 Amp.

stk. No. Type Contacts Coil V. Each $19 A 1429$ KA5AY SPDT GAC $\$ 3.35$ $19 A 1332 \mathrm{KASAY}$ SPDT $12 A C \quad 3.35$ $\begin{array}{llll}19 A 1332 K A 5 A Y & \text { SPDT } & 12 A C & 3.35 \\ 19 A 1430 K A 5 A Y & \text { SPDT } & 24 A C & 3.35\end{array}$ $\begin{array}{llll}19 A 1430 K A 5 A Y & \text { SPDT } & 24 A C & 3.35 \\ 19 A 1431 K A S A Y & \text { SPDT } & 115 A C & 3.35\end{array}$ $\begin{array}{llrr}19 A 1431 K A S A Y & \text { SPDT } & 115 A C & 3.35 \\ 19 A 1432 \text { KASDY SPDT } & 6 D C & 3.20 \\ 19 A 379 & \text { KASDY SPDT } & 120 C & 3.20\end{array}$ $\begin{array}{llll}19 A 1432 & \text { KASDY SPDT } & \text { 6DC } & 3.20 \\ 19 A 379 & \text { KASDY SPDT } & 120 \mathrm{C} & \mathbf{3 . 2 0} \\ 19 A 378 & \text { KASDY SPDT } & 24 D C & \mathbf{3 . 2 0}\end{array}$ $\begin{array}{llrl}19 A 378 & K A S D Y & \text { SPDT } & 24 D C \\ 19 A 1370 K A 5 D Y & 3.20 \\ \text { SPDT } & 110 D C & 3.85\end{array}$ $\begin{array}{llrl}19 A 1370 K A S D Y & \text { SPDT } & 110 D C & 3.85 \\ 19 A 1423 K A 11 A Y D P D T ~ & \text { GAC } & 4.05\end{array}$ | $19 A 1423 K A 11 A Y D P D T$ | KAC | 4.05 |
| :--- | :--- | :--- | :--- |
| $19 A 1424$ |  |  |
| $19 A 1425$ | 4.05 |  | $\begin{array}{lrr}19 A 1425 \mathrm{KA} 11 \mathrm{AYDPDT} & 115 \mathrm{AC} & 4.05 \\ 19 A 1426 \mathrm{KAlIDYDPDT} & 6 D C & 3.55\end{array}$ $19 A 1426 \mathrm{KAlIDYDPDT}$

$19 A 1427 \mathrm{KAlIDYDPDT}$ $19 A 1427 \mathrm{KAIIDYDPDT}$
$19 A 1428 \mathrm{KAIIDYDPDT}$
$19 A 1371 \mathrm{KAlIDYDPDT}$ $19 A 1433 \mathrm{KAl\mid AAY} 3 P D T$ $19 A 1434$ KAl4AY 3PDT $19 A 1486$ KAl4AY 3PDT 19 A380 KA14DY 3PDT $19 A 1372$ KAl4DY 3PDT
Same as above except Contact Rating 10 Amp. For AC volts.
 $\begin{array}{llll}19 A 1375 & K A 5 A G & \text { SPDT } & 6 \mathrm{~V} . \\ 19.40 \\ 19 A 1445 \mathrm{KASAG} & \text { SPDT } & 12 \mathrm{~V} . & 3.40 \\ 19 A 1447 \mathrm{KASAG} & \text { SPDT } & 24 \mathrm{~V} . & 3.40\end{array}$ $19 A 1447$ KASAG SPDT $19 A 1501$ KAllAG DPDT
$19 A 1502 \mathrm{KAllAGDPD}$
$19 A 1503 \mathrm{KAlIAGDPDT}$ 19A1504 KAllAGDPDT $19 A 1505$ KAllAGDPDT $19 B 364 \mathrm{KAl4AG3PDT}$ $19 B 386$ KAl4AG3PDT

## KT ANTENNA RELAYS

 Stk. No. Type Coll V. Net Ea. 19A1451 KTllA $\begin{array}{rr}\text { Coll V. } & \text { Net Ea. } \\ 6 \mathrm{AC} & \mathbf{\$ 3 . 9 0} \\ 115 \mathrm{AC} & \mathbf{3 . 9 0} \\ 6 \mathrm{DC} & \mathbf{3 . 9 0} \\ 12 \mathrm{DC} & \mathbf{3 . 9 0}\end{array}$

## ML TELEPHONE TYPE


small size, highly semsitive with ex celient mechanical action. Ideal computor net computor networks, and tele phone systems.
Mounts with four Mounts with four 2.5 oz. Size $1 \frac{12}{3} 2^{\prime \prime}$ high, $1 \frac{3}{3} "^{\prime \prime}$ long 4PDT 80 MW 6PDT 120 MW $\begin{array}{ccc}\text { Stock } & \text { Mfg. Coil Res. Net } \\ \text { No. No. Contacts Ohms Each }\end{array}$ 19 B 1386 MLIID DPDT lOK $\mathbf{\$ 7 . 1 5}$ 1981387 MLI7D 4PDT 81388 ML23D 6PDT 10K 9.45
"P" Plastic Case with plug-in base. $2 \times 1 \frac{13}{}{ }^{3}{ }^{\prime \prime}$ above base. Same as used on KRP relays.
19A1400. 35D070. 8 Pin Base. 60c 19A1401. 35D072. 11 Pin Base.. 75 c
9-KR-15 Hold Down Spring. Holds all KRP-KCP plug-in relays securely in ony mounting position
No. 198392.
$\$ 5.50$

SOLID STATE TIME DELAY RELAYS
Electronic timing with solid state switching combined to provide a trouble-free device with no moving parts. Other advantages are timing
accuracy $\pm 10 \%$, repeatability $\pm 2 \%$, reset accuracy $\pm 10 \%$, repeotability $\pm 2 \%$, reset time dependability.
(1) CD-38 Series are knob adjustable with internally mounted DPDT relay with 10 omp contacts. Size $1.75 \times 2.37 \times 2.87^{\prime \prime} \mathrm{high}$. Octal plug termination.
(2) CD-21 Series knob adjustable, smaller size for use with external relays, $P$ G B Series KR for 115 V . AC or $24 \mathrm{DC} .1 .4 \times 1.4 \times 2^{\prime \prime} \mathrm{H}$. Octal plug termination. (1) New CH Series. Lower cost, accuracy $10 \%$ of nominal, reset time 100 millisecands octal plug-in. Size same as CD-38. \% Provides delay on release, all others on operate. Has internally mounted DPDT relay.

| Stk. No. | fg. No. | Volts | Fig. | Delay Sec. | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1981459 | CHB-38-30001 | 24 V. AC | . | 1.0 to 10 | \$18.50 |
| 1981460 | CHB-38-70001 | 115 V. AC | 1 | 1.0 to 10 | 18.50 |
| 1981461 | CHD-38-30001 | 24 V.DC | 1 | 1.0 to 10 | 7.50 |
| 1981463 | *CHB-38-70011 | $115 \mathrm{~V} . \mathrm{AC}$ | 1 | 1.0 to 10 | 0 |
| 19B1482 | CDB-38-70003 | 115 V. AC | 1 | .1 to 10 | 43.80 |
| 19B1483 | CDB-38-70005 | $115 \mathrm{~V} . \mathrm{AC}$ | 1 | 1.8 to 180 | 43.80 |
| 1981484 | CDD-38-30003 | 24 V. DC | 1 | . 1 to 10 | 1.55 |
| 1981486 | CDB-21-70003 | $115 \mathrm{~V} . \mathrm{AC}$ | 2 | . 1 to 10 | 8.70 |
| 1981487 | CDB-21-70001 | 115 V. AC | 2 | 1.8 to 180 | 38.70 |
| 19B1488 | CDD-21-30003 | 24 V. DC | 2 | .1 to 10 | 38.35 |

## JM MERCURY WETTED CONTACT RELAYS



Long life, high speed with unvorying dependability through bil-
lions of operations. Operating time for SPDT 3 milliseconds, release time 3.2 milliseconds making possible 100 operotions per C . to $107^{\circ} \mathrm{C}$ rating 5 amps of 500 V . Temp. range - $39^{\circ}$


New JMF Series. Module type with 5 pin printed board mounting. Contacts
SPDT, break before make 2 amp rating. Size 10.62 lang 625 wide 625 high SPDT, break before make 2 amp rating. Size 10.62 long, .625 wide, .625 high
Wt. 1.25 oz . Wt. 1.25 oz

| Stock No. | Mfg. No. |
| :---: | :---: |
| 198401 | JM1-109-12 |
| 198439 | JM1-112-11 |
| 198440 | JM1-114-11 |
| 198470 | JM1-118-11 |
| 198472 | JM1-119-11 |
| 198451 | JM2-110-22 |

Coil
Ohms

| $\begin{array}{c}\text { Coil } \\ \text { MA }\end{array}$ | $\begin{array}{c}\text { Net } \\ \text { Each }\end{array}$ | $\begin{array}{c}\text { Stock } \\ \text { No. }\end{array}$ | $\begin{array}{c}\text { Mfg. } \\ \text { No. }\end{array}$ |
| :---: | :---: | :---: | :---: |
| 38.8 | $\$ 14.75$ | 19B1464 | JMF1020-61 |
| 20.1 | 14.75 | 1981465 | JMF1070-61 |
| 20 | 14.75 | 1981466 | JMF1080-61 |
| 10 | 15.00 | 1981467 | JMF1120-61 |
| 8.1 | 8.55 | 1981471 | JMF1150-61 |
| 34.8 | 23.95 | 1981472 | JMF1160-61 |


| Coil |
| :---: |
| Ohms |
| 65 |
| 450 |
| 675 |
| 1425 |
| 2400 |
| 4000 |


| Coil | Net |
| :---: | ---: |
| MA | Each |
| 38.1 | $\$ 9.40$ |
| 12.9 | 9.40 |
| 11.6 | 9.4 |
| 8.4 | 9.4 |
| 7.8 | 9.40 |
| 4.0 | 9 |

MH TELEPHONE TYPE


Extremely fast acting miniature relay.
 silver contocts. Except MHIIL, 3 omp.
Stk. No. Type Contacts Coil V. Eoch $19 A 1305 \mathrm{MHIIL}$ DPDT $10 \mathrm{~K} \% \$ 6.25$ $19 A 1306 \mathrm{MHI7D}$ 4PDT 6DC 6.25 $\begin{array}{llll}19 A 1307 & \text { MHI7D 4PDT } & \text { 12DC } & 6.25 \\ 19 A 1308 & \text { MHI7D 4PDT } & \text { 24DC } & 6.25\end{array}$ 19A1308
:Ohms

## PLATE CIRCUIT TYPE <br> LB-5 LOW COST SPDT



Designed for top performance at unusually low cost 5 amp silver centers 2 In" $^{\prime \prime}$. Wt. 2 oz .

| Stk. No. | Coil Res. | Coil Ma. | Each |
| :---: | :---: | :---: | :---: |
| 1941413 | 2,500 | 9.0 | $\$ 2.70$ | $\begin{array}{rrrr}19 A 1413 & 2,500 & 9.0 & \$ 2.70 \\ 1941414 & 5,000 & 6.3 & \mathbf{2 . 9 0} \\ 1941444 & 10,000 & 4.5 & \mathbf{3 . 1 5}\end{array}$

## RS5D SENSITIVE RELAY



Low price, light weight for
model controls model controls, light dim-
mers, radiosonde, etc. 2 amp palladium contacts.
Size $1 \times_{3}^{5} \times x^{29}{ }^{\prime \prime} \mathrm{H}$. Wt. $11 / 2$ $\begin{array}{lclr}\text { Stk. No. } & \text { Coil Ohms } & \text { Pull In } & \text { Each } \\ 19 A 1491 & 335 & 6 \mathrm{~V} & \mathbf{\$ 2 . 7 5} \\ 19 A 1442 & 1.35 \mathrm{~K} & 12 \mathrm{~V} & \mathbf{2 . 9 0} \\ 19 A 1494 & 5 \mathrm{~K} & 3.5 \mathrm{MA} & \mathbf{3 . 3 0} \\ 19 A 1495 & 10 \mathrm{~K} & 2.5 \mathrm{MA} & \mathbf{3 . 8 0}\end{array}$


## SENSITIVE TYPE

SM Series. Lightweight (1 ozz)
hermetically sealed. Plugs in
 perates. on 500 mw. SM5LS
75 mw . All ore SPDT with 25 mmp contacts. Used in stk. No. Type V.orMA Ohms Each 1981418 SM5DS 24 V 900 $\$ 8$


## NEW KHP \& KHS



LM ADJUSTABLE TYPE


Feotures high - quality Sensitive relays with adjustable spring tension, adjustable release screw, and ${ }^{\frac{7}{32} \text { "" dilver contacts rated at }}$.


| No. | Coil Res. Coil Ma. | Each |  |
| :--- | :---: | :---: | :---: |
| $19 A 1412$ | 5,000 | 4.5 | $\mathbf{4 . 3 5}$ |
| $19 A 161$ | 10,000 | 3.2 | $\mathbf{4 . 6 5}$ | $\begin{array}{lrrr}19 A 162 & 2,500 & 9.0 & \$ 5.90 \\ 19 A 163 & 5,000 & 6.3 & \mathbf{6 . 1 0} \\ 19 A 164 & 10,000 & 4.5 & \mathbf{6 . 7 0}\end{array}$

## BU INDUSTRIAL BUZZER



For signalling. $A C$ op-


# Potter \& Brumfield Relays 



PR HEAVY DUTY POWER RELAYS
A highly dependable, fast acting, sturdily constructed relay for contlnuous heavy duty use in industrial control applications. Molded phenolic base bobbin and contoct carrier. 25 amp silver contocts. $21 / 2^{\prime \prime}$ wide $\times 21 / 2^{\prime \prime}$ long $\times 2 \mathrm{i}^{7}$ " high (PR11 ore $4 \mathrm{~m}^{\prime \prime}$ long). AC types are 60 cycles, single throw types are normally open. Wt. 1 ith

| Stk. No. | Type | Contacts | Co | Eoch |
| :---: | :---: | :---: | :---: | :---: |
| 194366 | PR3AY | SPST | 24AC | 5 |
| 19A1402 | PR3AY | SPST | 115AC | 4.35 |
| 19 A 1335 | PR3AY | SPST | 230AC | 4.75 |
| 19 A 1415 | PR3DY | SPST | 60C | 4.35 |
| 19 A1336 | PR3DY | SPST | 12 DC | 4.35 |
| 194370 | PRSAY | SPDT | 24 AC | 4.55 |
| 19 Al 1403 | PRSAY | SPDT | 115AC | 4.55 |
| 194371 | PRSAY | SPDT | 230AC | 5.00 |
| 19A1337 | PR5DY | SPDT | 12 DC | 4.55 |
| 19 A1322 | PR5DY | SPDT | 24DC | 4.55 |
| 19 A1368 | PR7AY | DPST | 6AC | 5.15 |

## PR11AL5 TYPE

Same power type PR described above. contocts ", sllver rated 5 amps Permits use of remote control circults such as push button, time delay etc. such os push Jofton, Type Coilv. Each $\begin{array}{llr}\text { Stk. No. } & \text { PRIPALS } & 115 A C \\ 19 A 1342 & 8.55 \\ 19 A 1343 & \text { PRIIAL5 } & 230 A C \\ 9.00\end{array}$

PM APDT POWER TYPE For use in polyphose and heovy duty switching. $1 / 4.8$ contacts 20 Vated . resistance $A C, 1$ H.P: per movable arm ot 115 or 220 single phase. Meets UL requirements. 2 ? ${ }^{2}$ " ${ }^{2} \mathrm{~W}$, $3 \mathrm{z}^{\prime \prime} \mathrm{D}, 21 \ell^{\prime \prime}$ H . Heavy $8-32$ screw
14 For AC volts.
Stk. No Mfg. No. Coil Volts Net Each $19 A 1510$ PMI7AY 6 S $\$ 2.95$ $\begin{array}{llrr}19 A 1512 & \text { PMIIAY } & 24 & \mathbf{1 2 . 9 5} \\ 19 A 1513 & \text { PMI7AY } & 115 & \mathbf{1 2 . 9 5}\end{array}$ $\begin{array}{llll}19 A 1513 & \text { PMI7AY } & 115 & \mathbf{2 . 9 5} \\ 19 A 1514 & \text { PMI7AY } 230 & \mathbf{3 . 4 0}\end{array}$ METAL DUST COVER for PR Relays. 19A438. PB \#35DO13. Eoch. $\$ 3.30$ Cover For MS, MR and SP Reloys.
$1941441 . \mathrm{PB} \# 350130$. Each. $\$ 2.10$


## MS MOTOR STARTING

For capacitor start, induction run runtors. Operates on back EMF of running winding. Meets oll under$\times 21 / 8^{\prime \prime}$ high. Pure silver contocts.
For $3 / 4$ H.P. Motors
tk. No. Type Roting V. AC Ea. $19 A 1455$ MSZAY SPST-NC $115 \$ 3.80$ $19 A 1456$ MS2AY SPST-NC 2304.25 For Motors Up to 3 HP (DB Contocts)
$19 A 1457$ MS4AY SPST-NC 115
4.45 $\begin{array}{lll}19 A 1457 & \text { MSSAY SPST-NC } \\ 19 A 1458 & \text { MS4AY SPST-NC } 230 & 4.85\end{array}$

MB3D Power Contactor
Minioture high current type Rated 60 omp of 28 V . DC up to 130 omp surge. Large siver contacis on brimally open. Dimensions $15 / 8^{\prime \prime} \mathrm{L}$, 謌" W , $13 / 8^{\prime \prime} \mathrm{H}$. For dynamotor control. $\begin{array}{llll}\text { th. } \mathrm{Na} \text { Volts Ohms Each } \\ 9 \mathrm{~A} 389 & 12 \mathrm{DC} & 623 & 5.80\end{array}$ $\begin{array}{llll}9 A 389 & \text { 12DC } & 62.3 & \mathbf{5 . 8 0} \\ 9 A 390 & 24 D C & 245 & \mathbf{5 . 8 0}\end{array}$ Cover for PM Reloys.

VERSATILE NEW GENERAL-PURPOSE RELAYS


New KUP 10 Amp Series. Covers a wide range of valtages and contact arrangements. Highly reliable, well designed, easy to install or replace. Price is subston tially less than octal type plug-in reloys. Enclosed in a clear plastic cover Silver-codmium-oxide contacts assure long trcuble-free service. Size $2.22^{\prime \prime}$ high $x$ $1.406^{\prime \prime} \times 1.531^{\prime \prime}$. Wt. 3 Oz . Socket for KUP relays listed below.


## No. 19A1610. Net Each

KR3-H 20-AMP. MIDGET
A reliable heavy duty relay for use types. All have twin $1 / 4^{\prime \prime}$ silver codmlum A reliable heavy duty relay for use types. All SPST-N.O-DB, roted 20 omp current requirement is high. Available of 115 V . AC 60 cycle. in both open mounting ond plug-in KR3-H open mounting type have combl KR3-H open mounting type have comblnation $1 / 4$ " quick connect or solder terminals. Overall size $1.6 \times 1.67 \times 2 \mathrm{Oz}$. Inches. Mounting 6-32 stud. Wt. 2 Oz .
 $1981492 \mathrm{KR} 3 \mathrm{AH} \quad 12 \mathrm{~V} . \mathrm{AC} \quad 4.10 \quad 19 A 1525 \mathrm{KRP} 3 \mathrm{AH}$ $19 \mathrm{~B} 1496 \mathrm{KR} 3 A H \quad 24 \mathrm{~V} . \mathrm{AC} \quad 4.1019 \mathrm{~A} 1526 \mathrm{KRP} 3 \mathrm{AH}$ 19B1497 KR3AH 1 19 Bl 1497 KR 3 AH
19 Bl 115 KV . AC
19 KR 3 DH
$6 \mathrm{~V} . \mathrm{DC}$ $\begin{array}{lll}19 \mathrm{B1499} \mathrm{KR} 3 \mathrm{DH} & 12 \mathrm{~V} . \mathrm{DC} & \mathbf{3 . 9} \\ 19 \mathrm{~B} 1500 \mathrm{KR} 3 \mathrm{DH} & 24 \mathrm{~V} . \mathrm{DC} & \mathbf{3 . 9} \\ 1941523 \mathrm{KR} 3 \mathrm{DH} & 110 \mathrm{~V} . \mathrm{DC} & \mathbf{4 . 5}\end{array}$ $\begin{array}{lll}1981500 \mathrm{KR3DH} & 24 \mathrm{~V} . \mathrm{DC} & \mathbf{3 . 9 0} \\ 19 \mathrm{~K} 1523 \mathrm{KR} 3 \mathrm{DH} & 110 \mathrm{~V} . \mathrm{DC} & \mathbf{4 . 5 0}\end{array}$

KRP3-H as described above, enclosed in clear plastic housing Overall size $29^{\circ} \times 1 \frac{38}{2} \times 1 \frac{3^{\prime \prime}}{}{ }^{\prime \prime}$.Wt. 3 Oz


LATCHING TYPE KB


Consists of one coll to set lotch and another coil
to release It. Both operto release it. Both oper ate on same voltage wise.
only a momentary puls For memory devices, overload protectlon and outomatic control. All are No. ending in $G$ which are 10 amp . No. ending $25^{2} \times 18^{3} \times 23^{3 \prime \prime}$. Wt. 6 oz . Stk. No. Type Conts. Coil V. Eoch $19 A 1468$ KB17AY 4PDT GAC 11.05 $19 A 188$ KB17AY 4PDT 12AC 11.05 $\begin{array}{llll}19 A 1469 K B 17 A Y 4 P D T \\ 19 A 1470 \mathrm{~KB} 17 A Y 4 P D T & 115 A C & 11.05 \\ 19 A\end{array}$ ing. light or motor switching, speake, selection, etc. Size Stk. No. Mfg. No. 19A1534 GM11A 19 A1535 GMIIA

## PC IMPULSE TYPE



Armoture driven
rocker type octurocker type actu-
otor with single coil provides impulse switching for circult reversing or on-off
use. Requires only 60 MS pulse. Contocts roted of 2 Size 2 友 $\times 2$ it $\times 28^{\circ \prime \prime}$, two hole mounting. Wt. 5 oz . Stk. No. Type Conts. Coll V. Eoch $19 A 1344$ PCIIA DPDT $115 A C \quad \$ 5.90$ $19 A 1345 \mathrm{PC} 17 \mathrm{~A}$ 4PDT 24AC 8.1

RELAY CONTACT CLEANER AND BURNISHER
Convenient pocket clip with plostic cop. Aluminum chuck holds blade securely. Hord tempered blade cleans any type contact, leaves no grit or dust. No. 16B504. Jonord P-4. With 12 Blades. Net Eoch No.' 16B505. Pockoge of 25 Replocement Blodes. Pockage

# Guardian Relays \＆Solenoids 

| GUARDIAN POWER RELAYS ith Interchangeable Coil Assembles |  |
| :---: | :---: |



 quirement for AC is 9.5 volt omperes， 60 cycles．Molded bokelite base，inter－ changeable coil．Screw terminals．Mounting： 2 holes for $8-32$ screws．



100
 ＂1＂Intermittent types can be energized up to 5 minutes．＂ C ＂continuous

duty types for unlimited time，if operated within power roting．Plunger has slotted end with $1 / 8^{\prime \prime}$ hale for coupling．See new $2 H D$ and $4 H D$ heavy duty | units． |
| :--- |

| Stock No． | Mifg． No． | Duty | Volts | $\begin{array}{\|c\|} A C \\ \text { or DC } \end{array}$ | Ohms | Amps． | Adj． Stroke | ＊Max． Lift | L． | dy Si |  | $\begin{aligned} & \text { Wt. } \\ & \mathrm{Oz} . \end{aligned}$ | Each Net |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $19 \mathrm{B278}$ | 2HD | I | 115 | AC | 39 | ． 6 | 1／8－8／4 | 60 oz ． | $1{ }^{\text {委 }}$ | 1710 | 1\％0 | 13 | 8.66 |
| 198279 | 2HD | I | 24 | DC | 20 | 1.2 | 1／8－3／4 | 120 oz ． | $1{ }^{\frac{3}{3}}$ | $17 / 1 /$ | 140 | 13 | 8.93 |
| 198280 | 4 HD | I | 24 | DC | 14 | 1.7 | 1／8－3／4 | 156 oz ． | 2 | 176 | 15／8 | 15 | 6.41 |
| 198281 | 4 HD | I | 110 | DC | 330 | ． 33 | 1／88／4 | 156 oz ． | 28 | $17 / 13$ | 15／8 | 15 | 6.41 |
| 19B142 | 11 | 1 | 6 | DC |  | 3.00 | 1／8－7／8 | 39 oz ． | $1{ }^{2} 16$ | 137 | 115 | 7.5 | 3.15 |
| 198143 | 11 | C | 6 | DC | 5 | 1.2 | 1／85\％ | 21 oz ． | $1{ }^{1 / 8}$ | $1{ }^{\frac{1}{37}}$ | $1 \begin{aligned} & 18 \\ & 18\end{aligned}$ | 7.5 | 3.15 |
| 198144 | 11 | 1 | 24 | AC | 5.1 | 1.10 | 1／8－1 | 20 oz． | $1{ }^{18}$ | 13 | 13 | 7.5 | 3.15 |
| 198153 | 11 | C | 24 | AC | 12 | ． 33 | 1／8－1 | 802. | 11 | 13 | $1 \frac{1}{18}$ | 7.5 | 3.15 |
| 198155 | 11 | C | 24 | DC | 72 | ． 333 | 1／8．5／8 | 21 oz ． | $1 \frac{1}{16}$ | $1 \frac{1}{1}$ | $1{ }^{18}$ | 7.5 | 3.15 |
| 19B156 | 11 | 1 | 115 | AC | 125 | ． 225 | 1／8－1 | 20 oz ． | $1 \frac{18}{18}$ | $1{ }^{\frac{3}{2}}$ | 115 | 7.5 | 3.15 |
| $19 \mathrm{B165}$ | 11 | C | 115 | AC | 300 | ． 072 | 1／81 | 8 oz ． | $1{ }^{15}$ | 13 | $1{ }^{18}$ | 7.5 | 3.15 |
| 19B169 | 12 | C | 115 | AC | 150 | 155 | 1／807／8 | 22 0z． | 15／8 | 12 | $1 \frac{18}{18}$ | 6 | 4.46 |
| 198103 | 14 |  | 115 | AC | 11 | 1.4 | 1／8－11／2 | 110 oz ． | $2{ }^{\frac{1}{4}}$ | $1 \frac{7}{16}$ | $2 \frac{1}{16}$ | 19 | 6.04 |
| $19 \mathrm{B170}$ | 14 | C | 115 | AC | 18 | ． 52 | 1／8－11／2 | 65 oz. | $2{ }^{\frac{1}{16}}$ | $1{ }_{1}^{1 / 8}$ | $2 \frac{1}{18}$ | 19 | 6.04 |
| 19874 | 16 | C | 115 | AC | 85 | ． 19 | 1／85／8 | 55 oz ． | 15／8 | 11／8 | $1 \frac{1}{17}$ | 7.5 | 3.68 |
| 198186 | 18 | I | 115 | AC | 8.8 | 1.45 | 1／8－1 | 304 oz ． | 21／2 | $1+1$ | $2 \frac{1}{6}$ | 16.5 | 4.99 |
| 19890 | 18 | C | 115 | AC | 19.7 | ． 39 | 1／8－1 | 145 oz ． | ．21／2 | $1 \frac{1}{17}$ | $2 \frac{1}{16}$ | 16.5 | 4.98 |
| $19 \mathrm{B285}$ | 18 | 1 | 230 | AC | 45 | 59 | 1／8－1 | 304 oz． | 21／2 | $1 H$ | $2 \frac{1}{16}$ | 16.5 | 5.25 |
| 19B286 | 18 | C | 230 | AC | 78 | 20 | 1／1 | 145 oz ． | 21／2 | 1 ＋ | $2 \frac{1}{16}$ | 16.5 | 5.25 |
| 19 A 325 | 22 | I | 6 | DC | 4.7 | 1.27 | 16－3／8 | 24 oz ． | 11／8 | $3 / 4$ | $3 / 4$ | 2.5 | 2.84 |
| 19 A328 | 22 | C | 6 | DC | 9 | ． 66 | 15－1／4 | 13 oz ． | 11／8 | 3 | $3 / 4$ | 2.5 | 2.94 |
| 19 A337 | 22 | I | 24 | DC | 60 | ． 47 | \％ | 24 oz ． | 11／8 | $2 / 4$ | $3 / 4$ | 2.5 | 2.94 |
| 19 A374 | 24 | 1 | 115 | AC | 310 | 130 | 18－5／88 | 19 oz ． | 11／6 | 3 | 星 | 3.0 | 3.41 |
| 19 A375 | 24 | C | 115 | AC | 500 | ． 07 | 18．8\％ | 12 oz ． | $11 / 4$ | $\frac{37}{37}$ | \％ 8 | 3.0 | 3.41 |
| 19A23 | 28 |  | 24 | AC | 7.5 | ． 9 | 161／2 | 35 oz ． | 13／8 | 接 | $1{ }_{18}^{18}$ | 3.5 | 3.15 |
| 19 A24 | 28 | C | 24 | AC | 17.4 | ． 34 | 15 1／2 | 20 oz ． | 11／8 | 18 | $1{ }_{1}^{18}$ | 3.5 | 3.15 |
| 19A25 | 28 | I | 115 | AC | 220 | 16 | 18．1／2 | 35 oz ． | 11／8 |  | $1 \frac{18}{18}$ | 3.5 | 3.41 |
| 19 A 27 | 28 | C | 115 | AC | 400 | ． 077 | 15．15 | 20 oz ． | $11 / 8$ | H | $1 \frac{18}{18}$ | 3.5 | 3.41 |
| 19 A43 | 28 | I | 6 | DC | 3.3 | 1.8 | 15－1／2 | 41 oz ． | 11／8 | $\frac{15}{15}$ | $1 \frac{1}{15}$ | 3.5 | 2.94 |
| 19A44 | 28 | C | 6 | DC | 7.7 | ． 78 | 16－1／2 | 35 oz ． | $11 / 8$ | 18 | $1 \frac{1}{18}$ | 3.5 | 2.94 |
| 19A47 | 28 | 1 | 12 | DC | 13 | 9.2 | 15－1／2 | 41 oz ． | $11 / 8$ | 将 | 118 | 3.5 | 2.94 |
| 19A58 | 28 | C | 12 | DC | 27 | ． 45 | 16－1／2 | 35 oz ． | 11／8 | 4 | $1 \frac{1}{16}$ | 3.5 | 2.94 |
| 19A65 | 28 |  | 24 | DC | 50 | 48 | 1011／2 | 41 nz ． | 11／8 |  | 118 | 3.5 | 2.94 |
| 19A68 | 28 | C | 24 | DC | 104 | 23 | T 18 1／2 | 35 oz ． | 11／8 | 格 | 11 | 3.5 | 2.94 |
| $19 \mathrm{C282}$ | 34 | I | 115 | AC | 400 | 11 |  | 16 oz | 11／8 | $3 / 4$ | 1.3 | 2.5 | 2.31 |
| 19C254 | 34 | I | 6 | DC | 4.3 | 1.4 | 3／6－1／2 | 21 oz． | 11／8 | $3 / 4$ | 18 | 2.5 | 2.31 |
| 19 C 396 | 34 | I | 24 | DC | 66 | ． 36 | 1／10－1／2 | 21 oz ． 1 | 11／8 | $8 / 4$ | $1 \%$ | 2.5 | 2.31 |

## GUARDIAN UNIVERSAL＂200＂SERIES

## COIL AND CONTACT ASSEMBLIES

Two bosic parts－a Cail Assembly with core piece and a Cantact Assembly with switch blades，armoture，spring and frome－comprise this versatile reloy．Very easy to set up or chonge obout．Order choice of Coil Assembly and choice of Contact Assembly from tables belaw．All cail assemblies are interchangeable and fit either Stand－
ard or Midget size Contoct Assemblies．Shpg．wt． 4 az． 60 CYCLE AC COILS Stock Fact．Coil Rating Price Stack Foct．Colls Roting Price

No．Noil Ror Ohms Each No．Nolts Ohms Each $\begin{array}{cccccccc}\text { No．} & \text { No．} & \text { Volts Ohms Each } & \text { No．} & \text { No．} & \text { Volts Ohms Each } \\ 19 A 31 & 200-6 A & 6 & 1.7 & 51.85 & 19 A 35 & 200-6 \mathrm{D} & 6 \\ 19 \mathrm{~A} 32 & 200-12 \mathrm{~A} & 12 & 6.8 & 1.85 & 19 \mathrm{~A} 36 & 200-12 \mathrm{D} & 12 \\ 1920 & 50 & \mathbf{2} .00\end{array}$ | $19 A 32$ | $200-12 A$ | 12 | 6.8 | 1.85 | $19 A 36$ | $200-12 D$ | 12 | 50 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | ---: | ---: |
| $19 A 33$ | $200-24 A$ | 24 | 24 | 1.85 | $19 A 37$ | $200-24 D$ | 24 | 200 |
| 19.00 |  |  |  |  |  |  |  |  |
| 1000 |  |  |  |  |  |  |  |  | $\begin{array}{llllllllll}19 A 34 & 200-115 A & 115 & 725 & 2.15 & 9939 & 200-110 D & 110 & 3400 & 2.85 \\ 19860 & 200-230 A & 230 & 2950 & 2.85 & 9 A & 200\end{array}$ 19860 200－230A $2302950 \quad 2.85 \quad 194437 \quad 200-10000$ D Plate Coil 2.86 CONTACT SWITCH ASSEMBLIES

For use with Coil Assemblies obove．All contacts ore fine silver．Ratings are for $13 / 4^{\prime \prime} \times 27 / 8^{\prime \prime} \times 11 / 8^{\prime \prime}{ }^{\prime \prime} \mathrm{W}^{\text {non－inductive lood．Size of stondord units assembled is }}$ $13 / 4^{\prime \prime} \times 27 / 8^{\prime \prime} \times 11 / 8^{\prime \prime} \mathrm{W}$ ；Size of Midget units assembled， $11 / 2^{\prime \prime} \times 2{ }^{1}{ }^{\prime \prime} \times 11 / 8^{\prime \prime} \mathrm{W}$ ． STANDARD CONTACT ASSEMBLIES MIDGET CONTACT ASSEMBLIES Stock Fect．Contact Price Stock Fact．Contoct Price 19A40 200－i SPDT ${ }^{\text {Rating Amps } \$ 1.60} 19817$ 200－M1 SPDT 10 Amps $\$ 1.50$ $19 A 41200-2$ DPDT 8 Amps $2.1019848 \quad 200-M 2$ DPDT 10 Amps 1.85 $1984200-4$ DPDT 121／2Amps 2.3519861 200－M5 4PDT 8 Amps 3.00 1982 200－5 4PDT 8 Amps 3.70
Extra Switch Ports Kit．Consists of parts to make up to 4 P．D．T
No．19A42．Type 200－3．Fits Stondard Assembly．Eoch．
No． 19 B 95 ．Type 200－M3．Fits Midget Assembly．Eoch．
$\$ 1.80$

## INTERLOCKING AC RELAYS



TYPE IR－1200－1200．Used to maintoin circuits con－ tinuously without coil power consumption．Unit is electrically pulse operoted with mechanical hold and electrical releose． 8 amp contocts 60 cycle，non－in－
ductive．Size $1+1 \times 13 / 4 \times 2 / 8^{\prime \prime}$ ．Wt． 5.5 oz ． ductive．Size $1+\frac{1}{2} \times 13 / 4 \times 21 / 8$ ．Wt． 5.5 oz ．

GUARDIAN STEPPERS

For occurote sequence selecting, pulse multiplying, pulse dividing, circuit selecting, counting and latching
(1) IR-MER 24 POINT ELECTRICAL RESET STEPPER. Positive reset on pulses as
 or more may be interconnected to
No. 19A547. IR-MER-115 V.AC. 20 steps per sec. Eoch......... $\$ 15.75$ (3) IR-MC 24 POINT MIDGET. Continuous rototion stepper with 24 points. For occurace sequence circts stobility. Size $2{ }^{18} \times 3 \times 31 / 4^{\prime \prime}$. Wt. $91 / 2$ ozs.
No. 19A471. IR-MC-115 V. AC. 20 steps per sec. Each
 stepper design, completely metol enclosed. Will operate up to 20 steps per secstepper design, completely metoor enclosed in business machines, computer circuits, outomation. Size $2^{\prime \prime} \mathrm{L}$. $\times 11^{3} \mathrm{~s}^{\prime \prime}$ dio. Wt. 5 oz . Continuous duty.

 No. 19A488. 2 ONOITS DC. MELAY, 60 CYCLES AC. Type IR-610L. Midget lotching reloy for use on 115 V . AC. Provides positive on-off control for positioning devices; remote controls, lighting circuits, etc. 5 amp contacts, snap oction switching. Short duration pulse reverses switch and holds last position with coil de-en-



## 

SIGMA SENSITIVE RELAYS

sensitivity SPDT $i$ omp silver contacts. Open type design-mounting


 | No. | Coil Resistonce | M.A. Each |
| :--- | :--- | :--- | :--- |
| 198592 | $5 F-1000-S-S I L ~$ | 2.3 |
| 9.25 |  |  | $\begin{array}{llll}198592 & \text { SF-1000 } & \text { S-SSL } & 2.3 \mathbf{\$ 9 . 2 5} \\ 198594 & 5 \mathrm{FF} 5000-5 \mathrm{SIL} & 1.0 & \mathbf{9 . 9 0}\end{array}$ 198594 5 FF-10000-S-SIL 1.710 .905

PLATE CIRCUIT TYPE 4F RELAY
Useful in model airplane control or any
electronic circuit requiring high sensitivity. Adjustable
spring tension and 20 to 50 milliwatts. Balanced arma-
 sition. SPDT contacts roted up to
 No. Coil Resispance MA Each
$19 A 515$ 4F-1000-S-SIL $4.5 \$ 6.50$ $\begin{array}{lll}19 A 515 & 4 F-1000-5-S I L & 4.5 \\ 19 A 518 & \text { 4F-8000-5-SIL } & 1.6 \\ \mathbf{7 . 1 0}\end{array}$

## SIGMA 46 SERIES

## DPDT relays for switching


up to 10 amp loads. Used ers, loundry equipment timPlastic duol cover. Fits standard octol socket. Base wired for conventionol con-
toct connections. $11^{\circ \prime \prime \prime}$ sq., 2 ds" $^{\prime \prime}$ high. Wt. $A C^{3}$ Y $/ 4$ PES $\# 46 B R O Z$
 sensitivity type. 5 omp contacts, Fits
 No. Coil Resistance Each 198544 42R06-1000-G-SIL S6.55 $19854642 R 06-2500$-G-SIL 19B554 42R06-10000-G-SIL
. $\$ 14.75$

## IMPULSE RATCHET RELAYS

## TYPE 41FZ

 AC RELAYHighly sensitive completely quiet, shoded-pole, long life relay. All titype operate on 0.2 voltamperes, contacts
carry 2 amps. All others require 0.4
$\checkmark A$ have 10 amp contacts. Size $11 / 4$ V. A ${ }^{1}$ have 10 amp contacts. Size $11 / 4$

$\times 21 / 4 \times 1 \frac{18}{\prime \prime}$. Wt. $21 / 2 \mathrm{oz}$. $\begin{array}{lccc}\text { Stock Sigma-Type } & A C & \text { Net } \\ \text { No. } & 41 F Z & \text { volts } \\ \text { Each }\end{array}$ 19A508 lOACG-BSL $\quad 6 \quad \$ 3.90$ $\begin{array}{llll}19 A 509 & 35 A C S-S I L & 6 \% & 4.50 \\ 19 A 512 & 5000 A C G-B S L & 120 & \mathbf{4 . 1 0}\end{array}$ | $19 A 513$ 10000ACS-SIL 120* $\mathbf{5 . 0 0}$ |
| :--- | :--- |

$41 F$ DC TYPE, 40 MW sensitivity Same as 41 FZ described above.

| Stock <br> No. | Sigma Type G <br> Coil Resistance | Net <br> Each |
| :---: | :--- | ---: |
| 198598 | $41 F-500-$ S-SIL | $\mathbf{\$ 4 . 3 0}$ |
| 198588 | $41 F-1000-$ S-SIL | $\mathbf{4 . 3 0}$ |
| 198590 | $41 F-5000-$ S-SIL | $\mathbf{4 . 5 0}$ |
| $19 B 591$ | $41 \mathrm{~F}-10000-$ S-SIL | $\mathbf{4 . 7 5}$ |

## SMALL SENSITIVE TYPE

llf. Low cost DC Re-
lay. Very populor
sensitive type. Size
 50 milliwatt sensitivity SPDT silver conity SPDT silver con-
tacts roted of 1 amp.

tacts roted of Mg.
Stock
Mo. Coil Oper. Net 19A504 11F-1000G-SIL. $10007.0 \$ 1.95$ 19A580 11F-1500G-SIL 15005.81 .95 19AS80 IIF-1500G-SIL $23004.6 \quad 1.95$
 19 A507 lIF-9000G-SIL 9000 $2.4 \quad 2.35$

$$
\begin{aligned}
& \text { 11FZ AC RELAYS } \\
& 19 \text { B500 } 11 \mathrm{FZ}-25-A C S-S I L \\
& 19 \text { B501 } 11 \mathrm{FZ}-9000 \text {-ACS-SIL } 115 \mathrm{~V} .3 .05 \\
& \hline
\end{aligned}
$$ NEW GENERAL PURPOSE 65 DC SERIES

Relioble, low cost, small size open frame units only :7 $\times 11^{1} \times 11^{3 \prime \prime}$.
Wt. 1 oz. 90 milliwofts, 1 amp switching. For vending machines, automatic toys, games, etc.


SPDT.
No. Mfa No Coil Y Coil Res. $19 \mathrm{B502} 65 \mathrm{~F} 1 \quad 6 \mathrm{DC} \quad 410 \mathrm{~S} 1.50$ $\begin{array}{lllll}198520 & 65 F I & 12 D C & 1640 & 1.50 \\ 19 B 599 & 65 F I & 24 D C & 6560 & 1.50\end{array}$

RBM CONTROLS POWER RELAYS, CONTACTORS
For Refrigeration-Air Conditioning-Heating-Appliances
$-\operatorname{cec}^{2}$
1

C15

70


First value inductive, second resistive load roting of contacts.


19B180 84-903 115 AC SPNO $8-16$

Type C15. Industrial contactor-pressure connector No. 10 wire. Size $\begin{array}{ll}33 / 6 \times 23 / 4 \times 33 / 8^{\prime \prime} \\ 198173^{C} \text { C } 15-902 \quad 110 \mathrm{AC} & 4 \mathrm{PNO} 1 \text { to } 2 \mathrm{HP}\end{array}$ $\begin{array}{ll}19.80 & 17.82 \\ 19.80 & 17.82\end{array}$ $\begin{array}{lllll}19 B 173 & C 15-902 & 110 \mathrm{AC} & \text { 4PNO } 1 \text { to } 2 \mathrm{HP} \\ 19 \mathrm{~B} 174 & \text { C15-903 } & 220 \mathrm{AC} & \text { 4PNO } & 110 \text { to } 600\end{array}$


| Type 75. | AC | power contactor. | Screw terminals, size | $21 / 2 \times 21 / 6 \times 21 / 4^{\prime \prime}$. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 198211 | $75-902$ | $115 / 120$ | $2 P-N O$ | $2 H P$ | $\mathbf{4 . 5 9}$ | $\mathbf{4 . 1 3}$ |
| 198212 | $75-903$ | $230 / 240$ | $2 P-N O$ | 18 | $\mathbf{4 . 5 9}$ | $\mathbf{4 . 1 3}$ |



Fig. (1) Type 93 Open Type, solder terminals, out front wiring, single hole mounting. A new idea in cost saving assembly. Overall size 1 opprox 2 oz . 10 amp button contacts.
Fig. (2) Type 93 Enclosed Type with quick connect terminals. May be plugged into panel mount socket Fig. (3) (Socket for printed circult wiring Fig. (4)). Relay size $21 / 8 \times 1$ yex in". Wt. opprox. $21 / 2 \mathrm{oz}$. $10 \mathrm{amp}^{-}$roting.

| (1) Open Type | So |  | (2) Enclosed Quick | $\mathrm{Co}$ | ermin |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $901$ | $1 P D$ | \$3 | Sta.No. Mrg. |  | PDT \$4.50 |
| 9853 93-902 | 6 AC 2PDT | 3.95 | $19 \mathrm{C75}$ 930-904 | 24 AC | 1PDT 3.75 |
| 854 93-904 | 24 AC IPDT | 3.25 | 19B76 930-905 | 24 AC | 2PDT 4.50 |
| 55 93-905 | 24 AC 2PDT | 3.95 | 19877 930-906 | 24 AC | 3PDT 5.00 |
| 56 93-906 | 24 AC 3PDT | 4.40 | 19878 930-907 | 120 AC | 1 PDT 3.75 |
| 9457 93-907 | 120 AC IPDT | 3.25 | $19 \mathrm{B79} 93 \mathrm{Q}-908$ | 120 AC | 2PDT 4.50 |
| 9A59 93-908 | 120 AC 2PDT | 3.95 | 19A80 93Q-909 | 120 AC | 3PDT 5.00 |
| 9A62 93-909 | 120 AC 3PDT | 4.40 | 19A81 93Q-917 | 12 DC | 2PDT 4.05 |
| 463 93-914 | 6 DC 2PDT | 3.50 | 19482 93Q-920 | 24 DC | DT 4.05 |
| -93-917 | $12 \mathrm{DC} \mathrm{2PDT}$ | 3.50 | 19883 | D | T |
| 93-919 | 24 DC IPDT | 3.10 | (3) 19485 |  | 5 |
| 67 93-920 | 24 DC 2PDT | 3.50 | A86 | . Printed |  |
| 93-921 | 24 DC 3PDT | 4.00 | Choice |  |  |
| 93-923 | 110 DC 2PDT | 4.10 | 50-99 Ed |  |  |

## ALLIED CONTROL COMPANY RELAYS



80 Series Power Types. Sturdy heavy duty power relay for the most demond$\begin{array}{llll}\text { ing requirements. DPDT contacts. } 15 / 8 \times 118 \times 11 / 2^{\prime \prime} .15 \mathrm{amp} \text {. Wt. } 51 / 2 \mathrm{oz} \text {. } \\ \text { Stk. No. Mig. Volt } 1-9 & 10-49 \text { Stk. No. Mfg. Volt } 1-9 \quad 10-49\end{array}$ $\begin{array}{lllllllllll}\text { Stk. No. Mfg. Volt } & 1-9 & 10-49 & \text { Stk. No. Mfg. } & \text { Volt } & 1-9 & 10-49\end{array}$ $\begin{array}{llllllllll}43 A 204 & B O-6 A & 6 A C & \$ 5.50 & \$ 4.95 & 43 A 209 & B O-6 D & 6.3 D C & \$ 5.05 & \$ 4.55 \\ 43 A 205 & B O-6 A & 24 A C & 5.50 & 4.95 & 43 A 210 & B O-6 D & 13.2 \mathrm{DC} & 5.05 & 4.55\end{array}$ | $43 A 206$ | $B O-6 A$ | 115 | $A C$ | 5.50 | 4.95 | $43 A 211$ | $B O-6 D$ | 26.5 | $D C$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | $43 \mathrm{~A} 207 \mathrm{BO}-6 \mathrm{~A} \quad 230 \mathrm{AC} \quad 5.62 \quad 5.06 \quad 43 \mathrm{~A} 213 \mathrm{BO}-6 \mathrm{D} \quad 115 \mathrm{DC} \quad 5.60 \quad 5.04$

T154 and T163 Serles DC Relays. Miniature enclosed plug-in type. 2 omp con-


DPDT (Use 30055-1 Socket)
4PDT (Use 30055-2 Socket) Stk. No. Mfg. No. Volts $1-910-49$ Stk. No. Mfg. No. Volts $1-9 \quad 10-49$ $43 A 257$ T154-2C 6 DC \$3.42 $\$ 3.08$ 43A266 T154-4C 6 DC \$3.82 $\$ 3.44$ $\begin{array}{llllllllll}43 A 258 & \text { T } 154-2 C & 12 \mathrm{DC} & 3.42 & 3.08 & 43 A 267 & \text { T } 154-4 \mathrm{C} & 12 \mathrm{DC} & 3.82 & 3.44 \\ 43 A 259 & \text { T } 154-2 \mathrm{C} & 24 \mathrm{DC} & 3.42 & 3.08 & 43 A 268 & \text { T154-4C } & 24 \mathrm{DC} & 3.82 & 3.44\end{array}$ $\begin{array}{lllllllllll}43 A 259 & \text { T } 154-2 C & 24 D C & 3.42 & 3.08 & 43 A 268 & \text { T1 }\end{array}$

 PO Series. Heavy duty power type CNA-CNAS Series. Compact high cur with 15 amp contacts. Open mount- rent series. CNA roted 25 amp . CNAS ing, solder terminals. 115 AC VOLTS

115 AC VOLTS
$\begin{array}{lllllllll}\text { No. Mifg. Contocts } & 1-9 & 10-49 & \text { No. Mfg. Contacts } & 1-910-49 \\ 43 A 245 & \text { PO-9A } & 3 P D T & \$ 6.40 & \$ 5.76 & 43 A 218 \mathrm{CNA}-13 \mathrm{~A}-115 & \text { SPST } 8.007 .20\end{array}$ Quantity Users-Write Us for Industrial Price Quotations

## Mallory And Centralab Switches

MALLORY SWITCHES


## 3100J \& 3200J SERIES

Compact switches hoving wide opplication for use in max. current 125 pment. Rating 30 . breakdown Have $2^{\prime \prime}$ notched shafts, silver contacts, $3 / 8^{\prime \prime}$ long brass threaded bushing with Bar knob and Mtg. hardwore. Shpg. wt. 4 oz . See Plates Below

| Shorting Type | NonShorting Type | Poles | Positions | $\begin{gathered} \text { Base } \\ \text { Dia. } \end{gathered}$ | $\begin{gathered} \text { Each } \\ 1-4 \end{gathered}$ | $\begin{gathered} \text { Each } \\ 5-9 \end{gathered}$ | $\begin{aligned} & \text { Each } \\ & 10-24 \end{aligned}$ | $\begin{aligned} & \text { Each } \\ & 25-49 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3115 J | 3215 J | 1 | 5 | 11/4 | \$1.01 | \$0.84 | \$0.76 | \$0.72 |
| ${ }_{3122 \mathrm{~J}}$ | 32112J | 1 | 12 | 11/" | 1.01 | . 84 | . 76 | . 72 |
| ${ }_{3}^{31223 J}$ | 3222 J | 2 | 2 | 11/" | 1.01 | . 84 | . 76 | . 72 |
| 3123 J | 3223 J | 2 | 3 | 11/" | 1.01 | . 84 | . 76 | . 72 |
| 3126 J | 3226 J | 2 | 6 | 11/" | 1.01 | . 84 | . 76 | . 72 |
| 3134 J | 3234 J | 3 | 4 | 11" | 1.04 | . 87 | . 78 | . 74 |
| 3142 J | 3242 J | 4 | 2 | 11/" | 1.04 | . 87 | . 78 | . 74 |
| 3143 J | 3243 J | 4 | 3 | $11 /{ }^{\prime \prime}$ | 1.04 | . 87 | . 78 | . 74 |
| 31117 J | 32117 J | 1 | 17* | 14\%" | 1.55 | 1.29 | 1.16 | 1.10 |
| 3129 J | 3229 J | 2 | $9^{*}$ | 1\% | 1.55 | 1.29 | 1.16 | 1.10 |
| 3136 J | 3236 J | 3 | $6^{*}$ | 1\%" | 1.66 | 1.38 | 1.24 | 1.18 |
| 3163 J | 3263J | 6 | 3* | 14/8" | 1.66 | 1.38 | 1.24 | 1.18 |

## MULTI-GANG 1300L SERIES

 $11 / 4^{\prime \prime}$ Mounting Radius. 1 fixed, 1 adjustable stop silver pl. contacts, solid silver rotor contact slugs and alloy springs. $2^{\prime \prime}$ notched shafts. $1 / 2^{\prime \prime}$ spacing be tween sections except 3 gang which have I" spacingRating 1000 V . break down; max current 6 amp @ 300 V . DC; 8 amp @ 6 V. DC. Bar knob, mt hardware included. Üses $11 / 4^{\prime \prime}$ Base-Plates. All switches ore non-shorting. Shpg. wt 4 oz

| Type | Gang | Pole | Pos. | 1-4 | 5-9 | $\begin{aligned} & 10- \\ & 24 \end{aligned}$ | $\begin{aligned} & 25- \\ & 49 \end{aligned}$ | Type | Gang | Pole | Pos. | 1-4 | 5-9 | $\begin{gathered} 10- \\ 24 \end{gathered}$ | $\begin{array}{\|l\|} \hline 25- \\ 49 \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1311L* | 1 | 1 | 11 | 2.09 | 1.74 | 1.57 | 1.49 | 1322L | 2 | 8 | 2 | 2.59 | 2.16 | 1.94 | 1.84 |
| ${ }^{1312 L}$ | 1 | 4 | 2 | 2.09 | 1.74 | 1.57 | 1.49 | 1323 L | 2 | 6 | 3 | 2.59 | 2.16 | 1.94 | 1.84 |
| ${ }_{1}^{1313 L}$ | 1 | ${ }_{2}^{3}$ | 3 | 2.09 | 1.74 | 1.57 | 1.49 | ${ }^{1325 L}$ | 2 | 4 | 5 | 2.59 | 2.16 | 1.94 | 1.84 |
| $\begin{aligned} & { }_{1321 L^{*}} \end{aligned}$ | 1 | 2 | ${ }_{11}^{5}$ | 2.09 | 1.74 2.16 | 1.57 <br> 1.94 | 1.49 | ${ }_{13351}^{1331 L^{*}}$ | 3 3 3 | 3 6 | 11 5 | 3.24 3.24 | 2.70 2.70 | 2.43 2.43 | 2.31 <br> 2.31 <br> 1 |

## No third or "off" p

## CERAMIC SECTION 170C \& 160C SERIES



Rotory, non-shorting, adjustable stops, $30^{\circ}$ in cates extro position (Off). Max. breaking current, resistive load, 5 A . @ 300 V . AC-DC. Nonbreaking 10 A. Hamband non-shorting continuous rotation, $90^{\circ}$ index. 2 gang $17 / 8 \mathrm{~s}^{\text {spacing, }}$ others $\mathrm{I}^{\prime \prime}$. Rated 100 watts @ 1000 V . DC. Specify B-A Stock No. 12 A 368 and Type When Ordering. Shpg. wt. 8 oz.


MALLORY SWITCH DIAL PLATES
Aluminum figures efcee on black bockground. is" OD with is" hole. All are for $1 / 4$, bose switches with $30^{\circ}$ spacing, except those morked which Specify B-A No. 12 C541 and Type When Ordering oz.

| Type | Marked | Type | Marked | Type | Marked | Type | Marked | Type | Marked |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 372 | 1 to 2 | 377 | 1 to 7 | 382 | 1 to 12 | 387 | Off 1 to 7 | 456* |  | 6 |
| 373 | 1 to 3 | 378 | 1 to 8 | 383 | Off 1 to 3 | 388 | Off 1 to 8 | 459* | 1 to |  |
| 374 375 | 1 to 4 | 379 | 1 to 9 | 384 | Off 1 to 4 | 389 | Off 1 to 9 | 467* | 1 to |  |
| $\begin{array}{r}375 \\ 376 \\ \hline\end{array}$ | $\begin{array}{ll}1 \\ \text { to } \\ 1 & 5 \\ \text { to } \\ 6\end{array}$ | 380 381 | $\begin{array}{lll}1 \\ 1 \\ 1 & \text { to } & 10 \\ 1 & 11\end{array}$ | 385 388 | Of 1 to Off 1 to | 390 ${ }^{3}{ }^{\text {3 }}$ | Off 1 to 10 | Choice | Each |  |

## MINIATURE PUSH-BUTTON

Use in test panels, meter circuits and labs or any this type. Mounts in a single hole $\frac{1}{18}{ }^{\circ}$ dia. on panels to $1 / 4^{\prime \prime}$ thick. Mtg. rodius is $1{ }^{\prime \prime \prime}$ Mtg. depth $7^{\prime \prime}$ min . (1011) and $3 / 4^{\prime \prime}$ max. (1016). 500 V . DC Complete with mtg. hardware. Shpg. wt. 3 oz
Specify B-A Stock No. 12 C538 and Type When Ordering

| Type | Action | 1-4 | 5-9 | 10-24 | 25-49 | Type | Action | 1-4 | 5-9 | 10-24 | 25-49 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1011 | SPST, N.O. | \$ 68 | \$.57 | \$ . 51 | \$ . 48 | 1014 | DPST, N.O. | \$ 8.86 | \$ . 72 | \$ . 65 | \$ . 62 |
| 1012 | SPST, N.C. | . 68 | . 57 | . 51 | . 48 | 1015 | DPST, N.C. | . 86 | . 72 | . 65 | . 62 |
| 1013 | SPDT | . 79 | . 66 | . 59 | . 56 | 1016 | DPDT | 1.04 | . 87 | 78 | 74 |

## SPECIAL CENTRALAB SWITCHES

Type 1450. Use, os SPST, SPDT, DPST, DPDT, 4PST, 4PDT. 21/4" shoft. With knob. Shpg.' wt. 4 O'z No. 12A533. Net Each.
Type 1451. 4-Pole, 2-Position. Especially for press No. 12 A 480 . Net Eoch.

## CENTRALAB SWITCHES

## MINIATURE STEATITE

## PA2000 SERIES

Smaill and compact-only $7 / 8^{\prime \prime} \mathrm{mtg}$. radius required Silver plated spring brass clips and contocts; adjustable stop; $30^{\circ}$ indexing; $1 / 2^{\prime \prime}$ spacing between sections; $17 / 8^{\prime \prime}$ shaft. includes $11 / 4$ bar knob and mounting hardware marked with an asterisk signifying "shorting" Roting marked with on asterisk signifying "shorting". Roting-excellent RF characteristics, low inter-capacity. Rated 2.75 omp at 15 VDC; 230 milliamps at 115 VAC. Averoge Shog. wt. 602.

Specify B-A Stock No. $12 C 481$ and Type When Ordering

| Type | Gg. | Pole | Pos. | 1-4 | 5-9 | $\begin{aligned} & 10- \\ & 24 \end{aligned}$ | $\begin{aligned} & 25- \\ & 49 \end{aligned}$ | Type | Gg. | Pole | Pos. | 1-4 | 5-9 | $\begin{aligned} & 10- \\ & 24 \end{aligned}$ | $\begin{gathered} 25- \\ 49 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| *2000 | 1 | 1 | 12 | \$2.61 | \$2.18 | \$1.96 | \$1.86 | 2019 | 1 | 6 | 2 | \$2.61 | \$2.18 | \$1.96 |  |
| 2001 | 1 | 1 | 12 | 2.61 | 2.18 | 1.96 | 1.86 | 2021 | 2 | 6 | 5 | 3.72 | 3.10 | 2.79 | 2.65 |
| *2002 | 1 | 2 | 6 | 2.61 | 2.18 | 1.96 | 1.86 | *2022 | 3 | 6 | 6 | 4.74 | 3.95 | 3.56 | 3.38 |
| 2003 | 1 | 2 | 6 | 2.61 | 2.18 | 1.96 | 1.86 | 2023 | 3 | 6 | 6 | 4.74 | 3.95 | 3.56 | 3.38 |
| *2004 | 2 | 2 | 12 | 3.72 | 3.10 | 2.79 | 2.65 | 2025 | 6 | 6 | 12 | 7.92 | 6.60 | 5.94 | 5.64 |
| 2005 | 2 | 2 | 12 | 3.72 | 3.10 | 2.79 | 2.85 | 2027 | 4 | 8 | 6 | 5.70 | 4.75 | 4.28 | 4.07 |
| *2006 | 1 | 3 | 5 | 2.61 | 2.18 | 1.96 | 1.86 | 2029 | 3 | 9 | 5 | 4.74 | 3.95 | 3.56 | 3.38 |
| 2007 | 1 | 3 | 5 | 2.61 | 2.18 | 1.96 | 1.86 | 2031 | 2 | 10 |  | 3.72 | 3.10 | 2.79 | 2.65 |
| *2008 |  | 3 | 12 | 4.74 | 3.95 | 3.56 | 3.38 | 2033 | 5 | 2 | 6 | 6.81 | 5.68 | 5.11 | 4.85 |
| 2009 | 3 | 3 | 12 | 4.74 | 3.95 | 3.56 | 3.38 | 2035 | 2 | 12 | 2 | 3.72 | 3.10 | 2.79 | 2.65 |
| *2010 | 2 | 4 | 6 | 3.72 | 3.10 | 2.79 | 2.65 | 2037 |  | 12 | 6 | 7.92 | 6.60 | 5.84 | 5.64 |
| 2011 | 2 | 4 | 6 | 3.72 | 3.10 | 2.79 | 2.65 | 2039 | 3 | 15 | 3 | 5.37 | 4.48 | 4.03 | 3.83 |
| 2013 |  | 4 | 12 | 5.70 | 4.75 | 4.28 | 4.07 | 2041 |  | 18 | 2 | 5.37 | 4.48 | 4.03 | 3.83 |
| *2014 | 1 | 5 | 3 | 2.61 | 2.18 | 1.96 | 1.86 | *2042 | , |  | 10 | 2.37 | 1.98 | 1.78 | 1.69 |
| 2015 | 1 | 5 | 3 | 2.61 | 2.18 | 1.96 | 1.86 | 2043 | 1 | 1 | 6 | 2.37 | 1.98 | 1.78 | 1.69 |
| 2017 | 5 | 5 | 12 | 6.81 | 5.68 | 5.11 | 4.85 | 2045 | 2 | 2 | 8 | 3.30 | 2.75 | 2.48 | 2.35 |

## MINIATURE PHENOLIC PAIOOO SERIES

Miniature phenolic-insulated switches that meet rigorous commercial or military applications. Clip and contact arrangement assure low inter-circuit tions. $30^{\circ}$ indexing, adjustable stop. $11 / 2 \times 11^{5} 6^{\prime \prime}$ dia. Shaft $21 / 4^{\prime \prime}$ long. 2.75 amps @ 15 V . DC. $230 \mathrm{MA} @ 115 \mathrm{~V}$. AC. Withstond 25 hour salt spray test. With knob, nut, lockwasher. Avg. shpg. wt. 5 oz.
Odd Numbercify B-A Stock No. $12 A 755$ ond Type When Ordering. Odd Numbered Switches are Non-Shorting-Even Numbers are Shorting Type


## SMALL GENERAL PURPOSE PHENOLIC SWITCHES

High quality laminated phenolic. Voltage breakdown 1000 volts AC-R.M.S. Rating 1.75 A @ 24 V. DC, 230 milliamps single hole. Bushing $3 / 8^{"}-32$ thread, $3 / 8^{\prime \prime}$ long. With . 1461 nut and lock washer. Avg. shpg. Wt. 6 oz.
Specify B-A Stk. No. 12 A568 and Type When Ordering.
Type 1460: 1 pole, 2 position, sharting. Positive index. SPST or SPDT far phono-radio, tone or sensitivity contral.
Type 1461: pole, 3 position, shorting. Positive index. Use as miniature band change, steptype tone or sensitivity control, and P. A. chonnel selector. Type 1462: 2 pole, 2 position, shorting. Positive index. Use os SPST, SPDT, DPST, DPDT. For meter reversing, P.A. channel, or switching BOTH Type 1463: 1 pole, 2 position
Type 1463: pole, 2 position, non-shorting, spring return index. For meter Type 1464: 2 pole, 2 position nory tolk switch on intercom systems.
Type 1464: 2 pole, 2 position, non-shorting. Spring return index. Use as Your Chaice of Types 1460 thru 1464 remote speaker return on intercoms.
1-4, Each.. S1.08 5-9, Each. .90c 10-24, Each. .81c 25-49, Each.. 77 c
LEVER ACTION PHENOLIC SWITCHES

## space saving lever switches have many uses: With multiple

switching sequences, these units mounted singly or in groups on special plates (listed below), are particularly
adaptable to intercoms, PA systems, test instruments, broadcast antenna interchange, speaker selection, etc. All metal parts steel cad. plated. Mts. two $6-32$ thread mount-
ing. holes on $15 / \mathrm{s}^{\prime \prime}$ centers in switch front plote. Rating $2.75 \mathrm{amp} @ 15 \mathrm{~V}$ DC; 230 milliamps at 115 V . AC (make and break, resistive load). $30^{\circ}$ indexing. Complete with screws and black knob. Avg. shpg. wt. 4 oz.

| Shorting | NonShorting | Poles | Posit. | Indexing | 1-4 | 5-9 | 10-24 | 25-49 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1452 | 1454 | 2 | 3 | Positive | \$1.26 | \$1.05 | \$.95 | \$ . 90 |
| 1453 | 1455 | 2 | 3 | Spring Return | 1.26 | 1.05 | . 95 | . 90 |
| 1466 | 1467 | 2 | 3 | Posit. \& Sp. Return | 1.26 | 1.05 | . 95 | . 90 |
| 1456 | 1457 | 4 | 2 | Spring Return | 1.44 | 1.20 | 1.08 | 1.03 |
| 1459 | 1458 | 4 | 2 | Positive | 1.44 | 1.20 | 1.08 | 1.03 |
|  | *1475 | 1 | 3 | Positive | 1.26 | 1.05 | . 95 | . 30 |

*Primarily replacement part for the ganged switches in tube testers and equip.
LEVER SWITCH MOUNTING PLATES
Specify B-A Stk. No. $12 A 722$ ond Type When Ordering
First columin indicotes quontity of switches to be gonged. Shpg.

| Gang | Type | Size | Gang | Type | Size | Your Choice Each |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | P1755 | $25 / 8 \times 3 / 4$ | 4 | P1758 | $2^{5} \mathrm{~s}^{\text {x }}{ }^{\prime \prime}$ | 1.4 | 5-9 | 10-24 | 25-40 |
| 2 | P1756 | $2588 \times 11 /{ }^{\prime \prime}$ | 5 | P1759 | $25 / 8 \times 33 / 4{ }^{\prime \prime}$ | 30c | 25c | 23c | 22 c |


（1）AC－DC TOGGLE SWITCHES


| Stock | $\begin{aligned} & \text { Mfg. } \\ & \text { Type } \end{aligned}$ | Action | $125 \mathrm{Vr}$ | $250 \mathrm{v} .$ | $\begin{gathered} 1-9 \\ \text { Each } \end{gathered}$ | $\begin{aligned} & \text { 10-99 } \\ & \text { Each } \end{aligned}$ | $\begin{aligned} & 100 \text { Up } \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 A 47 | 110－73 | SPST | 6 | 3 | \＄． 53 | \＄． 44 | \＄ 35 |
| 12 A648 | 112.73 | SPDT | 3 | 1 | ． 61 | ． 75 | ． 44 |
| 12 A649 | 216－73 | DPST | 3 | 1 | ． 90 | ． 75 | ． 60 |
| 12 A650 | ${ }^{216-73}$ | DPDT | 3 | 1 | ． 99 | ． 83 | ． 66 |
| $12 \mathrm{B402}$ | 111－16－73＊ | SPST | 6 | 3 | ． 59 | ． 49 | ． 39 |

> HEAVY DUTY AC TOGGLE SWITCHES
id＂bat handle toggle switch．Metal covered bakelite base．Stem ${ }^{\prime \prime}$＂long， dia．${ }^{\frac{1}{2} " \prime} \times 32$ thread．$* 6-32$ binder head screw terminals，all others have
 2 oz ．UL approved．

| （2）12A651 | 2FA53－73 | SPST | 15 | 10 | .54 | .45 | .36 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| （3）12A653 | 2FB53－73 | SPDT | 15 | 10 | .60 | .51 | .40 |
| （3）12A654 | 2FC53－73 | SPDT | 15 | 10 | 60 | .51 | .40 |
| （3）12A655 | 2GK50－73 | DPST | 15 | 10 | .82 | .68 | .54 |
| （3）12A657 | 2GL50－73 | DPDT | 15 | 10 | .96 | .80 | .64 |
| （3）12A658 | 2GM50－73 | DPDT | 15 | 10 | .96 | .80 | .64 |
| （3）12A659 | 6FB53－73 | SPDT | 15 | 10 | .75 | .65 | .57 |
| （3）12A660 | 6FC54－73 | SPDTs | 15 | 10 | .87 | .72 | .58 |

 | 12 A 794 ｜600C |
| :--- |

（5）HEAVY DUTY AC－DC TOGGLE SWITCHES

| 12 A 66112 A 662 | $\begin{aligned} & \hline \text { DK284-73 } \\ & \text { EK204-73 } \\ & \hline \end{aligned}$ | DPSTDPST | $16,1 \mathrm{HP}$$20,11 / 2 \mathrm{HP} 10$ | $\begin{array}{r} .99 \\ 1.65 \\ \hline \end{array}$ | $\begin{array}{r} .86 \\ 1.45 \\ \hline \end{array}$ | .761.15 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |

## PUSH－PUSH AC－DC SWITCHES



Positive action push on，push again for off．For any applica－ tion where a pushbutton is preferable．Stem $1 / 2^{\prime \prime \prime}$ ．Complete with body $7 / 8$ ．$\times$ ．
 Stock
$\begin{array}{cccccc}\text { Mig．} & \text { Amperes } & \text { Each } & \text { EEch } & \text { Each } \\ \text { Type } & 125 \mathrm{~V} .250 \\ 10-S \mathrm{~V} & 6 & 3 & \$ 1.05 & \mathbf{\$ 0 . 8 8} & \mathbf{\$ 0 . 7 0} \\ 60-S P & 10 & 5 & 1.14 & 1.03 & .93\end{array}$

## CARLING <br> SPST MIDGET SWITCH



Type 125 RB． 3 amps terminals．Threaded stem diameter，H2＂； bat handle length knurled nuts．Wt． 2 oz ．

## No． 12 C 596.

 1－9 Each 10－99 Eoch
## STACKPOLE UL APPROVED SLIDE SWITCHES

## WORLD＇S LARGEST PRODUCER OF SLIDE SWITCHES

For any need where a small switch is wanted－mike current， tone control，low power supplies，etc．All contacts．silver
 shpg．wt． 3 oz．All are positive action except where marked． All are UL approved．
Spring－Return，No Det
\＃U．I．D．Not Stackpole

| Stock No． | Mfg．No． | Type | Action | ${ }_{A C}^{A m p s}$ | $\begin{gathered} 5 \mathrm{~V} \\ \mathrm{DC} \end{gathered}$ | $\begin{gathered} 1-9 \\ \text { Each } \end{gathered}$ | $\begin{aligned} & \text { 10-99 } \\ & \text { Each } \end{aligned}$ | $\begin{gathered} 100-\mathrm{up} \\ \text { Each } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12A799 | SS－26 | A | SPST | 4 | 1.0 | ． 10 | ． 09 | ． 07 |
| 124768 | SS－26－1 | A | SPDT | 4 | 1.0 | ． 11 | ． 10 | ． 075 |
| 12 A 404 | SW－121 | A | \＃DPST | 1 | 0.5 | ． 16 | ． 14 | ． 10 |
| 12A769 | SS－50 | A | DPDT | 3 | 0.5 | ． 18 | ． 15 | ． 11 |
| 128837 | SS－36－1 | A | SPDT | 6 | 1.0 | ． 15 | ． 13 | ． 11 |
| 128838 | SS－33 | B | DPDT | 6 | 0.5 | ． 26 | ． 23 | ． 19 |
| 128839 | SS－9 | A | ＊SPST or SPDT | 3 | 0.75 | ． 20 | ． 17 | ． 15 |
| 128840 | SS－5 | B | －DPDT | 5 | 0.5 | ． 29 | ． 26 | ． 23 |
| 128841 | SS－15 | A | ＋SPST | 1 |  | ． 21 | ． 18 | .16 .35 |
| 128842 | SS－12 | B | 4 PDT | 3 | 0.5 | ． 46 | 41 | ． 35 |

## Han $\begin{aligned} & \text { On } \\ & \text { hig } \\ & \text { silv } \\ & \text { har }\end{aligned}$

## HGH SUB－MINIATURE SIZE SWITCHES

Only $1 / 4 \times 1 / 2^{\prime \prime}$ diometer SPDT，or $1 / 2 \times 1 / 2^{\prime \prime}$ DPDT．Body 1 a $^{\prime \prime}$ high， $.26^{\prime \prime}$ stem， $1 / 4^{\prime \prime}$ long．Stationary contocts gold ploted coin
silver．Terminals gold plated bross． 5 amp rating．Mounting $\uparrow$ hardware supplied．

| Stk．No．Mfg．No． |
| :--- |
| 128748 |
| TC． |



（1）LIGHT DUTY TYPE AC－DC TOGGLE SWITCHES
Long life and dependability in radio and fractional horsepower applications． Laminated phenolic sections－slotted sleeve（13．＂dia． 32 thrds per inch）with hex and knurled nut－nickel finish．Solder lug connections．U．L．approved． ＊Bat Handle．†Ball handle．Shpg．wt． 2 oz ．

| Stock No． | H S H Type | Circuit | Sleeve <br> Length | $\begin{aligned} & \text { Amp } \\ & 125 \mathrm{~V} \text {. } \end{aligned}$ | $50 \mathrm{~V}$ | $\begin{aligned} & \text { 1-9 } \\ & \text { Each } \end{aligned}$ | $\begin{array}{r} 10-99 \\ \text { Eoch } \end{array}$ | $100 \mathrm{Up}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 124771 | ＊20994NV | SPST | $3^{3}{ }^{\prime \prime}$ |  | 3 | S0．58 | S0．46 | $\$ 0.39$ |
| 124773 | \％21350CF | SPDT | 迷＂， | 3 | 1 | ． 71 | ． 59 | .49 |
| 124775 | ：20902AJ | DPST | ${ }^{9}{ }^{\prime \prime}$ | 3 | ， | 1.03 | ． 85 | － 70 |
| 124777 | \％20905AN | DPDT | $3^{\prime \prime}$ | 3 | 1 | 1.18 | －97 | －80 |
| 12A770 | $\dagger 20994 \mathrm{BF}$ | SPST | 觡＂ |  | 3 | ． 56 | ． 46 | .39 |
| 124586 | ＋21615BD | SPST | $1 "$ |  | 3 | 71 | ． 59 | 49 |
| 124772 | ＋21350－B | SPDT | 31．＂ | 3 | 1 | － | －59 | 48 |
| 124774 | ＋20902AM | DPST | 觡＂ | 3 | I | 1.03 | ． 85 | .70 |
| 124776 | ＋20905z | DPDT | 考量＂ | 3 | 1 | 1.18 | .87 | ． 80 |

MOMENTARY ACTION－Normally Open－Bat Handle

| $12 B 730$ | $80054 B E$ | SPST | $13^{\prime \prime \prime}$ | $\cdots$ | 3 | .90 | .76 | .67 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $12 B 731$ | 20907 MA | DPST | $1{ }^{\prime \prime}$ | $\cdots$ | 3 | 1.37 | 1.13 | .89 |

（3）STANDARD DUTY TYPE AC TOGGLE SWITCHES
Slow make and break．Designed to offer high capacity on a small phenolic base．Exceptionally long life expectancy．All hove solder terminals．＊Center off．$+3 / 4 \mathrm{HP} 120-240 \mathrm{~V}, \mathrm{AC} ; \ddagger 1 / 6 \mathrm{HP} 120-240 \mathrm{~V}$ ．AC．Bat handle．

| 12A1640 | ＋82601 | SPST | \＄8＂ | 15 | 10 | 56 | －46 | 39 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12A1641 | $+82603$ | ＊SPDT | $3^{\prime \prime}{ }^{\prime \prime}$ | 15 | 10 | ． 85 | ． 54 |  |
| 12A1667 | ＋82609 | ＊DPDT | $13^{\prime \prime}$ | 15 | 10 | 1.04 | ．85 | 0 |
| 124645 | $\ddagger 83001$ | SPST | 15＂， | 6 | 3 | 49 | ． 41 | ． 36 |
| 12 A 646 | $\pm 83004$ | ＊SPDT | f＂ | 6 | 3 | ． 53 | 44 | ． 39 |
| 124759 | \＄83028 | ＊DPDT | di＂ | 6 | 5 | ． 80 | 66 | 54 |
| 43 A1 65 | 81027FX | DPDT | $1^{18}$ | 6 | 3 | 2.86 | 2.18 | 1.78 |


（3）STANDARD DUTY TYPE AC－DC TOGGLE SWITCHES－BALL HANDLE formonly used quick make，quick break wator use．Screw terminals．Rated $1 \mathrm{HP} 125,250 \mathrm{~V}$ ．AC－DC． $\begin{array}{lllllllll}128582 & 80607 & \text { SPST } & \text { R＂} & 12 & 6 & 1.08 & .90 & .73 \\ 12 A 786 & 80618 & \text { SPDT } & 8 . " & 12 & 6 & 1.08 & .90 & .73 \\ 12 A 779 & 280600 & \text { DPST } & 16 " & 16 & 8 & 1.08 & .90 & .73\end{array}$

On－off－On．Positive off center．Lever can＇t be moved from one side through center without stopping．For heavy current circuits such as transmitters， amplifiers，etc．＂Fast break＂contacts．Screw terminals． $3 / 4 \mathrm{HP} 250 \mathrm{~V}$ ．AC－DC． With 2 hex nuts．UL approved．Ball handle．Shpa．wt． 2 oz
12 A780 80638－D $\qquad$ DPDT $\qquad$ ＂ 10
（4）MOMENTARY PUSH SWITCHES AC－LIGHT DUTY
Slow make and break operated with light pressure－Laminated phenolic sections－ slow make and break operated with（ $\mathrm{j} \mathrm{g}^{\prime \prime}$ dia． 32 threads per inch）－hex and knurled nut assembled． siotted sleeve（reverses circuit when pushed）．All have solder terminals．Shpg．wt． 2 oz．

（5）MOMENTARY PUSH SWITCHES AC－DC－STANDARD DUTY
open．Screw terminals．Rated 1 HP 125,250 V．AC－DC．With 2


（8）MOMENTARY PUSH SWITCHES AC－LIGHT DUTY MIDGET SIZE Slow make and break．Molded phenolic bose（11＂dio．， 32 threads per inch）． Hex and knurled nut assembled＿standord button brass nickel finish．Solder NO is normally open．N．C．is normally closed．UL approved．Shpg，wt
 $12 A 749$＊80541E SPST－NO P＂Block 3 ．．
（7）ROTO－POWER AC－DC LOCK SWITCH

key for use on power tools，appliances．Fits panels to ${ }^{92}$＂， Lockswitch with key for use on power Laminated phenolic sections．Hex and dress nuts，key．Key removable in off position．Solder lugs．U．L．Wt． 2 oz ． | off position．Solder lugs．U．L．Wt． 2 oz ． |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{1 2 A 5 8 7}$ | $26561-\mathrm{L}$ | SPST | $\frac{1}{3} 5^{\prime \prime}$ | Key | 6 | $\mathbf{3}$ | $\mathbf{1 . 2 6}$ |
| N0． | 10 |  |  |  |  |  |  |

 （8）SPST＂ON－OFF＂SLIDE SWITCH．TYpe 81564 ．Molded phenolic base and $13 / 8 \times$ ming $^{\prime \prime}$ mole．Plate is 2 I $^{3} \times 3 / 4^{\prime \prime}$ morked On－Off．U．L．listed．Wt． 2 oz
 （9）ON－OFF PLATE．Fits slot in threaded sleeve of toggle switches．
No．12A785．Mounts Vertically．Each．．．．．．．．．．．．．．．．．．．．．．． 10 For．． 30 c （1i0）SLIDE－SWITCH ON－OFF PLATE．Mounts vertically．For switches with $11 / 8$

Industrial Dept．BA 1－4266

## Switches，Motors，Solenoids



## SWITCHCRAFT SPECIAL ＂MULTI－SWITCHES＂

Because of the complexity of this series and their proctically unlimited application $\mathrm{B}-\mathrm{A}$ has Sw witcherof factory trained personnel to help solve your switching problem and supply these switches．Write deport ment S．W．ot Burstein－Applebee Co．

## SWITCHCRAFT LEV－R SWITCHES

Compact lever－action switches，Silver contacts rated ot ${ }^{3}$ amps， 120 volts，non－inductive load．Length tion type，others are 2 position．

| $\begin{array}{r} \text { Spring } \\ \text { Stock No. } \end{array}$ | $\begin{aligned} & \text { aturn } \\ & T_{\text {ype }} \end{aligned}$ | Stock No． $\begin{gathered}\text { Locking } \\ \text { Type }\end{gathered}$ |  | Action |  | 1 to 49 Each |  | $\begin{aligned} & 50-99 \\ & \text { Each } \end{aligned}$ |  | $\begin{aligned} & 100 \text { Up } \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 128128 | 3001 | 12813 | 3001 L | SPST，NO |  | \＄1．17 |  |  |  |  |
| 128129 | 3002 | 128131124792 | 3002 L | SPST，NC |  | \＄1．17 |  | ＋．97 |  |  |
| 12 A791 | 3003 |  | 12 A 9923003 L | SPDT |  | 1.32 |  | 1.13 | 1.01 |  |
| 128132 | 3004 | 1281363005 L |  | DPDT，NO |  | 1.50 |  | 1.25 | 113 |  |
| 128133 | 3005 |  |  | DPDT，NC |  | 1.50 |  | 1.25 | 113 |  |
| 124429 | 3006 | $\begin{array}{ll}128136 & 3005 \mathrm{~L} \\ 12 \mathrm{~A} 435 & 3008 \mathrm{~L}\end{array}$ |  |  |  | 1.62 |  | 1.38 | 24 |  |
| 12 A793 | ＊ 3033 | 12 A 795 ＊3033 |  | SPDT，No |  |  |  | 1.251.451.48 | 1 |  |
| 12 A796 | ＊3036 | 12 A797＊＊3036L |  | DP 2－Ckt． |  |  |  |  |  |  |
| 12 A431 | ＊3037 | 124437 | ＊3037L |  |  |  |  |  |  | ． 33 |
| SWITCHCRAFT BUTTON SWITCHES |  |  |  |  |  |  |  |  |  |  |
| Momentary type．Ideal for use where space is limited． 200 Series mounts in $3 / 8^{\prime \prime}$ dia hole．Sleeve $3 / 8^{\prime \prime}$ long． 3 amp． 115 volts DC．Series 900 ，provides behind panel mounting in ff＂dia．hole． 250 mils，non－inductive load，AC．Type 95 ！，A Tiny Switch， similiar to 200 Series，but mounts in $1 / 4^{\prime \prime}$ dia．hole．＂Black Button．千口Red Button． |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fig． | Stock No． | Type | Action |  | 1－49 Ea． |  | 50－99 Ea． |  | 100 Up，Ea． |  |
| （A） | 12A798 | ＊201 | SPST－NO |  | 53c |  | 44c |  |  |  |
| （A） | 124787 |  | SPST－NC |  | 53 c |  | 44 c |  | 41 c |  |
| （A） | 12 A788 | ${ }^{*} 203$ | SPDT |  | 59 c |  | 49 c |  | 45 c |  |
| （B） | 12 A789 |  |  |  | 75 c | 68 c |  |  |  |  |
| （B） | 12 A790 | $\begin{array}{r} +900 \\ +903 \\ +913 \end{array}$ | SPDT |  |  |  | ${ }_{88 \mathrm{c}}^{88}$ |  | 75 c |  | 68 c |  |
| （B） | 12 A 76 C | ＋951 |  |  | 53 c |  |  |  |  |  |  |  |
| （B） | 128126 | $\begin{aligned} & \dagger 9525 \\ & \dagger 953 \end{aligned}$ | $\begin{aligned} & \text { SPST NC } \\ & \text { SPDT } \end{aligned}$ |  | $\begin{aligned} & 54 \mathrm{c} \\ & 60 \mathrm{c} \end{aligned}$ |  | $\begin{aligned} & 45 \mathrm{c} \\ & 50 \mathrm{c} \end{aligned}$ |  | 41 c415 c |  |  |  |
| （B） | 128127 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## GRAYHILL PUSH SPST SWITCHES


（1）SILENT ACTION SPST SWITCH
Momentary．Normally open or normally closed．Rating $1 / 2$ ampere， 115 V ． AC．$\frac{15}{\frac{3}{2}-32}$ threoded bushing， $8 t^{\prime \prime}$ O．D．， $1 \frac{1}{3} \frac{12}{2}$ overall length including solder No． 124687 ． 44001 ．Who
No．12A687．\＃4001．N．O．Red．1－49 Eoch．．90c 50－99 Eoch．．． 68 c No．12A688．\＃4002．N．C．Block．1－49 Each．．90c 50－99 Eoch．．．． 68 c （2）SUB－MINIATURE SILENT ACTION SPST SWITCH
Momentary．Normally open or normally closed．Rated at 1 ampere， 115 V AC．Button ond housing molded phenolic．1／4－32 threaded bushing， $3 / 8$ o． 12 A683．$\# 30-1$ ．
 （3）MINIATURE PUSH SPST SILENT ACTION SWITCH
Momentory，normally open．Rated $1 / 4$ omps．， 115 V ．AC．Button and housing molded phenolic．fg -32 threaded bushing， $1 / 2^{\prime \prime} \mathrm{O}$ ．D．Is ${ }^{3}$＂overall length in cluding solder terminals．Shpg．wt． 2 oz ．
No．12A691．Type 23－1．Red．1－49 Each
$\$ 1.05$ 50－99 Each
$79 c$ （4）SNAP ACTION SPST SWITCH
 No．12A889．\＃2201．N．O．Red．1－49 Eoch．．．\＄2．05 50－99 Each．S1．54 Use with series $2000,4000,35$ BUTTON GUARD
No．12A686．Type 10C－1015．Each （8）DECORATIVE MOUNTING NUT
Use with series $2000,4000,35-1$ ，and $30-16$ ． 15 －32 thread． No． 12 B669，Type 7C＇ 1040 ．Each


## HURST SYNCHRONOUS MOTORS

Smail，rugged，for continuous duty opplicotions；completely enclosed．Will not overheat even in stalled position．Gear train built to withstand more than motor＇s rated capacity， lifetime lubricated．
May be operated in ony position．Requires 5 watts 95－130 V．AC 60 cycles，Stainless steet $\frac{310}{18}$ shaft， 1 ＂long，flat tened．Three Nc． 6 mounting holes．
SMS Series 40 Inch Ounce．Unidirectional．DA Series 120 Inch Ounce．Instantly Clockwise rotation．Size $21 / 2 \times 13 / 4^{\prime \prime}$ ．W + 1 th．

|  |  |  |  | $21 / 2 \times 13 / 4^{\prime \prime}$ ．Wt． $11 / 3$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| k．No． <br> 3A178 | Spee | 43A181 | Speed Each $10 \$ 12.28$ | Stk．No． <br> 43A289 | Speed | Stk．No． <br> 43 A292 |  | $\$ 1$ |
| 3 A179 | 4 | 43 A182 | $30 \quad 12.28$ | 434290 |  | 434293 | 30 |  |
| Cl3Al 60 12．28 43A291 6 43A |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| t． $11 / 4$ | 4 lbs． |  |  |  |  |  |  |  |
| No | Speed | Stk | Speed Each | Stk．N | Sp | Stk．No |  |  |
|  |  |  | \＄17．86 | 43A295 |  | 43 A | O |  |
|  |  | 43 A287 | 17.86 | 43A296 |  |  |  |  |
| 3 A28 | 6 | 43 A | 17.86 | 43 A297 |  | 43 |  |  |

## Potter \＆Brumfield PRECISION SWITCHES



Potter G Brumfield precision snap－action switches are UL and CSA listed．Each type is directly interchangeable with competifive types shown．
In addition switch mechanisms are on improved design providing longer life，pre－ ision action，more trouble－free service
For more complete detailed specifications request catalog 400 B－A No．25B107

GENERAL PURPOSE TYPES
A1G1－SPDT．Rotings： $15 \mathrm{amps}, 125$ ，
A1G or 480 Volts AC ； $1 / 2 \mathrm{amp} 125 \mathrm{~V}$ ．
250 ． $1 / 4 \mathrm{amp} 250 \mathrm{~V}$ ．DCi $1 / \mathrm{HP} 125 \mathrm{~V}$ ．

\section*{ <br> | Stock |
| :--- |
| N |
| 19 A |
| 198 |
| 198 |
| 198 |
| 198 |
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| 19 A |
| 19 A |
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| 19 A |
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| 198 |}


| Stock <br> No． |  |
| :---: | :---: |
| $19 A 657$ |  |
| 198658 | 11 |
| 198659 | 1 |
| 198660 | 1 |
| 198661 | 1 |
| 198662 | 1 |
| $19 A 663$ | 1 |
| $19 A 664$ | 11 |
| 198666 | 1 |
| 198667 | 1 |
| 198668 | 11 |
| 198669 | 1 |
| 198670 | 1 |
| 198671 | 11 |
| 198672 | 113 |
| 198673 | 114 |
| $19 A 674$ | 114 |
| 198675 | 11 |
| 198676 | 11 |
| 198677 | 11 |
| $19 C 614$ | 11 |

MI SERIES MINIATUR
AIM1－SPDT．Ratings：Meets U／L re－ quirements for $15 \mathrm{amps}, 125$ ，or 250 V $\mathrm{AC}: 1 / 3 \mathrm{HP} 125 / 250 \mathrm{~V} . \mathrm{AC}_{\mathrm{C}} 1 / 2 \mathrm{amp}$
$125 \mathrm{~V} . \mathrm{DC} ; 1 / 4 \mathrm{amp} 250 \mathrm{~V} . \mathrm{DC}$

| Stock No． | M1 Type | Micro V3 Equiv． | Oper． Force 02. | $\begin{gathered} 1-9 \\ \text { Each } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| 19A626 | 111－B | 1 | 6－14 | \＄1．10 |
| 194627 | 111－1 | 19 | 6－14 | 1.04 |
| 194629 | 111－2 | 15 | 6－14 | 1.04 |
| 194631 | 311－1 | 32 | 6－14 | ． 96 |
| $19 A 634$ | 311－B | 23 | 6－14 | 1.00 |
| $19 \mathrm{B639}$ | 131－B | 601 | 6－14 | 1.50 |
| $19 \mathrm{B678}$ | 117－6 | L－1－D8 | 1 4－MAX | 1.05 |
| 198680 | 117－6－1 | 1 L－2－D8 | 8 MAX | 1.05 |
| 198681 | 117－6－2 | L－5－D8 | 8MAX | 1.05 |
| 198682 | 117－6－3 | 3 L－6－1）8 | 4MAX | 1.05 |
| 198683 | 118－6 | L－4－D8 | 8 MAX | 1.25 |
| 19 A 684 | 119－6 | L－3－D8 | 14 MAX | 1.25 |
| A1M2－Low operating force－SPDT Roting： 30 volts $D C$ ；inductive 10 amps； 125 or $250 \mathrm{~V} . \mathrm{AC}$ ． |  |  |  |  |
| 198640 | 171－B | 101 | 8 MAX | \＄1．10 |
| 19 | 171－1 | 119 | 8MA |  |
| SUB－MINIATURE PRECISION SWITCHES low differentiol）SPDT．Meets irements 10 amps， 250 V ．AC． |  |  |  |  |
| Stock No． | Mfg． No． | Micro Enuiv． | Oper． Force 0 ． | $\stackrel{1-9}{\text { Each }}$ |
| 19D636 | 191－B | 26 | 7－12 | \＄1．65 |
| A1S1－SPDT．Meets U／L requirements for 5 omps， 125 or 250 V ．AC． |  |  |  |  |
| $19 \mathrm{B646}$ | 111－1 | 1SM1 | 3－5 | 1.20 |
| 198647 | 111－3 | 1SM1－T | 3－5 | 1.20 |
| 198648 | 131－1 | 1：SM1 | 3－5 | 1.25 |
| 198649 | 151－1 | 1SM23 | 3－5 | 2.25 |
| 198650 | 161－1 | 11SM23 | 3－5 | 2.30 |
| 194651 | 131－3 | 11SM1－T | 3－5 | 1.25 |
| 19 A652 | 116－1 | 11SM1 | 7 MAX | 1.65 |
| 19 A 653 | 117－1 | 111SM2 | 7MAX | 2.00 |
| 19 A 654 | 177－3 | 111SM2－T | 7MAX | 2.00 |
| 19A655 | 121－1 | 1SM3 | 3－5 | 1.20 |
| 19A656 | 141－1 | 11SM3 | 3－5 | 1.25 |



801－821－812－813


## CONTROLS COMPANY HEAVY－DUTY SOLENOIDS

Types 801－821，812， 813 and 831 heavy duty solenoids of superior quality eatures＂ing valves，elutches，switches，interlocks and mechanical controls plastic，screw terminals
Type 860 ．Compact unit where big power in a small size is required．

| Stock No． | Mfg． No． | Duty | $\begin{aligned} & \mathrm{AC} \\ & \text { Volts } \end{aligned}$ | Max． Stroke | Max． Pull Lbs | L． | Overall W． | H． | $\begin{aligned} & 1-9 \\ & \text { Each } \end{aligned}$ | $\begin{aligned} & 10-24 \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 434101 | 801－101－2 | Constant | 115 | $5 / 8$ | 7.7 | 15／8 | $1{ }^{1 / 6}$ | 1 数 | \＄ 5.54 | \＄ 4.44 |
| $43 A 102$ | 801－102－2 | Int． | 115 | 5／8 | 8.0 | 13／8 | $1{ }^{1}$ | $1 \frac{18}{3}$ | 5.54 | 4.44 |
| $43 A 104$ | 812－101－2 | Constant | $115{ }^{\text {t }}$ | $1 \frac{1}{16}$ | 14.5 | 21／2 | 118 | 2 | 7.22 | 5.82 |
| $43 A 105$ | 812－102－2 | Int． | 115 | $1 \frac{1}{16}$ | 17.0 | $21 / 2$. | 146 | 2 | 7.05 | 5.68 |
| 43 A107 | 813－101－2 | Constant | 115 | $1 \frac{1}{16}$ | 14.5 | 21／2 | $2 \frac{1}{16}$ | 2 | 8.14 | 6.48 |
| 434108 | 813－102－2 | Int． | 115 | $1 \frac{1}{16}$ | 18.0 | 21／2 | 21 | 2 | 7.58 | 6.09 |
| 43 A109 | 813－103－2 | Constant | 230 | 11. | 22.0 | 21／2 | $2 \frac{1}{16}$ | 2 | 8.34 | 6.64 |
| 43 A110 | 821－101－2 | Constant | 115 | $13 / 8$ | 18.0 | 27／8 | $23 / 8$ | 218 | 10.35 | 8.27 |
| 43 A111 | 821－102－2 | Int． | 115 | 13／8 | 29.0 | 27／8 | $23 / 8$ | $2 \frac{18}{16}$ | 9.62 | 7.70 |
| 43 A112 | 821－103－2 | Constant | 230 | 13／8 | 32.0 | 27／8 | $23 / 8$ | 218 | 10.55 | 8.43 |
| $43 \mathrm{Al13}$ | 860－101－2 | Constant | 115 | 8／8 | 29.0 | 15／8 | 13. | $1 \%$ | 3.00 | 2.70 |
| 43B120 | 831－101－2 | Constant | 115 | 10 | 7.0 | 218 | 2.0 | 2.23 | 7.70 | 6.93 |

## PHILLIPS ADVANCE

## HIGH QUALITY ANTENNA RELAYS

Advance 52 Ohm Coax Relays．SPDT $1 / \mathbf{n}^{\prime \prime}$ pure silver con－
 AC．Wt． 1 lb．
No．178346．Type CBICl15VA．Net Each
As above with extra DPDT external contacts．
\＄21．00 No．178347．Type CBIC2C115VA．Net Each． .$\$ 24.56$ Advance RF Relay．DPDT 10 A ．silver wiping contacts，roted KW．Highly efficient ceromic Steatite insulation． $2 \nmid{ }^{2} \mathrm{Z} x$


```
                                    $13.20
```



See Amateur Antenna Equipment Pages for Other Coaxial Relays

## Switches, Sonalert


(1) Model T51-S "Treodite". Compact, rugged treodle switch. SPDT momentary contacts roted 7 amps at $125-250 \mathrm{~V}$. AC. $1 / 6$ H.P. 115 V . AC. Has rubbe treading and skidproof rubber bose pad. Durable black wrinkle finish cosing Size $31 / 2 \times 25 / 8 \times 1$. Shpg.
No. 125482 . $1-9$ Net Each
 (1) Model T51-SC. As above, wired with 6 ft . cord and 2 prong series plug. No. 12B483. Wt. $10-19$ Each. $1-9$ Each $\$ 3.60$ 20-49 Each
conductor coble and (1) Model T-51-SC
safety grounding.
No. 12A542. 1-9 Each
10-19 Each. $\$ 4.50$ 20-49 Each $\$ 4.00$
$\$ 3.35$ (.......... $\$ 4.50 \quad 20-49$ Each ..................... $\$ 4.00$ SPDT 10 amps at 125 V AC $1 / 2$ H.P. 115 V . AC Has steel SPDT contacts rated 10 amps at 125 . AC. 2 H.P. No. 12B484. Wt. $1 / 2$ lb. 1-9 Net Each. 20.49 Each ................. \$3.25 10-19 Each. Model 491 -sc. As obove, wired with 6 ft . cord and 2 prong series plug. (2) Model 491-SC. As above, wired with

10-19 Each. $\mathbf{1 0}$ 20-49 Each ................ $\$ 3.98$
(2) Model 491-Sc3. Same as above except with, 3 conductor cable and safety grounding.
No. 12B546. 1-9 Each

## 10-19 Each. . . . . . .......... $\$ 4.95$ 20-49 Eoch

(3) Model $632-5$ "clipper". New momentary contact heovy duty switch \$4. \$DT (3) Model $632-\mathrm{S}$ Clipper it 125 , 250 V . AC. $1 \mathrm{H.P}$. $115-230 \mathrm{~V} . \mathrm{AC}$. Cast iron contacts take onti-skid pad, black wrinkle finish, mtg . holes. Size $41 / 2 \times 31 / 2 \times$ $11 / 2^{\prime \prime}$. shpg. wt. $21 / 2$ lbs.
No. 12 B486. 1-9 Net Each
10-19 Eoch.
(30-19 Eoch Model 632 -D. As above, but maintains contact until again actuoted.
 $\$ 8.25$
.56 .92 No. 12B487. Wt. 21/2 lbs. 1-9 Net Each $20-49$ Each ..................... 11.00 10-19 Each. (4) Madel L-2-S Lektro-Lock. Teeter-totter principle. Mechanical interlock preEoch side SPDT 15 A. $125-250 \mathrm{~V}$. AC. Metal housing. $5 \times 21 / 2 \times 11 / 8^{\prime \prime}$. Complete with cord. Wt. 10 oz .
No. 12B547. 1-9 Each
S5. An ideal unit for of
10-19 Eoch. Monior Footswitch. An ideal unit for office machines ond shop (5) Model 121-5 Junior Footswitch. An equipment. Also popular for $1 / 2 \times 31 / 4 \times 11 / 4{ }^{\prime \prime} \mathrm{Wh}^{2}$. 1 lb SPD 15 amp 125-250 V. AC. Aluminum housin
No. 12B572. 1-9 Each.
57.42 20-49 Each
$\$ 8.25$
.$\$ 8.60$

## LEVITON APPLIANCE SWITCHES <br> 

(1) SINGLE POLE ROTARY For lamp and opplionce repoirs SPST switch. Rated 3-omp., 125-volt; 1-omp 250-volt. Hos to" shank, brown bokelite knob, $6^{\prime \prime}$ wire leads. Wt. 2 oz.
No, 124725 . No. 574 . Eoch.......... 28 c 10 Lots, Each........24c
(2) 3 POSITION ROTARY

For 3 -light floor and desk lomps. Rated 3 amps at 125 volts. Bakelite cose $1^{\prime \prime}$ dia. by ${ }^{7}$ " high. Shank $3 / 8^{\prime \prime}$ dia. by $3 / 8^{\prime \prime}$ long. Metal knob. $6^{\prime \prime}$ wire leads. No. 12 B578. No. 582 . Each ............ $57 \mathrm{C} \quad 10$ Lots, Each.
SPST. Rated 3 amp. of 125 volts. Bak PUSM-BUTTON
甭" long. $6^{\prime \prime}$ wire leads. Plastic $5^{72}{ }^{7}$ " dia. push No. 12B579. No. 575. Each.

33 c 10 Lots, Each
$.25 c$
(4) FLUORESCENT LAMP STARTER SWITCH

For use with single 15 to 40 W . tamps. Eliminates starter from circuit. Measures $11^{\prime \prime}$ "dic, by $3 / /^{\prime \prime}$ high. Shonk $3 / 8^{\prime \prime}$ dia. by ${ }^{58}{ }^{\prime \prime}$. $6^{\prime \prime}$ wire leads. Bakelite push button. Shpg. wt. 2 oz
Na. 12 B580. No. 382. Each
64c 10 Lots, Each.
49 c

## EAGLE FLUSH MOUNT



Momentary push button switch normally open. Ideal for signal bells, lights, buzzers, etc. Has heavy type deep pearl button with a nickel plated outer ring. Will not stick or jam. Has screw terminals. Snap mounts in $5 / 8^{\prime \prime}$ dio. hole. Perfect for mounting on metal boxes, chassis, etc. Depth of shank $1 / 2^{\prime \prime}$. Eagle \#188. Shpg. wt. 2 oz .
No. 12 A784
No. 12 A78
35c
10-99
Each.
30c
$100 \mathrm{UP}_{\mathrm{E}}$
28c

## REAR SEAT SPEAKER SWITCH KIT



Complete assembly for switching between dual speakers such as auto rear seat and front seat speakers; TV, radio, PA remote speaker installations; etc. Permits opera complete with SP-3 Pos. Switch, bracket, dial, knob, hardware. © 5 No. 12A414. Centralab PK-300. EACH
No. 12B583. Switch Only, Centralab 1483. Net Eoch. No. 14B874. Wired Fader Control Kit. For intermixing No. 14B874. and rear speakers. Shpg. wt. 3 oz . Net Each.

## CUTLER HAMMER SWITCHES



Use for small motor driven tools, appliances, etc. Feotures quick-make, break contact. Long life and high arc resistance. Phenolic case. Stem fí" dia. threaded $\times \frac{1}{3} \frac{2}{2}$ " length. All hove bat handle $\frac{1}{3} \frac{2}{2}$ " long. U.L. Approved. Average shpg. wt. 3 oz .

$12 \mathrm{B5} 89$ 8290K16
AC TOGGLE SWITCHES, STANDARD DUTY
AC TOGGLE SWITCHES, STANDARD DUTY. All Roted 15 Amps 125 Volts- 10 Amps 250 Volts. U.L. Approved
Slow-make, slow-break mechonism for long, dependable performonce. All have

(4) With Solder Lug Terminals (8) With Screw Type Terminals

| (4) With S |  |  |  | (8) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ck |  |  |  |  |  | - |  |  |
| 2B629 75 | SPS | \$0.71 | \$0.58 | 128635 |  | SP | 0.81 | 0.6 |
| 2B630 7505K4 | SPDT | . 81 | . 66 | 128636 |  | SPDT | 96 | 79 |
| 2B632 7561K4 | DPST | 1.08 | . 90 | 12 B637 | 7560 K 5 | DPST | 1.26 | . 06 |
| 2B633 7565K5 | DPDT | 1.26 | 1.06 | 12 B 638 | 7564K6 | PDT | 1. | 1.31 |
| 2B554 7611K2 | ST | 2.19 | 1.83 | $12 \mathrm{B639}$ | 7610 K 2 | PST | 2.55 | 2.13 |
| 2B634 7615K2 | 3PDT | 2.70 | 2.26 | $12 \mathrm{B640}$ | 7614K2 |  |  |  |
| (B) Center <br> With Solder | $\begin{aligned} & \text { Off Ty } \\ & \text { Lug Ter } \end{aligned}$ | minals |  |  |  |  |  |  |
| 17503 K 13 | SPDT | . 81 | . 66 | 128695 | 7502 K 13 | SPDT | . 96 | . 79 |
|  | DPDT | 1.26 | 1.06 | $12 \mathrm{B696}$ | 7562 K 4 | DPDT | 1.56 | 1.3 |
|  |  | 2.70 | 2.26 | 2B697 | 7612K2 | 3PDT | 3.2 |  | $\begin{array}{llllllllll}12 B 665 & 7563 K 4 & \text { DPDT } & \mathbf{1 . 2 6} & \mathbf{1 . 0 6} & 12 \mathrm{~B} 696 & 7562 \mathrm{~K} 4 & \text { DPDT } & \mathbf{1 . 5 6} & \mathbf{1 . 3 1} \\ \mathbf{1 2 B 6 7 5} & 7613 \mathrm{~K} 2 & \text { 3PDT } & \mathbf{2 . 7 0} & \mathbf{2 . 2 6} & 12 \mathrm{~B} 697 & 7612 \mathrm{~K} 2 & \text { 3PDT } & \mathbf{3 . 2 4} & \mathbf{2 . 7 0}\end{array}$ (7) AC-DC TOGGLE SWITCHES HEAVY DUTY (TO 20 AMPS)

These switches are similor to standard duty type in appearance and construction, but with heavier parts, larger clearances and higher rotings. For larger motors or heovier loods; also provide longer life on lighter loads. All hove bakelite bodies, screw terminols and quick-make, break contact for long dependable use without pitting. U.L. Approved. Average shpg. wt. 3 oz .

A Amperes
$\begin{array}{lc}\text { Sik. No, C-H Typ } \\ 12 \mathrm{~B} 698 & 7321 \mathrm{~K} 3\end{array}$
12 B 699
12 B 529
$1285297361 K 5$
$12 \mathrm{B531} \quad 7402 \mathrm{~K} 4$
,

## SPST MIDGET SWITCH

Type $8098-\mathrm{K3}$. Midget switch. 3 omps at 125 volts $A C, 0.75 \mathrm{amps}$ ot 125 volts $D C$, and 6 amps at 24 volts $D C$. Screw terminals.
 length ${ }^{2}$ "' from end of threoded stem.
No. 128518 . Wt. 2 oz. 1-24 Eoch... 58 c 25-99 Each....48c

## NEW MALLORY SONALERT

## ELECTRONIC AUDIBLE SIGNALLING DEVICE

Illustration shows front and side view. Produces a penetrating sound by purely electronic means. Solid state circuitry. There is no arcing, RF noise or mechanical wear. Very compoct, light and highly versatile. Consumes less current than a normol indicator light. Can also be used to complement visual signals. Positive audible warnings are instantly given in faulty alarms for computers, fire signals, instruments,
medical electronics, appliances, communications as well as telephone signals ond protection equipment. tPulsing unit: puise rate $3-5 \mathrm{cps}$ (depending on input voltoge). Firnished with silicon transistors for operation to $-40^{\circ}$ to $+1130^{\circ} \mathrm{F}$. Frequency tolerance: $2800 \pm 300 \mathrm{cps} ; 4500$ $\pm 500$ cps. Mou"" mox depth behind ponel 1.38". Has two $1 / 4^{\prime \prime}$ combination dia. of unit 18 . mox. depth behind ponel 1.38 . Has oz .

| Stk. No. | Mfg. No. |
| :--- | :--- |
| $14 A 433$ | SC628 |
| $14 A 434$ | SC628A |
| $14 A 437$ | SC628H |
| $14 A 443$ | SC628P |
| $14 A 447$ | SC628S |
| $14 A 448$ | SC1 10 |

Freq. Cps
2800
2800
4500
2800
2800
2800

Voltage
$6-28 \mathrm{~V}$.
$6-28 \mathrm{~V} . \mathrm{A}$
$6-28 \mathrm{~V} . D$
$6-28 \mathrm{~V} . \mathrm{D}$
$6-28 \mathrm{~V} . \mathrm{DC}$
$110 \mathrm{~V} . \mathrm{AC}$

|  | Prices Each |
| :--- | ---: |
| 1.24 | $25-49$ |
| $\$ 5.50$ | $\$ 5.40$ |
| 8.75 | 8.60 |
| 8.35 | 8.25 |
| 9.95 | 9.75 |
| 6.75 | 8.65 |
| 8.75 | 8.60 |

$50-99$
55.16
8.2
5.9
8.3
8.3
8.2

## Terminals



|  | (1) NON-INSULATED RING TERMINALS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | $\mathrm{Mfg} .$ | Wire | Stud | Min. | Per | Std. | Per |
| 1941028 | Al $8-4$ | 22-18 | ${ }_{4}$ | Pkg. |  | Pkg. | 100 |
| 19A1250 | A18-6 | 22-18 | 6 | 100 | +2.88 | 1000 | $\$ 2.30$ 2.30 |
| 19A1251 | Al8-8. | 22-18 | 8 | 100 | 2.88 | 1000 | 2.30 |
| 19A1252 | Al8-10 | 22-18 | 10 | 100 | 2.88 | 5000 | 2.30 2.30 |
| 1941253 | Al8-14 | 22-18 | $1 / 4$ | 100 | 3.88 | 500 | 3.10 |
| 19 A1029 | B14-4 | 20-14 | 4 | 100 | 2.88 | 500 | 3.10 2.30 |
| 19A1254 | B14-6 | 20-14 | 6 | 100 | 2.88 | 2000 | 2.30 |
| $19 A 1301$ | B14-8 | 20-14 | 8 | 100 | 2.88 | 2000 | 2.30 |
| $\begin{aligned} & 19 A 1256 \\ & 19 A 1258 \end{aligned}$ | B14-10 C10-6 | $20-14$ $16-10$ | 10 | 100 | 2.88 | 5000 | 2.30 |
| 19 A1259 | C10-8 | $16-10$ $16-10$ | 8 | 50 | 4.19 | 500 | 3.35 |
| 1941260 | Clo-10 | 16-10 | 10 | 50 | 4.19 | 500 | 3.35 |
| 1941302 | C10-14 | 16-10 | 1/4 | 50 | 4.19 | 5000 1000 |  |

(2) NYLON INSULATED RING TERMINALS
$19 A 1030$
$19 A 1031$
$19 A 1032$
$19 A 1033$
$19 A 1035$
$19 A 1036$
$19 A 1279$
$19 A 1280$
$19 A 1281$
$19 A 1282$
$19 A 1037$
$19 A 1283$
$19 A 1038$
$19 A 1285$
$19 A 1039$
$19 A 1040$
$19 A 1041$
$2^{(2)}$
$19 A 1042$
$19 A 1043$
$19 A 1045$
$19 A 1046$
$19 A 1047$
$19 A 1048$
$19 A 1049$
$19 A 1050$
$19 A 1051$
$19 A 1052$
$19 A 1053$
Stock
No
$19 A 1286$
$19 A 1287$
$19 A 1054$
$19 A 1289$
$19 A 1290$
$19 A 1055$
$19 A 1056$
$19 A 1057$
$19 A 1058$
$19 A 1545$
$19 A 1546$
$19 A 1547$
$19 A 1548$
$19 A 1549$
$19 A 1550$
$19 A 1551$
$19 A 1552$
$19 A 1553$

## (3) NYLON SELF INSULATED FORK



| (4) | VINYL | INSULATED | FORK |  |  |  |
| :---: | ---: | ---: | ---: | :--- | ---: | ---: |
| 18RA-6F | $22-18$ | 6 | 100 | $\mathbf{4 . 2 5}$ | 500 | $\mathbf{3 . 5 0}$ |
| $18 R A-8 F$ | $22-18$ | 8 | 100 | $\mathbf{4 . 2 5}$ | 500 | $\mathbf{3 . 5 0}$ |
| $18 R A-10 F$ | $22-18$ | 10 | 100 | $\mathbf{4 . 2 5}$ | 500 | $\mathbf{3 . 5 0}$ |
| $14 R B-6 F$ | $16-14$ | 6 | 100 | $\mathbf{4 . 2 5}$ | 500 | $\mathbf{3 . 5 0}$ |
| $14 R R-8 F$ | $16-14$ | 8 | 100 | $\mathbf{4 . 2 5}$ | 500 | $\mathbf{3 . 5 0}$ |
| $14 R B-10 F$ | $16-14$ | 10 | 100 | $\mathbf{4 . 2 5}$ | 1000 | $\mathbf{3 . 5 0}$ |
| $10 R C-8 F$ | $10-12$ | 8 | 100 | $\mathbf{5 . 5 0}$ | 500 | $\mathbf{4 . 4 0}$ |
| $10 R C-10 F$ | $10-12$ | 10 | 50 | $\mathbf{5 . 5 0}$ | 1000 | $\mathbf{4 . 4 0}$ |
| $10 R C-14 F$ | $10-12$ | $1 / 4$ | 50 | $\mathbf{6 . 6 9}$ | 500 | $\mathbf{5 . 3 5}$ |


|  | (5) | NON- | ULA | ATED | FORK |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock |  | Wire | Stud | Min. | Per | Std. | Per |
| 19A1262 | Al8-6F |  |  | Pkg. |  | Pkg. | 100 |
| 19A1554 | Al $8-8 \mathrm{~F}$ | 22-18 | 8 | 100 | 2.88 | 000 | 2.30 |
| 1941263 | Al 8 -10F | 22-18 | 10 | 100 | 2.88 | 1000 | 2.30 |
| $19 \mathrm{Al555}$ | Al 18.14 F | 22-18 | 1/4 | 100 | 2.88 | 1000 500 | 2.30 |
| 1941264 | B14-6F | $20-16$ | 6 | 100 | 2.88 | 2000 | 2.30 |
| 19 Al 556 | B14-6FS | 20-16 | 6 | 100 | 3.31 | 500 | 2.85 |
| 1941265 | B14-8F | 20-16 | 8 | 100 | 3.31 | 2000 | 2.65 |
| 1941303 | B14-10F | 20-16 | 10 | 100 | 3.88 | 5000 |  |
| 19A1557 | C10-6F | 16-10 | 6 | 50 | 4.19 | 500 | 3.35 |
| $19 \mathrm{Al558}$ | Clo-8F | 16-10 | 8 | 50 | 4.19 | 500 | 3.35 |
| 19A1559 | Cl0-10F | 16-10 | 10 | 50 | 4.19 | 5000 | 3.35 |
| 19 Al 560 | Cl0-14F | 16.10 | 1/4 | 50 | 4.63 | 500 | 3.70 |
| $1127{ }^{\text {(6) }}$ | NON- | ULA |  | UTT | CONNE | ORS |  |
| 19A1276 | 2 Al 8 | 22-18 |  | 100 | 3.56 | 2000 |  |
| 1941277 | 2814 | 20-14 |  | 100 | 3.56 | 2000 | 2.85 |
| 19 A1278 | $2 \mathrm{Cl}{ }^{\text {a }}$ | 16-10 |  | 50 | 4.84 | 2000 | 3.95 |
|  | (7) INSU | LATED | BUT | TT CO | NNECT |  |  |
| $\begin{aligned} & 19 A 1292 \\ & 19 A 1293 \end{aligned}$ | 2RA-18 | 22-18 |  | 100 | 5.50 | 500 | 4.40 |
| 19A1561 | ${ }_{2 \mathrm{LCl}}$ | 16-14 |  | 100 | 5.50 | 1000 | 4.40 |


| H | AS 8 | ETTS |  | ON |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (8) | $1]$ |  |  | (1i) |  | (13) |  | - |
| Fig. Stock | Mfg. | Tab | Wire | Insul- | Un | Per | Std. | Per |
|  |  | Size | Size | ation | Pikg. | 100 | Pkg. | 100 |
| (8) $19 A 1059$ | RB14-250F | . $25 \times .032$ | 16-14 | Nylon | 100 | \$6.88 | 500 | \$5.50 |
| (9) 1941060 | 18RA-250F | . $25 \times .032$ | 22-18 | Vinyl | 100 | 6.25 | 500 | 5.00 |
| (8) 19A1061 | 14 RB -250F | . $25 \times .032$ | 16-14 | Vinyl | 100 | 6.25 | 500 | 5.00 |
| (3) 1941062 | 10RC-250F | . $25 \times .032$ | 12-10 | Vinyl | 100 | 7.81 | 500 | 6.25 |
| (10) 1941063 | Al8-250 | . $25 \times .032$ | 22-18 | None | 100 | 4.06 | 500 | 3.25 |
|  | B14-250 | . $25 \times .032$ | 16-14 | None | 100 | 4.06 | 500 | 3.25 |
| (11) $19 A 1066$ | C10-250F | . $25 \times .032$ | 12-10 | None | 100 | 7.19 | 500 | 5.75 |
| (11) $19 A 1067$ | B14-250A | . $25 \times .032$ | 20-14 | None | 50 | 4.69 | 500 | 3.75 |
| (12) 19A1068 | A18-205 | . $205 \times .02$ | 22-18 | None | 100 | 5.63 | 500 | 4.50 |
| (17) 19A1069 | B14-205 | . $205 \times .02$ | 16-14 | None | 100 | 5.63 | 500 | 4.50 |
| (11) 1941073 | A18-187 | . $187 \times .032$ | 22-18 | None | 100 | 5.63 | 500 | 4.50 |
| (13) 19A1075 | B14-187 | $.187 \times .032$ | 16-14 | None | 100 | 5.63 | 500 | 4.50 |
| (19) 19A1076 | Al8-110F | $.110 x .032$ | 22-18 | None | 100 | 6.25 | 500 | 5.00 |
| (11) 1941077 | B14-110F | $.110 x .032$ | 16-14 | None | 100 | 6.25 | 500 | 5.00 |
| (14) 19A1079 | 14RB250T | . $25 \times 1.032$ | 16-14 | Vinyl | 100 | 6.50 | 500 | 5.20 |

THOMAS \& BETTS TY-RAPS


| Fig. | Stock No. |
| :---: | :---: |
| $\begin{aligned} & \text { (1) } \\ & \text { (2) } \\ & \hline \end{aligned}$ | 19 A1080 |
|  | 19 Al 1081 |
|  | 1941082 |
| $\begin{aligned} & \text { (8) } \\ & \text { (3) } \\ & \hline(4) \end{aligned}$ | 19 Al 1083 |
|  | 19 Al 085 |
|  | 19 A1027 |
|  | STA-K |
| Contains 100 each A |  |
| WTIIMM installing |  |
|  |  |
| universol combination |  |
|  | W+. 3 lb . |

TY-RAP SELF-LOCKING
Mfg.


THE IDEAL TOOL FOR TV, RADIO \& ELECTRICAL WORK
Crimps terminals as listed below to wire ends for clean and true connec-
tions-no solder needed. Shears screws, bolts sizes $10-24$ 10-32, $8-32$ $6-32,4-40$ to desired length without thread sizes $10-24,10-32$, $8-32$, $6-32,4-40$ to desired length without thread domage. Strips and cuts
wire sizes 22 to 10 fast, clean. Stripper notches also serve os Wire 1981100 19B1315. Type 47100-1. For Insulated Terminals. Each . . . . . . . . S4.8565
Terminals are serrated internally for permanent
of wire. May be used for solid, stronded or irregularly shoped wires, or (A) NON-INSULATED RING TONGUE TERMINA


# Terminals，Plugboards，Etc． 

WALDOM CRIMP－ON TERMINALS


Available Insulated and Non－Insu－ loted．Made from：Annealed Elec－ trolytic Copper and Electro－Tin plated．One－piece design，inter－ nally serrated．Wt． 8 oz ．per 100 For 5000 up of a type deduct 22\％from 1000 piece price．
SPADE TONGUE TERMINALS FIG．

| Non－Ins． <br> Stock No． | Wire | Dimensions | sions W． | L． | $\begin{aligned} & 100 \\ & \text { For } \end{aligned}$ |  | $\begin{aligned} & 1000 \\ & \text { For } \end{aligned}$ | Insulated Stock No． | L． | $\begin{aligned} & 100 \\ & \text { For } \end{aligned}$ | $\begin{aligned} & 1000 \\ & \text { For } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 19A1170 | 22－18 | 3－4 |  |  | \＄1．961.96 |  | \＄14．12 | 19A1174 | 48 | \＄4．06 | \＄30．05 |
| 19 A1125 | 22－18 | 5－6 |  |  | 14.12 | $19 \mathrm{Al123}$ | 8 | 4.06 | 30.05 |
| 19A1126 | 22－18 | 8 |  |  | 1.96 |  | 14.12 | 1911124 | 46 | 4.06 | 30.05 |
| 1941171 | 22－18 | 10 |  |  | 1.96 |  | 14.12 | 19 A1175 | \％ | 4.06 | 30.05 |
| 19 A 1127 | 16－14 | 5－6 |  |  | 2.05 |  | 14.77 | 19 A1145 | 5 | 4.06 | 30.05 |
| $19 \mathrm{Al128}$ | ${ }_{16-14}^{10-14}$ | 5 |  |  | 2.05 |  | 14.77 | $19 A 1146$ | 46 | 4.06 | 30.05 |
| 19 A 1172 | 16－14 | 10 |  |  | 2.05 |  | 14.77 | 19 A1176 | 46 | 4.06 | 30.05 |
| 19 A 1173 | 12－10 |  |  |  | 2.85 |  | 20.52 | 19 A1177 | $1 \frac{3}{32}$ | 5.26 | 38.93 |
| BUTT CONNECTORS FIG 2 |  |  |  |  |  |  |  |  |  |  |  |
| Stock No． | Wire |  | Length |  |  |  | 100 For ${ }^{1}$ | 1000 For S |  | Stock No． | Length | 100 For | 1000 For |
| 19 A111719 A1118$19 A 1207$ | $\begin{aligned} & 22-18 \\ & 16-14 \\ & 12-10 \end{aligned}$ |  |  |  | $\begin{array}{r} \$ 2.16 \\ 2.16 \\ 3.84 \end{array}$ | $\begin{array}{r} \$ 15.56 \\ 15.56 \\ 27.65 \end{array}$ |  | $\begin{aligned} & 19 A 1165 \\ & 19 A 1166 \\ & 19 A 1208 \\ & \hline \end{aligned}$ | $\begin{aligned} & 46 \\ & 48 \\ & 15 \end{aligned}$ | $\begin{array}{r} \$ 4.80 \\ 4.80 \\ 6.55 \\ \hline \end{array}$ | $\begin{gathered} \$ 35.52 \\ 35.52 \\ 48.48 \end{gathered}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| QUICK DISCONNECTS－PUSH－ON TYPE FIG． 3 |  |  |  |  |  |  |  |  |  |  |  |
| Stock No． | Wire |  | Stud |  | 100 For | 1000 For S |  | Stock No． | Length | 100 For | 000 |
| $\begin{aligned} & 19 \text { A1119 } \\ & 19 \text { A1120 } \end{aligned}$ | $\begin{aligned} & 18-14 \\ & 18-14 \end{aligned}$ |  | $\begin{aligned} & \hline 1 / 2 \text { Male } \\ & 1 / 4 \text { Female } \end{aligned}$ |  | $\begin{array}{r} \$ 2.25 \\ 2.25 \\ \hline \end{array}$ | $\$ 16.21$16.21 |  | $\begin{aligned} & 19 \mathrm{~A} 1167 \\ & 19 \mathrm{~A} 1.168 \end{aligned}$ | $\begin{aligned} & \frac{77}{72} \\ & \hline 8 \\ & \hline \end{aligned}$ | $\$ 4.36$ 4.36 | $\begin{array}{r} \$ 32.28 \\ 32.28 \end{array}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |
| NYLON INSULATED CLOSED－END CONNECTORS FIG． |  |  |  |  |  |  |  |  |  |  |  |
| Stock No． | Wire |  |  |  | O．D． | Length |  | Barrel Length | I．D． | Circular Mill Area |  | $100$ | $\begin{aligned} & 1000 \\ & \text { For } \end{aligned}$ |
| $19 A 1121$ $19 A 1122$ | 22－14 |  | \％ | $\begin{aligned} & \frac{39}{38} \\ & \frac{35}{37} \\ & \hline \end{aligned}$ |  | 产 $\frac{1}{3}$ | 3／1／8 | $\begin{aligned} & 600-5,180 \\ & 2,400-13,100 \end{aligned}$ |  | $\begin{array}{r} \$ 3.36 \\ 4.92 \end{array}$ | $\begin{array}{r} \$ 24.20 \\ 35.43 \end{array}$ |
|  |  |  | \％ |  |  |  |  |  |  |  |  |
| RING TONGUE TERMINALS FIG． 5 |  |  |  |  |  |  |  |  |  |  |  |
| Non－Ins． Stock No． | re | $\begin{aligned} & \text { Dimensions } \\ & \text { Stud W. } \end{aligned}$ |  | L． | 100 For |  | 1000 For | Insulated Stock No． | L． | 100 For | 1000 For |
|  |  |  |  |  |  |  |  |  | 19 A1193 |  |  |  |
| 1941180 | 22－18 1－2 |  | $\frac{1}{17}$ |  |  |  | \＄14．12 |  |  | $\overline{\$ 30.05}$ |  |  |
| 19A1181 | 22－18 | 3－4 | $\frac{1}{1}$ | 荘 | $\begin{aligned} & 1.96 \\ & 1.96 \end{aligned}$ |  | 14.12 14.12 | $19 A 1194$ 19 A1158 | $\frac{818}{81}$ | 4.06 | 30.05 |  |
| 19A1140 | 22－18 | 8 | 8 | ＋ |  | ${ }_{96} 96$ | 14.12 | 19 191159 |  | 4.064.06 | 30.05 |  |
| 19A1141 | 22－18 | 8 |  |  | 1.96 |  |  |  | ${ }^{\frac{3}{3} \frac{3}{2}}$ |  | 30.05 |  |
| $19 \mathrm{Al142}$ | 22－18 | 10 | ， | ${ }^{3}$ | 2.69 |  | 19.36 | 19A1195 | $1{ }^{1 / 2}$ |  | $\begin{array}{r}38.93 \\ 38.93 \\ \hline\end{array}$ |  |
| 19A1182 19A1183 | $\begin{aligned} & 22-18 \\ & 22-18 \end{aligned}$ | \％ |  | $\frac{18}{1}$ | 2.6 | 2.692.05 | 19.3614.77 |  | 1\％ | 5.26 5.26 |  |  |
| 19A1183 | 16－14 | 5－6 |  | 装 | 2. |  |  | $19 A 1161$ | ${ }^{\frac{3}{5}}$ | 4.06 | 30.0530.05 |  |
| 19A1144 | 16－14 | 8 |  | 寿 | 2.052.052.05 |  | 14.7714.77 | $19 A 1162$$19 A 1163$ |  | $\begin{aligned} & 4.06 \\ & 4.06 \\ & 5.26 \end{aligned}$ |  |  |
| $19 \mathrm{Al115}$ | 16－14 | 10 |  | 熍 |  |  | $\begin{aligned} & 30.05 \\ & 38.93 \end{aligned}$ |  |  |  |  |  |
|  | 12－10 | 10 | 3／8 | 4 |  | ． 85 |  | 20.52 |  |  | 19A1164 |  |
| FLANGED SPADE TERMINALS FIG 6 |  |  |  |  |  |  |  |  |  |  |  |  |
| T9A1133 | $22-18$ $5-6$ $\frac{18}{17}$ 5 <br> $22-18$ 8 $\frac{11}{1}$ 5 <br> $22-18$ 10 $\frac{18}{1}$ 5 <br> $16-14$ $5-6$ $\frac{11}{18}$ 8 <br> $16-14$ 8 $\frac{18}{12}$ 8 <br> $16-14$ 10 辝 8 |  |  |  | $\begin{aligned} & \$ 1.96 \\ & 1.96 \\ & 1.96 \\ & 2.05 \\ & 2.05 \\ & 2.05 \end{aligned}$ |  | $\begin{aligned} & \$ 14.12 \\ & 14.12 \\ & 14.12 \\ & 14.77 \\ & 14.77 \\ & 14.77 \end{aligned}$ | $\begin{aligned} & 19 A 1151 \\ & 19 A 152 \\ & 19 A 1153 \\ & 19 A 154 \\ & 19 A 1155 \\ & 19 A 1156 \\ & \hline \end{aligned}$ |  | \＄4．06 | \＄30．05 |  |
| $19 \mathrm{Al134}$ |  |  |  |  | 4.06 | 330.05 |  |  |  |  |  |  |
| 19 A1135 |  |  |  |  | 4.06 | 330.05 |  |  |  |  |  |  |
| 19 A1136 |  |  |  |  | 4.06 | 30.05 30.05 |  |  |  |  |  |  |
| 19 A1137 |  |  |  |  | 4.06 | 30.05 30.05 |  |  |  |  |  |  |
| $19 \mathrm{Al138}$ |  |  |  |  | 4.06 | 30.05 |  |  |  |  |  |  |

## WALDOM CRIMPING TOOL



Model CT4050．Ideal ．．．inexpensive．Crimp both insuloted and non－insuloted，regular and through $\# 10$－cuts and strips wire Has lated handles．Shpg．wt．I lb．
No．19A1200．Net Eoch．．．．．．．．． 5.5


CRIMP TOOL \＆TERMINAL KITS Non－Insulated Terminal Kit contains 214 assorted terminals－flanged spade，ring tongue，hook ton－ oue，quick disconnects，spade tongue，butt con－ box．Wt．${ }^{3} \mathrm{lbs}_{1}$ ． 1981209 ．Type $\mathrm{K}-170$ ．Each．．．．． 8.8 Insulated Terminat Kit． 138 assorted insulated terminals－spade tongue，butt onnectors，auick disconnects，ring tongue，flanged spade．With Crimp Tool

No．19B1169．Type K－180．Shpg．wt． $21 / 2$ lbs．Each
ath
510.95

ESSEX CRIMP－ON APPLIANCE TERMINALS


A＂MUST＂FOR EVERY APPLIANCE REPAIR OR MAINTENANCE REPAIR SHOP
CRIMP TOOL AND
APPLIANCE TERMINAL KIT
REPLACES ORIGINAL EQUIPMENT
TERMINALS USED IN APPLIANCES， VENDING AND ELECTRONIC

EQUIPMENT
Contains approximately 1100 terminals including those shown of left plus ring， spade，and tab terminals；insulated butt and closed end connectors．Complete with crimp．Shpg．wt． $21 / 2 \mathrm{lbs}$ ．\＄2295
metol cose 19 B1248．Per Kir．．．．

## ESSEX CRIMP TOOL ONLY

FOR USE ON ALL TYPES OF TERMINALS
For both plain and insulated terminals．Performs genuine＂$B$＂crimp．Even crimps spork plug terminals．Cuts wire，strips wire sizes 22 through 10．Shpg．wt．
No．19B1247． Each


## VECTORBORD PREPUNCHED INSULATING BOARDS

Provide a convenient and economical method of as－ embling circuit components in both experimental and production units．All terminals and eyelets．All in terminals，turned terminals and eyelets．All are ponels may be sowed，drinse marked ${ }^{\text {：}}$ Epoxy unclad phenole except $1 \times 2$ oz Copper clad paper，holes offsel ．$\times .2^{\prime \prime}$ xin 2 oz ．Copper clad


## VECTOR PLUGBORDS AND RECEPTACLES



Ready to wire Plugbords for prototypes and short runs．All are furnished with overall grid of pre－punched $\frac{1}{1}$＂dio．holes located Contacts along bottom edge of board mate Contacts Pre－drilled to ac cept T－28 Miniklips，standard turned termi－ nals or＂1 dia，eyelets．All are ${ }^{18}$＂thick nals，or is dia．eyelets Al 23 is＂WE＂ epoxy paper pery glass per MIL－P－18177 types are epoxy glats on all except 838 Elco Varicon co 2 exthed copper 838 series which are 2 oz ．etched copper．

## Fig．Stock <br> 20B211 <br> 20A212 8 <br> 20A212 20A212 WE

$\begin{array}{ll}\text { 20A213 } & \text { R616－1 } \\ \text { 20B214 } & 837\end{array}$
$\begin{array}{ll}20 B 215 & 837 \\ 201 W\end{array}$
$\begin{array}{ll}\text { 20A218 } & \text { R612－1 } \\ \text { 20A219 } & 838 A\end{array}$
Description
Plugbord 16 contacts $41 / 2 \times 61 / 2$ ；
Receptacle for above， 16 Contacts
Plugbord， 12 cont．， $3 \times 41 / 2^{\prime \prime}$＂，
Plugbord， 12 cont．， $3 \times 41 / 2$ ，＂
Receptacle for above， 12 Contacts
Receptacle for above， 12 Contacts
$\begin{array}{ll}\text { Plugbord } 41 / 2 \times 61 / 2^{\prime \prime}, & 22 \text { Etched Cont．} \\ \text { Plugbord } 41 / 2 \times 61 / 2^{\prime \prime}, & 22 \text { Etched Cont．}\end{array}$
Plugboord $41 / 2 \times 61 / 2 \times 1,43$ Etched Cont．
（ 2 Sides） $41 / 2 \times 61 / 2,43$ Etched Cont
Stched Cont
Plugbord $41 / 2 \times 61 / 2^{\prime \prime}, 43$ Etched Cont
（2 Sides） 838 Series Plugbords Has
44 Contocts， 2 Rows
Price Each

20A220 838AWE
（3）20A225 838 WE

SH－IN＂ZIP＂TERMINALS
PUSH－IN＂ZIP＂TERMINALS
AND INSERTION TOOLS


Bright tinned，serrated teeth grip several leads for good contoct．May be used over and over or soldered in．
（1）No．20472．T9－4．Fits ． 093 holes． 100 For．$\$ 1.25$ 1000 For．． 58.90 （2）No．20A73．T28 Miniklip．Fits． 062 holes， 100 For $\$ 1.551000$ For $\$ 11.00$ （3）No．20A73．Insertion Tool．P91．For T28 Terminals．Eoch．
3 No．20A74．Insertion Tool．P91．For 28 Terminals．Each．．．．．．．．．．．．．．．． soldering，bending or crimping component leads．
soldering，bending or crimping component leods．
No．20A75．Type T32A－1．For ． 062 holes． 10 For ．$\$ 1.35100$ For ．．$\$ 9.90$ No．20A75．Type T32A－1，For ． 06 holes． 10 For ．．$\$ 1.351 .3100$ For ．．．$\$ 9.90$ （3）No．20477．Insertion Tool．P29A．For T32 Terminals．Each ．．．．．．．．．．． 50 c

## VECTOR 22X \＆25X CHASSIS KITS

Ideal for experimenters，classroom instruction and prototype．Provide complete assortments of solderless and solderable push－in terminals，tube and transistor sockets，plus pre－punched Vectorbord and new Frome－Loc aluminum rail chassis supports for quick easy setups of experimental or prototype circuitry．Each kit also includes＂pot＂brackets，bus stripping，layout paper，screws，nuts，and wire．

## 22X TRANSISTOR EXPERIMENTER＇S

 CHASSIS KIT$4.8 \times 17 \times{ }^{3} 5^{\prime \prime}$ pre－punched phenolic Vectorbord deck，Frame Loc expondoble aluminum chas－ sis support， 8 transistor sockets， 97 （total） solderable T9－4 and solderless spring clip tem nos， 6 potrcheras，4＂oo $\$ 1050$

$\$ 10.50$

## 25X SOLDERLESS EXPERIMENTER＇S CHASSIS KIT

Big $8.5 \times 17 \times \frac{3}{3}{ }^{3 \prime}$ pre－punched phenolic Vector－ bord deck with Frame Loc expandable alumi－ num chassis support． 6 transistor sockets， 3 each 7 and 9 pin miniature sockets， 2 octal sockets， 204 （total）solderable and solderless terminals． 10 patchcords， 4 pot and switch brockets pire，etc．
hookup
No．20A196．Net Each ．．．．．．．


## Amphenol Sockets, Plugs, AC Connectors

## 骨 <br> $\sqrt{x=1)}$ <br> NFF <br> (3)

PM and PF made of black bakelite for chassis mounting, fits $11^{3}{ }^{\prime \prime}$ " hole. PM and PF connectors are molded black bakelite with steel shell. Rubber

| Fig. | Stock No. | Type | Pins | 1-49 Ea. | 50-249 Ea. | 250-499 Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | 12 A 58 | $86-\mathrm{CP}_{4}$ |  |  |  |  |
| (1) | 12A59 | 86-CP5 | 5 | 30.22 .22 | $\$ 0.18$ .18 | $\$ 0.15$ |
| (1) | $12 A 63$ $12 A 80$ | $86-\mathrm{CP8}$ | 8 | .22 .24 | .18 .20 | $\begin{aligned} & .16 \\ & .17 \end{aligned}$ |
| (2) | 12A80 | 78-PF4 | 4 | . 39 | . 32 | . 27 |
| (2) | 12A88 | 78-PF5 5 | 5 | . 41 | . 34 | . 29 |
| (2) | 12483 | 78-PF6 $78-\mathrm{PF} 7 \mathrm{~S}$ | ${ }^{6} \mathrm{~S}$ | .42 | . 36 | . 30 |
| (2) | 12A85 | 78-PF8 | 8 | . 45 | . 37 | . 31 |
| (2) | $12 \mathrm{l}{ }^{12} 8$ | 78-PF9 | 8 | . 41 | . 35 | . 29 |
| (2) | 12 A87 | 78-PF11 | 11 | . 44 | . 37 | . 31 |
| (3) | $12 A 72$ 12 A73 | 86-PM4 | 4 | . 43 | . 36 | . 33 |
| (3) (3) | $12 A 73$ $12 A 74$ | 86-PM 5 | 5 | . 43 | . 36 | . 30 |
| (3) | $12 A 74$ $12 A 75$ | 86-PM 6 $86-\mathrm{PM} 7 \mathrm{~S}$ | 6 | . 45 | . 38 | . 32 |
| (3) | 12 1275 | 86-PM7S | 7S | . 46 | . 38 | . 32 |
| (3) | 12 A78 | 86-PM8 | 8 | . 45 | . 38 | . 32 |
| No. 12A91. Cable Clamp for above (not shown) |  |  |  | . 47 | .39 .39 | . 32 |
|  |  |  |  | . 47 | . 39 | . 33 |

## AMPHENOL AC CONNECTORS


(1)

(2)

(3)


Molded of high dielectric black bakelite, U/L approved, rated 15 omps of 110 valts. Fig (1) ond (2) have metal shell with built-in coble clamp. Fig (3) mounts in $1 \mathrm{r}^{3}$ " hale on $11 / 2^{\prime \prime} \mathrm{mtg}$. centers. Fig. (4) and (5) snop mount in

| Fig. | Stock No. | Type | 1-49 Each | 50-249 Ea. | 250-499 Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | 12889 | 61-M11 | \$0.58 | \$0.48 |  |
| (2) | 12890 | $61-\mathrm{F} 11$ | $\begin{array}{r}\text { + } \\ \hline\end{array}$ | 10.48 .48 |  |
| (3) | 12A354 | 61-MIP-61F | . 40 | . 43 | $\begin{array}{r} .40 \\ .28 \end{array}$ |
| (1) | 12A121 | $61-\mathrm{M}$ | . 37 | . 31 | . 26 |
| (5) | $12 \mathrm{Al22}$ | 61-F | . 37 | . 31 | . 26 |

## AMPHENOL POLARIZED AC CONNECTORS

## (1) <br> 

(2)


U/L approved for home appliances and 3-PRON


Mode of block phenolic bokelite, contacts power tools. Third prong grounded Cops ore cack. ploted steel, mounting plate is nickel plated steel. Roted at 15 amp, ${ }_{\text {centers. }}$ Cable type are $160-2$ receptacle maunts in 1 品", hole, has $11 / 2^{\prime \prime}$ mtg. centers. Cable type are $1 \frac{1}{\text { fig }}$ long with either coble clomp or grommet. Avg. shpg. wt. 2 oz
Fig. Stk. No.

| Fig. Stk. No | 160-M1P Type | $1-24 \mathrm{Ea}$. 25 |
| :---: | :---: | :---: |
| (1) 12 Al | M | \$0.93 \$0.78 |
| $\begin{aligned} & 12 A Z 4 \\ & 12 A 4 \end{aligned}$ | $160-7$ Cable |  |
| (2) 12441 | $160-9$ Cable Plug-Coble Cl | $\begin{array}{lll}1.142 & \mathbf{1 . 0 5} & .80 \\ 1.25 & 85\end{array}$ |
| (8) 1243 | 160-6 Cable Socket-Gromm | .98 8.82 .825 |
| (3) 12A33 | 160-8 Cable Socket-Cable Clamp | 1.08 .88 |

## AMPHENOL INDUSTRIAL SOCKETS


(1) 11-Contact Industrial Relay Socket. High, thick insuloting barriers between contocts provide lang
creepage paths. creepage paths. Rated 600 volts RMS of 10 amps.
Hos screw terminals with 4 molded-in tie points. Shpg. wt 8 oz.
${ }_{1-24}{ }^{12}$ 2Ci52. Amphenol 146-817.
(2) Octal Industrial Socket for reloys or high-power tubes. Molded $\mathbf{2 5 - 9 9}$, Each... $\mathbf{\$ 2 . 9 1}$ hos screw terminols. Roted 1250 volts of 5 amp . Shpg. Molded melamine bose Sth. No.
12 Cl 53
12 C 154
12 C $12 C 153$
$12 C 154$
$12 C 155$ $\begin{array}{ll}\text { Top Mtg. No Tie Points } & \text { Type } \\ \text { Too Mtg. } 4 \text { Tie Points } & 146-103 \\ \text { BotMom M Mtg. No Tie Points } & 146.104 \\ \text { Bottom Mtg. } 4 \text { Tie Points } & 146-203 \\ \text { Boin } & 146-204\end{array}$
$\begin{array}{rr}-24 \mathrm{Ea} & 25-99 \mathrm{Ea} \\ \mathbf{S 1 . 5 0} & \mathbf{E R} \\ 1.91 & 1.29 \\ 1.60 & 1.25 \\ 1.91 & 1.59\end{array}$

## POMONA SOCKET SAVERS \& ADAPTERS



COLOR TV

Miniaturized SOCKET SAVERS
$68^{\prime \prime}$ (octal)' ${ }^{2}$ sockets from wear coused by repeoter and RCA color tubes on your present use. Assures positive contact to tube standard neo-diheptal 14AL/14AU bospins and preserves tester accuracy. Sim- ing on new color tubes.
ple plug-in installation, no wiring. Shpg.
No. 17B259. 1847. For 7 -pin.
No. 178260. 1848. For 8-pin
No. 17B261. 1849. For 9-pin No. 178266. 1751. For 9-pin nove CHOICE EACH

# Tube and Transistor Sockets 


(3) TUBE SHIELDS FOR ABOVE

Durable steel shields with "J-Slot" for locking onto base. Tube holding spring on top.

| For 7-Pin |  | Miniature Sockets |  |  | For 9-Pin |  | Miniature Sockets |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | Type | Size | $\begin{aligned} & 1-99 \\ & \text { Each } \end{aligned}$ | $\begin{aligned} & 100 \\ & \text { For } \end{aligned}$ | Stock No. | Type | Size | $\begin{aligned} & 1-99 \\ & \text { Each } \end{aligned}$ | $\begin{aligned} & 100 \\ & \text { For } \end{aligned}$ |
| $\begin{aligned} & \text { 17A780 } \\ & \text { 17A778 } \end{aligned}$ | 783 784 | $18 / 4$. <br> $21 / 4$. | 12c | $\begin{array}{r}\text { \$ } 7.76 \\ 11.84 \\ \hline\end{array}$ | $\begin{array}{\|l\|} 17 \mathrm{~A} 1064 \\ 17 \mathrm{~A} 1063 \\ \hline \end{array}$ | $\begin{aligned} & 9 \mathrm{~S} 2 \\ & \text { 9S3 } \\ & \hline \end{aligned}$ |  | $\begin{aligned} & 16 \mathrm{c} \\ & 30 \mathrm{c} \end{aligned}$ | $\begin{array}{r} \$ 10.96 \\ 18.96 \\ \hline \end{array}$ |

## MOLDED OCTAL SOCKETS

(4) Saddle Mount Type

Molded from high dielectric low-loss bakelite. Steel saddle has 4 ground lugs. Mounts in $1^{\prime \prime}$ hole. $1 \mathrm{l}^{\mathrm{F}} \mathrm{mmtg}^{\prime \prime}$.

| centers. Type |  |
| :--- | :--- | :--- |
| Stk. No. Typ Ea. 100 For |  |
| $17 C 713$ | $8 A B B l a c k ~ S O .10 . ~$ |

$17 C 713$ 8AB Black $\$ 0.10$ \$6.60

Bayonet types have porcelain boses, glazed top and sides, cad. plated phosshells. Wafer types have glazed steatite base and plated brass contacts with steel reinforcing springs.
Stk. No. Johnson No
(1) 12A174 123-209-1
$\begin{array}{lll}\text { (1) } 12 A 175 & 123-211-1 \\ \text { (2) } 12 A 571 & 122-275-1 \\ \text { (3) } 12 A 173 & 122-237-1\end{array}$
(3) 12A173 $122-237-1$
$\begin{array}{ll}\text { (4) 20B803 } & 124-109-1 \\ \text { (4) 20B804 } & 124-111-1\end{array}$
Fits Tube Types Net Ea.
866A, 811 A
203A, 810, 872A, 250TH $\begin{aligned} & \$ 1.75 \\ & 2.30\end{aligned}$
$\begin{array}{lll}4 \text { P. Jumbo Bayonet } & 203 \mathrm{~A}, 810,872 \mathrm{~A}, 250 \mathrm{TH} & \mathbf{2 . 3 0} \\ 5 \mathrm{P} \text {. Giant Wafer } & 4-125 \mathrm{~A}, 4-250 \mathrm{~A}, \text { RK } 48 & \mathbf{2 . 3 5} \\ 7 \mathrm{P} \text {. Giant Wafer } & 4 E 27,813, H K 257 & \mathbf{1 . 4 0} \\ \text { Kel-F Plastic } & 4 \times 150 \mathrm{~A}, 4 \times 250 \mathrm{~B} & \mathbf{5 . 3 0}\end{array}$
$\begin{array}{lll}4 \text { P. Jumbo Bayonet } & \text { 203A, 810, 872A, 250TH } & \mathbf{2 . 3 0} \\ 5 \text { P. Giant Wafer } & 4-125 A, 4-250 A, R K 48 & \mathbf{2 . 3 5} \\ 7 \text { P. Giant Wafer } & 4 E 27,813, H K 257 & \mathbf{1 . 4 0} \\ \text { Kel-F Plastic } & 4 \times 150 A, 4 \times 250 B & \mathbf{5 . 3 0}\end{array}$
$\begin{array}{lll}4 \text { P. Jumbo Bayonet } & \text { 203A, 810, 872A, 250TH } & \mathbf{2 . 3 0} \\ 5 \text { P. Giant Wafer } & 4-125 A, 4-250 A, R K 48 & \mathbf{2 . 3 5} \\ 7 \text { P. Giant Wafer } & 4 E 27,813, H K 257 & \mathbf{1 . 4 0} \\ \text { Kel-F Plastic } & 4 \times 150 A, 4 \times 250 B & \mathbf{5 . 3 0}\end{array}$

Kel-F Plastic $\quad 4 \times 150 \mathrm{C}$
Steatite Air Chimney for above

## CINCH AC SOCKET

Fits standard AC plugs. UL roted $15 \mathrm{~A} ., 110 \mathrm{~V}$. Mounts in $3 \mathrm{~m} \times$ Fits standard AC plags. No. 12A899. Net Each. ..... 19c ${ }^{2} 100$ For . . . . $\$ 12.60$

## HEAT SINKS FQR SEMI-CONDUCTORS

| Stk. No. | Length | Finish | 1-9-Ea. | 10-24 Ea | 9 Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (1) 12 C 322 | $3 \prime \prime$ | Ploin, Unpunched | \$0.85 | 50.75 | \$0.63 |
| (1) 12 C 328 | $3^{\prime \prime}$ | Anodized, Unpunched | 1.17 | 1.10 | 88 |
| (1) 12 C 330 | $6^{\prime \prime}$ | Ploin, Unpunched | 1.30 | 1.25 | 1.10 |
| (1) 12 C333 | $6^{\prime \prime}$ | Anodized, Unpunched | 1.90 | 1.85 | 1.60 |
| (1) 12 C 370 | $3^{\prime \prime}$ | Plain, Sgl.-Punched for TO-3 | $1.30$ | $1.20$ | 1.00 |
| (1) 12 C 371 | $3^{\prime \prime}$ | Anodized, Punched for TO-36 | $1.66$ | $1.50$ |  |
| (1) 12 C376 | $6^{\prime \prime}$ | Ploin, Sgl.-Punched for TO-3 | $1.85$ | $1.70$ | $1.45$ |
| (1) $12 C 378$ | $6^{\prime \prime}$ | Anodized, Single-Punched | 2.40 | 2.25 | 1.88 |

(2) NEW $1 / 2^{\prime \prime}$ SQUARE DESIGN
cooling in less spoce than rad

Type 20. Achieves more cooling in less spoce than radial fin types. Slotted to ollow fast, precise production mounting. Precision fit assures moximum heat transfer bétween case and cooler.

| Stk. No. | Mfg. No. | Fits Transistors | 1-49 Ea. | 50-99 Ea. | 100 Up |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $12 C 393$ | TR101 | TO-5,9,11,12,16,29, etc. | $\$ 0.25$ | $\$ 0.23$ | $\$ 0.19$ |
| $12 C 399$ | TR118 | TO-18 | .25 | .23 | .19 |

## $Z 5$ SILICON HEAT SINK COMPOUND

Conducts heot from tronsistor, stud rectifier, etc. to chassis. 1 oz. tube.
No. 11c31. GC $\# 8101$. Each. No. 11C31. GC\#8101. Eoch

## TRANSISTOR SOCKETS, DIODE HOLDER

$\overbrace{\text { (1) }}^{\text {Bity }}$

(2)

(5)
(1) RECTANGular transistor sockets

Low less phenolic with push-on mtg. ring. Contacts are beryllium copper, silver ploted.
No. 148332. 3-Prong. Cinch Type 2H3. Each..... 21 c 100 Each.... 14c No. 17A1056. 5-Prong. Cinch Type 2H5. Each.... 23 c 100 Each.... 15 c (3) Cinch Universal Socket. For use with any transistor with 3 pins. Gold plated copper contacts. Snop-in P.C. mount.
No. 14A246. Cinch 7-UTS. Net Each.
.......68c 100 Each .... 45 c (3) Cinch All-Molded Socket, fits triangular base $.2 \times .1^{\prime \prime}$ centers, or 3 -contact in-line, $.048 \times .192$ contact centers. Bakelite with phosphor bronze contacts. No. 14A247. Cinch 2TS-4. Net Each.............. 16c 100 Each.... 11 c (4) Diode Holder. Has plated brass spring shaped clips to support most diodes. No. 148336. Net Each . . . . . . . . . . . . . . . . . . Bc 10 Each
(B) Cinch Integroted Circuit Socket. 10 lead. No. 12 A 240 . Cinch $10-1 \mathrm{CS}$. Each

## POWER TRANSISTOR SOCKETS \& HEAT SINKS



## (6) POWER TRANSISTOR SOCKETS

Wafer type for 2 -prong power transistors with $7 / 8^{\prime \prime}$ spacings. Has grounding strap which octs as heat sink. Size $11 / 8^{\prime \prime} \times l^{\prime \prime}$. Fits TO-3 out line transistors. . $\mathbf{C}$ No, 14A337. Cinch Type 2TS-1. Each. . . . . . . . . . . . 8 c 100 Each. Same as above except has two mitg. eyelets for easier chassis mounting.
No. 14 A 33 . Cinch Type $2 T \mathrm{~S}-2$. Each............ 11 c 100 Each..... Bc No. 144338 . Cinch Type 2TS-2. Each........... 11 C Bokelite base, phosphor bronze contacts. Mounting etrs. . 425 . No. 14A248. Cinch 2TS-3. Net Each............. 100 Each

## (B) HEAT SINKS

Anodized aluminum insulator wafers for use with power transistors. Have high thermal conductivity and high resistance.
For $2 \mathrm{Nl} 79,2 \mathrm{NI} 76$ etc. power transistors. Is " $^{\prime \prime} \times$ ita $^{\prime \prime} 4$-hole type.
No. 12A53. Cinch Type $2 W-1$. Net Each........... 25 c 50 Each....
For 2N174, etc. power transistors. $1 / 2 \times \mathrm{Hf}^{\prime \prime}$ centers. Center bolt hole.
For 2 N 389 號
For $2 N 389$, etc. power tran
No. 12A47. Cinch Type $2 W-3$. Net Each. .........25c 50 Each.

## PRINTED CIRCUIT SOCKETS


(1) 5-Pin Nuvistor Socket of low loss phenolic with steel mounting saddle for snap-in PC mounting. No. $14 A 35$. Mole holes fit (2) Same as above, but with conventional steel saddle mount. Mtg. holes fit \#2 screw or $3 / 32^{\prime \prime}$ rivet. Top mounting.
No. 17 B785. Cinch Type $5 \mathrm{NS}-1$. Net Each

21 c 100 Eoch.... 14 c 7-Pin Nuyistor Socket of general purpose bokelite. Saddle mounting type (8) 7-Pin Nuvistor Socket, of general purpose bake. 78 . 10 Eoch.....7 70 c (3) 9in Novar Socket for new Novar tubes. Made of general purpose phe(3) 9-Pin Novar Socket for new nolic with bottom mount saddle.
No. 14A2. Eby Type 9369 . Net Each. . . . . . . . . . . . . 18 c 10 Each. . . . 16 e (3) 12-Pin Compactron Socket for new compactron tubes. Made of general
purpose phenolic, bottom mount saddle.
No. 144573 . Eby Type 9371 . Net Each. . . . . . . . . 27 c 10 Each. . . . . 24c

## CINCH

WAFER TYPE SOCKETS
Laminoted sockets made of high
grade XP bakelite. Wofer is f" thick with solder cooted bross contacts. and 9 pin sockets have center shield


|  | Pin Miniature so |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stk. No 128405 12840612 B407Not | Type | Mtg. Centers | Mtg. Hole | Net Each | ${ }^{100}$ For |
|  | 7WL2 |  | . $0988^{\prime \prime}$ | . 07 | [5.66 |
|  | 7WL4 | $15 / 81$ |  | .08 |  |
| 128408128409 |  | (1) 9-PIN MINIAT | URE SOCK |  |  |
|  | $9 \mathrm{9W}$ | 11/8." | . 1381 " | . 10 | 6.20 |
|  |  | (3) OCTAL SOC | KETS (EB |  |  |
| ${ }_{128411}^{128410}$ | 46-5-E | 11/2" | . 136 " | :12 | 10.80 |
|  |  |  |  |  | 109 |

## Jones Strips, Lugs, Grommets


(1) SERIES 140. Metol to metal spocing over bakelite $1 / 4^{\prime \prime}$. Base $7 / /^{\prime \prime} \mathrm{W} \times$ Prices below are for one type only-not assorted.

| Stock No. | Terms. \& Type | $\begin{gathered} 1-4 \\ \text { Each } \end{gathered}$ | $\begin{gathered} 5- \\ 99 \\ \text { Each } \end{gathered}$ | $\begin{gathered} 100- \\ 249 \\ \text { Each } \end{gathered}$ | $\begin{gathered} 250- \\ 499 \\ \text { Per C } \end{gathered}$ | Stock No. | Terms. <br> $\&$ <br> Type | $\begin{gathered} 1-4 \\ \text { Each } \end{gathered}$ | $\begin{gathered} 5- \\ 99 \\ \text { Each } \end{gathered}$ | $\begin{gathered} 100- \\ 249 \\ \text { Each } \end{gathered}$ | $\begin{gathered} 250- \\ 499 \\ \text { Per C } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12A1526 | 2-140 | \$0.14 | \$0.12 | \$0.10 | \$ 9.12 | $12 \mathrm{Al533}$ | 12-140 | \$0.67 | \$0.56 | \$0.45 | \$42.56 |
| 12A1527 | 3-140 | . 20 | . 17 | . 13 | 12.54 | 1241477 | $13-140$ | . 73 | . 61 | . 48 | 45.98 |
| $12 A 1528$ $12 A 1529$ | 4-140 | . 25 | . 21 | . 17 | 15.96 | 12A1534 | 14-140 | . 79 | . 66 | . 52 | 49.78 |
| 12A1530 | 5-140 | . 31 | . 26 | . 20 | 19.38 | $12 \mathrm{Al478}$ | 15-140 | . 84 | . 70 | . 56 | 53.20 |
| 12 A1474 | 6-140 | . 31 | . 30 | . 24 | 22.42 | 12 A1535 | 16-140 | .89 | . 75 | . 60 | 56.62 |
| 12A1531 | 8-140 | . 46 | . 39 | . 31 | 29.84 29.26 | 12A1479 | 17-140 | . 84 | . 79 | . 63 | 59.66 |
| 12A1475 | 9-140 | . 52 | . 43 | . 34 | 32.68 | 12A1480 | 19-140 | 1.00 | . 83 | . 66 | 63.08 66.50 |
| 12 A1532 | 10-140 | . 57 | . 48 | . 38 | 36.10 | 12A1537 | 20-140 | 1.10 | . 92 | . 74 | 66.50 69.92 |
| 12 A1476 | 11-140 | . 62 | . 52 | . 41 | 39.14 | 12 A1481 | 21-140 | 1.16 | . 97 | . 77 | 73.34 |

(1) SERIES 141 . Metal to metal spacing over bakelite $3 / 8^{\prime \prime}$. Base $11 / 8^{\prime \prime} \mathrm{W} \times$ Prices below are for one type only-not assorted.

| $12 A 1550$ | $2-141$ | $\$ 0.19$ | $\$ 0.16$ | $\$ 0.12$ | $\$ 11.78$ | $12 A 1557$ | $12-141$ | .86 | .72 | .58 | $\$ 54.72$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $12 A 1551$ | $3-141$ | .25 | .21 | .17 | 15.96 | $12 A 1456$ | $13-141$ | .54 | .78 | .63 | 59.30 |
| $12 A 1552$ | $4-141$ | .32 | .27 | .22 | 20.52 | $12 A 1417$ | $14-141$ | 1.00 | .84 | .67 | 63.46 |
| $12 A 1553$ | $5-141$ | .39 | .33 | .26 | 24.70 | $12 A 1457$ | $15-141$ | 1.07 | .89 | .71 | 67.60 |
| $12 A 1554$ | $6-141$ | .45 | .38 | .30 | 28.50 | $12 A 1418$ | $16-141$ | 1.14 | .95 | .76 | 72.20 |
| 12A1453 | $7-141$ | .53 | .44 | .35 | 33.40 | $12 A 1458$ | $17-141$ | 1.21 | 1.01 | .80 | 76.40 |
| 12A1555 | $8-141$ | .59 | .50 | .40 | 37.62 | $12 A 1419$ | $18-141$ | 1.27 | 1.06 | .85 | 80.56 |
| 12A1454 | $9-141$ | .66 | .55 | .44 | 41.80 | $12 A 1459$ | $19-141$ | 1.34 | 1.12 | .90 | 85.10 |
| 12A1556 | $10-141$ | .73 | .61 | .49 | 46.36 | $12 A 1420$ | $20-141$ | 1.41 | 1.18 | .94 | 89.30 |
| 12A1455 | $11-141$ | .80 | .67 | .53 | 50.50 |  |  |  |  |  |  |

 Prices below ore for one type only-not assorted.

| Stock No. | $\begin{gathered} \text { Terms. } \\ \& \\ \text { Type } \end{gathered}$ | Each | $\begin{gathered} 5- \\ 99 \\ \text { Each } \end{gathered}$ | $\begin{aligned} & 100- \\ & 249 \\ & \text { Each } \end{aligned}$ | $\begin{gathered} 250- \\ 499 \\ \text { Per C } \end{gathered}$ | Stock No. | Terms. \& Type | $\begin{aligned} & 1-4 \\ & \text { Each } \end{aligned}$ | $\begin{gathered} 5- \\ 99 \\ \text { Each } \end{gathered}$ | $\begin{aligned} & 100- \\ & 249 \\ & \text { Each } \end{aligned}$ | $\begin{gathered} 250- \\ 499 \\ \text { Per C } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12A1566 | 2-142 | \$0.22 | \$0.18 | \$0.14 | \$13.68 | 12 A1572 | 10-142 | \$ 8.89 | \$ . 75 |  |  |
| $12 \mathrm{Al567}$ | 3-142 | . 31 | . 26 | . 20 | 19.38 | 12 A1452 | 11-142 | . 97 | . 81 | . 65 | 61.60 |
| $12 \mathrm{A1568}$ | 4-142 | . 39 | . 33 | . 26 | 24.70 | 12A1573 | 12-142 | 1.06 | . 88 | .70 | 66.88 |
| 12 A1569 | 5-142 | . 47 | . 39 | . 31 | 29.64 | 12A1422 | 13-142 | 1.14 | . 95 | . 76 | 72.20 |
| 12A1570 | 6-142 | . 55 | . 46 | . 37 | 34.96 | 12A1423 | 14-142 | 1.22 | 1.02 | . 82 | 77.52 |
| 12A1439 | 7-142 | . 64 | . 54 | . 43 | 40.70 | 12A1424 | 15-142 | 1.31 | 1.09 | . 87 | 82.84 |
| 12 A1571 | 8-142 | . 72 | . 60 | . 48 | 45.60 | 12 A1425 | 16-142 | 1.39 | 1.16 | . 93 | 88.16 |
| 12 A1442 | 9-142 | . 80 | . 67 | . 54 | 50.90 | 12A1426 | 17-142 | 1.47 | 1.23 | . 98 | 93.10 |

## CINCH-JONES SOLDERING LUG STRIPS

$\stackrel{\circ}{\circ}$ 0

Bokelite strips hondy for oll types of circuit wiring. Soider cooted steel lugs are spaced on $3 / 8^{\prime \prime}$ centers. Mtg. feet hove $140^{\prime \prime}$ dio. holes. Types $1,2,3$ ground lug; type 5 has one ground lug; type 4 hos two mtg. feet with no mtg . ft. and two ground lugs. "No. of lugs" belound lug; type 5 has two of lugs on a strip, including ground lugs.

Prices below are for one type only-not ossarted.

| Stock No. | Cinch No. | Fig. | No. of Lugs | $\begin{gathered} 10 \\ \text { For } \end{gathered}$ | $\begin{aligned} & 100 \\ & F_{\text {or }} \end{aligned}$ | Stock No. | Cinch No. | Fig. | No. of Lugs | $\begin{array}{r} 10 \\ \text { For } \end{array}$ | $\begin{aligned} & 100 \\ & \text { For } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12A1256 | 51 F | 1 | 1 | \$0.30 | \$2.25 | 12A1270 | 55 | 4 |  |  |  |
| 12 A1258 | 51 T | 2 | 1 | \$0.30 | 3.50 | 12A1273 | 5 | 4 | 6 | \$0.60 | $\$ 4.50$ 5.40 |
| 12A1260 | 52 T | 2 | 2 | . 62 | 4.65 | 12A1262 | 51.4 | 5 | 2 | . 26 | 2.00 |
| $12 \mathrm{Al263}$ | 53 T | 2 | 3 | . 76 | 5.70 | 12A1268 | 52 A | 5 | 3 | . 30 | 2.25 |
| 12A1261 | 51 | 3 | 1 | . 26 | 2.00 | 12A1275 | 53 F | 5 | 4 | .40 | 3.00 |
| 12 A 1267 | 52 | 3 | 2 | . 30 | 2.25 | 12A1282 | 54C | 5 | $\stackrel{4}{5}$ | . 44 | 3.00 3.30 |
| 12A1264 | 53 E | 3 | 3 | . 40 | 3.00 | 12A1274 | 53A | 5 | 5 | . 64 | 3.30 4.80 |
| 12 A1265 | 54 B | 3 | 4 | . 48 | 3.60 | 12A1257 | 54A | 6 | 5 6 | . 64 | 4.80 5.10 |
| 12 A1266 | 53 | 4 | 3 | . 58 | 4.75 | 12A1283 | 55 A | 6 | 7 | . 60 | 5.10 4.50 |
| 12A1269 | 54 |  | 4 | . 62 | 4.65 | 12A1259 | 56A | 6 | 8 | . 72 | 4.50 5.40 |

No. Type Lgth (C) (D)

No. Type Lgth. Hole 100 (E)
 $12 A 1288$

 B-A BARGAIN SPECIAL
No. 18A1144. 50 Assorted. 110

| $88 c$ | $12 A 1300$ | 8 | 299 | 2.20 | 18.00 |
| :--- | :--- | :--- | :--- | :--- | :--- |

## SOLDERING LUGS



110

Terminol $019^{\prime \prime}$ (2)JONES NO. 2000 TERMINAL STRIPS
strip Brock. Usefut in assembling rodio chassis, wiring, etc. Insulation: bokelite. Brockets: steel, cadmium plated. Terminals spaced on $\frac{8}{8}$ centers

| $N$ | Terms. Type | $\begin{aligned} & 1-49 \\ & \text { Each } \end{aligned}$ | Each | $\begin{gathered} 100- \\ 249 \\ \text { Per C } \end{gathered}$ | $\begin{aligned} & 250- \\ & 499 \\ & \text { Per C } \end{aligned}$ |  | $\stackrel{\&}{\text { Type }}$ | $1-49$ <br> Each | $\begin{gathered} 50- \\ 99 \\ \text { Each } \end{gathered}$ | $\begin{gathered} 100- \\ 249 \\ \text { Per C } \end{gathered}$ | $\begin{aligned} & 250- \\ & 499 \\ & \text { Per C } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 Al 582 | 2-2002 | \$0.07 | \$0.06 | \$4.40 | \$4.18 | 12 A 1587 | 8-2008 | \$ . 12 | \$ . 10 | \$8.00 | \$7.60 |
| 12A1583 | 3-2003 | . 07 | . 06 | 4.80 | 4.56 | 12 A1461 | 9-2009 | . 13 | . 11 | 8.80 | 8.36 |
| 12A1584 | 4-2004 | . 08 | . 07 | 5.60 | 5.32 | 12 Al 588 | 10-2010 | . 14 | . 12 | 9.20 | 8.74 |
| 12A1585 | 5-2005 | . 09 | . 08 | 6.00 | 5.70 | 12A1462 | 11-2011 | . 15 | . 13 | 10.00 | 9.50 |
| 12A1586 | 6-2006 | . 10 | , 09 | 6.80 | 6.46 | 12A1589 | 12-2012 | . 16 | . 13 | 10.40 | 9.88 |
| 12A1460 | 7-2007 | . 11 | . 09 | 7.20 | 6.84 | $12 \mathrm{Al463}$ | 13-2013 | . 17 | . 14 | 11.20 | 10.64 |

(3) ADAPTER SOLDER TERMINALS FOR JONES BARRIER STRIPS "3/4 W." type lugs are for wiring above the chassis.
wiring below the chassis. Avg. shpg. wt. 3 oz. per 100

| Stock No. | Type | $\begin{aligned} & \text { Fit } \\ & \text { Strip } \end{aligned}$ | $\begin{aligned} & 1.99 \\ & \text { Each } \end{aligned}$ | $\begin{gathered} 100- \\ 499 \\ \text { Per c } \end{gathered}$ | $\begin{gathered} 500- \\ 999 \\ \text { Per C } \end{gathered}$ | Stock No. | Type | $\begin{aligned} & \text { Fit } \\ & \text { Strip } \end{aligned}$ | $\begin{aligned} & \text { 1-99 } \\ & \text { Each } \end{aligned}$ | $\left\|\begin{array}{c} 100- \\ 499 \\ \text { Per } \\ \text { C } \end{array}\right\|$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12A1434 | $3 / 4 \mathrm{~W}$ | 140 | \$0.03 | \$2.20 | \$1.98 | 12B1329 | Y | 140 | \$0.03 | \$2.20 | \$1.98 |
| 12A1435 | $3 / 4 \mathrm{~W}$ | 141 | . 04 | 2.95 | 2.65 | 1281330 | Y | 141 | . 04 | 2.95 | 2.65 |
| 12 A1436 | $3 / 4 \mathrm{~W}$ | 142 | . 04 | 3.60 | 3.24 | 12B1331 | Y | 142 | . 04 | 3.60 | 3.24 |

(1) CINCH SCREW TYPE TERMINAL STRIPS WITH SOLDER LUGS

Ideal for chassis or breadboard layouts. Solder coated brass terminals. $136^{\prime \prime}$ dia. mtg. holes. Strlps with 1 to 6 lugs are of $1^{\prime \prime \prime}$ bakelite; 7 to 10 terminals mounted on $3^{3} y^{\prime \prime}$ bokelite. Ends of screws are coptivated to pre-

| Stock No. | $\begin{aligned} & \text { Type } \\ & \text { \& } \\ & \text { Lugs } \end{aligned}$ | Mtg. Centers | $\begin{aligned} & \text { 1-99 } \\ & \text { Each } \end{aligned}$ | $\begin{gathered} 100- \\ 999 \\ \text { Per C } \end{gathered}$ | $\begin{gathered} 1000 \\ \text { Up } \\ \text { Per C } \end{gathered}$ | Stock No. | Type \& Lugs | Mtg. Centers | $\begin{aligned} & \text { 1-99 } \\ & \text { Each } \end{aligned}$ | $\begin{gathered} 100- \\ 999 \\ \text { Per C } \end{gathered}$ | $\begin{gathered} 1000 \\ \text { Up } \\ \text { Per C } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12A1509 | 17-1 | 7/8" | 4 c | \$ 2.00 | \$ 1.90 | 12A1514 | 17-6 | $31 /{ }^{\prime \prime}$ | 18 c | \$ 9.10 | \$ 8.65 |
| 12A1510 | 17-2 | $1 \%{ }^{\prime \prime}$ | 7 c | 3.40 | 3.23 | 12 A1515 | 17-7 | 31/2" | 23c | 11.30 | 10.74 |
| 12A1511 | 17-3 | $16^{\prime \prime}$ | 10 c | 4.80 | 4.56 | 12A1516 | 17-8 | 315" | 26c | 12.80 | 12.16 |
| 12 A1512 | 17-4 | 2\%" | 13c | 6.24 | 5.93 | 12A1517 | 17-9 | $43 / 8{ }^{\prime \prime}$ | 29c | 14.30 | 13.59 |
| 12A1513. | 17-5 | 25/8" | 15c | 7.70 | 7.32 | 12A1518. | 17-10 | 4 $0^{\circ \prime}$ | 32c | 15.80 | 15.00 |

Nickel plated $1 / \mathrm{B}^{\circ}$ (5) CINCH-JONES INSULATED PIN PLUG
Nicke plated $1 / 8^{\prime \prime}$ brass tube pin $i^{9}{ }^{\prime \prime}$ long assembled to $\$_{2}{ }^{\prime \prime}$ long black fibre insulator

| Stock No. | Type | $1-99$ Each |
| :---: | :---: | :---: | :---: | :---: |
| 12 Cl 1438 | $\frac{100-999 \text { Per C }}{14 \mathrm{c}}$ | 1000 Up Per C |
| $\$ 9.00$ | $\$ 8.00$ |  |

(6) SCREEN TYPE PLUG BUTTON

Ideal for ventilating radios, transmitters, amplifiers or any electronic equipment where heat can build up. Bright zinc ploted steel button snops in 1" dia. hole. Shpg. wt. 1 oz. per 5
No. 12B200. Cinch Type 41 V . Net each.....12c 100 Eoch........ 8 c

## FAHNESTOCK CONNECTORS



Positive cont
oz., per 100

| lllus. Fig. | Stock No. | Mfg. Type | Length | Width | Max. Wire | Mig. Hole | $\begin{aligned} & 1-9 \\ & \text { Each } \end{aligned}$ | $\begin{aligned} & 10 \\ & \text { For } \end{aligned}$ | $100$ | $\begin{aligned} & 1000 \\ & \text { For } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | 12A1089 | 2 | 1 * | 8/8' | \#10 | 78 | 4 c | \$0.20 | \$1.60 | \$14.90 |
| (1) | 12A1090 | 10 | $3 / 4$ | $3^{18}$ | 414 | 46 | 4 c | . 15 | 1.27 | 11.48 |
| (2) | 12A1091 | 5 | $1 \frac{1}{10}$ | $8 / 8$ | \$10 | 48 | 5 c | . 35 | 2.55 | 22.95 |
| (2) | 12A927 | ${ }^{*} 15$ | 1/2. | 尔: | \$16 | 44 | 4 c | . 20 | 1.55 | 14.18 |
| (3) | 12 A1092 | 9 | $2{ }^{\frac{1}{16}}$ | $3 / 8$ | 110 | 48 | 17c | 1.35 | 12.60 | 14.18 |
| (3) | 12A1093 | 18 | 11/2. | 8 | 114 | 46 | 14 c | 1.20 | 11.20 |  |
| (4) | 12 A1094 | ${ }^{*} 36$ | 15/8. | \%* | 110 | Lug | 24c | 1.80 | 16.80 |  |
| (5) | 12A1095 | 45 | -3" | 3/8* | \%12 | 16 | 5 c | . 35 | 16.55 2.55 | 22.95 |

RUBBER GROMMETS, PLUGS \& BUMPERS

(1) SNAP HOLE PLUGS

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | Fits <br> Hole <br> Dia. | Each | $\begin{aligned} & 100 \\ & \text { For } \end{aligned}$ | $\begin{aligned} & 500 \\ & \text { For } \end{aligned}$ | For |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 12A1448 |  |  | 2.40 |  |  |
| 12A133 |  | 48 | 2. |  |  |
| 12A1336 |  | 46 | 2.4 |  | 16.00 |
| 12 A 1337 |  | 46 | 2.4 |  |  |
| 12A1338 |  | 48 | 2.40 | . 0 | 16.00 |
| 12A1343 |  | 5 | 3.00 | 2.50 | 0.0 |
| 12A1344 |  | 66 | 3.60 | 15.00 |  |
| 12A1339 |  | 98 | 5.40 |  |  |
| 12A1340 | 114* | $10 \%$ |  |  |  |


|  |  | $\begin{aligned} & \text { BBER } \\ & \text { Just } \end{aligned}$ | BUTTON BUMPERS Put in Hole |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | O.D. | $\left\lvert\, \begin{gathered} \text { Fits } \\ \text { Hole } \end{gathered}\right.$ | High | Each | $\begin{array}{\|l\|} 100 \\ \text { For } \end{array}$ | For | $1000$ |
| 12A1449 |  |  | \%" | 3 c | 1.41 | 6.34 | 11.28 |
| 12A1450 |  |  |  | c | 2.07 | 9.31 | 16. |
| 12A1 |  |  |  | 6 c | 3.3 |  |  |
| (4) RUBBER FEET <br> With recessed cavity for screws, nails, etc. |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Stock No. |  | Takes |  |  | 100 | 500 | 1000 |
|  | O.D. | Screw | High | Each | For | - | For |
| $\begin{aligned} & \hline 12 \mathrm{~A} 1447 \\ & 12 \mathrm{~A} 1444 \end{aligned}$ | $\begin{aligned} & \frac{8}{8 \prime \prime} 8^{\prime \prime} \\ & 5 / 8^{\prime \prime} \end{aligned}$ | $\left\lvert\, \begin{array}{ll\|l} 44 \text { or } 6 & 3 / 8^{\prime \prime} \\ 46 & \text { or } 8 & 3 / 8{ }^{\prime \prime} \end{array}\right.$ |  | $\begin{aligned} & 4 c \\ & 4 c \end{aligned}$ | 1.45 | $\begin{array}{r\|r} 6.54 & 11.88 \\ 12.19 & 21.57 \end{array}$ |  |
|  |  |  |  | 2.64\| |  |  |

## (2) RUBBER GROMMETS

\section*{PLAIN RUBBER <br> | Stock | $\begin{array}{l}\text { Mitg. } \\ \text { Hole }\end{array}$ | $\begin{array}{l}\text { Hole }\end{array}$ | Each | 100 | 500 | 1000 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |} | No. Hole | Hole | Each | For | For | For | perM |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $12 A 1497$ | $1 / 4^{\prime \prime}$ | $1 / 8^{\prime \prime}$ | $2 c$ | 1.10 | 4.95 | 8.75 | 7.87 |


 3) RUBBER BUTTON BUMPERS


## B-A Is A Stocking Industrial Distributor of ALL Cinch-Jones Products

# Jones Connectors, Binding Posts 

## SERIES 300 CONNECTORS <br>  <br>  <br> (1)

## SERIES 400 CONNECTORS

Small in size with good separation between contocts, block bakelite insulation roted ot 730 RMS valts of 10 amp
24 to 33 contoct connectors hove special long polarizing pin for correct inspecify both B.A Stock No. and Jones Type No.

300 SERIES PLUGS \& SOCKETS
CABLE TYPE WITH CLAMP
(1) PLUGS Stk. No, 12 A179
(2) SOCKETS Stk. No, 12 A179

|  | Jones No. | E-49 | $50-99$ Each | 100-249 |  | Jones No, | 1-49 | 50.99 Eoch | 00-249 Eoch |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \text { Eoch } \\ & \$ .46 \end{aligned}$ |  |  |  |  |  | \$.39 | \$.31 |
| 3 | P303CCT |  |  | . 2 | 3 | S303CCT | 50 | .42 | 33 |
| 4 | P304CCT |  |  |  | 4 | S304CCT | . 54 |  |  |
| 6 | P306CCT |  |  | 39 | 6 | S306CCT | 62 | 52 |  |
| 8 | P308CCT |  |  | 3 | 8 | S308CCT | . 72 | 80 |  |
| 10 | P310C |  | 1 |  | 10 | S310CCT | 80 | 87 |  |
| 12 | P312CCT |  | . 66 | 3 | 12 | S312CCT | . 92 | 77 | 82 |
| 15 | P315CCT | 03 | 86 | 9 | 15 | S315CCT | 1.15 | 96 | 6 |
| 18 | P318CCT |  | 04 | 3 | 18 | S318CCT | 1.36 | 1.14 |  |
| 21 | P321CCT |  | 1.2 | 98 | 21 | S321CCT | 1.58 | 1.32 |  |
| 24 | P324CCT | 1.73 | 1.45 | 1.18 | 24 | S324CCT | 1.88 | 1.55 | 4 |
| 27 | P327CCT | 1.97 | 1.84 | 1.31 | 27 | S327CCT | 2.08 | 1.73 | 38 |
| 30 | P330CCT | 2.29 | 1.9 | 1.53 | 30 | s330CCT | 2.40 | 2.00 | 80 |
| 33 | P333CCT | 2.45 | 2.0 | 1.64 | 33 | S333CCT | 2.57 | 2.14 |  |

CHASSIS TYP
No. $12 A 18$


(1)


400 Series. Heavy duty polorized connectars for high power applicotions, Rated 1100 RMS volts at 15 omps. Plug prongs ore $1 / 4^{\prime \prime}$ wide and ${ }^{18}$ thick, made of phosphor bronze, knife-switch type are black crystal with fibre lining. Average shpg. wt. 6 az. Specify B-A Stock No. and Jones Type No. when ordering.

CABLE TYPE WITH CLAMP


## NU-WAY SNAP CONNECTORS

For Permanent or Temporory Circuits Permits quick simple connection of wires. Nickel plated brass. Terminals snop rogether making positive contact. Any number or shaps can be pyramided together for
shown of right). Shpg. wt. 2 oz .
(1) Snaps-Snaps on to studs or lugs listed below. With crimp-on solder lug 12A642. Ea.. 10 c 100 For. $\$ 7.19$ IM For. $\$ 64.80$ (3) Studs-With snap for use with snaps above. 124643. Ea...7c 100 For. $\$ 5.40$ IM For. . $\$ 51.33$ (3) Lugs-Adapts screw type terminols or binding posts for use with above snaps. Size $3 / 4^{\prime \prime} \times \frac{18}{18} \times{ }^{\prime \prime}{ }^{\frac{1}{2}}$ Has hole for size 6 or 8 screws.
124644 . Ea.. 7 c ( 100 For. $\$ 5.40$ IM For $\$ 51.33$
 GRID \& PLATE CAPS

## HIGH VOLTAGE



## BINDING POSTS

(1) (2)

(6) SOCKETS WITH KEEPER
(5) PLUGS WITH LATCH

CHASSIS TYPE SOCKET
(3) CABLE TYPE PLUG

No. 12A183


No. 12A135 with hole in


## SERIES 202 PLUGS AND SOCKETS


(1) H. H. SMITH NO. 266 1/" dio bakelite head, 8/32" brass $1 / 2$ dia. bakelite head, $8 / 32$ threoded inser
$12 A 619$. Eoch.
(2) H. H. SMITH NO. 257 Molded Nylon, 5-way connections Brass inserts head $G$ washer. Metal insulated from chassis. For panels $1 /{ }^{\prime \prime}$ to $1 / 4^{\prime \prime}$ dio.. $1 / 2^{\prime \prime}$ mtg. hole. 30 amps 2000 V. AC. Red or Black.
No. 12 A 603 . Eo.. 35 c 10 , Eo. 29 c (3) H. H. SMFTH NO. 386 5 -way connection insuloted post of molded Butyrate. $1 / 2^{\prime \prime}$ dio. Mounts in No. 12B742. Black Each 10 Eo. $\begin{array}{ll}\text { No. 12B742. Black Each } 10 \text { Eo. } \\ \text { No. } 128743 . R e d \quad \$ 0.25 & \$ 0.22\end{array}$

## (7) SUPERIOR DF3O S-WAY BINDING POSTS

Five ways to connect: (1) banana jack in top; (2) wire around shaft and clamp; (4) wire to 12 gauge clomped through center hole; (5) clomped spade lug connection, plus new solder tip on bottomnylon plastic insulation, all brass ports GOLD-plated. Rating 30 amps 1000 volts. Availability of 6 colors provides more aftractive panels and easier circuit identification. Mounts in panels ${ }^{10 \prime \prime}$ to $1 / 4^{\prime \prime}$ thick. Has $10-32$ thread-
ed stem with 2 hex nuts. Overall length 1 fl $^{\prime \prime}, 5 / 8^{\prime \prime}$ dia. Specify color: Red, ed stem with 2 hex nuts, Overall length $1 \not \mathrm{l}^{\prime \prime}$, $5 / \mathrm{s}^{\prime \prime}$ dia. Specify color: Red
8lock, Green, Yellow, White, or Blue.
No. 12 B 600 . Choice Eoch.....40

# Switcherett, Mailory blugs s. deck 



SWITCHCRAFT "LITTEL PLUG" TYPE
Smali size phone plugs fit standard $1 / 4^{\prime \prime}$ phone jack, except Nos. S-250, S-260, $\mathrm{C}-245$ and $\mathrm{C}-270$ which hove o $206^{\prime \prime}$ dio. sleeve for .210 jacks. No's. C-240, c-245 and C-270 hove cable clamp and screw terminals. $;$ R- 280 has short sleeve for Revere Recorders. Solder terminal types have coble clamp. Shielded handles are nickel plated brass; others are molded plastic; $5 / 8$ " long, $1 / 2^{\prime \prime}$ dia. Shpg. wt. 2 oz . tScrew terminals, others solder terminols.

2 CONDUCTOR TYPES


## SWITCHCRAFT "FLAT PLUGS"

plugs pho plugs featuring flat, space-soving handles, for use where conventional phone protrude too for. No's. 220,225 have adaptor clips to clamp standard and S-235 hove $.206^{\prime \prime}$ dio. sleeve. +Screw terminals, others solder ter. 5-230 2 CONDUCTOR TYPES


Rugged jocks feature cable anchoror $18^{\prime \prime}$ O.D. $28^{\circ} 2^{\prime \prime}$ long; 121 and 131 are $1 / 2 \times 21 / 2^{\prime \prime} \mathrm{S}-830, \mathrm{~S}-1230$, and $\mathrm{S}-128$ hove. $21^{\prime \prime} 0^{28^{\prime \prime}} \mathrm{D}$.; all others $1 / 4^{\prime \prime}$. $\dagger 31$ are cates screw terminal, others solder.

2 CONDUCTOR TYPES


Stondard $1 / 4^{\prime \prime}$ phone jack with extro
up to $11 / 4$ " thick. Overall length $21 / 4^{\prime \prime} \times 5 / 8^{\prime \prime}$ dia bushing for mounting in panels 152 i type. No. 151 mates with all standard 2 mounts in $15 / 36$ hole. Open 528 with 3 conductor types, 260 etc. $12 \mathrm{BzOj} \quad \mathrm{Mfg}$. No. Conductors $1-24 \mathrm{Ea}$ : $25-49 \mathrm{Ea} \quad 50-99 \mathrm{Ea} .100 \mathrm{Up}$ Ea. $\begin{array}{rrcccrr}128201 & 151 & 2 & \$ 0.81 & \$ 0.70 & \$ 0.60 & \$ 0.58 \\ 128202 & 152 B & 3 & .90 & .78 & .87 & .59\end{array}$

## SWITCMCRAFT "LITTEL-JAX"

## PHONE JACKS

Small economical standard jacks. Mount in single $3 / 8^{\prime \prime}$ hole, panels ofi2 thick. No s. S-1/ and S-12B have . $210^{\prime 1}$ I.D. sleeve, others mote with standord $1 / 4$ plug. Wt. 1 oz


MALLORY PLUG \& JACKS
MALLORY MIDGET \& JUNIOR $1 / 4$ " JACKS

Screw terminal 2-cond. plug and jack
will toke wire or phone tips. Both hig. Stk. No. shell
Fite
 standard $1 / 4^{\prime \prime}$ phone plug. Open circuit like Al in diagram at right. Extends $7 / 8^{\prime \prime}$ behind panel. Type $\mathrm{GJ}^{\prime} 1$
12 B 364 . Eoch...36 c 10 Each

| MALLORY HEAVY-DUTY MILITARY TYPE JACKS | - | Midget Al <br> No. 124381 | $\begin{aligned} & \text { Each } \\ & 33 \mathrm{c} \end{aligned}$ | 10 E. $30 c$ |
| :---: | :---: | :---: | :---: | :---: |
|  | $\underline{\square}$ | Midget $A 2$ No. $12 A 382$ | Each 48 c | 10 Ea. $43 c$ |
|  | $\sim$ | Midget A2A <br> No. 124383 | Each 57 c | 10 Ea. 616 |
| Open circuit like Al in diagrom at |  | Juniar 702B <br> No. 124379 | Each | 10 Ea . 516 |
| No. 124384. Ea..36c, 10 , Ea. 32c Type JJ-034. Meets JAN-J-641 specs. No. 12B15. Ea. 39c, 10 , Eo.. 35 c |  | Junior 703B <br> No. 124380 | $\begin{aligned} & \text { Each } \\ & 60 \mathrm{c} \end{aligned}$ | 10 Ea. $54 c$ |
| Three-conductor like 702 B in diagram at right. For plugs WE109, PJ-068, PL68, PL168, etc. (For . $206^{\prime \prime}$ dia. |  | Junior 704B <br> No. 12A306 | $\begin{aligned} & \text { Eoch } \\ & 69 \mathrm{c} \end{aligned}$ | 10 Ea. 62c |
| 12A385. Eo. 42c, 10, Eo.. 38 c JJ-033. Meets JAN-J-641 specs. |  | $\begin{aligned} & \text { Junior } 705 \\ & \text { No. } 124377 \end{aligned}$ | $\begin{aligned} & \text { Each } \\ & 75 c \end{aligned}$ | 10 Eg. 68 c | Type JJ-033. Meets JÁN-J-641 specs.

## MILITARY PLUGS AND JACKS



Meets MIL specs. No. MIL-P-642A. High quality black plastic handle, with ug terminals aftached internally with brass screws. PJ-309 has phenolic hondle held in place with bress set screw. Shpg. wt. 2 oz .


Conform to MIL-J-641A specs. Bross nickel-plated
special alloy of tempered nickel silver. Shpg. witated frome, with springs of Stk. No. Type MILNo. I.D. No.Cond. Cireui

| Stk. No. | Type | MIL No. | I.D. | No. Cond. | Circuit | Net Ea. | $10 \text { Ea. }$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 128345 | C-11 | JJ-034 | 1/4"' | 2 | Open | $\$ .36$ |  |
| 128346 | C-12A | JJ-089 | $1 / 4{ }^{\prime \prime}$ | 2 | Closed |  |  |
| 12 A 451 | C-12B | JJ-033 | $.210^{\prime \prime}$ | 3 | Open |  |  |

Two-conductor precision cord MILITARY CORD CONNECTOR
gether. Size $1 / 2^{\prime \prime} \mathrm{W} . \times 1 \mathrm{~s}^{\prime \prime} \mathrm{T} \times$ connectors. Molded plastic cose cements to-



## TRANSISTOR RADIO PLUGS AND JACKS

Only $1 / 3$ size of "Littel-Jox" and "Littel-Plugs".
Plug is 2 -cond ${ }^{\prime \prime}$ hole in panels up to $1 / 8^{\prime \prime}$ thick.
Plug is 2 -cond. Dig. $3 / 8^{\prime \prime}$ of she
overall. For ${ }^{\prime} 6{ }^{\prime}$ or smaller cable.

(1) No. 12 8426. Type 41. Open Circuit Jack. Each....24c 10, Each.. 22 c
(1) No. 12 B 427 . Type 42A. Closed Circuit Jock. Each..27c 10, Each. 24 c (2) "TINJ-PLUGS

WITH SCREW TERMINALS
No. Type Eoch Has clomp SOLDER TERMINALS
$12 \mathrm{B420} 740$ Blk. Tennite. .... 45 C 12 C 423750 Blk. Tennite. En.
 12 B422 770 Brass N.P..........63c 128425 780 Brass, N.P. Ea..... $80 c$ Ultro-minioturized version MICRO" PLUG AND JACK
with $.097^{\prime \prime}$ dia finer $1 / 4^{\prime \prime}$ O.D.
 (3) No. 12 A287. 850 Black Plug. Each.
(1) No. 12 A288. TR-2A. Jack. Each

## SWITCHCRAFT HI-D JAX



New smaller, more compoct phone jacks, mote with stand ard $1 / 4$ "phone plugs. Malded box body protects integral sil-ver-plated, nickel silver springs. Low contact resistance and electrical leakage with little copocity between springs. Mounts in $3 / 8$ " O.D. hole in panels up to " 39 " thick. Shpg.
wt. I oz. wt. I oz. 2 CONDUCTOR TYPES


# Plugs - Jacks - Clips 

BANANA PLUGS \& JACKS


PHONE TIP PLUGS \& JACKS


ASSORTED CONNECTORS


MANUFACTURERS ABBREVIATIONS USED BELOW: HS for Hermon $H$. Smith, EJ for E. F. Jahnson, S for Switcheraft and E for EBY. Shpg. wt. 2 oz. DESCRIPTIVE ABBREVIATIONS: BP for banona plug, BJ for banana jack TP for tip plug, TJ for tip jack, PP for phono plug, PJ for phano jock and 1 for insulated. All jocks will mount in panels up to $3 / 8$ "thick except HS240 (ta " $6^{\prime \prime}$ ) and HS206 (to $5 / 8^{\prime \prime}$ ). Herman Smith insulated types are stocked in Red, Black, Green and Yellow. E. F. Johnson types stocked in White, Red, Black, Green and Yellow. Please specify both B-A Stock Number and Color


## GRAYHILL BINDING POSTS-TEST CLIPS



Illus. Stock Mfg. Mig. Lgth. Fig. No. No. Hole -100 1. 1.48 Spring loaded. Brass, Red or Black. . \$0.35 \$0.30 (B) 128499 29-101.
1.8

Adapts Banano Jock to Spring loaded post. Red or Black . . . . .
For chassis mtg. ins. Red or Black
(C) $12 C 505$ 29-104 3/8" 1.48 For chassis mtg. ins. Red or Black
(D) $12 C 507$ 2-0 $\mathrm{H}^{\prime \prime} 1.59$ Ponel mounted spring Test Clips.
(E) 128508 2-1 ... 2.07 Banano adapter spring Test Clip
(F) 128509 2-4 $3 / 8^{\prime \prime} 1.56$ Ins. Mtg. Type.
(G) $12 B 514$ 2-2 ... 3/4 Ctrs. Bonana plug-in
(H) $128515 \quad 2-7$
(I) $12 C 516 \quad 2-8$
$3 / 4$ Ctrs. Bonana plug-in . . . . . . . 1.40
Adj. Ctrs. Bonana plug-in . . . . . . . . . . 1.50

MUELLER CLIPS AND INSULATORS
TYPES MARKED WITH ASTERISKS (\%) ARE COPPER. OTHERS ARE OF STEEL (Cadmium-Plated). "S" AFTER TYPE NUMBER INDICATES SCREW CONNECTORS, $(+$ ) INDICATES SOLDER TYPE. STANDARD PACKAGES 10 AND 100.


## (1) "MINI-GATOR" CLIP

Small size for testing miniature and sub-miniature equipment.


## (2) 34 SERIES MICRO-GATOR CLIPS

Has microscopic tip, no lorger than a pin head. Makes firm connection on printed circuits, transistors ond other tiny terminols. Separote insulators, use No. 36 listed below.
12 A1 1069
${ }_{34}^{34} \mathrm{C}$ ! 1 a "."

$\$ 0.41$
$\$ 3.60$
4.60 $12 A 1070$
$34 C$
.
wee-pee-wee clip
Non-ferrous R.F. Clip. Ideal for coils and high frequency work.
12 A 1012
14.30

12A1012

|  | (1) | alligator | CLIPS (Fit | Bonono Plugs) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }_{12 \mathrm{No}}^{\mathrm{No}} \mathrm{O}_{26}$ | ${ }_{+60}$ | Length | Open | Eoch 07 | . 48 | 4.20 |
| 12 A 1006 | 605 | 2"', | 感", | . 08 | . 58 | 5.00 |
| 12A1007 | *60CS | $2^{\prime \prime}$ | ${ }^{\prime}$ | . 12 | . 86 | 7.40 |

$12 A 1007$

* 60 CS
(5) INSLATED ALLIGATOR CLIPS

Red ar Black shank. Fits banano plugs.
12 A 1008
 (B) ALL-INSULATED ALLIGATOR CLIPS

Protects against shocks and sharts in compact equipment. Red ar black. $\begin{array}{lllllll}12 A 1638 & { }^{633} & 2^{2 \prime \prime} & 1 / 4^{\prime \prime} & .19 & 1.30 & 11.00 \\ 12 A 1639 & * 53 C & 2^{\prime \prime} & 1 / 4 & .22 & \mathbf{1 . 5 0} & 13.00\end{array}$

(9) " 70 " SERIES ALLIGATOR CLIPS


| No. | Type | Lgth. | Open | Eoch | 10 For | 100 For |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 NO 93 | +70 | 17, | P8." | . 07 | . 42 | 3.60 |
| 124924 | 705 | 1.1." | ! ${ }^{\text {fo}}$ | . 08 | . 50 | 4.30 |
| 12 A925 | \% 70 CS | $17{ }^{\text {12 }}$ | P'" | . 11 | 77 | 6.80 |
|  |  |  | DILE |  |  |  |
| 12 Al 1010 | * 85 |  |  | $\begin{array}{r} 10 \\ 19 \end{array}$ | $1.71$ | $\begin{array}{r} 6.10 \\ 11.20 \end{array}$ |
| 1281041 | *85C | 25/8" |  | . 29 | 1.73 | 14.80 |
| 12A1011 | $\pm 85 \%$ | 2 s | 18 | jow |  | 4.80 |



Red or black, specify colors wanted

| Red or b Stk. No. | " spee | colors wanted. For Clip |  |  | 100 For |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stk. No. <br> 124674 | Typa | $21 A^{\prime \prime}$ | $\begin{aligned} & \text { Eoch } \\ & .40 \end{aligned}$ | $2.80$ | $23.70$ |
| 124673 | 26 | 24 A | .21 | 1.50 | 13.00 |
| 12A1016 | 29 | 27, 27C | .13 | . 90 | 7.60 |
| 12 B 1037 | 32 | 30,30C | . 05 | . 30 | 2.50 |
| 12A1071 | 36 | 34,34C | . 05 | .30 | 2.50 |
| 12 A1014 | 47 | 45,45C | . 06 | . 40 | 3.50 |
| 12 A1015 | 49 | 48B, 50C, 51 C | . 09 | . 65 | 5.40 |
| $12 \mathrm{B1} 064$ | 62 | $605,60 \mathrm{CS}, 60,705,70 \mathrm{CS}, 70$ | . 05 | .35 | 3.00 |
| 12 A1074 | 72 | 70, 70-5, 70-CS | . 05 | . 35 | 3.00 |
| 12 A1017 | 87 | 85, 85T, 85C | . 06 | . 40 | 3.50 |

GRAYHILL INSULATED TEST CLIP
Completely insulated (including hinge pin), may be placed cide-by-side without shorting. Terminal and tip of silver ploted brass.
No. 12C517. Red or Block
Your Choice Each.
85c


## Radio Hardware



Please indicate B-A Stock No. and Quantity desired when ordering. Weights, overage per 100: $4-36,4-40-3$ oz.; $6-32-4 \mathrm{oz.;} 8-32-6 \mathrm{oz}$.
$10-32-9$ oz.; $1 / 4$-2 lbs.

## (1) BINDER HEAD <br> 4-36 Nickel Plated BRASS <br> <br> 4-40 Nickel Plated STEEL

 <br> <br> 4-40 Nickel Plated STEEL}| $\begin{aligned} & \text { Brass } \\ & \text { Stock } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Lgth. } \\ & \text { Inches } \end{aligned}$ | $\begin{gathered} 20 \\ \text { For } \end{gathered}$ | $\begin{aligned} & 100 \\ & \text { For } \end{aligned}$ | $\begin{aligned} & 500 \\ & \text { For } \end{aligned}$ | $\begin{aligned} & 1000 \\ & \text { For } \end{aligned}$ | $\left\lvert\, \begin{gathered} 5000 \\ \hline \mathrm{Por} \\ \mathrm{M} \end{gathered}\right.$ | $\begin{aligned} & \hline \text { Ste日 } \\ & \text { Stock } \\ & \text { No. } \end{aligned}$ | Lgth. Inches | $\begin{aligned} & 20 \\ & \text { For } \end{aligned}$ | $\begin{aligned} & 100 \\ & \text { For } \end{aligned}$ | $\begin{aligned} & 500 \\ & \text { For } \\ & \text { For } \end{aligned}$ | $\begin{gathered} 1000 \\ \text { For } \end{gathered}$ | 5000 Per $M$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\xrightarrow{198719}$ |  | - 35 | $\begin{aligned} & .79 \\ & 90 \end{aligned}$ | $3.14$ | 5.69 |  |  |  | 24 | 3 | 05 | 72 |  |
| 1987732 <br> 19836 | 疗 | . 40 | . 99 | 3.65 | 6.64 6.9 | $\begin{aligned} & 5.98 \\ & 6.29 \end{aligned}$ | $l_{19 A 7008}^{198774}$ |  | 25 27 | 54 53 | 2.11 2.28 | 3.14 | 3.45 |



> (2) BRASS

2-56 Nickel Plated BRASS

| $\begin{aligned} & \text { Brass } \\ & \text { Stock } \\ & \text { No. } \end{aligned}$ | Lgth. Inches | $\begin{aligned} & 20 \\ & \text { For } \end{aligned}$ | $\begin{aligned} & 100 \\ & \text { For } \end{aligned}$ | $\begin{gathered} 500 \\ \text { For } \end{gathered}$ | $\begin{aligned} & 1000 \\ & \text { For } \end{aligned}$ | $\left\|\begin{array}{c} 5000 \\ \text { Per } \\ \mathrm{M} \end{array}\right\|$ | $\begin{gathered} \substack{\text { Steel } \\ \text { Stock } \\ \text { No }} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 19 \mathrm{B703} \\ & 198997 \end{aligned}$ 198982 |  | $\begin{aligned} & .32 \\ & .31 \\ & .33 \end{aligned}$ | $\begin{array}{\|c\|} \hline .73 \\ .69 \\ \hline \end{array}$ | $\begin{aligned} & 2.86 \\ & 2.64 \\ & 2.96 \\ & \hline \end{aligned}$ | $\begin{aligned} & 5.20 \\ & 4.79 \\ & 5.39 \end{aligned}$ | $\begin{aligned} & 4.68 \\ & 4.81 \\ & 4.85 \end{aligned}$ | $\begin{aligned} & 19 A 7010 \\ & 19 A 702 \\ & 19 B 768 \end{aligned}$ |

${ }_{2}$ 2-56 Nickel Plated STEEL


STEEL Cadmium Ploted. Average shpg.
wt.
per 100,6 oz.



6-32 Nickel Plated BRASS
ss

$$
0171100
$$

8-32 Nickel Plated BRASS

(1/4 Nol Plated BRASS

| 19 A1000 | $1 / 4$ | .37 | .84 | 3.43 | 6.23 | 5.61 | $19 A 707$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 198710 | $3 / 8$ | .41 | .92 | 3.77 | 6.85 | 6.17 | 19 A855 |
| 19A1001 | $1 / 2$ | .46 | 1.05 | 4.18 | 7.61 | 6.95 | 198771 |
| 19A1002 | 1 | .55 | 1.24 | 5.02 | 9.11 | 8.20 | $19 B 772$ |


| 10.32 |  | Nickel | Plated BRASS |  |  | 10-32 |  |  | ic |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 198711 | 3/8 | . 90 | 2.07 | 8.33 | 15.14 | 13.63 | 194767 | 3/8 | 33 |
| 198712 | 1/2 | . 92 | 2.12 | 8.71 | 16.17 | 14.42 | 1981072 | $1 / 2$ | . 37 |
| 198720 | 3.4 | 1.32 | 2.99 | 11.78 | 21.42 | 19.28 | 19A773 | /4 | . 44 |
| $19 \mathrm{B729}$ | 1 | 1.56 | 3.54 | 13.02 | 23.68 | 21.31 | 1981074 | 4 | . 51 |
|  |  |  |  | $1 / 4-2$ | 20 Ni | ickel | Plated | STE |  |


| 19 A786 | 1 | .92\| | 2.071 | 8.35\|15.19|13.67|1981078| |  |  |  | 2 | 1.10\| $2.52\|10.20\|$ |  |  | . 55 | 70 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (3) | Phillips Round N.P. Bross |  |  | Head |  | (4) |  | Oral | Head (Rack N.P. Steel |  |  | cr |  |
| Brass Stock No. | Size Inches | $\begin{aligned} & 20 \\ & \text { For } \end{aligned}$ | 100 | $\begin{aligned} & 500 \\ & \text { For } \end{aligned}$ | $\begin{aligned} & 1000 \\ & \text { For } \end{aligned}$ | $\left\lvert\, \begin{aligned} & 5000 \\ & \text { Per } \\ & \mathrm{M}\end{aligned}\right.$ | Steel Stock No. | Size Inches | For | $\begin{aligned} & 100 \\ & \text { For } \end{aligned}$ | $\begin{aligned} & 500 \\ & \text { For } \end{aligned}$ | $\begin{aligned} & 1000 \\ & \text { For } \end{aligned}$ | $\begin{gathered} 5000 \\ \mathrm{Per} \\ \mathrm{M} \end{gathered}$ |
| $19 B 779$ 198780 | 6-32-3/8 | . 52 | 1.18 1.49 | 4.75 | 8.63 | 7.84 | 19A930 | 6-32-1/2 | . 25 | . 57 | 2.28 | 4.14 | 3.73 |
| 198788 | 8-32-3/8 | . 68 | 1.49 | 6.02 6.28 | 11.42 | 10.38 | 19A931 | - $10-32-1 / 2$ | . 33 | . 69 | 2.73 3.28 | 4.95 | 4.46 |
| 198787 | 8-32-3/8 | . 971 | 2.21 | 9.38 | $17.05\}$ | 15.34 | 19A933 1 | 10-32-8/4 | 44 | 99, | 3.28 3.92 | 5.96 7.13 | 5.36 6.42 |



## RADIO

HARDWARE ASSORTMENT Nuts, woshers,
grommets, springs ets, screws, etc. A part to fill proctically any occasional need. Very hathy for workshos or tool box.
Over 600 pieces cantoined plastic box. Shpg. wt. 2 bibs. a clear No. 11A335. Net Each.
114

THREADED BRASS RODS

Ideal for making your own lang serews by cutting to any desired length. Supplied in 12" lengths. Shpg. wt. 3 oz .

| No. | Size | Eoch | 10 Ea. |
| :---: | :---: | :---: | ---: |
| 198805 | $6-32$ | $\$ .26$ | $\$ .17$ |
| 198807 | $8-32$ | .33 | .22 |

# TV \& Radio Hardware 


(1) CABLE CLAMPS

Heavy gauge steel, cadmium plated. $3 /{ }^{\prime \prime}$ wide with No. 6 mounting hole.
Fits cable up to size shown. Fits cable up to size shown.
 (2) CINCH CABLE CLAMPS Brass nickel plated with $6-32$ screw.


## (3) NYLON CABLE CLAMPS

Hold their shape under severest stress.
Stands temp. of 60 to 300 degrees F., do not support combustion. 100 For ${ }_{2}$ No. 1098 I. Dach
 $12 A 1081$
$12 A 1099$ $12 A 1099$
$12 A 1255$ $12 A 1255$
$12 A 1345$ $12 A 1345$ $12 A 1082$ $12 A 1346$
$12 A 1083$ 12 A1 1083
12 A1 347


## (4) ANGLE BRACKETS

Hardened Brass, Nickel Plated, $3 / 3^{\prime \prime}$ W. No. Size Each 10100

 (5) G-C BRASS EYELETS Specify B-A No. $19 A 1099$ G G-C No G-C Shank Length $100 \quad 1000$ | No. Dia. | Under |  |  |
| :--- | :--- | :--- | :--- |
| 7251 | .087 | $1 / 8$, Head For | $\mathbf{\$ 0 . 3 2}$ |
| 7 | $\mathbf{\$ 2 . 6 2}$ |  |  |


 $\begin{array}{lllll}7261 & .123 & .8 .10 & .62 & 4.91 \\ 7269 & .182 & .145 & .37 & 2.93\end{array}$ (6) SPADE MTG. BOLTS Cadmium Plated. $6-32$ screw end
(7) RUBRER FEET Accepts screws, nails, etc. For wood
or metal cobinets (less screw). or metal cobinets (less screw). 12.100




## COMPONENT MOUNTING CLIPS

Permits fast, easy insertion of capacitors, resistors, lamps, bot. teries, etc. to chassis or panels. Holds firmly, yet allows easy removal. Made of strong black vinyl w
Floor of clips are drilled for mounting. 10 For 100 For stk. No. Each 10 For 100 For


## HANDY STORAGE CONTAINERS

Keep small items neatly arranged, always ready for instant use-no more lost or misplaced items.

(1) AKRO-MILS CLEAR POLYSTYRENE BOXES

1001 uses: Electronic ports, screws and nuts, nails, fish hooks and lures, office supplies, coins, stamps, jewelry, buttons, thread, any small parts. Strong, rigid and scratch-resistont
number of compartments. All have hinged lids.
Stk. No. Mfg. No. Comp.
Size of Compartments


| Overall Size | Lbs. | Each |
| :---: | :---: | :---: |
| $43 / 4 \times 2 / 8 \times 1{ }^{11}$ | 1/4 | . 0.22 |
| $67 / 8 \times 338 \times 1{ }^{3} / 8^{*}$ | 1/2 | 42 |
| $83^{\frac{3}{2}} \times 2 \times 1 / 8 \times 11 / 4^{\prime \prime}$ | $81 / 4$ | 49 |
| $10^{7} / 1055 \times 12^{\prime \prime}$ | 1 | 1. 20 |
| $43 / 4 \times 2$ \% $\times 11^{\prime \prime}$ | $1 / 4$ | . 22 |
| $8 \frac{1}{2} \times 41 / 8 \times 11 / 4$ | $3 / 4$ | 49 |
| $43 / 4 \times 2 \%$ \% ${ }^{1 / 4}$ | $1 / 4$ | 22 |
| $67 / 8 \times 33 / 8 \times 11 /{ }^{17}$ | $1 / 2$ | 42 |
| $10^{7} \times 5545 \times 2$ " | 11/4 | 1.27 |
| $67 / 8 \times 3$ /8 $\times 1 \frac{1}{8 \prime}$ | $1 / 2$ | 42 |
| $8 \frac{3}{3} \times 41 / 8 \times 11 / 4{ }^{\prime \prime}$ | $3 / 6$ | 49 |
| $6 \% / 8 \times 3^{3} / 8 \times 11 / 8^{\prime \prime}$ | 1/2 | . 42 |
| $10^{\circ} 16 \times 5 \times \times 2^{\prime \prime}$ | 11/4 | 1.27 |
|  | $11 /$ | 1.27 |
| $88_{3}^{\frac{3}{2}} \times 41 / 8 \times 11 / 4^{\prime \prime}$ | 13 | . 49 |
| $1076 \times 5^{1 / 1 / 4} \times 2^{\prime \prime}$ | 11/4 | 1.27 |

(2) HANDY GLASS JARS WITH LIDS

For visible storage of small parts. Serew-on metal lid included. 5Al91. $^{\prime \prime} \mathrm{H}$


## (2) CLEAR POLY JARS WITH LINED METAL LIDS

Made of extra thick heavy gauge shatterproof polystyrene offording years of Made of extra thick heavy gouge comes with a lined screw-on black metal lid These jars are ideal for storage of miscellaneous hardware and parts. They may even be used for storing various types powdered chemicals.
No. 11 A224. 2.5 Oz. Jar complete with screw-on lid. Wt. 1 oz. $50 . .54 .45$ No. Each.......15c 10 For..........99c 50 For........ . $\$ 4.45$ No. 11A225. 4.6 Oz. Jor complete with screw-on lid. Wt. $11 / 2 \mathrm{oz}$. Net Each.......18c 10 For....... $\$ 1.38$ 50 For
No. 11 A227. 8 Oz. Jor complete with screw-on lid. Wt. 2 oz.
Net Each........25c 10 For....... 51.83 For. ...... 58.15

## MOUNTING SPACERS

These bushings are ideal for use in raising sub panels, (1) Round chassis condensers, transformers, spacing switch decks, breadboard mounting of sockets and other components, etc.

BRASS CADMIUM PLATED, NON-THREADED
(2) Hexagonal Solderiess screw-on connectors for securely foining stripped ends of wire together. All are UL approved except ( $\%$ ). Rated 300 volts except $(t) 300-600$ ( 1000 V . enclosed in fixtures)


| Stock | Wire Combinations |  |  | 100 For |
| :---: | :---: | :---: | :---: | :---: |
| No. | Minimum | Moximum | 25 for | \$0.72 |
| 19B1147\% | 2-\#24 | 2-\#18 | 250 | 50.42 |
| 19811294 | 2 -\#18 | 3-\#16 | 46 C | 1.45 |
| $1981130+$ | 1-\#18G1-\#16 | 5-\#16 | 49 c | 1.50 |
| 1981131 | 1-\#14 G1-\#18 | $2-\# 12$ G1-\#18 | 51 c | .58 |
| 1981148 | 1-\#14 G 1 -\#16 | 3-\#10 | 92 c | 2.88 |

## 19B1748

partmented plastic box.
$\$ 2.49$


Consists of 100 each $4-40 \times 1 / 2^{\prime \prime}$ and Consists of 100 each $4-40 \times 1 / 2^{\prime \prime}$ and -32x1/4 40,32 and $8-32$ hex nuts. 50 each $6-32 \times 3 / 4^{\prime \prime}$ and $8-32 \times 1 / 2^{\prime \prime} R H$ machine screws and 75 No. $6 \times 1 / 2$. sheet metol screws.
No. 11 A498. Per Astmt... 2 LBS. OFTEN NEEDED SELF-TAPPING SCREWS


Handiest hardware assortment you'll buy! A big variety of sizes and length in Hex, Phillips, Round, efc. - proc-
tically all head styles. No. 11 B385. 2 Lb. Asstmt.. 88

RUBBER GROMMETS


High quality, tough black rubber. Approx. 50 pieces in popular sizes to fit holes from $1 / 4$ to $5 / 8^{\prime \prime}$ dio. in meta ponels.
No. 184509
Per Assortment, Special
69c


Consists of 16 pieces, 4 sets of 4
matched bumpers. Includes recessed, matched bumpers. Includes recessed, small. Mighty handy to have around No. 18 C 23.

## BUD Cabinets, Mini Boxes

B-A is an AUTHORIZED BUD DISTRIBUTOR. All Bud Products are available from B-A. For a complete list-
ing request Bud Catalog No. 25B102-Free.


## BUD ALUMINUM MINIBOXES

Simple two piece design with both snap-lock and screw type fastening. Provides complete access for installation or service of components. Ideal for housing shielded subassemblies as well as the many separate self-contained units which have made this box so popular. Choice of Gray Hammertone or Natural Aluminum.


## BUD COWL-TYPE MINIBOX

Aecting cowl reduces altare to the Minibox line. The pro-ing-protects controls-permits use of various indirtlighting effects. Top and side ussembly various indirect tom section forming o rigid unit with excellent occessability. Made of . 040 ", aluminum in Natural or Hammertone Gray finish.

| H. ${ }^{\text {Inches }} \mathrm{w}^{\mathrm{o}}$ | w | H | ne Gray | 1-49 | Natural | Finish |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Mfg. ${ }^{\text {No }}$ |  |  |
| 12 | $11 / 4$ | SC2130 | 54255 | \$5. | $\mathrm{SC}^{\text {SC3030 }}$ | ${ }_{5} 54259$ | \$4.30 |
|  |  |  |  |  |  |  |  |
| 55 | 1 | SC2133 | 5425 | 3. | SC |  |  |

## BUD MINIATURE UTILITY CABINETS

 Miniature size re-
movable front and rear panel design. Avoilable in a
range of sizes range of sizes
which are particu which are particu-
larly useful in building equipment of miniature slze. Bud numbers AUlO83 through AUl040.

Natural Finish Gray Hommertone Stock Net Size Stock Net | No. Each H.W.D. No. Each |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 204428 | 1.40 | 4 | 42 | 204431 | 204429

204430 $20 A 430$
$5 A 264$ $\begin{array}{rrrrrrrr}54264 & 2.40 & 6 & 6 & 6 & 542636 & 2.00 \\ 5 A 265 & 2.75 & 9 & 6 & 5 & 54267 & 2.10\end{array}$
 Designed fassis Designed for use in building miniature apparatus where smaller size is essential. Convenient design is attached to removable front panel. Rear panel is also removable. Steel with black ripple finish.

| Stk. <br> No. | Mifg. No. | H. W. D. |  |  | Wt. Lbs. | $\begin{aligned} & \text { Net } \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 204434 | C1793 | 4 | 4 | 2 |  | \$1.45 |
| 204435 | C1794 | 4 | 5 | 3 |  | 1.65 |
| 204436 | C1795 | 5 | 4 | 3 | 1 | 1.80 |
| 204437 | ${ }^{\text {C1796 }}$ | 6 | 5 | 4 | 13/4 | 1.85 |
| 204438 | C 1797 | 5 | 6 | 4 | 13.4 | 2.10 |
| 5A268 | C1798 | 6 |  | 4 | 23/4 | 2.40 |

Quontity Prices For Above 50 to 99 less $10 \% ; 100$ up less $20 \%$


| Stk. No. | Mfg. No. | L. $\underset{\text { Inches }}{\text { D. }}$ H. |  |  | Wt. Lbs. | $\begin{aligned} & \text { 1-49 } \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5478 | CU-883 | 4 | 2 | 4 |  | \$1.20 |
| 5479 | CU-728 | 5 | 3 | 4 |  | 1.35 |
| 5 A 7 | CU-1098 | 6 |  | 6 | 21/2 | 2.30 |
| 5A8 | CU-1099 | 6 | 5 | 9 |  | 2.60 |
| 549 | CU-879 | 8 |  | 10 | 5 | 3.70 |
| 5A10 | CU-880 | 10 | 8 | 10 | $51 / 2$ | 4.40 |
| 5A11 | CU-881 | 11 | 8 | 12 | 6 | 4.80 |

Quantity Discount Deduct $10 \%$ for 25 to $49 ; 20 \% 50$ up.

## BUD PORTACAB

 The housing with buit "custom built" appear-ance. ance. Formed of one piece . $050 "$
aluminum loluminum, side backers, partial back opening. $1 / 2^{\prime \prime}$ from front is ". $062^{\prime \prime}$ from front, um. Recessed spring-up handle and detachable rubber feet. Gray hammertone finish only

| Stk. <br> No. | Mfg. <br> No. | D. <br> Inches | W. <br> Int. <br> Lbs. | $1-24$ <br> Each |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 40A178 | WA1540 | 8 | $63 / 8$ | 8 | $21 / 2$ | $\$ 9.65$ |
| 40A179 | WA1541 | 12 | $81 / 8$ | 9 | 3 | 12.60 |
| 40A180 | WA1542 | 8 | $101 / 8$ | 8 | $31 / 2$ | 11.20 |
| 40A181 | WA1543 | 18 | $111 / 8$ | 11 | $61 / 2$ | 14.20 |
| 40A182 | WA1544 | 18 | $141 / 8$ | 12 | $73 / 4$ | 16.30 |

GRAND PRIX CABINET
 Bud Award Winning De-
sign Cabi sign labi
nets. ldeal
where where op paramount. Top and bottom separate for complete access. Made of 20 gauge steel
aluminum extrusions serve as handes aluminum extrusions serve as handles
Has rubber feet. Choice of Hammertone Gray or Smooth Gray. Panels are contrasting color. Add HG to stock number for Hammertone Gray or $\$ G$ for Smooth Grey.

| Stock No. | Mfg. No. | $\text { H. W. } \mathrm{D} .$ Inches | Wt. <br> Lbs. | Net <br> Each |
| :---: | :---: | :---: | :---: | :---: |
| 5B46 | MD-1 | 48/6193/8 $101 / 2$ | 71/4 | \$13.15 |
| 5B50 | MD-2 | $73 \% 19388101 / 2$ | $73 / 4$ | 13.65 |
| 5B51 | MD-3 | $49 / 8121 / 8883 / 4$ | $7 / 4$ | 10.50 |

## Quontity Discount Deduct TRANSICASES



Hondsome
aluminum portable in strument
case Con cose. Con-
toured design with
chrome plated fittings.
Flush mounted aluminum panel. Lid is foam rubber lined, has slip hinges. Rubber Smot on both back and bottom. finish on special order, finish. (Blue finish on special order

| Stock No. | Mfg. No. | Dimensions <br> W. D. H. |  |  | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5B132 | TC-300 | $10 \frac{1}{18}$ | 7 | 6 | \$24.95 |
| 58137 | TC-301 | $111 / 2$ | 81/4 | 6 | 25.50 |
| 5B138 | TC-302 | 13 | 9 | $71 / 2$ | 26.00 |
| 5B148 | TC-303 | 161/2 | 9 | $71 / 2$ | 26.50 |
| 5B149 | TC-304 | 201/8 | 8 | 9 | 27.90 |

BUD SHADOW CABINET
 Unusually ot
tractive appearance is created by using a 1" beveled recessing on the front panel. Both front as well as the bottom are removable for easy installation and service. 18 gauge steel with 16 gauge panels. Rubber feet. Light gray hammertone.

| Stk No. | Mfg. No. |  | $\underset{\text { vches }}{\text { H. }}$ | Wt. Lbs. | $\begin{aligned} & 1-24 \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5 A243 | SB2140 | 141/4 | $8 \quad 10$ | 111/2 | \$6.85 |
| 5A244 | SB2141 | 131/4 | $71 / 20$ | 93/4 | 5.25 |
| 5A245 | SB2142 | 17 | $91 / 2111 / 2$ | 1514 | 9.30 |
| 5A246 | SB2143 | 151/2 | 6 9 | 91/2 | 5.10 |

CONTOUR UTILITY CABINETS
 ounded corner design with beautiful symmetry and rugged strength.
Fabricated of 20 gouge steel. front, ventilating louvers in rear smooth gray enamel body with light gray panel. Has rubber feet.

| Stk. <br> No. | Mfg. No. | H. | Inches | D. | Wt. Lbs. | $\begin{aligned} & 1-24 \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 5247 | CU463 | $4{ }^{17}$ | $6{ }^{\frac{7}{37}}$ | 33/4 | 13/4 | \$5.50 |
| 5A248 | CU465 | $4 \frac{1}{1 / 2}$ | $6{ }^{6} \frac{7}{3}$ | 53 | $21 / 4$ | 8.35 |
| 5A249 | CU585 | $5 \frac{7}{37}$ | $8{ }^{17}$ | 53 | 3 | 8.35 |
| 5A250 | CU587 | $5_{7} \frac{7}{37}$ | $8 \frac{17}{17}$ | $73 /$ | $33 / 4$ | 9.10 |
| 5A251 | CU7125 | $7_{7}^{7 \frac{7}{37}}$ | $12{ }^{\frac{1}{7}}$ | 53 | 5 | 9.70 |
| 5A252 | CU7127 | $7 \frac{7}{32}$ | $12 \frac{1}{3}$ | 73/4 | 6 | 10.35 |

## 50 and up

BUD FUTURA CABINETS


BUD CHASSIS BRACKETS
Essential for proper chassis support. Heavy gauge steel, panel. For chassis up to four inches high, all others up to 3 inches high.

| No. | Mfg. No. | Wt. | Depth | Hgt. | Net Pr. | No. | Mfg. No. | Wt. | Depth | Hgt. | Net Pr. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5A99 | MB458 | $11 / 4 \mathrm{lbs}$. | 8' | 61/2" | \$1.35 | 5A284 | MB460 | 21/2 lbs. | 13" |  |  |
| 5 A113 | MB448 | $13 / 4 \mathrm{lbs}$. | $10^{\prime \prime}$ | $61 /{ }^{\prime \prime}$ | 1.35 | 5A157. | MB450 | 21/4 lbs. | $10^{10}$ | $8{ }^{61 / 2 \prime \prime}$ | $\begin{aligned} & \$ 1.69 \\ & 1.97 \end{aligned}$ |
| 5498 | MB459 | 2 libs. | 11* | $6 \frac{1 / 2}{}$ | 1.50 | 5A158* | MB451 | $3^{1 / 4} \mathrm{lbs}$ lbs. | $1{ }^{10^{*}}$ | $881 /{ }^{\prime \prime}$ | $\begin{aligned} & 1.97 \\ & 2.09 \end{aligned}$ |
| 5A156 | MB449 | 2 lbs. | $12^{\prime \prime}$ | $61 / 2^{\prime \prime}$ | 1.75 | 5A158 | MB451 | 3 lbs. | $13^{*}$ | 81/2" | 2.09 |



## BUD TRANS-AIRE BLOWERS

Features greater air displacement for given area and panel space. Exhaust or intake, operates in mounted. Has oilite bearings. Has thermal overload protection and automatic reset. Mounted on 19 " rack ponels. Complete with air filter,

|  |  |  |  | Air Displacemen High Low | Motor Size |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 54200 |  |  |  |  |  |  |  |
| 54214 |  |  |  |  |  |  |  |
| 12 | B27 |  |  |  |  |  |  |
| ADJUSTABLE BUD TEM-STAT. Used to turn blowers on and off to maintain desired temperature. Mounts inside enclosure. $2 \frac{10}{10} \times 1{ }^{\prime \prime} \times 1 \mathrm{~g}^{7}{ }^{\prime \prime}$. UL listed for 8 amps. 115 V . or 4 omps, $230 \mathrm{~V}, \mathrm{AC}$. <br> No. 5C146. TS-15 Temperature range 80 to $170^{\circ}$ F. Each. . . . . . . . . . . $\$ 5.00$ <br> No. 5C147. TS-15 Temperature range 150 to $240^{\circ}$ F. Each. . . . . . . . . . . $\$ 5.00$ |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

# Bud Relay Racks, Panels \& Chassis 

BUD DELUXE CABINET RACKS
Professional quality and appearance for equipment builders. larger sizes also have hinged rear door. For use with standard reloy rack ponels overall O.D. is $22^{\prime \prime}$ wide, $143 / 4^{\prime \prime}$ deep. Aluminum relay rack panel covering entire pane space now supplied of no extro cost.


## BUD DELUXE RELAY RACKS

Attractive rounded corner design, with red filled chrome trim and recessed panel supports for streamtined Drilled and tapped for $10-32$ screws, spocing for all standord $19^{\prime \prime}$ panels. Well ventilated louvers side and rear. Hinged rear door with snap catches. All are $22^{\prime \prime}$ wide, $171 / 4^{\prime \prime}$ deep. O.D. except $\%$ snap catches. All are 2ial supports for mounting free-rolling costers listed below. Shipped knocked down.
Black wrinkle is available by adding $B$ to Stock No.

| Gray Wrinkle | Hammertone Gray | MFg. No. | Hgt. In. | Panel <br> Space | Wt. Lbs. | $\begin{aligned} & 1 \text { to } 9 \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 40W70 | 40W70HG | CR1774 | $42518{ }^{\prime \prime}$ | $36^{3 / 4}$ | 82 | \$49.70 |
| 40W39 | 40W39HG | CR1771 | $47 \%$ \% | $42^{\prime \prime}$ | 92 | 56.20 |
| 40W71 | 40W71HG | CR1772 | 66\% ${ }^{\prime \prime}$ | 611/4" | 115 | 70.35 |
| 40W72 | 40W72HG | CR1773 | 82.9 " | 77" | 135 | 84.25 |
| , | *40W77HG | CR2072HG | 66\%" | 611/4" | 137 | 93.80 |



## CASTERS FOR BUD DELUXE RELAY RACKS

No. 5A310. Bud RC7756. Install on bottom supports. Wt. 6 oz. Net Each. 99 c

III
ELEPHONE TYPE RELAY RACKS Uprights ET" $^{7 \prime}$ steel, 3" deep, Chassis type base. Black wrinkle, for Hammertone Gray add HG to stock number. Stk. No. Mfg. No. Ht. Panel Space Wt. Net Each
 40W56 RRI366 81梪" 77" 50 lbs. 31.45

DESK TYPE TELEPHONE RACKS
For desk or bench mtg . of equipment, permitting easy access for building or operating. Black wrinkle, for Hammertone Gray add HG to stock number. $\begin{array}{llllll}5 A 269 & R R 1248 & 24^{\prime \prime} & 21^{\prime \prime} & 15 \mathrm{lbs} . & \$ 10.50 \\ 5 A 270 & \text { RR1249 } & 31^{\prime \prime} & 28^{\prime \prime} & 18 \text { lbs. } & 12.85\end{array}$

## BUD RELAY RACK PANELS

All panels are $19^{\prime \prime}$ wide furnished in $1 / 8^{\prime \prime}$ steel or aluminum. Notched to RMA specks. Finished in Black or Gray baked wrinkle ftandard racks. and new Hammertone Gray. On orders for Black add "B" to Stock Number, for Gray add "G", for Hammertone Gray add "HG"

| ALUMINUM |  |  |  |  | STEEL |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stk. No. | Mfg. No. | Height | Weight | Net | Stk. No. | Mfg. No. | Weight | Net |
| 54289 | PA1101 | $13 / 4{ }^{\prime \prime}$ | 1/6 lbs. | \$1.20 | 5A21 | PS1250 | 11/4 lbs. | \$0.90 |
| 54290 | PA1102 | 31/2** | 3/4 lbs. | 1.55 | 5 A22 | PS1251 | $21 / 4 \mathrm{lbs}$. | 1.10 |
| 54291 | PA1103 | $51 /{ }^{\prime \prime}$ | 1 lb . | 2.10 | 5423 | PS1252 | $31 / 4 \mathrm{lbs}$. | 1.40 |
| 5 A292 | PA1104 | $7^{\prime \prime}$ | $13 / 4 \mathrm{lbs}$. | 2.65 | 5A24 | PS1253 | $41 / 2 \mathrm{lbs}$. | 1.55 |
| 5 A293 | PA1105 | 83/4' | 2 lbs . | 3.10 | 5A25 | PS1254 | 6 lbs. | 1.95 |
| 5A294 | PA1106 | 101/2** | 21/2 lbs. | 3.95 | 5A26 | PS1255 | 7 Ibs. | 2.30 |
| SA295 | PA1107 | 121/4* | 23/4 lbs. | 4.50 | 5A27 | PS1256 | $81 / 4 \mathrm{lbs}$. | 2.65 |
| 5 A296 | PA1108 | $14^{\prime \prime}$ | 3 lbs. | 5.25 | 5A28 | PS1257 | $91 / 2 \mathrm{lbs}$. | 3.10 |
| 5A297 | PA1109 | $153 / 4$ " | $31 / 2 \mathrm{lbs}$. | 5.85 | 5A29 | PS1258 | 103/4 lbs. | 3.40 |
| 5 A298 | PA1110 | 171/2* | 4 lbs. | 6.45 | . . . . . . | ...... | . . . . . | ..... |
| 5 A299 | PA1111 | 191/4" | 41/4 lbs. | 7.00 |  | ...... | . . . . . | . |
| SA300 | PAl112 | $21^{\prime \prime}$ | 5 libs. | 7.70 |  | ..... |  |  |

## ALUMINUM SURFACE SHIELD RACK PANELS

Bright oluminum with blemish-free Mil! finish. Covered both sides with pressure sensitive white kraft Daper for layout and $19^{\prime \prime}$ width, $1 / 8^{\prime \prime}$ thick Woved when reody to instal
Stk. No. Height Mfg. No. Net Ea. Stk. No. Height Mfg. No. Nef Eo.

 Quantity Price on Panels: 1 to 49 net; 50 to 99 less $10 \% ; 100$ up less $20 \%$.

## BUD PANEL CHASSIS



BUD STEEL CHASSIS BASES
Mode from one piece of steel, corners reinforced and spot-welded. Have fold-over bottom for attaching bottom plates ond added strength. Choice of Zine or Black finish.
oll others 20 gouge.

| Size Inches | Wt. Lbs. | Zinc Chassis Bases <br> Stk.No. Mfg.No. 1-24 Ea. |  |  | Black Chassis Bases Stk.No. Mfg.No. 1-24 Ea |  |  | Bottom Plates Stk.No. 1-49 Ea. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4x17x 3 | 21/4 | 54287 | CB1066 | \$2.35 | 5A288 | CB1068 | \$2.00 | 5A141 | \$1.20 |
| $5 \times 7 \times 2 \dagger$ | 1/2 | 5 5312 | CB629 | 1.45 | 5 A311 | CB628 | 1.20 | 58103 | . 69 |
| $5 \times 91 / 2 \times 11 / 2 \dagger$ | 1 | 5A52 | CB776 | 1.85 | 5A53 | CB788 | 1.35 | 5A101 | . 75 |
| $5 \times 91 / 2 \times 21 / 2 \dagger$ | 11/4 | 5A54 | CB645 | 1.85 | 5A55 | CB644 | 1.50 | 5 A 101 | . 75 |
| $5 \times 10 \times 3 \dagger$ | 11/4 | 5 A56 | CB605 | 2.05 | 5 A57 | CB604 | 1.40 | 5 A102 | . 80 |
| $5 \times 131 / 2 \times 21 / 2$ | $18 / 4$ | 5 A285 | CB1198 | 2.40 | 5 5286 | CB647 | 1.95 | 5A140 | 1.00 |
| $6 \times 14 \times 3$ | $18 / 4$ | 5 A162 | CB756 | 2.25 | 54161 | CB755 | 1.95 |  |  |
| $7 \mathrm{x} \times 2$ | 11/2 | 5A60 | CB1191 | 1.65 | 5A61 | CB789 | 1.35 | 54104 | .97 |
| $7 \times 9 \times 2$ | $11 / 2$ | 5462 | CB1192 | 1.75 | 5A63 | CB790 | 1.55 | $5 A 105$ | . 99 |
| $7 \times 11 \times 2$ | $11 / 2$ | 5A64 | CB1193 | 1.85 | 5A65 | CB791 | 1.60 | 5A106 | 1.07 |
| 7x12x3 | $13 / 4$ | 5A66 | CB793 | 2.30 | 5467 | CB792 | 1.75 | 5A107 | 1.25 |
| 7x13x2 | 2 | 5A68 | CB1194 | 2.10 | 5A69 | CB646 | 1.70 | 5 A108 | 1.20 |
| $7 \times 15 \times 3$ | 2 | 5470 | CB1189 | 2.65 | 5A71 | CB649 | 2.20 |  |  |
| 7x17x3 | 13/4 | 5 A72 | CB758 | 2.85 | 5 A73 | CB757 | 2.40 | 5 S 110 | 1.37 |
| $8 \times 12 \times 21 / 2$ | $21 / 2$ | 5 A122 | CB704 | 2.45 | 5 5121 | CB703 | 1.95 | $5 \mathrm{5A111}$ | 1.34 1.34 |
| $8 \times 12 \times 3$ | $18 / 4$ | 5474 | CB760 | 2.60 | 5A75 | CB759 | 2.05 | 5 5111 | 1.34 |
| $8 \times 17 \times 3$ | $31 / 4$ | 5476 | CB775 | 2.90 | 5A77 | CB651 | 2.25 | 5 A112 | 1.54 |
| 10x12x3 | 3 | 5480 | CB1195 | 2.50 | 5A81 | CB652 | 2.10 | 5A114 | 1.57 |
| $10 \times 14 \times 3$ | 4 | 5A82 | CB779 | 2.70 | 5A83 | CB653 | 2.25 | 5 A115 | 1.50 |
| $10 \times 17 \times 2$ | 31/4 | 5 A217 | CB769 | 2.65 | 5 5218 | CB654 | 2.20 | 5A116 | 1.60 |
| 10x17x3 | 4 | 5 A84 | CB637 | 3.15 | 5485 | CB636 | 2.20 | 5A | 1.60 |
| $10 \times 23 \times 3$ * | 51/2 | 5A86 | CB1197 | 3.75 | 5A87 | CB656 | 3.15 |  |  |
| $11 \times 17 \times 2{ }^{*}$ | $41 / 2$ | 5 5166 | CB770 | 3.10 | 5A165 | CB657 | 2.60 | 5 A118 | 1.60 |
| $11 \times 17 \times 3^{*}$ | $41 / 2$ | 5A88 | CB771 | 3.85 | 5A89 | CB658 | 3.05 | $5 A 118$ | 1.60 |
| $12 \times 17 \times 3$ * | 51/4 | 5 590 | CB662 | 4.05 | 5491 | CB664 | 3.20 3.75 | $5 A 119$ $5 A 120$ | 1.87 2.24 |
| $13 \times 17 \times 3^{*}$ | $51 / 2$ | 5 5A92 | CB773 | 4.50 | $5 A 93$ | CB660 CB640 | 3.75 3.25 | 5A120 | 2.24 1.60 |
| $10 \times 17 \times 4^{*}$ | $61 / 2$ $71 / 2$ | 5A94 5A96 | CB641 CB643 | 3.90 5.15 | 5A95 5A97 | CB640 CB642 | 3.25 4.30 | $5 A 116$ $5 A 120$ | 1.60 2.24 |

BUD ALUMINUM CHASSIS BASES

## Some construction as steel chassis illus. above. 18 gauge through

| Stock No. | Mfg. No. | $\begin{aligned} & \text { Size } \\ & \text { Inches } \end{aligned}$ | Wt. Lbs. | $\begin{aligned} & \text { 1-24 } \\ & \text { Each } \end{aligned}$ | Stock No. | $\begin{aligned} & \text { Mfg. } \\ & \text { No. } \end{aligned}$ | Size Inches | $\begin{aligned} & \text { Wt. } \\ & \text { Lss. } \end{aligned}$ | $\begin{aligned} & 1-24 \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5A347 | AC1401 | $21 / 2 \times 41 / 2 \times 1$ | 1/4 | \$1.10 | 5A362 | AC1416 | $7 \times 17 \times 2$ |  | \$2.75 |
| 5A348 | AC1402 | $31 / 2 \times 41 / 2 \times 1$ | 12 | 1.15 | 5A363 | AC1417 | $7 \times 17 \times 2 \frac{1}{2}$ | $13 / 4$ | 2.85 |
| 5A349 | AC1403 | $31 / 2 \times 51 / 2 \times 1$ | 1/2 | 1.15 | 54208 | $\mathrm{AC}^{2} 23$ | 7x17x3 | $13 /$ | 3.05 |
| 5 A350 | AC1404 | $4 \times 5 \times 2$ | 免 | 1.35 | ${ }^{54364}$ | AC1418 | $8 \times 10 \times 21 / 2$ | $11 / 2$ | 2.40 |
| 5A351 | AC1405 | $4 \times 6 \times 11 / 2$ | 1/2 | 1.25 | 5A365 | AC1419 | $8 \times 12 \times 21 / 2$ | $11 / 2$ | 2.65 |
| 5B160 | AC431 | 4x6x2 | 1/2 | 1.25 | 5A209 | AC424 | $8 \times 12 \times 3$ | $11 / 2$ | 2.70 |
| 5B154 | AC430 | $4 \times 6 \times 3$ | 1/2 | 1.45 | 5A317 | AC425 | $8 \times 17 \times 2$ | $11 / 2$ | 2.80 |
| 5A352 | AC1406 | $4 \times 8 \times 2$ |  | 1.60 | 5A219 | AC412 | $8 \times 17 \times 3$ | $11 /$ | . 75 |
| 58164 | AC432 | 4x17x3 | 11/4 | 2.60 | 5 5366 | AC1420 | $81 / 2 \times 15 \times 3$ | $11 / 3$ | 2.75 3 |
| 5A353 | AC1407 | $41 / 2 \times 8 \times 11 / 2$ | $1 / 2$ | 1.25 | 5 5A367 | ${ }_{\text {ACl }}$ | $9 \times 15 \times 3$ $10 \times 12 \times 3$ | 11/2 | 3.35 3.00 |
| 5 A313 | AC402 | ${ }_{5 \times 7 \times 2}$ | $1 / 2$ | 1.30 | 5A210 | AC413 | $10 \times 12 \times 3$ $10 \times 14 \times 3$ | $11 / 2$ | 3.00 3.15 |
| $5 \mathrm{5B168}$ | ${ }^{\text {AC4 }} 29$ | $5 \times 7 \times 3$ | 3.4 | 1.60 | ${ }^{\text {5A263 }}$ 5418 | ${ }^{\text {AC4 }}$ | 10x17x2 | 11/6 | 3.00 |
| 5A354 | ${ }^{\text {ACC1 }}$ | $5 \times 9 \times 11 / 2$ | $3 / 4$ | 1.35 | ${ }^{\text {5A211 }}$ | AC416 | $10 \times 17 \times 3$ | $1 /$ | 3.50 |
| 5 A355 | AC1409 | $5 \times 91 / 2 \times 11 / 2$ | 3/4 | 1.35 | 5A211 | ${ }^{\text {AC4 }} 427$ | 10x17x4 | 31/2 | 5.00 |
| 5A314 | AC403 | 5x93/2x2 | $1 / 2$ | 1.80 | 5A368 | ${ }_{\text {ACl }}$ | 10x17x5 | 31/2 | 7.50 |
| 5 A202 | ${ }_{\text {AC4 }}{ }^{\text {d }}$ | ${ }_{5 \times 1} 5 \times 1 / 2 \times 3$ | 3 | 1.80 | ${ }_{\text {5 }}^{\text {5A368 }}$ | ${ }_{\text {ACl }}$ | $10 \times 23 \times 3$ | $31 / 2$ | 5.15 |
| ${ }_{5}^{58169}$ | ${ }^{\text {AC404 }}$ | $5 \times 10 \times 3$ $5 \times 13 \times 3$ | $3 / 4$ | 1.80 2.10 | 5A155 | ${ }_{\text {AC4 }}$ | $11 \times 17 \times 2$ | $21 / 4$ | 3.80 |
| ${ }^{5 A}$ 5A356 | ${ }_{\text {AC122 }}$ | ${ }_{5 \times 131 / 2 \times 21 / 2}$ | $3 / 4$ | 1.75 | 5A319 | AC417 | 11x17x 3 | $2^{3}$, | 4.40 |
| 5A357 | AC1411 | $51 / 2 \times 5 / 2 \times 1 / 2$ | $1 / 2$ | 1.25 | 5 5A370 | ${ }^{\text {ACLI }} 124$ | $12 \times 12 \times 3$ | ${ }^{23}$ | 3.15 |
| 5A358 | AC1412 | $51 / 2 \times 91 \times 11 / 2$ | 1/2 | 1.35 | ${ }_{5}^{54371}$ | ${ }^{\text {ACl }}$ | ${ }_{12 \times 17 \times 2}$ | 23/4 | 4.50 |
| 5A359 | $\mathrm{AC}_{1413}$ | $6 \times 8 \times 2$ | $\frac{1}{3}$ | 1.60 | ${ }_{51}^{5 A 12}$ | ${ }^{\text {AC4 }}$ | $12 \times 17 \times 3$ |  | 3.90 |
| 54360 | ${ }_{\text {AC1 }}$ | 6x14x3 | $1{ }^{3 / 4}$ | 2.65 3.00 | [5A163 | ${ }_{\text {AC4 }}{ }^{\text {A }}$ | 13x17x2 | $23 /$ | 4.70 |
| 58170 | AC433 | $6 \times 17 \times 3$ | $11 /$ | 1.50 | 58173 | AC428 | $13 \times 17 \times 4$ | 33 | 5.80 |
| 54204 | AC405 | ${ }_{7 \times 9 \times 2} 7 \times 2$ |  | 1.60 | 5A372 | AC1426 | $13 \times 17 \times 5$ | $48 /$ | 8.35 |
| ${ }_{5} 542205$ | ${ }_{\text {AC406 }}$ | $7 \times 9 \times 2$ $7 \times 11 \times 2$ | 8/2 | 1.60 | ${ }_{54373}$ | $\mathrm{AC}^{\text {A }} 1427$ | $14 \times 17 \times 3$ | $43 / 4$ | 5.85 |
| 54315 $5 A 206$ | ${ }_{\text {AC40 }}^{\text {AC40 }}$ | 7×1122 | $1 / 4$ | 2.20 | 5A374 | AC1428 | 15x17x4 | $43 / 4$ | 8.35 |
| 5 5316 | AC409 | 7x13x2 | $3 / 4$ | 1.90 | ${ }^{5 A} 375$ | AC1429 | $15 \times 17 \times 6$ | $53 / 4$ | 11.35 |
| 5A361 | AC1415 | $7 \times 15 \times 2$ | $11 / 1$ | ${ }_{3}^{2.50}$ | ${ }_{5}^{54376}$ | ${ }^{\text {ACl430 }}$ | $17 \times 17 \times 3$ | 48/4 | 6.78 9.85 |
| 5A207 | AC411 | 7x15x3 | 11/2 | 3.00 | 54377 | ACl431 | 17x17x4 |  |  |


| Stk. No. | Mfg. No. | Size | Each | Stk. No. | Mfg. No. | Size | Each' |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | BPA1501 | $21 / 2 \times 41 / 2$ | \$0.55 | 5A410 | BPA1595 | $7 \times 12$ | \$0.97 |
| 54391 | BPA1502 | 31/2x $41 / 2$ | . 60 | 5 5411 | BPA1596 | 7 | 1.14 |
| 5 5392 | BPA1503 | $31 / 2 \times 51 / 2$ | . 65 | 54412 | BPA1516 | $7 \times 15$ 7 | 1.34 |
| 5A393 | BPAI504 | $4 \times 5$ | . 63 | 5 A 113 | BPA1517 |  | 1.37 |
| 5A394 | BPA1505 | $4 \times 6$ | . 68 | 5 A414 | BPA1518 | $8 \times 10$ | 1.17 |
| 5A395 | BPA1506 | $4 \times 8$ | . 84 | $5 \mathrm{SA15}$ | BPA1519 | $8 \times 12$ | 1.54 |
| 5A396 | BPA1507 | $41 / 2 \times 8$ | . 90 | 5A416 | BPA1520 | 8 ${ }_{81 / 2 \times 15}$ | 1.75 |
| 5A397 | BPA1589 | $5 \times 7$ | . 74 | 5A417 | BPA1521 |  | 1.84 |
| 5A398 | BPA1508 | $5 \times 9$ | . 77 | $5 \mathrm{SA17}$ | BPA1522 | (10 | 1.50 |
| 5A399 | BPA1590 | $5 \times 91 / 2$ | . 75 | 5A419 | ${ }_{\text {BPAL523 }}$ |  | 1.50 |
| 5A400 | BPA1591 | ${ }_{5}^{5} \times 10$ | . 715 | ${ }_{5} 54421$ | BPA1597 | 10 $\times 17$ <br> 10  | 1.52 |
| 5A401 | BPA1509 | $5 \times 13$ $5 \times 1311$ | 1.14 1.17 | 5A421 | BPA1597 | ${ }_{10}^{10} \times 23$ | 2.17 |
| 5A402 54403 | BPA1510 | $5 \times 131 / 2$ $51 / 2 \times 51 / 2$ | 1.17 .74 | 5A4423 | BPA1526 | $11 \times 17$ | 1.67 |
| ${ }_{5 A 404}$ | BPA1512 | $51 / 2 \times 91 / 2$ | . 80 | 5A424 | BPA1527 | $12 \times 12$ | 1.67 |
| 5A405 | BPA1513 | $6 \times 8$ | . 92 | 5A425 | BPA1528 | $12 \times 17$ | 2.00 |
| 5A431 | BPA1514 | $6 \times 14$ | 1.14 | 5 5426 | BPA1598 | $\begin{array}{ll}13 & \times 17\end{array}$ | 2.07 |
| 5A406 | BPA1515 | $6 \times 17$ | 1.39 | 54427 | BPA1529 | $\begin{array}{ll}14 & \times 17 \\ 15\end{array}$ | 2.40 |
| 5A407 | BPA1592 | $6 \times 7$ | . 77 | 54428 | BPA1530 | $\begin{array}{lll}15 & \times 17 \\ 17 & \times 17\end{array}$ | 2.85 2.90 |
| 5A408 | BPA1593 | $7 \times 9$ | . 80 | 54429 | BPA1531 | 17 <br> 1817 <br> 4 | 2.90 |
| 5A409 | BPA1594 | $7 \times 11$ | . 90 | 5 | BPA1532 |  |  |


| MINIATURE ALUMINUM CHASSIS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 204450 | CB1623 | $25 / 8 \times 23 / 4 \times 11 / 4$ | \$0.40 | 20A453 | CB1617 | $4 \times 31 / 8 \times 1$ | \$0.45 |
| 20A449 | CB1624 | $13 / 4 \times 31 / 8 \times 1$ | . 45 | 204452 | CB1619 | $4 \times 51 / 8 \times 1$ | . 60 |
| 204448 | CB1625 | $31 / 6 \times 41 / 2 \times 2$ | . 55 | 204451 | CB1620 | $4 \times 61 / 8 \times 1$ | . 65 |
| 204447 | CB1626 | $28 / 4 \times 1 / 8 \times 1$ | . 50 | 5 A220 | CB38 | $7 \times 6 \times 2$ | 1.00 |
| 204446 | CB1627 | $38 / 4 \times 41 / 8 \times 11 / 2$ | . 50 | 5A223 | CB41 | $7 \times 7 \times 11 / 2$ | 1.24 |
| 20A455 | CB1628 | $3 \times 618 \times 11 / 4$ | . 60 | 5A221 | CB39 | $7 \times 8 \times 2$ | 1.17 |
| 5A236 | CB1618 | $4 \times 41 / 8 \times 1$ | . 55 | 5A222 | CB40 | $7 \times 10 \times 2$ | 1.37 1.45 |
| 5A232 204454 | CB996 | $51 / 2 \times 9 \times 11 / 2$ $58 / 4 \times 47 / 8 \times 11 / 2$ | 1.20 .65 | 5A234 5A233 | CB997 | $7 \times 11$ $71 / 2 \times 9 \times 11 / 2$ | 1.45 1.55 |
| 20A454 |  | all this col | n: | 5A233 | 10\%; | up less 20\% |  |

## Cabinets, Printed Circuits, Insulation

MIDGET SIZE CABINETS

(1) BUD SLOPING FRONT CABINETS for miniaturized equipment. Hammertone Gray. Size $41 / 2^{\prime \prime}$ deep $\times 41 / 2^{\prime \prime}$ high. Detachable back and bottom.


 (3) BUD MIDGET SPEAKER CASES. Block wrinkle steel. $4 \times 4 \times 41 / 4^{\prime \prime \prime}$. Wt. $3 / 4 \mathrm{lb}$. FOR $\mathbf{3}^{\prime \prime}$ SPEAKER ${ }^{\prime \prime}$ SPEAKER No. 5A41. CS1685. Each...... \$1.75 No. 5A47. CSI ${ }^{686}$. SPEAKER (3) BUD MIDGET WALL TYPE STEEL SPEAKER CASES

Similar to above except brown wrinkle finish. With keyway, for wall mounting os well os table tod. Both are $71 / 2^{\prime \prime} \mathrm{H}, 61 / 2^{\prime \prime} \mathrm{W} .41 / 4^{\prime} \mathrm{D}$. Wt. $13 / 4 \mathrm{lb}$. No. 5A48. CS1948. For 4" Speaker. Each
$\$ 2.67$
$\mathbf{\$ 2} .76$ Quontity Prices: 25 to 49 less $10 \%$. 50 up less $20 \%$ (4) BUD UNIVERSAL CASES FOR 2, 3, OR $41 / 4$ INCH METER

Punched for $2^{\prime \prime}$ meter with easy removable knock out ring to increase hole size for 3 meter. One piece removable back ond bottom. Two $3 / 8^{\prime \prime}$ knock No. 5A39. STE EL CM1 No. SA39. STEEL. CM1935. Each
No. SA40. ALUMINUM. CMA1936. Each
$5^{\prime \prime} W^{\prime \prime}$ Bud CMA $\times 4^{\prime \prime}$ 1930. Larger size for 2,3 or $41 / 2^{\prime \prime}$ Meters. Size 4 No. 5 A 33 Al. Win. $3 / 4 \mathrm{lb}$.

Quantity Prices: 50 to Groy. Eoch
$\$ 1.35$
No. 5A33. Aluminum, Hommertone Groy. Eoch
Quontity Prices: 50 to 99 less $10 \%$. 100 up less $20 \%$
. $\$ 2.65$ BUD QUALITY HANDLES WITH MOUNTING HARDWA
 ploted. Stk. No. Mfg. No. Mtg. Ctrs. Each
 (3) Made of $1 / 4^{\prime \prime}$ bross rod, chrome (5) Sturdy drower pull, silver anodized

 5 B Tubular aluminum, etched finish. 436 dized aluminum with hand clearance 54437 $\begin{array}{llll}\text { UH70A } & 45 / 8^{\prime \prime} & .38 & \text { of } 11 / 2 \\ \text { UH71A } & 31 / 4{ }^{\prime \prime} & .30 & 5 A 441\end{array}$
L.M.B. ALUMINUM BOXES


Features simple interlocking design. Slips together easily moking a sturdy finished box requiring only places. Made of 18 -gauge aluminum-to-get-at places. Mode of 18 -gauge aluminum. Ideally boxes, etc. Choice of Block Wrinkle, Gray Ham mertone and Brushed Natural finishes. Special quantity prices available - write for quotations.


| H. | LMB No. |
| :---: | :---: |
| $\times 13 / 8{ }^{\prime \prime}$ | MOO |
| $\times 13 / 4, "$ | 002 |
| $\times 25{ }^{\circ}{ }^{\prime \prime}$ | 1004 |
| $\times 15{ }^{\prime \prime}$ | 0004 |
|  | 006 |
| $\times 21 / 4^{\prime \prime}$ | 107 |
|  | 143 |
| $\times 21 / 4^{\prime \prime}$ | 108 |
| $\times 11 / 4$ | 139 |
| $\times 218$ | 135 |
| $\times 21 / 8{ }^{\prime \prime}$ | 136 |
|  | 140 |
| ¢3 " | 141 |
| $\times 3$ " | 141 |
| $\times 5$ " | 142 |
| $\times 21 / 8$. | 138 |
|  | 145 |
| $\times 23 / 4 "$ | 13710 |
| 41/2", | 14612 |
| $\times 212^{\prime \prime}$ | 14412 |
| $\times 13 .{ }^{\text {a }}$ | 1512 |

## DAVIES PLASTIC CASES \& COVERS

Made of beautiful black plastic with highly polished finish. sofety construction to withstand rugged usage and provide mounted in them. Corner bosses drilled and topped also ore recessed for flush panel mounting.
Model 240 B . Size, $33 / 4^{\prime \prime}$ W, $61 / 4^{\prime \prime} \mathrm{L}, 2^{\prime \prime} \mathrm{D}$. Inside dimenNo. 29A1. Net Each.
wide, 6 tg i" 72 c 10 Lots, Each.... . 65 c
 New Minioture Size Model 220. Size: $4^{\prime \prime}$ long, 2 li $^{\prime \prime}$ wide ${ }^{\prime \prime \prime}{ }^{\prime \prime}$ high Inside
 upplied, No. 2988. 1-24 Ea.....42c $25-49$ Ea...... 37 c 50 Up Eo....... 32 c MATCHING PANELS. Made of same molded block plastic as above. Precision No. 29A67. For 2408 and a finished appearance. $1 / 8^{\prime \prime \prime}$ thick. No. 29A68. For 2608. Net Eoch No. 29871. For 220. Net Each.

# R. F. Chokes-Coils-Shields-Insulators 



## OHMITE RF CHOKES



Single layer wound to operate over frea. range indicated. Ohmite number corresponds to the approx. freq. at which max. efficiency is obtained



(1) alr CORE UNSHIELDED SINGLE Pi.- $11 / 8^{\prime \prime}$ DIA., $5 / \mathbf{8}^{\prime \prime} \mathrm{H}$. Stock Mig. Ind. Cur. Ohms Net Stock Mfg. Ind. Cur. Ohms Net Stock Mig. Ind. Cur. Res. Each No. No. MH MA Res. Each | No. | No. | MH | MA | Res. | Each | No. | No. | MH | MA |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $17 C 409$ | 610 | .25 | 125 | 9.6 | $\$ 0.71$ | $17 C 432$ | 660 | 7.5 | 125 | 66.0 | $\$ 0.85$ |
| $17 C 412$ | 615 | .5 | 125 | 14.4 | .71 | $17 C 726$ | 670 | 10 | 125 | 81.0 | .88 |
| $17 C 414$ | 620 | .75 | 125 | 19.2 | .71 | $17 C 733$ | 690 | 15 | 125 | 102 | .88 |
| $17 C 701$ | 622 | 1.0 | 125 | 21.6 | .71 | 178401 | 691 | 20 | 125 | 120 | .94 | $\begin{array}{llllllllll}17 C 7101 & 622 & 1.0 & 125 & 21.6 & .71 & 178401 & 691 & 20 & 125 \\ 120 \\ 177 C 719 & 630 & 1 . & 125 & 25.2 & .71 & 17 C 734 & 692 & 30 & 100 \\ 156 \\ 17 C 722 & 640 & 2.5 & 125 & 34.8 & .85 & 17 C 743 & 693 & 60 & 100 \\ 1740 \\ 17 C 724 & 650 & 5.0 & 125 & 52.8 & .85 & 17 C 746 & 694 & 80 & 100 \\ 264\end{array}$

 $\begin{array}{llllllllllll}17 C 460 & 754 & 5.0 & 125 & 54.0 & 1.15 & 17 B 433 & 757 & 25 & 125 & 156 & 1.35\end{array}$ $\begin{array}{lllllllllll}178413 & 756 & 10 & 125 & 86.4 & 1.29 & 17 B 434 & 758 & 50 & 100 & 228\end{array}$ (i) IRON CORE UNSHIELDED SINGLE Pi.-11/8" DIA., $5 / 8^{\prime \prime \prime}$ H. $\begin{array}{lllllllllll}17 C 462 & 958 & 50 & 100 & 156 & \$ 1.47 & 178436 & 960 & 100 & 100 & 240 \\ 17 A 735 & 959 & 75 & 100 & 204 & 1.62 & 178437 & 961 & 150 & 100 & 312\end{array}$ 17 A735 95975 (3) AXIAL LEAD IRON CORE SINGLE LAYER Stock Mfg. Ind. Cur. Ohms Net Stock Mfg. Ind. Cur. Ohms Net No. No. UH MA Res. Each No. No. UH MA Res. Each $\begin{array}{llllllllllll}\text { No. } & \text { No. } & \text { N } \\ 17 C 463 & 4580 & 0.10 & 300 & .012 & \$ 0.50 & 178466 & 4606 & 2.40 & 300 & .192 & .50 \\ 17 C 494 & 4586 & 0.33 & 300 & .023 & .50 & 17 B 478 & 4609 & 5.50 & 300 & .828 & .50\end{array}$ | $17 C 468$ | 4588 | 0.47 | 300 | .026 | .50 | $17 B 481$ | 4610 | 6.20 | 300 | .900 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $7 C 496$ | 4602 | 1.00 | 300 | .060 | .50 | $17 B 486$ | 4611 | 820 | 300 | 34 |


(4) AXIAL LEAD FERRITE CORE-MULTI Pi.-1/4" DIA., 7/8" Lg. Net

 $\begin{array}{lllllllllllll}178840 & 6304 & 5.0 & 200 & 14.9 & 1.06 & 17 B 842 & 6308 & 25.0 & 75 & 83.4 & 1.23\end{array}$
CHOKE INDUCTANCE RATINGS IN LISTINGS ABOVE
UH-MICRO HENRIES; MH-MILLIHENRIES

## $B$ \& W MINIDUCTORS

"Air-Wound" construction for very efficient operation as tank coils, RF chokes, etc. Easily cut to required length. $1 / 2^{\prime \prime}$ and $5 / 8^{\prime \prime}$ dia. coils are $2^{\prime \prime}$ long; $3 / 4^{\prime \prime}$ and $1^{\prime \prime}$ are $3^{\prime \prime}$ long; $11 / 4^{\prime \prime}$ and $13 / 4^{\prime \prime}$ are $4^{\prime \prime}$ long. Wt. 4 oz .

| Stock | Mfg |  | Coil |  | Stock | Mfg. | Turns Per Inch |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | No. | Per Inch | Dio. | Price | No. 17 A1089 |  | ef Inch |  | $\begin{aligned} & \text { Price } \\ & 1.10 \end{aligned}$ |
| 17A1069 | 3001 | 4 |  | \$.68 | 17A1090 | 3015 | 16 |  | 1.25 |
| 17 A1078 | 3003 | 16 |  | 1.01 | 17 A1091 | 3016 | 32 |  |  |
| 17 A1079 | 3004 | 32 |  | 1.26 | 17 Al 1075 | 3017 | 4 |  |  |
| 17A1081 | 3006 | 8 |  | 95 | 1781118 | 3018 | 16 | $14^{\prime \prime} 4^{\prime \prime}$ |  |
| 17 A1082 | 3007 | 16 |  | 0 | 1781119 | 3020 | 32 | $11 / 4{ }^{\prime \prime}$ | 0 |
| 17A1083 | 3008 3010 | 8 |  | 02 | 1781121 | 3021 | 4 | 13 |  |
| 17A1085 | 3011 | 16 |  |  | 1781122 | 3022 | 8 | $13 / 4$. | 4 |
| 17 A1087 | 3012 | 32 | 3/4' | 35 | 1781123 | 3023 | 16 | 13"1 |  |
| A1088 |  | 4 | $1^{\prime \prime}$ |  | 1781124 | 3024 | 32 | $13 / 4{ }^{\prime \prime}$ | 2.18 |

## B \& W STANDARD INDUCTORS

$29448 \quad 3900 \quad 2 \quad$ " Length $10^{\prime \prime} \# 14$ Tinned Wire. Eoch. . 52.52 3905-1 $61^{\prime \prime}$ Length $10^{\prime \prime}$ \# 12 Tinned Wire. Eoch 29A48 $29 A 50$ 29451 3906-1 8 $21 / 2^{\prime \prime \prime}$ Length $10^{\prime \prime} \# 12$ Tinned Wire. Eoch Length $10^{\prime \prime}$ \#14 Tinned Wire. Each
Length $10^{\prime \prime} \# 16$ Tinned Wire. Each

B \& W PI-NETWORK INDUCTORS
Bandswitching 80-40-20-15 and 10 meters; single or parallel tubes. Ratings: 850A and 8521 KW ( 4000 V . CW/SSB, 3000 V. AM) ; 851 rated 500 W . CW/SSB ot $2000 \mathrm{~V}, 250 \mathrm{~W}$. AM at $1250^{\circ} \mathrm{V}$.
Model 850A. Size $8 \times 6 \times 4^{\prime \prime}$. Wt. 3 lbs
.$\$ 64.50$
No. 29A133. Net Each
Model 851 . Size $7 \times 3 \times 31 / 2^{\prime \prime}$ high W4 3 lbs
No. 29A149. Net Eoch

## BARKER \& WILLIAMSON CHOKES



B \& W FILAMENT CHOKES far Grounded Grid Amplifiers. Broadband characteristics from 80 through 10 meters, no uning Use with regular filament transformers. Sturdy teel Case with mounting brackets.
No. FC-15A for total of 15 amp current to one or two tubes. Size $2 \times 21 / 2 \times 5$. Wt. 2 lbs. No. 29A279. Net Each
$\$ 16.50$
No. FC-30A improved model for one or two tubes requiring total of 30 amps filament current. Size $2 \times 21 / 2 \times 5^{\prime \prime}$. Wt. 2 Ibs. 380 Net Each No. 800 B E W RF Plate Choke. Ideal for transmitter parallel or series fed circuits, 80 through 10 meters. Maximum rating 250 . No. 29A278. Net Each ...................10

FOR B\&W COAXIAL SWITCHES SEE AMATEUR ANTENNA ACCESSORIES


THRU-PANEL TYP
Furnished with nickeled brass hardware for mounting in panels up to $1 / 2$ thick. Dimension shown is height Porcelain except type 45, steatite.
$\begin{array}{llll}\text { Stk. No. Type Fig. Top } & \text { Hdwe. NET } \\ 10-32 & \mathbf{4 5 c}\end{array}$ $\begin{array}{lllll}\text { Stk. No. } \\ 12 A 262 & 40 & (1) & 11 / 4, & 10-32 \\ 45 c\end{array}$ $\begin{array}{llllll}12 A 266 & 44 & \text { (1) } & 5 /{ }^{\prime \prime} & 6-32 & 33 \mathrm{c} \\ 12 A 267 & 45 & \text { (3) } & 13 /{ }_{8}^{\prime \prime} & 10-32 & \text { 61c }\end{array}$

## STEATITE FEED-THRU BUSHINGS

Stk. No. Type Fig. Hgt. Dia. NET

(8) ULTRA-STEATITE CONES


## Chemicals \& Service Aids


(1) CEMENTS

SERVICE CEMENT - For replacing and repairing speaker cones; sealing odjustments, cementing loase tube bases, etc. Fast drying
11 A38-Tube.
11A678-8 ox
$.54 c$
16A499-8 OI
$\$ 1.42$
SERVICE SOLVENT - Loosens ald cement. Also thinner for above. $11 A 35-2$ or. 16A498-1 Pr
$.51 c$
PLASTIC 6 BAKELITE CEMENT-
$16 A 440-2$ (2 0x. Jor, Each... 54c VINYLITE CEMENT - A plastic cement for nonporous materials. LUCITE CEMENT-For lucite and other ocrylic materials. RUBBER TO METAL CEMENT-11A76-2 ox. Jor. Eoch.....59c Q-DOPE (COIL DOPE)-Coats and seols coil windings, etc. Low RF 11 A25-2 ox. Bottle. Each. 54 c PLI-O-BOND CEMENT-It bonds anything to anything-iron, steel, plastic, glass, aluminum, etc. truly universal cement
$11 A 424$ G-C $43-2$
11 A424. G-C 43-2,
2 oz. bottle with brush..... 59 c
(3) CEMENT LAB KIT

14 different 2 oz, bottles cement
No. 22B234. Per Kit . .... \$5.85

(3) CHEMICALS

CARBON CONTROL CLEANER Repairs noisy volume contrals, switches, etc. Applicator supplied.
"NO-OX" CONTACT CLEANER-Dissalves corrosion by chemical oction. Contains no solvent.
$11868-1$ oz.
69 c
s 1.01
CARBON TET - $100 \%$ pure. Dissolves dirt and grease. $114680-8$ oz..
$.93 c$
$\$ 1.52$
INSULATING VARNISH-Produces waterproof, ailproof, non-corrosive film on coils, transformers, etc. 11 A27- 8 oz
.59 c
$\$ 1.32$
ANTI-CORONA LACQUER - HAS high dielectric strength to pre vent corona in TV high voltage 11B175-2 ox. Bottle. Eoch..76c CONTACTENE-Lubricates, cleans ony moving contac
11A429-2 oz. Jor
.59 c
.88 c
TRANSISTOR 25 SILICONE COM-
POUND. Maintains efficient heat transfer from transistor to chossis. (4) INJECTOR

Surgical needle in oil resistant rubber bulb
No. 11 B234. Eavh.
(5) LUBRICATOR

Spring plunger releases lubricant.
No. 118150 . Eoch....... $.62 c$.
WALSCO OILETTE G-C CONTACT
BURNISHING KIT


A complete kit for servicing relays, switches, efc. Removes oxide and corro-
sion from contoct sion from contact points
without removing excessive without removing excessive amounts of the precious tle of contact cleaner and the of contact
burnishing tool.
No. 11 C 605.
G-C 9339. Each
W


Filled with high grade lubricating oil. Telescoping spout permits ocessibility to difficult places 'requiring lubrication. Clever system releoses one drop of
time. Does not leak. No. 11B140 Each No. $11 \mathrm{B142}$ Ea


Kit contains jar each of red, grey, White, black, brawn, orange, purple, blue, green and yellow high quality
fast drying lacquer enamel. Complete and color No. 11 A57.
Per Kit
$\$ 1.44$

## SCRATCH REMOVING

 COMPOUND Restore plastic and
-plexiglass surfaces to -plexiglass surfaces to just seconds. Removes unsightly scrotches and mars from all plastics madio and TV cabinets electronic instrument panels, dial covers on testing equip ment or high fidelity components, aircroft, marine and sports car wind shields, optical lens, showcases mirrors- even removes cigarette burns, Contains a microscopically-thin wax which retards further development of No. 11 B47 5 Oz. Jar.
120
$\$ 1.05$

PRINTED CIRCUIT REPAIR KIT


Repalr any Printed Circuit in Radio and TV Print-Kote Sili cone Resin, 2 oz Print-Kote SolPure Silver Print 1 Solder Probe Ti of 1 Stainless Brush and Scraper Print Kote Solder, plus a Printed Circuit 11A396. G-C 680 Kit, Net Ea.. $\$ 8.22$

## GC PRINTED CIRCUIT PRINT

SILYER PRINT - Contoins pure silver powder as pigment. Use for making or repairing printed circults. Also ideal far applying conductive coating to nonconductive materials-plasgrounding and shielding. Brush for cator attached to cop. Brush appliNo. 11 B70
COPPER PRINT.............3.23
COPPER PRINT-A highly conductive touch-up of printed for repair and plete with of printed circuits. ComNo. IIB73. No. 11 B
GC20-2

$\$ 1.91$

See Page 184 for Other Chemicals and Paints
BUILD THIS TUBE TESTER


A complete tube tester, not a gadget! Checks each section of multipurpose tubes seporately . checks octal, loctal, 9 prong nuvister, miniature tubes tester costing over three times os mittents as well os for quality, same as tube ench on thorts or leakages between any two regulator tubes as well. regulator fubes os well.
Quality of tube is indicated directly on a two color meter dial using the standard emission test. Has on etched panel and a high impact bakelite case. Comes complete with instructions and tube chorts in ring bound mon ual. Size $63 / 4 \times 51 / 4 \times 21 / 4^{\prime \prime}$ deep. Operates from 115 V .60 cy . AC. S. 49 No. 35 A160. As above Factory Wired, Net Each
$\$ 22.90$

## G-C <br> ZERO-MIST <br> "TROL-AID" SPRAY

LOCATES TROUBLE INSTANTLY
Spray electronic compon stontly pin-pointing faulty capacitors, resistors, tronistors, cold solder and ox-

idized junctions, due toxvariances. Saves valuable time.
No. 11A629. GC 8667. Net Ea. \$2.37


## TUN-O-LUBE <br> TUNER CLEANER

Just spray it on-cleans and lubricotes all types of tuners. Leaves a long lasting protective cooting ogainst noise and oxidation. Non-inflammable, non-toxic. Won't harm plastics.
No. 11 A373.
No. 11 C675. 16 Oz........... $\$ 2.73$


Cleans, lubricates, restores corbon controls, switches, relays, solenoids. any electrical contact. Provides long lasting protection agoinst noise and oxidation. Will not offect electrical properties nor harm


## NO-ARC SPRAY INSULATOR

20,000 Volts Dielectric
Strength
Provides o tough insulating coating to prevent arcin and carona shorts. Spray on transformers, yokes, printed cifcuits, etc
$\$ 2.73$
11A374. 8 ox. spray can 2 Oz , bottle with brush applicotor.
No. 11 C 674 . Each.............96c

## "QUIETROLE"

Stops noisy operation of switches, volume and tone controls without removal from chassis. Makes all moving parts quiet.
1184. 2 ox. ... 51.69
'QUIETROLE' SPRAY
6 full oz. of the finest available lub-ricant-cleaner now in spray can.
No. llB6. Per Can. . . . . . . . \$2.89
INSL-X E-26 CLEAR INSULATING SPRAY

Quick dry-3 to 5 minutes. Insulate everying in TV except moving parts and tubes, spray ontenna and all connections. Prevents corona, arcing - keeps out mósture. No. 11 A 683.91 .79
$12 \mathrm{Oz} . \mathrm{Can}$.

## KNOB-PLASTIC REPAIR KIT

## SETS ROCK-HARD IN 7 MINUTES

 REPAIR:
## - Loose or broken <br> Complete with color kit <br> to match any shode

New fast-setting material repairs anything of plastic Ideal for joining broken or new parts, creating new plas. tic to motch or fill repairs as needed. Completely mold able in setting stoge, conforms to any shape. Once set it may be sonded, sowed, drilled, topped or polished $1 / 2 \mathrm{lb}$.

41A160. Each
$\$ 1.50$

## Winegard TV AND FM ANHENNAS!

## NEW "CHROMA-FLEX" VHF-FM ANTENNAS

FOR EXCEPTIONAL COLOR OR BLACK AND WHITE
CH. 2-13 TV OR FINEST FM AND FM STEREO

## GOLD VINYLIZED

FOR FINEST APPEARANCE AND EXTRA LONG LIFE!
SAVE \$5.00!
COMPARED TO SEPARATE PRICAS


ALL NEW WINEGARD "CHROMA-FLEX" VHF/FM AND UHF ANTENNAS

Wiagle, high powered antenno for the ultimote in all bond TV and FM. Uses highly efficient co-related driven element assembly and precision for perfect bandwidth and directivity. Precision pre-ossen Whm lead. VHF-UHF coupler for back of set supplied. IEERED-CHOOSE BY Shpg. Mfg. Net Cox. Range Miles Size Installed Shpg. Mis FM Width Length Wt. List Each \begin{tabular}{lllll}
HF HF <br>
25 \& 80 \& 90 \& $110^{\prime \prime} 175^{\prime \prime}$ \& 15 libs. <br>
\hline

 

25 \& 80 \& 90 \& $110^{\prime \prime}$ \& $156^{\prime \prime}$ \& 12 libs. \& 49.95 <br>
90 \& 80 \& 75 \& $110^{\prime \prime}$ \& $84^{\prime \prime}$ \& 9 lbs. \& 34.95 <br>
60 \& 30 \& 50 \& 11.95 <br>
\hline 10 \& 30 \& \& 21.00
\end{tabular} $\begin{array}{llllllll}90 & 30 & 50 & 110^{\prime \prime} & 84^{\prime \prime} & 9 \text { lbs. } & 34.95 & 21.00 \\ 60 & 30 & 40 & 106^{\prime \prime} & 58^{\prime \prime} & 6 \text { lbs. } & 24.95 & 14.95\end{array}$

## JFD Television \& FM/FM Stereo Antennas

## 82-CHANNEL <br> LOG-PERIODIC <br> LPV-VU SERIES <br> THE COMPLETE ANTENNA FOR COLOR OR BLACK AND WHITE TV-FM / FM STEREO!



NOW WITH NEW CAP-ELECTRONIC DIPOLES

Advanced application of the famed log-periodic formula now provides even better, more powerful performance than before . . . across all the channels Major innovotion is the capacitor coupled dipoles and directors for extra gain on the higher VHF channels and the UHF chanmels where antenna power is


RUGGED IN-LINE STYLING-

## EXCELLENT FOR ROTOR, ROOF-TOP

 OR ATTIC INSTALLATION ONLY ONE LEAD-IN NEEDEDAVAILABLE IN FIVE AREA-ENGINEERED MODELS

| Stock No. | $\begin{aligned} & \text { JFD } \\ & \text { No. } \end{aligned}$ | Max Rge., Miles Size Installed VHF UHF FM Width Length |  |  |  |  | Shpg. Wt. | Mfg. List | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 94154 | LPV-VU18 | 175 | 90 | 75 | 81" | 135' |  |  |  |
| $9 A 155$ | LPV-VUI5 | 150 | 90 | 60 | $81^{\prime \prime}$ | $116^{\prime \prime}$ | 13 Lbs. | \$69.95 59 | \$41.13 |
| $9 A 156$ | LPV-VU12 | 125 | 65 | 50 | $85^{\prime \prime}$ | 103" | 12 Lbs. | 59.95 49.95 | 36.25 |
| 9 91157 | LPV-VU9 | 100 | 40 | 40 | $84^{\prime \prime}$ | 103 ${ }^{\prime \prime}$ | 12 Lbs. | 49.95 3995 | 29.37 |
| $9 \mathrm{P110}$ | LPV-VU6 | 75 | 25 | 30 | $100^{\prime \prime}$ | $50^{\prime \prime}$ | 6 Lbs. | 27.50 | 23.49 |
| 9 9234 | LPV-VU5 | 30 | 20 | 20 | $90^{\prime \prime}$ | $44^{\prime \prime}$ | 4 Lbs. | 27.50 17.50 |  |

## CHANNEL 2-13 LOG-PERIODIC LPV-TV SERIES

## FINEST PERFORMANCE FOR VHF COLOR OR BLACK AND WHITE TV AND FM

CAP-ELECTRONIC ELEMENTS


All Aluminum Construction
The latest and finest VHF Ch. 2-13 interpretation of the acclaimed Log Periodic formulo.
Achieves the narrowest beam width (with high rejection of interfering slgcapacitor coupled by on antenno of equal size. Exclusive JFD system of perb performonce on all channels 2 through enhances high channel gain for su Ruggedly constructed. excellent for roof top and most.


| Stock <br> No. | $\begin{aligned} & \text { JFD } \\ & \text { No. } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Mo } \\ & \text { Rge. } \\ & \text { VHF } \end{aligned}$ |  | Size | nstalled Length | Shpg. | Mfg. List | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9855 9856 | LPV-TV19 | 200 | . | 105" | $200^{\prime \prime}$ | 24 Lbs. | \$79.95 | \$47.01 |
| 9860 | LPV-TV16 | 175 | . | 105"', | 160"' | 21 Lbs. | 59.95 | 35.25 |
| 9 A 68 | LPV-TV10 | 125 | 50 | 105", | $145^{\prime \prime}$ | 18 Lbs. | 49.95 | 29.37 |
| 9471 | LPV-TV7 | 100 | 50 | $105^{\prime \prime}$ | $72^{\prime \prime}$ | 18 Lbs . | 41.95 | 24.67 |
| $9 \mathrm{A98}$ | LPV-TV5 | 75 | 40 | $104^{\prime \prime}$ | $55^{\prime \prime}$ | 8 Lbs. | 31.95 23.95 | 18.79 |
| $9 \mathrm{B69}$ | LPV-TV3 | 50 | 30 | 104" | $40^{\prime \prime}$ | 4 Lbs. | 14.95 | 8.08 |

## LONG RANGE FM ANTENNAS 88-108 MC

3037
MFG. LIST
\$49.95

Brings to FM the unique Log-Periodic concept that has worked wonders in reception. Full-wave LP design delivers the clac and wide-band response needed for fully separated distortion-free FM

| Stock No. | $\begin{aligned} & \text { JFD } \\ & \text { No. } \\ & \hline \end{aligned}$ | Recommended Range | Size Installed Shpg. Width Length Wt. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 94136 | LPL-FM10 | Up to 175 Miles | $140^{\prime \prime}$ | 143" | 10 Lbs. |
| 94140 | LPL-FM8 | UP to 150 Miles | $140^{\prime \prime}$ | $116^{\prime \prime}$ | 8 Lbs. |
| $9 \mathrm{Al43}$ | LPL-FM6 | Up to 125 Miles | $140^{\prime \prime}$ | 88'" | 6 Lbs. |
| 9 A148 | LPL-FM4 | Up to 75 Miles | $140^{\prime \prime}$ | 59' | 5 Lbs. |

## JFD Television And FM Antennas

 OG PERIODIC 82 CHANNELGAL SPLITTER FOR CHANNELS 2 TO 13 TV AND FM/FM STEREO Includes a Gold Alodized LPV ontenna and complete professional accessory it for a laokin ling-lasting roof-top or attic installation. Clears up
 reception problems rar with self-supporting tripod base, 50 ft . 300 ohm lead and 5 insulators CHOOSE THE LPY KIT THAT SUITS YOU BEST

| Stock No. | Antenna With Kit | Recommended Miles Range | Shpg. Wt. | Mfg. List | Net <br> Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | LPV-4 | UP to 50 | 8 Lbs. | \$21.95 | \$12.91 |
| 9 A 88 | LPV-6 | Up to 75 | 10 Lbs. | 29.95 | 17.61 |
| $9 \mathrm{B91}$ | LPV-8 | Up to 100 | 12 Lbs. | 37.95 | 22.31 |

(2) LOG PERIODIC 82 CHANNEL COMPLETE OUTFIT Model LPV-VU9 antenna, rated 100 miles VHF, 40 miles UHF, 40 miles $F M$. Gold Alodized all-aluminum. Produces fine color.' With UHF/VHF signal splitter, 50 ft . lead, tripod base, 5 ft . mast and hardware No. 9A232. Mfg. List $\$ 47.95$. Net Each
\$28.19
JFD BOW-TIE SCREEN ANTENNAS FOR UHF TV


UHF 202


## MOST POPULAR! UHF-202 4-BAY STACK

Rugged 4 -stack bow-tie giving the extra gain and high vertical expanse so necessary for dexndable reception on all UHF channels. Uses rigid, wind resistant open cardioid design elements and weather proofed curtain type reflector' for finest single direction pickup. Entirely pre-assembled for quick installation. Shpg. wt. 5 lbs . Less mast and 300 ohm lead. No. 94100.
Mfg. List $\$ 8.20$. Net Each
$\$ 4.82$
6 Lots,
Each.
$\$ 4.43$

## SUPER PERFORMER! UHF-208 8-BAY UHF ANTENNA

Gives up to terrific 12 db gain. Needle sharp on all UHF channels. Fine for those difficult locations, even Translator installations. Uses new weatherfree implex " $A$ " insulators, extra heavy-duty galvanized wire screen reflector, Mot

## JFD ALL-TRANSISTOR UHF CONVERTER



## ADDS $\mathrm{G}_{\mathrm{G}}^{\mathrm{CH}} \mathrm{W}^{14}$ TO YO 83 COLOR SET

Mfg.
List List
$\$ 39.95$


- Exclusive slim line styling - size only $6 \times 7 \times 21 / 2^{\prime \prime}$ high.
- Continuous channel tuning ingat smooth accurate action, illuminated
THE VERY LATEST! SPACE AGE CIRCUITRY
Fully transistorized solid-state circuitry utilizes two of the most advanced transistors and one of the latest space-age diodes pius up-to-the-minute design techniques for high frequency aliability as judged by today's high ing in tremendous performance 10 db and stabilized, drift-free, heat-free standards. Amplification of 10 db. and stabilized, high signal-to-noise operation provide utmost station pulling power. "Powered from 115 V .60 ratio. . Selivers pictures With extra $\$ 39.95$. cy. AC. Shpg. wt. I $1 / 2$ lbs. Mfg. List
Na. $4 A 175$. Model CR2-J. Net Each


For finest color, B/W and FM stereo performance. Reinforced all-aluminum, gleaming gold alodized. Dismantles eosily folds up for storage while on the move. Ronge 30 miles VHF, 20 miles UHF, 20 miles FM stereo. No. 9A233. Madel LPV-TL5. Mfg. List \$29.95. Net Each
.$\$ 17.61$
(4) FM STEREO CONE ANTENNA OUTFIT

MAKES EXCELLENT ATTIC OR ROOF TOP INSTALLATION Engineered for finest $F M$ reception in urbon areas, even where stations are not all in the same direction. Made of oluminum finished in new gold alodizing for long lasting peak performance. from existing TV or other short mast, side mount brackets for stand off from existing TV or other upright mounting, $50^{\prime} 300$ ohm lead and 5 insulators. instalied size, 410 diameter, high. Wt. ${ }^{6}$ Ibs.

## JFD "JET" VHF INDOOR ANTENNAS

## CHANNELS

## 2 TO 13

CLARIFY YOUR Picture beautify your

## HOME!

Only $13^{\prime \prime}$ high . . . but extends to full $38^{\prime \prime}$ to capture maximum signal. Ratchet-swivel design permits quick, Decor-styled mahogany base has fine appearance. Weighted to prevent accidental tipping. Complete with 300 ohm lead. Wt. 2 lbs.
(1) Standard Channel 2-13 "Rabbit Ear".

5 25 Lots, Each

(2) Switch TYpe "ASTRO-JET" with Has unique 6 -position electronic phasing switch to motch set impedance and elecrically adjust antenna for maximum signal. Helps tune out ghosts. Covers VHF and UHF channels 2 to 83. Mfg. List \$9.95.
No. 38B117. Model TA990 10 Lots, Special Each

- Special Each.

UNIVERSAL ANTENNA FOR PORTABLE TV SETS Installs easily on ,back of set. Telescoping 5 -section 37 ation and pivor on ball socket in all directions, disappear into an-
tenna housing when not in use. Length tenna housing when not in use.
closed $734^{\prime} . W_{t}$. 2 lbs. Mfg. List $\$ 4.95$. No. 38C110. Model TA155. \$2.91 Net Each.

NEW VHF-UHF ALL-CHANNEL INDOOR ANTENNA

## FOR URBAN <br> CHANNELS

2 TO 83 TV


All-new for the all channel city areas. Four section $38^{\prime \prime}$ dipoles receive VHF, double direction-finding loops receive UHF; 6 -position impedance matching switch helps clear up ghosts. Made of polished brass. Base is mahogany toned, weighted. Separate 300 ohm leads for VHF and UHF. Shpg. wt. 2 lbs.
$\$ 3.11$
No. 38B116. Model TA995. Net Each


## TV-FM ANTENNA OUTFITS <br> - SIMPLE INSTRUCTIONS INCLUDED

# TV-FM Antennas \& Accessories 



Colorstar, electronically and mechanically right for finest VHF TV/FM every-
here?
All-riveted pre-assembled construction
snop-lock precision formed aluminum lotors, crith extra strength sleeve at critical points, high impact molded insulators, crush proof mast clamp, Dura Gold vinyl ocrylic finish-and top quality workmanship plus proven engineering desigñ. That's "Colorstar"-quality and performance that belie the low B-A prices! Less mast and 300 ohm lead.

CHOOSE YOUR VHF/FM COLORSTAR BY RANGE IN MILES


Big Shot-8 Complete Kit. (Antenna on'y illustrated) Includes 4 ft . tripod mount,
$50^{\prime}$ lead-in
 All are of finest materials stallation. Dura-Gold seoled for permanent high and are designed for quick installation. Dura-Gold sealed for permanent high performance.
CHOOSE YOUR 82-CHANNEL ANTENNA BY RANGE IN MILES

| Stock No. | Antennacraft Model | VHF | e In UHF | FM | Shpg. Wt. | Net Eoch |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 94227 | "Big-Shot 8" Kit | 75 | 25 | 30 |  |  |
| 94228 | UVFM110 | 100 | 40 | 40 | 4 Lbs. | \$ 7.77 |
| 94229 | UVFM150 | 125 | 65 | 50 |  | 8.98 |
| 94230 | Mark 18 | 150 | 90 | 60 | 6 Lbs. | 14.97 |
| 94231 | Mark 21 | 175 | 90 | 75 | 9 Lbs. | 19.77 |

BELDEN ANTENNA ROTATOR CABLE Vinyl plostic weatherproof Insulation. Flexible stranded.
Stk. No. Belden Type



3-WAY ANTENNA OR SPEAKER SWITCH Double pole, 3 positions. For 300 ohm ontenno leads, speakers, etc. Screw terminals. No. 18A999. Mosly F-20. Ivory. Net Each $\$ 2.48$

FILTERS FOR IMPROVED TV RECEPTION CLEAR UP MOST PROBLEMS CAUSED by UNWANTED SIGNALS DRAKE "HIGH PASS" TV FILTER To stop interference entering TV Set through 300 ohm ontenno lead.
Eliminates amateur or other signals on 6 thru 160 meters. 60 db ottenuation from zero to 52 mc . Does not decrease TV signal itself.
29A86. Type TV-300-HP. Wt. 8 oz . Net Eo.

## TV "IGNITION INTERFERENCE" ELIMINATOR INSTALLS AT THE TV SET

Very effective yet simple to connect require removing or cutting the antenno lead Rejects streaks and "static" caused by iqnition motor cars, buses, etc. Size $11 / 2^{\prime \prime} \mathrm{L}, 1 \frac{1}{16}$ " dia 146117.8 oz.
146117. Superex. Model CPI. Net Eoch. \$1.


## TUNABLE TELEVISION CLARIFIER

Highly popular and effective "TVI" filter for eliminating or greatly reducing lines, herringbone patterns, tears, wovy effects ond other picture distortion when caused by FM,
Police, Amoteur ond other short wave transmitters: diothermy, industrial equipment, ignition and adiacent TVchannels. Does not reduce wanted signal. Con be installed and tuned for clearest picture by anyone. Full instructions included. In metal case, size $4 \times 31 / 4 \times 11 /{ }^{\prime \prime}$
29A243. Mfg. List $\$ 7.50$. Wt. 8 oz. Net Each.. $\$ 4.41$

## LOW COST REGENCY TVI HI-PASS FILTER

Effectively suppresses most common television interference. Carefully designed, small and simple to install right on the set. Requires no tuning and no maintenance. There is no loss of signal to the television set while interfering signals below 45 MC are

## Antenna Towers, Masts and Rotators


(1) ROHN $25 G$ GALVANIZED $1212^{\prime \prime}$ TRIANGULAR TOWER SECTIONS Will stand 35 feet above house bracket without guys, 200 ft . max. When guyed. Hot-dipped golvanized seamless $11 / 4^{\prime \prime}$ heavy waH uprights, 8 precision welded zig-zag braces per 10 ft . section, double bolted section ioints. No. 6A47. 10 Ft. Stroight Section. Rohn 25G. 40 lbs. Net Each.... $\$ 18.25$ No. 6 A48. 9 Ft. Top Section for $11 / /^{\prime \prime}$ Mast. 31 lbs . Net Boch. No. 6A44. 8 Ft., Amateur Top Section. $11^{\prime \prime}$ dia. flat top plate, $21 / 4$, center hole. Rohn 25 AG-4. Net Eoch. (3) 6A42. Hinged Base. BPH-25G, 15 , Ibs. Net Each 6A42. Hinged Base. BPH-25G, 15, Ibs. Net Eoch ............... \$11.00 86 6A53. House Bracket, $15^{\prime \prime}$ to $24^{\prime \prime}$. Rohn HB25BG. 10 libs. Net Ea. (4) 6A57. Guy Bracket with 3 Torque Bors. 9 Ibs. Set
(5) 6A51. Rotor Post. Mounts inside tower " 3 ibs. Net Each. 6A43. Rotor Plote. AS-25G. For Hom " $M$ " inside tower 5 ibs. E.. \$1.60 (6) ROHN GALVANIZED TELESCOPING MASTS Heovy 17 gauge. Hos most brake for simpler installations. Sections $10^{\prime}$ long hot-dipped galvanized inside and out. With guy rings.

| Stk. No | Heigh | ubing Si | Wt. Lbs. | Net Ea. | , Eo. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6A90 | 20 Ft . | $11 / 2^{\prime \prime}$ to | 15 | \$5.28 | \$5.02 |
| 6489 | 30 Ft . | ' to 1 | 24 | 8.58 | 8.15 |
| 6488 | 40 Ft . | $2^{\prime \prime}$ " to 11/4,", | 34 | 11.68 | 08 |
| 6A91 | 50 Ft . | 21/4" ${ }^{\text {" }}$ 0 $11 / 4^{\prime \prime}$ | 48 | 15.78 | .99 |

(7) 4A114. Universal Base. All-angle, rotatable. 2 lbs. Net Each... (8) 4A184. Ground Mount. Hondy drive-in type. 31/2 lbs. Net Each
(8) STEEL AND ALUMINUM MASTS-self caupling, stacking 6A114. 10 ft . $\times 11 / 4^{\prime \prime}$. Hot-dip golv. steel. 7 lbs. Ea.. $\$ 2.0610$ @ Eo.. $\$ 1.86$


 (13) NO-GUY ROOF MOUNT. With 5-Ft. Aluminum Mast (13 No-GUY ROOF MOUNT. With 5-Ft. Aluminum Mast
Aluminum gold alodized. Wr. 3 lbs. Eo..... $\$ 3.8410$ @ 6A66. All-Aluminum gald alodized, Wt. 3 Ibs. Eo..... $\$ 3.8410$ @ Eo... $\$ 3.46$ 4A156. Zinc ploted steel. I Ib. Per Pr................. $\$ 0.69$ 10 10 Pr. Ea 4A156. Zinc ploted steel. 1 Ib. Per Pr.............. $\$ 0.6910$ Pr. Eo. 4A140. Zinc plated steel. 4 Ibs. Per Pr.ing. For masts to $\$ 3.45$ 10 Pr. Eo. 4A160. 4 lbs. Per Pr........................... $\$ 3.68$ lo Pr. Ea... $\$ 3.49$
(10) ROHN TRIANGULAR ROOF MOUNTS,

Hot dipped galvanized tubular steel. Takes masts to $13 / 4^{\prime \prime}$.
No. 6A62. ${ }^{\text {Ft. }}$. Type TRT36. Wt. 8 Ibs. Net Eoch.
No. 6A62. 3 Ft . Type TRT36. Wt. 8 lbs. Net Eoch.
No. 6A63. 5 Ft . Type TRT60. Wt. 11 lbs. Net Eoch

## GUYING ACCESSORIES <br> (1) (2) Cusing ACCESSORIES



## SCREW-IN EARTH ANCHOR FOR GUYS

Very easy to install. Literolly screws into ground at on angle to conform with pull of the guy. Pounds of pull rating is for average soil. Rods are $48^{\prime \prime}$ long, have $11 / 2^{\prime \prime}$ eye. Sti. No. Withstonds Pull Description Wt. Eoch 6 @ Eo.


## C-D-R ANTENNA ROTORS <br> FOR TV AND AMATEUR BEAMS


(1) NEW ROTOR FOR "CLOSE-IN" AREAS

Designed for the new highly directional antennas that are, required for maximum performance on color TV, UHF-TV and FM stereo. Sized to handle single bay antennos. Integral solid steel shaft holds ontenno directly. Shpg. wt 12 lbs.
Model TR-10 with switch control and light direction indicator. No. 4A188. Mfg. List $\$ 37.95$. Use 8 -wire cable. Net Eoch Model AR-10 with outomatic sontrol. Stops where dialed.

## (2) HEAVY DUTY ROTOR UNIT

First choice of thousands! Rotates full 375 degrees of approximately 1 RPM with positive, automatic stop in either direction. Instant reversing Built-in $61 / 2^{\prime \prime}$ diameter boll thrust bearing will handle heavy antennos. no addirional bearing support hen lower most support is removed. Mechanism hos oilite and ball bearings, lifetime lubrication. Shpg. wt. 15 lbs
With Manual Control TR-2C. Newly designed. Convenient switch operation. Mfg. List $\$ 47.95$. Use 8 -wire coble.
No. 4A186. Net Eoch
$\$ 29.95$
With Automatic Control AR-22R. Antenna turns and stops as dialed S33.95 No. 4A185. Mfg. List $\$ 54.95$. Use 4 -wire coble. Net Each.

## alliance TENNA• ROTOR

FOR TELEVISION OR LIGHTWEIGHT AMATEUR BEAMS

WITH INDICATOR LIGHT
MFG. LIST PRICE $\$ 29.95$
$\$ 18^{98}$ - UNSURPASSED PERFORMANCE SUPERB STYLING


Rotator. Swings ontenno either direction through a full $360^{\circ}$ in 1 minute. Stops where desired. Magnetic brake prevents drifting. Has automatic stop at end of rotation, permanent lubrication and strong, weather-tight diomps. metal housing. Masts up to $13 / 8^{\prime \prime}$ dia. slip through rotor; are held Sy $73 / 4 \times$ Optional TBB bearing takes stress off 115 V , wele AC. Shpg, wt 12 lbs $51 / 2 \times 8^{\prime \prime} \mathrm{H}$. Control boxes operate on $115 \mathrm{~V}, 60$ cycle AC. Shpg. wt. I2 ibs Model K22 with switch bor and light indicotor to show end
No. 4A173. Mig. List $\$ 29.95$. Use 4 -wire coble. 88 Net Eoch . 98 Model T45 with switch ond meter indicator
No. 4A176. Mig. List $\$ 39.95$. Use 5-wire cable.
to show
Net Each
Model C225 with silent outomatic control
No. 4B154. Mig. List $\$ 59.95$. Net Each
\$35.25

## STRANDED GALVANIZED STEEL GUY WIRE

Highest quality, full gauge steel wire, heavily galvanized to prevent rust and corrosion. Specially coiled to minimate kinking and fangling. Approximate breaking strength: 4 strand No. 20 240 lis. No 18640 lbs. Approx. shpg. strand No. 18,640 bs. Approx. 1800 ft wis. $50-\mathrm{FT}$. CONNECTED COILS
Simplifies handling and measuring.
Stk. No. Description Length Spool Stk. No. Description Coll 10 Coils 2B147 4 strands No. $201000^{\prime}$ \$5.00 3 3. No. 4 strands No. $20 \quad 33 \mathrm{c} \$ 3.00$ 2B148 6 strands No. $201000^{\prime} \quad 6.40 \quad 381036$ strands No. $20 \quad 45 \mathrm{c} 4.10$ 281496 strands No. 18 500' $5.20 \quad 3 \mathrm{~B} 1076$ strands No. 1860 C 5 5 20 GALVANIZED AIRCRAFT GUY CABLE
 2A211. $1 / 8^{\prime \prime}-2100$ Lb. $100^{\circ}$ For $\$ 5.55$
2A212. ${ }^{32}-3300$ Lb. $100^{\prime}$ For $\$ 7.15$

# TV Boosters, Amplifiers 

WINEGARD COLORTRON TWIN-NUVISTOR ANTENNA MOUNTED PRE-AMPLIFIERS


AP-220N
 MAKES A SUPER POWERFUL VHF ALL-CHANNEL SYSTEM OF ANY TV OR FM
ANTENNA

FAR OUTPERFORMS ORDINARY BOOSTERS . . . ALLOWS LONG DISTANCE RECEPTION IN ANY AREA WITHOUT OVER-DRIVING FROM STRONG LOCAL STATIONS
Can be remotely locoted up to 1600 ft. from AC source when using open wire lead, up to 500 ft . using 300 ohm ribbon.
Trem-nuvistor "Colortron" all channel pre-omplifier "sparks up" the signal greater distance. Direct coupling FM antenna do o far better job over greoter distance. Direct coupling to the antenno feeds only wanted signals the lead-in Alifier, ovoids boosting noise, ghosts, etc. normally picked up on the lead-in. Amplifier, in weatherproof high-impact polystyrene housing, uses very latest nuvistor techniques for high gain, low noise and distortion stations of 400,000 mierovolts compared to 75,000 voltage from strong local stations of 400,000 microvolts compared to 75,000 for a single tube and AC operoted power unit ot
AC operoted power unit of the TV or FM set provides safe 30 volts AC power to the preamplifier over the same 300 ohm lead that carries the signals. Signal outlet in power unit operates 1 or 2 sets directly, up to 10 sets in normal oreos, 6 in fringe areas using the Winegard line Tap-Off Set Outlets on poge 127. Shpg. wt. 3 lbs.

THERE IS A COLORTRON AMPLIFIER FOR EVERY USE ALL MODELS HAVE 300 OHM ANTENNA INPUT

| Stock <br> No. | Winegord <br> Model | Used <br> For | Signol Outlets <br> At Power Unit | Mfg. | List |
| :--- | :---: | :---: | :---: | :---: | :---: |

NEW TWIN TRANSISTOR SUPER "RED-HEAD" POTENT NEW MODEL RS-75T PRE-AMPLIFIER


33 DB. GAIN-AMPLIFIES SIGNAL 45 TIMES
Use on any TV antenno for black and white, color.
Fantastic performance ... measured 33 db gain on all channels 2-13 noise figure as much as 2 db better than any TV pre-amp previously ovaitable ... assures TV, even color, in the deepest fringe areas.
Exclusive twin tronsistor antenna mounted amplifier takes signals to $160,000 \mathrm{MV}$ ( 80,000 per band) without overlooding. . use it in almost any orea. Designed for 75 ohm RG59U lead in. Use RGIIU if down lead length is over 70 ft . Anterna input, 300 ohms.
AC Power unit at set provides 2-75 ohm or 2-300 ohm outputs for TV sets. 115 V .60 cy . AC. Shpg. wt. 3 lbs .
No. 4 B 166 . Model RS-75T. Mfg. Lis

## WINEGARD TRANSISTOR TV-FM RD-300 "RED-HEAD" ANTENNA AMPLIFIER



INSTALL IT ...FORGET IT. Powerful, reliable and trouble-free. Boosts signal a fobulous 18 db overage on the low VHF and FM bands, 14 db average on the high band. Cuts snow, brings in finest FM and Multiplex, outperforms any ordinary booster. Most certainly the next best thing to the "Colortron" boosters obove. For use in all areas receiving 5 to 20,000 microvolts of signal where no TV or FM station is near by to cause signal overloading.
Weatherproof outdoor transistor amplifier mounts on antenna or side of house. Same 300 ohm lead carries TV-FM signal as well as low voltage power for the amplifier. Coupler unit ot set hondles 2300 ohm sets, takes couplers or 300 regular $A C$ outlet. Will operate 4 to 6 sets using 300 ohm set 4A161. Model RD-300. Mfg. List $\$ 29.95$. Wt. 2 lbs. Net Each. . $\$ 17.51$

## WINEGARD HOME SYSTEM AMPLIFIER BOOSTS TV AND FM SIGNALS UP TO 8 DB



DRIVES 1 TO 10 TV-FM
OUTLETS - 15 DB. BOOST


Especially recommended for large homes, small motels, sales and demonstrotion areas, etc. Fine professional iently with ceptionolly uniform response. Hos exlow noise characteristics will with stand 350,000 microvalt local withstand 350,000 microvalt local signal without overlooding. Has single input Also provides voltage for operating Also provides volage for operating fier if desired for a super-apin system hor if desired for a super-goin system hoving no equal. Perforated steel cabinet $27 / 8 \times 91 / 4 \times 33 / 8^{\prime \prime}$-operates on 117 $V .60 \mathrm{cy}$. AC. To be used with couplers and wall outlets on page 127 For instance, will operote $10-300$ ohm sets using a single LT-103 coupler.
Mfg. List $\$ 44.95$.
4A168. Model A-215
Wt. 3 lbs. Net Eoch.
\$26.43
NEW WINEGARD VHF-TV-FM TWO-SET BOOSTER COUPLER

## NEW TRANSISTORIZED

$$
\text { MODEL BC= } 107
$$


Low cost, highly practical solution for weak signals in most areas. Will properly run two TV's or TV and FM from a single 300 ohm antenno lead. Gain 12 db on a single set across channels $2-13$ and $F M$; for 2 sets 7 dodule circuitry in small precision case. Operates on 115 V 60 molded AC. Mfg List $\$ 18.95$
4A145. Model BC-107
Net Each

NEW WINEGARD "FM SUPERCHARGER" TRANSISTORIZED-MODEL FM-340 8-TIMES MORE SIGNAL + 17 DB. GAIN
Installs easily, right at the FM set. Reduces background noise and clears up reception of all FM including FM stereo. Withstands 45,000 microvolt signal without overloading. 300 ohm input and output. 115 V . AC powered. Case
some as above.
Na. 4A170. Model FM-340. Mfg, List $\$ 18.95$. Net Each....... S11.22
UHF TV ANTENNA MOUNTED BOOSTER


Adds extro range and performance to UHF-TV by amplifying the signal right at the antenno, instead of after extraneous noise has been picked up by the lead in. New 2 transistor amplifier has 12 db gain with flat frequency response $\pm 1 / 4 \mathrm{db}$ across any UHF channel. Requires 300 ohm lead between power supply at set and antenna mounted amplifier.
$\$ 26.43$


T5911M, CA283 CS283
Couples 300 ohm VHF-TV/FM antenno to 75 ohm coaxial cable ror superior noise-free lead in. Finest low loss type.
No. 188587. TS911M 300/75 Ohm Antenno Trans. Net Each.......83.65
No. 18B559. T73S 75/300 Ohm Set Trans. Net Each. . . . . . . . . . . . $\$ 1.76$
Joins UHF and VHF Antennos for single 300 ohm lead in.
Na. 18B542. CA283. Net Each.
52.83

Splits UHF and VHF Signals from single 300 ohm lead in.
S1.76

# TV-FM Set Couplers, Wall Plates, Filters 

## WINEGARD MULTIPLE SET COUPLERS



Used in home TV-FM systems. Divides signal from antenno or booster lead for operoting 2 or more sets, or for wiring 2 or more outlets where one set is to be moved obout in the house. See explanation of coupler systems and wiring right below. CC-200 and CC-400, new ferrite core balun, 22 db isolation; excellent for color sets. CVU-2 couples or splits UHF-FM or splits VHFUHF signals. LS-275B, also used as "line splitter" for bronch leads in larger systems, has screw-on coaxial connectors included. Others have terminal screw fittings. CC-200, CC-400 and CVU-2 have 5 -way mounting brocket for outside or inside mount. Others for inside use only. Use only one Standard Antenna Outiet listed ot right on eoch branch.

| Stock No. | Winegard No. | TV or FM Sets | Signal nput Wiring | Branch Wiring To Each Set | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $18 \mathrm{B561}$ | C |  | 300 Ohm | 300 Ohm Lead | - |
| 18 C564 | CC-400 | Up to 4 UHF/VHF/FM | A 300 Ohm | 300 Ohm Lead |  |
| 18B565 | CVU-2 | 2 UHF/VHF/FM | 300 Ohm | 300 Ohm Lead | 2.32 |
| 188567 | LT-63 | Up to $6 \mathrm{VHF} / \mathrm{FM}$ | 300 Ohm | 300 Ohm Lead | 4.67 |
| 188570 | LT-103 | Up to $10 \mathrm{VHF} / F \mathrm{M}$ | 75 Ohm | 300 Ohm Lead | 7.61 |
| 188573 | LS-275B | $2 \mathrm{UHF} / \mathrm{VHF} / \mathrm{FM}$ | 75 Ohm | 75 Ohm Coax | 6.17 |
| 18 B 575 | LT-47 | Up to $4 \mathrm{VHF} / F \mathrm{M}$ | 75 Ohm | 75 Ohm Coax |  |
| 188576 | LT-67 | UD to $6 \mathrm{VHF} / F \mathrm{M}$ | 75 Ohm | 75 Ohm Coax | 4.87 |

## WINEGARD ANTENNA MOUNTED COUPLERS

LOW LOSS UNITS FOR MATCHING LEAD-IN TO I OR 2 ANTENNAS
 FOR I-TV VHF ANTENNA AND I-TV-UHF
Used outside to join signals for single lead. AnJsed outside to join signals for single sead. Another CA2-83 may be used at
No. 18B542. CA2-83. Net Each
$\$ 2.33$
FOR 2-TV-FM VHF ANTENNAS TO ONE 300 OHM LEAD-IN
Matches two VHF TV antennas, where separate orientation is required for reception on different chonnels, to use a single lead in without switches. No. 18B578. Type CA213. Net Each . . . . . . . . . . . . . . . . . . . . . . . . . . . $\$ \mathbf{\$ 3 . 2 3}$

FOR I-VHF-TV and I-FM ANTENNA TO ONE 300 OHM LEAD IN The only proper method of joining separate TV and FM ontennas. Use another identical coupler at sets to divide signal again.
No. 18B586. CAFM. Net Each.
$\$ 2.65$

## BLONDER TONGUE AMPLIFIERS AND COUPLERS

 FOR UHF-VHF CH. 2-83 HOME TV SYSTEMS . BRING-IN SHARP SNOW-FREE PICTURESBEST FOR COLOR


U-VAMP-2 UHF-VHF DELUXE MAST-MOUNTED AMPLIFIER
With two high gain silicon transistors ond remote power supply for peak performance in ony location. Separate 300 ohm UHF and VHF inputs and outputs. Increases signals up to 5 times, drives up to four sets when used with couplers. Shpg. wt. 2 lbs.
No. 4A110. Mfg. List \$49.95. Net Each.
$\mathbf{S 3 5 . 2 5}$
V/UALL- 2 UHF/VHF DELUXE INDOOR AMPLIFIER
Delivers picture pulling power to bring in weak signals. Single 300 ohm combined UHF/VHF input; two 300 ohm combined UHF/VHF outputs. Two transistors, 115 V . AC powered. Will drive up to four sets, used with couplers. No. 4Alli. Wt. 1 lb . Mfg. List $\$ 42.50$. Net Each
$\$ 29.15$
HIGH EFFICIENCY 2 AND 4 SET COUPLERS FOR ALL CHANNELS 2-83 VHF-UHF AND FM
Makes one permanently installed antenna serve every set in the home. Also ideal for use with amplifiers like above. Use 300 ohm lead for wiring and standard wall plates or surface outlets. Tan plastic weatherproaf case, $27 / 8 \times 21 / 4 \times 1{ }_{8}^{\prime \prime}$ " H . Installs in basement, ottic, outside, etc.
No. 4A107. For 2 sets. Model AlO2-U/V. Mfg. List $\$ 3.75$. Net Eoch . $\$ 2.40$ No. 4A108. Up to 4 sets. Model Al04-U/V. Mfg. List $\$ 5.85$. Net Ea.. $\$ 3.70$ No. 4A109. Mast Mounting Kit. Net Each
$73 c$

TV WIRING FOR YOUR HOME \& BUSINESS
FREE BLONDER-TONGUE TV SYSTEM PLANNING GUIDE
No. 25B103. Ask for it.
Explains how to layout UHF-VHF TV and FM distribution systems for home and business. Write B-A-we can help you design a complete B-T system

## WINEGARD TV-FM ANTENNA OUTLETS


finest molded construction, for long-lasting service. Flush Wall Plate Types, for hidden wiring, use the modern Despard electrical outlet plates matching perfectly the desion installed in modern homes. All flush wall plotes except those with AC outinstaled lets con be installed with or without standard electrical boxes. Suriace Outlets for exposed wiring ore install who wac screws. All types are with tenna circuits. Outlet to set is 300 ohms for all types. Necessary matching to set is 300 ohms for all types. Necessary matching circuits ar

STANDARD FLUSH WALL PLATE ANTENNA OUTLETS
Use only one on the lead direct from the ontenna or booster, or one on each lead from a multiple set coupler. Outlet to set is 300 ohms . Read explanation of wiring systems below. When ordering specify Ivory or Brown.

| Stock | No. | Design | ut | Net Each |
| :---: | :---: | :---: | :---: | :---: |
| No $18 B 515$ | $\begin{gathered} \text { No. } \\ T-3 \end{gathered}$ | 1-TV-FM Fet | Wiring <br> 300 Ohm Lead | $\begin{aligned} & \text { Each } \\ & 51.26 \end{aligned}$ |
| 188535 | T-32 | 2-TV-FM Sets | 300 Ohm Lead |  |
| 18B520 | T-7 | TV-FM Set | 75 Ohm Coax | 1.68 |
| $18 \mathrm{B5} 27$ | TA-3 | 1-TV-FM G Duplex AC | 300 Ohm Lead | 2.18 |
| 18B528 | TA-7 | TV-FM \& Duplex AC | 75 Ohm Coox | 2.25 |
| 18B529 | TR-3 | TV-FM \& 4-Wire Rotor | 300 Ohm Lead | 2.34 |
| 18B530 | TR-7 | V-FM G 4-Wire Rotor | 75 Ohm Coax | 2.47 |
| 18B532 | TRA-3 | TV-FM, Duplex AC G Rotor | 300 Ohm Lead | 28 |
| 18B533 | TRA-7 | 1-TV-FM Duplex AC G Rotor | 75 Ohm Coox |  |
| $18 \mathrm{B540}$ | TP-10 | Extro No Strip Ant. Plug |  |  |
| 188541 | RP-10 | Extra 4-Wire Rotor Plug |  |  |
|  | STAND | ARD SURFACE MOUNTING | NNA OUTLETS |  |
| Electri <br> 18B53 | $\begin{aligned} & \text { ly the } \\ & T-35 \end{aligned}$ | same as wall plate outlets | 30 specify lvory | Brown. |
| 188544 | T-7S | 1 -TV-FM Set | 75 Ohm Caox |  |

## "TAP-OFF" ANTENNA OUTLETS

For use on "Feed Thru" type wiring. Read explanation of wiring systems below. Each outlet has built-in 6 db isolation, required to prevent interaction between sets. Outlets designated for last set on feeder are resistance terminated to assure proper system operation. Outlet to set is 300 ohms for all types. Available in lvory only. Av. wt. 8 oz .

| Stock No | Winegard | $\begin{gathered} \text { H Wesigned } \\ \text { For } \end{gathered}$ | $\begin{aligned} & \text { FS } \\ & \text { Input } \\ & \text { Wiring } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: |
| 18B501 | LTF-33 | 1-TV-FM Set | 00 Ohm Lead | 2.0 |
| 8545 | LTF | 1-TV-FM | 75 Ohm Coax |  |
| 188556 | LTF-33T | Lost Set on Feeder, Terminated | 300 Ohm Lead |  |
| 188557 | LTF-73T | Last Set on Feeder, Terminated SURFACE MOUNTED TAP-O | 75 Ohm Coax |  |
|  |  | SURFACE | 300 Ohm |  |
| - |  | 1-TV-FM Set | 75 Ohm Coox |  |
| 188560 | LTS-33T | Last Set on Fee | 300 Ohm Lead |  |
| 188562 | LTS-73T | Lost Set on Feeder, Terminat | 75 Ohm Coox |  |



## IT'S EASY TO WIRE YOUR HOME FOR TV-FM

 COUPLER SYSTEM
## To Antenno

Line From Antenna

- Or Booster Goes


Bronch
Leods
To Eoch
TV Or
TV
FM
Set
TAP-OFF SYSTEM

4 Line From Antenna or Booster "Feeds Thru" On Post Each Set. Eoch Set Requires a
$\square$

Either type of system may be used, depending on convenience of wiring It is important that only one standard outlet be attached to each lead of the Coupler System; it is also importont that the last outlet in a TapOff System be the "terminated" type for proper operation.
Wiring may be regulor 300 ohm TV lead, or if wiring must be close to pipns, other wiring, etc., then shielded 75 chm RG59/U cooxial line is preféred. All couplers and outlets listed above are equipped for fast wiring and need no additional fittings. It is not necessary to utilize all outlets on either system at the same time, allowing one or more sets to

# TV Wire, Installation Accessories 

HIGH QUALITY TV LEAD-IN INSULATORS MADE WITH GENUINE POLYETHYLENE INSERTS

(1) "Y-TY" LEAD-IN CONNECTOR FOR ANTENNAS. Prevents broken leads caused by wind and swaying lines. Makes installations neater, easier. Works with any type line. Connerting strips fan out to fit antenna terminals. 1881009. Type 263-5. For terminals spaced up to 4 inches. Net Ea..
18 B1010. Type 263-L. For terminols spoced up to 6 inches. Net Ea. (2) WEATHER-PROOF "ROOF-THRU" LEAD ENTRANCE. Low loss polystyrene for lead-in or rotor combined with $8^{\prime \prime} \times 9^{\prime \prime}$ copper flashing. Easily installed. For lead-in or rotor control cable. Permits shorter lead-in, less pickup of interference, hides lead-in wires.
No. 18B181008. Type 624. For Flat Lead-in. Net Each
$\$ 3.99$ ... $\$ 3.99$ tic trailer wall, "WALL-FEED" LEAD ENTRANCE. For entrance into atadoptable to thickness of molded weother hood and $2^{\prime \prime}$ polvstyrene tube No. 18B1011. Type 626. For all types of exterior wall. Ivory color
(4) WEATHER-PROOF "WALL-THRU" BUSHING. For all types TV transmission line and small coax cables. Has anchor points for open wire line. Installs through $13^{\prime \prime}$ dia. round hole in walls up to $13^{\prime \prime}$ thick. End plates are No. 18B1054. Type 625. ivory color polystyrene.
LEAD-IN AND ROTATOR CABLE CONNECTORS
ALSO EXCELLENT FOR SPEAKERS, INTERCOMS, ETC.



Fig. (3) (3) (4) (5) wires ore recommended for UHF or VHF, others VHF only (1) AMPHENOL FLAT 300 OHM TWIN LEAD, 214-056. Highest quality 60 mil brown polyethylene, $7 / 28$ copper conductors. 18 lbs. per M. No. 2A157. 25 Ft....76c 100 Ft . For... $\$ 1.73 \quad 1000 \mathrm{Ft}$. For. . $\mathbf{\$ 1 5 . 6 0}$ (1) BELDEN WELDOHM FLAT 300 OHM TWIN LEAD, 8230. Has $11 / 2$ times the strength of pure copper, yet retoins all the electrical characteristics. 72 mil brown poly, 20 gouge copper cooted steel wire. 18 lbs. per $\mathrm{M}^{\prime}$.

| Stk. No. | 25 Ft | $\mathbf{5 0} \mathrm{Ft}$ | 75 Ft | $100 \mathrm{Ft}$. | 1000 Ft |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{2 B 1 4 3} \ldots .86 \mathrm{c}$ | $\mathbf{\$ 1 . 2 9}$ | $\mathbf{\$ 1 . 7 3}$ | $\mathbf{\$ 2 . 1 6}$ | $\mathbf{\$ 1 9 . 7 5}$ |  |

(2) AMPHENOL TUBULAR 300 OHM 1 EAD 214-271 12.16 \$19.75
 insulated, $7 / 28$ copper conductors. 35 snow, ice have no effect. Brown poly. No. 28163. Per Ft. ....5c $\mathbf{5 c} 100$ Ft..... \$3.67 1000 Ft. For.... $\$ \mathbf{\$ 3 0 . 6 2}$ (3) BELDEN CELLULINE 300 OHM LEAD, 8275. Ideal for color or black and white. Highly efficient, VHF or UHF. Absolutely water-proof cellular foam construction. Brown poly. jocket. . 356 O.D., $7 / 28$ copper over steel conductors. 36 lbs. Der 1000 ft .
No. 2Bi56. Per Ft.
No. 2B156. Per Ft. . . . . . . . . . . . 6 c 100 Ft. For. . . . . . . . . . . . . $\mathbf{\$ 4 . 5 0}$
(3) NEW BELDEN "PERMOHM" 300 OHM LINE, 8285. Ideal for color or black ond white. Lower loss, more constant impedance, compared to regular or snow. Encapsulated in low-loss salt spray, industrial contamination, rain or snow. Encapsulated in low-loss cellular polyethylene. Copperweld $7 \times 30$ $\begin{array}{llllll}\text { Stk. No. } & 50 \mathrm{Ft} . & \mathbf{7 5 ~ F t .} & 100 \mathrm{Fft} & 500 \mathrm{Ft} . & 1000 \mathrm{Ft} \\ \mathbf{2 A I 4 1} & \mathbf{\$ 2 . 8 5} & \mathbf{\$ 3 . 8 5} & \mathbf{\$ 4 . 9 0} & \mathbf{\$ 2 2 . 5 0} & \mathbf{\$ 4 5 . 0 0}\end{array}$ (5) COLUMBIA "DURAFOAM" 5790 DELUXE TV LINE

Newly designed low loss 300 ohm TV line for UHF, VHF, FM color. Very flexible. Black polyethylene sheath protects against' sun, moisture, salt air, etc. No. $50 \mathrm{Ft} \quad 75 \mathrm{Ft} \quad 100 \mathrm{Ft} \quad 500 \mathrm{Ft} \quad 1000 \mathrm{Ft}$
 (8) $1-1 \mathrm{NCH}$ LOW LOSS OPEN LEAD- 450 OHMS

Size 18 solid conductor copperweld with $1 / 4^{\prime \prime}$ polystyrene insulators spaced every $6^{\prime \prime}$. Recommended for weak signal areas or where extremely long lines are needed. Matches 300 ohm antennas and receivers. Wt. $21 / 2 \mathrm{lbs} .100 \mathrm{ff}$. No. 4A106C. 100 Ft. Coil. $\$ 2.79$ No. 4A106D. 500 Ft. Reel. . $\$ 11.95$ (7) AMPHENOL RG59/U COAXIAL LINE- 72 OHMS

Best for noise-free antenno lead to TV-FM sets or for shielded wiring of


## F <br> BELDEN 8290 SHIELDED PERMOHM <br> THE LONG AWAITED PERFECT LEAD-IN'FOR ALL 82 CHANNELS COLOR OR BLACK AND WHITE

- Eliminates interference caused by line pick-up.
- Easy to install. No standoffs, tape it to the mast, run through gutters, conduit, even underground - No matching transformers needed.
- Excellent for antennas using rotors." Very low loss per 100 feet

Mechanically strong, electrically "right" for nominal 300 ohm antennas and TV sets. Stranded copperweld, 2 conductors, orange polyethylene insulation and web between conductors, cellular polyethylene oval insulation, Beldfoil shield, stranded tinned copper drain wire, polyethylene $1 / 2 \times \psi_{\phi^{\prime \prime}}$ oval iacket overall. In coils as priced.

ANTENNA GROUNDING ACCESSORIES

(1) UNIVERSAL UHF-VHF LIGHTNING ARRESTOR Will handle all TV or FM Arrestor problems.
Works with open, flat, or tubular lead-in on both UHF and VHF. Toothed washers pierce lead insulotion-requires no leod stripping. Installs easily inside or out. Made of sturdy, molded plastic with brass weather-resistant
hardware. Shpg. wt. 12 oz . hardware. Shpg. wt. 12 oz.
No. 198353 .
No. 198353. Net Each.
69 c 10 Lots, Each
59 c
(2) NO. 8 ALUMINUM GROUND WIRE
 (3) GROUND CLAMP

For atteching ground wire to masts, pipes, etc., up to $13 / 8^{\prime \prime}$ dia. Rigid channeled construction gives five point contact. Cose hordened screw.
No. 12A678. Mueller TyDe 58. Each.....20c;10 Lots, Each.......14c (4) GROUND RODS

Efficient, easy-to-install, copper plated steel. One end pointed for driving. Other end has screw-clamp to hold No. 4 to Na . 14 gauge wire.

58 c
79 c

## Wiring Devices \& Electrical Specialties

U/L ATTACHMENT PLUGS AND CURRENT TAPS


MODERN U/L APPROVED ELECTRICAL SWITCHES

- FAR MORE CONVENIENT THAN USUAL TYPES
- FIT STANDARD OUTLET BOXES AND SWITCH PLATES Shpg. wt. 6 oz. each

(1) HANDY DELAYED ACTION LIGHT SWITCH
brand new solution to an old problem! Turns off lights 35 to 60 seconds after switch is flipped to the "off" position. Allows you to reach your destination without groping in the dark. Fine for bedroom, hallway, etc. around home, farm, business. U/L rated, 10 A. 125 V .5 A .250 V.



## (2) MODERN "TOUCH" WALL SWITCH

Converts "old-fashioned" noisy toggle switch instollations to quiet push button control with no wiring changes! Just a touch or nudge and lights go on"; another touch and they re off $120 \mathrm{~A}, ~ 120-240 \mathrm{~V}$. AC. Specify lvory or Brown arms are loaded. U/L rated, 15A. No. 20A96. Single Pole.
Net Each
$76 c$
69 c
(3) SILENT MERCURY SWITCH WITH ILLUMINATED HANDLE

Makes no sound when switching lights on and off. lvary switch handie glows gently in the dark, quides you directly to the switch. Glow light will ast a lifetime! Platinum contacts in pools of mercury inside hermetically

 U/L ELECTRICAL CORD SETS-REPAIR CORDS


(1) Appliance Cord Set. 6 Ft . \#18, Neoprene, $1 / 2^{\prime \prime}$ terminal spocing. No. 20A847. Each.......................... 45 c (1) Short Appliance Cord Set. 2 ft . \#17, Neoprene. $1 / 2^{\prime \prime}$ terminal spocing. (2) Coiled Appliance Cord Set. Extends to 6 ft . \#18, Neoprene No. 19A903. With miniature $1 / 2 "$, spaced appliance plug. Net Each. No. 19A903. With miniature 1/2" spaced applance plug. Net Each. .... No. 20A869. Each. 5 Lots, Each............................. 4 c (4) Plastic Repair Cord. \#18. For lamps, clocks, radios. Molded plug. No. 198911.6 Ft. Brown or Gray. Each.......29c 10 For....... $\$ 2.19$ No. 19A909. 9 ft. Brown. Each. ..................... 10 For (5) Coiled Repair Cord. Extends molded plug. Net Each

## BELDEN THREE CONDUCTOR CORDS

## PARALLEL PRONG U-GROUND VINYL PLUG

No. 3A208. 8 Ft. Black. $18 / 3$ SV Rubber. Net Each
No. 19 A891. 8 Ft. Gray. 18/3 SVT Vinyl. Net Each
No. 3 A209. 9 Ft. Black. $16 / 3 \mathrm{SJ}$ Rubber. Net Each.
No. $19 A 892$. 15 Ft. Black. $16 / 3$ SJ Rubber. Net Each

## HEAVY DUTY COILED POWER TOOL CORDS <br> 6 Ft. $16 / 3$ SJO Neoprene. Moided U-ground plug like above

No. 19A889. Retroctable to 12". Net Each.
12 Ft. 16/3 sjo Neoprene. Fine for saws. Molded U-ground plug \$2.37 No. 19A890. Retractable to 2 ft . Net Each
Use Fig. 18 Cord Receptacle at left to make extension cords

## REPLACEMENT

APPLIANCE ELEMENTS

(1) 115 VOLT COILED NICHROME WIRE ELEMENTS Finest quality, for repair of Hot Plates, Toasters, Heaters, Shpg. wt. 2 oz No. 20A119. 600 W. \#3, "," dia. coil. Net Each. 25 c 10 @ Each. 23 C No. 20A224. 1000 W. \#7, 時" $^{\prime \prime}$ dia. size 20. Net Ea.... 51 c 3 For. . $\$ 1.38$ (2) NICHROME COILED ELEMENT WIRE

Wattage length rating on each spool. Use \#2 for repair of light duty appliances, \#3 for hot plates, \# 4 for 1000 W . appliances. Shpg. wt. 6 oz. © Ea.
 20A281 12 Ft . \#2-Size 22, ${ }^{512}$ dia. coil
 $\$ 2.8$
3.7
5.6 3.30
4.95

Will safely and conveniently distribute power for applionces, test equiply ment, shop machinery, office and factory equipment, etc. . Hiterally duty construction all components $U / L$ opproved. Fused for 15 amps. 115 $V$. AC. Average shipping weight 3 lbs .
(1) 6 Standard Outlets with Pilot Light and Master Switch.

No. 29A122. Net Each
(2) 4 Standard Outlets with 4 Separate Switches.

No. 29B7. Net Eoch
(3) 6 "U-Ground" Outlets with Pilot Light and Master Switch

No. 29B6. Net Each
$\$ 6.88$
$\$ 6.88$
$\$ 7.95$
(3) 1000 WATT CONE HEATER ELEMENT-Shpg. wt. 6 oz.
Standard 115 V . screw base. Net Each. 1.0210 @ Each
$90 c$
(4) COFFEE MAKER ELEMENT For "Silex" and "Hill-Shaw"

Top grade Nichrome $V$ wire imbedded in $31 / 8^{\prime \prime}$ dia. "brick" with terminals on $1 / 2$ centers. Also fits many other types. Shpg. Wt. 5 Each.
(5) 550 WATT TOASTER ELEMENT

Flat Nichrome wire wound on top grade mica. Shpg. wt. 2 oz.
No. 20A223. With adjustable mounting. Net Each...89c 10 @ach

# Belden Wire and Cable 

MIL-W-76B TYPE-MW VINYL HOOK-UP WIRE

## $\rightarrow$

ACTUAL SIZE \#16 AWG For Voltages up to 1000 RMS.Wall Thickness 017

| Stk. No. |  | Cond. | Cond. |  | Wt. | $25^{\prime}$ | $100^{\circ}$ | $1000^{\prime}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2Bi3 ${ }^{\text {No. }}$ | 8525 Stranded | ${ }_{24}^{\text {Size }}$ | Strand $7 \times 32$ | $\begin{aligned} & \text { O.D. } \\ & 0.058 \end{aligned}$ | $\begin{gathered} 1000^{\prime} \\ 3 \end{gathered}$ | Length | Length | Length |
| 2B14 | 8524 Stranded | 22 | $7 \times 30$ | . 064 | 4 | 40.56 |  | 0 |
| 2 A 32 | 8523 Stranded | 20 | $10 \times 30$ | . 072 | 6 |  |  |  |
| $2 \mathrm{B7}$ | 8522 Stranded | 18 | $16 \times 30$ | . 081 | 8 |  |  | 0.05 |
| 2B15 | 8521 Stranded | 16 | $19 \times 29$ | . 096 | 11 |  |  | 3.65 |
| 2B67 | 8520 Stranded | 14 | $41 \times 30$ | .111 | 16 |  |  |  |
| 2B68 * | 8527 Stranded | 12 | $65 \times 30$ | . 130 | 24 | . |  |  |
| 2B69 * | 8538 Solid | 24 | - | . 054 | 2.7 | 1. |  |  |
| 2834 | 8530 Solid | 22 | 1 | . 059 | 4 |  | 8 | 90 |
| 2 A 2 | 8529 Solid | 20 | 1 | . 066 | 5 | 5 | 8 | 90 |
| 2 A36 | 8528 Solid | 18 | 1 | . 074 | 7 | . 66 | 1.64 | $11.55$ |

## MIL-W-16878C TYPE D VINYL 600 V. $105^{\circ} \mathrm{C}$.

Tinned copper stronded. Wall thickness $.010^{\prime \prime}$. Colors: Solid white and striped; White with black, red, green, yellow, blue, brown, orange, gray or
violet. Please Specify Color.


## SHIELDED

## Belden Type 8885

No. 2A70. 25-Ft. Coil
No. 2A70.

Withstands $80^{\circ} \mathrm{C}$. Tinned copper conductors. Strips easily and clean. In Gray, Black, Red, Blue, Green Yellow, White, Brown, Orange and Purple. Specify color *Stocked in Block, White, Red, Green, only

## HI-FI CONNECTING CABLE

## Type 8421. Size

chrome vinyl. Best quality and appeorance. For connecting recorders and phonos to amplifier or remote audio components. Spiral wrapped shield. Vinyl jacket. . $180^{\prime \prime}$ O.D $\begin{array}{ll}\text { shield. Vinyl jacket. } 180^{\prime \prime} \text { O.D. } \\ 2 A 168 \text {. } 15 \text { Ft. } & \text { Ideal for lead-in or hookup. }\end{array}$ 50 ft. . . $\$ 2.70$ i00 ft.... $\$ 4.50$ 100 Ft.

Conductor is size 20 tinned copper
tranded 10/30; rubber insulated. Lac-
quer coated cellulose acetate yarn are over-all. $100^{\prime}$. Wt . 2 bs bid shield are over-all. 100'. Wt. 2 lbs. SHIELDED TYPE 8882

Conductor is size 18 gouge tinned copper stronded and vinyl insulated

## BELDEN 2-WIRE SPEAKER \& INTERCOM CABLE

Copper parallel conductor, 1-tinned, 1-copper for code. Zip apart. Chrome vinyl insulation

## $\begin{array}{cccccccc} & \text { Stock Mfg. } \\ \text { No. No. Size Cond. } & \text { O.D. } & \text { Wt. } & 25 & 1000 & 1000\end{array}$ $\begin{array}{llll} & \text { No, } & \text { No. Size Cond. }\end{array}$

 $\begin{array}{lll}2819 & 8782 & 24(7 \times 32) \\ = & 2 A 16 & 8649 \\ 20(7 \times 28)\end{array}$ $\rightarrow 2 \mathrm{EA16} 8649 \quad 20(7 \times 28)$ $.058 \times .115 \quad 6 \mathrm{lbs} . \$ 0.66 \quad \$ 1.47 \mathrm{~F} 11.15$ SOUND SYSTEM, ALARM OR SPEAKER EXTENSION Solid conductor wire, twisted, color coded Stk. No. Size Cnd. O.D. Wt. $100^{\prime} \quad$ Ft. 100 Ft $\begin{array}{lllllll}2 C 192 & 22 & 2 & .10 & .8 \text { Lbs. } \$ 0.02 & \$ 0.99 \\ 2 B 54 & 19 & 2 & .17 & 2 \text { Lbs. } & 03 & \mathbf{2} 90\end{array}$ $\begin{array}{llllllll}2855 & 19 & 3 & .14 & 1.8 & \text { Lbs. } & .03 & 2.70\end{array}$ Ideal for thermostat controls, low voltage relays signals, onnunciators and automation controls Solat conductor size 18 bare copper thermoplastic insulation, color coded and twisted with
CONTROL CABLE

## Stk. N 3A205

$3 A 205$
$3 A 206$
3 A206
$3 A 203$
$3 A 204$ or without outer brown vinyl jacket.

3 A204 $\quad \frac{2}{3} \quad$ Plostic

## LOW VOLTAGE AUTO-MARINE WIRE

or high current with minimum voltage drop for mobile electrical systems, 2 -way radio, accessories, etc


## BROWN POSJ 18-2 RUBBER SP-1

UL approved rubber insulated parallel cord; 2 bare copper flexible stranded, conductors. $41 / 34$ strands.

Shpg. wt. 3 lbs. Per 100 Ft .

## HEAVY DUTY PORTABLE RUBBER CABLE

Stock
UL Belden
$2 A 26$ 34194
2427
2427
2491
130 Type Belden

For heavy duty service where subjected to
 tery chargers and heavy equipment when up to 300 volts are required. color coded with conductors wrapped and rubber jacket with rubber insulation. Black rubber jacket overall. UL approved.


# Wire, Cable, Insulated Tubing 

NEW BELDFOEL $100 \%$ SHPELDED CABLES Beldfoil shielding has superior low noise choracteristics compared to broided copper shield, ot greatly reduced cost. Shielding is made of continuous sheath of Mylar backed aluminum foil with overall vinyl jacket: Much easier to terminate since continuous ground drain wire for each shield provides positive ground connection. Also provides superior flexibility and more continuous shielding when flexed.

SINGLE CONDUCTOR
Stk. No. Mfg. No Size O.D. Perft. 100 ft .1000 Ft . Sk. No. Mrg. No. $25(7 \times 33) \quad 140$ Perfr. $\$ \$ 0.06$ Ft. 2A234 8417 25(TWO CONDUCTORS $\begin{array}{lll}2 A 235 & 8761 & 22(7 \times 30)\end{array}$ $2 A 2368762 \quad 20(7 \times 28)$ $2 A 2378760 \quad 18(16 \times 30)$ 167 $2 A 238$
$2 A 239$ 8720
8720
$14(19 \times 27)$ THREE CONDUCTORS $\begin{array}{llllll}2 A 240 & 8771 & 22(7 \times 30) & .175 & .04 & 3.75\end{array}$ $2 A 2418772 \quad 20(7 \times 28)$ .236 Beldfoil shield, each pair individually shielded. Stk. No. Mfg. No. Pr. Size O.D. PerFt. 100 Ft . 1000 Ft .
 PAIRED CABLE-SOLID CONDUCTORS


## 8-CONDUCTOR POWER CABLE

Interconnecting cable for industrial or amateur use. Conductors are \#20 tinned copper stranded. each cotton wrapped, rubber insulated and color coded. Rayon braid over conductors and fillers, with tinned copper shield, cotton serve and black rubber jacket overall. O.D. 386. Wt. per 100 ft . 12 lbs .

2B195. Per Ft... 26 c 100 Ft. For . $\mathbf{\$ 2 1 . 9 0}$


LONG RUN AUDIO CONTROL CABLES-Unshielded Vinyl Jacket- $8466,400 \mathrm{WV}$, All Others 600 WV .

5tk. No. Mfg. No. No. Cond. Size
SAA $_{243}{ }_{8466} \quad 12 \quad 18(16 \times 30)$
$\begin{array}{llr}\text { O.D. } & \text { Per Ft. } & 100 \text { Ft } \\ .402 & \$ 0.23 & \$ 19.90 \\ .359 & .12 & 9.75 \\ .455 & .19 & 16.35 \\ .580 & .33 & 27.75 \\ .640 & .46 & 39.60 \\ .485 & 20 & 16.50\end{array}$

1000 Ft.
$\$ 186.00$
90.00
149.30
261.00
262.50
383.00
382.50
153.00

## SHIELDED SOUND CABLE

2 Conductor, spiral shield-Size 18, tinned coppe stronded, copper spiral wrapped shield, chrome vinyi 2B125. Belden 8790 . Per Ft. . . $61 / 2$ C 100 Ft. . $\$ 5.40$

## FLEXFOAM MIKE CABLE

Ideal for use where long lengths or portability is a must. Very flexible stranded low capacity Tinned copper braid with gray vinyl jacket

BELDEN COILED CORDS FOR MIKES, TELEPHONES

terminals and metal cord clomp attached, vinyl insulated. Black vinyl . $230^{\prime \prime}$ dia.
29B244. 8495. 3-Cond. $10^{\prime \prime \prime}$ to $41 / 2^{\prime}$. Ea... $\$ 1.31$
29B245. 8494. 4 -Cond. $10^{\prime \prime}$ to $4 \frac{1}{2} 2^{\prime}$. Ea... 31.56

## SHIELDED MICROPHONE CORDS

Single conductor type has tinned copper shield; three conductor has superior Beldfoil-broid plus drain wire on one conductor only. All conductors rubber insulated. Extra durable black neoprene sheoth.


## TEST PROD WIRE

High voltage lead wire, excellent dielectric proper-
ties and extreme flexibility. Conductors are tinned
copper stranded cotton wrap and rubber insulation
overall. Available in Red or Black. Type 8899 also available in Green and Yellow. Specify color and length. Shipg. wt. 2 lbs. per 100 ft .

| Stock | Mfg. | Cond. | O.D. | Brkdwn. | Vitg. |  | 25 Ft. |  | 100 Ft . |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 N 64 | 8899 | $18(65 \times 36)$ | . 144 | 20 KV | 5 KV | \$0.75 | \$1.15 |  | . 60 |
| $2 \mathrm{C77}$ | 8898 | $18(65 \times 36)$ | . 230 | 29 KV | 10 KV | 1.05 | 1.95 |  | 5.05 |
| A80 | 8890 | $24(45 \times 40)$ | . 066 | 10 KV | 1 KV | . 40 | D |  | 0 |

FOR LISTINGS OF TV AND COAX CABLES SEE PAGE 132

Monufactured for all electronic, electrical and aircraft opplications. Conforms to MIL-1-631-C, ASTM-D876 and D922 specs and is UL approved. High dielectric strength, non-flammable ond resistant to oils ond corrosion. lengths of $1000^{\prime}$ available on request. Contact Industrial Dept. for price. lengths of $10005^{\circ} 100^{\prime}$
Stk.
Str. No. Size 1.D. For For No. Size 1.D. $25^{\prime}$ For $100^{\prime}$ For


3848
385
$3 \mathrm{B5}$
3
38
38
3


Heat with match, soldering gun or oven and it will shrink in a matter of seconds. request.

|  | Specify Stk. I.D. After | No. 3 A4 Wall | Size wh | ordering <br> Neí Pef |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Size | Orig. I.D. Heafing | Thicknes 016 | $\begin{gathered} \text { Foot } \\ \text { s0.16 } \end{gathered}$ | $\begin{aligned} & 20 \mathrm{Ft} . \\ & \mathbf{\$ 2 . 9 3} \end{aligned}$ | $\begin{gathered} 100 \mathrm{Ft} . \\ \$ 13.80 \end{gathered}$ |
| 宕, | . 062 . 031 | . 017 | ง. 17 | 3.13 | 14.60 |
|  | . 093 . 046 | . 020 | . 20 | 3.56 | 16.90 |
| 1/8." | . 125 . 062 | 020 | . 21 | 3.82 | 17.90 |
| , ${ }^{\text {3 }}$ | . 191 . 089 | . 020 | .26 | 4.64 | 21.90 |
| 1/4", | . 250 . 125 | . 025 | .33 | 5.89 | 38.60 |
|  | . 500 . 250 | . 025 | .41 | 6.90 | 32.77 |
| 3/4 | . 750 . 375 | 030 | . 55 | 9.25 | 43.9 |
| /, | 1.00 . 500 | . 035 | .76 | 13.00 | 61.75 |

No. 25A118. Catalog of Alpha Tubing and Accessories FREE on Request
HELI-TUBE SPIRAL WRAP
Spiral cut clear polyethylene tubing for cabling or harness wiring. Allows taps or lead off at any point. Retains original form and may be reused if desired. $1 / 4^{\prime \prime}$ O.D. expands for cables up to $2^{\prime \prime}$ in dia. Not affected by solvents, acid or alkalies. For use in temp. from - $100^{\circ}$ to $+200^{\circ} \mathrm{F}$.

7 ( 100 Fr. For $5^{76}$
No. 2W300, 1/4"O.D. Per Ft. 100 Ft. For
2W301. $1 / 2$ " O.D. Per Ft. 14 c 100 Ft . For $\$ 12.00$


## PRESSURE SENSITIVE LABELS

Codes wires, leads, circuits, relays, 1 -PEEL 2 PAPPLY 3 -IDENTIFY and other parts fast and cheap. Easy to use, they stik-quik without moiseach number, 1 to 33 . 19 No. 19A259. Per Card.......
Card of Letters-A to E. 5 of each
 letter. Used for multi-conductor cable coding in connection with number No. 198260. Per Card

## BELDEN MAGNET WIRE

Tough dual-film insulated copper wire. Use Beldsol for opplications where easy insulation removal for soldering is desirable. Will solder of $750^{\circ}$ C. Without stripping. IEEE thermal roting $130^{\circ}$ C. Use Poly-Thermaleze where tougher, higher temperoture wire is needed. Replaces Nylclod. For motors,
solenolds, tronsformers. IEEE rating $180^{\circ} \mathrm{C}$.

|  | Lb. Spoo | Po |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size | stk. No. | Ff. Per Spoof | Each | Size | ${ }_{19}{ }^{\mathrm{Na}} \mathrm{~A}_{54}$ | Spoo |  | Each |
| 14 | 194338 | $79$ | $\$ 1.85$ | $14$ | 194354 |  |  |  |
| 16 | 19 A339 | 125 | 1.92 | 16 | 19A601 | $1 / 2 \mathrm{~b}$ | 63 | . 08 |
| 18 | 19 A340 | 199 | .03 | 18 | 19 A 602 | 12 lb | 100 | .10 |
| 20 | 194341 | 316 | 2.03 | 20 | 194603 |  | 150 | 110 |
| 22 | 194342 | 503 | 2.03 | 22 | 19 A604 | $1 / 2 \mathrm{~b}$ | 250 | 3 |
| 24 | 194343 | 809 | 2.10 | 24 | 19 A 605 | 12 | 400 | .13 |
| 26 | 19A344 | 1264 | 2.25 | 26 | 194606 | $1 / 2 \mathrm{lb}$ | 638 |  |
| 28 | 19 A 345 | 2001 | 2.46 | 28 | 194607 | $1 / 2 \mathrm{~b}$ | 1610 | . 28 |
| 30 | 194346 | 3167 | 2.78 | 30 | 194608 | $1 / 2 \mathrm{lb}$ | 1610 | . 40 |
| 32 | 194347 | 5023 | 3.02 | 32 | 19A609 | $1 / 4 \mathrm{lb}$ | 1270 |  |
| 34 | 19A348 | 7962 | 3.56 | 34 | 19A610 | $1 / 4 \mathrm{l}$ | 2015 | . 0 |
| 36 | 19A349 | 12618 | 4.53 | 36 | 19A611 | $1 / 4 \mathrm{lb}$ | 3200 | . 1 |
| 38 | 19A350 | 20004 | 5.61 | 38 | 19A612 | 1/4 lb | 5070 | 1.43 |
| 40 | 19A351 | 31686 | 7.30 | 40 | 19A613 | $1 / 4 \mathrm{lb}$ | 8050 | . 95 |
|  |  | PHONO | ARM |  | D |  |  |  |

Very flexiple, small diameter wires designed especially for record changer and very flexiple, small diometer wires a dioctions where small leads are essential. Shielded Single Conductor \#24 stranded. Brown cotton braid overall. $\mathbf{7 5} 75$ 2A103. Belden 8431. 10 Ft... 66 C is Ft... 75 C code Belden 8419. Shielded ${ }^{3}$ Conductor stereo \#32. $\mathbf{\#}$. 10 Ft. For. No. 2A82. 10 ct. For. . Wisted poir. Belden 8430 .
Unshielded 2 Conductor twisted poir. Belden 8430 Ft. For.
No. 2 W260. 10 Ft. For $1 \times 44$ stranded-enamel, Nylon wrop
No. 198336. 100 ft . spool for.
 solenols, Spool Poly-Thermaleze

## Coax Cable, Connectors

AMPHENOL MIL C-17 SPEC COAX CABLE
Highest quality coax cable used for commercial, omateup, militory or citi zens band "transmission or receiving signal within cable Vinyl confines
 $+80^{\circ} \mathrm{C}$, but remains flexible and is impervious to most acids, oils, alkaloss and mechanical stability. insulation over center conductor provides low loss and mechanical stability.

| Stock No. | Mllitary AN No. | Imp. Ohms | 0.0. | Cap. Mmf. Mmf. Ft. | Size Center Conductor | $\begin{aligned} & \text { Lb. Wt. } \\ & \text { C. Ft. } \end{aligned}$ | $\begin{gathered} \text { Per } \\ \text { Ft. } \end{gathered}$ | $\begin{gathered} 100^{\prime} \\ \text { For } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2W21-004 | RG8U | 52 | 405 | 29.5 | $7 \times 21$ |  | 146 | \$12.78 |
| 2W21-290 | RG8A/U | 50 | 405 | 29.5 | $7 \times 21$ | $101 / 2$ | 168 | 14.40 |
| 2W21-007 | RG11U | 75 52 | 405 870 | 20.5 | ${ }^{7 \times 26}$ | 10 | 136 | 12.08 |
| 2W21-024 | RG58U | ${ }_{53} 5$ | - 195 | 28.5 | $188{ }^{1}$ | 47 3 | 69. | 63.65 |
| 2W21-199 | RG58A/U | 50 | 195 | 30 | 19X.007" | 3 | 68 | 5.66 |
| 2W21-316 | RG58C/U | 50 | 195 | 30 | 19X.007" | 3 | 76 | 5.93 |
| 2W21-025 | RG59U | 73 | 242 | 21.5 | 122 | 4 | 6 | 5.55 |
| 2W21-794 | RG59B/U | 75 | 242 | 21 | .023* | 4 | $61 / 24$ | 5.94 |
| 2W21-026 | RG62U | 93 | 242 | 13.5 | 422 | 4 | 61.8 | 5.94 5.89 |
| 2W21-318 | RG62A/U | 93 | . 242 | 13.5 | /22 | 4 | $71 / 20$ | 6.77 |
| 2W21-804 2W21-440 | RG718/U | ${ }_{185}^{93}$ | . 250 | 13.5 | +22 | 41/2 | 124 | 11.03 |
| 2W21-598 | RG174U | 185 | . 405 | 6.5 | 33 | $81 / 2$ | 176 | 15.40 |
| 2W21-597 | Sub Minax | ${ }^{30}$ | . 150 | ${ }_{20}^{29.5}$ | ${ }_{7 \times} 7.0063$ | 111 | 5 | 4.95 |

## AMPHENOL POLYFOAM COAXIAL CABLE   <br> INSULATORS FOR LONG WIRE AND <br> DOUBLET ANTENNAS



Fig. (1) and (3) are molded high strength Cycolac
(1) No 9 A 13 are glazed porcelain. Fine for receiving antennas (1) No. NA173. HyGain Cl heavy duty center insulotor. Net Each (2) No. 18 C835. 41/" 1 porcelain end duty end insulator. Poir For (3) No. 18C836. 41/2" porcelain center insulator Net Eoch

## COPPERWELD ANTENNA WIRE

Tensile strength exceeds 100,000 lbs. per inch or 3 times that of ordinary copper. Will not stretch of sog. Electrical properties are the same os copper of high frequencies. Vinyl co
hove solid conductors.

| Stk. | Size | 100 Coil | $250{ }^{\circ}$ Coil | $500^{\prime}$ Coll |
| :---: | :---: | :---: | :---: | :---: |
| No. | (AWG) | Wt. Each | Wt. Each | Wt. Each |
| 2 A 44 | 10 | 3 lbs. \$3.83 | $7 \mathrm{lbs}$. \$9.08 | 14 lbs. \$ 17.93 |
| 2445 | 12 | $2 \mathrm{lbs} \quad$. | 5 lbs. 7.05 | 9 lbs. 12.08 |
| 2446 | 14 | 1 lb .2 .63 | $3 \mathrm{lbs} \quad$. | $6 \mathrm{lbs} \quad$. |
| 2447 | 18 | $1 / 2 \mathrm{lb} . \quad .88$ | $11 / 2 \mathrm{lbs}$. |  |
| 2B50 | 12 | 2 lbs ENAMELED | COPPERWELD |  |
| 2851 | 14 | 11/4 lbs. 2.83 | $\begin{array}{ll}41 / 2 \mathrm{lbs.} \\ 3 \mathrm{lbs} . & \mathbf{9 . 6 0}\end{array}$ | $9 \mathrm{lbs}$. |

## COPPER ANTENNA WIRE

Excellent for ontenna requirements; as bus bar hookup wire; for winding coils, etc. Formvor type is non-corrosive.

SOLID FORMVAR No. SOLID BRIGHT TINNED

| SOLID FORMVAR |  |  |  |  | SOLID BRIGHT TINNED |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Size | $100^{\prime}$ | 200' | $500^{\circ}$ | 2 A 10 | 12 | \$0.79 | \$3.00 |
| 2 A 12 | 12 | \$3.8 | \$5.05 |  | 2437 | 14 | . 85 | 2.22 |
| $2 A 42$ | 14 | 2.4 | 3.60 | 9.70 | $\begin{aligned} & 2439 \\ & 2 A 41 \end{aligned}$ | 18 | .45 | 1.50 1.03 |
|  |  | RAND | BARE |  | 2852 | 20 | 30 | . 81 |
| No. 2 | $43-$ | Size 1 | $17 \times 24$ s | ding) | 2873 | 24 | .26 | . 67 |
| 100 | For |  | 1724 | 1.43 | 2875 | 26 | 25 | 86 |

TINNED COPPER

## SHIELDING



Forms perfect electrostatic and inter erence shield for wires. Very flexi ble. Expands to nearly double its rigina
diameter, reducing i engith about $25 \%$ Exten


Stk. Ne. Type I.D.

$\begin{array}{lll}2 \text { A134 } & 8660 \\ 2 \text { B139 } & 8668\end{array}$
$\begin{array}{ll}2 \text { A135 } & 8668 \\ 2 \text { B140 } & 8669\end{array}$

| $2 A 1150$ | 8661 |
| :--- | :--- | :--- |
| 281439 |  |
| $2 A 136$ | 8662 |

## INDOOR AERIAL WIRE

Belden 8014
$13 \times 36$ stronded
tinned copper.
chrom vinyt
wlastic insulation
No. 2A1. 25 Ft.
$100 \mathrm{Ft} . . . .92 \mathrm{c} 500 \mathrm{Fr}$....... 57 c

## ANTENNA

 LOOP$\begin{array}{cc}10 \mathrm{Ft} & 50 \mathrm{Ft} \text {. Reploces ontenno, } \\ \mathbf{\$ 0 . 6 5} & \$ 1.94 \\ \mathbf{9 0} & \begin{array}{l}\text { coll on most any } \\ \text { type set. Cood pick- }\end{array}\end{array}$
 48 c

Fig 17 and style, especially suited for smaller RG58 and RG59 coox cables. Fig. 17 and 18 are "between series" odapters providing greater convenience where smal coox is used with equipment having UHF or N style recep tacles. (*) Female connectors mating with all others In same series

| Fig. | Stock No. | Amphenol No. | Military No. | Description | For RG Cable | $\begin{aligned} & 1-24 \\ & \text { Each } \end{aligned}$ | 25-99 Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (10) | 18A1223 | 31-002 | UG88U | Cable Plug | 58 | \$ . 72 | \$0.59 |
| (10) | 18 A1120 | 31-018 | UG88B/U | Cable Plug | 58 | + . 76 | . 62 |
| (10) | 18A1150 | 31-202 | UG88C/U | Cable Plug | 58 | . 86 | . 71 |
| (10) | 18A1225 | $31-012$ | UG260U | Cable Plug | $59,62,71$ | . 66 | . 54 |
| (10) | 1841123 | 31-212 | UG260B/U | Cable Plug | 59, 62, 71 | . 96 | . 79 |
| (11) | 18 A1228 | $31-005$ | UG89 ${ }^{*}$ | Cable Receptacle | 58. | . 82 | . 67 |
| (11) | 18A1130 | 31-015 | UG261U | Cable Receptacle | 59, 62, 71 | 1.53 | 1.25 |
| (12) | 18A1224 | 31-003 | UG290U | Panel Receptacle |  | 1.06 | . 87 |
| (12) | 18 A1132 | 31-203 | UG290A/U* | Panel Receptacle |  | . 86 | . 71 |
| (13) | 18 A1149 | 31-102 | UG657U* | Recept. 1-Hole Mtg. |  | 1.27 | 1.04 |
| (14) | 18 A1229 | $31-011$ | UG262 ${ }^{\text {* }}$ | Recept. Rear Clamp | 59.62, 71 | 1.67 | 1.37 |
| (14) | 18 A1227 | 31-001 | UG291U* | Recept. Rear Clamp | 58 | 1.75 | 1.43 |
| (15) | 18 A1153 | 31-219 | UG914U ${ }^{\text {® }}$ | Dbl. Female Junction |  | 1.22 | 1.00 |
| (17) | 18 A1131 | 31-008 | UG274U* | Tee |  | 1.96 | 1.61 |
| (17) | 18 A1121 | 31-830 | UG201U | N to BNC Adaptor |  | 2.33 | 1.91 |
| (17) | 18A1134 | 31-028 | UG273U | UHF to BNC |  | 1.56 | 1.28 |
| (18) | 18 A1135 | 31-217 | UG349A/U | N to BNC |  | 2.55 | 2.09 |



MOF SINGLE CONTACT CONNECTORS
Most populor screw-on coaxiol connector series. Used extensively for RF power transmission lines in amateur, CB and commercial services. Item with \%ore femole connectors moting with all others in some series. Fig. 3
 shielded line connection to rear of Fig. 4 socket. $83-225 \mathrm{P}$ and $83-22 \mathrm{R}$ are 2 conductor for special twin RG22/U coax line. Others, single conductor.

| Fig. | Stock No. | Amphenol No. | Mifitary No. | Description | For RG Cable | $\begin{aligned} & \text { 1-49 } \\ & \text { Each } \end{aligned}$ | $\begin{gathered} 50-249 \\ \text { Each } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | 18 A1122 | 83-ISP | PL-259 | Cable Plug | 8,11 | \$0.51 | \$0.42 |
| (1) | 18 A 1220 | 83-ISPN | PL-259A | Cable Plug | 8,11 | . 76 | . 62 |
| (1) | 18 A 1218 | 83-776 | UG-203U | Cable Plug | 59, 62, 71 | . 99 | . 81 |
| (2) | 18 A 1274 | 83-851 |  | Solderless Plug | 88 8, | 1.79 | 1.47 |
| (3) | $18 \mathrm{B148}$ | 83-168 | UG176U | .255* I.D. Reducer | 59, 62, 71 | . 13 | . 11 |
| (3) | $18 \mathrm{B149}$ | 83-185 | UG175U | .207" I.D. Reducer |  | . 13 | . 11 |
| (4) | 18 A1124 | 83-1R | SO-239* | Panel Receptacle |  | . 51 | . 42 |
| (5) | 18 A1129 | 83-1H | M-360 | .345* I.D. Hood | 8,11 | . 35 | . 29 |
| (5) | 18 A1217 | 83-765 | UG177U | .155" I.D. Hood | 58 | . 28 | . 23 |
| (6) | 18 A1125 | 83-1AP | M-359* | Right Angle | 5 | 1.60 | 1.31 |
| (7) | 18 A1126 | $83-1 \mathrm{~J}$ | PL-258* | Double Male Adaptor |  | . 93 | . 77 |
| (8) | 18 A1128 | 83-IF | PL-274* | Feed Thru Junction |  | 1.92 | 1.58 |
| (9) | 18 A1127 | 83-1T | M-358* | Tee |  | 2.53 | 2.08 |


(10)
(11)
(13)
5 तín


(10)
(17)

(18)

TYPE "BNC" CONNECTORS




(10)


Highest quality, conston $\mathrm{N}^{\prime \prime}$ SERIES CONNECTORS more critical , constont impedance style connectors. Generally specified for more critical applications because of lower SWR and weatherproof construc-
tion. UG/1185/U, 1186 U and 1187 U have captivated internal contacts. recommended where coox line will be supported by the connector. Female connectors mating with all others in same series.

| Fig. | Stock No. | Amphenol No. | Military No. | Description | For RG Cable | $1-24$ <br> Each | $\begin{aligned} & \text { 25-99 } \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (19) | 18A1231 | 82-61 | UG21B/U | Male Cable Plug | 8 | \$1.28 | \$1.05 |
| (19) | $18 \mathrm{Al113}$ | 82-84 | UG94A/U | Male Cable Plug | 11 | 2.01 | 1.65 |
| (20) | 18A1269 | 82-63 | UG23B/U* | Female Cable Jack | , | 1.47 | 1.21 |
| (21) | $18 \mathrm{Al230}$ | 82-24 | UG58U* | Panel Recept. |  | . 76 | . 62 |
| (22) | 18 A 1271 | 82-101 | UG29B/U* | Dbl. Recept. Junction |  | 1.88 | 1.54 |
| (23) | 18 A1275 | 82-100 | UG57B/U | Dbl. Plug Junction |  | 2.66 | 2.18 |
| (24) | 18 A1109 | $82-213$ | UG27C/U* | Right Angle |  | 4.14 | 3.40 |
| (25) | 18 A1110 | 82-99 | UG28A/U ${ }^{\text {- }}$ | Tee |  | 3.14 | 2.58 |

## COAX CABLE CONNECTOR ADAPTORS



For connecting PL-259, SO-239 plugs to Motorola and RCA type sockets and cable plugs. Designed for RF transmitter-receiver cables, test equipment for fast conversion without altering original connectors.
(1) Adapts PL-259 Plug to stondard outo antenno plug
(2) Adopts PL- 259 plug to RCA. List 75c. Net Eoch

No. 18 C 428 . Model CPP. Mfg. Iist 75 c . Net Each
$.45 c$
(3) So-239 coax connector to standard auto antenno socket.

No. $18 \mathrm{C429}$. Model CSA. Mfg. list 75c. Net Each.
(4) Standard auto antenno plug to RCA type phono plug.

Special double male coax connector for mounting relay directly onto output of transmitter or S.W.R. meter. Silver plated. No. 16A945. Net Eoch

KANSAS CITY, MISSOURI 64106 1012 McGEE STREET PHONE 816-BA-1-1155
KANSAS CITY, MISSOURI 64113 301 E. 55TH STREET PHONE 816-EM-3-8700
SPRINGFIELD, MISSOURI 65804
1904 S. GLENSTONE
PHONE 417-TU-3-2324
OVERLAND PARK, KANSAS 66204 6808 W. 75TH STREET PHONE 816-CO-2-9535

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PHONE 303-222-8986

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- FRESH NEW GEAR. B-A hos complete stocks of olf the Big Name Brands, plus thousonds of occessories.
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## EXCLUSIVE B-A SPECIAL PURCHASE SALE GENERAL COVERAGE SHORTWAVE RECEIVER <br> TUNES IN EVERYTHING ON THE AIR IN THESE 4 BANDS:

550-1600 KC; 1.6-4.5 MC;
4.0-12.0 MC; 11.0-30.3 MC


ONLY $\$ 5.00$ MONTHLY BUYS THIS FINE RECEIVER!

## AN EXCITING SHORTWAVE SET... A FINE STANDARD BROADCAST RECEIVER TOO

[^8]EXTRA BONUS SAVINGS OF $\$ 8.82$ ON THIS SHORTMAVE LISTENERS ACCESSORY KIT


HANDY 24 HOUP CIOCK Tells Time All Over the World Beautiful, chrome plated "1 dia Electric self trating Regular Price 58.47 HALLICRAFTERS COMMUNICATIONS HEADPHONES. Rugged, very sensitive. Makes private listening a real pleasure. Attached phone plug.
.... $\$ 5.00$
Regular Hallicrafters Price................CUIATOR............................................................... 55.00 EXCLUSIVE B-A WORLD TIME CALCULATOR. Rotary slide rule showing local time at all time zones of the world, Plus Greenwich Mean Time (GMT). Valuable logging
aid for short wave listening and amateur station operation. aid for short wave listening and amateur station operation.
Regular Price
No. 35872
With Purchase of NC-121 Receiver above.. Special

# GET YOUR BEST HAM DEAL AT B-A... <br> B-A STOCKS ALL THE LATEST HAM EQUIPMENT-WRITE OR CALL US FOR YOUR DEAL. ASK FOR FREE FACTORY LITERATURE ON ANY ITEM 



## SSB-CW-RTTY AT ITS BEST!

KWM-2 TRANSCEIVER (illus.). 175 W. PEP SSB, 160 $W$ CW 80 thru 10 meters, selectible sideband. $61 / 2$ x $\times$
$143 / 4 \times 13^{\prime \prime}$ deep. Wt. 18 lbs. $143 / 4 \times 13^{\prime \prime}$ deep. Wt. $188^{\prime} \mathrm{lbs}$.
354238 . Net Ea. $\$ 1150.00$

## KWM- 2 ACCESSORIES

No. 35A23. 516F-2 AC Supply. 28 lbs. Net Each
No. 35A241. 312B-5 PTO, Wattmeter, Potch, Speaker. Net Eo No. 35A242. MP-1 12 V . DC Supply. is Ibs. Net Each. ......... \$198.00
No. 35 S 240 . $351-\mathrm{D}-2$ Mobile Mount. Wt. I8 lbs. Net Each ..... $\mathbf{\$ 1 2 0 . 0 0}$
$\$ 115.00$ 75S-3B RECEIVER. Tunes amateur bands 3.5 MC to 29.7 MC with coverage of any frequency in the 3.5 to 30 MC range (except 5.0 to 6.5 MC ) by substituting crystols. Operates on 117 V .60 cy . AC . Size $67 / 8^{\prime \prime} \mathrm{H}_{\text {., }} 141 / 2^{\prime \prime} \mathrm{W}$. $115 / /^{\prime \prime} \mathrm{D}$. Wt. 20 lbs.
No. 35 B416. With 2 I
No. 35B416. With 2.1 KC Mechanical Filter. Net Each
$\$ 620.00$ OPTIONAL ACCESSORIES FOR 75S-3B
No. 50896. $\times 455 \mathrm{KQ}-200$. 200 Cycle Mechanical Filter. Each
No. 50897. 500, 800 or 1500 Cycle Mechanical Filter. Specify. Ea.. No. 50898. 3. 1, 4 or 6 KC Mechanical Filter. Specify. Each
No. 35A15. 3128-3 Matching Speaker. Net Each
$\$ 88.00$
$\$ 57.50$
$\$ 47.00$
No. 35A20. 312B-4 mptching Speaker. Net Lach . .................. \$32.00
32S-3 TRANSMITTER. The finest transmitter of its kind.
175 W . PEP input on SSB, 160 W . CW. Range 3.5-29.7 MC except 5.0 to 6.5 MC. Mechonical filter sideband generation, permeability-tuned VFO automatic load control for higher overage tolk power. Internol switching permits ransceiver operation when used with $755-3$ receiver. Some size cobinet as No. 35B53. Net Each
$\$ 750.00$
30L-1 LINEAR AMPLIFIER. 1000 W. PEP. 38 lbs. Same size os KWM-2. Covers 80 through 10 meters. $115 / 230 \mathrm{~V}$. AC
$\mathbf{\$ 5 2 0 . 0 0}$


## R. L. DRAKE CO.

TR-4 TRANSCEIVER (illus.). 300 W . PEP SSB, 260 W . CW, 260 W . PEP ( 50 W . Out) AM, 80 through ' 10 meters in seven 600 KC ronges. Solid stote VFO. Selectible sidebond.

TR-4 ACCESSORIES
No. 35B404. AC-4 AC Supply. Wt. AC bs . Nt
No. 35B147. RV-4 Console VFO/Speaker. Wt. 7 lbs. Net Each No. 35 A 613 . MS-4 Matching Speaker. Wt. 6 lbs. Net Each No. 358405 . DC-3 12 V . DC Supply. Wt. 10 lbs. Net Each No. 35B138. MMK-3 Mobile Mounting Kit. Wt. 3 lbs. Net Each
$\$ 99.95$
$\$ 99.95$ meters and 28. SOB, AM CW, RTYY. Covers hom bands 80, 40, 20, 15 meters and 28.5 to 29.0 MC with erystals furnished. Can tune 160 meters,
MARS CB WWV, marine, SW broodeosts, 5 MC to 30 MC in 500 KC MARS, $C B$, WWV, morine, $S W$ broadeosts, 1.5 MC to 30 MC in 500 KC
ronges with accessory crystals. Linear permeability tuned VFO, 1 KC colironges with accessory crystals. Linear permeability tuned VFO, 1 KC coli-
brotion. Size $51 / 2 \times 103 / 4 \times 115 / 8$ " deep. Wt. 16 lbs . No. 35A614. Net Each.
$\$ 399.95$
T-4X TRANSMITTER. Will tronsceive with R-4A receiver. Hos its own VFO. 200 W . PEP SSB and AM, 200 W . CW. Requires AC-3 power supply above. Size $51 / 2 \times 103 / 4 \times 115 / 8^{\prime \prime}$ deep. Wt. 14 ibs.
No. $35 A 615$. Net Each. T-4 SIDEBAND RECITER. Tranceives with R-4A only. No VFO, only crystal
control. Otherwise identical to T-4X. Requires AC 4 supply. control. Otherwise identical to T-4X. Requires AC-4 supply.
No. $35 A 616$. Net Each..............................................
5299.95

L- 4 LINEAR AMPLIFIER. 2000 watts PEP SSB- 1000 watts DC input power on CW, AM and RTTY. Rated for continuous duty. Uses two $3-400 \mathrm{Z}$ or 8163 triodes. $1318 \times 77 / 8 \times 148^{\prime \prime} \mathrm{D}$. Power supply $63 / 4 \times 7 \frac{1}{8} \times 11^{\prime \prime} \mathrm{D}$. Combined wt. No. $\mathbf{3 5 C 2 5 7}$. Linear with Tubes \& Power Supply. Net Each
$\$ 895.00$

## GALAXY <br> ELECTRONICS

GALAXY V TRANSCEIVER (illustroted). 300 W . PEP SSB/ CW, 80 through 10 meters, selectible sideboand. Crystol filseler. $6 \times 101 / 4 \times 111 / 4^{\prime \prime}$ deep.
tet 35 B303. Net Each. $\$ 420.00$

10 GALAXY $V$ ACCESSORIES
No. 358553 . 110 V. 60 Cy. AC Supply. Wt. 23 lbs. Net Each
No. 358564 Deaker Console. Will house AC Supply. $31 / 2 \mathrm{lbs}$. Net Ea. . $\$ 19.95$
No. 351564.24 Console. Speoker, SWR Bridge, patch
No. 35 B560. Remote VFO. Fine for DXing. Wt. 5 ibs. Net Each No. 35 B558. Crystol Calibrotor. Plugs in. Net Each.
No. 35B556. vox Control. Internally mounted. Net Each
No. 35 A608. 12 V . DC Power Supply. $800 \mathrm{~V} / 350 \mathrm{~V}$. DC. Net Each No. 35 B554. Mobile Mounting Bracket. Net Each
No. 35A609. High Angle Tilt Accessory for mobile mount. Net Each
GALAXY $2000+$ LINEAR AMPLIFIER. Maximum legal power Ssw- $\mathbf{5 2 . 9 9}$ Output over 1200 W . PEP. All bonds 80 through 10 meters. RF unit size $101 / 4 \times 111 / 4 \times 6^{\prime \prime \prime}$. Wt. 14 lbs. Separate $115 / 230 \mathrm{~V} .60 \mathrm{cy}$. AC power supply. $71 / 4 \times 95 / 8 \times 75 / 8^{\prime \prime}$. Wt. 30 lbs.
134
$\$ 450.00$


## hallicraffers

MODEL SX-146 RECEIVER. Advanced design with crystals for Ham Bands 10 ( $28.5-29 \mathrm{MC}$ ) whrough 80 meters. Full range $28.5-29 \mathrm{MC})$ with auxiliary erystals. VFO output for transmitter control. Size $57 / 8 \times 131 / 8 \times 11^{\prime \prime}$ deep. No. 35A606. Less Speaker. Wt. 20 lbs.
 Wt. $61 / 2 \mathrm{lbs}$. Net Each. . ....... $\$ 19$ HT-46 5-BAND TRANSMITTER. Transceives with the SX-146 Receiver obove operotes independently with self-contained VFO. Has advanced crystal filter selectible sideband. SSB-CW 175 W PEP, 80 through 10 meters. Physically motches and is same size as SX-146 No. 35A300. Net Each. SR-500 "TORNADO" TRANSCEIVER. Fixed or mobile brute power . $\$ 349.95$ PEP SSB/CW. $80+40 \mathrm{M}$ (LSB), 20 M (USB), crystal lattice filter, exclusive amplified outomatic level control, receiver incrementol tuning $\pm 3 \mathrm{KC}$ from transmit frequency, sensitivity less than 1 microvolt. $13 \times 61 / 2 \times 11^{\prime \prime} \mathrm{D}$. Wt. $131 / 2 \mathrm{lbs}$.
No. 35 B596. Less Power Supply. Net Each.................... $\mathbf{5 3 9 5 . 0 0}$

## 35B597. P-500 AC. 115 ACCESSORIES FOR SR-500

35A598. P-5000C 12 V. 60 cy. Power Supply. Wt. 29 lbs . Ea.
395.00

35A598. P-S00DC. 12 V . DC Power Supply. Wt. 10 lbs. Net Each $\$ 119.95$ 35C164. HA-7. Crystal Colibrator. Net Each

SR-42A 2 METER RECEIVER AND TRANSMITTER. Mobile or fixed complete 12 power supply for $115, ~ A M$ transmitter and $143.9-148.1 \mathrm{MC}$ receiver with
 No. 35 A603. Wt. 17 lbs. Net Each. ............................. $\mathbf{\$ 1 9 9 . 9 5}$ SR-46 6 METER RECEIVER AND TRANSMITTER. SOMe os SR-42 except covers 49.9-54.1 MC range. Less crystal, DC cord and vibrotor. Wr. 17 1bs.
No. 354604 . Net Each. ........................................ $\mathbf{5} 199.9$
$\$ 199.95$

## ACCESSORIES FOR SR42 AND SR46

No. 35A605. MR-40. Mobile Kit. Cord, vibrotor and bracket. Net Ea. $\$ 12.95$ No. 50B104. Crystals. Specify Frequency. 2 week delivery. Net Each. \$4.85

MODEL SX-12 HALLICRAFTERS RECEIVERS AND SPEAKERS
short wove listening. SSB/CW and AM $19 \times 8 \times 10^{\prime \prime}$, No. 35 Cl 163 listening. SSB/CW and AM. $19 \times 8 \times 10^{\prime \prime} \mathrm{D}$
No. $\mathbf{N}$ o. 35 a472, R47 Speaker for Phon.
No. 35A472. 47 Speaker for Phone or CW. W†. 3 lbs. Net Each
$\$ 289.95$ No. 35C164. HA-7 100 KC Crystal Calibrator. Net Each. . . . . . . . $\$ \mathbf{\$ 9 . 9 5}$


VOX. Size ${ }_{6}{ }^{3} \times 135 / 8 \times 115 / 8^{\prime \prime}$ deep. Wt. 26 lbs.
No. 35 C63. NCX-5 ACCESSORIES
No. 35C65. NCX-A. 115 V. AC Supply/Speaker. Wt. 29 lbs. Net Each.... $\$ 110.00$ No. 35 B315. "Century" 12 V DC Supply. Wt. 7 lbs. Net Each. 35C69. VX-501. VFO/Crystal Console. For NCX-5. Wt. 15 lbs . Net Ea. $\$ 249.95$ No. $\mathbf{3 5 A 4 4 1 .} \mathbf{X C U}-27$. 100 KC Plug-In Crystal Colibration. Net Each..... $\$ 26.60$ NCL-2000 LINEAR AMPLIFIER, 2000 W. PEP, 80 through 10 meters. Requires 20 to 200 wotts drive. Built-in $115 / 230$ V. 60 cy. AC Power Supply ALC ou pput, internal change-over and protective reloys. With two 8122 ceramic tetrode tubes. Size $9 \times 16 \times 121 / 2^{\prime \prime}$ deep.
No. 35 B93. Shpg. wt. 73 lbs. Net Each.

## NATIONAL

NCX-5 TRANSCEIVER (illus.) 200 W . PEP SSB CWrough 100 W. AM, 80 through sideband. Has solid tible sideband. Has solid state VFO, direct KC read-

HRO-500 COMMUNICATIONS RECEIVER. Covers the entire VLF and HF spectrums from 5 KC to 30 MC in sixty 500 KC bands. Directly colibroted, accurate and readable to 1 KC throughout the entire range. Completely transistorized. Ooperates on $115 / 230 \mathrm{~V}$. AC or 12 V . DC. DC current droin 200 MA . Size $75 \mathrm{~s}^{2} \times 161 / 2 \times 123 / 4^{\prime \prime}$ deep. Shpg. wt. 32 lbs .
No. 358213. Net Each.
No. 35 B214. HRO-500-TS Matching Speaker. Net Each
$\$ 1560.00$
$\$ 40.00$


SB-34 TRANSCEIVER. 135 W. SSB input, $80,40,20,15$ meters, selectible sideband. Built-in universol power supply and speaker, solid-state dial colibrotion and switching
 No. 35 S5547. Wt. 20 lbs. Net Each.
. $\$ 395.00$
No. 35 B535, SB2-YOX ACCESSORIES FOR SB-34
No. 358535. SB2-YOX. Plug-In Voice Control. Net Each................ $\$ 34.50$ No. 35 B536. SB2-XC. Crystal Calibrator. Net Each ........ No. 35 B540. SB2-CW. "Codapter". Tone gen. for CW operotion. Net Ea. $\$ 39.95$ No. 35 B545. SB2-MB. Mobile Mounting Bracket. Net Each................ $\$ 12.50$
No. 35 B546. SB2-M1C. Microphone with plug. Net Each................ $\$ 14.50$
SB2-LA LINEAR AMPLIFIER. 1000 W . PEP, 80-40-20; 750 W . on 15 meters. Has built-in, 115 V .60 cy . AC supply, built-in antenna relays. Size $51 / 4 \times$ $113 / 4 \times 115 / \mathrm{B}^{\prime \prime}$ deep. Shpg. wt. 35 llas.
No. 35 C 517 . Net Each................
. $\$ 249.50$

# ...TOP TRADES - EASY TERMS-FAST PERSONAL SERVICE <br> WHETHER FOR A WHOLE NEW STATION OR FOR ACGESSORIES...B-A IS YOUR FAST, DEPENDABLE ONE-STOP SOUREE FOR EVERY HAM NEED! 



SWAN-350 TRANSCEIVER (illus.) 400 W . SSB, 320 W. CW. 125 W . AM input, 5 bands $3.5-4$. MC, 7.0-7.5 MC, $13.85-14.35 \mathrm{MC}$, $21.0-21.5 \mathrm{MC}, 28.5-29.0$ $M C$ lower sideband on 80 and 40 M , upper sideband on $2 \mathrm{~A}^{\prime}$ and S meter. Size $51 / 2 \times 13 \times 11^{\prime \prime}$ deep. Wt. 16 ibs
$51 / 2 \times 13 \times 11$ " deep. Wt. 16 lbs.
No. 35 B148. Less Power Supply (below). Net Eoch............. $\$ 420.00$ No. 35B148. Less Power Supply (below). Net Eoch. . 180 W. 5420.00
SWAN-250 6 METER SSB TRANSCEIVER. 240 W. SSB, 180 W . AM SWAN-250 6 METER SSB TRANSCEMER. power amp. Receiver noise figure better than $3 \mathrm{db} .51 / 2 \times 13 \times 11^{\prime \prime}$ deep. Wt. 17 Ibs. No. 35C478. Less Power Supply. Net Each
$\$ 325.00$
ACCESSORIES FOR SWAN- $\mathbf{3 5 0}$ AND 250
35B150. Model $117 \times C$. AC Supply/Speaker (Illus.). Net Eoch.
358151. Mod. 14-117. 12 V. DC Supply. Net Each.

35B446. Model VX-1. Plug-In VoX Control. Net Each
35C487. Deluxe Mobile Mounting Kit. Net Each.
35C152. Model SSB-2. Selectible Sideband Kit ( 350 only). Net Each 35C480. 100 KC Crystal Calibrator ( 350 Only). Net Each
35C481. 500 KC Crystal Calitrator ( 250 Only). Net Each.
SWAN MARK I LINEAR AMPLIFIER. 2000 W. PEP, all bands, 80 meters. Requires two $3-400 \mathrm{Z}$ tubes. With 115 V . AC Supply. No. 35B154. Less tubes. Net Each.

753 SSB/AM/CW
 TRANSCEIVER

## WITH SILICON SOLID STATE VFO

Frea. range $3,490 \cdot 4,010 \mathrm{KC}, 6,990-$ $7,310 \mathrm{KC}, 13,890-14,410 \mathrm{KC}$. LSB 80 and 40 meters, USB 20 meters. 180 W. PEP SSB ond AM, 180 W. CW. Has 5.2 MC crystal lattice filter, bondwidth 2.7 KC of 6 db . Stobility 400 cos. offer warmup. Receiver sensitivity 1 microvolt for 10 do $/ \mathrm{N}$ ratio. Size $51 / 2 \times 14 \times 11 / 4$ deep. 1.25 ios. No. $35 \mathrm{C482}$. Model 753 Wired. Less Power Supply. Net Each. .... $\$ 299.95$ No. $\mathbf{N}$ NB485. Model 7518 . Model 752 Wired 12 V. DC Power Supply. Net Each..... \$109.95

## AMECO NUVISTOR.

Preamplifier for Any Receiver Tunes 6 meters thru 160 meters. Uses 2 SDS4 Nuvistors in Coscode giving exceptional noise figures of 1.5 to 3.5 db depending on band. Will improve the performance of practically every receiver in use by greatly boosting the desired sig-
 nal while improving rejection of image and spurious signals. Panel switch cuts booster in or out, switching ontenno direct to receiver. Size $3 \times 5 \times 3^{\prime \prime}$. For 115 V .60 cy . AC. No. 35 C 516 . Model PCL-P. Wt. $11 / 2$ lbs. Net Eoch.

## 24 HOUR NUMERCHRON DESK CLOCK

 DIRECT READING

## 24-HOUR WORLD CLOCK

## WITH UNIQUE SOUTH POLAR PROJECTION MAP



## WATERS HAM ACCESSORIES



MODEL 334 DUMMY LOAD/WATTMETER. For making legal non-radiating performance tests on rodio transmitters. Frequency range 2 to 230 MC . VSWR less than $1.3: 1$. Power range 50 watts continuous, 1000 W . Intermittent. Direct reading meter calibrated 10,100 and 1000 W. Has overload signol, so-239 connector. Size $43 / 4 \times 9 \times 101^{\prime \prime} 4^{\prime \prime}$. Wt. 12 !bs.
No. 29A457. Net Eoch.
MODEL 371 CALIBRATED 52 OHM RF ATTENUATOR. Accurate means of checking receiver comporative performance, colibrating " S " meters, measurchecking receiver comparative per signal overloading of receivers. Attenuaing ontenno gain or reducing $0-61$ in 1 db steps. Power roting $1 / 4 \mathrm{~W}$. Has rocker switches. Size $71 / 2 \times 21 / 4 \times 21 / 8^{\prime \prime}$ H. W. W. 1 lb . $\qquad$ MODEL 369 REFLECTOMETER. New dual indicating meter simultaneously hows forward and reflected voltoges expressed as RF watts. Sensing unit for shows forward and reflected voltages expressed as RF watts. Sensing unit for 52 ohm coax line may be permaneflect $51 / 2 \times 33 / 4 \times 41 / 4^{\prime \prime}$ Reflected. $51 / 2 \times 33 / 4 \times 41 / 4$ No. 29B262. Shpg. wt. 3 lbs. Net Each.
.$\$ 115.00$
MODEL 3002 HYBRID COUPLER-PHONE PATCH. Versatile accessory with built-in switching for tape recording from receiver or phone, playing recorder back over transmitter or phone. Provides VOX operotion on phone patch, has built-in compressor amplifier (compreamp) to increase weak telephone levels. Transistorized. Internal battery powered. Wt. 3 lbs. No. 29B263. Model 3002. Coupler with Compreamp. Net Each.............. $\$ 49.95$ No. 29B265. Model 3001. Coupler without Compreamp. Net Eoch............. $\$ 49.50$ MODEL 361 CODAX AUTOMATIC KEYER. Perfect CW, automotic spacing and timing. Speed 5 to 50 WPM. Built-in monitor signal and double-paddle key. Tronsistorized internal battery powered. Size $23 / 8 \times 33 / 4 \times 61 / 8^{\prime \prime}$. Shpg. wt. 3 lbs. Requires 6 -RM502R botteries.
.$\$ 92.50$

## WATERS HAM \& CB ACCESSORIES



MODEL 359 COMPREAMP
 For use with any transmitter between MODEL 359 COMPREAMP For use with any transmitter between microphone and mike jack. Up to 4 times increase in effective speech power. Transistorized. Sattery powered. Size $23 / 4 \times 3 \times 41 / 2$. Shpg. wt. $\$ 27.95$ No. 29A456. Net Each
PROTAX COAXIAL SWITCHES WITH AUTOMATIC GROUNDING. Functions os a regular antenna selector switch as well os a grounding switch for the entire ona regular onter when shutting down the station. Power rating 1000 watts. Regulor S0239 coaxial connectors.
Ior SO239 coaxiol connectors.
No. 29B14. Model 375. 6 Pos, with rear connectors. Net Eoch $\qquad$

## PETERSEN COMPACT CONVERTERS

 VHF TO BROADCASTUsed with any broadcast AM radio to tune in on VHF weather statians, aircraft, business, fire, marine, police, railroad, toxicab, radiotelephone, etc. No connection to radio required. Operotes by being ploced close to your set and tuning set to an unused broadcast band frequencyConverter is crystal controlled. Performance range 20 miles or better. Antenna extends to 36 $17 / 8 \times 4$ inches. Requires regular 9 V . transistor batrer When ordering specify VHF station frequency to be re-
ceived and broadcast frequency desired on your radio. Allow 2 weeks delivery. Wt. I lb.
No. 50A 88. Less Battery. Net Each. . . . . . . . . . $\$ \mathbf{\$ 4 . 9 5}$


## RECEIVERS FOR SHORTWAVE LISTENING



## NOTHING

 DOWN (PLUS U.s.) RECEIVER S-200 LEGIONAIRE - 5 BANDS LETS YOU "ZERO-IN". . . WITH LOCAL STATION TUNING EASE AND PRECISION ... SHORTWAVE BROADCASTS ALII OVER THE WORLD

Frequency Range 5.9-6.25 MC (49 Meters): 9.45-9.8 MC (31 Meters); 11.65. 12.05 MC ( 25 Meters); 15.05-15.55 MC (19 Meters) and Broadcast Band 550 Here it is.
Here it is a professionally styled short wove receiver that you can tune as easily
as you tune your AM radio! Hos Hallicrofter's $S-P-R-E-A-D$ then as you tune your AM radio! Hos Hallicrafter's S-P-R-E-A-D tuning. Stretches out the heavily-crowded portions of the foreign broadcast spectrum into four separote, precisely colibrated segments-actually spreads the stations aport for effortless,

FAMOUS HALLICRAFTERS S-118 5-BAND RECEIVER

## ONLY

$94^{81}$ mothing DOWN

- Covers Shortwave
Broadcast and Longwove.
- Electrical Band. spread Slide - Rule Dial.
- Noise Limiter 5 tubes plus rectifi-
ers. ers.

Features a plenty! Tremendous tuning range covers low band aeronautical, mobile ond international distress frequencies plus U. S. Gov't. weather mobiceasts, not found on any other set... os well os the broadocst, omobroadcasts, not found on any other set. Alos well as the broadocst, omo495 KC to $1.62 \mathrm{MC}, 1.6 \mathrm{MC}$ to $4.95 \mathrm{MC}, 4.85$ to $15 \mathrm{MC}, 14.8$ to 31 MC eleorly colibroted on full-length slide rule dial bondspread for easy tuning. Hat outomotic noise limiter, beat oscillator for code, internal speaker; jacks for heodphones, phono input ond socket on rear for external cower source. $\frac{105 / 125}{N}$ No. 35 A447. 60 cy. AC. Size $133 / 4 " \times 61 / 8^{\prime \prime} \times 81 / 2^{\prime \prime}$ D. Wt. $19 \mathrm{lbs} .1 \$ 94.95$

## RECENGY MONDTORADIOS FOR POLICE, FIRE AND AIRCRAFT



MODELS FOR 30-50MC FM, $152-174$ MCFM, 108-135 MC AM LOWEST COST MONITORADIOS
Model PR-35日R. Tunes in police, fire and other vitol or highly interesfin broadcasts. Has transistorized odjustable squelch for quieting between calls. bensitivity. 10 microvolts, selectivity 100 KC . Built-in $4^{\prime \prime}$ speaker 1.1 watts audio. 5 tubes plus rectifier. Requires 30 watts. 117 V . AC or DC. Block plastic cabinet $91 / 2 \times 6 \times 51 / 2 " 1 \mathrm{CH}$
No. 35 B 25 . Tunes $30-50 \mathrm{MC}$
FM
\$59.95


HIGHLY SENSITIVE MONITORADIOS
MR Series. For police, fire, commercial broadcosts. Sensitivity 4 microvolts or better, more selective thon PR models. Very stable tuned RF stoge, allelectronic, odjustable squelch for perfect quieting, illuminoted diol, built-in
5 inch speaker provision for external speaker. 7 tubes plus rectifier. Vinyl 5 inch speaker, provision for external speoker. $7^{\prime}$ tubes plus rectifier. Vinyl
laminated stee cabinet, $12 \times 61 / 2 \times 6^{\prime \prime}$. For 117 V . 60 cy . AC only. Wt. 11 lbs . No. 358366. Model MR-10B. $152-174$ MC-FM. Your Choice $\$ 84.95$ No. 35B35. Model MR-33B. 30-50 MC-FM. Net Each. MODEL ARI36 AIRCRAFT RECEIVER Made to professional industry standards. Hos amazingly high 1 microvalt sensitivity, Nuvistor RF amplifier, built-in $5^{\prime \prime}$ speaker, 1 watt output, odiustable squelch. Same size and style cabinet as MR Series abové. For 117 V . 60 cy. AC only, 36 watts. Wt. 15 lbs.
No. 35 B356. Model AR136. $108-136$ MC
$\$ 89.95$ No. 358356. Model AR136. 108-136 MC AM. Net Each........... \$8
No. 38847. Madel AA-1. Outdoor Antenne for AR136. Net Each........ $\$ 5.95$ OUTDOOR ANTENNAS FOR MONITORADIOS

## Ground plane, all-direction support. Less RG58U leod <br> No. 9Al75. Model GP-50 for 30-50 MC. Net Each.... <br> $\$ 12.95$

No. 9B176. Model GP-150 for 108-174. MC. Net Each.
hairline tuning.
With the $5-200$ With the S-200 you can listen to the news in English direct from the major capitals of the world -study foreign languages by hearing the real thing or just tune broadcast ferrite loop antenna world of short wave listening. Has AM standard speaker and provision for any 8 ohm external outdoor sw antenno, internal wood grained steel cabinet $131 / 2 \times 51 / 8 \times 83 / 4$ " D . With free station-finder No. 35C291. Shpg, wt. 12 lbs. Net Each. $\$ 59.95$


## new hallicraffiers S-210 FM / AM / FOREIGN BROADCAST 6 BAND RECEIVER <br> TUNES STANDARD AM/FM BROADCAST BANDS $\$ 89^{95}$ <br> $$
5
$$

Amozing 49, 31, 25, 19 METER SHORTWAVE BANDS _ with equal eose. Even the foreign stations are seporated edectronically stations any member of the family con enjoy fine reception from all over the world as well as AM and FM broadcasts from your usual local stations.
Has built-in ferrite loop antenno for standard AM broadcast, effective line cord antenno for FM and terminals for outdoor short wave antenna. Self-contained speaker has heavy duty 1.47 oz . magnet. Any external 8 ohm speaker may be used. FM range has AFC for perfect drift-free tuning. 6 tubes, 3 dual purpose. Housed in attractive walnut toned vinyl covered metal cabinet with molded front and wood grain inlay trim. Size $135 / 8 \times 6 \times 81 / 4^{\prime \prime}$ overall.
No. 35 C 292 . Shpg. wt. 12 lbs. Net Each...........................
\$89.95
HALLICRAFTERS SX-130 FINE GENERAL COVERAGE RECEIVER


Precision made, hot-performing 7 tube receiver with Important features for the serious world wide listener and amateur. Bandspread tuning covers amateur $10,15,20,40$ and 80 meter bands and 11 meter citizens band. General coverage tuning dial is calibrated in megacycles and has $0-100$ logging scale. Phasing control for crystal filter gives pin-point selectivity. Stable, modern circuit tunes and holds side bond, CW and AM signals more easily. Has antenno trimmer, RF amplifier, 2-IF stoges, 2 watts audio output for external $3-4 \mathrm{ohm}$ speaker. Front panel phone jock disobles speaker Newly styled, in professional steel cobinet, grey and sitver trimmed. 187/8x $93 / 4 \times 8^{\prime \prime}$ high. For 115 V . 60 cy . AC. Wt. 25 lbs.

# Amateur Antennas and Accessories 

## HIGH FREQUENCY VERTICALS, DOUBLETS AND BEAMS <br> 

MULTI-BAND VERTICALS- 52 OHM COAX FEED
Model 18HT has decoupling stubs for automatic band switching; structurally very rugged. Madel 18 V uses tapped coil for band switching.


## TRAP VERTICALS- 52 OHM COAX FEED

All use the new $\mathrm{Hy}-\mathrm{Q}$ all metal traps and seamless oluminum tubing. Selfsupporting except new $18 A V Q$. Roof mount kits contain 5 ft . mast and wire radials.
Stk. No. Model Wescription Wt. Lbs. Net Eoch 9A160 I4AVQ 10 thru 40 M . $20^{\prime}$ high 10 . $\$ 29.95$ 9 A202 I8AVQ 10 thru 80 M ., $32^{\prime}$ high 18 49.95 $9 A 127$ IARMQ Roof Mount Kiit for 14 AVQ $\quad 8 \quad 11.95$ 9 LC803 Coil, Adapts 14AVQ for 80 M . Operation $\mathbf{7 . 9 5}$

## TRAP DOUBLETS- 52 OHM COAX FEED

For horizontal or inverted " $V$ " installation. Kits include $\mathrm{Hy}-\mathrm{Q}$ all metal traps, aluminum clad steel antenna wire, heavy duty cycolac end and center insulators. Less coax line

| Stk. No. | Model | Description | Wt. Lbs. | Net Eoch |
| :---: | :---: | :---: | :---: | :---: |
| 941 | 2BDQ | 40 and $80 \mathrm{M}$. . $110^{\prime}-6^{\prime \prime}$ | 2 | \$23.50 |
| 9 A 3 | 4BDQ | 10 thru $40 \mathrm{M} . \mathrm{S}^{\prime} 68^{\prime}-6^{\prime \prime}$ | 4 | 29.95 |
| 944 | 5 BDQ | 10 thru $80 \mathrm{M.}, 111^{\prime}-6^{\prime \prime}$ | 5 | 39.95 |
| $9 \mathrm{A5}$ | 248BDQ | 20 thru $80 \mathrm{M} ., 110^{\prime}-6^{\prime \prime}$ | 4 | 26.50 |

## SINGLE BAND DOUBLET ANTENNA KITS

Low cost transmitting-receiving antenno outfits for horizontal or inverted "V" installation. Copper clad steel antenna wire, light-weight molded insulators and 50 ft . RG58/U coax cable included
Stk. No. Model Description
Wt. Lbs. Net Each Des 9 A10 HD-4 $75 \mathrm{M} ., 120 \mathrm{ft}$. long

## THUNDERBIRD 10, 15, 20 METER BEAMS

Feature the new frequency stabilized Hy-Q Traps, offering better performance and mechanical reliability. Beta matched 52 ohm coax feed. Handles maximum legal power. $F / B$ ratio $20-25 \mathrm{db}$
Stk. No. Model. Description Gain Lgth. Boom Wt. Net Each 9 A 162 TH3MK2 3 Elements 8 db . 28 Ft . 14 Ft . 36 Lbs . $\$ 99.75$ 9 A 163 TH 6 DX 6 Elements 9.2 db . 31 Ft .24 Ft . 60 Lbs. 139.50

## 204BA 20 METER 4-ELEMENT BEAM (Not Illus.)

High performance DX antenng that can be supported by lightweight tower and standard HAM rotator. Fwd. gain 8.5 db , front-to-back ratio 25 db Bnom $2^{\prime \prime} \times 26 \mathrm{ft} .52$ ohm coax feed, Beta matched. Longest element $361 / 2$ Seamless all-aluminum tubing, deluxe construction. No. YA204. Shpg. wt. 40 lbs. Net Each


## MODEL BN12 BALUN FOR <br> \section*{10, 15 or 20 M. BEAMS}

Balances RF energy transfer from 52 hm coax feed to driven element and improves antenna pattern of radiation. Mounts on element and improves antenna pattern of radia
No. 9A23. Shpg. wt. 2 lbs. Net Eoch


DX receiving ability of ony receiver depends on antenno efficiency. These antennas are designed for all SWL type receivers, matching high impedance input. Especially easy to install.
Window Mount Vertical. Especially for limited space installation. Works at home, in apartments, or on vacations. Simple to install. Includes 12 ft aluminum element, 30 ft . lead-in, universal bracket, 20 ft . grounding kit and instructions. Wt. 4 lbs.
No. 9A198. HyGain SW-9. Net Eoch
Long Wire Inverted "L". 50 ft . ontenno flat-top, 50 ft . leod-in, plastic rope, molded insulators and instructions. Wt. 4 lbs. No. 9A197. HyGain SW-6 Kit. Net Eech

HYGAIN VHF AMATEUR ANTENNAS


2 ANO 6 METER HALO ANTENNAS
For basz or mobile operation. Horizontal polarized, omni-directional. Bal anced center mount design. Beta matched for low SWR, 52 ohm coox feed Stk. No. Model Description Wt. Lbs. Net Each 9 H199 HH6BA 6 Meters, 34' dia. 4 4 $\mathbf{\$ 1 0 . 9 5}$ 9A200 HH2BA 2 Meters, $14^{\prime \prime}$ dia. 1 5.95 9A201 HMBA $50^{\prime \prime}$ Mast, fits $3 / 8-24$ mounts

2 AND 6 METER DUAL BAND GROUND PLANE
Unity gain, omni-directional, 52 ohm coax feed. VSWR less than $1.5: 1$ both bonds. Max. power 1 KW . Aluminum. Wt. 6 lbs. No. 9A167. Model GP62. Net Eoch.
519.95

2 AND 6 METER DUAL BAND BEAM
18 EI .15 db . gain on 2 Meters; 4 EI .8 db on 6 . F/B ratio $15-20 \mathrm{db}$. Feeds with one 52 ohm coax line. SWR $1.5: 1$ both bands. Boom length 10 ft Al aluminum. Max. wind. survival 100 MPH . Wt. 8 lbs .
No. 9AG7. Model DB62. Net Each.
$\$ 32.95$
MONOBAND VHF BEAMS
New Total Performance Beams. Seamless aluminum tubing, machine formed heavy trackets MIL spec. iridited. F/B ratio 20-30 db. VSWR 1.5 :1 at reso nance. Max. wind survival 100 MPH .
Stk. No. Model
$\begin{array}{llll}9 A 61 & 23 & 2 \mathrm{M}, & 3 \mathrm{ELI} . \\ 9 A 662 & 28 & 2 \mathrm{M}, & 8 \mathrm{EI.} \\ 9463 & 63 \mathrm{~B} & 6 \mathrm{M}, & 3 \mathrm{EI.}\end{array}$
$\begin{array}{ll}9 A 170 & 64 \\ 9 A 65 & 66\end{array}$
DOW 52 OHM COAXIAL RELAYS
Rated I KW on matched line up to 400 MC . Low SWR, low cross talk. Teflon insulated 50-239 connectors. Receiver connector has built-in shorting device which actuates on transmit to prevent receiver RF overload.
16 A987. Type DK60-G. 115 V 60 cy AC
16A987. Type DK60-G. 115 V. 60 cy. AC. Net Eo
As above with extra DPOT external contacts
16A996. Type DK60-G2C. 115 V. 60 CY. AC. Net Ea. $\$ 21.80$ 16 A999 Type DK60-G2C. 12 V. DC. Net Eo.......... $\$ 20.80$

HIGH-POWERED C-D-R HAM-M ROTATOR
$\$ 99.95$
$\$ 13.50$
$\$ 9.95$

56.95

## Hondies Full Size Amoteur Antennos

- Heavy Duty Brake Built-In
- Mast, Tower or Platform Maunting

Clomps take up to $2^{\prime \prime}$ diometer masts. Lower clamp removable for flat bott-on mounting. Housing dla. $8^{\prime \prime}$ moximum. Delivers approx. 360 inch pounds torque. Gear train is made of precision mochined stainless steel. Rotates $365^{\circ}$ at 1 RPM. Lower portion of unit contains the automatic solenoid operated brake capable of withstanding 3600 inch pounds torque.
Meter Type Direction Indicator is continuous indicating type. Gives accurate headings. Requires 8 wire cable $12 \# 18,2$ \#22, Belden type 8448). Shpg. wt. 20 lbs. No. 4A198. Model HAM-M. Net Each
\$117.11

## MODEL TR44A ROTATOR

USES SAME ACCURATE
INDICATOR AS THE HAM-M
Designed specifically for intermediate loads, CB antennas, large VHF arrays and small HF an-tennas-not quite as rugged as the HAM-M but will handle most antennas. Hos mognetically released mechanical brake. Requires 7 wire
$\# 88$ cable. Shpg. Wt. 20 lbs . 58.75 No. 4A177. Net Each
558.75

## Mobile Antennas \& Accessories-Crystals

STANDING WAVE-RF INDICATING INSTRUMENTS


BENDIX-JONES AND AMECO RF BRIDGE-POWER METERS (1) Micromotch VSWR and RF Power Indicotor. Use with Fig. 2 coupler No. 29A144. Reads forward or reflected power, 2 lbs. Net Each... . $\$ 14.50$ 2) Type 261 Micromotch Coupler. For continuous use in 52 ohm lin No. 29A143. Roted up to IKW to 225 MC. I lb. Each. . . . . . . . . . . . . \$22.50 8) Ameco SWR Bridge-Power Meter. Read in SWR, percentage power and voltage. Panel switch for use with 1 or 2 Fig. 4 Couplers. No. 35B502. Model BIU. $23 / 4 \times 5 \times 3^{\prime \prime}$. 1 lb . Net Eoch $\$ 15.95$ (4) Ameco SWR Bridge Coupler. 52 ohms, continuous duty $\$ 8.85$ (3) EICO GRID DIP METERS
(5) Model 710. Compact, versatile and rugged. Easy to hold and thumb-tune with one hand. Covers 400 KC to 250 MC in 7 overlapping ranges. Plug-in coils hove protected internal" windings. Exceptionally stable, pre-calibrated for accuracy. Has sensitivity control, 500 microamp meter, built-in absom tion wave meter circuits and 110 V . AC transformer power supply. $21 / 4 \mathrm{x}$ $2{ }^{2} \times 67 / 8^{\prime \prime}$. Wt. 3 lbs.
No. 35A74. Kit with Tubes and Instructions. Net Each
$\$ 29.95$ No. 35A73. Factory Wired ond Tested. Net Eoch
$\$ 49.95$

# RF COAX SWITCHES, DUMMY LOADS 


(1) B \& W COAX SWITCHES. I KW, $52-75$ ohms to 50 MC . For receiver/ transmifter switching to antennas. Type 551 A and 590 are for switching any device into coox line, or cutting in linear amplifier. Dia
shoff. Wt. 2 lbs. All hove SO-239 coaxiol connectors.
Stk. No. Type
(1) $29 A 137550 A$
(1) 29 B 19 550A2

1) 29 A 139551 A
.P 5 Position Radiol
S.P. 2 Position, Radial Connectors For switching into
(2) $29 \mathrm{~B} 18 \quad 590$ S.P. 5 Position, Axial Connectors

29B20 592 S.P. 2 Position, Axial Connectors
(2) 29821591 For switching into RF tine, Axial Connectors
(3) OHMITE 52 OHM DUMMY RF LOAD

Essentially non-inductive resistors mounted inside o perforated metal cage Standard SO-239 cocx connectar.



All are rated 1 KW RF power, have very low insertion loss and provide ex cellent attenuation of transmitter harmonics folling in TV bands. All have SO-239 fittings, except Drake TV-100-LP. Factory adjusted for maximum attenuation except Bud LF-601 which permits individual peaking on any two channels.

1) 29A135. Barker-Williamson Model 425. For 52 Ohm Coax. Ea... (3) 29A116. Bud Model LF-601. Adjustable, 52 or 72 Ohm Coax. Ea.
${ }^{522.75}$ (3) 29A125. Johnson Model 250-20. For 52 Ohm Coox. Each......... 314.85 (4) NEW DRAKE 52 OHM FILTERS. Cut off between 6 meters and channel 2 Designed with particular attention to 10 meter and 6 meter operation.
No. 298166. Model TV-1000-LP. 1000 Watts except 6 meters, 200 No. 298166. Model TV-1000-LP. 1000 Wotts except 6 meters, 200 watts



Supplied within the following bands, calibroted integral kilocycles only at oscil aror laad capacity of 32 mmfd . Pin spacing standard $.487^{\prime \prime}$. Pin diameters Z-9C.093", Z-6A and Z-9A.050". Orders must be paid in full and are non cancellable. Allow 2 weeks for factory processing


Z-9C Fundamental Z-9C Fundamental Z-9C Fundamental | Calibration |
| :--- |
| $\pm 250$ Cycles |
| $\pm 500$ Cycles |
| $\pm 500$ Cycles |
| $\pm 500$ Cycles |
| $\pm 500$ Cycles |
| $\pm 3 \mathrm{KC}$ |
| $\pm$ |
| $\pm$ |
| $\pm$ |

Stk. No.
(3) 12 B 299
(3) $12 \mathrm{~B} 299^{\circ}$ (3) 1781007

Mfg. Type Millen 33302 Cinch 2 KM

Net Eoch
$\$ 2.95$
2.95

Z-9C Fundamental Z-9C Fundamental Z-9A 3rd Overtone Z-9A 3rd Overtone Z-9A 5th Overtone CRYSTAL SOCKETS

### 2.95 3.95 3 $\begin{array}{r}3.95 \\ 3.95 \\ 3.95 \\ \hline\end{array}$

KC Freq. Standord. Net Each
.05" D. Pins, $1 / 2^{\prime \prime}$ Spacing, Ceramic
Net Ec. $24 c$ $36 c$
$25 c$

NEW-TRONICS HTSTERER ANTENNAS
Power Roting To Handle All Populor Amateur Tronsceivers - 52 Ohm Feed Any Length Line


Change bands by merely interchanging the resonotors. Each resonator has a coil specially designed for maximum radiating efficiency for a particular band, tuned to precise resonance by its own adjustable stainless steel top rod, which after adjustment remains ser. Mast is $1 / 2$ diameter heat trected aluminum with a precision machined shake-proot hinge to allow forward fold-over to horizontal with ciutch-sleeve orrangement to hold mast rigidly erect. Changing resonators or garaging is fast and base to fit all standard mounting hordware:
(1) STANDARD HUSTLER RESONATORS FOR USE WITH FOLD-OVER MAST

(1)

## SUPER HUSTLER RESONATORS

New high power type. Will hondle legal power limit on SSB. Bandwidth, base impedonce ( 52 ohms) SWR and frequency drift are opimum with antenno mast below.

| Stk. No. | Type | Band | Total Length | Net Each |
| :---: | :---: | :---: | :---: | :---: |
| 94235 | RMIIOS | 10 M . | 21-26" | \$11.95 |
| 94236 | RM15S | 15 M . | 22-27"' | 13.95 |
| 94221 | RM20S | 20 M . | 29-24" | 15.95 |
| 94222 | RM40S | 40 M . | 38-33"' | 19.95 |
| 94223 | RM75S | 75 M . | 43-37" | 24.95 |

## (2) FOLD OVER MASTS ONLY

For use with resonators above. Use MO-1 for rear deck or fender mounting MO-2 for bumper mount. Wt; 4 lbs.
No. 9A103. MO-1, length 54", folds $15^{\prime \prime}$ from base. Net Each. . . . . 37.95 No. 9A104. MO-2, Length 54", folds 27" from base. Net Each.... . 37.85


## BODY MOUNTS 3/8"-24

(1) 9A29. Chrome swivel body mount. HyGoin BDYF. Net Ea. . . . . . . . 34.77
(2) 9A38. Jiffy Mount. Fits under deck lid. Hy Gain JMS. Net Each 4.77 (3) B. Jiffy Mount. Fits under deck lid. Hy Gain JMS. Net Ea 4.04
(3) 9A44. Deluxe Chrome Ball. Coox. Conn. Tenna MB9. Each. . . .
(3) 9 A237. Deluxe Swivel Body Mount. Chrome Plated. Coox adaptor 35.43 M13. Net Each
(3) 94238 . Aluminum Swivel Body Mount. Ant. Spec. M3. Net Each.
(4) 9A39. Standard Ball Mount with Spring. Tenna MB2. Net Each.
(5) 9A35. Gutter Clip for whip hold down. Hy Gain GC. Net Each. .
$\$ 3.25$
8) 9A64. Stainless Steel Strop Bumper Mount. Hy Gain BPR. Net Eo.... . $\$ \mathbf{8} 57$ (7) 9A161. Double Chain Bumper Mount. Ant. Spec. ASP-143. Net Ea. . . S8. 80
(8) 9A239. Cadmium Plated Spring. Will support 102" whip. Ant. Spec. M3A

Net Each 32.25
(B) 94240 . Chrome plated spring. Deluxe version of above. ............................... Spec. M3AD
............... $\$ 3.60$
(3) 9A46. Deluxe Chrome Spring. Hy Gain SPG. Net Each. . . . . . . . . . . 34.77
® 9A26. Heavy Duty Chrome Spg. Hy Gain SPGH. Net Each. . . . . . . $\$ 7.85$
(8) 9A27. Miniature Stoinless Steel Spg. Hy Goin SPGM. Net Each....... $\$ \mathbf{\$ 2 . 8 0}$
(0) 9A40. Quick Whip Disconnector. Hy Gain QD. Net Each
\$2.89
Amateur and Commercial Whips, $3 /{ }^{\prime \prime}$ - 24 Mounting
Highest quality stainless taper ground, cutable to freq
(10) 9A101.60"' Steel. 48 MC or higher. Eoch
(10) 9447. $72^{\prime \prime}$ Steel. 40 MC or higher. Each
(10) 9A49. $102^{\prime \prime}$ Stainless Steel. 27 MC or higher. Each

Designed for use with all models of HyGain "Toppers" (replaces spring). ProNo. 9A138. Model FOA over if struck by low honging objects. Ideal for garoging

# Telegraph Keys, Code Records, Practice Sets 

## LEARN MORSE CODE WITH THIS SENSATIONAL NEW B-A TRANSISTOR CODE PRACTICE OSCILLATOR KIT

## NEW LOW PRICE

A fruly up-fa-dafe ki deally suised for radio amareur beginner, boys groups, itc.anyone de. and recelving of the Morse Code through octua proctice.
procice.


Because of the special transistor circuitry, this kit will provide a strong clear, qudible tone, equivalent to that received from vacuum tube code oscillator's costing a great deal more. Requires fewer parts, far less power (uses 2 penlight cells) and is considerably smaller in size. transistor, mounting board, and all necessary parts. Uses any high impedance headphones such as listed on next page. Easy to build, only 5 solder points, no previous electronic experience necessary. Includes simple pictorial diagram that shows complete wiring and parts
 Na. 29A2so.
$\$ 3.95$ loch
$\$ 3.75$
CODE PRACTICE FOR THE NOVICE


## (1) HIGH FREQUENCY BUZZER

quency. Uses 2 dry cells or " C " battery. Johnson Type 114-400. No. 17A7. NET EACH

## (2) TRANSISTORIZED CODE PRACTICE OSCILLATOR

## Perfect for

 Hos varioble pitch control, built-in speaker standard $1 / 4^{\prime \prime}$ phone jack for heod phones. Also has light for visual aid in learning to send cade characters perfectly Light or tone or both moy be selected. Requires two "C" cell botteries. $31 / 2 x$$25 / 8 \times 61 / \mathrm{g}^{\prime \prime} \mathrm{H}$. Wt. I lb. No. 22A39. Imported, Highest Quality. Special Each.
59.25

## (3) DELUXE CODE PRACTICE AND KEYING MONITOR

 fncorporates modern dual purpose transistor circuit for generating a perfect tone for learning the code and for local monitoring of your tronsmitter keying while speaker on the air with your own station. Has variable pitch control, built-in cuit causes tone oscillator to follow transmitter keying. Hos terminals for key $41 / 2 \times 3 \mathrm{~K}_{5} \times 3 \mathrm{H}^{\prime \prime} \mathrm{H}$. With two penlight batteries. Wt. $11 / 4 \mathrm{lbs}$.No. 29 C 230 . Net Each . . . . . . . . . . . . . . . . . . . . . . . . . . . .

## CODE PRACTICE SET

 High frequency buzzer produces clear tone. Also operotes one or more headphones. Two sets wired toge her wil trans "D" code mes tery. Less battery Wt No. 22461Net Each
Net Each

$\$ 1.95{ }^{2}$ fer

## ${ }^{2} \$ 3.59$

## SAMS INTERNATIONAL CODE

 TRAINING SYSTEMSpecially progrommed chorts and $331 / 3$ RPM recordings teach receiving and sending speeds up to 22 WPM. Enables transcribing code messages at 2-3 WPM in just a few minutes, without memorizing code charocters Programmed method promotes learning speed and ocplus 3 LP records.
$\$ 6.95$
NEW $33^{1 / 3}$ R RPM CODE LESSON RECORDS


## LEARN CODE THIS QUICK, EASY WAY

Novice Code Course. 12 -inch record, recorded on both sides. Progresses in ten lessons from 1 to 15 words per minute. With 20. page inprinted on record jacket. S. 81 No. 33A167. Eoch
-4Advanced Code Course. sides. Twelve lessons of 16 to 25 words per tion Booklet 20 page Advanced Code Instru tion Booklet.
No. 338139. Each
$\$ 4.80$
Sove on Complete Novice and Advanced Code
No. 338140.
No. 338140 .
Both 12 -Inch
$\$ 9.00$

FINE SEMI-AUTOMATIC CODE KEY COMPARE AT $\$ 17.95$

FOR PERFECT SENDING AT ANY SPEED 10 TO 35 WORDS PER MINUTE


Beautifully machined. All parts nickel plated biass, with knurled adjustments to exactly suit individual "feel". Makes "dots" automatically, "dashes" manually, operating like expensive bug keys at any speed. Has molded bakelite base, size $3 \times 7 \times 21 / 2^{\prime \prime}$, weighted to hold position in operation plus removable clear plastic cover to protect from dust, damage or accidental contact with live circuits. Detachable cord has plug-in wedge style connector like
 No. 29A444. Special Each

## POPULAR AUTOMATIC KEYS

## (1) GENUINE VIBROPLEX

For all types of communications work where speed and perfect Morse are essential. Single lever. Two pairs of contact points; one for dots, the other for dashes. Easy to adjust. Wt. $31 / 2 \mathrm{lbs}$ PRESENTATION SUPER-DELUXE - 24 K gold plated base top, polished chrome parts, red knob, jewel movement and adjustable main spring.
$\$ 39.95$
ORIGINAL DELUXE FINISH-Polished chromium top parts and base, red knobs, with jeweled No. 33 A172. EACH
$\$ 29.95$ No. $33 A 172$. EACH $\$ 24.95$ mium top parts, gray base
No. 33A173. EACH
(2) VIBROPLEX "CMAMPION"

A low price key for the amateur or professional radio operator. Has exceptional sending qual-ities-clarity, speed, sending ease. Gray crystal finish, metal base with bright fin No. 33A174. EACH

## (3) VIBROPLEX Vibro-Keyer

## Keying mechonism for electronic keyers. Mode

## on frome like other Vibroplex keys. Switching

 oction SPDT. $31 / 2 \times 41 / 2^{\prime \prime}$. Wt. 3 lbs.
(1) No. 33A148. Net Eoch

## CARRYING CASE

For Vibroplex and other speed keys. Plush lined case, in black morocco Reinforced covers. Flexible leather handle. Lock ond key. Inside dimensions $63 / 4^{\prime \prime} L^{\prime}, 33 / 4^{\prime \prime}$ W., $41 / 4^{\prime \prime}$ high.
No. $33 A 175$. EÁCH
36.75


RIDER "SOUND-N-SIGHT"

## CODE COURSE

Combines sound and sight plus an imaginary instructor to speed code learning. Makes use of a psychological princlple proven successful by there is no slow down you ho right on Code. There is no slow down, you go right on up af an even pace, gaining as much as one word per minure per day. The courses are in wo pars-hovice and advanced. Or save by buying both courses in one package.
Novice Course 10 to 8 words per minute)
Three $10^{\prime \prime} 331 / 3$ LP records ( 96 minutes of recording, 28 recordings), 47 identification cards 8 words per minute. Wt. 3 lbs.


No. 33A150. 0479. Net Each.
. 59.50

o 20 words per minute). Three $10^{\prime \prime}$ ' $331 / 3$ RPM LP records ( 96 minutes o recording, 18 recordings) and the book trains you to receive up to 20 words per minute. Shpg. wt. 3 lbs.
No. 33A151. 0484. Net Eoch.
Complete Course-Consists of both of obove courses.

## Headphones and Listening Aids


(2) Single Heodset, 1000 ohms. With $41 / 2 \mathrm{ft}$ cord and pin tips. No. 22B154. Net Eoch

ALNICO V HEADSET Double Headset
No. 22B173. Each (1) With $1 / 4^{\prime \prime}$ Phone Plug. No. 22B153. Each

## FOR RADIO AMATEURS

 SHORT WAVE LISTENING CRYSTAL SETS, ETC.CANNON BALL No. 15
Popular small size, light weight, extro mognets to assure by Alnico No. Videlity sponse and excellent volume. Sturdily constructed of durable black plastic. Diometer of diophrogm is $17 / 8^{\prime \prime}$. Adjustable spring steel headband. Complete with $41 / 2 \mathrm{ft}$. cord. 2000 ohms. 52.38 52.58 S1.29
(1) TRIMM ACME DELUXE HEADSET

Superior low cost headset for use with crysial sets code training, all radio communicotions. Double tubular headband, $41 / 2 \mathrm{ft}$. cord. Bakelite shell ond cap. 4000 ohms No. 22A363. Net Each
(1) SUPEREX STEREO PHONES

Ideal for stereo private listening, language labs, and many other uses. Double headphone type with separote leads to each earphone. Has viny covered spring steel headband, spring tension adjustment, nickel plated parts. Phone units feature Alnico $V$ magnets, dual coils, surface ground pole pieces, and shockproof, unbreakable case. Leads are stripped and
tinned, less phone plug. Mfg. list $\$ 4.25$. Shpg. wt. 2 lbs. tinned, less phone plug. Mfg. list $\$ 4.25$. Shpg. Wt. 2 lbs.
No. 22A179. Model ST-48. 4-8 Ohm Impedance. Net Each No. 22A180. Model ST-2000. 2000 Ohm Impedance. Net Each
52.54


## TRIMM PROFESSIONAL

## HIGHEST QUALITY

HEADPHONES
(1) Featherweight. World famous, only $41 / 2$ oz.
Highly sensitive. Cobalt steel alloy magnets, impregnated coils. 24,000 ohms.
(2) Trimm "L" Type Headsets. No. 22B140. Net Each. Highest quality magnetic units with molded
$\$ 6.60$ shells, vinyl covered adjustable headband and over-the-head neoprene cord. Prolonged exposure to heat and humidity do not offect performance. Response 50 to 9000 cps . Highly recommended far educational training, broadcast work and communications. With ottached $1 / 4^{\prime \prime}$ standard plug. Stk. No.
$22 \mathrm{~B} 143.56-088 \mathrm{Ohm}$
$22 \mathrm{~B} 144.56-2 \mathrm{M} 2000 \mathrm{O}$

Each
$\$ 16.59$
Each 22B144. 56-2M 2000 Ohm 16.59

## TRIMM HEADSET KITS

## FOR TELEVISION AND RADIO

For private radio and TV listening without disturbing others. Ideal for the hard of hearing. Consists of high quality, low impedance headphones, brown hammertone control box complete with switch and volume control, 15 ft . of wire, and complete instructions for simple attachment to set. Additional headset listed listen ot once. Wt. 3 lbs. Mfg. list $\$ 11.90$. \$7. 14 No. 228152. Extra 40 hm Headset for above. \$2.B5


FOR GROUP HEARING AID YSTEMS IN CHURCHES,

TRIMM OUTLET BOX

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Tunes FM-AM standard broodcasts, plus 3.9-12 MC shortwove. Superb design and construction by the fomous Ponasonic. Provides magnificent tone from a big 5 -inch speaker and powerful high-fidelity solid state audio system. Big set sound eosily overcomes outo noises, gives you delightful listening as you drive then you simply slide it out and take it with you on beach, boat or picnic.
Feotures varicble tone control, AFC for perfect driftfree FM, slide-rule vernier tuning, push button dial light, telescopic antenna. Has jock's for earphone, external amplifier, multiplex output, phano input, externol antenno
Beautiful black plostic cose is trimmed with silver ponel and occents. Size $101 / 2 \times 7 / 8 \times 23 /$
and batteries. Shpg. Wt. 6 lbs.
\$54.95 No. 32B155. High Quolity Import
No. 328156. Auto Mounting Brocket ond Lock. $\$ 10.95$
No. 32 B157. Bottery Kit. (4-ER935 Flashlight Cells) 56 c


AUTOMATIC TUNING PORTABLE-CAR RADIO

## 3-BANDS <br> FM/AM/MARINE <br> 

- Loy Down. Stand Up
- Carry-about. - Use accessory mount for outo or boot

Features world's first electronically controlled Touch N'Tune 3-band dialing system. Now you can have the wonderful convenience of outomotic tuning everywhere Wy simply touching the selector. Tuning locks in on next station without tedious adjustment.
Powerful solid state chassis has 18 transistors plus 12 diodes. Wide range oudio system and big 5 -inch speoker produces 2 watts output for portoble use, 2.9 watts for auto use. Hos AFC for drift-free FM, telescopic swivel ontenna, continuous tone control, jacks for earphone. In deluxe black molded case with silver trim. Size $1018 \times 71 / 4 \times 33 / 8^{\prime \prime}$. With earphone and $4^{\prime \prime} \mathrm{D}^{\prime}$ size long-life batteries. Wt. 6 lbs.
No. 32 2 B176. High Quality Import. Net Eo.... $\$ 79.95$ No. 32B177. Auto Mounting Brocket © Lock .... $\$ 14.95$

## THE WORLD FAMOUS

## NORDMENDE

FM-AM-MARINE-LONG WAVE -PLUS II BANDSPREAD SHORTWAVE

## BANDS

mouits In auro or boat
Slides in and out easily


## 15 BAND PORTABLE

## entire world onecision product of West Germany! Listen to the

 entire world on shortwove $11,13,16,19,25,31,41,49,59$61 and 80 meters, plus $1.5-3.5 \mathrm{MC}$ marine band and $150-400$ KC long wove band for aireraft. It's a hi-fi system all Its own with standard AM and FM rodio, input jacks for phono and tope recorder, 3 separate slide-rule dials, 3 built-in ontennas, tuning indicator, push-button dial light, drift-free FM. Hos jocks for all these: earphone, extension speaker, AC odaptor, external ontenno. 14 tronsistors, 12 diodes, full range $6 \times 9^{\prime \prime}$ speaker, up to 4 watts undistorted audio output when on external power, $81 / 8 \times 4^{\prime \prime}$. $\$ 169.95$ No. 368350 . Shpg. wt. 12 lbs . Net Eoch \$ 69.95
 12 V .1 Rodio slips in or out. Has lock. Net Each........ \$21.95
No. 36 B 352.110 V . AC Adoptor for home use. Eoch.... $\$ 16.88$ No. 36B354. 5 " ${ }^{\circ}$ "' Cell Botteries for portable use................ 70 C

## NORD\|ENDE

GLOBETRAVELER JR. FM/AM LONG WAVE 9 BAND PORTABLE s 109 "

NOTHING DOWN

- Shortwove-6 Bonds.
- For Portoble, Home, Car or Boat Use.

Same high performance and quality-most of the features of radia above. Tunes the shortwave croft 150-400 KC os well os the standard AM and FM broodcasts. Hos visual battery tester tuning meter, built-in AM ferrite rod antenna, telescoping FM/ Shortwave antenno, jocks for external antenno, earphanes and phono. 11 -transistors, 11 diodes, full range $5 \times 7^{\prime \prime}$ speaker, up to 4 watts output on extarnal power. 2 watts on No. 368352.110 V. AC Adaptor.

## MRAl|tDIIf

## - High-fidellty sound.

 - AM/FM 1.7-12 MC SW- Fine tuning all bonds.

Superlative listening pleosure, luxurious good looks pares with units selling for $\$ 30.00$ ond $\$ 40.00$ more! well as Police colls Haten to for-away foreign stations weil as Police calls, Hams, boats of sea, etc. on the two SW Tunes 88 -108 MC FM, $540-1600 \mathrm{KC}$ Tunes 88-108 MC FM, 540-1600 KC AM 1.7-5 MC Marine SW and $5-12 \mathrm{MC}$ SW. Variable tone control lets you emphasize nier tuning, 7 ", slide-rule dial, push button dial light. AFC for drift free 'FM, telescoping FA-SW antenno $7^{\prime \prime}$ ferrite AM drift free FM, telesco Polishad
Polished block molded case with wood-grain panel, chrome hordware and die-cost mesh speaker, grille. Size $10 \times 61 / 2 \times 3$ " No. 61A23. $\$ 49.95$
No. 61 A25. 115 V. AC Adoptor for hame current. Each.... $\$ 4.50$


modern space-age circuitry ( 8 semi-conductors) for real station getting power. Large $5 \times 3^{\prime \prime}$ dynamic speaker delivers sparkling room-filling sound. Variable tone control adjusts in-filing highs for personal listening taste. Brushed and highs for personal listening taste. Brushed gold ures $111 / 4 \times 61 / 4 \times 43 / 4^{\prime \prime}$. 117 V . AC only. Top quality import. Shpg. wt. 14 lbs. $\$ 29.95$

- Handsome, high styled walnut veneer cabinet.
- Full fegture Telechron Clock with snooze button and lighted dial.
Offers the superior performance of solid state electronics - cool operation, long life, instont sound-plus a full feature clock and all wood cabinet . . . at a really low budget price! Precision tuning slide-rule dial combines with 2




## ARVIN SOLID-STATE

 AM RADIO \$14.95- Smort, two pedestal styling.
- Built-in ontenne pulls in many hard-to-get stations. Amazing quality at surprisingly low cost! Tops in performonce and styling too ... a welcame componion for any room in the house. Powerful solid state chossis features 4 transistars plus 2 diodes and rectifier for instant play, cool operation and long life. $4^{\prime \prime}$ velvet voice spéaker delivers exceptionally cleor, bright sound. High-impact plastic cabinet size $103 / 8 \times 51 / 2 \mathrm{H} \times 3 \mathrm{~g} . \mathrm{D}^{2} 115 \mathrm{~V} .60 \mathrm{cy}$. AC only.
Speclfy color: White or Beige.
No. 36 A287. Shpg. wt. $31 / 2$ lbs. Each.... $\$ 14.95$


DELUXE SOLID-STATE

## TWIN SPEAKER am radio <br> $\$ 19.95$

- Richly styled, walnut veneer wood cabinet. - Separate, continuous tone control.

Superb selectivity and sensitivity from modern up-to-the-minute solid state circuitry. Twin $5 \times 3^{\prime \prime}$ speak ers in wood cabinet delivers sound that approoches console quality. Precision tuning slide-rule dial, powerful 8 semiconductor chassis. All wood cabinet meosures $111 / 4 \times 61 / 4 \times 43 / 4^{\prime \prime}$. All wood cabinet measBrushed gold control panel. 117 V. AC only. Shpg.



GENERAL ELEGTRIC AM CLOCK RADIO \$14.95

- Lulls you to sleep, wokes you to music, allows extra 40 winks.

Remarkable volue! Bright, versatile styling-wide ronge sound performance-full featured clock/olarm system in this hondsome budget toilored entertainment leader
Printed circuit chassis with 4 tubes plus rectifier; 4" dynamic speaker, drift compensation and automotic volume control for steady reception.
White polystyrene cobinet, size $53 /$ " $^{\prime \prime} \mathrm{H} \times 11^{\prime \prime} \mathrm{W}$.


- Distinctive new compact, upright cabinet design.
- Full feature clock has slumber switch, repeat-a-cali alarm.

Exciting new slim, upright styling, advanced solid-stote instant play radio with the added luxury of a full feoture clock. Radio is no larger than many clocks alone!

Play it anywhere .... on the table, desk, cabinet, bed headboard, bookcose, etc. . it's never in the woy. 8 semiconductor solid state circuitry and Velvet Voice speoker deliver full, rich bodied sound. Slide-rule dial, built-in long distance antenna. Walnut woodorain plastic case, size $41 / 2^{\prime \prime} \mathrm{W}$. $\times 73 / 4^{\prime \prime} \mathrm{H} . \times 33 / 4^{\prime \prime} \mathrm{D} .115 \mathrm{~V} . \mathrm{AC}$ No. 368288.
Each.
\$22.95

# SPECIALLY IMPORTED BY B-A TO PRESENT THE FINEST FM/AM RADIO VALUE WE'VE SEEN! FM/AM TABLE RADIO WHTH FOUR SPEAKERS 

## FOR MAGNIFICENT

 TONAL QUALITY- Elegant walnst wood-grained cabinet with silver trim styled to grocz any decor
Drift-free FM with automatic frequency cantrol to lock-
in stotions. $4 \times 6^{\prime \prime}$ dynomic speakers plus two $21 / 4^{\prime \prime} \mathrm{hlgh}$ frequency tweeters for figh fidelity sound.
- Variable tone control for blending of tones to sult personal tastes.

No other set B-A has tested meets the standard of performance of tris fine rodio of such a surprisingly low price. Blends rich boss tones and clean crisp highs for a dramatic experience in listening enjoyment. Powerful 7 tube, silicon rectifier chassis pulls-in stations sharply and clearly. Built-in rod antenno for $A M_{\text {r }}$ lead wire for FM. Also external FM antenna terminals. Separate vernier dials for $F M$ and $A A_{\text {w }}$ with indicator lights. Measures $113 / 4^{\prime \prime} \mathrm{W}$.
 15. 36 .
No.


GENERAL ELEGTRIG FM/AM TABLE RADIO

$\$ 44.95$

- Continuous boss/treble tone control.
- Night light tuning dial.
- Attractive thin-line, wolnut finished hordwood cabinet.
Marvel of space-age electronies design. Solid-state circuitry utlizing 10 tronsistors, 5 diodes plus rectifier provides a new high standard of performance never before possible in a radio of this size. Beoutiful hardwood cabinetry for fine furniture look and finest sound resononce from two wide-range dynamic speakers big $6 \times 4^{\prime \prime}$ and $31 / 2^{\prime \prime}$. Long-range FM/AM pull-in power. AFC eliminates drifting. Size only $71 / 4^{\prime \prime} \mathrm{H}$., $101 / 2^{" 1}$ W., $41 / 4^{\prime \prime} \mathrm{D}^{\text {D }}$ Shpg. wt. $71 / 2 \mathrm{lbs}$.
No. 36 A380. Each
\$44.95


## HIGH FIDELITY FM/AM

## TABLE RADIO \$49.95

- Solid stote circuitry gives instont sound.

Tuned RF stage for improved reception with AFC to prevent drifting.
You will be amazed by the depth and beauty of sound provided by this irresistible toble radio. Extra powerful $61 / 2^{\prime \prime}$ dynamic speaker and 3 watts of power output for unusually fine tone. Quality engineered solid state chassis with 10 transistors, 7 diodes, rectifier. Built-in FM/AM antennos. Continuously variable tone contral. Slide-rule dial with logging scale for pin-point funing. Measures
$191 / 8 \times 9{ }^{3} \times 5{ }^{\prime \prime}$. Fine import. Shpg. wt. $71 / 2 \mathrm{lbs}$. 191/893 ${ }^{3} \times 53^{\prime \prime}$. Fine import. Shpg, wt. $71 / 2 \mathrm{lbs}$.
No. 364379.
No. 364379.
Each.


SOLID-STATE FM/AM

## TABLE RADIO <br> $\$ 29.95$

- Handsome, richly styled walnut wood spoce-sover cabinet, $31 / 2 \times 51 / 2 \times 10^{\prime \prime}$
- Built-in AFC for drift-free FM performance. Remarkable performer. Large 5"" oval speaker augmented by resonont wood cobinet provides pleasing rich sound as you prefer it. Cool long-life instont-on solid stote circuiiry, 18 transistors, 5 diodes, 2 silidistont stotions with exceptionol sensitivity and distant stations with exceptionol sensitivity and
razor-sharp selectivity. Easy slide-rule tuning. Beoul razor-sharp selectivity. Easy slide-rule tuning. Beou-
tifully mode to grace any decor. 115 V .60 cy . AC
 No. 364357 . Import Special Eech.
$\$ 29.95$


1 GE FM/AM CLOCK RADIO $\$ \mathbf{\$ 9 . 9 5}$


3 GE AM/FM TABLE RADIO \$54.95


2 DELUXE AM/FM CLOCK RADIO $\$ 39.95$


4 PANASONIC CLOCK RADIO $\$ 49.95$

## 1 GENERAL ELECTRIC FM/AM SOLID-STATE/INSTANT-SOUND CLOCK TABLE RADIO

doEs more for you automatically than ANY OTHER CLOCK RADIO WE SELL
Discover new, brilliont performance provided by GE's very finest toble model FM/AM clock radio Instont transistorized power fills the room with musicol magnificence for your listening pleasure. Reol station getting power with 10 tronsistors, 5 diodes, plus rectifier ond printed circuit chassis
for the for the greatest reliability. Built-in extro circuits guarantee clearest reception. AFC pin-points stotion selection for drift-free FM. Full-featured
clock system ind clock system includes: Vori-Lorm control, SnoozAlarm, Slumber Switch, Vue-Alarm and GE's new dramatically lighted clock dial. Numbers are individually lighted by luminous background creating o soft glowing effect so much easier to read at night. Built-in extremely sensitive FM/AM antenna systems plus external FM connections with 30 wire aftached. For your selection-the finest crafted hardwood cabinetry in contemporary wal${ }_{93 / 4 "}$ "or period antique cherry finish. Dimensions AC. shpg. wt. 10 ibs. specify wainut or Antique Cherry. No. 364381.
Choice Eoch
$\$ 69.95$
FM/AM RADIO. Some radlo as above, less clock. Dimensions: $93 / 4^{\prime \prime} \mathrm{H} \times 17^{\prime \prime} \mathrm{W} \times 6^{\prime \prime} \mathrm{D}$. Shpg. wt. $91 / 2 \mathrm{lbs}$. Specify Wolnut or Antlque Cherry. No. 36 A382.
Choice Eoch.
\$59.95

## 2 SOLID-STATE/ANSTANT-SOUND DELUXE AM/FM CLOCK RADIO

Looks right at home in any room!
Thrill to the big sound and superb performance of this very special import. Super-powered by a
15
semiconductor circuit with an undistorted 15 semiconductor circuit with an undistorted output of 1 watt. Large $4^{\prime \prime}$ PM dynamic speaker baffled by on exquisite wolnut veneered cobinet with brushed gold control panel, complemented by the finest grille cloth. Continuous tone control. Slide-rule precision tuning. AFC ossures perfect drift-free FM reception.
Full feature Telechron clock has lighted dial ... snooz feature too-simply tap the button on the top and cotch of few extro cat-naps.
Beoutlifully styled wolnut veneered wooden cabinet $65 / 8 \times 141 / 8 \times 47 / 8^{\prime \prime}$. Operates on 117 volt AC. Shpg. wt. 17 lbs .
$\$ 39.95$ No. 36A377. Import Special Eoch

## 3 GENERAL ELECTRIC FM/AM

## TABLE RADIO

 WITH FULL FEATURED CLOCK FASHIONED IN HANDSOME THIN-LINE STYLING WITH THE ELEGANCE OF WALNUT FINISHED HARDWOODA reol beauty to grace ony decor while providing magnificent performance.
Takes full advantage of hordwood cabinetry for finest resonance and sound. Large $6 \times 4^{\prime \prime}$ widerange speaker for full rich tonal quality.
Instant-on solid state circuitry delivers extra long range station gefting power, built-in extra circuits assure clearest reception and pin-point program assure clearest reception and pin-point progran
selection. Continuous boss/treble tone control Selection. Continuous bass/treble tone control. ontenna, $30^{\prime \prime}$ wire and external connections for FM.
Mare features than any other clock. Lulls you to sleep, shuts itself-off automaticolly', wakes you to music or alarm; snooz-bar allows 40 winks; vari-larm wakes you an hour earlier or later without resetting, just press a switch in front. GE's new, conveniently lighted clock dial with easy to read numerals creates a soft, glowing effect for easier reading at night. Vue-alarm (tiny red light) lets you know when olarm is set.

Atsractive walnut finished hardwood cabinet is $73 / 4^{\prime \prime} \mathrm{H} \times 111 /^{\prime \prime} \mathrm{W} . \times 4 \frac{1}{2 \prime 2} \mathrm{D}$. No. 36 C 182.
$\$ 54.95$

## 4 PANASONIC FM/AM SOLID-STATE/INSTANT SOUND CLOCK RADIO

74 solid statc devices and solid walnut cabinetpurposely engineered and completely motched to achieve unbelievingly thrilling sound-yet the convenient $121 / 2 \times 51 / 8 \times 71 / 4^{\prime \prime}$ small size invites its use anywhere in your home as a clock radio... as a table radio . . as a mantel clock adding a touch of elegance to any decor
Finest quality features include: Slide-rule precision tuning dlal. Full feoture Telechron clock ... Iulls you to sleep and turns itself off . next morning you awaken to lovely FM or AM music. Lighted clock face and alarm set indicator. Powerful $4^{\prime \prime}$ PM dynamic speaker and built-in antennas for both drift-free FM and AM. Push-pull oudio circuitry. High sensitivity and very low power conNo. 36 A 375 .
Import Special Eoch.
$\$ 49.95$

## OUR VERY BEST BUY! <br> 

WITH AFC FOR DRIFTFREE PERFORMAMCE
\$27 ${ }^{\mathbf{8 8}}$

## Unbelievable

 Power-pocked 5 tubes, 3 transistors, plus rectifier radio chassis featuring solid-stote tuning stoge for extra reliability. AFC on FM for driff-free reception. Slide-rule dial with precision vernier uning and logging scale. Separate ontennae for FM and $A M$ with external $F M$ antenna connection also provided. RF amplifier on FM. AVC on AM. Powerful $4^{\prime \prime}$ dynamic speoker for pleasing Dependable GE clock with outomatic woke-tomusic, or music/alarm, snooz-alorm and slumber switch.Acoustically designed shatter-proof polystyrene cabinet handsomely styled. Size $145 / \mathrm{g}^{\prime \prime}$ W., 75/8" H ibs.
No. 368255-Nutmeg Brown
No. 36 C 263 -Antique White
Each
Eace $\mathbf{2 7 . 8 8}$


2 PANASONIC FM/AM-FM STEREO RADIO $\mathbf{\$ 9 9 . 9 5}$

## a FANTASTIC BUY!



## PM/AM/FM STEREOPHONIC

 TABLE RADIOWITM DELUXE WALNUT
"WOOD-GRAIN"

## CABANET

569"5
Jequalled sound and appearance at such low cost! A mosterplece of listering pleasure, with wideanced 5 "speakers, double-power stereo amplifier. Eult-range, tone, volume, and stereo balance controls vary listening conditions to personal toste. Precision built and power-packed with 9 tubes, 7 diodes, and solid-state rectifier, for superb recestion of AM, FM, and FM stereo. Automotic AFC locks-in all stations. Gets even far-distant stations with sensitive built-in line cord antenma for FM, and large ferrite-core AM ontenno. Lighted dial has aceurate indirect-drive tuning plus FM stereo indicator light that automatically indicates FM multipiex stereo broadcosts size $183 / 4 \times 63 / 4 \times 73 /{ }^{\prime \prime \prime}$. S.ipg wt. 16 lbs.
No. $36 C 99$. Net Eoch......................... $\$ 69.95$ Na. $\mathbf{3} 6 \mathrm{C99}$. Net Eoch

1

# PANASONIC 

SOLID-STATE FM/AM-FM STEREO RADIO WITM SEPARATE SPEAKER SYSTEMS

TME ULTIMATE IN STEREO WIGH FIDELITY RECEPTION


ANOTHER PANASONIC FIRST AUTOMATIC TUNING
IN A STEREO TABLE RADIO

- 26 Transistors, 15 diodes.
- Full 12 watts music power
- Separate walnut speaker systems. 2-7" woofers and 2-21/2 tweeters.
- llluminated diat.

In looks, sound and in quality this is the industry standard by which all other radios are measured. Meets the requirements of the most discriminoting listener. Beoutiful motched walnut speaker systems with $7^{\prime \prime}$ woofers and $21 / 2^{\prime \prime}$ tweeters plus big 12 watt music power omplifier provides true concert repioduction.
Fingertip-touch motor-driven dial regulotes forward and reverse of outomatic tuning. Local-distont switch adjusts automotic tuning to desired sensitivity. Stereo bolonce meter permits visuol bolancing of speaker systems. Continuous treble and bass control, built in FM/AM antennas, automatic frequency contral and tuned RF stage for FM, stereo eye plus numerous other features make this the finest radio of its kind on the market todoy. For $110-120 \mathrm{~V}$ AC. Dimensions: Main Cabinet, $191 / 2 \times 131 / 8 \times 51 / 4^{\prime \prime} ;$ Speaker cabinets:


## 2 PANASONIC FM/AM-FM STEREO RADIO WITM SEPARATE SPEAKER SYSTEM

- All solid state, 21 transistors, 13 diodes.
- 10 watts of music power.
- Beautiful solid walnut cabinetry.
- Striking illuminated funing dial.

As beoutiful to look at as it is to listen to. Matched handsome walnut speaker systems fit anywhere... in bookcase, on table, or may be hung on wall
Permits fullest stereo separation taking advantage of matched and balanced $61 / 2^{\prime \prime}$ console type efeakers. Exclusive stereo eve system permits pinspeakers. Exclusive stereo eye Built-in FM automotic prequency contral assures sharp drift-free recepfrequency control ossures sharp drift-free recepance controls to toke fullest advantage of radio performance. performance.
built-in line cord FM antenno and ferrite core AM antenna for super sensitive reception.
Dimensions: $161 / 2 \times 31 / 8 \times 10^{\prime \prime}$. Speakers $81 / 4 \times 82 \times$ $81 / 2^{\prime \prime}$. Operates on 115 V .60 cy . AC. Shpg. wt. No. 39A256. Model RE767. Net Ea..... \$99.95

## 3 EXCEPTIONAL IMPORT VALUE 4-SPEAKER FM/AM-FM STEREO RADIO

- Handsome piono finish wolnut cabinet.

4 high-fidelity speokers, 2-5" woofers, 2-4" tweeters.
tweeters. 10 diodes

- Multiplex indicotor light.
- No drift FM circuitry.
- No drift FM circuitry.

Enjoy breathtoking high-fidelity sound from $A M$ Enjoy breathtaking high-fidelity sound frings out the FM deep bass tones from two heavh-frequency range. Tweeters extend the briliont high- inegusts lows and hiahs for personalized listening Bolonce cantrol highs for personolized adjusts volume between chanels providing perfect sterea listening. No-drift circuitry ossures stable reception. Powerful 11 -tube, 10 diode chossis is extremely sensive is beared down for easy tun tion. Slide rule dial is geared down for easy tun ing. Indicatar light shows when set is on. Wood cabinet has fine furniture walnut finish Distinctive grite cloth mate $\mathrm{H}^{\prime \prime} \times 73$ "0 pane Dimensions: $26^{\prime \prime} \mathrm{W} \times 10^{\prime \prime} \mathrm{H} \times 73 / 8^{\prime \prime} \mathrm{D}$. Shpg. wt. 15 lbs
No. 36 C 5
No. 36485 . Speciol Eoch.
$\$ 59.95$

## NEW IMPROVED MODEL OF B-A'S BEST SELLING TVI

## 3 <br> PANASONIC

## SOLID-STATE "DELUXE" 82-CHANNEL 9-INCH PORTABLE TV <br> 9 INCH MEASURED DIAGONALEY WITH FULL 39.2 SQ. IN. VIEWING AREA

## USE IT ANYWHERE OPERATES ON ELECTRICITY OR BATTERY <br> ${ }^{8} 119^{95}$

SUPER SHARP ... SUPER BRIGHT PICTURE
FOR THE WHOLE FAMILY TO SEE ... EVEN IN BROAD DAYLIGHT Produced by world-famous Matsushita-your guorontee of unsurpassed quality. Welghs little more than personal size $4^{\prime \prime}$ or $5^{\prime \prime}$ models yet has a screen more than 3 times larger how the whole family con enjoy sharp, clear pictures together.
Operotes anywhere ..goes anywhere. Plugs into standard 115 V . AC outlet or plug into cigarette lighter of car or boat. Operates also with bottery-pack and charger (see below for accessories)
Pleasing sound from full range $4^{\prime \prime}$ oval dynomic speaker and powerful amplifier. Transistor circuitry with 43 solid-state devices: 26 transistors, 13 diodes plus 4 rectifiers. Special allov diffused RF transistors for extreme sensitivity and picture definition. Aluminized picture tube for maximum brightness and contrast. Uses less than 1 amp. on 12 V . DC, 20 VA with 115 volts 60 cy . Two $101 / 2 \times 87 / 8^{\prime \prime}$. Shpg. wt. 15 lbs. Fine quality import and chrome trim. Size $81 / 4 x$ No. 36 B180. Model TR9O1. Speciol Each import.
\$119.95
WITH AUTOMATIC TIMER otherwise identical to above. Timer can be set for up to one hour...then relox, even fall asleep and the set turns itself off automatically. Shpg. wt. 15 lbs . 12 V. DC P Model TR-902D. Each
$\$ 129.95$
12 V. DC Power Cord. Plugs into cigarette lighter of car or boot.


COMPLETELY NEW! BRILLIANTLY DESIGNED! BEAUTIFUL WALNUT-GRAINED HIGH IMPACT PLASTIC CABINET

SUPER PULL-IN POWER... EVEN IN FRINGE AREAS

GREAT FOR OUTDOORS Yet deliberately styled TO ENHANCE INTERIORS
panasonic SOLID-STATE

## 9-INCH 82-CMANNEI. PORTABLE TV

## With BUILT-IN FM/AM RADIO and TIMER

## 9 INCH MEASURED DIAGONALLY... WITH FULL 39.2 Sa. IN. VIEWING

## ${ }^{8} 159^{95}$

TV or radio outomatically. -9" $90^{\circ}$ deflection aluminized picture tube. Monopole telescopic swivel and loop ontennas. - 400 MW audio output. - Control circuits: active power filter (APF): outomotic noise conceller; peok AGC. 115 volts AC. Weighs only, 13 lbs. and measures a compoct 8 fix $123 / 8 \times 9^{\prime \prime \prime}$. Shpg. wt. 16 lbs .
No. 36A181. Model TR903R. Each ... \$159.95 No. 37A560. Battery Pack with Charger........ $\$ 29.95$

OPERATES IN AUTO OR BOAT OR FROM RECHARGEABLE BATTERY-PACK (See Accessories) OR PLUGS INTO ANY STANDARD 115 VOLT AC OUTLET


- Truly portable . . .weighs only 24 - Automatic fine tuning . . . preset and lbs
- Big $11^{\prime \prime}$ overall diagonal tube- 60 sa. inch picture. - Earphone for private listening.
forget.
Keyed automatic gain control for constant picture . . . minimizes airplane flutter and picture fading.

New improved model of America's most remarkable entertainment innovation. Vivid color pictures that will thrill you ... and you can easily take and enjoy it wherever you like because it's truly portable. Precision engineered for sharp VHF and UHF (all 82 chonnels) color and black and white reception of both nearby and fringe area stations. Illuminated controls for extra tuning convenience. Bult-in dipole telescoping antenna for VHF, sensitive loop for UHF. Just plug it in. and play anywhere. Degausser quards against distortion. Static-tree FM quality sound with $3^{\prime \prime \prime}$ dynapower speaker. Handsome, yet rugged high-im-


## ONE YEAR SERYICE WARRANTY

EASY TO OWIW! EASY TO OPERATE!
Free repair, lobor and parts, in event of monufocturing defects during first year of purchose. Toke set, with proof of purchose dote, to ony authorized GE TV service ogency in U.S.A.


> TAKE YOUR SET ANYWHERE... operate on regular mouse CURRENT... FROM OPTIONAL BATTERT PAGR OR PLHE INTO GGARETTE LIGHTER OF AUTO OR BOAT

No. $61 / 1^{2} 130$. Shpg. wt. 27 lbs . Each.


## IN POPULAR CHOICE OF PICTURE SIZES

Most convenient set you will buy. Extra aependubie transistor. circuitry gives cool, long-life operation-no tubes to burnout. Pick-up easily by luggage handle and carry, everywhere, so compact and lightweight. Sharpest black and white pictures from both nearby ond fringe arec stations, tunes all 82 icture quolity regordess of slgnal strength, minimizes airplone flutter ond picture foding. Operates on 120 V .60 cy . AC or minimizes arplane flutter ond picture foding. from optional battery pack (see below). Also from auto or boat battery, plistening without disturbing others.

$$
\text { MODEL TR812CYY WITH BIG } 74 \text { SQUARE INCH }
$$

VIEWING AREA USING 12 -INCH TUBE
Weighs only $141 / 2 \mathrm{lbs}$ Overaflesures $123 / 4^{\prime \prime} \mathrm{W}$. $13^{\prime \prime} \mathrm{H}, 101 / 2^{\prime \prime} \mathrm{D}$. Rugged hiimpact polystyrene plostic cabinet. Shpg. wt. 16 liss.
$\$ 114.95$ impact polystyrene Dlastic

## MODEL TR814CEB WITH BUILT-IN CHARGER

Camplete with snap-on cover to protect set when being corried. Other features Canple wize
No. 36A384. Ebony. Each.
$\$ 129.95$
MODEL TR853CVY-16-INCH WITH LARGER 125 SQUARE INCH
VIEWING AREA (Overall Diagonal Tube Measurement)
Complete with built-in bottery charger. Size $153 / 4^{\prime \prime}$ W., $157 / 8^{\prime \prime} \mathrm{H} ., 121 / 2^{\prime \prime} \mathrm{D}$ Weighs only $191 / 2 \mathrm{lbs}$. Hi-impoct polystyrene cabinet.
No. 36A385. Ivory Chaice
$\$ 139.95$
No. 36A385. Vory Chaic


Puilt out the gleaming chrome 48" whip antenna, flip the switch and you're on the air.
High impact gray cases have metol speaker grilles. Operates on Citizens Band channel 14. Readily picked up on base station obove or on other walkie tolkie operat-
ing on same channel. GE's solid state circuitry assures long, trouble-free operation. On/off volume control. Permits proper adjustment of receiving volume control.


## B-A's POPULAR 4-BAND WORLD WIDE RECEIVER KIT



LOOK AT ALL TMESE FEATURES

- Covers 10, 15, 20, 40, 80 and 160 meter amateur bands, also citizen band, maritime, oeronautical, international broadcost, WWV, and Standard AM.
- Front panel band-switching.
- Built-in 4 inch loudspeaker.
- Front panel phone jock cuts out speaker for pri-
- 
- Band Spread tuning. Neon Panel light indicator.

Easy to build
band-switched band revelation to use. In four KC- $1600 \mathrm{KC} \quad 1650$ You have total coverage 550 $\mathrm{MC}, 16 \mathrm{MC}$ - 30 MC KC-5.5 MC, $5.5 \mathrm{MC}-16$ and foreign broadcasts as well as standerd ations, great aid to students of foreign stangard AM. A perfect way for the newcomer to start rodio.
Regenerative circuitry provides outstanding per formance yet is easy to build. Instruction book is so thorough with step-by-step details that anyone can build it. No coils to wind. Everything

## PLAYS 488 TRACK TAPE CARTRIDGES

# RANGER CAR STEREO tape player 



COMPLETE WITH FOUR SPEAKERS
$\$ 89^{95}$

> FULLY AUTOMATIC AND COMPATIBLE - INSTANTLY ACCEPTS EITHER 4 OR 8 TRACK CARTRIDGES

Simply insert either cartridge to start, remove to stop ... no switching required.
Channel automatically transfers at the end of each program track-has selector bar for manual change and provision for foot switch remote control. Illuminoted dial shows the channel that is playing.
Features finest electronic and mechanical design, solid state audio system, 4 watts per channel. Highly, styled, chrome and black, compact size $27 / 8 \times 77 / 8 \times 8^{\prime \prime}$ deep. With universal top or bottom mounting supports and four $5^{\prime \prime}$ heavy duty speakers and grilles. For 12 V . DC positive or negative ground. $\$ 89.95$
No. 32847 . Net Each.

## voluswagen <br> GUST•M transistor Radios



[^10]
## RANGER CUSTOM UNDER DASH LINE SLIM, TRIM...NEW APPROACH TO CAR RADIO STYLING <br> UNIVERSAL AM RADIO <br> $\$ 29^{95}$ <br> FITS ALL GARS <br>  <br> - Simplified installation. Modern walnut front trim. <br> - Matched appearance. All units $17 / 8 \times 4 \times 9^{\prime \prime}$ W.

## UNIVERSAL AM RADIO

Truly a product of American electronic and mechanical engineering genius. Designed for 6 or 12 V . positive or negotive ground cars. . Has
stage, $A V C$ better thon 15 microvolt sensitivity, stage, AVC, better thon control, internal speaker, continuously variable tone control, internal speaker, superb audio 6 transistors and 2 diodes. fits to the dash with adjustable brack $\mathbf{\$ 2 9 . 9 5}$
No. 32 Ib 2 . Model RR-18M. Net Each No. 32B49. Model RR-18M. Net Eoch

FM AUTO CONVERTER
Converts your existing AM radio to FM band. Made for 12 V . negative ground cars. Requires only the simplest connection to your radio, through the antenna lead, and no dismounting. AM/FM switch returns radio to normal AM operation. Also has multiplex plug for adapting to
sistors, 8 diodes, RF stoge, AFC. Wt. 4 Ibs. $\$ 3750$ No. 32 's51. Model RR-2ifC. Net Each
.97 .50
E

## RANGER CUSTOM TUNABLE REVERB

## DELUXE FM/AM RADIO

Complete auto radio entertainment in one compact under dash unit. Made for $12, \mathrm{~V}$. cars, negative or positive ground. External $5 \times 7$ heovy duty speaker and 3 watt oudio output reproduce the full range of FM and AM broadcasts. Has 11 tronsistors, 8 diodes, RF stoge, AVC, tone control, automatic trequency control, sensitivity 5 microvolts FM, 8 microvolts AM. Designed for the addition of Multiplex Adaptor below for FM stereophonic sound. $\$ \mathbf{1} 9 \mathbf{D}^{6}$
No. 32B50. Model RR-19FM. Net Each...
$\$ 59.95$

## FM MULTIPLEX ADAPTOR

For any AM/FM Radio or FM Converter to Stereo Sound. Styled exactly like other units illustrated. For 12 V . negative ground only. Has dual channel volume controls, dual tone controls, bolonce control, 6 watts each channel, 4 ohm output, and automatic "stereo" . Wt. 6 lbs No. 32A45. Model RR-23-MX. Net Each.
$\$ 74.50$

Matches appearance and size of the other custom under dash units described above. Produces pleasing, dimensional tonal quality from your rodio. Exclusive electronic tuning control "custom fits" the sound o your car "Ho your ear, Made be mounted like ive ground. Has $6 \times 9^{\prime \prime}$ speaker to be mounted like an ordinary rear seat speaker. Audio power output watts. Shpg. Wt. 5 lbs. No. 32B175. Model RR-22R. Net Each
$\$ 22.45$

## A VTOMATIG FM-AM ALL TRANSISTOR AUTO RADLO

## PBSH BUTTON

## TUNING BOTH

 FM AND AMMFG.LIST $\$ 104.95$


## MOUNTS IN DASH OR

 UNDER DASHTuned RF stages for max. sensitivity.

- Push button funing, both AM and FM.

Advanced design automatic freq. control.
Push pull cutput 16 watts peak power.
Complete with special antenna for moximum performonce.
Now! Enjoy static-free FM and finest AM in your cor ... a complete receiver covering 87.5-108.5 MC FM and 540 to 1610 KC AM at a cost of less than most AM outo radios. Deluxe features include five Quick-Set push buttons A.M. - 2 FM) farge vernier slide-rule funing dia, powerful 6 watt audio output to
speaker. FM Band has 4 IF stages; 1.5 micro volt sensitivity to 20 db signal ta noise ratio; image rejection better than 40 db ; AFC to facilitate tuning and prevent frequency shift; AGC to prevent overlood in strong signal areas.
AM features 3 micro volt sensitivity, newly designed AVC system to eliminate fading.
UNIVERSAL PUSH-BUTTON MODEL arranged for simple in-dash installation without need for extra trim plates ... or under dash mounting. Simple to move from car to car.
No. $32 \mathrm{B130}$. Mfg. List $\$ 104.95$. Net........ $\$ 79.95$


## 

- Tuned RF stage for fine sensitivity.
- Automatic volume control--tone controf switch.
- $21 / 2$ watts oudio output-heavy duty speaker.

Möst exciting universal auto radio borgain onywhere. Modern all solid-stote circuitry makes possible finest fraction of former car radio prices . . with no sacrifice in quality, appearance or features that make rodio listening a pleasure, such os effective AVC to prevent tading, tone contro switch and tuned RF amplification.
Mounts neatly and easily under the dash. So small that it just can't get in the way-only $6{ }^{\prime \prime} \times 2$ 每 $\times 65 / 8^{\prime \prime}$ .om built-in $5^{\prime \prime}$ oval speaker and operates with minimum battery drain from 12 volts negative or positive ground.
Priced way below the usual import price
No. 32B174.
$\$ 19.95$
157


NEW LOW PRICES ON B-A's

## BA-23 DELUXE 5 WATT

23 CHANNEL COMPATABILITY
15-DAY HOME TRIAL WITH FULL MONEY-BACK GUARANTEE

WITH TRANSMIT CRYSTAL FOR CH.11

## CNGINEFRED AND TESTED FOR FINEST PERFORMANGE AND DEPENDABIATT

## THOROUGHLY QUALITY CONTROL CHECKED BEFORE SHIPMENT

 All-Channel Receiver Tuning-The Ultimate in Flexibility.Specifications: Double conversion superheterodyne receiver, tunable 26.965 to 27.225 MC (channels $1-23$ ); sensitivity 0.4 microvolts for $6 \mathrm{db} \mathrm{S} / \mathrm{N}$ ratia; selectivity 6 db down $\frac{ \pm}{5} \mathrm{KC}_{\text {, }} 60 \mathrm{db}$ down $\pm{ }^{ \pm} 6 \mathrm{KC}$; positive acting squelch with adich series gate automatic noise imiterf 3.5 watts to internal PM speaker.
Tronsmitter section: 5 watts legal input, 3.4 watts minimum RF output, 52 Tronsmittor section: 5 watts legal connector, $100 \%$ modulation capabílity, ohms impedance, sotich ceramic push-to-talk plug-in microphone with coil modulation meter switch, ceramic push-to-taled pag-in mas and dust cover for dependable long life operation.
dependable long life operation.i7V. AC and 12 V . DC. Exceptionally rugged

Dependable Crystal Spating-puts your receiver exactly "'on channel" for standby. 23.Channel Transmit Crystal Selector. Front panel switching.
and trouble free design with built-in transistor switching for DC operation. Cabinet enclosure is steel with professional black wrinkle enamel finish and contrasting gray panel, trimmed in brushed aluminum. $121 / 2 \times 71 / 4 \times 41 / 4^{\prime}$ Supplied with microphone, crystal for channel 11, mobile mauniting bracket and both power cords.
No. 35Cl14, Model 8A23. Nef Egeh ................................. $\$ 10$ No. 35C252. Each......... $\$ 2.50$ EARANEL CRYSTALS——Specify Channe. $\$ 21.00$ SAVE on B-A CHIT-CHAT PACKAGE OF 5 IX CRYSTALS Crystals for talking to stations in another license group. Includes channels $9,10,12,13,14,23$ (Ch. 11 comes with Tronsceiver).
No. 35 C251. All 6 ' in Plastic Container.
Sperial
.$\$ 11.00$

## BEST CB VALUE WETVE EVER OFFERED: BA-8 5-WATT CITIZENS BAND TRANSCEIVER

*Exceptional receiver versatility: Crystal controlled on choice of 7 internal receive crystals as well as full 23 channels tunable. Transmit channel frequency control is by choice of 7 internal crystals plus !"quick-change", on the panel. Receiver tuning can be "spotted" to ony transmit crystal Other important receiver features: tuned RF stage; 0.3 mierovalt sensitivity ( 0.5 microvolts at $30 \%$ modulation); selectivity 6 db down $\pm 4 \mathrm{KC}, 60 \mathrm{db} \pm 25 \mathrm{KC}$ : illuminated " s " meter; automotic noise limiter; positive acting squelch that can be set to operate on any usable signal, audio output 3.5 watts maximum to internal speaker.
Transmitter: Power Input 5 watts, Dower output 3.4 watts minimum; Pi-network matching and SO239 coaxial connector for 52 ohm antennas; modulation, high level clipping at $100 \%$. Has ceramic microphone, coil cord and push-to-talk switching that uses no relays.
Power Supply. 117 V .60 cy . AC @ 40 watts; dependable vibrator type 12 V . DC supply operates at 4.5 A . on transmit, 3.8 A . on receive.
In heovy gauge steel cabinet with handsome durable black wrinkle finish and contrasting grey ,panel with brushed aluminum trim. Size $113 / 16 \times 63 / 4 \times 51 / 8^{\prime \prime}$ high. Supplied with microphone, mobile mounting bracket, $A C$ and $D C$ power cords and crystals for channel 11. . Net Each..... $\$ 79.95$
No. 35 B 115 . Wt. 9 lbs. Model BA-8. Extra Tronsmit ond Recetve Crystals. Specify Chonnel. No. 35 C 250 .

## Pair $\quad \$ 4.95$ For ....

Save on B-A "Chit-Chat" Package of 6 Pairs Crystals for talking to stations in onother license group. Includes transmit and receive crystals for channels 9, 10, 12, 13, 14,23 (Ch. 11 comes with Transceiver.) Nó. 35'B249. In Plastic Container. Special
$\$ 21.00$
*WITH 8 CHANNEL CRYSTAL CONTROL AND 23 CHANNEL TUNABLE RECEIVER

# $57 \cdot 2$ 

15-DAY HOME TRIAL WITH FULL MONEY-BACK guaramtee

## Less Transportation

 Chareses Only

ITS FINE FEATURES CAN'T BE BEAT FOR VALUE!

## JOHLSON MESSANGER CITFINS RADIO EQUPWHENT FOR PERSONAL OR BUSITESS 2-WAY COMMUWCATIONS

MESSENGER "100" \$129.95

## NEW MESSENGER "100" 5-WATT

ALL SOLID-STATE CB TRANSCEIVER
All transistor-Now with new extra features. Very small size $21 / 2 \times 6 \frac{1}{8} \times 83 / 4$ deep Has six channel crystol receive-tronsmit, norrow bandwidth, ${ }_{\text {squed }}$, dijustoble squelch, exceptional sensitivity, transmitter speech compression, full 3.5 wotts
$R F$ output, 3 W . audio power to internal RF output, ${ }^{3} \mathrm{~W}$. oudio power use os 3 W . PA internal speaker. Also hos jock ond switch for use os 3 W . PA amplifier. Wired for optional tone alert. For 12 V . DC.
With crystals for channel With crystals for chonnel 9 . Shpa. wt. 5 lbs.
No. 35A620. Johnson 242-156. Net Each....
$\$ 129.95$

## DELUXE MESSENGER III 5-WATT

ALL SOLID-STATE CB TRANSCEIVER
Features finest engineering and performance. Now 12 channels. 18 transistors, 9 diodes, double conversion superheterodyne, 0.4 microvolts sensitivity, 7 KC KC bondwidth. 2-stage self-compensating squelch, outomatic noise limiter. Transmitter is high level modulated, has speech clipping ond filter for high intelligibility for optional seaker, also provisions for external speaker and for 3 W. PA. Wired channel 9 crystals. Wt. 7 libs.
No. 35 A621. Johnson 242-143. Net Each...................... $\$ 159.95$

TRANSISTORIZED TONE ALERT
Plug-in selective calling system. Completely mutes the speaker until one of your units calls another. Automatically sounds audio note and lights indicator which remains on until call in answered. Eliminotes annoyance of unwonted signols
when on Stand-by.
No. 35B57. Johnson 250-827. For 100 and III Net Each.
\$69.95
No. ${ }^{354622}$. Pair Crystais for $10{ }^{\circ}$. Specify Channel. Net Pair
No. 35A623. Pair Crystals for III. Specify Channel. Net Poir


5-CHANMEL MESSENGER $\$ 99.95$

5 CHANNEL "MESSENGER"

## AT NEW LOWER COST

## The oin 5 wat

The original 5 watt 10 -tube transceiver popularly known as Messenger
Nationally
comomeus for its penetrating signal ond foithful performance. A components operate at only half their capability providing performance. All power ond dependability. Hos squelch, outomatic noise limiter AVC Size reserve $7 \times 113 / 8^{\prime \prime}$ deep. Sturdy steel cobinet, chrome front ponel With AVC. Size $55 / 8 \times$
 No. 35 C 216 . Johnson 242-127. For $6 \mathrm{~V} \cdot \mathrm{DC}-115 \mathrm{~V}$. AC. Net Each \$99.95 No. 358217 PACESES FOR TUBE MODEL MESSENGERS
No. 358218 Pair Crystals for Messenger One. Specify Channel. Pair
No. 35A592. Johnson 251-828 Massenger Two. Specify Channel. Pair
No. 35 B219. Johnson 251-830 Corry Handle. Net Each
$\$ 5.95$
5

## TRANSISTORIZED PERMAVIB

Permanently replaces vibrator in Messenger and Messenger Two. For $12 \mathrm{~V} D$ operation only, Quiet operating.
$\$ 8.95$
GET MAXIMUM RANGE FROW YOUR TRANSCEIVER


[^11]
## SINGIE NEW MESSENGER "350" <br> SINGLE SIDEBAND CB TRANSCEIVER

Gives up to $30 \%$ more range over ordinary 5 W . units when conditions are norAll, up to 3 times the range when noise and skip are bad.
All solid state circuitry uses 25 transistors, all diade switching, no mechanica either of tivity 0,2 two channels- -1 totol of 4 communicotions channels. Receiver sensiPower consumption, receive 0.3 A . transmit Audio 3 watts on receiver or PA

No. 35A624. Johnson 242-154. Net Each.
$\$ 299.50$
No. 35A625. Johnson 239-122-1. 115 Vach. AC Supply. Net Each $\$ 29.95$

OPTIONAL ACCESSORIES FOR 100 AND III AC POWER SUPPLIES FOR 115 V. BASE OPERATION No. 358385. Johnson 239-125-1.
For "100". Net Each.
$\$ 29.95$
No. 35B256. Johnson 250-823. For III. Net Eoch \$29.95

FIELD PACK FOR III. Fully portable. With rechargeoble battery.
No. 35A627. Johnson 250-845-1. Net Each
$\$ 69.95$
No. 35A628. Johnson 250-846-1 Charger.
$\$ 17.50$

## MESSENGER TWO

has tunable receiver and 10 Ch . Crystal control
New lower price plus the utmost in features ond performance make the top ronking Johnson Messenger an outstanding buy, performance make the top
tunable to all channels or instan hot receiver tunable to all channels or instantly crystal controlled on ony of 10 channels,
efficient noise limiter positive squelch and efficient noise limiter, positive squelch and very effective AVC. Highly effective
transmitter makes full
use of moximum lege
 No. 35 B 220 . Johnson $242-162$. For 6 V . DC-115 V. AC. Net Each $\$ 149.95$ No. 35 B227. Johnson 242 -163. For 12 V . DC-115 V. AC. Net Each ....... $\$ 149.95$

TONE ALERT FOR MESSENGER TWO
Plug-in selective calling system. Completely mutes the speaker until one of your units calls onother. Automatically sounds oudio note and lights indicotor
which remains on until coll is onswered. Elimindes which remains on until coll is onswered. Eliminates annoyances of unwanted No. 35C228. Johnson 250-811. Net Each.
$\$ 59.95$
Reour adaptor for adding tone alert to messenger one
No. 35 C 258 Johnson 250-819-1. Net Each
\$9.95


## VOLTAGE CONVERTER <br> FOR POWERING 12 V . TRANSISTORIZED CB SETS ON 6 TO 32 v. DC

New In-Converter, a versatile, compact unit that provides 12 V . DC at 14 watts, 1 omp. max. ond inverts polarity, if necessary, to allow CB instolla= other than 12 V . DC power. Size $53 / 4 \times 33 / 4$
No. 35C262. Johnson 239-120-1. Net
$\$ 22.95$

## JOHNSON BUSINESS-INDUSTRIAL 2-WAY RADIO \& RADIO PAGING SYSTEMS

# NEW CITIZENS RADIO EQUIPMENT FOR EVERYONE VERSATILE 2-waY TRANSCEIVERS FOR MOBILE OR BASE 

FOR BUSINESS, PROFESSIONAL \& PERSONAL USE

## BN <br> cobra $V$ 5-WATT

## SOLD STATE CB MOBILE TRANSGEIVER

### 50.195

5 Crystol Controlled Channels
All Silicon
Transistarized


Features outstanding selectivity, sensitivis formance of units costing much more.
Has arclufe Dyno-Boost speech compression for increased sideband power, 35 watts RF output with $100 \%$ modulation and twin-pi output network for increased efficiency. Receiver sensitivity is better than 0.5 microvolts for 10 db signal to noise ratio. Selectivity, 6 db down at 3 KC bandwidth. Audio output at least 2.5 watts. Has adjustablé squelch, automatic series gote noise limiter, solid state transmit/receive switching without relays. 12 silicon transistors, 7 diodes. Ceromic press-to-tolk microphone. Long life components throughout. Minioture size $2 \times 63 / 4 \times 93 / 4^{\prime \prime}$ D. Wolnut groined front. With crystals for channel $\$ 99.95$
lbs. 358162 . For lbs. $\mathbf{N o .} 35 \mathrm{B162}$. For $12 \mathrm{~V} . \mathrm{DC}$, negative ground. Net Each.

## a sensational new Value in cB AFICD "SENTINEL-PRO" MODEL 779-A 23-CHANNEL 5-WATT

## TRANSCEIVER



Nothing more to buy! 23-channel frequency synthesizing circuit provides full crysand conversion superhet 0.25 mi tol receive and tronsmit. And whol a noise atio excellent odjocent channel rejeccrovolt sensitivity for 10 do signal to noise ratio, excellent KC fine meter and relative power output meter, AGC circuit that prevents strong signal overload, 4 inch power output meter AGC circuit that prevents
Also hos PA/CB switch for 3.5 W . poging
Transmitter has pi-network tuning-loading controls, speech compression, modulation indicator, TVI filter, noise cancelling ceramic microphone.
internal dual power supply is transistorized. For 117 V 60 cy AC or 12 V negative ground Cabinet size $43 / 4 \times 123 / 8 \times 71 / 2^{\prime \prime}-$ vinyl finished steel. With mobile mounting bracket. W†. 14 lbs .
No. 35 B141. Net Each

NOW EVERY MOTORIST CAN MAVE 2-WAY RADIO FOR EMERGENCY AND CONVENIENCE USE

## NEW LOW COST CITI-FONE II 5-WATT CITIZEN RADIO FOR YOUR CAR

## $\$ 4995$

## Transistorized Transist Transmitter and Remitter Converter Works with Your Car

 Rodio

Fits eosily in glove comportment of under dash. Size $43 / 8 \times 11 / 2 \times 53 / 4{ }^{\prime \prime}$ D. So simple to connect that overage installation time is only 5 minutes. Requires no modification or dismounting of the car radio and the only attachment o it is through the antenna connector.
Consists of a full power 5-watt transmitter section with $100 \%$ high level modula tion and double pi-tuned output circuit to match any CB antenna, a receiving converter with tuned RF amplifier, $1 / 2$ microvolt sensitivity and spotting signal for tuning in the communication channel on the cor rodio. 9 -transistors, 2 diodes. Power source 12 V. DC, negotive ground. With press-to-tolk microp crystal for channel 9. Requires CB license for use. No. 35 C 95 . Wt. 3 lbs. Net Each
$\$ 49.95$

## 23-CHANNEL-ALL READY TO OPERATE

 COBRA CAM-88 5-WATT DELUXE MOBILE AND BASE STATION CB TRANSCEIVER


Leaves nothing to be desired! Has the exclusive B \& $k$ " "Dyna-Boost" speech compressor for extended range, full 5 watts input, modulation indicator, plug-in microphone, double conversion superheterodyne receiver with sensitivity of 0.5 microvolts or better, selectivity 3 KC series noise limiter, adjustable squelch, illuminated " $S^{\prime \prime}$ meter, crystal synthesizer transmit/receive with delto-tune fine tuning control $\pm 3 \mathrm{KC}$, internal/external speaker connections, 3 watt output, switch for public address and front panel earphone iock.
In handsome, compact and rugged perforated steel case finished in blue-grey with
 Mobile brocket and power cables for

## FIM I NEW 23-GMAMNEL JOHMSON MESSENCE: ALL GOLD GTATE 5-MAT MODEL 323

Engineering superiority from E. F. Johnson brings you the exciting advantages of a frequency synthesized all 23 chonnel transceiver combining unbeatoble coma frequency syntesize and mechanical perfection.
This is no ordinory 5 wott $\mathbf{C B}$ set. The very lotest transistor circuit design has been incorporated to provide o double conversion superheterodyne receiver with 0.5 microvolts sensitivity for 10 db signal to noise ratio and selectivity of 7 KC ot 6 db down. Incorporates a crystal filter. Adjacent channel rejection and imoge rejection are exceptional. AVC, noise limiter and squelch circuits all operote rejection are exceptional. Avers
smoothly, with great effectiveness and stability. Has dual function relative power smoothly, with grea
The transmitter section operates efficiently with mare talk power than most others due to speech compression clipping and voice range audio circuits that are especially designed for maximum communications range. Has large, side mounted espeaker, optional external speaker connection, PA function. Incorporates 24 transistors, 14 diodes.
transistors, 14 diodes.
Cabinet is aluminum, size $21 / 2 \times 8 \times 83 / 4^{\prime \prime}$. Wired for optional tone olert. (Same as Cobinet is aluminum, size 12 V . DC negative ground operation. Mobile brocke messenge
No. 35B167. Johnson 242-153-1. Net Each.
\$229.95
OPTIONAL 117 V . AC POWER SUPPLY.
No. 35 A625. Johnson 239-122-1. Net Eoch


## FINEST CITIZENS RADIO ANTENNAS AND ACCESSORIES



The stondard of comporison among CB users. Feotures exceptional performance, excellent omni-directional signal pattern and high strength. Made for fost, snapfittings, stoinless steel outside through o single $3 / 8^{\prime \prime}$ hole. Chrome ploted bross fittings, stoinless steel tod and spring. $46^{\prime \prime}$ overall height. With 20 ft . RG58U No. 9A249. Model M-125. No. 9A249. Model M-125 with Spring. Net Eoch.
No. 9A250. Model M-123
$\$ 15.30$ No. 9A250. Model M-123. Some os Mi 25, less spring. Net Each..
.$\$ 13.35$

constructed. Snop-in mounting like M-125 a very good performer. Beautifully With 20 ft . RG58U coax and PL259 connector.
No. 9A251. Model M-130. Net Each.
$\$ 11.05$
Installs in seconds with M-127 FOR TRUNK GROOVE MOUNT
Installs in seconds with no visible mounting holes in car. Requires only 2 tiny
holes in trunk groove, odjusts to all cars, holds securely. Stainless steel rod and
spring. Height $46^{\prime \prime}$ with No. 9A252. Model M-127 with Spring. Net Eoch PL259 connector. No. 9A252. Model M-127 with Spring. Net Eoch
No. 9A253. Model M-73.
$\$ 17.00$

> MODEL M-128 FOR COWL-FENDER-DECK

Some high performance base looded design as the $M-125$ with standard auto style adjustable angle bose. Holds antenna vertical when mounting surfoce is slonted $35^{\circ}$ or less from horizontal. Height 46" overall. With 20 ft . RG58U coox and PL259 connector
No. 9A254. Model M-128 with Spring. Net Each.
$\$ 18.15$


## A/S BASE STATION CB ANTENNAS



MODEL M-148 "SPEAKIN" BEACON"
COAXIAL OMNI-DIRECTIONAL ANTENNA
WITH VISUAL RF OUTPUT INDICATOR
WITH VISUAL RF OUTPUT INDICATOR
Lights up when you transmit! RF indicotor is up topside, built right into the famous A/S "stati-lite" ball and requires no separate electrical connection the tenna is efficient coaxial design, all aluminum, 19 ft . $3^{\prime \prime}$ overall height. Built to take winds to 90 MPH . Produces exceptionally low angle of rodiation, Built to no horizontal radials and installs on your $2^{\prime \prime}$ O.D. vertical mast or pipe. Designed for 52 ohm coox feed.
No. 9A245. Model M-148. Net Eoch.
$\$ 29.95$

## MODEL M-117 SUPER MAGNUM <br> OMNI-GAIN GROUND PLANE

One of the most popular and best-perfor DB GAIN
of rodiotion and an intensified signal pattern. Has rigidade. Features low angle $1 / 4$ wavelength radiols, direct electrical pattern. Has rigid aluminum radiator, four boll of top for additional dissipectical ground for lightning protection, "stati-lite" btrength and very low wind resistance static electricity, exceptional mechonical building. 50 very low wind resistance. Duol clamp fits pipe masts or side of No. 9A246. Madel M-117. Net Each.......... Sh. 10 lbs.
$\$ 29.95$
MODEL M-20 WINDOW MOUNTING ANTENNA
For apartments or other buildings, wherever a permanent roof-top antenno installation cannot be made. Has 9 ft. jointed oluminum rodiator, heavy codmium Noted odjustable mount. Accepts PL259 cooxial connector.
$\$ 8.75$

## A/S SCANNER DIRECTIONAL CB ANTENNA ROTATE THE SIGNAL-NOT THE ANTENNA <br> 7.75 DB FORWARD GAIN-23 DB REAR ATTENUATION

Has all-electronic beam control through use of three separate dipoles and a is a simple switch sose switching. Scan control unit at station operating position weatherproof phose switching with indicator lights, that controls the glass sealed direction whose switching relay up in the antenna. Indicator lights show beam Vertical
Built for rugged weather. $1 / 2^{\prime}$ long, mounted at $120^{\circ}$ points on $3^{\prime}$ radius circle. Requires 4 wire weather.
antenna. Shpo TV rotor type cable for scan control and 52 ohm coax lead for No. 9A248. Madel M-119. Net Each.
$\$ 69.35$

## "BLITZ BUG" COAX CABLE LIGHTNING ARRESTOR

Added lightning protection for receiving and tronsmitting equipment, hom gear, citizens bond fransceivers etc. using 52 ohm or 72 ohm coaxial antenno lead.
Threaded for stondard PL259 and SO239
fittings fittings.
No. 19A145
Cush Craft LAC-1. Net Each.... $3 \mathbf{3} 95$


## HYGAIN DCGK STATIC ARRESTOR

A DC poth grounding choke for opplicotion between the driven element and ground on all types of CB antennas to drain away noise level by 10 to 20 receive function. Actually reduces averoge No. 9A59. Net Each...............................

## POPULAR NEW-TRONICS CB ACCESSORIES

## MODEL CB-52-T TRANSICHECK

Easy-to-use instrument for checking CB tronsmitter operation. Installs in 52 ohm coax line to ontenner Measures power output, indicates transmitter resonance, indicotes proper adjustment of ontenno loading capacitor, measures SWR on feed antenno SO239 connectors, sensitive microammeter. Made in USA. Wt. I lb. sensitive microammeter. Mode No. 35B514. Net Eoch.
\$19.95

## MODEL PL-52 DUMMY LOAD

Attaches to CB transceiver in place of antenna Needed for moking transmitter odjustments. High No. 29B42.
Net Each.
$\$ 1.49$

CB-52-T CB-52-T
TRANSICHECK

Tough $48^{\prime \prime}$ coil looded antenna constructed of practically indestructible black fibreglass. A fine performer. With 5 ft . RG58U coox cable and PL259 plug. No. 94241 Model MR-52. Net Each.
No. 9 A242. Model MR-53. Black. Net Each
No. 9A243. Model M-141. Orange. Net Eoch
NEW MODEL M-153 "SOLID CIRCUIT" ANTENNA

Appealing new design and ver fine performer, too. Printed circuit coil assures
precise frequency coverage. Short 40 " stainless, steci whip and precise frequency coverage. Short 40 " stainless steel whip and spring adjusts for
finest possible tuning. VSWR is very low li finest possible tuning. VSWR is very low, 1.3 to 1 or less. Shunt fed, DC
grounded, low static noise. For roof-top or deck. Snop-in mounting in single grounded, low static noise. For roof-top or deck. Snop-in mounting in single $3 / 8^{\prime \prime}$ hole. With RG58U coax cable and PL259 plug. No. 9A244. Madel M-153. Net Each
\$17.85

Gleoming chrome MODEL M-103 CB/AM COMBINATION
to ${ }^{11}{ }^{\prime \prime}$ " mounting holes. Extends 31 to $46^{\prime \prime}$. Cable set with antennas. Fits $7 / 8$ includes 5 ft . lead with PL259 connector for Cable set with outomatic coupler AM radio and 2 ft . lead with PL259 connector for C'B radio. Hos Grey center No. 9A256.

Net Each
\$16.15
some os M-103 excepl MODEL M-143 WITH ORANGE COIL
and makes your ear easy to spot loading coil is "internotional" orange. Distinctive and makes your cor eosy to spot
No. 9A257. Model M-143. Net Eoch ................................................. $\$ 17.00$

## hY-GAIN CITIZENS RADIO ANTENNAS AND ACCESSORIES

Hy-Gain "Topper" Mobile Antennas
Outperform Bumper-Mounted $1 / 4$ Wave Length Whips


## COMPLETE "TOPPER" ANTENNA PACKAGES

 (1) Model TRQS SHORTY ROOF TOPPER. Convenient short length mobile antenna for optimum performance root-top mounting. Height only 19". Stainless steel radiotor, leakproof base mount of molded high impact cycolac plastic. With stainless steel shock spring, 16 ft . RG58 coox and PL-259 connector. No. 9A206. Wt. 2 lbs. Complete Pockoge..... \$15.50 (1) Model TQRDX ROOF TOPPPR. Overall $50^{\prime \prime}$ height. Highly fficient, outperforms usual $1 / 4$ wave whips. Deluxe anRG58 coax. PL-259 connector. (2) Model TQRMB MAGNA TOPPER. Height 28". Installs (2) Model TQRMB MAGNA TOPPER. Height 28". Installs instantly without hole through roof. Powertul magnetic design assures top performance. With 16 ft . RG58 coax and PL-259 connector No. 9ASI. Wt. 3 lbs. Complete Pockog\$14.95

## COWL OR FENDER TOPPERComplete System

Model TMCQ. Automotive type ball mount replaces regular auto antenna. Non-telescoping $50^{\prime \prime}$ stainless steel flexible ontenna, ${ }^{16 \mathrm{ft} . ~ R G 58 U}$ coax cable and
PL259 connector. Wt. 2 lbs. No. 9A207. Complete Pockoge
$\$ 12.95$

## TRUNK MOUNTED "JIFFY TOPPER"

 _Complete SystemModel TJCQ. Non-telescoping $50^{\prime \prime}$ stainless steel flexible Topper antenna with jiffy mount base that fits under lip of trunk or hood with no external screws. Includes 16 ft . RG58 coox cable and PL259 plug. No. 9A208.
Wt. 2 lbs. Complete Package.
$\$ 13.95$
COWL OR FENDER "‘DUO-TOPPER" SYSTEMS
For both AM and CB Rodios-Replaces Auto Antenna Model TTMPQ. Automotive type ball-mount fits in place of regular radio ontenna. Extends to 50", telescopes to $28^{\prime \prime}$. Comes with new solid-state coupler to split signols to
radios without switching, all necessory cobles and plugs. With instructions.
No. 9 Al90. Wt. 3 lbs
$\$ 14.95$
 Antenna is $50^{\prime \prime}$ stainless steel, flexible. Otherwise like abtenne. Wt. 3 lbs
No. 9 A 220 .
$\$ 14.95$
MARINE TOPPER-Complete System Model TQMA. For any kind of boat . . metal, wood, fibreglass. Operates independent of ground system. With special boat mount and quick-disconnect fitting for instant removal. Includes 12 ft . coax and PL259 plug. Wt. 3 lbs
\$19.95


TJCQ TRUNK JIFFY TOPPER


TQMA MARINE TOPPER


## HY-GAIN TOPPER ANTENNA WHIP ONLY

Less cable kits. See explonation of Topper design above. 46" Top Looded Stainless Steel Whip, 3/8-24 Stud. I ib
No. 9A189. Model TOW. Each.

## HY-GAIN CB-AM

COUPLER AND CABLE HARNESS
For use with any $C B$ antenna. Splits signals for $A M$ and $C B$ radios without switching, making single antenno serve dual purradios without switching, making single antenna serve dual pur-
pose. Has RG58U cable with PL 259 plug attoched for antenna pose. Has RG58U cable with PL 259 plug attoched for antenno
and 2 ft . cobles for CB and AM radio with PL259 and stondord
 No. 9A28. Model CPR-2. Not Foch

## TOPPER CLOSE RANGE WHIP ATTACHES DIRECTLY TO TRANSCEIVER

Designed for mounting on standard coaxial output connector Chrome plated $36^{\prime \prime}$ whip telescopes to $18^{\prime \prime}$
Top loading coil completely encased in plastic. Has PL259 coaxial connector for either top or back of set. Shpg wt. 1 lb
No. 9A192. Hy Gain TQCW.
Net Eoch

## BASE STATION ANTENNAS FOR CB



- Outperforms other omni-directional base station antennas.
- 8 db gain in all directions.
- High strength aluminum
construction.
1000's IN USE EVERYWHERE

CLR-11 COLINEAR. Embodies every significant electrical and mechonical innovation. Maximum legal radiator height of 19 ft . 10 in . lowers the ongle of radiation directing a maximum distance-reaching signal along the horizon. Radiator and 9 ft . radials are all high strength seamless aluminum. Has tough styron insulators and iridited weatherproof double grip mast support. DC grounded for lower noise, from 6-20 db goin in improved sign rotio.
No. 9A54. Model CLR-11. Wt. 10 lbs. less coax and mast. Net Ea.
$\$ 29.95$
GCLR-11 GOLDEN COLINEAR. Operationally same as CLR-11. Entire ontenno of heavy wall aluminum and massive heavy gouge steel grid iridited to Mil. specs. for lifetime mointenance free service. Withstands winds to 100 MPH. Perfect 50 ohm impedance match. Less coox and mast. \$39.95
No. 9 A183. HyGain Model GCLR-11. Wt. 15 lb . Net Each............. $\$ 3$. No. 9A183. HyGain Model GCLR-11. Wt. 15 lb . Net Eoch


NEW! ROTATABLE CB BASE ANTENNAS HY-GAIN 4, 6 AND 10 ELEMENT DUO-BEAMS DELIVER MORE TALK POWER THAN ANY OTHER

Antenna orrays that tremendously increase effective range and power of CB signals by concentrating them into a narrow ray-like pattern. Assembly consists of one boom holding two vertically oriented beams, electrically coupled for a single 52 ohm feed line. Rugged all-aluminum construction to withstand heovy weather. Mount on CDR Type TR2C or similar rotor, CDR TR44 or HAM-M heavy duty rotor recommended on 2 larger arrays in high wind oreas. Less rotor, mast, 52 ohm lead. *Power odvantage is in compari on to ground-plane or vertical antenna with 5 watt transmitter input. Ex ample: Duo-Beam 10 makes o 5 watt signal sound like 120 watts!

| Stock | Hy Gain <br> Model | "Power <br> Advantage | Boom <br> Length | Wt. <br> Lbs. | Net <br> Eoch |
| :---: | :---: | :---: | :---: | :---: | ---: |
| $9 A 209$ | Duo Beam 4 | 42 Watts | $3^{\prime} 1^{\prime \prime}$ | 16 | $\$ 39.95$ |
| $9 A 210$ | Duo-Beam 6 | 93 Watts | $12^{\prime \prime} 2^{\prime \prime}$ | 30 | 69.95 |
| $9 A 211$ | Duo-Beam 10 | 120 Watts | $18^{\prime \prime}$ | 59 | 99.95 |

CBV $1 / 2$ WAVE LENGTH GAIN TYPE GROUND PLANE. Radiator, 18 ft overall height, produces goin in ali directions through lowering the angle of radiation Grounded construction decreases noise, delivers apparent 6 db receiving goin. Alllumimum $1 / 2$ wave length element and $52^{\prime \prime}$ radials withstands heovy weother Steel parts iridited to MIL specs. Less coax cable and most
$\$ 19.95$
CBGP $1 / 4$ WAVE LENGTH GROUND PLANE. Delivers full signal in all directions of lowest possible cost. Equipped for DC ground to lower noise level by preventing static build-up. Has HyGain exclusive Beta match for 52 ohm feed line. Taper swaged seamless aluminum, tough insulators, weatherproofed hordware. Shpg. Wt. 6 lbs. Less coax cable and mast No. 9A53 HyGain Model CBGP. Net Each.
$\$ 9.95$
CB3 BEAM ANTENNA. Forward goin of 8 db , front-to-bock ratio 20 db . Mounts either horizontal or vertical. Three elements, factory pre-adjusted and matched for 52 ohm feed. Toper swaged oluminum boom. Less coax, mast and rotor (use TV rotor). Wt. 12 lbs.
$\$ 19.95$
CB BALUN MATCH FOR IMPROVED BEAM OPERATION
installs at the antenno. Improves front-to-back rotio of beams, helps eliminate TVI and improves radiation pattern of antenna. Recommended for the HyGain beams obove as well os other makes.
No. 9B119. HyGoin Model BN-27. Net Each
\$9.98

## HIGH POWER CITIZENS RADIO WALKIE-TALKIES!

## AUTOMOBILE RADIO FREQUENCY NOISE SUPPRESSORS



Compact, versatile citizens band transceiver with 20 times the power of the best 100 MW walkie-talkie. Enough power for all personal and business uses range can be up to 15 miles between like units; more when used with 5 wott base stotion. Equipped with jacks for external antenno and external microphone. In rugged metal cose, $81 / 2 \times 4 \times 21 / 4{ }^{\prime \prime}$, with zippered leather carrying case and shoulder strap. Optional $D$ cell bottery back maintains full power for longer mobile service. Outfit includes strong 9 section 62" telescoping antenna, earphone with pouch, Ch. 7 crystals. Requires 8 pencell batteries or other power source below.
No. 35C266. Model 13-133B. Wt. 36 oz. Net Each
\$79.95

## ACCESSORIES FOR MODELS 13-133B AND 13-131



## - 1 (1)



## NEW I $1 / 2$ WATT 2-CHANNEL

 MIロLANDTRANSC=1MER WITh call
SIGNAL $\$ 7550$

- Powerful 13 transistor chassis.
- Rugged all metal cobinet
- Battery condition meter.
- Full varioble squeleh.
- Range up to 12 miles.
- External antenno lack.
- Many handy accessories.

At least 15 times more powerful than most walkie-falkies. Has tone call system allowing signo ling through closed squelch of receiving unit. Provides the extra calling and cormunications range so often needed. Comes with heavy leother
 No. 35c265. Madel $13-131$. Net Each botteries. Wt. 21/2 lbs.
$\$ 77.50$ see power sources and accessories at left

## FAMOUS FOR PERFORMANCE AND FINE QUALITY



Exclusive Johnson 11-Transistor circuit, pow-- Range 3 ered by 8 penlight cells in plug-in compartto 5 miles. "ment, or by optional long-life nickle-cadmium rechargeable battery hos many advantages tively reduces ignition and electrical noise, prevents distortion at close range and brings in weak stations over max. distance. Quiet control silences receiver on standby reducing battery drain. In rugged, high-impact case $8^{\prime \prime} H, 31 / 2^{\prime \prime} W, 2^{\prime \prime}$ T. Strap hondle. With plug-in crystals for 1 chonnel, less botteries. License required. Wt. 23 oz . No. 358207. Model 242-102.
ACCESSORIES
$\$ 129.50$

Nickel-Cadmium Bottery. With Charger for 15 V .60 cy . Ac 35A333. Model 250-804. Net Each........ $\$ 19.95$ 35A325. Set of $8^{\prime \prime} Z^{\prime \prime}$ Cell Batteries. Nef...... $\$ 1.12$ | 35A334. Private Earset. Net................. $\$ 4.50$ |
| :--- |
| 35B328. Leather Carrying Cose. Net |
| 80 | 50A66. Crystals, Specify Channel. Pair.......\$5.90

SPRAGUE SK-1 DELUXE SUPPRESSIKIT


Effectively stops radio noise from auto or boat engines using 6 or 12 V. 2 pole generctors. Contains heavy duty thru-pass capacitors with 400 MC rings $u p$ to 60 amperes, effective to armature special field R-C filter, shielded tions. 5 and field leods, step-by-step instrucassures better results. Wt. 2 lbs. $\mathbf{~ I b s i m g} 17.85$
No. 358309 . Net Each. . . . . .

NEW SPRAGUE ALTERNATOR SUPPRESSIKITS
Exact fitting mechanical and electrical design for eliminating the radio interference whine peculior to olternotors. Fits cors through '65. No. 35C350. Sprague SK-20. Ford Vehicles. Net Each. No. 35C351. Sprague SK-30. GM Vehicles. Net Each

(1) MASTER DISTRIBUTOR SUPPRESSOR. Sure cure for most all ignition noises.

## SPRAGUE "HYPASS" FILTERS

 TWO-TERMINAL SERIES FEED THRU-CASE GROUNDED Populor for quieting ignition, generotor ond regulator noises in mobile radio installations and for by-passing AC input to transmitting equipment. Type 80P3 has flanged bulkhead mtg., illustrated of for left. All others bracket mtg . Average wt. 2 oz .| Stk. No. | Type | Mfd. | Amps. | Voltage | Dia. | Length | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 158988 | 48P18 | 5 | 40 | $50 \mathrm{~V} . \mathrm{DC}$ | 1 | $1{ }^{13}$ | \$2.23 |
| 148256 | 48P9 | . 1 | 20 | 250 V. AC | 17 | 118 | 1.53 |
| 158987 | 80P3 | . 1 | 20 | 600 V. DC | 18 | 1 \| 1 | 1.73 |

## MAGNETIC MOBILE MIKE HOLDER

Powerful ceromic magnet secures brocket to any steel surface, on transceiver or auto dash. Fits all standard micraphones equipped with honger button. No. 22 A400. Speciol Each. For use separately, or in severe coses, with individual suppressors. No. 198203. Net Each..................... 57 c . 10 Lots, Each.. (3) HIGH EFFICIENCY SPARK PLUG SUPPRESSOR.

No. 19A208. Each
(3) WHEEL STATIC ELIMINATORS. Button makes noise free contact

No. 19A197. Dne required for each front wheel. Net Each contact
In handy Kits AUTO RADIO IGNITION NOISE ELIMINATOR KITS In handy Kits, the needed suppressors, condensers, etc., for a complete installation. Eosy to install by anyone.
19 Al 71 . For 8 Cyl. Cors. Per kit
\$2.97 19A171. For 8 Cyl. Cors. Per kit

[^12]c Special Each....

## B-A'S PHOTO EQUPMENT MUST SATISFY OR YOUR MONEY BACK

INVITATION! Please examine and use any of $B-A^{\prime}$ s photo equipment in your home. If for any reason you are not completely satisfied, return it at once in original factory carton and B-A will promptly exchange, repair or refund your money (less only postage) whichever you prefer.

B-A's Photo Department concentrates on bringing you outstanding
photographic values at better than competitive prices . . . however, yalue isn't determined by price alone, but by the very careful analysis of product-quality and performance.
Every major photographic item B-A offers, first has been critically evaluated by the head of B-A's Photo Dept. whose recommendations are based an 28 years experience.

# FULLY AUTOMATIC CUS ELECTRIC EYE 35MM CAMERA B-A "AUTO-EE 1.8" 

NOWHERE IN THE U.S. CAN YOU BUY SO MUCH QUALITY AND SO MANY FEATURES FOR SUCH A LOW PRICE!


Accepts standard 20 or 36 exposure 35 MM black \& white or color film.

THIS CAMERA AT THIS PRICE IS BEYOND COMPARISON

FULL AUTOMATION AND MANUAL CONTROLS VISIBLE FROM TOP
Supernar 45 MM FI. 8 amber coated
Super
lens.
Citizon MVE full sync MX 11 speed elick stop sh

Rapid focus tever- $1 / 4$ turn covers full range $26^{\prime \prime}$ to infinity.

CdS Mot
shutter.

$\lambda A S A$ range 10 to 400.
Euilt-in Timer 2 to 12 seconds variable delay.

M-X sync. lover
$\left\{\begin{array}{l}\text { Lens Di } \\ \text { sottings } \\ \text { matic. }\end{array}\right.$


DELUXE LEATHER EVEREADY CASE

Single window range-finder shows lens settings bright line framing.


PRICED TO SAVE YOU MONEY BECAUSE OF B-A's VOLUME BUYING--MADE IN JAPAN FOR B-A BY ONE OF THE LEADING PRODUCERS OF FINE PHOTOGRAPHIC EQUIPMENT AND TESTED TO OUR OWN HIGH STANDARDS

B-A "AUTO-EE 1.8 " 35 MM CAMERA is precision engineered and embodies the latest technical developments in camera design with the CdS Meter coupled to lens diaphragm and shutter. B-A's "Auto-EE 1.8" determines optimum combination of shutter speed and lens F-stop, and adiusts itself for correct exposures instantly and automatically (with manual overide if you desire to set any combination of lens and shutter speeds).
The SUPERNAR superspeed 45 MM F1.8 amber-coated lens assures you of needlesharp and well contrasted pistures in either color or black and white.
FAMOUS CITIZEN 11 SPEED CLICK-SIOP SHUTTER B (time exposures), 1, $1 / 2,1 / 4$, $1 / 8,1 / 15,1 / 30,1 / 60,1 / 125,1 / 250$, and $1 / 500$ second is $M-X$ synched at ali speeds for popular $M$ type flashbulbs as well as electronic flash. Has standard PC flash fitting, also features built-in timer with variable delay from 2 to 12 seconds. ASA FILM SPEED 10 to 400 and DIN range 11 to 27 .
SINGLE WINDOW COUPLED RANGE-VIEWFINDER allows instant and critical focusing utilizing the most efficient superimposed type rangefinder system. The viewfinder features luminous framing and parallax correcting luminous indica-
tors. The area covered by the viewfinder is larger than the luminous framed area covered by the lens enabling you to follow sports action in your viewfindepthen when subject moves within the luminous frame-snap your picture. Also visible in the viewfinder are your lens settings indicated by $F$ stops, this setting varies and sets itself automatically as changing light hits the super-sensitive CdS meter cell and computes the proper exposure. OTHER OUTSTANDING FEATURES: Meter turns itself off after shutter is released, conserving battery power. - Single stroke rapid advance lever advances film, counts exposures, charges the shutter and switches on the current of the exposure meter. - Oversized easy-grip focusing lever. - Foldaway rewind crank. - Automatic exposure counter. - Hinged back cover. - Snap-away deluxe black leather Eveready case with shoulder strap. Lens cap. Mercury battery - Standard accessory shoe. - Cable release and tripod sockets. - Push and stay rewind button.
Complete with instruction book, registration and guarantee card. Shpg. wf. 4 lbs No. 61 A47 B-A "Auto-EE T.8" \& Case.
Special.
\$49.95


Fits any camera having
"X" flash...also Polaroid UP TO 150 FLASHES ON JUST 2 C" CELLS—WORKS ON AC TOO!

Built-ln Mtg. Bracket, Plus AC Cord

Most desiroble miniature transistorized type onepiece unit disperses light at $70^{\circ}$ horizontal and $40^{\circ}$ vertical. Has powerful 40 watt seconds and weighs only $133 / 4$ ozs. Professionals, when photographing people, always use flash OUTDOORS to fill-in the harsh shadows cast by Sunlight-Now ot a froction of lc per flash YOU TOO can get professional results if you use this Flashgun outdoors is well as inside.
EEATURES that leove nothing to be desired: Lightweight and quiet operation recyeles in $8-10$ seconds. $5600^{\circ} \mathrm{K}$ color temperature bolanced to oll Jaylight color films. Flashes 150 times per set of 2 " C " cell batteries at the equivalent of $1 / 600$ th second stopping any action. Approximate Guide Noo's,: 50 with Kodachrome 11, 56 with Kodacolor, Anschochromerand Ektachrome ( 64 with the new $X$
films), 125 with High Speed Extachrome. Housing films), 125 with High Speed Extachrome. Housing
is tough, durable hi-impact thermoplastic. Kingis tough, durable hi-impact thermoplastic. King-
size ready light built-in. Exposure guide built-in sixe ready light built-in. Exposure guide built-in.
Shpg. wt. 2 Ibs.
No. 60A393. Super Special, Each............ \$19.95 ENERGIZER "C" CELLS. Give up to 150 flashes.
No. 21A)33. Eveready E93 (takes 2). Each.....39c


| FOR NEW KODACHROME-X KODACHROME II, EKTACHROME-X, REGULAR AND HI-SPEED, DYNACHROME AND ANSCHOCHROME |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| If any of the above films have been purchased less |  |  |  |  |
| processing from B-A or any place else you may |  |  |  |  |
| buy the | prepaid process mailer | s listed | below | $w$ and |
| ve |  |  |  |  |
| ach mailer is good for prepaid processing of one roll. |  |  |  |  |
|  |  | Nef | $3 @$ |  |
| No. | Mailer | Each |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| 6042068 MM, Magazine ${ }_{6} 6$ |  |  |  |  |
| 604207 $16 \mathrm{MM}, 100^{\circ} \mathrm{Roll}$ 2.39 2.20 2.09 |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  | G 126-Insfomatic | 94 | . 88 | 84 |

POLAROID LAND PICTURE FILM

FACTORY FRESH!
ORIGINAL UNBROKEN CARTONS

## MOVIE KODACHROME FILMS

TVPE ASA 25 DAYLIGHT


\section*{ITCLODES PROCESSING} Doy Kodachrome II Type A Kdehrm il | Net | $3 @$ | $10 @ @$ |
| ---: | ---: | ---: |
| Eoch | Eqch | Eq. |
| 3.28 | $\$ 2.96$ | $\$ 2.79$ |
| 3.76 | 3.39 | 3.19 |
| 4.60 | 4.11 | 3.85 |
| 11.40 | 10.24 | 9.63 |



| Stk. No. | Kodak | ASA | Descriotion | coch | 3 (1) Ea. | . |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 604330 | K 135-20 | -25 | 20 Exp. Kodochrome II | \$2.80 | \$2.54 | \$2.39 |
| 604331 | K 135-36 | 25 | 36 Exp. Kodochrome II | 4.19 | 3.80 | 3.58 |
| 608257 | K×135-20 | 64 | 20 Exp. Kodochrome $x$ | 2.80 | 2.54 | 2.39 |
| 608258 | K $\times 135-36$ | 64 | 36 Exp. Kodochrome $\times$ | 4.19 | 3.80 | 3.58 |
| 60B280 | K×126 | 64 | 20 Exp. Kodachrome X Instamatic | 2.81 | 2.54 | 2.39 |

35MM \& 126 EKTACHROME PRICFS Naclude procissinc-
TYPE X AND HIGH SPEED

| Stk. No. | Kodok No. | 35 Description |  | Flash | Each 3-E9, 10 Eo. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 60B271 | EXi35-20 | 35 MM Day orflash, 20 Exp. | -AsA |  |  |  |  |
| 60B272 | Ex135-36 | 35 MM Doy or Flosh, 36 Exp. | 64 | Blue | 4.43 | 4.01 | 3.78 |
| 604224 | EH135-20 | $35 \mathrm{MM} \mathrm{Hi-Speed} \mathrm{Doy}$,20 Exp. | 160 | Blue | 3.33 | 3.01 | 2.83 |
| 604359 | EH135-36 | 35 MM Hi-Speed Doy, 36 Exp . | 160 | Blue | 4.91 | 4.43 | 4.18 |
| 604225 | EHB135-20 | 35 MM Hi-Speed "B", 20 Exp. | 125 | Flood | 3.33 | 3.01 | 2.83 |
| 608282 | EX126-20 | Instomotic Ekto $\times 20^{\prime}$ ExD. | 64 | Blue | 3.00 | 2.71 | 2.55 |
| 60B231 | EHI26-20 | Instamatic Hi-Speed Day, 20 Exp. | 160 | Blue | 3.33 | 3.01 | $2.83]$ |

## MOVIE KODACHROME FILMS

TYPE ASA 25 DAYLIGHT with Floods

## WITHOUT PROCESSIWG



PRIGES INCLUDE ROLL OF FILM, PROCESSING AND MOUNTED SMDES DUAL PURPOSE FILM DALGIGT OR FLASN

## DUAL PURPOSE 35 MM FILMS FOR DAYLIGHT OR BLUE FLASH

| Stk. No. | Kodak No. | ASA | Eoch | 3 Eo. | 10 Eo. |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 608267 | EX120 | 64 | $\$ 2.14$ | $\$ 1.94$ | $\$ 1.84$ |
| $60 B 315$ | EH120 | 160 | $\mathbf{2 . 4 7}$ | 2.17 | 2.12 |
| $60 B 316$ | EHB120 | 125 | $\mathbf{2} .47$ | 2.17 | $\mathbf{2} .12$ |
| $60 A 216$ | EX127 | 64 | $\mathbf{2} .14$ | 1.94 | 1.84 |
| $60 B 266$ | EX620 | 64 | $\mathbf{2} .14$ | 1.94 | 1.84 |

## KODACOLOR-X

 ASA64
WROCESSIMG

| k. No | Kodak | ch | Each ${ }_{\text {3@ }}^{\text {E }}$ | $\begin{aligned} & 10 @ \\ & \text { Eoch } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 604295 | CX127-1 | \$1.10 | 8 | 22 |  |
| 60A29 |  | +1.10 | 8 | 92 |  |
| $60 \mathrm{B2}$ | Cx126-12 Exp | 1.20 |  | 92 |  |
| 608229 | CX126-20 Exp. | 6 | 1.49 | 39 |  |
| 274 | $35 \mathrm{MM}-20$ Exp. | 1.67 | 1.4 | 39 |  |

## MAILERS FOR KODACOLOR

> PRICES INCLUDE OEV. ANO $12,31 / 2 \times 31 / 2$
> COLOR PRINTS OR 20 ON CXI26-20 OR $20,21 / 2 \times 31 / 2$ ON 35 MM KODACOLOR



35 MM \& $21 / 4 \times 21 / 4$ DOUBLE GOMDENGER

| Z |
| :---: | :---: | :---: | :---: | :---: |
| WHI $75 \mathrm{MM} \mathrm{F} / 3.5$ LINS |

Glassless metal negotive corriers $(21 / 4 \times 21 / 4$
and 35 MM$)$ hold negatives entirely flat at onytime. Filter-drawer for contrast or color compensating filters. Pivating red filter. Friction dual bar raller system assures easy and accurate focusing. Warp-proof baseboord has non-slip rubber fering counterbalancer provides featherlight adjustment of stippled black lamp house. Stantion, focusing column,
shafts, large counter balancing spring, shafts, large counter balaneing spring, and negative carrier handles all heavily wt. 13 lbs.
No. 37 A591. While They Last.. $\$ 39.95$ No. 16B495. Sylvania \#211 Enlarging Lamp Each
$8 \times 10$ Enlorging Easel. All metal for rigidity and perfect flatness. Non-skid rubber feet, grippers. Shpg. Wt. 3 lbs. $\$ 6.95$. No. 37 A590. Each........... $\$ 0.95$.
$11 \times 14$ Easel. Similar to above. 37A599. Shpg. Wt. 4 lbs. Eo.. $\$ 10.90$

BARGAIN HUNTING? HERE ARE SOME VERY RARE B-A BUYS FOR YOUR USE...EXPERIMENTATION...EVEN RESALE BECAUSE OF B-A's IMPOSSIBLE LOW PRICES HUGO MEYER PRECISION RANGEFINDER COMPARE AT 6 TIMES B-A'S LOW PRICE
Originally made tor press type cameras. Turning shatt superimposes two imoges in viewfinder into one for ob-
taining range. Scales, arms and mounting hardware not supplied. Experimenter must devise to suit his own application.
No. 61 A99.
No. 61A99. Shpg. wt. 1 lb. Eoch. $\qquad$ $\$ 6.00$

WORLD FAMOUS WOLLEMSAK WOCOTED CIME RAPTAR LENSES FOR ALL

8 MM MOVIE GAMERAS
Woilensak prices shown are from the last ovailable Wollensak 1962 price list signifying the superb quality of these lenses. Actually these new lenses are very rare in the market place and consequently have no esfablished price. CAMERAS AND ALL OTHERS PC FLASH CONNECTION

Accepts three mast popular Bases AG-1, M-3 and Press 25 without adaptors. After testing more than a dozen available B-C units B-A selected the Minal-fardless-Deluxe os having the best overall quality and performance. varesize flashlamps are inserted and rejected. The little AG-I's can be a nuisance with poorly designed sockets-there are all sorts of BC units around, flashbulbs an instrume of dependability is the least expensive in the long run. This Minolta-Flash-Deluxe fills the bill on all counts-B-A Guarantees it! Comes with Case lless battery. Shpg. wt. 12 oz . \$8.97 No. $21 \mathrm{B144}$. Burgess Y10 15 V . Battery for Minolto-Flash-Deluxe. Each.... 81 c AND STUDENTS...FOR SCIENCE PROJECTS, COIN AND STAMP COLLECTORS AND BIRD WATCHERS

100's ©F USES, DEPANPING ON YOUR IMAGINAION AND INVENIVENESS

GENUINE BAUSCH AND LOMB F2. 7
 16MM LENS

This precision $F 2.7$ Lens (with click-stop
apertures of $F 2.7, \& 5.6,8,118$ \& 16 ) was originally made for the finest of 16 picture cameras. It has a standard "C" 16 MM moun "C" 10 MM adapter as a 25 MM telephoto for your piesent uses include standard camera. Some other uses include. 16 MM lens for present 16 MM
stan equipment including closed-circuit TV cameras, enlargers, projectors, etc, or any use you might think of experimentarly ser seen. Shpg. wi. 8 oz. \$4. 99 has the finest
No. GIA78. Special Each.

TWO GENUINE WOLLENSAK REVERE 35MM F3.5 AMATON COATED LENSES
PLUS AFX SYNCHROMATIC 9-SPEED SHUTTER (T, B, $1 / 2$.
$1 / 5,1 / 10,1 / 25,1 / 30,1 / 100,8$ $1 / 200$ th Second


This finely matched pair of F3.5 coated wo lensak lenses is mounted in dajl flash at all speeds. Lenses and shutters are mounted in a satin finished alumic num camera face plate ready for mounting as a unit. These lenses were originally made for the Revere Wollensak Stereo 35 MM Camera-at B.A's give away price you can try your hand at building a stereo camera, projectior, independently-any way you go, you can't miss. Shpg. wf. 1 lb . $\$ 4.99$
No. 61A79. Special Each..........................................................

# NaWEST BLL (Behind-The-Lens-Metering) 35 MM SINCLF LENS REFLEX CAMERAS <br> ALE THESE CAMERAS HAVE THE SEAL OF INSPEGTION FOR OUALITY CONTROL BY TME JAPAMESE GOVERNMENT 

 *B-A GUARANTEES NO LOWER NATIONALLY ADVERTISED PRICES ANYWHERE ON THESE NEWEST AND FINEST CdS MIRRO-MATIE MAMIYA ISEKOR "TL" SERIES SLR CAMERAS*B-A WILL REFUND THE OIFFERENGE UPON PRESENTATION OF AD


These new Mamiyo/Sekor TL cameros ore the end result af years of study, testing, developing and perfecting the mony facets of the through-the-lens meter concept. Momiyo engineers hove developed a spot meter-on-the-mirror covering $10 \%$ of the viewed oreo. Engroved in the viewfinder (special micra-diaprism screen is one of the brightest on ony comera) is the exact $10 \%$ portion of the view being metered, thus permitting professional spot exposure rother thon on average exposure of 'the entire picture which might be wrongly influenced by
sky or other extraneous light.
Lenses: The Mamiya/Sekor Automatic Lenses are among the world's finest as indicated by many test reparts in phata magazines and by prafessional photoMAMIYA/SEKOR MODEL SOOTL
AUTOMATIC MAMIYA/SEKOR 50 MM F/2 LENS
Lens: Mamiyo/Sekar Fully Automatic 50MM F/2, 6 elements in 4 groups fully color corrected and cooted to reduce lens flare ond increase light transmission Focal Plane Shutter with speeds of second to 1500 th to lens and shutter focal plane bulbs (FP) and electronic flash ( $X$ ) ing screen is very brilliant and even to the edges due to a pellicle mirror. MatchPointer System visible in viewfinder assures occurote and automotic metering. ASA range 25-800. Automatic Reset Counter, Preview Lever and Instant Return Mirror. Shpg. Wt. 4 lbs.
No. 61 A105. " $500 \mathrm{TL}-\mathrm{F2"}$
\& Case. $\$ 8.00$ Monthly. Each.............. $\$ 155.00$

## 3 YEAR GUARANTEE Factory of their option, will replace comera or repoir ony defects in workmonship or materiols when comera is re- turned to outhorized service station.

 $B=N O B$
grophic experience. They are completely interchangeable with Pentax and Practico. These comeros use the some mount.
How The Mirror-Matic System Works: All you do to get a readino is to push in the film advance lever with your thumb. This dops the o reading is to push in lever, octuotes the meter, ond you can chonge the shutter speed or aperture setting until the needle in the viewfinder indicates you shuve speed or aperture Since your thumb is normally in this position during filming there is exposure, groping around. When you want to see the scene of full operture, iust release the lever and it springs bock gently, opening seene of full operture, just release by pushing o buttion on top of the exposure counter. More consistent power is provided by the new silver-axide battery.

## MAMIYA/SEKOR MODEL IOOOTL

## AUTOMATIC MAMIYA/SEKOR 55 MM F/I. 4 LENS

 Hos all the feotures of the " $500 \mathrm{TL}-\mathrm{F} / 2^{\prime \prime}$ except the lens is o Fully Automotic Shuter speeds, 7 elements in 7 groups plus o Voriable Delay Self-Timer and No. 61A107. \#1000TL-F/i.4 \& Cose. \$13.00 Monthly. Each..... \$245.00 MAMIYA/SEKOR " $1000 \mathrm{TL}-\mathrm{F} / 1.8$ ". Has all the features of the " 1000 TL " above except the Lens is a Fully Automatic 55 MM F/1.8, 6 elements in 6 groups. Camero ( $\$ 179.50$ ) and Case ( $\$ 15.50$ ) foctory packoged together. Shpg. wt. 4 lbs.No. 61A106. \#1000TL-F/1.8 Case. $\$ 10.00$ Monthly. Each....... \$195.00


## 35 MM

Meosure All
the Light All the
Yime With the Lens
Wide Open


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\begin{aligned}
& \begin{array}{l}
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\end{aligned}
$$ 35 MM SLR WITH THE SAME METER-ON-THE-MIRROR SYSTEM THE $\$ 420$. BESELER TOPCON

"SUPER D" HAS


NO MONEY DOWN
ne Lenses: Eoch with its own autamatic diaphragm coupled to the mirror-meter. Standord lens is the fomous UV (Inherent Ulitra-Violet correction) Topcor 53 MM F/2 with click stops to $F / 22$. Accepts stondard 49 MM dia. screw-in filters and attachments.
The Body: It's beoutiful! Hold it! Feel it! Use it! Instont return mirror gives virtuolly continuous sight in sequence-shooting. The viewfinder hos o unique center Micro-Prism focusing spot thot lets you focus pictures shorper than ever before. As you view the scene through the viewfinder you see the F/Stop markings and the meter needle.
The Shutter: It's fully automotic. B, 1 second, $1 / 2,1 / 4,1 / 8,1 / 15,1 / 30$, $1 / 60$, $1 / 125,1 / 250,1 / 500$ second. The shutter is coupled to the sensitive Codmium Sulphide Cell on the Mirror. EV ronge is 5 to 18, ASA film settings are 25 to 400 (DIN 15 to 27). Flosh can be perfectly synchronized for either floshbulbs or electronic flosh units. A self timer even ollows you to get into the motic, the finder tells you rhat is coupled to the viewfinder. When on Autobutton. You just made a perfect picture will expose the film. Focus, press the should expose the film. Give more exposure on manual, it shows what $\mathrm{F} /$ stop want, when how and os you more exposure or or tare tion, 'if you' like.
Complete with instruction monual and Guorantee. Made in Japan
No. 61A109. With Automotic UV Topeor 53 MM F/2.
$\$ 159.00$
No. 61 A110. Carrying Case for obove comera. Shipped Prepaid. Each....... $\$ 11.95$
No. 37 A501. Wide Angle Auto. UV Topcor $35 \mathrm{MM} \mathrm{F} / 3.5$ \& Case. Prepoid $\$ 55.00$ No. 378502 . Telephoto Auto. UV Topror 100 MM F/3.5 Case. Prepoid.. $\$ 55.00$ No. 37 B503. Telephota Auto. UV Topeor 135 MM F/4 G Cose. Prepaid........ $\$ 72.50$

## ALL NEW MIRANDA "G" THE PERFECT "SYSTEM CAMERA" A 35 MM SINGLE LENS REFLEX WITH REAL VERSATLLITY

The Mirando " $G$ " is the camera for the photographic enthusiast. It's engineered for the man who expects a camera to respond to his demands ... not tell him how to take a picture. The Miranda "G" allows you to use your own knowiedge of photogrophy to create an intensely personal stotement on film. The gadget-free simplieity of the Miranda " $G$ " also makes it the very camera to learn on and grow with.
Lens. Auto Miranda 50 MM F/1.9, 4-group 6-element Gauss type, fuily automotic diaphragm smallest aperture F/16, has depth-af-field preview button, uses screw-in 46 MM filters, closest focus of 17
Shutter: Focal plane FP,X sync., speeds B, $1-1 / 1000$ sec., built-in selftimer. Viewfinder: Pentaprism type, uses condenser and Fresnel lens. Quick-return mirror recedes before swing-up, equipped with locking device, to be used with ultro wide angle lenses, interchangeable with reflex viewfinders.
Focusing: By pentoprism SLK system, with focusing screen and multi-microprism spot in center. Entire focusing screen is interchongeable.
Lens Mount: Miranda Mount, usable for both boyonet and screw-bose lenses. Accepts interchangeoble lenses of 18 MM up to 800 MM .
Film Advance: Single stroke lever (winding angle $180^{\circ}$ )
Film Rewind: Rewind knob with collapsible crank, self-resetting releqse button with device to indicate completion of rewinding.
Film Counter: Advance counting type, has devise to indicate cocked shutter.
Accessories: Uses all accessories mode for previous series of Miranda Cameras. Other feotures: Clip-on type occessory shoe, double exposure prevention, ASA speed dial, tunnel-type film pressure plote, and hinged back cover with double safety locking device (entirely removable).
Size: $53 / 4 \times 2^{3 / 4} \times 33 / R^{\prime \prime}$ (with $\mathrm{F} / 1.9$ lens), thickness of bodv only is 45 MM . Some 3 Year Guarantee as Miranda Sensorex on page 168 . \$171.90 EXPOSURE METER. Snap-on type CdS meter (Miranda $G$ Meter) couples to shutter speed, acceptance ongle $40^{\circ}$, high-low switching type, measuring range LV 2-18 (at ASA 100), film speed range ASA 6-3200, includes Mallory No. 625 Mercury battery. Shpg. wt. 1 lb .
$\$ 23.95$

## TOTAL INTERCHANGE

AIEWFINDER FOCUSING SCREENS \& ACCESSORIES.

- Worlds only comera without mirror cutoff.
- Elliminates dorkening of upper part of viewfinder field when using telephoto lens.
- Super accurate focal plane shutter with built-in self-timer.
- Snap-on type CdS meter dial (listed below) couples to shutter speed

NO MONEY DOWN $\$ 9.00$ MONTHLY


Factory Packaged Together $\$ 159.95$ Camera $\$ 11.95$ Case


## BAUER8

QUALITY MADE IN GERMANY

## USES NEW <br> INSTAMATIC KODAPAK SUPER 8 FILM CARTRIDGE

## BAUER CI SUPER 8 MOVIE CAMERA

 Bauer Vario 4:1 F/1.8 9.36 MM Zoom LensBAUER C2 SUPER 8 MOVIE CAMERA Schneider Vorigon 5:1. F/1.8 8-40 MM Zoom Lens

HONEYWELL ELMO DUAL 8


Eimo Duol 8 Model FP8C. Imported exciusiveny uy noneywell. Distributors of fomous Honeywell Pentox and Rolleiflex cameras, this projector is Quolity and if you want to enjoy pride of ownership and the very best performance-make the Dual 8 your choice.
Features automatic threading all' the way onto the 400 ft . take-up reel; forward reverse rapid rewind and still picture control; variable speed control 12 to 24 fos). Other pluses include a loop restorer, framing lever, micro-focusing knob, spring-loaded elevation control, built-in film trimmer and a $21 / 1 / 2$ volt, 150 watt DCA-type projection lamp.
Dual 8/FP8C with 25 MM F/1.3 Lens. $\$ 18.00$ monthly.
No. 37A589. Shipped Prepaid. Eoch
$\$ 179.50$


Truly on exciting volue-feature packed equipment that will provide endless hours of thrilling home entertainment.
Crestline "Super 8" Zoom Camero. OF/1.8 zoom lens. Electric eye provides perfect automatic exposure. - 4 penlite cells power film drive. - Built-in "A" filter allows same film to be used indoors and outdoors. Automatic signal in viewfinder waths of inadequate lighting conditions. Accepts newest $50^{\prime}$ continuous run Super 8 MM Instamatic low cost Cartridge.
Crestline "Super 8" Projector. Everything you really need: 500 watt brilliance, color-corrected lens; autoload reel-to-reel, 400 foot capacity; forward, rapid-rewind thru film gate, framer elevation knob, UL approved, self-contained case. Comes with $400^{\prime}$ self-threading reel. Shpg. Wt. 15 lbs .
No. $61 \mathrm{Al12}$. Camera
Projector. Both For.
$\$ 99.90$
No. 61 Al12. Camero E Projector. Both For.....
No. 61All3. Camero only. Wt. 3 Ibs. Net Each
$\$ 59.95$
No. NiAlli. Projector Only. Wt. 12 ibs. Net Each.

## YASHICA ELECTRO 35 <br> HAS BRAINS... (BUILT-IN ELECTRONIC COMPUTOR)



Automatic Flash Calculation-Simply Select Lens Aperture and Electronic Shutter Takes Over

Yashica's Electro 35 moy look like other cameras, but it's not. It's new. all-through. It con proctically see in the dark. Even one small candle gives light enough. Then just view and snop. automotically you have a clear, "living" picture, without flash. Even if you have never clicked a shutter before. Why? Becouse the Electro 35 is transistarized. Has an electronic "brain" that's so fontastic t can even change exposure automatically during pieturetaking. Sensitive .. but not delicate.
The solid-state "biain" is specially protected ... even a jorring drop should moke little difference to this comera.

Whether you're a regular camero pro or an amateur you will start taking brilliant pictures immediately
Revolutionary new technical innovation in photography Automatically sets any shutter speed required, for instance 1287 th sec. ldeal for night picfures, no meter movement so it operates accurotely in ony position. Few moving parts in shutter to go wrong, transistors last indefinitely. Signal light tells you when to use tripod or ND filter. New multi slot take-up spool makes looding simple and fast. Shpg wt. 3 lbs.
i15. Imported
$\$ 89.90$

## TME TLTMMATE ПN KODAPAKK LOLDMC MIMIATVRF CAMERAS

$515 \sqrt{3}+3$

FACTORY PACKED TOGETHER
CAMERA $\$ 56.66$ CASE $\$ 10.00$



FASTEST LENS EVER...F/1.9 ON AN INSTAMATIC LOADING

Fastest Kodapak-loading lens on market: F/1.9, tokes flashcubes, but also regular and electranic flash, for extreme versotility. Computer-Scope finder lets you check exposure,

Set distance by symbal and compose and check parallax Fo. in hands easily. Shpg. wt. 3 lbs. No. 61A116. (Imported). Camera \& Case...
$\$ 66.66$

## AIREQUIPT MAGAZINES

Metal Magazine. Holds 36. Shpg. wt. 8 oz
No. 11 A 748 . Each ............ $\$ 1.92$ Lots, Each ............ $\$ 1.71$ Vori-Mount Plostic Magozine. Holds 36. Shpg. wt. 8 oz.
No. 118590 . Each......... $\$ 1.34$ 6 Lots, Each........... 119 Circular Magazine. Holds 100 . Shpg. Wt. I lb.

6 Lots, Eoch
.$\$ 2.36$

## SAWYER TRAYS

Roto Tray. Holds 100. Shpg. wt. I lb.
No. 11 B766. Each.......... $\$ 2.29$ Lots, Each.............. $\$ 2.21$
No. 11 B766. Each.......\$2.29 6 Lots, Each............... $\$ 2.21$
Easy-Edit Tray. Holds 36 . Shpg. wt. 8 oz.
No. 11 B757. Each........... $\$ 1.29 \quad 6$ Lots, Each............... $\$ 1.16$ YANKEE TRAYS
Universal. 30 slot with plostic cover. Fits the Sawyer's Anscomatic, Viewlex, Keystone, AO Executive, Tower Automatic, No. 11 A743. Each.............49e 49 Lots, Eoch.................44c 44 engers. Revere-Wallensak. 36 slot with plastic cover. Shpg. wt. 8 oz . Revere-Wollensak. 36 slot with plastic cover. Shpg. wt. 8 oz .
No. 11 A879. Eoch................89c 6 Lots, Each...............79c Kodok Carousel. Circular, holds 80 , with plastic cover. No. 11 Al042. Shpg. wt. 2 lbs. Eoch.. ARGUS TRAYS
80 Slide Capacity. For Argus 538, 540, 541, 543, 550, 560,


## ATOMATIC <br> DOUBLE OR TRIPLE FOCAL LENGTH OF BOTH YOUR OWN AND VIVITAR LENSES LISTED AT RIGHT



## EVERY SAWYER'S SLIDE PROJECTOR, EVEN THE LOWEST-PRICED, CAN SHOW 100 SLIDES UNINTERRUPTED...LETS YOU SHOW YOUR SLIDES 4 DIFFERENT WAYS!

Now you can have the longest uninterrupted slide shows ever possible. Each Rototray holds 100 cordboard or plastic slldes up to $.08^{\prime \prime}$ thick, yet is smaller and lighter weight than you would think possible. Slides readily accessible, but can't spill accidentally. Complete with library box and Index. Wt 1 16. $\$ 2.29^{6} @ \$ 2.21$


Exclusive flip-top keeps slides always within reach for convenient editing or repositioning. Allows slides to be lifted out while tray is still in proector so they can be edited or repositioned of any time. Each tray holds $36-2 \times 2^{\prime \prime}$. slides, cordboord, glass ar plastic. Complete with index card No. $1118757 \$ 1.29{ }_{\text {Each }}^{6}$ @ $\$ 1.16$


## LOW COST TDC.TYPE TRAYS

All Sowyer's projectors will still handle this least expensive of trays. This permits many people to show their present stide collection or friends slides without switching trays. Lets you keep and use any TDC or uniNo. 114743 49e 12 @
E.


## NEW STACK LOADER

Lets you show up to 40 slides without a tray. Takes $2 \times 2^{\prime \prime}$ slides in cardboord, or thin glass or plastic mounts. The perfect way to 90 through a stack of slide No. 11 B'735 Each.
$\$ 5.00$


## DEPENDABLE?... JUST READTHIS...



MADE OF NEW RUGGEDIZED BREAK \& IMPACT RESISTANT


# ATLAS-WARNER <br> MODEL 500-XL PROJECTOR FOR 35 MM, BANTAM, 127 OR INSTAMATIC SLIDES 



## FULLY AUTOMATIC OPERATION...for confinuous and unałfended

operation or remote control operation!

Here is high performonce with the ultimote of convenience. Just set the Sowyer's Auto Timer on the Rotomatic "700" projector to show your intervals and you can settle back in your easy chair to enjoy the show.
The complete remote control provides focus, slide change and reverse, and you can change a slide at will without affecting the timing of the next slide. The simple $4^{\prime \prime}$ remote control panel lifts out from the projector for use anywhere in the room; a $10-\mathrm{ft}$. cord for the remote control is
included. You get all this convenience plus such quality features as 500 watt brillionce, extrashorp detail with the $4^{\prime \prime}$ F/3.5 onastigmat lens, preheating of slides to maintain focus and control "pooping", and Sowyer's exclusive four meth ods of slide handling.
Handsomely styled. Complete with Rototray, EasyEdit Tray and Auto-Timer (Extra trays listed top of poge .). With self-enclosing cose. See page 165 for B-A Guarantee. Shpg. wt. 18 lbs . No. 37C402. Model 700. Each.
$\$ 89.95$

2-YEAR GUARANTEE FREE REPAIR AND PARTS (EXCEPT BULB) WHEN RETURMED TO AUTHORIZED SERVICE CENTER OR B-A

## THIS IS A FINE PROJECTOR AT A REAL GOOD PRICE! AlREOUPT SPRIIE 135

Accepts 4 different magozine systems: The fomous Airequipt Metal Magozine, which protects each individual sllde with a metal frame; plastic Vori-Mount Magazine for all mounts up to $1 / \mathrm{s}^{\prime \prime}$ thickness; and new 100-slide Circular Magazine with library shelf storing box, plus the new Stack G Show Loader.
PLUS FEATURES GALORE: Brilliont 500 watt lamp. Features fomous foolproof Airequipt changer . Accepts 35 MM , Square 3 element anostigmatic color-corrected lens 3 element onostigmotic color-corrected lens cooted on all air surface sides. Extremely efficient blower cooling system, low filmplane temperature. Built-in preheat to eliminote slide popping. 3 -way on-off switch. Lamp blower can be furned off independently. out elevation foot for easy adjustment and out elevation foot for easy adjustment and stamp if internal temp. raises above $200^{\circ}$ due to malfunction of blower or blockage of air to malfunction of blower or blockage of air age under projector. Extremely lightweight, less than 10 lbs.
Housing of miracle space age polymer: Cycoloc. Extremely durable finish, break, mork and chip resistant stronger than die-costing yet lighter in weight and more durable finish. Compact slze: $11 \times 101 / 2 \times 7^{\prime \prime}$. Complete with ane Airequipt 36 slot metal magazine. Shpg. wt. 12 lbs.
No. 37 A569. Each.
\$56.66
New 100 Slide Circulor Magazine
No. 11 18491. Ea........... $\$ 2.36$ Ea. ......... $\$ 2.21$ Other Airequipt Mogaxines on page 167


## fix SYLVANIA BLUE DOT FLASHBULBS

 FOR BLACK AND MMTTE
## COMPARE B-A's LOWER PRICES!

## 



## HELPFUL DATA ON THE NEW M3's, AGI's \& P1A FLASHCUBE

 tiniest of all sync to all cameras except focal plane P14 Flashcubes plug into Kodak Instamatic Series end
after each shot
14 Fiashcubes plug into Kodak Instamatic Series ending with 4. Cube con-
Shipping weights of Bulbs: Press 25 or FP26 weigh 4 lbs. per case of 144 Each carton contains 12 Flashbulbs.
 films and Kodacolor films. May be used with the new High Speed Ekto-
chrome Type (EHB) with on 81 C filter. chrome Type (EHB) with on 81C filter.

| Stock No. | Bulb Type | Class | Lumen Seconds | Color Temp. | $\underset{\text { As }}{\text { Same }}$ | $\begin{aligned} & \text { Ctn } . \\ & \text { List } \end{aligned}$ | Per Ctn | 3 Cins. @Ea. | Cose of 144 For | Stock No. | Bulb <br> Type | Class | Lumen Seconds | Color I Same Temp. K As |  | Ctn | Ctns. (a) | $\begin{aligned} & \text { Cose of } \\ & 144 \text { For } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 60454 | AG-1 | - | 7.000 | $3800^{\circ} \mathrm{K}$ | AG-1 | \$1.56 | \$1.12 | \$1.07 | \$11.52 | 60455 | AG-1B | P | 4.000 | $6000^{\circ} \mathrm{K} A G-1 B$ | \$1.56 | \$1.12 | \$1.07 | \$11.52 |
| 11 B504 | M-3 | MEFP | 16,000 | $3800^{\circ} \mathrm{K}$ |  | 2.04 | 1.47 | 1.40 | +15.12 | 118505 | M-3B | MEFP | 9,000 | $6000^{\circ} \mathrm{K}$ K | 2.04 | 1.47 | 1.40 | 15.12 |
| 11 A513 | M-2 | - | 7.200 | $3800^{\circ} \mathrm{K}$ | M-2 | 1.68 | 1.22 | 1.16 | 12.53 | 118511 114519 | $\mathrm{M}_{25 \mathrm{~B}}$ |  | 6,000 | $5100^{\circ} \mathrm{K} \mathrm{M}-28$ | 1.68 | 1.22 | 1.16 | 12.53 |
| 114515 | Press 25 | M | 20,000 | $3800^{\circ} \mathrm{K}$ | 5 | 2.04 | 1.47 | 1.40 | 15.12 | 114519 $11452 \%$ | 25B FP26B | M FP | 9.000 | $6000^{\circ} \mathrm{K} 5 \mathrm{~B}$ $6000^{\circ} \mathrm{K} 6 \mathrm{~B}$ | 2.04 | 1.47 | 1.40 | 15.12 |
| 11 A5 12 | FP-26 | FP | 19,000 | $3800^{\circ} \mathrm{K}$ | 6 | 2.40 | 1.74 | 1.65 | 17.86 | 11C507 | FP26B P14 cube | FP | 8,500 2 MCPS | $6000^{\circ} \mathrm{K} 6 \mathrm{~B}$ $5500^{\circ} \mathrm{K}$ | 2.40 1.95 | 1.74 | 1.65 | 17.86 |

## NEW GERAMIG

Exact replocement for all slide and movie projectars. Shpg. wt. each 4 oz
PROJECTION LAMPS BELOW LISTED ALPHABETICALLY ACCORDJNG TO ASA CODE

| Stock No. | ASA Code | Type Number | List Each | Net Each | 3 Lots Each | 6 Lots Eoch | Stock No. | ASA Code | Type Number | List <br> Each | Net Each | 3 Lots Each | 6 Lots Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TTB4T | BEH | 150TIOTF | \$2.80 | \$2.16 | \$2.02 | \$1.92 | 11 A525 | DDB | 750 T 12 F | 5.10 | 3.95 | 3.83 | 3.51 |
| 11 B401 | BVB | 30T7SC | +1.05 | -2. 81 | 22.76 | -1.92 | 11 B431 | DEF | $150 T 12 T F R / L V D$ | \$5.95 | 54.60 | 54.29 | \$4.68 |
| 118416 | CAL | 300 T10TF4 | 4.05 | 3.14 | 2.93 | 2.79 | 114539 | DEJ | 750T12/3LR | 6.05 | 4.68 | 4.37 | 4.16 |
| 118412 | CAR | 150 TlOTF 1 | 3.10 | 2.40 | 2.24 | 2.13 | $11 \mathrm{C744}$ | DEK | 500T12TF2/H | 5.85 | 4.52 | 4.21 | 4.01 |
| $11 \mathrm{B403}$ | CBJ/CBC | 75T8/73 | 2.40 | 1.86 | 1.74 | 1.65 | $11 \mathrm{C432}$ | DEP | 750T12TF | 5.10 | 3.94 | 3.68 | 3.51 |
| 114477 | CEM | $11078 / 1085 C$ | 2.00 | 1.55 | 1.44 | 1.37 | 114553 | DFA | 150 Tl 2TFR | 5.25 | 4.05 | 3.78 | 3.60 |
| 114528 | CEW/CFC | 15078/71 | 2.45 | 1.89 | 1.76 | 1.88 | 118717 | DFC | $150712 T F R 1$ | 4.75 | 3.68 | 3.43 | 3.27 |
| 116410 | CGW/CGT | 20078/113 | 2.55 | 1.97 | 1.84 | 1.75 | 114490 | DFD | 1M/T12P | 5.50 | 4.25 | 3.96 | 3.77 |
| 114524 | CLS/CLG | $300781 / 2 / 11$ | 3.30 | 2.55 | 2.38 | 2.27 | 118510 | DFK | 1M/T12/3LR | 6.45 | 4.98 | 4.65 | 4.43 |
| 114485 | CLX/CMB | $300781 / 2 / 12$ | 3.40 | 2.63 | 2.45 | 2.33 | 118472 | DFR | 500712 | 5.40 | 4.17 | 3.89 | 3.71 |
| 11 A484 | CMV/CMT | $300781 / 2 / 25 C$ | 4.00 | 3.09 | 2.88 | 2.74 | 11 B433 | DFT | $1 \mathrm{M} / \mathrm{T} 12 / 46$ | 5.95 | 4.60 | 4.29 | 4.08 |
| 118747 | CTS | $1 \mathrm{M} / \mathrm{T} 12 \mathrm{TF3}$ | 7.15 | 5.52 | 5.15 | 4.90 | 118731 | DFW | 500T12TF2 | 5.20 | 4.02 | 3.75 | 3.57 |
| 118749 | CWA | 750T12/TFI | 6.70 | 5.18 | 4.83 | 4.60 | 118417 | DFY | 1M/T12/5LR | 6.75 | 5.21 | 4.86 | 4.63 |
| 114773 | CWD | 300T 10TFI | 3.75 | 2.90 | 2.70 | 2.57 | 114487 | DGA | 300T10TF | 4.05 | 3.14 | 2.93 | 2.79 |
| 11 A5 26 | CXK | 300 Tl 10 P | 4.40 | 3.41 | 3.14 | 3.03 | 114475 | DGH | 750T12/500 | 7.60 | 5.87 | 5.47 | 5.21 |
| 11 B413 | CXL | 50TIOSCP/R | 5.70 | 4.40 | 4.11 | 3.91 | $11 \mathrm{B438}$ | DHT | 1200T12/50 | 7.25 | 5.59 | 6.22 | 4.99 |
| 114486 | CYC | 300TIOSC | 3.40 | 2.63 | 2.45 | 2.33 | 118448 | DJA | 150 T 12 TFR4 | 4.75 | 3.67 | 3.42 | 3.26 |
| 114775 | CZA/CZB | 500T10TFI | 4.90 | 3.80 | 3.54 | 3.37 | 118449 | DJL | 150T12TFR3 | 5.00 | 3.86 | 3.61 | 3.43 |
| 114527 | $C Z X / D A B$ | 500 TlOP | 4.85 | 3.85 | 3.54 | 3.3 | 118451 | DKM | 250T14TFR/LVD/1 | 8.10 | 8.26 | 5.84 | 5.56 |
| 114931 | DAH | 500 T I $2 \mathrm{TF} / \mathrm{H} / 200$ | 7.15 | 5.52 | 5.50 | 4.93 | 118452 | DLR | 250T14TFR/LVD | 8.10 | 8.26 | 5.84 | 5.56 |
| 11 A492 | DAK | 500T10TF | 4.65 | 3.60 | 3.36 | 3.20 | 118454 | DLS | 150T14TFR/LVD | 6.30 | 4.87 | 4.54 | 4.33 |
| 11 A932 | DAY | 500T10/TF/H | 6.20 | 4.80 | 4.38 | 4.27 | 118456 | DNF | 150TB20/LVD | 6.95 | 5.37 | 5.01 | 4.77 |
| $11 C 415$ | DBJ | 500T12/DBJ | 5.25 | 4.80 | 4.48 | 4.20 | $11 \mathrm{B459}$ | DRC | $1 \mathrm{M} / \mathrm{T} 20 / 13 \mathrm{P}$ | 7.15 | 5.52 | 5.16 | 4.91 |
| 11 B414 | DCA | $150 \mathrm{~T} 12 \mathrm{TFR} / \mathrm{LV}$ | 5.00 | 4.08 | 3.79 | 3.60 | 11 B463 | DRS | $1 \mathrm{M} / \mathrm{T} 20 \mathrm{MP}$ | 6.45 | 4.98 | 4.65 | 43 |
| 11 B718 | DCH | 150 T12TFR2 | 4.75 | 3.87 | 3.61 | 3.44 | 114488 | EDK | 500T10/2SC | 4.45 | 3.44 | 3.21 | 3.05 |
| 11 C428 | DCL |  | 5.95 | 4.80 | 4.29 | 3.27 | $11 C 745$ | FAL | 420T4/Q | 7.95 | 6.14 | 5.73 | 6 |
| - | DCL | 150TI2TFR/3D | 5.95 | 4.60 | 4.29 | 4.08 | $11 C 464$ | FCB | 600T4/Q | 8.50 | 6.57 | 8.13 | 5.84 |

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 Metal travel case. Shpg. wt. $21 / 2 \mathrm{lbs}$. No. 60A429. Eoch. No. 60B'26. Shpg. wt. $21 / 2$ lbs. Eoch.
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Net Ea. . $\mathbf{2 2 4 7} \underset{\text { Each. }}{3}$ @ $\$ 212$
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| 40419 | Two 75-Watt, $96^{\prime \prime}$ | 43/8x5 "W. | 34 lbs. | 19.85 | 18.86 |



Top effleiency, portable illumination -quickly installed or moved! TWO 40-watt lamps spaced 5 -inches apart
in full $13^{\prime \prime}$ wide reflector! U/L opproved components mounted in strong steel wireway with knockouts on top and both ends-may be hung by rod, pipe or chains fastened to brackets on each end. Quick-on Refiector shas, gray enomel exterior finish. Size is $481 / 2^{\prime \prime}$ long, $131 / 4^{\prime \prime}$ wide, $6^{\prime \prime}$ deep; wt. 21 lbs. $6-7 t$. cord and plug, supplied complete with your choice of 40 -watt lomps.
Stock No. 408189 . "Dreadnought"
Double-40 Unit, Eoch................. \$13.49 Eoch


SYLVANIA FLUORESCENT STARTER SWITCHES


| No | Type | For Lamp | Net Eo. | 10 @ E | @ Eo. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 20468 | FS-2 | 14, 15, 20-watt | $24 c$ | $22 c$ | $20 c$ |
| 20469 | FS-4 | 13, 30,40 -watt |  |  |  |
| $20 B 8$ 2089 | FS-5 FS-12 | 4,6,8,22, 25 -wott 32-watt Circline | $42 c$ $28 c$ | $25 c$ | 23. |

- PARALLEL ARM ACtion gives perfect control

Mast convenient seeing aids made. Lamp head can be rotated and tilted to any position. Bolanced parallel action steel arms allow lamp to be coised or lowered without offecting odjustment angle. Can be pushed oside or returnable all-steel bose has extra stable double clamps for edge of desk or bench.
(3) FOR TWO 15-WATT LAMPS Finest light for close work of any Both hands free to manipulate work. kind, used by draftsmen, machine operators, offices, homes. 10 lbs.
No. 34A13G-Grey
No. 34 A 13 B - Brown
No. 34A13B-Brown
Choice
Net Eoch.
$19^{85} \underset{\substack{3 \\ \text { Each. } \\ \text { @185 }}}{ }$
CLAMP-ON INCANDESCENT LAMPS


Flexo Madel 5600. Fully adjustable arm totals $31^{\prime \prime}$ length, beams light in any direction. Padded clamp bracket holds securely to flat surface up to $21 / 8^{\prime \prime}$ thick. Complet
No. 30 A 248 G Grey No. 304248 G-Grey

Eub. Net Each. ....... \$ $\$ .72$ Each... \$ 24 swing-o-Lite Lamp. Most versatile adjustable lamp made. Has balanced parallel acting support arms to hold ongle position of light regardless of up, down or side adjustment. Moves with o "flick of the finger" and stays put! or Other flot surface. Mfg. list $\$ 19.90$. Less Bulb. No. 34A16-Gray
h. . $\$ 14.95$ 3@
$\$ 14.20$
OUTDOOR LIGHTING EQUIPMENT SPOTLIGHT ERACKET 75 and 150 Watt


Cadmium plated
OUTLET-BOX type Outdoor Reflector Lamps bracket for ANY "SYLVANIA" Reflector, ProjesAdjustable to direct beam of light in ANY direction. direct to $4^{\prime \prime}$ outlet box, or by screws to any surface. All diometer. Wt. $11 / 2 \mathrm{lbs}$. (Less Lamp.) $11 \mathrm{~A} 536.51 .71 \underset{E c h}{3}$ @ $\$ 1.51$ Eleh ${ }^{-21}$ 11A531. 150W Spot

Weatherproof or Flooflo Built-in silvered standard screw base. 120 volt. 2 lbs.
11A533. 75W Spot / Each 11A531. 150W Spot $\begin{aligned} & \text { Each }\end{aligned}$ 11A532. I50W Flood 12, Eoch 1.83
SYLVANIA INCANDESCENT LIGHT BULBS

AS LOW AS 16c EACH IN LOTS OF 24
Inside Frosted. Standard base. 120 V . AC-DC. Supplied in packages of 2

| Stk. No. | Wotts | Pkg. of 2 | ¢3 Pkgs. For | \% 12 Pkgs. For |
| :---: | :---: | :---: | :---: | :---: |
| 348280 | 15 | \$0.40 | \$1.08 | \$4.10 |
| 34B281 | 25 | . 43 | 1.17 | 4.45 |
| 348282 | 40 | . 43 | 1.17 | 4.45 |
| 348283 | 60 | . 43 | 1.17 | 4.45 |
| 348284 | 75 | . 43 | 1.17 | 4.45 |
| 348285 | 100 | . 43 | 1.17 | 4.45 |

Glare-Free Soft White Bulbs. Standard base. 120 V. AC-DC. Supplied in packages of 2 .
Stk. No.
34 B 287
$34 A 288$
$34 B 289$
348290
$34 B 291$
34B292

*12 Pkgs. For
$\$ 5.13$
5.13
5.13
5.13
5.13
5.13

## FAMOUS TENSOR HICH INHENSTIY MINIATURE LAMPS

## THE CLOSEST THING TO NATURAL LIGHT YOU CAN BUY!

- LIFETIME AND ONE YEAR GUARANTEES

Factory repair or replocement if unit becomes defective under normal use (excludes bulb and finish


## SIMULATED GAS LIGHT KIT

## GIVES ANY ELEGTRIC LAMP AUTHENTIG GAS LIGHT CHARM

## ${ }^{9}$

IONG LIFE REPLACEMENT FOR REGULAR ELEGTRIC BULB--ALL TNE CONVERIENCE OF ELECTRICITY

Simple to install in outdoor lanterns, ornamental fixtures, hurricane lamps etc . . . Just screw into regular lamp socket and forget it! Operates cheaply, for less than $1 / 10$ the cost of gas. Fibreglass mantle is burnout proof, never needs replacement. Produce light a-plenty for normal "gas light" installations. Complete No. 11 C117

## INCANDESCENT DESK LAMP

A lamp of a thousand uses! Fine for every room of the home, office, shop, lab. Fully adjustable to any cosition. Brass socket with push-button switch and 7 -inch porabolo shode take any size lamp to 75 watts. Shade removable for "poking" into small areos or for heat lamps. Has weiahted base, 6 ft . ord and plug. Wt. 4 lbs. Less Lamp.
No. 32420.

\$2.18

(1) SYLVANIA 250.WATT Tr, 2 -h-hed HEAT LAMP


Instant penetrating heat for treatment of aches and pains, drying paint, thowing, etc No. IIA535. R-40 Clear Glass.

806 No. 11 A574. R-40 Red Glass. S? 13 Net Each. \$2.37 12 @ Each. S2.13
(2) CLAMP-ON BRACKET FOR HEAT LAMPS
Rubber covered clamp, double ball swivel extra heavy wire guard. Push switch socket, 6 ft. cord and plug. No. 20A932. Net Each
$\$ 2.19$
PANELESCENT NGHT LIGHTS
SHEDS A SOFT LIGHT-NO BULBS TO BURN OUT!

(1) PLUG-IN NITE LITE. Sheds gentle luminescent glow trom any 115 V AC outlet-simply plugs in. Only $31 / 4^{\prime \prime}$ dia. $1 / 4^{\prime \prime}$ thick $W t .2$ oz No. 114474 No. Eoch.
$79 c$ 10 Lot

# Light-Dimmers, Automatic Time Switches 

ELECTRONIC LIGHT DIMMERS
FOR GLAMOR LIGHTING IN HOMES, OFFICES OR SUBDUED CONVENIENCE AND SAFETY LIGHTING

Brand new product of modern electronic technology, Incorporates "solid state" diodes to odjust current flow without heat or power loss. No coils or resistors as in place af regulor wall switch.

SIMPLY DIAL THE LEVEL OF LIGHT... CREATE THE MOOD YOU WANT From full on ta zero light output or any degree in between. 5mooth, gradual dialing is combined into a single contral with positive on-off pushbutton action of any predialed hight level. Wall plate not supplied. For 15 $V .60 \mathrm{cy}$. AC incondescent lights only. UL Listed No. 29B3. 600 W. Copocity. Fits single gong box. Net Each
$\$ 11.97$
No. 13 A352. 1000 W. Capacity. Fits 2-gang box. Net Each
GLAMOR-GLO 3-POSITION OFF-HI-LO SWITCH Controis lighting of "off" $50 \%$ intensity or full on. Shpg. wt
4 ozs. For 115 V .60 cy . AC incondescent lights.
No. 29B4. 300 W . Moximum Lomp Lood. Net Each... \$1.71
No. 29B5. 600 W. Maximum Lomp Lood. Net Each


## AUTOMATIC TIMED EXTENSION CORD



Here's a happy combination . an adjust-
able Time Switch, Extension Cord and 3 Way Convenience Outlet!
Promotes peace of mind
and set it for automatic electrical "turn off" of appliances, radio, TV, lamp, fan, heating pad, efc. Up to 4 hours later. Sim ple time-set knob adiusts 10 desired oper ating period. Also has "hold" position for continuous non-automatic operation. High quality throughout. Uses famous Mark Time automatic switch, heavy duty 6 ft cord, molded plug and - way recepracle. Factory. guaranteed against defects in material and workmanship for one year. Shpg wt. 2 lbs
No. 29A442
$\$ 5.47$

## AUTOMATIC PHOTOELECTRIC SWITCH

 TURNS LIGHTS ON AT DUSK ..OFF AT DAWNNIGHT TIME PROTECTION FOR YOUR HOME

Discourages prowlers, prevents accidents in the dark by turning on the lights for you -automatically. Tiny light sensitive cell light and through 115 V . AC power source causes reloy switch to turn lights off and on with doylight ond darkness
Completely silent operotion. Uses less oower than an electric clock. Simple plugin connection with U/L approved cord
set. Handles lamp lood up to 600 watts. set. Hondles lamp lood up to 600 wotts.
size $3 \times 2 \times 2 \times 2$. WYt. 12 oz.
No. 378149 . Net Each.......... $\$ 5.95$ No. 37B149. Net Each..


## "WNW! Now! sPECTACULAR BUY! s FOR BLACK

TURNS OFF TV AUTOMATICALLY WHILE YOU SLEEP!

ZAND COLOR
$\$ 597$

## EXTRA LONG 20 FT. CORD

500 Watts copacity.

- No installation
- Just plug in.
- May also be used for rodios, lomps, recorders, etc.
Now you can fall osleep while TV is still on! No need to wake up and turn it off TV Timer Control turns off TV automatically Simply plug TV set into Timer Control dial and Time Control into wall outlet. Turn dial to choose outomatic turn-off. Thet's all.
 Hox 1246 Model M8. Eoch
\$5.97

INTERMATIC AUTOMATIC TIMERS


CLOCK-TIMER
COMBINATION ELECTRIC CLOCK AND SIGNAL TIMER
Turns appliances, fans, lights, etc. Not anly tells time, but also is a de"on" ond "off" at any selected time pendable automatic timer for confrom 1 hour to 23 , hours. Automatically repeats some "on" and "off" operation daily without reset. Manual control switch allows temporary or permonent "on"-"'oif" independent of outamatic switch if desired.
Requires no installotion-simply plug unit into wall sockel and appliance cord into receptacle or the "TimeAll." Hondles up to 1875 Wotts. Gray plostic cose only $5 \times 4 \times 2^{\prime \prime}$. Mounts on wall if desired. UL opproved. Wt. 2lbs.
No. 37 A315. Time-All
Model A211. Net Each... $\$ 8.97$

## INTERMATIC MODEL TIO1 UTILITY TIMER ALL-PURPOSE TIME SWITCH

$$
\begin{aligned}
& \text { FOR DEPENDABLE AUTOMATIC } \\
& \text { ON-OFF ELECTRIC CONTROL } \\
& \text { OF: } \\
& \text { APPLIANCES - LIGHTS • FANS } \\
& \text { - MUSIC SYSTEMS • ETC. } \\
& \begin{array}{l}
\text { HEAVY-DUTY } \\
\text { UP TO 40 AMPS } \\
\text { (4375 WATTS) } \\
\text { 125 VOLTS AC }
\end{array}
\end{aligned}
$$

HANDLES EVERY TIME NEED AROUND THE HOME OR BUSINESS

Automatic switch, powered by 115 V .60 cy . AC synchronous clock, repeats timing cycle each 24 hours. Manual switch allows independent operation when desired. Comes with one set of adjustoble on-off trippers, others easily Minimum time between settings, 1 hour. Heavy duty 40 amp switch contacts will handle in-rush currents up to 8 times normal rating. Encased in gray steel cabinet with hinged door and wiring knockouts. Size $73 / 4^{\prime \prime} \mathrm{H}, 5^{\prime \prime} \mathrm{W}, 3^{\prime \prime}$ D. For 115 V .60 cy . AC. Wt. 3 lbs. No. 378350 . Net Each $\$ 8.77$ Type T103. Some os above but Double Pole Single Throw. \$9.97 Type 107T8A. Set of "On and Off" Trippers for intermatic switches. 26 e
No. 37 A321. Net Per Set. ..................................................

## TORK 24 HOUR PROGRAM TIMER

## - 15 MINUTE SWITCHING

- REPEATS 1 TO 48 DAILY OPERATIONS FOR PRECISE AUTOMATIC
CONTROL OF ELECTRICAL SYSTEMS Ideal precision timer for music systems, lights, ventilating and heating, pumps, etc. Used extensively in industrial plants as we as homes, forms, ete. where high dependobility is required even under extreme cold or worm temperatures.
Exclusive tilting-tab adjustment on timer drum allows rapid set-up or change for 15 minute increments of "on or "off" aperation up to 23 hours and 45 minutes. Switch is precision snop action type, SPDT, roted 20 omps 115 V . AC. Powered by extra heavy duty long life 115 V .60 cy . timing motor. Drown steel case, hinged lid, $81 / 2 \times 53 / 8 \times 41 / 9^{\prime \prime}$. Wt. 5 Ibs.
No. 37B381
Mfg. List $\$ 29.95$. Net Ea.. \$19.97



## Inverters, Power Supplies, Mercury Batteries



Delivers ripple free DC in two -NEW COMPACT DESIGN
variable by front panel control adjustment of variable tron volts continuously variable by front panel control adjustment of variable tronsformer. Ideal for servicing transistor equipment, auto sets, portables, os battery substitute or bat-
tery charger. Ranges (selected by toggle switch) $0-8$ volts at 10 amp continuous 20 amp intermittent and $0-16$ volts at 6 amps continuous, 10 amp intermittent. Output voltmeter and ammeter permits constant monitoring, Fused primary, automatic reset overload reloy on secondary. Gray cabinet size $81 / 2 \times 53 / 4 \times 71 / 2^{\prime \prime}$. Wut. 14 los. Use on 105-1 25 volts AC 50-60 Cycle line No. 35A272. 1064K. Kit Eoch.
No. 35A273. 1064 . Factory Wired. Each

## MODEL 1060 LOW RIPPLE VARIABLE POWER UNIT

incorporotes extra low-ripple filter circuit to supply dependable DC power for servicing and operating all 6 or 12 volt transistor radios, amplifiers, vibrator-tube sets and other equipment. Has varioc-type voltoge adjustment. Ranges (selected by 6-12 volt toggle switch), ore $0-8$ volts of 10 amp . continuous or 20 amp . meters, $0-20$ volts and $0-10 / 0-20$ amperes permits constant monitoring of the output. Ruggedly constructed with fused primary and overload reset protection. Operotes on $105-125$ volts $A C 60$ cycles. Weight 19105 . Size $83 / 4 \times 101 / 2 \times 73 /{ }^{\prime \prime}$
 MODEL 1020 TRANSISTOR POWER AND BIAS SUPPLY

- Continuously varioble 0-30 volts monitored by dual range voltmeter.
- Versatile, stable, transistorized, copable of up to 300 MA .

Ideal bench unit which will supply all voltage needed to aperate tronsistor devices, varioble bios supply, DC filoment supply ond to recharge batteries of vorlous kinds. Output voltage continuously variable from $0-30$. Current rating 150 MA
 Housed in gray steel cobinet. Fuse prot



Galaxy, new transistorized unit with adjustable voltage and frequency. Op-
erates dictating machines, power tools, TV and recorders. Electral, small erates dictating machines, power tools, TV and recorders. Electral, small glove comportment size, operates tape recorder, radios, etc. Has cigorette lighter connector.
Senior, time proven, relioble, small in size. Dynamo, lowest cost converter, operates all shovers, small radios, etc.
Supreme, up to 200 watts AC power, has remote control with veriable autput switch and indicator light. Connects direct to battery.
New fronsistorized (Series 200 Wott Attias and 275 Watt Continental and 550 Watt Dual Continental Continuous Duty. Uses transistors for mone efflcient, quieter operation. Produces good wave form, at 60 cycles controlled by frequency reed, well filtered, for operating tape recorder, phonograph ond other motor type appliances os well as TV sets, power tools, etc. Complete with remote control and all wiring.

| Stock No. | DC Volts Input | $\begin{aligned} & \text { Outp } \\ & \text { Cont. } \end{aligned}$ | Wtge. Interm. | Mtg. No. | Wt. <br> Lbs. | Size <br> Inches | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 298130 | 12 | 25 | 30 | Dynamo | 2 | $2 \times 2 \times 33 / 4$ | $\$ 9.95$ |
| 294152 | - 12 | 42 | 50 | Electral | 3 | $3 \times 21 / 4 \times$ |  |
| 294146 | -12 | 40 |  | Senior |  | $21 / 2 \times 21 / 4 \times 41 / 2$ | 18.47 |
| 29B165 | 12 | 140 | 175 | Goloxy | $91 / 2$ | $103 / 4 \times 6 \times 6$ | 36.7 |
| 294154 | 12 | 175 | 200 | Supreme | $25^{1 / 2}$ | $103 / 4 \times 6 \times 6$ | 8 |
| 294176 | 12 | 275 | 300 | Cont'nt'I | 30 | $11 \times 6 \times 6$ | 153.13 |
| 35826 | 12 | 550 | 600 | Cont'nt'I | 60 | $103 / 4 \times 13 \times 71 / 4$ | 153.13 |

## NOW . . . 117 VOLTS OF HOME ELECTRICITY IN TENT, TRAILER, BOAT . .. ANYWHERE! <br> TERADO TRAV-ELECTRIC COMPLETELY SELFCONTAINED 117 VOLT AC PQWER SUPPLY For use anywhere. Operates TV, recorders, electric drili, test equipment, hedge trimmer, TV comera, soldering iron, sewing mochine, electric lights, PA systems. Contains inverter with bottery and automatic recharger. Output 117 volts 60 eycle AC, 125 wotts continuous, 175 intermittent. Meter shows charge rate and hours of onticipated output. Battery: 25 omp hr , wet storage. Charger operates on storage. Charger operates on 110 V . AC or 12 volts (cigorette lighter socket), 6 amp rote automotically tapers to 0 , will not overcharge if left on. Copper clod cose $12 \times 51 / 2 \times 8^{\prime \prime}$. Wt. 30 lbs. Shpg. wt 36 lb $12 \times 51 / 2 \times 8^{\prime \prime}$. Wt. 30 lbs. Shpg. wt. 36 lbs . No. 29A169. Model $50-160$ Complete. Each. <br> 



MALLORY DURACELL ALKALINE BATTERIES PROVIDES UP TO 5 TIMES LONGER SERVICE FOR OPERATING


## BATTERY PLUGS AND SNAP-ONS


(D) 12A1341. Individuol snap fasteners for 455 , 457,467 , etc. Mole ond female. Per Set 50 Up, Per Set
(E) 14A717. Snap-on strip for 45 c 456, etc. Each............... 18 c
(E) 14 C 4 . Snop-on strip for 437 477, etc. Ench ................ 18c 477, etc. Each................ 18c
(E) 148127 Snop-on strip for 430 ,
415,216 , etc. Eoch........ 24 c
KEYSTONE CLIP-IN BATTERY HOLDERS TEMPERED ALUMINUM $\begin{array}{ll}\text { Mfg. } \\ \text { No. Stk. No. Choice Eoch } \\ 1-19 & 100 \\ 20-99 & U_{D}\end{array}$
Fits Battery Types
 Size.$^{\prime \prime}$ dia. $x$ 1 $3 / 4^{\prime \prime}$ Mini. Cell 915 Eveready, Z Burge
or ZM-9 Mercury Cell
935 Evereody, I Burges
or TR233 Mercury Cell
Holds Mf

$\begin{array}{rrrrr}\text { One } 137 & 148109 & \$ 0.23 & \$ 0.21 & \$ 0.18 \\ \text { Two } 138 & 148110 & .38 & .34 & .30 \\ \text { One } 139 & 148111 & .23 & .21 & .18\end{array}$ 412 Eveready, U15 Burgess $221 / 2 \mathrm{~V}$. | $\begin{array}{llllll}\text { or RM-412R Mercury Cell }\end{array}$ | 148120 | .30 | 26 | 24 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | 413 Evereody, U20 Burgess 30 V

or RM-413R Mercury Cell or RM-413R Mercury Cell 950 Eveready, \#2 Burge
or RM42R Mercury Cell "D" Cells Mounted in Líne 504 Eveready, Y 10 Burgess 15 V .
411 Eveready, U10 Burgess 15 V .

| One 183 | 148123 | .30 |
| :--- | :--- | :--- |

$$
.24
$$



## 进 <br> ENERGIZERS－TRANSISTOR BATTERIES

| Stock No． | Fact． No． | List Each | Net Each | Pkg Qty． | Each | Volts | Dimensi | $\stackrel{\mathbf{s}}{\mathbf{H} .}$ | Replaces Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21 B63 | E9 | 95 | ． 72 | 2 | ． 64 | 1.4 | Mercury P | Cell | Z9 |
| 21438 | 1050 | ． 30 | .19 | 1 | .19 | $11 / 2$ |  | 218 | 230 |
| 21443 | 206 | ． 89 | ． 62 | 1 | ． 62 |  | $3 / 4{ }^{\prime \prime}$ dio．$\times$ |  | VS327 |
| 218141 | 216 | 69 | 48 | 1 | ． 48 | 9 | $1 \frac{1}{3 \frac{1}{2}}$ | 13 | 2U6 |
| 21 A198 | 222 | 98 | 65 | 1 | .65 | 9 | $13^{1 / 2}$ | $1{ }^{\text {\％}}$ \％ |  |
| 21 B159 | 226 | ． 89 | .62 | 1 | .62 | 9 | 11 | 118 | P6 |
| 21425 | 228 | 1.50 | 1.05 | 1 | 1.05 | 12 | $1^{\prime \prime}$ dia．$\times$ |  | V5329 |
| $21 C 62$ | 239 | 1.85 | ． 30 | 1 | ． 30 | $131 / 2$ | $1371 \mathrm{~g}^{1}$ | 211 | $\times \times 9$ |
| 218142 | 246 | 1.85 | 30 | 1 | 1.30 | 9 | $1{ }^{13} 112$ | $3{ }^{18}$ | 2N6 |
| 21430 | 266 | 1.95 | 1.36 | 1 | 1.36 | 9 | 1 部 1 诸 | $2 \%$ | M6 |
| 218137 | 276 | 1.95 | 1.36 | 1 | 1.36 | 9 | 21028 | 3 | D6 |
| 21446 | 333 | ． 89 | ． 62 | 1 | ． 62 | 4.5 | .662 dio．$x$ | ． 965 | 1306 |
| 21 A40 | 904 | ． 125 | .09 | 6 | ． 08 | $11 / 2$ | ． $44^{\prime \prime}$ dio．$\times$ | ． 18 | Size N |
| ${ }^{64} \mathrm{~B}^{97}$ | BATTERIES |  |  |  | PORTAELE |  | RADIOS， |  | ETC． |
| 21427 | 412 | 1.50 | 1.05 | $!$ | 1.05 | 221／2 | $1 \frac{1}{32} 5$ | 2 | U15 |
| 21 B69 | 413 | 1.75 | 1.23 | 1 | 1.23 | 30 | 1 3\％5／8 | 218 | U20 |
| 21 Cl 65 | 417 | 1.75 | 1.35 | 6 | 1.23 | $221 / 2$ | 1 0 | $1{ }^{\text {P }}$ | $K 10$ |
| 218121 | 437 | 4.50 | 3.47 | 3 | 3.15 | 75 | 148 138 | 615 | $\times \times 50$ |
| 21867 | 457 | 3.85 | 2.97 | 6 | 2.70 | $671 / 2$ | 2 根 $13 / 8$ | $21 / 2$ | K45 |
| 21 B26 | 477 | 3.85 | 2.97 | 6 | 2.70 | $671 / 2$ | 19 88 | $5{ }^{7}$ | P45 |
| 218132 | 479 | 4.25 | 3.27 | 6 | 2.97 | 90 | $17 \%$ | 73 | P60 |
| 21419 | 482 | 4.25 | 3.27 | 6 | 2.97 | 45 | $35 / 8 \quad 17 / 8$ | $51 / 2$ | M30 |
| $21 C 143$ | 484 | 4.95 | 3.47 | 1 | 3.47 | 45 | $3 \frac{31}{31} 213$ | $5{ }^{6}$ | B30 |
| 21820 | 490 | 4.50 | 3.47 | 6 | 3.15 | 90 | $3 \%$ 13／8 | 318 | N60 |
| 21868 | 493 | 11.95 | 8.37 | ， | 8.37 | 300 | 2418 | 3.3 | U200 |
| 21 Cl 40 | 506 | 1.85 | 1．43 | 6 | 1.30 | 30 | 1 \％5／8 | 13 | Y20 |
|  | PORTAELE＂A＇＂BATTERIES |  |  |  |  |  |  |  |  |
| 21870 | 717 | 1.75 | 1.35 | 6 | 1.23 |  | $23^{3} 8178$ | $3{ }^{3}$ |  |
| 21 B66 | 724 | 1.25 | ．87 | 1 | ． 87 | 6 | $1{ }^{3} 518$ | 231 | Z4 |
| 21412 | 742 | －1．65 | 1.26 | 6 | 1.15 | $11 / 2$ | $2 \frac{15}{215}$ | 4 | $4 F$ |
| 21415 | 746 | 2.25 | 1.73 | 3 | 1.57 | $41 / 2$ | $3{ }^{3} \mathrm{O}$ | 4 极 | G3 |
| 21423 | 773 | 2.50 | 1.92 | 5 | 1.75 | $71 / 2$ | Scr．Ter．G | Lead | 5540 |
| 2149 | 781 | 1.75 | 1.35 | 5 | 1.23 | $41 / 2$ | Screw Term |  | 5360 |
| 21811 | 964 | ． 60 | ． 46 | 12 | ． 42 | $11 / 2$ | $13 / 8$ Dio． | 4 杜 | 21 R |

## HOBEY BATTERIES

（Screw Terminals）

## 

## PHOTO FLASH BATTERIES

| 214188 | 812 | ． 20.14 | ． 14 | 1.5 Round $\frac{1}{3}{ }^{\prime \prime}$ dio．$\times \frac{1}{3}{ }^{3} 720$ |
| :---: | :---: | :---: | :---: | :---: |
| 21450 | 815 | .25 ． 16 | 1.16 | $11 / 2$ Pen Cell size 920 |
| 21451 | 835 | ． 30.19 | 1.19 | $11 / 2$ C Cellsize 120 |
| 21452 | 850 | ． 30.19 | 1.19 | $11 / 2$ D Cell size 220 |
| 214205 | 497 | 15.9511 .16 | 111.16 | $510 \quad 3 \quad 1$ 12 5 5／8 |
| 214128 | 504 | 1.15 ． 81 | 1.81 | 15 5／8 16，13／8 Y 10 |
| 218116 | 460k | 2.501 .67 | 11.67 | For Polaroid Winklite w／Lamp |
| 214195 | 531 | 1.25 .8 | 1.82 | $41 / 2$ For New Poloroid |
| 214196 | EPX13 | ． $75 \quad .55$ | 4.50 | $11 / 2$ For Poloroid $G$ Others |

ALKALINE LONGLIFE，HIGH DRAIN TYPES

| $21 \mathrm{Al31}$ | E90 | 40 | ． 27 | 1 | .27 | $11 / 2$ | Size N | N |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21441 | E91 | ． 50 | .33 | 1 | .33 | 11／2 | Pen Cell Size | 915 |
| 214197 | E92 | ． 50 | .33 | 1 | －33 | 11／2 | AAA Size | 912 |
| 214133 | E93 | ． 60 | .39 | 1 | ． 39 | $11 / 2$ | C Cell Size | 935 |
| 21 C134 | E94 | 50 | ． 33 | 1 | ． 33 | 1.5 | Rd． $1{ }^{\text {d／}}{ }^{\prime \prime}$ dia．x $13^{7} 2$ | 1／2D |
| 21453 | E95 | ． 75 | ． 49 | 1 | ． 49 | $11 / 2$ | DCellsize | 950 |
| 214186 | E177 | 1.98 | 1.29 | 1 | 1.29 |  | Rd．昭＂dio．x19 | TR177 |
| 214187 | 523 | 1.25 | ． 82 | 1 | 82 | 4.5 | Rd． $066^{\prime \prime}$ d．x1．96 M | MN1306 |
| 214221 | 563 | 4.15 | 3.04 | 3 | 2.76 | 4.5 | $128^{3} 0^{\prime \prime}$ dia．x7 ${ }^{5} 3^{\prime \prime}$ | 1 lb ． |
| 214222 | 564 | 14.95 | 11.75 | 2 | 9.94 | 13.5 | $8 \mathrm{8} \times 2+\frac{18}{6} \times 5$ | 5 lb. |

For Flashlight，Lantern，Emergency Lighting，Toys | $21 A 211$ | 1461 | 5.50 | 4.07 | 4 for 14.80 | Hot Shot 6 volt 9 | Lbs． |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $21 A 189$ | 1463 | 5.98 | 4.01 | 1 | 4.01 | Hot Shot 12 volt $71 / 2$ Lbs． | POPULAR＂MINI－MAX＂A－B BATTERY PACKS

| Stock No． | Mfg． No． | Net Each |  | Voltage | Sixe | $\begin{aligned} & \text { Wt. } \\ & \text { Lbs. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 214206 | 759 | 7.95 | Standard | 11／2／90 Volt Pack | $15 \mathrm{tb} \times 4 \frac{8}{8} \times 6+\frac{15}{6}$ | 17 |

BURGESS Batteries
－
THE ACCEPTED STANDARD FOR
INDUSTRY，LABORATORY， AND ELECTRONIC NEEDS． FRESH STOCK ALWAYS AT B－A！
＂A＂BATTERIES

| Stock No． | $\begin{aligned} & \text { Mfg. } \\ & \text { No. } \end{aligned}$ | List Each | Net Each | $\begin{aligned} & \text { Pkg. @ } \\ & \text { Qty. Each } \end{aligned}$ |  | Volts | L． | ensi | H． | $\begin{aligned} & \text { Wt. } \\ & \text { Lis. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21B123218802188121887218882188921890218912189221893218153 | 2 F | 1.75 | 1.22 |  | 1.22 | 11／2 | $2 \frac{18}{2}$ | $13 / 8$ | 1／4 | 3／4 |
|  | 4 F | 1.65 | 1.15 | 1 | 1.15 |  | 25／8 | 25／8 |  | $12 / 5$ |
|  | 21 R | 60 |  | 12 | ． 42 | $11 / 2$ | $1{ }^{18}$ | Dia | 41／8 | $2 / 5$ |
|  | 2FBP | 1.15 | 87 | 5 | ． 79 | $11 / 2$ | 27 |  | $4{ }^{3}$ |  |
|  | F2BP | 1.90 | 46 | 5 | 1.33 |  |  | $13 / 8$ | $4{ }_{4} \frac{1}{31}$ |  |
|  | F4BP | 1.29 | 85 | 1 | ． 85 | 6 | 8 | $25 / 8$ | 4 |  |
|  | ${ }^{2 F} 2 \mathrm{H}$ | 2.50 | ．93 | 5 | 75 | 3 | 258 |  |  |  |
|  | 422 | 1.15 | ． 87 | 6 | 79 |  | 1 ？ |  | 名 |  |
|  | 432 532 | 1.25 | ． 96 | 6 | ． 87 | 41 |  |  |  |  |
|  | 532 85 | $\begin{aligned} & 1.95 \\ & 3.25 \end{aligned}$ | 1.3 2.2 | 1 | 1.36 2.27 | 411／2 | 2 3 \％ |  | 238 |  |
|  |  | ＂B＇ | AND | ＂C＂E |  | BATTERIES |  |  | Replaces Eveready |  |
| 21897 | P45 | 3.85 | 2.97 | 6 |  | 671／2 | 172 |  | $5{ }^{3}$ | 477 |
| 21 A191 | B30 | 4.95 | 3.47 | 1 | 3.47 | 45 | 41 | 217 | $5{ }^{1 / 8}$ | 484 |
| 21898 | M30 | 4.25 | 2.97 | 1 | 2.97 | 45 | $3{ }^{\text {P }}$ | $13 / 4$ | $51 / 2$ | 482 |
| 218100 | 4156 | 2.35 | 1.61 | 1 |  | $221 / 2$ | 31 | $21 / 8$ | 29 | 763 |
| 218101 | 5156SC | 5.95 | 4.57 | 5 | 4.16 | $221 / 2$ | $41 / 8$ | $21 / 2$ | $23 / 4$ | 778 |
| 218102 | 5308 | 4.35 | 3.05 | 1 |  |  | 4 |  |  |  |
| 218104 | K15 | 1.95 | ． 74 | 1 | 1.44 | $221 / 2$ | $11 / 4$ | 8 | $2{ }^{2}$ | 420 |
| 218138 | U30 | 2.50 | 1.75 | 1 | 1.75 | 45 | $1{ }^{3}$ | 13 | 313 | 415 |
| 21 A18 | $\times \times 45$ | 3.85 | 2.70 |  | 2.70 | 671／2 | $23 / 4$ | 118 | 318 | 467 |
| 21 A192 | Z30 | 3.95 | 2.76 | 1 | 2.76 | 45 | 3 | $2{ }^{\circ} 8$ | $4{ }^{3}$ | 738 |
| 21B113 | Z30NX | 3.85 | 2.69 |  | 2.69 | 45 | 3喿 | 17／8 | $4{ }_{3}{ }^{2}$ | W35 |

## PHOTO－FLASH BATTERIES

| $21 A 216$ | N150 | 10.95 | $\mathbf{7 . 6 5}$ | $\mathbf{7 . 6 5}$ | 225 | Strobonor 6 | 492 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $21 A 218$ | $\times 150$ | 10.25 | $\mathbf{7 . 2 0}$ | 7． | $\mathbf{7 . 2 0}$ | 225 | Stroboflosh 11,111 | 489 |
| 21A219 U160 | 10.25 | $\mathbf{7 . 2 0}$ | 1 | $\mathbf{7 . 2 0}$ | 240 | Stroboflosh 1 | 491 |  |

## IGNITION，TELEPHONE，LANTERN BATTERIES

| A32 | 4FM | 1.29 | 93 | 12 |  | $11 / 2$ | 25／8 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 218119 | 4 F 2 H | 2.75 | 1.92 | 1 | 92 |  | 㤑 | 2 t |  | 357 |
| 2145 | 6 ign | 1.25 | ．92 | 12 | ． 84 |  | 2 | Dio． |  |  |
| 214213 | 4F4H | 5.50 | 3.70 | 1 | 3.70 |  |  |  |  |  |
| 21 A214 | 4F5H | 7.25 | 4.86 | 1 | 4.86 | 71 |  |  |  |  |
| 214212 | 4F6H | 8.25 | 5.63 |  | 5.6 |  |  |  |  |  |
| A193 |  | 2 | 87 | 25 | ． 79 | 6 |  |  |  |  |
| 2144 | F4 | 1.39 | 01 | 12 |  | 6 | Met | ont |  | 509 |
| 218136 | TWI | 2.95 | 1.96 | 1 | ． 96 | 6 | Rada | ite |  | 31 |
| 216139 | TW2 | 2.95 | 1.96 |  |  | 12 | Rodar | ite Bo |  | 32 |

BATTERY ACTIVATORS FOR TRANSISTORS

| Stock No． | Mfg． No． | List | Net Each | Pkg． Qty． | ${ }_{\text {Each }}^{\text {@ }}$ | Volts | Dimensions | Replaces Eveready |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21A135 | C6X | 2.35 | 1.64 | $\frac{1}{1}$ | 1.64 |  | $2{ }^{\frac{5}{4}} \times 1{ }^{17} \times 6$ 右 | 2356 |
| 21 1885 | 9R | ． 17 | .13 | 12 |  | 11／2 | 誛x 1 號 | 1015 E |
| 21878 | 930 | 25 | 16 | 1 | .16 | $11 / 2$ | $8: \times 111$ | 1015 |
| 21871 | 410 | 1.15 | 81 | 1 | ． 81 | 15 |  | 411 |
| 218107 | U15 | 1.50 | 1.05 | 1 | 1.05 | $221 / 2$ | $1 \times 88 \times 1{ }^{\text {1 }}$ | 412 |
| 218108 | U20 | 1.75 | ． 23 | 1 | 1.23 | 30 | $1 \times 81818$ | 413 |
| 218144 | Y10 | 1.15 | 81 | 1 | ． 81 |  |  | 504 |
| 218145 | Y15 $\times \times 15$ | 1.50 | ． 05 | 1 | 1.05 | $221 / 3$ |  | 505 425 |
| 218110 | $\times \times 15$ | 2.25 | 56 | 6 | ． 56 | 221／2 | $148 \times 18 \times 31 / 8$ | 3425 |
| 218147 | NE | 1.125 | 09 | 6 | ． 08 | $11 / 2$ | $218 \times 2$ | 276 |
| 218142 | 2N6 | 1.85 | 1.30 | 1 | 1.30 | 9 | $13 / 8 \times 13 / 8 \times 23 / 4$ | 246 |
| 218141 | 2 U | ． 69 | ． 48 | 1 | ． 48 | 9 | $1 \times 18 \times 1$ \％ | 216 |
| 218179 | P6 | ． 89 | 62 |  | 62 |  | 1 Dio．x 1 陪 | 226 |
| 218180 | M6 | 1.95 | 1.36 | 1 | 1.36 | 9 | 1 18 $\times 1$ 数 $\times 2$ 尔 | 266 |

NICKEL－CADMIUM RECHARGEABLE BATTERIES
Provides more energy than primary dry cell，are rechargeable
No．Mfg．List Net Ea，Volts
Replaces
$\begin{array}{llllll}21 A 58 & \text { CD6 } & \$ 2.60 & \$ 1.82 & 1.25 & \text { Pencil＂} \\ 21 A 59 & \text { CD7 } & 5.76 & \mathbf{4 . 0 3} & 1.25 & \# 2 \text { or } 950\end{array}$
Size AA
Size D
Size D
Size C

QUICK ORDER LISTING OF THE MOST POPULAR BATTERY TYPES
ORDER BY STOCK NUMBER AND YOUR CHOICE OF EVEREADY－BURGESS－R．C．A
For Flashlights，Lanterns，Toys，Instruments，Etc．

| Siock No． | Eveready No． | y Burgess No． | $\begin{aligned} & \text { RCA } \\ & \text { No. } \end{aligned}$ | Volt or Size | Mfg． List | Net Each | Pkg． Qty． | At Each | Wt． Std．Pkg． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21 C60 | 912 | 7 | VS074 | AAA | \＄0．20 | D． 14 | 24 | 0.13 | 0.8 |
| 2143 | 915 | Z | VSO34A | AA | ． 20 | .14 | 24 | .13 | 0.9 |
| 2142 | 935 | \＃1 | VSO35A | C Cell | ． 20 | .14 | 12 | .13 | 2.1 |
| 2141 | 950 | \＃2 | VS036 | D Cell | ． 20 | .14 | 48 | ． 13 | 9.5 |
| 2145 | No． 6 | 6 lgn ． | VS006S | Dry Cell | 1.35 | .92 | 12 |  | 25. |
| 2144 | 509 | F4M | VSO40C | Lantern | 1.39 | 1.01 | 12 | .92 | 17. |
| 218136 |  | TW1 | V\＄317 | 6 V ．Ltrn． | 2.95 | 1.96 | 1 | 1.96 | 3.2 |
| ＂B＂ 8 |  | BATTERY |  | PORTABLE＂A＂TYPES |  |  |  |  |  |
| 21871 | 411 | U10 | VS083 | 15 V＂B＂ | 1.15 | 81 | 1 | ． 81 | ． 05 |
| 218138 | 8415 | U30 | V 086 | 45 V ＂B＂ | 2.50 | 1.75 | 1 | 1.75 | 0.1 |
| 218164 | 4416 |  | VS318 | $671 / 2 \mathrm{~V}$ | 2.95 | 2.07 | 1 | 2.07 | 0.3 |
| 21417 | 455 | $\times \times 30$ | VSO55 | 45 V ＂B＂ | 3.25 | 2.27 | 1 | 2.27 | ． 5 |
| 21418 | 467 | XX45 | $\checkmark$ SO16 | $671 / 2 V^{\prime \prime}{ }^{\prime \prime}$ | 3.85 | 2.70 | 1 | 2.70 | ． 8 |
| 21431 | 744 | F4P1 | VS009 | $6 V^{\prime \prime} A^{\prime \prime}$ | 1.65 | 1.15 | 1 | 1.15 | 1.4 |

# Handy Tools, Test Leads 

POPULAR TOOL KITS AND AIDS USED IN TESTING AND SERVICING

(1) HANDY TV ALIGNMENT KIT A low cost kit that contains all the necessary aligning tools for doing a complete TV servicing job, 9 tools in all-in a convenient pocket sized leatherette roll case. pocket sized Made to last and wear for hundreds of jobs-an absolute must for every service shop. includes K-tron tool, aligner, oscillator tool, long reach aligner, universal alígner, dupiex aligner, and flexible tuning 'wand. GC8455. Wt. $1 / 2 \mathrm{lb}$.
No. 164841 . Each. . . . .

## DELUXE

TV ALIGNMENT KIT
Similar to above but with 16 tools in roll cose. Handles alignment of most TV sets. All tools are of best quality available.
Designed to give long service. GC8280. Wt. 1 tb.
No. 16 C 725 . NET. .... $\$ 10.19$

(3)

## (2) TV SERVICE CORD KIT

Consion most-needed universal exIncludes leads in a plastic roll-cose. with socket; 4 anode extension lead with socket, tension with kinescope socket CRT base and 6 leads; 5 ft . anode extension for metal tubes with snap connectors at each end; yoke extension harness with 8 wires that can be wired as desired; 6 ft . cheater cord for both standard and Zenith sets. Wt. 1 lb. Eby K308. Each 5 S. 95 (3) TUBE CHECKER

Locates bad receiving tubes and picture tubes in series filament TV and radios. Checks latest tubes including compactron, novar, nuvistor. Plug tubes in, neon glows if filoment is OK. Leods provide continuity test, no shock hazord. Plugs in outlet with cheater cord. Weighs only 6 oz . Sencore FC123.
No. 16C296. With Leads
.53 .95

## ALIGNMENT

 Wall mounting kit with 27 tools for complete rodio-TV olignment service. Includes: olignment screwdrivers, wrenches, channel tuners, oscillotor adjustment tools, core oligners, solder probe, trimmers and IF oligners, hex tools, nylon replacement tip, etc. Steel panel hos separate indexed compartment for each tool. Shpg. wt. 3 lbs. No. 168124. GC9200. Each
$\$ 17.17$


Test Leods of Best Quality Flexible, Kinkless Wire $48^{\prime \prime}$ to $50^{\prime \prime}$ Long
(1) PHONO NEEDLE TYPE Replaceable phono needles one (3) ALL PURPOSE TYPE Replaceable phono needles one end, Sturdy slim $6^{\prime \prime}$ plastic handles with
choice of below connectors other end. sharp point tips. Equipped with baSlim $4^{\prime \prime}$ red ond black handles.
I1A167. With Std. Phone tips. 878 11B51. With spade lugs. Pair. .87c
11 B52. With alligotor clips. Pr.. 83 c

## (2) SLIM LINE TYPE

Long vinyl-insulated shafts. Red and black tenite handles. Phone tip plugs. Type 698.
No. 16A517. Per Pair.... $\$ 1,14$ nana plugs allowing for interchange of spade lugs, phone tips or alligator


## (4) WESTON TYPE

Well made for precision tests. Red and Black $4^{\prime \prime}$ long pencil type plastic handles, $48^{\prime \prime}$ lead, molded finger grip phone tips. Type 625 .
No. 11 Alil. Per Pair. . (5) RETRACTILE TEST LEADS TYPE 618 Coiled cords exted and black plugs solderl. Block and red molded butyrate hondes, plastic red and black plugs. Solderless phono tips No. 11 Cl 68. Per Pair

TEST PRODS AND WIRE


(1) Phono Noedle Type-Tapped removable chuck holds standard phono needles. Red or Black Tenolite handle. 11A173. Type 317. $5^{\prime \prime}$ long......30c
(3) Solderless Type-Tapped Removable plug holds wire securely by means of knurled collar. Red or Black. means or knurled collar. Red or Black.
(3) Hard Steel Phono Needles. Standard straight shank type used in all No. 24 B333. Pkg. of 25 . . . . . . . 25 c (7) Test Lead Wire-Non-kink flexible wire with live rubber insulation. 5000 our breakdown.
No. 2A65. 25' Red and 5' Black. 75 c CB" ALIGNMENT TOOL KIT
9 most often needed alignment tools for servicing citizens band equipment. Tune If transformers, RF coils, antenna ond oscillator coils make countless intricate odjustments. carrying case. Shpg. wt. $1 / 2 \mathrm{lb}$. No. 16B745. G-C 9210. Each.

## (4) CHEK-IT ELECTRICAL CIRCUIT TESTER

Battery operoted. 1000's of uses for the serviceman, electrician, outo mechanic. Checks continuity of circuits in radio and TV, motors, appliances, outo ignition systems, etc. Tests fuses, switches, buzzers. . handle lights Uses when circuit shows continuity. Uses standard penlight cell. Shpg. wt. 8 ozs.
No. 17C422. Less Battery. . 1.49 21 A3 Bottery for above. Each. . 14 c
(5) VOLT-OHM-MA TESTER

1000 OPV. AC or DC volts in 3 ranges $0-15,0-150$ and $0-1000, D C$ current 0-150 MA. Resistance 0-100,000 ohms. Thumb-operated ohms zero adjust and pin jacks for all 5 ranges. Bokelite cose $4 \times 21 / 4 \times 13 / 8^{\prime \prime}$. Test leods, setf-contained battery. Instructions included. Wt 1 ib No. 354573.
Import Special . . . . . . . . 8 . 5 No. 16B629.
SIGNAL TRACER TROUBLE SHOOTING AID

## SAVES TIME AND MONEY

Finds defective stage in a minute. Produces 1000 cycle signal for fost tracing af troubles in transistor rodios, tube radios, hifi omplifiers, TV sets, etc. No need to unsolder transistors for checking. Size
 No. 16A315. Net Each

(1) Average wt. ${ }^{3} \mathrm{oz}$. each (3) K-Tran and IF Tool. Natural plas(1) Narrow Blade "Fibreglas" screw- tic. Serewdriver tip, both ends. Type driver completely insulated. Type
 (3) Long Reach Alignment Screwdrivers. Made of bone fibre, extra thin $1 / 8^{\prime \prime}$ dia. blades. Screwdriver tips both ends - can be re-ground
168870. Type 9293.
$12^{\prime \prime} \mathrm{L} . \times 1 / 8^{\prime \prime}$ dia. Each.

16 L. $\times 1 / 8^{\prime \prime}$ dio. Each. . . . .... 71

(6) TV 6 FM Tuning Tool. Molded (6) Delvin Plostle Hex Wrench. Hex plastic. Fine recessed screwdriver tip. wrenches both ends, one end under
 No. ifB5. Type 8196. Each. . 41 c cores. $11^{\prime \prime}$ long. (7) Alignment Tool Set. Fountain pen size. Has $1 / 4$ " and "fi" nut wrenches, small and full blode screwdrivers. Made of bone fibre.
No. 11 A 156 . Type 5015. Set. . $\$ 1.24$ No. 16C727. Type 8606L. Each B20 No. "Ab6 bottom slugs in iron cores. 5" long No. 168125. Type 2501. Eoch.e2c (1) Color voltoge supply when bock cover of set is removed. Per No. 16B866. Type 5650. Eoch................ 73 c (2) Color TV Tool. Permits simultoneous adjustment of (2) Color TV Tool. Permits simultan
concentric controls on color TV sets.
No. 16 B867. Type 9299. Each. ...


# Service Tools 

 made drafting set. $41 / 2^{\prime \prime}$ compass with pen and pencil port, $41 / 2^{\prime \prime}$ divider, $31 / 2^{\prime \prime}$ ruling pen, I each of $31 / 2^{\prime \prime}$ bow pencil, bow divider and bow pen all heavy nickel plated brass in felt lined
container. $\mathbf{N o}$. 37 Bi75. Special, Each. 3.39

## DRAWING BOARD SET

$18 \times 24^{\prime \prime}$ drawing board of high grade $3 / /^{\prime \prime}$ basswood ond with end cleats for odded strength plus $24^{\prime \prime}$ well seasoned No. 36A200. Per Set
$\$ 4.29$


## RADIO RULE

Makes symbols indicating tubes, meters, coils, trans-formers-all parts in chassis. Pocket size. With directions
rections
No. $114314 . ~ E o c h . ~$


TV SERVICE MIRROR FOR VIEWING SCREEN
WHILE SERVICING SET
Just the thing for viewing the TV screen while adjusting controls or servicing in rear of set. Good quality
$12 \times 10^{\prime \prime}$ $12 \times 10^{\prime \prime}$ glass mirror does not distort image. Telescoping stand odjusts to the necessary height-collapses for easy corrying when making service No. 35485
NET EACH
$\$ 5.79$
MIRROR ONLY FOR BENCH USE
$12 \times 10^{\prime \prime}$ glass mirror in chrome frome and with upright bracket. S291
No. $35488 . \mathrm{G}$ - 8391 . Ea.


CHASSIS PUNCH SET
5 PUNCHES PLUS BURRING REAMER AT PRICE YOU NORMALLY PAY FOR 2 OR 3 PUNCHES ALONE! Five most often needed round hole punches. Cuts clean accurate holes in chassis or panel to accommodate sockets; switches, controls, etc. Does the job quickly and easily-drive with any wrench or with T-handle included. Punch sizes are $5 / 8^{\prime \prime}$ " $3^{\prime \prime}$ lav' $^{\prime \prime} 1^{\prime \prime}$ and $18^{\prime \prime \prime}$ Complete with punches, dies, $T$-handle, $1 / 8^{\prime \prime}$ to $1 / 2^{\prime \prime}$ tapered burring reamer, and handsome case. Quality import. Shpg. wt. 3 lbs.
No. 17 A626.
Special Per set

NEW WALSCO COLOR TV DEGAUSSING COIL AT LOWEST COST!

# SAFE, EASY TO USE AO EVEN FOR SET OWNER 



Eliminates fuzzy, unwanted stray colors... in just minutes. An absolute necessity for the serviceman. Simple for anyone to use ... allows set owner to save many dollars by demagnetizing his own color TV. High-impoct plastic, with momentary push button switch. Convenient storage clip for back of set. With illustrated instructions.
No. 138680. Type 2592.
$\$ 5.83$

## SERVICE AIDS


(1) TUBE LIFTER

Lifts tubes, vibrators, plugs and similar type parts easily and quickly. Simply insert tool under base of part and lift. Right angle end is for outo rodios and for pulling knobs. Stainless
steel. G-C 9213.2 oz . steel. G-C 9213.2
No. $16 A 832$. EACH.

## (2) SOLDERING AID

Soldering made eosier. fast! Special stainless steel angled tlp acts as probe - clears lug of solder, pushes other wire aside. Fork tip on other end guides and holds wire when soldering in tight spots. Wt. 4 oz No. 168933.

## Each

981

## (3) SOLDERING AID

Handy new tool with o stiff wire brush on one end for cleaning wires, terminal strips, lugs, etc., before soldering, and a fork-tip on the other end soldering G-C 9088 , 4 , wires while No. 118165 . Net Each
(4) Universal Fuse Puller Accommodates all kinds and types of Accommodotes all hinds and types of plug types ond cartridge fuses up to $3 / 4^{\text {, }}$ of 100 omps. Mode of molded nylon... non-conductive, non-inflammable, virtually unbreakoble. Wi. 3 ozs .
3 ozs.
No. 11 Bi . GC9356. Eoch. ... 87
HANDY 4-IN-1 TOOL - Pin Straightener

- Tube Puller

Tube Topper
For both 7 and 9 pin minloture tubes. Extremely well mode of top quality live rubber with oligning dies of hordened nylon bokelite.
Costs $1 / 4$ the price of the Costs $1 / 4$ the price of the
4 tools it replaces. G -C 4 tools it
9130.3 oz. 9130.3 oz .
$16 B 64$.

Special, Eo. 915


## (5) TEST ADAPTERS

Hondy for checking circuit voltoges, etc., without removing chassis. Replace tube with approdriote test adopter-plug tube into odapter. Al socket connections are ropside
within easy reach of a test prod. Low loss phenolic construction with high insulation resistance and high voltage breakdown.
168736. 7-pin Minioture. S1.52 G-C 9247.4 oz . Each. G-C 92452 8-Pin Octal. $\$ 1.54$ 168773. 9-Pin Minioture 31.83 No. 168930. TV CRT.
G-C 9251.4 oz . Each. $\$ 1.91$ No. 168931. Kit of 4 above put up in convenient container. S 9250 . Wt . $1 \mathrm{lb} .$. (6) $10 \frac{1}{2}$-INCH MAGNETIC PICK-UP TOOL
Reaches what your hands can't grosp. Use for picking up small parts from hard to reach ploces. With permo-
nent Alnico mognet.


NE-O-LITE
ELECTRIC TROUBLE SHOOTER
Hondy for radio men and electricians for testing $A C$ lines, polarity of $A C$ or DC, for blown fuses, tracing ground line in AC circuits, as an rug and cotor, spark plug and cable tester, etc. Can be used on voltages of 60 AC. G-C 5100. 3 oz or 11A84. Each

## Paint and Insulating Materials

## KRYLON CLEAR PLASTIC SPRAY



SEALS! PROTECTS! RESISTS
RUST and CORROSION!
Tronsparent plastic protective coating adheres to proctically any surface. Seals out air, water, chemicals, oil, grease and acids. Protects outomotive chrome, galf clubs, fishing rods, tools, leother goods, photos, blueprints, etc. Seals TV antennas ogainst the effects of weather and corros-
ion. Helps prevent corona in TV high voltage sections. Fast dry 208863. \#1302 (For radio G TV) 11A702. \#1303 (For Graphic

Your Choice. . . . . . . . 13 cz . can
$\begin{array}{lccc}1 \text { to } 11 & 12-47 & 48-95 & 96 \text { up } \\ \text { Each Each } & \text { Each } & \text { Each }\end{array}$ $\begin{array}{llll}1.27 & 1.17 & 1.14 & 1.10\end{array}$

## GLASS FROSTING SPRAY

Insures privacy when applied to windows, sky-lights, etc. Ob-
scures vision yet allows light to enter scures vision, yet allows light to enter. Diffuses and eliminates glore from lomp reflectors, bulbs, shodes and outside lights.
Ideal for decoroting glass doors ond partitions, table tops, vases Ideal for decorating glass doors and partitions, table tops, vases
and glassware. Just spray it on -dries in 5 minutes. Non-toxic. Removable with lacquer thinner or may be seraped off with razor blade to return glass to original condition.
No. 11 B600. 15 Oz. Can. Each . . . . . . . . . . . . . . . . No. 11 B 601.6 Oz . Can. Each. $79 c$

## SPRAY TOP-QUALITY <br> ENAMEL PAINT <br> DIRECT FROM CAN

- NO BRUSH! - NO MIXING!
- NO MUSS OR WASTE!


## GIANT ECONOMY SIZE

 16-0Z. DISPENSER \$129Just press the button and spray ... exclusive built-in governor regulates spray. in just 5 minutes. Won't work off, peel off or chip off. Non-toxic. 16 oz . can covers approx. 200 sq. ft . All colors with asterisk* hove new Rustcor rust preventative. Easy to follow directions on can.


BUY SEVERAL CANS NOW 11 A651-Appliance White:11 A640-Chrome Aluminum: 11 A642-Battleship Grey ${ }^{2 c}$ 11 A. 643 -Gorden Green* 11 A644-Medium Blue: 11A647-Chinese Red: 11A648-Dove Grey: 11 A649-Gloss White:
11A276-Gloss Black Locquer: 11 A277-Gloss White Lacquer ${ }^{\text {s }}$ 11 A279-Flat Black Lacquer* 11A653—Flat Black ${ }^{2}$ CHOICE EACH.

## $\$ 1.29$

## NU-TILE EPOXY SPRAY

Provides a super-hard tile-like finish on most any surface. Dries rockhard. Keeps its gloss, beauty and toughness . . . won't peel, crack or chip. Ideal for appliances, cabinets, refrigerators, washers, dryers, etc. Specify Color: Turquoise, Appliance White, Coppertone, Appliance Yellow, Appliance Pink.


## WRINKLE-FINISH SPRAY PAINT

Gives a rich, professional wrinkle finish to any surface. Air dries or can be baked. Perfect for office equipment, appliances, tools, test equipment, tackle boxes, etc. Easy to use-just spray on-it wrinkles as it dries. Specify color: Forest Green, Silver, Tropical Tan, Opal Gray, Black, Blue.
No. 11 B606. 16 Oz. Can.
Each.
$\$ 1.47{ }^{12}$ Each... $\$ 1.33$

## 16 OZ. HAMMERTONE SPRAY

For custom finishing or touch-up of chassis, racks, panels, etc. Just spray it on-no brush streaks, or mess. Provides hommer finish found only on the finest electronic equipment. Made by Illinois
Bronze. Specify color. Silver-Grey, Gold, Copper, Green, CharcoalBronze. Specify color. Silver-Grey, Gold, Copper, Green, Charcoal-
Grey or Blue.
Mo. 11 A627. 16 oz. Can. Each.


"SCOTCH" CELLOPHANE TAPE
"Scotch" Transparent Tape -sticks to anything. Far practically any sealing need plus numeraus mending jobs such os torn speaker canes, ancharing cails, etc.
(A) 1296 Inch Roll $1 / 2^{\prime \prime}$ Wide, fits 2592 Inch Roll $1 / 2^{\prime \prime}$ Wide. the handy dispenser illustrated. 11 A582. 11 A580. $5 S$ Rer Roll .... 12 Lot
Pach.
(B) Dispenser.

No. 11A581. Eoch
59c
2592 Inch Roll 3/4" Wide.

SCOTCH VINYL PLASTIC ELECTRICAL TAPE
SUPER-TOUGH AND STRETCHY-THIS FA-
MOUS MINNESOTA - MINING PRODUCT MOUS MINNESOTA - MINING
CARRIES FULL U/L APPROVAL.
CARRIES FULL U/L APPROVAL.
Scoteh No. 33. Black vinyl plostic molds to ony surface, remains flexible at low temperature. Resistant to grease, acids, alcohols, water, gasoline, etc. Non-corrosive. Has high tensile strength. 7 mils thick. Dielectric strength $10,000 \mathrm{~V}$. breakdown.



Scotch All Weother Plastic Electrical Tape No. 88. Makes splice wropping In cold weather easy, yet retains its excellent body for smooth and easy application of normal temperatures. 8.5 mils thickness, super-tough-abrasion, oll, acid and flame resistant. Remains pliable ot temperatures down to $0^{\circ}$ F.' 9350 volts electric strength. No. 11B232. 66 Ft., $3 / 4^{\prime \prime}$ Wide Roll, Each.
No. 11 B242. 20 Ft., $; / 4^{\prime \prime}$ Wide No. 11 B242
$\$ 1$ 1.69
10 Rolls

$\$ 1.41$ $52 c$

## "SCOTCH" MULTI-USE MASKING TAPE

A handy aid for many uses in addition to its original purpose of protecting areos where painting isn't desired. For example: Write-on for labeling, holds parts together while soldering, temporarily secures moving parts which might become damaged during transportation, such as phono pick-up arms, etc.; for making notes on factory packed boxes, then removing them without ó trace, etc.
No. 11 A284. 60 Yds., $3 / 4$ " Wide. Roll, Each. $98 \mathrm{c} \quad 12$ Rolls, Each . . . 89 C



## MAGIC AII-Purpose SILICONE LUBRICANT

 STOPS STICKING, BINDING AND SQUEAKING- Lubricates - Waterproofs - Preserves - Protects

The most fantostic lubricant we hove ever seen! Lubricotes to easy operation bearing shafts, windows-practically anything where other lubricants have failed to penetrate. Oilless, dripless, greaseless-will not gum, melt or freeze.
Lubricates, woterproofs, weotherproofs, preserves and protects rubber, metal, glass, leather, fibre, wood and canvas. PreProtects chrome. Prevents rust, mildew and corrosion No. 11 A796. 6 oz. Con. Net Each
\$1.99
 No. 114795.16 oz. Can. Net Each

## RED INSULATING TOOL-DIP

Used by major utility companies, for insulating power linemen's tools. Gives more than adequate protection against 110 to 220 volts exposure. Dielectric strength $1500 \mathrm{v} / \mathrm{m}$. Resists acids, alkalies, and
petroleum derivatives. petroleum derivatives.
No. 114379. ${ }^{2}$

ELECTRIC MOTOR CLEANER

## Just spray on . cleans

 without washing or wiping. Instontly penetrotes, dissolves, cleans and removes grease, oil, dirt from motors, electrical-electronic equipment, etc. Evaporates completely-leaves no residue. Safe to use on insulation and painted surfaces. No. 11840016 oz. Spray Can

MAKE YOUR OWN CHALK BOARD ON ANY FLAT, SMOOTH SURFACE


EVEN REFINISHES OLD CHALK BOARDS-IDEAL

Most amazing product we have seen in o long time! Just sproy it on scrap lumber, glass, hardboord, wallboord. , virtually any smooth surface ond it becomes a convenient useful chalk board. Also refinishes factory made boards. Special formula with friction "bite" makes it ideal for use in making or refinishing toble tennis surfoces. Perfect for warehouses, offices, stores, homes. Apply to walls of children's rooms over when changing decor.
No. 118631 . 15 Oz. Can.
$\$ 1.49$

# Wire Strippers, Blow Torches, Rules, Gauges 

## AMP HAND TOOL

CRIMPS SOLDERLESS TERMINALS TO WIRE . . . SHEARS BOLTS CUTS, STRIPS AND GAUGES WIRE Never before a single tool with so many uses. Crimps solderless terminals
 and $4-40$ to desired length without damaging threads; Strips, Cuts, and measures wire, sizes 22 to 10 . 19B1100. Shpg. wt. 1 lb. S4. 95 Assort. of 50 . New "Solistrand" solderless terminals. For solid, stranded, or irregularly shaped wires, or their combinations.
19 B1113.


## POCKET BLOW TORCH \& SOLDERING KIT



HANDY 2-IN-1 TOOL WORKS FROM BUTANE GAS CARTRIDGE
Handiest torch yet for doing those small repair jobs quickly and easily. Provides high heat ( 3500 degrees) pin point flome sufficient for soldering, brazing, softening point and putty, fixing leaks plus numerous other uses. Pays for itself in no time at all! Uses economical "throw - away" gas cartridges similar to those used in cigorette lighters. Kit includes compoct size torch with soldering tip, all purpose solder and three butone gas cortridges. Soldering tip slips over torch head to provide portable iron for case. Shpg. wt. it ow No. 11 ClO . Kit Each
No. 11 B118. Torch Only with one cartridge
$\$ 3.75$
No. 11 B119. Extro Cartridges. Box of 2
51.95
.596


## HEX \& SPLINE WRENCH KIT

Hondy pocket size kit contains complete range of wrench sizes used in electronics. Includes Hex (Allen) wrenches that fit No. 4 to No. 10 set screws and No. 2 to 5 cap screws, and (Bristol) wrenches for set screws up to $1 / 4^{\prime \prime}$ and cap screws up to No. 8. In durable leatherette
cose. Shpg. Wt. 8 oz.
No. $16 A 648$. SET. ....................

POPULAR WIRE STRIPPERS

(1) UTICA "STRIPWRIGHT" WIRE STRIPPER

Slim nose design Ideal for working on small electronic opparatus. . reaches into the most closely confined areas. Just insert wire in end jaws and squeeze handle-strips fast and clean. Calibrated com oction dial adjusts to strip from \#12 to \#26 wire gauge size. Handles Teflon as well as other insulations. Gripping jows hold wires firmly, keeps insulation morking at an per stroke. Comfortable cushion-grip handles. Shpg. wt. 1 lb . No. 16A570. Model SW-1. Each.
(3) SPEEDEX AUTOMATIC WIRE STRIPPERS

Strips insulation automatically from wire easily and cleanly without crushing it. Just squeeze the hondles and the job is done. Deluxe models are fully outomatic with delayed return action-prevents crushing of fine stranded wire. Jows remoin open until wire is removed. Shpg. wt. $11 / 4 \mathrm{lbs}$.

DELUXE MODELS 20 wire STANDARD MODELS
228138. Type 766. For 12 to 20 wire. 228136. Type 733. For 12 to 20 wire. 22B135. Type 766A. For 14 to 30 wire. 22B137. Type 733A. For 14 to 30 wire.
 SPEEDEX WIRE STRIPPER KIT. Deluxe type wire stripper and 7 different size blades in a special steel box. Strips solid or stranded wire \#8 to \#30, 18 POSJ, and 300 ohm twin lead. Shpg. wt. $21 / 4 \mathrm{lbs}$.
$\$ 12.90$ No. 228134. Type 766K Complete
(3) WALSCO DELUXE AUTOMATIC WIRE STRIPPER

Popular for years among radiomen everywhere because of its many exclusive features . particularly designed for electronics wark but equally effective for electricions, linemen, etc. Easy to use-just insert wire and squeeze handle. Strips wire sizes 10 to 22 fast. . clean. Stay-open feature prevents crushing wire. Automatically strips insulation awoy neatly and quickly
with hardened steel, precision ground replaceable type blades. with hardened steel, precision ground reploceable type blades
No. 16B243. Shpg. wt. 1 lb. Net Each.
$\$ 5.81$

Keeps test leads and patch cords neat, orderly, reodily occessible. Accepts cobles up to $210^{\prime \prime}$ dla. Mounts on steel, with baked enamel finish. Size
$11 " W^{\prime \prime} \times 31 / 2^{\prime \prime} D$
No. $17 C 195$. Eoch. . . . . . . . No. 17C195. Eoch

TWEEZER KIT


Always handy for small work. Includes $7^{\prime \prime}$ with curved smooth point, and $43 / 4^{\prime \prime}$ standard $51 / 2^{\prime \prime}$ self-closing Ploted steel. Shpg. wt. 8 oz.
No. 11 B164. KIt of Four.

Millers-Falls sTEEL TOOL MARKING SETS

$1 / 8^{\prime \prime}$ Roman pace characters for morking chossis, parts, etc. Simply hammer to produce clear sharp impressions. Shpg, wt. 2 lbs.
Letter Set-Consists of 28 choracters. (A to Z "G" and "Period") No. 11 A273. No. Set. $\$ 4.95$
Figure set-Consists of 9 characters. 10 to 8 with " 6 " being used also as " 9 "'I IIA274. Per Set . . . . . 81.85

(3) WITH HANDY
(1) $6^{\prime \prime}$ Rule $\&$ Wire Gauge Handy pocket all-purpose rule. Made of stainless steel with hy" and to " graduations. Has Americon or Browne E Sharpe wire gauge. Reverse slde hos gauge numbers and decima equivolents. Shpg. wt. 2 oz. 859
No. $16 A 536$. NET EACH. . . 85

## (2) Micrometer

Precision tool. Measures $0^{\prime \prime}$ to $1^{\prime \prime}$ with great accuracy. Guaranteed correct to $.0005^{\prime \prime}$. Screw type onvil makes zero adjustment easy. Die cost
speciol alloy frame.
No. 168814 . Each. ...... $\$ 4.32$
(3) Vernier Caliper Made of cold rolled steel, graduations deeply etched of is " and "h"" permit close readings. Inside laws offset and may be used for scribing circles or dividers. $5^{\prime \prime}$ capacity. Vernier reading and depth gouge.
No. 114195 . Your Cost, Ea. 1.58

## REVERSIBLE SCRIBER



Knurled steel handle with chuck that holds needle point and retracts into hondle when not in use. 75 11A271. Complete, Each 11A272. Extro Points


(9)
(4) Pocket Rule \& Depth Ga.

Tempered steel $6^{\prime \prime}$ rule with pocket clip. Quick reoding 64th oraduotion. No. 184421. Shpg. wt. 2 oz. 1 SA

## (5) Jobbers Drill Gauge

Gauges fractional size drills if" to each. Mode of heovy gauge tem-
 No. 11 Al94. Each
(6) Multi-Use Rule \& Gauge
$4^{\circ \prime}$ rule with 32 nd and 64th scole, a drill point gauge; a square, a bevel finder, and top drill table. stointess steel with leather-cose. $\$ 1,58$
(7) Handy Wire Gauge Americon Standard. Gauges wire and non-ferrous metals sizes 0 to 36 with decimol equivalent af each on re11 A323. Shpg. wt. 7 oz. Eoch.

## (8) 12" Steel Rule

Stainless steel rule. $7 / 8^{\prime \prime}$ wide gradwated in 8 ths, 16 ths, 32 nds and on the other. Shipg. wt. 502 . No. 11A303. Eoch

995
(9) Drill \& Tap Gauge

Made of heavy gauge tempered steel. Gauges and gives decimal equivalent of numbered drills, sizes 1 to 60.
 No. 11 Al93. Eoch

## LEVEL-SQUARE-10 FT. RULE

Now by the KGECa. foremost mfgr. of measuring instruments, a $10 \mathrm{ft} .-1 / 2$ in. Wide "wytefoce" rule, a square $23 / 8 \times 5 / 88^{\prime \prime}$ thick, metal cose, ideal for convenied in $2 \times$ ing accurate "inside" measurements. ing accurate inside
No. 168896 . Eoch..
$\$ 1.49$


## UTICA "KUTMASTER" ELECTRICIANS' KNIFE

Standard $23 / 4^{\prime \prime}$ knife blade and a special screwdriver blade with insulation cutter and wire scraper. screwdriver blade locks in open position. $33 / 4$ Rosewood hande with shackle ring polished bolsters, and brass linings. Made to government specs. Shpg. wt. 7 or. | GOA119. S |
| :---: | :---: | :---: |
| Each.... |

# Soldering Guns \& Irons 

## WEN SOLDERING PISTOL

 MOST ADVANCED SOLDERING TOOL YOU CAN BUY!

## WEN SOLDERING "ALL-GUN"

NOW . . . FIRST TIME POSSIBLE! ONE PRECISION SOLDERING DEVICE FOR ALL SOLDERING JOBS!


Handles any soldering job from delicate kit work and printed circuits to copper plumbing, gutter and downspout repoir. *Automatic Thermal Regulation provides an extremely efficient range of heat power to the tip through a tiny hairright level for the job. Heats and cools in automatically adjusted to the light illuminates work area. Trig and cools in just seconds. Pre-focused spot-名, Huminates work area. Trigger on-off switch. High-impoct plastic case, No. 37 B 215 . Shpg, wt. $21 / 2$ lbs.

No. 16B401. 200-450 Wott Tip. Each.
$\$ 9.30$
No. 16B402. 100-200 Watt Tip. Each
No. 16B403. 25-100 Wott Tip. Each. 98 c
WEN "HOT ROD" SOLDERING KIT
THE IDEAL ALL-AROUND KIT

MODEL 199
The first really new soldering development in 20 years! And at an amazing low price! A soldering pistol perfectly sized and balanced for delicate work normally done by soldering "pencils"-yet with plenty of capacity for heavy jobs os well. A tiny hairlike wire of new space-age metal heats the heavy tapered copper tip . delivers heat normally ovailable only from soldering
devices with twice its low 50 wott rating. Exclusive new \#Automatic Thermal Regulation. Automatically adjusts thig. Exciusive new "Automatic thermal of 50 watts brings tip to working temperature in seconds, then only 30 watts are needed to maintain heot for normal soldering. When tip is placed lates bock to its amazing 30 watt efficienggers more heat-ithen regudirectly on work. Heovy copper tip never overheats or needs re-tinning, has $120 \mathrm{~V} A C$ for close areas. Trigger On-Off switch. High impoct plastic case.
 No. 168323. Standard Tip for above. Each. . . . . . . . . . . . . . . . . . . . . . . . . . . . 744 . 4 .
No. 168321. Fine Tip for above. Each. . . . . . . . . . . . . . . . . (Y) WEN SOLDERING GUNS


ONLY
 little sweetheort of a soldering gun, priced within the reach of everyregular soldering jobs with ease, gives ample soldering heat quickly! Cools when trigger is released. Weighs only $11 / 2 \mathrm{lbs}$, with perfect bolance. Easy to rse-not tiring. Plastic handle and case ore heat and shock resistont. $31 / 4^{\prime \prime}$ ong, narrow lifetime tip reaches into those tight spots with real ease, while spotlight focuses on work. 115 volts, 60 cycle AC. Wt. $21 / 2 \mathrm{lbs}$. No. 374329 . Net Each. 3 Lots, HEAVY-DUTY MODELS


Exceptionally dependable Irons widely used by industrial and servicemen for ontinuous duty work. All are supplied with 6 ft . cord.


## SOLDERING AID AND SCRIBER

(1)
(2)

Perfect aids in repairing printed circuit boards, holding leads while soldering, stringing dial cords, removing parts from inaccessible places- 1000 uses from one tool. Hardened steel scriber point for marking chassis, panels, etc. (1) No. 11 Al. Combination Seriber ond Hook- 11 A3. Combination Seriber ond Awt- $81 / 2^{\prime \prime \prime}$ long. Net Eoch. . . 59 c


YOU GET

- New Hot-Rod Gun - 2 Soldering Tips

- Flat Iron Attochment - Cutting Attachment Carrying Cose
has plenty of power lightweight and perfectly sized for delicate wark . . . and heating power simply for, heavier jobs, too. Delivers from 25 to 200 watts of Regulation automatically changing tips. Wen's exclusive Automotic Thermal like space-age metal wire. Hus the temperature to the tip through a tiny hairinotes work. Trigger on-off switch. High-impact plastic case. $120 \mathrm{~V}, 60$ cycle AC. Shpa. wt. $31 / 2 \mathrm{lbs}$.
No. 37840. Model 222 K 5.
Net Each. . . . . . . . . . . 3 Lots
Each. .
tach. Sh
$\$ 7.97$
HOT-ROD GUN only. Supplied with 100-200 watt tip. Shpg. wt. 2 lbs. No. 37C34. Model 222.
$\$ 5.83$
3 Lots
55.30

No. 168403. 25-100 Wott Tip. Eoch.
No. 16B402. 100-200 Wott Tip. Eoch
WEN 100K
SOLDERING GUN KIT A real value! Wen quality soldering gun in handy carry package. Comes complete with standard soldering tip, plastic cutting tip plus handy roll of rosin core solder. Ideal for kit builders, experimenters as well os service-
men. Same high quality os heavier men. Same high quality os heovier
duty models but made for lighter use Roted 100 wotts. Rapid heat ready for use in 5 seconds. 120 volts 60 cy . AC. Fully



# Soldering Guns, Irons \& Solder 



The hottest solder gun volue ever offered! Here is true Weller professional performance and quality construction in a small, lightweight, exceptionally easy to handie solder gun. Perfect for hobbyist or serviceman-does a real man-sized soldering job. New improved gun, rated 100/140 watts furnishes solluminates work as you solder by a trigger control. Prefocused spow for illuminates work as you solder. Wual heat reature provides reserve power for



WELLER "MAGNASTAT" IRONS


All feature the magnastat controller which automatically maintains propes temperature at the tip. Tips are premium plated for long life, tapered for heat efficiency, replaceable by simply unscrewing knurled nut which holds tip in place. Supplied less tips. $110-120$ volts AC.

| Stk. No. 37 Al 3 $37 A 420$ $37 B 360$ | Type TC552-2 TC602-2 TC1 202-2 | Cord Type 2 Wire Wire 2 Wire |  | $\begin{gathered} \text { Watts } \\ 55 \\ 75 \\ 120 \end{gathered}$ |  | Each $\$ 6.07$ 6.25 6.99 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | TIPS | T | RONS |  |  |
| Stk. No. | ype | Temp. |  |  | Description | - 5 |
| 164533 | 5-CIN | $600^{\circ}$ |  |  | 1/8,', Screwdriver | \$0.58 |
| 16A558 | 5-BIN | $700^{\circ}$ |  |  | $3^{3}$ ", Screwdriver |  |
| 164534 | 6-EIN | $700^{\circ}$ |  |  | 1/4" Screwdriver |  |
| 164578 | 12-F4N | $750^{\circ}$ |  |  | 3/8' ${ }^{\prime \prime}$ Chisel | . 49 |

## HEAT SINK \& SOLDER AID



The perfect heat sink-"clamps on and holds wires in position while soldering. Retrieves small items in aluminum reach places. No. 11 A348. Each
$\$ 1.29$

## ERSIN MULTICORE SOLDER



Extra active, non-corrosive. 5 core construction assures flux continuity . . prevents "dry" joints. Conforms to Govt. KIT-PAK. Two solder gauges for the occasional user. 25 P No. 11 A701. Approx. $6^{\prime}$. Each.
$60 \%$ TIN - $40 \%$ LEAD
11C798. Easy Dispenser Pak. (Approx. 15') Eo
69 $11 \mathrm{C798}$. Easy Dispenser Pok. Approx. 28 Lbs .
 "SAVBIT" COPPER-LOADED ALLOY SOLDER
Does not absorb metal from copper tips, reduces wear and prolongs tip life ten-foid
11C663. 16 Gouge. 1 Lb. Spool
$\$ 3.22 \quad 28$ Lbs. Ea.
$\$ 2.71$
$\$ 2.81$


## KESTER "RESIN-FIVE"

## CORE SOLDER

The better Rosin Core solder for TV ... all radio and electronic parts . . . everyFlux elecrica Flux is more active and stable yet noncorrosive and non-conductive. Consists of the highest grades of tin and lead com mercially available
No. 11 A 692 . Small box for the occasional user. $40 \%$ tin- $60 \%$ lead, sh" diameter.
Approx. $6^{\prime}$. Each.................... 21 c Approx. 6'. Each

## 40\% TIN-60\% LEAD

$1 / 16^{\prime \prime}$ (.062) Diameter
3/32" (.092) Diameter
No. 11 A684, 1 ib Spool Ea.
1 A685. 1 Lb
b. Spool. Ea.. No. 11 A694. 5 Lb . Spool. Ea 8.18 No. 11 A695. 5 Lb . Spool. Ea.
\$1.73 No. HA694. 5 Lb. Spool. Ea.. $50 \%$ TIN-50\% LEAD
No. 11 A686. 1 Lb. Spool. Ea.. $50 \%$ TIN- $\$ 20 \%$ LEAD ${ }^{2}$ No. 11A687. 1 Lb. Spool. Ea.. $\$ 2.07$ No. 11 A696. 5 Lb. Spool. Ea... 9.90 No. 11 A697. 5 Lb. Spool. Ea... 10.05
No. 11A688. 1 Lb. Spool. Ea.. \$2.31 $\quad$ No. 11 A6899, 1 Lb. Spool. Eo.. . $\$ 2.36$ No. 11 A698. 5 Lb . Spool. Ea... 11.33 No. 11 A699, 5 Lb . Spool. Eo.. 11.55 No. 11 A691. Soldering Paste. Per 2 Oz. Can... 15 c 10 Cans, Each. . 13 c KESTER SILVER SOLDER FOR PRINTED CIRCUITS
Contains $3 \%$ silver, $611 / 2 \%$ tin, $351 / 2 \%$ lead with an . 062 diameter.
No. 11 A700. 1 Lb . Śpool. Net Each. .............................. $\$ 4.65$

WELLER HEAVY-DUTY

## DUAL HEAT

SOLDERING GUN KIT
FOR SERVICEMAN, HOMECRAFTER DUAL 1325
HOBBYIST, $240 / 325$ EVERYONE! WATI GUT
LOW PRICE
$\$ \bigcirc 55$

## - SOLDERS!

- MENDS!
- SEALS! CUTS!


## Accomplishes scores of money-soving jobs. Handy to

have for ready use in the
shop, of home, out on the
Comes complete with the very watt soldering gun that has such desirable features as: duty dual heat $240 / 325$ only 5 seconds to obtain solder heat; Extra long reach to get into the deep inaccessible places; Dual spotlights to focus on work; Rugged housing tha stays cool. Dual heat feature provides reserve power for extra heavy jobs Includes 3 handy Tips; Long-life soldering tip; Smoothing tip for heat-sealing, and mending plastic articles; Cutting tip for cutting plastic tiles, re. moving hard putty from broken windows, etc., tip changing wrench and all purpose solder. Instruction booklet gives helpful hints-tells how to do Unbreakable plastic case is convenient for storage and has handle for easy

$\$ 8^{15}$ Wet tach


145/210 WATTS


New-improved models designed to do any or all soldering jobs, heavy or light, with equal ease. Instant heating-takes only 5 seconds to obtain solder heat. $51 / 4^{\prime \prime}$ reach gets into the deep inaccessible places-dual spotlights focus on the work. Rugged housing withstands abuse-stays cool. Guns are perfectly balaneed-do not fatigue the user. Low-cost tips can be changed in a jiffy. Dual Heat provides $35 \%$ reserve power for heavier soldering needs. Operates on 115 volt 60 cycles AC

## DELUXE DUAL HEAT MODELS



WELLER SOLDERING TIPS


## WELLER HOBRY \& HOMECRAFTER TIPS

For cutting plastic tile; fixing home appliances and wiring; heat-sealing home-freezer packages; model railroads, regrooving tires, removing putty, etc. All are supplied with Tip nuts.
$\begin{array}{ll}16 B 552 & 16 B 551 \\ 16 B 550 & 16 B 549\end{array}$
For Gun Models
WD-250, S-500, D-550, 8250A
WD-135, 8200, D-440, J'r., 8100 B
Each
WELLER PENCIL

SOLDERING IRON

Ideal for minioture type soldering, kit building and production line work. Small and lightweight-hoid it like a pencil. High efficiency-rapid recovery, can do work of much higher wattage rated irons. Impact resistant plastic handle stoys cool. Complete with $1 / 8^{\prime \prime}$ tip and cord. Rated 25 watts. Net. wt. of iron and tip $13 / 4 \mathrm{oz}$. Shpg. wt. $1 / 2 \mathrm{lb}$. 12 Lots
No. 37 C 269 . Model W-P.
Each.
$\$ 3.82 \underset{\substack{\text { lato } \\ \text { toch }}}{ }$
12 Lots
Each.
$\$ 3.45$
No. 16 c690. 1/16"' Screwdriver Tip. Each.
No. $16 \mathrm{C} 691.3 / 32^{\prime \prime}$ Screwdriver Tip. Each.
$56 c$
$56 c$
No. 16C691. ${ }^{\text {No. }} 16$ C692. $1 / 8^{\prime \prime}$ Serewdriver Tip. Each.

# Ungar Soldering Pencils \& Tips 


for longer life, tough phenolic for added duró ceramic and glass insulation flexible 6 ft . 18 gauge Polyvinyl cord. Cork finger-grip, red colored handle Accommodates all elements and tips below.

toch $\$ 1.01$
(1) New "Clean Room" Soldering Pencil. Special heat stobilizer with air-flow cooling keeps handle cool to the touch all day long. Octagon shaped nonslip poly-grip won't collect dust or deteriorate. Efficient, perfectly balanced. Supplied in offractive easy-on-the-eye blue pastel color. Other features No. 11 sisipe 176 above.
 TIPS WITH SELF-CONTAINED ELEMENTS 500 STANDARD SERIES_231/2 WATTS
For instrument repair, and general use. Tips of new UC47 copper
Stk. No. Fig. Type Tip Size Temp. ${ }^{\circ}$ F Each 10 Ea. 50 Ea.
 Chisel 1200 HI-HEAT SERIES- $371 / 2$ WATTS ${ }^{2}$
For general service and light to medium production line service. Tip of

11 B 226
 \$ Solid iron for heavy duty production line use.
4000 SUPER HI-HEAT SERIES $471 / 2$ WATTS
For all operations formerly requiring a 150 watt iron. Tips of new UC47 copper plated with iron and pure silver.


## HEATING UNITS ONLY



## Use with Series 300 EIkoloy and

 $\begin{array}{lllllll}117 & 4045 & 471 / 2 & 850^{\circ} & 2.60 & 2.18 & 2.01\end{array}$ Stk. No. Fig. Type Description Each 10 Eo. 50 Eo.
 .28 UNITS

| Stk. No. | Fig. | Typ | (1) Description | Each | 10 Eo . | 50 Ea . |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11853 | (11) | PL331* | 1/8"Pencil Tiplet | $.49$ | . 41 | . 37 |
| 11824 | (11) | 331 | 1/8"Pencil Tiplet |  |  |  |
| 11854 | $(9)$ | PL 332\% | 1/8"Offset Pencil Tiplet | 8 |  |  |
| 11823 | $(9)$ | 332 | $1 / 8^{\prime \prime}$ Pencil, $30^{\circ}$ Offset | 19 |  |  |
| 11859 | $(10)$ | PL 333* | $1 /{ }^{\prime \prime}$ "Chisel Tiplet |  |  |  |
| 11822 | (10) | 333 | 1/8" Chisel Tiplet |  |  |  |
| 114440 | (12) | PL338* | R" Tapered Needle | 49 |  |  |
| 11464 | (8) | PL340: | Micro-Needle ${ }^{\text {- }}$ " | .49 |  | , | 11 A64

## (Designed for



\#8000 SOLDERING TRON HOLDER safer and more uord design protects protects iron against breakor from accidental burns, safely and securely-ready for e. Keeps iron cradied of crodle odiustable fer operar easy, instant use. Angle quickly to top side or underside of workbench. Mounts
 11A240 EG. $\$ \mathbf{Z 0 0}$ KLEEN-TIP Double life of soldering tips with new tip cleaner. Consists of special sponge, tray and bracket for fastening
 \#455 Refill Sponge for above.
No. 11420 . Net Eo.. 39 c 10, Ee.. 33 c 50, Ea..30c ngineered to get jobs done foster, better, more economically. Built to provide years of dependable operation. Complete unit weighs less than 5 ounces

## (1) IMPERIAL "PERMA-COOL" HANDLE

ntroduces a completely new heot sink principle ... double cushion of oir combined with five heat tronsition surfoces evenly dissipates heat, keeps hande cool and comfortable all day long. Durably built of Lexan high rength polycarbonote resin with built-in die-cast oluminum heat sink Cord)
No. 114802 . Type 6100. Ea..

INTERCHANGEABLE PLUG \& CORD SETS
Select the cord that fits your needs, piug on to Permo-Cool Handle. 6 ft 18 gouge flexible stranded wire, polyvinyl chloride insulation on both wire and female connector. Specify color: Turquoise, Beige, Ivory or Black. $\begin{array}{lll}\text { Stk. No. Type Description } \\ 11 A 803 & 6102 & \text { 2-Wire cord W/Plug Each } 10 \mathrm{Ea} \text {. } 100 \mathrm{Ea} \text {. }\end{array}$ $114804 \quad 6103 \quad$ 3-Wire Nema Cord W/Plug $\quad \$ 1.47 \$ 1.26 \$ 1.14$

## (2) INTERCHANGEABLE HEAT CARTRIDGES

New element winding principle provides reduced woft den longer life. Heating element of tip end of cortridge results in less heat to handle, more heat to tip. Stainless steel, completely sealed-eliminotes costly breakage. Threaded-end is engineered to resist oxidation, reduce heat waste, providing maximum heat transter. Slim, tubular design offers easy access to hard-to-reach areas. Extends $2.5^{\circ}$ beyond handle. 110-120 volts. AC-DC. Each cartridge (except 15 -watt) has color-keyed bend for instant wattage identification. 6200 has red band, 6201 blue band, 6202 green band, 62 U 3 yellow band

| Stk. No | Type | Wattage | Temp. To Tip | Each | 10 Ea. | . |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 114893 | $\dagger 6203$ | $60^{\circ}$ | $1150^{\circ}$ | 53.98 | 3.46 | S3.10 |
| 114806 | 6200 | 40 | $950^{\circ}$ | 3.51 | 3.00 |  |
| 114807 | 6201 | 30 | $850^{\circ}$ | 3. |  |  |
| 114808 | 6202 | 25 | $800^{\circ}$ | 3.51 | 3.00 | 2.70 |
| 11 A897 | *6206 | 15 | $743^{\circ}$ |  | 3.00 | 2.70 |

All are iron clad, 24 K gold plated.

| Stk. No. | Fig. | Type | Description | Eoch | 10 Eo. 100 Eo. |  |
| :--- | ---: | :--- | :--- | ---: | ---: | ---: |
| $11 A 889$ | $(7)$ | 6550 | Tapered Screwdriver | 51.02 | 50.87 | $\$ 0.78$ |
| $11 A 890$ | 5 | 6551 | Stepped Spade | 1.02 | .87 | .78 |
| $11 A 891$ | $(5)$ | 6553 | Stepped Chisel | 1.02 | .87 | .78 |
| $11 A 892$ | (3) | 6554 | Stepped Pencil | 1.02 | .87 | .78 |

## INTERCHANGEABLE THREAD-ON "MMNI-TIPS"

All are of Tellurium Copper except those morked * which are iron clad 24 K . gold plated. For use with $25,30,40$ and 60 watt heat cartridges.
 114812
114815
114816 114816

## 114817

114821
114809
114809
114810
114810
114818
$11 A 818$
$11 A 820$
11A854
UNGAR No. 270 DE-SOLDERING KIT
Tedious printed circuit repairs now made easily and safely. Includes Ungar handle, super heat $471 / 2$ watt unit, slotted tiplet,
and rectangular de-soldering tiplet $11 / 2 x$ and rectangular de-soldering fiplet $11 / 2 \times$
$3 / 8^{\prime \prime}$ for removing resistors and capacitors, or othering tiplets $1^{\prime \prime} 3 / 4^{\prime \prime}$ and $5 /$ " $^{\prime \prime}$ diamete soldering tiplets ${ }^{\prime \prime}, 3 / 4$ and $5 / 8$ diamete All in metal case. Wt. 1 lb.

## 

## NEW UNGAR "HOT-VAC" PRINTED CIRCUIT DE-SOLDERING \& CLEANING TOOL

Provides fast, safe de-soldering for eosy removal of components and parts. Just place heating tip to soldered connection, press-release bulb, ond Hot-Vac "sucksup" molten solder. Heat can be pin-pointed and solder removed one terminal at a time. Prevents overheoting of transistors, diades, etc. Special coating prevents solder from adhering to tip, or clogging orifice. Utilizes new \#777 "Clean Room" handle. Shpg. wt. 1 lb . Nach.
No. 11 B814. Replacement Tip
Type 7806 Each
64c Eoch....54c


Burstein-Applebee Co., 1012-14 McGee St., Kansas City 6, Mo. (Phone BAltimore 1-4266)

## Soldering Pencils, Welding Torch, Etc.



Deslgned to meet the newest, most exacting requirements for precision hand soldering in Microelectronic circuitry, high density packaging and assembly. Combines sophisticated miniaturization with a thermo efficiency and work capacity never before achieved in small, high-heat, feather-weight irons.
(1) PRINCESS FEATHERWEIGHT HANDLE

Molded of heat resistant A.B.S. Has midget thread-in socket to accept heat copsules below. Weight without cord .05 oz ., with cord 3 oz . $5^{\prime \prime}$ long $\times{ }^{18}$ dia. ot front. Turquoise color. 120 V . AC/DC
No. 11 C 216 . Type 6902. 2-Wire Cord. Eo. $\$ 2.4010$ Ea. $\$ 2.2050$ Ea. 51.96 No. 11 C220. Type 6903. 3-Wire Cord. Ea. $\$ 3.0610$ Eo. . $\$ 2.8050$ Ea. $\$ 2.50$
(2) INTERCHANGEABLE HEAT CARTRIDGES

Thread into Princess hondles with fingertip ease. Heating section is threaded to accept nibs below.

| Stk. No. | Type | ttoge | Temp. to Tip | Eoch | 10 Each | 50 Eoch |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 C 221 | 6906 | 6 | $400^{\circ}$ to $450^{\circ}$ | \$2.86 | \$2.61 | \$2.33 |
| 118223 | 6910 | 10 | $550^{\circ}$ to $650^{\circ}$ | 2.86 | 2.61 | 2.33 |
| 11 B236 | 6915 | 15 | $700^{\circ}$ to $800^{\circ}$ | 2.86 | 2.61 | 2.33 |
| 118238 | 6918 | 18 | $900^{\circ}$ to $1000^{\circ}$ | 2.86 | 2.61 | 2.33 |

## INTERCHANGEABLE THREAD-IN NIBS (TIPS)

All are cadmium copper except those morked $*$ which ore iron clod, 24 K gold plated. All have $1 / 8^{\prime \prime}$ dia. threads

| Stk. No. | Fig. | Type | Description | Each | 10 Each | 50 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 B239 | (3) | 6950 | .61" Long Pencil | 32 c | 30 c | 27 c |
| 11 B244 | (4) | 6951 | 68'" Long Screwdriver | 32 c | 30 c | 27 c |
| 11 B 253 | (5) | 6952 | .61" Long Spade | 32 c | 306 | 27 c |
| $11 \mathrm{B255}$ | (8) | 6953 | .61" Long Point | 49 c | 45 c | 40 c |
| 11 B 258 | 7 | 6960 * | .62'" Long Pencil | 58 c | 52 c | 47 c |
| 118267 | (8) | 6961\% | .62"'Long Screwdriver | 58 c | 52 c | 47 c |
| 11B269 | (9) | 6962* | .62"' Long Spode | 58 c | 52 c | 47 c |
| 118275 | (10) | 6963* | .61 " Long Point | 98 c | 89 c | 79 c |

## PRINCESS SOLDERING IRON HOLDER

Equipped with specially processed slit sponge for


## 

## UNIQUE "SOLDER SIPPER"

REMOVES SOLDER FROM ELECTRICAL TERMINALS For Safe, Easy Removal of Components. Just heat soldered con nection and amozing Solder Sipper "sucks-up" molten solder Heat can be pin-pointed and solder removed one terminal at a time. Prevents overheating and subsequent damoge to transistors, diodes, and other heat sensitive components. deal for working with printed circuit boards, glass epoxy resin boords, any material with bulb with Teflon Tube. Tube cleaning wire included. Wt. 8 oz No. 118268. Each
$\$ 1.29$

## Niln

## JEWELERS SCREWDRIVER SET

Perfect for working with jewelry, instruments, smal electronic devices, hobbies, etc. Six hardened steel replaceable blades, sizes: $.100^{\prime \prime}$, $.080^{\prime \prime}$, $.070^{\prime \prime}, .055^{\prime \prime}$ $.040^{\prime \prime}, .025^{\prime \prime}$. Each unit has hexagon swivel head with thumb rest and knurled steel handle. Threaded chuck firmly holds blade in position. Overall length $33 / 4^{\prime \prime}$. Shpg. wt. $1 / 2 \mathrm{lb}$.
$\$ 2.89$

## TOP VALUE UTILITY PLIERS



All are fully drop-forged, shockproof insulation on handles for protection and comfort. Quality import
(1) $61 / 4^{\prime \prime}$ Long Nose Side Cutters. Thin nose for hard to reach oreas, hos hardened and tempered side cutters. Polished head
No. 168944 . Shpg. wt. 12 oz . Each
$\$ 1.19$
(2) $8^{\prime \prime}$ Slip Joint Pliers. Heavy duty oll-purpose pliers for home and shop use. Chrome plated, rust proof. Shpg. wt. 15 oz.
No. 16B946. Each
99c
(3) $61 / 4^{\prime \prime}$ Diagonal Cutters. Precision honed hordened and tempered cutting edges. Polished heod. Shpg. wt. ll oz
No. 16 B947. Eoch.
$\$ 1.19$
(4) $7^{\prime \prime}$ Lineman's Cutting Pliers. Rugged, heavy-duty utility pliers. H (4) $7^{\prime \prime}$ Lineman's Cutting Pliers. Rugged, heavy-duty utilit side cutters. Polished head. Shpg. wt. 14 oz . No. 16B949. Each

NEW "ADJUST-A-BOX" WRENCH A COMPLETE SET OF BOX WRENCHES IN ONE TOOL


- Non-slip jaw grip, won't stip even on burred and damaged nuts
- Narrow heod gets into tight spots.
- Fits Metric. Whitworth, U.S sizes.

Combines the strength and compactness of a socket ar box-end wrench with the hondy versatility of a single adjustable wrench. Covers a wide range of sizes that would otherwise require a multiple number of fixed-size wrenches. Made of special farged alloy steel for maximum strength and long life. Fully heat treated and nickel-chrome plated.
No. 16A677. 8" Size. Capocity $1 / 4$ to $1^{\prime \prime}$ Wt. $1 / 2 \mathrm{lb}$. Eoch.
$\$ 2.97$
No. 16A678. $10^{\prime \prime \prime}$ Size. Copacity $\frac{3 / 8}{}$ to $11 / 8^{\prime \prime}$. Wt. 1 lb . Eoch.

## NEW ADJUSTABLE RATCHET WRENCH



Does the job of an adjustable, open-end box and pipe wrench. Works twice as fost . does the job better. One hand operation. ... won't slip, ratchets. Drop
forged tool steel, polished and chromed. Quality impart. No. 168942. $8^{\prime \prime}$ Length. Shpg. wt. 1/2 lb. Each.

SENSATIONAL BINOCULAR MAGNIFIER
Close miniature work made easy

## ${ }^{5} 14^{\circ 0}$

SWIVELS UP OUT OF WAY WHEN NOT IN

LARGE LENS AREA FOR DEPTH AND CLARITY

Unique binocular design greatly magnifies work to provide precision occurocy, gives natural 3 dimension vision. Perfect for repair and assembly of smáll electronic devices, hobbycrafts, comera repair, experimental workany "close" job requiring pinpoint clarity. Greatly reduces eye strain, may be worn over regular glasses. Optical glass lenses ground and polished to precision standords. Fully adjustable plastic headband and visor made of durable U.S. Royalite-non-conductive-chemical, grease and flame resistant. Net wt. 4 ozs. Shpg. wt. $1 / 2 \mathrm{lb}$. $\begin{array}{ll}\text { No. } 608218 .-13 / 4 \text { Power with } 14^{\prime \prime} \text { Focal Length } & \text { Choice } \\ \text { No. } 608219 .-21 / 2 \text { Power with } 8^{\prime \prime} \text { Focal Length } & \text { Eoch...... }\end{array}$

TWEEZERS
(A)

(B)
(A) $7^{\text {st }}$ Long, curved smooth point

Tweezers. No. 11 A307. Eoch slide Lock No. 118163 . Each.
(B) (B) 14 , $43 / 4^{\prime \prime}$ Long common soldering No. 11 B16.2. Eoch.

65 c Noe

## 8-A's LOW PRICE <br> \$1795

"MICROFLAME" GAS WELDING TORCH

WELDS, BRAZES, SOLDERS
WITH 5000 ${ }^{\circ}$ PRECISION FLAME USES OXYGEN AND BUTANE THROW AWAY CARTRIDGES
Most ingenius tool we've seen in a long, long time! Imagine! A completely self-contained gas welding torch that fits in the palm of your pletely self-contained gas welding torch that fits in the Welds, brazes hand and produces $5000^{\circ}$ f pin-point accurare flame. Welds, brazes solders-hundreds of uses in the shop, iveweldering and printed circuit and model making . ideal for silver soldering and printed circuit repair-anywhere precision high heat is required. Easy torch, 3 tip sizes, economical throw-away gas cartridges. Complere with handy compartmented plastic container. Sinpg. wt. I lb. mented plostic c
No. 37B25. Each

No. 37B26. Extra Oxygen Cartridge. Each

## Pliers, Vise Grips

## (1)

## FAMOUS KLEIN PROFESSIONAL QUALITY PLIERS

BY MATHIAS KLEIN AND SONS-FOREMOST IN QUALITY TOOLS FOR THE INDUSTRY SINCE 1857

- HIGHEST QUALITY - POLISHED HEADS TEMPERED BLUE HANDLES • FULLY GUARANTEED


Pliers with prefix " $D$ " have plastic cushion grip handles


The first choice of mechanics for years. Interlocking principle positively interlocking action. Mad any load.. the heavier the job the greater the handles. $440-\mathrm{G}$ and $460-\mathrm{G}$ supplied with steel with polished heods and Stk. No. Mfg. No. Capacity Whpl. with plostic cushion grips.



## adjustable klein wrenches

IN 4 POPULAR SIZES


Chrome plated drop forged alloy stee! combines moximum strength, lighter weight with lasting Stk. No. Mfg. No. Wt Crescent.

| Stk. No. | fg. No. Wt. | Size | Ea |
| :---: | :---: | :---: | :---: |
| 158917 | $500-431 / 2 \mathrm{oz}$. | $4^{\prime \prime}$ | 1/2; \$2. |
| 168702 | 500-6 3 oz . | $6^{\prime \prime}$ | 3/4" 2.31 |
| 168704 | $500-8 \quad 6 \mathrm{oz}$. | $8^{\prime \prime \prime}$ | 将" 2.63 |
| 16B706 | 500-10 13 oz. | $10^{\prime \prime}$ | $11 /{ }^{\prime \prime}{ }^{\prime \prime} 3.29$ |
| 168707 | 500-12 24 oz . | $12^{\prime \prime}$ | $1{ }^{1 / 8} 4.82$ |

## VISE-GRIP CHAIN CLAMP AND PIPE WRENCH

ADJUSTS TO ANY SIZE WORK UP TO IT IN. IN PERIMETER

## F-- Tremendous Gripping

 Holds and locks around anything, any, size, any shape, anywhere thot the 19. chain can be wropped around. Quick adjustment of end screw provides lockten thin walled pipe, tubing etc. A flick of the finger on Eosy Release Lever unlocks it instantly. Works in close quorters, leaves both Works free. Adjusts to ratchet action for turning pipe, has no teeth to mor bright No. 16C519. Model 20R. Ea. $\$ 4.47$$\dagger$ With coil spring to hald jows open ready for use
Cannot be assorted for ouantity orices
 16C770 D207-5C \% (1) $40 z$. $16 \mathrm{~B} 849 \mathrm{D} 221-51 / 2 \mathrm{C} *$ (2) 4 oz $16 A 934 \mathrm{D} 318-51 / 2$. 3 4 4 oz . 168848 D318-51/2C* (3) 5 oz . 164936 D209-4C ${ }^{\text {² }}$ (4) 2 oz .
$51 / 2^{\prime \prime}$ Obliqention Each 6 Each ine
$\$ 3.82 \$ 3.47$ 1/2" Leng Nose Nose As above w/Coil Spring
$4^{\prime \prime}$ Oblique Cutters
$\begin{array}{ll}3.82 & \$ 3.47 \\ 3.31 & 3.00\end{array}$

Supplied with coil spring to hold jaws open ready for 3.17 All have plastic cushion grip handles. Cannot assort for quantity prices


$$
\begin{aligned}
& \text { (1) VISE GRIP WIRE CUTTERS. Tong-grip remains locked to work with hands } \\
& \text { Model 5WR-5" "" thick jows adjust has powe wh wis cuter } \\
& \text { No. 16A925. Net Each. }
\end{aligned}
$$

# Pliers \& Screwdrivers 



Mode of highest grode steel. All hove polished heods and are supplied with comfortable cushion grip hondles. *Cannot be assorted for quantity prices.
 $16 A 643$ 36616 (3) 5 oz. $6^{\prime \prime}$ Long Chain Nose
52.9432 .67 $\begin{array}{llll}16 A 643 & 36616 & \text { (8) } & 5 \mathrm{oz} . \\ 16 A 610 & 36415 & \text { (2) } & 4 \mathrm{oz} .\end{array}$ $\begin{array}{llll}16 A 610 & 36415 & \text { (2) } & 4 \mathrm{oz} . \\ 16 A 470 & 37015 & \text { (3) } & 4 \mathrm{oz} .\end{array}$ $\begin{array}{ll}16 A 470 & 37015 \\ 168646 & 36107\end{array}$ 16864636107 $\begin{array}{ll}16 C 418 & 38308 \\ 168645 & 36216\end{array}$
 Needle Point Diagonal Hvy.-duty Diag. Cutters Side Cutting Pliers Long Needle Nose

## KRAEUTER ELECTRONIC PLIERS

## WITH PLASTIC CUSHION

 GRIP HANDLESAll have coiled spring to keep jaws open ready for use.
? Cannot be ossorted for quantity prices.
Stk. No. Mfg. No. Fig. Description Each \$6 Eo, 16447220101 (1) $41 / 2^{\prime \prime}$ Needle Point Diogonals 3 oz .53 .68 .53 .33 $\begin{array}{lllllll}16 A 473 & 20140 & \text { (3) } & 6^{\prime \prime} \text { Long Nose } & & 4 \mathrm{oz} & 3.31 \\ 16 A 480 & 20160 & \text { (8) } & 7^{\prime \prime} \text { Extra Fine Long Nose } & 51 / 4 \mathrm{oz} . & 3.01 & 2.60\end{array}$

##  <br> KLEIN CUSHION-GRIP SCREWDRIVERS

50\% greater torque.
Comfortable Nitrile rubber
cushion never hurts hand.
Exceptionally strong, of alloy tool steel. Chrome plated finish. Plastic hondles gos, etc. Round blades with precision ground points.
stk. No. Mfg. No Blade Wt. Ozs. Each Stk. No. Mfg. No. Blade Wt.Ozs. Each $16 C 856$ 601-3 $3 \times{ }^{4}$ " 5 . 0.8316 C871 $601-1010 \times 10^{\prime \prime} 8$ \$1.01
 $\begin{array}{llllll}16 C 858 & 601-6 & 6 x \text { M", } & 6 & -86 & \text { Stk. No. Mfg. No. Blade, Point Each } \\ 16 C 864 & 602-6 & 6 x \text { H", } & 13 & 1.28 & 16 c 87\end{array}$
 $\begin{array}{llllllllll}16 C 865 & 601-8 & 8 \times 1 \pi & 19 & 1.68 & 16 C 873 & 603-4 & 4 \times 1 / 4 " & \# 2 & 1.06\end{array}$


Especially designed for working with Especially designe components. Clamps on to work and will outhoid needle nose pliers. Ideal for use as a heat sink, pliers. ideal leads while soldering, restring ing dial cords, etc. All stainless steel with precise box joints. Length $6^{\prime \prime}$.
(1) No. 11 A218. Model 42H Straight Nose. Net
$\$ 4.42$ (2) No. 11A219. Model 43H. Curved

## RATCHET OFFSET SCREWDRIVER



Very handy sturdy nickel ploted steel ratchet screwdrivers handle both small and large hard-to-get-at screws. Ratforward or reverse

With Std. $1 / 4^{\prime \prime}$ and $3 / 8^{\prime \prime}$ blades.
No. 11 B82. Net Each. . . . . .
With Phillips \#1 G \#2 blades. \$108 No. 11B228. Net Each

## XCELITE SCREWDRIVERS

(1) Top quality Screwdriver skillfully designed for better Top quality
performance. Full sized shock and break-proof handle
is correctly shaped for grip and balance. Chrome Vana-


QUICK-WEDGE SCREW-HOLDING SCREWDRIVERS USCOSDITIONALIY GUARASTEED

tube is moved forward the double bit exponds thus ste steel tube. When When tube is maved bock the screw is released. Urbreakable, shockproof tenite handle. Tough spring steel blade.
No. Blade Overall Each No. Blade Overall Each


## Nut Drivers, Precision Tools, Etc.



WITH UNIQUE SLIP-ON TORQUE HANDLES
Hondiest, most often needed precision tools for working on smoll electronic apparatus, TV, radio, instruments, etc. Unique "piggyback"" torque handle power of standard size drivers. Permits you ta do more the grip, reach and ment, saves bench spoce, lightens the service do more jobs with less equipplastic pocket size cose with a flat base for use as bench set in a see-thru (2) MINIATURE NUTDRIVER SET

A complete set of ten precision miniature size nutdrivers with shockproof breokproof plastic handles-color coded for instont identification. Sizes:
 No. 11 C 125 . Type PSI20. Shpg. wt. 1 lb Each
35.55

## (2) PRECISION SCREWDRIVER SET

All the screwdrivers needed for all servicing iobs in one compact see-thru plastic case. Includes 8 drivers-five stondard slotted sizes $1 / 4^{\prime \prime} ; \# 0, \# 1$, and $\# 2$ Phillips. Shockproof bith overall lengith of each \#2 Phillips. Shockproof, breakproof plastic handles. No. 11 C28. Type PS88. Shpg. wt. I Ib. Each torque handle.
\$3.93

## (3) NUTDRIVER AND SCREWDRIVER SET

Includes the most popular sized tools from obove kits. 2 nutdrivers $1 / 4$ "
At/ 2 stondard slotted screwdrivers \#1. With torque handle. shipg. wt. I lb. No. 118256 . Type PS7. Each.
$\$ 3.60$

## XCELITE NUTDRIVERS



Color coded for easy Identification of size. Finest quality nutdrivers, with full
size shockproof, breakproof plastic handles, fully polished blades. Hollow shaft type fits over volume control
shafts, bolts, eic. Shpg. wt. 7 oz . eo.

## HOLLOW SHAFT TYPE (Illus.)

| Stock No. | De | Pol | $\begin{aligned} & \text { Nuf } \\ & \text { Sire } \end{aligned}$ | Leth. | $\begin{aligned} & \operatorname{COST} \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 118107 | 5 | ", | 1/4" | 7 | \$0.93 |
| 114143 | 5 | " | H" | 7 | .93 |
| 114144 | 5 | " |  |  | .93 |
| 114145 | 5 | " | 3/8 |  | .93 |
| 11 A146 | 5 | " |  | 71/4" | 1.05 |
| 11 A147 | 5 | " |  | 71/." | 1.08 |
| 114148 | 5 | " |  | $71 /$ |  |
| 114149 | 5 | " | 5 | 71/4" | 1.26 |



No 118i37. Eoch

## PRECISION "MIDGET" NUTDRIVERS

All have color coded, shockprosf plastic handles with handy pocket clip. Overoll

| Stock No. | Nut Size | Eoch | Stock No. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 11419 | 禀" | \$0.51 | $11 \mathrm{Cl} \mathrm{l}^{\text {do }}$ | $1 / 4^{\prime \prime}$ | $\begin{aligned} & \text { Eoch } \\ & \text { S0.61 } \end{aligned}$ |
| 11836 <br> 118109 | 1/8" | . 51 | 118178 |  | s0.61 |
| 11 Cl 52 | ${ }^{31}$ | 51 | 118184 |  | 51 |
| 116166 | ${ }_{5}^{7}$ | .51 | 11 C 211 |  |  |

XCELITE NUTDRIVER AND SCREWDRIVER SETS


No. 99PR-Consists of omber plostic handle with 9 snap-in nutdrivers, sizes d" to $1 / 2^{\prime \prime}$; double end snop-in screwdriver bit with ${ }^{2}$ " 1 and $5_{2}$ " blodes; and double end snap-in screwdriver with Phillips No. 1 and 2 blades. Tools fasten simply-ore held securely in handle. Plastic roll case. No. 118231. Complete. No. 99 Jr. Pocket version 118230 . Has smaller handle
$\$ 9.42$
of the bio
$\$ 8.28$

## XCELITE SERVICE MASTER KIT

 Versatile set of high-quality tools meets olmost any radio-TV servicing正
Set includes: $6^{\prime \prime}$ long nose pliers; $5^{\prime \prime}$ diagonal eutters; $6^{\prime \prime}$ adjustoble wrench; 3 stubby nutdrivers $1 / 4$, through $1 /{ }^{\prime \prime \prime}$,", Phillips screwdriver; $1 / 8^{\prime \prime}-3 / /^{\circ \prime}$ reomer; $1 / 4^{\prime \prime}-1 / /^{\prime \prime}{ }^{\prime \prime}$ reamer; $8^{\prime \prime}$ extension; regulor tough alloy steel with hie. All tools nickel chrome finish. In roll-up kit with separate compartment for kit tool. Shps. wt. 3 lbs. Each 924.87
$11 A 380$. Type $995 M$. Each

# Tackers, Punches, Files, Etc. 



Quickly cuts clean, accurate holes in chassls or panel to accommodate sockefs, switches, controls, meters, etc. Cutting is done by 2 -point punch driven by $3 / 8^{\prime \prime}$ dia. square head cop screw. Operates simply with on ordinar


STAPLE TACKERS
HEAVY-DUTY INDUSTRIAL T-50 TACKER KIT


Kit is complete in attractive package with T-50 Gun 5 M Staples in 4 sizes ( $1 / 4^{\prime \prime}, 3 / 8^{\prime \prime}, 1 / 2^{\prime \prime}$ and ${ }^{9} 6^{\prime \prime}$ ) and handy staple remover. Shpg. wt. 5 lbs. 22B274.
Complete Kit
$\$ 12.83$
Mode! T-50 Gun. For continuous heovy duty use chrome-plated. Mfg. List $\$ 12.50$. Shpg. Wt. 2 lbs.
No. 22B188. Net Each..... $\$ 10.41$
STAPLES FOR T-55 \& T-50 GUNS
Stk. No. Leg Lgth. Wt. Box 5000
$\begin{array}{llll}228189 & 1 / 4^{\prime \prime \prime} & 11 / 2 \mathrm{lbs} & \$ 2.08 \\ 22 \mathrm{~B} 190 & 3 / 8^{\prime \prime} & 2^{2} \mathrm{lbs} . & 2.29\end{array}$


ARROW GUN TACKER LOWEST PRICE EVER!


JUST A SQUEEZE OF THE HAND DRIVES STAPLES INTO WORK Now at a price everyone can afford fast, easy operating gun tacker. tacking jobs easily and rapidly. Perfect for screening, upholstery, shelving, linings and 1001 other jobs around home and shop. Fits hand comfortably. Tacker locks to fit in pocket and prevent accidental firing. Built-in staple extractor of rear of base. Takes $100 \mathrm{JT}-1 / 4^{\prime \prime}$ or if staples at one loading. Shpg. wt. I lb. No. 22B301.
JT-21 Gun Tacker. Spec. Ea.S.S7 STAPLES FOR MODEL JT-21 GUN CHOICE $\rightarrow 8$ \& 5000 BR 1000 For. $4 \rightarrow$ For .... $4.1+$

## CUTTERS

or cutting round holes in metals, wood, plastics, etc. Drill acts as center pilot, keeping cutter in constant alignment. Cross bar and cutfing bits are easily adjusted. May be used in slow speed drill press or hand brace. Cutting bits are of high speed steel. Shpg. wt. $1 / 2 \mathrm{lb}$.
(A) PAWOOD Type 5. Cuts holes $1^{\prime \prime}$ (B) PAWOOD Type 4 . Cuts holes $7 / 8^{\prime \prime}$ " to $51 / 2^{\prime \prime}$ diameter. No. 114181 . Round Shank. Choice Ea. round shank.
No. 11 A182. Square Shank. . \$2.48 No. 11 A183. Net Each. . . . . 81.94 No. 12A1501. Extro Cutter for types 4 or 5 listed above. Each.
(C) HEAVY DUTY TYPE—CUTS HOLE $13 / 4$ " TO $8^{\prime \prime}$
$1 / 2^{\prime \prime}$ round shank for drill press use. Removable $1 / 4$ centering drill bit and adjustable $1 / 4^{\prime \prime}$ high speed steel cutting bar. Easy to adjust Allen set screws for desired cutting depth in steel, plastic, metal, etc.
No. 16A904. Shpg. wt. 3/4 lb. Each
(5) NO. $731 R$ RELAY SOCKET PUNCH. Makes clean, oceurat
for Potter $\&$ Brumfield Type KHP relay sockets. WT. 10 oz. for Potter E Brum
No. 11 B55. Each
$\$ 13.75$
(6) BALL BEARING REPLACEMENT DRIVE SCREWS

Greenlee punches cut easier and faster than ever regardless of toughness of metal. Specially designed bearing assembly replaces present drive screw Balf bearing sooks up friction allowing screw to be furned with ease. Stk. No.
11 A444 AVY22BB
114444
11 A447
AVI12BB
AV249BB
AV304BB
HAND OPERATED NIBBLING TOOL CUTS ANY SHAPE OPENING IN SHEET METAL, COPPER, ALUMINUM, PLASTIC, ETC.
Cut those odd shape holes without distortion or strain in steel, aluminum, copper or plastic. Handles easily and smoothly, cuts rapidly with only one hand opera etc., in chassis. Copacity: steel, 18 gauge; aluminum copper, plastic $\frac{1_{1}^{\prime}}{1}$
No. 11 A441. Net.
$\$ 3.95$
No. 11 A442. Replacement Punch. Net.
BURRING REAMERS
 reamers rapidly remove burrs from chassis cutouts, antenna mast cutotfs, etc. Also handy for enlarging holes. (1) T-Handle Type. Tapers $1 / 8$ No. 11 A188.
Each
(2) Bit-Shonk Type. Tapers No. 11 A321.
Each
(2) Bit Shank Type. Tapers No. 114191
$\$ 1.80$
Stoch
2.60


X-ACTO SWISS NEEDLE FILES
 shop work.
Same as used by jewelers, watchmakers, tool and die makers, etc. ncludes round, half-round, flat, oval, In compartmented storage stand. Quality made by Swiss craftsmen. No. I6C187. Type 60S-ST . 4 . 5 Each

HANDY 3-IN-ONE TOOL HOLDERS


Nickel plated spring steel holder holds as many as 3 tools. Handy for pliers, hammers, wrenches, garden tools, etc. Mounts on wall or bencr. Has self tapping gimlet screw. No. 11 B101. 10 For.

## Cabinets and Embossing Tools

AKRO-MILS METAL STORAGE UNIT

## WITH CLEAR PLASTIC DRAWERS

NO MORE FRANTIC SEARCHING FOR MISPLACED ITEMS


New "Modular" design cabinets are all the same tion of cabinets to meet your individual storage needs. Place on bench or hang on wall. All steel fromes ore welded into one strong, solid unit to last through a lifetime of daily use. Handsome baked on gray hammertone enamel finish. Choice of 6 drawer of positions each drower divides into on infinite number complete flexibility.

## DELUXE STORAGE CABINETS

Space conserving metol
parts cobinets for work parts cobinets for workshop, home, store, etc. drawers provide instant item selection. Full width pull handles, rear stop tab prevents accidental spillage. Lobels and drower dividers included. "All cabi-
nets are $171 /$ " $^{\text {wide. Weight }}$ nets are $177 / /^{\prime \prime}$ wide. Weight
$\mathrm{G}-24-111 \mathrm{lbs}$ J-36-13 lbs, G-24- 11 lbs: J-36
all others 18 lbs.
 Stk. No. Model Quan- Drowers Sixe



PORTABLE CABINET

# $\$ 499$ 

CARRY IT . . . LOCK IT HOLDS TOOLS, PARTS, ETC.

Lightweight-take it anywhere. Stores and protects small items from dust reach of children ${ }^{\text {An }}$ ideol first aid center-keeps harmful drugs out convenient carrying handle. Hinged door with handsome silver-gray finish plastic drawers $53 / 4^{\prime \prime} \mathrm{L}$. $\times 23 / 4^{\prime \prime} \mathrm{W} \times 11 / 4^{\prime \prime} \mathrm{D}$. plus jumbo full width drawer $53 / 4^{\prime \prime} \mathrm{L} . \times 83 / 4^{\prime \prime} \mathrm{W} \times 21 / 2^{\prime \prime} \mathrm{D}$. Overall size $9^{\prime \prime} \mathrm{H} . \times 10^{\prime \prime} \mathrm{W} . \times 6^{\prime \prime} \mathrm{D}$. With one removable divider per drower.

Shpg. wt. 6 lbs. Net Each
$\$ 4.99$


## HANDY-BIN <br> STEEL CABINETS

Strong, welded steel cobinets can be used singly, stacked or hung on wall. tic drawers with metal dividers pasbe divided into two or three compartments. Complete with index labels and one divider per drower. All cabinets are $6^{\prime \prime}$ deep.

12 Drowers. $10^{\prime \prime} \mathrm{W} . \times 61 / 2^{\prime \prime} \mathrm{H} . \mathrm{Wt}$
$31 / 2 \mathrm{lbs}$. Model $12 \mathrm{HB}-\mathrm{A}$.
No. 36 B 302 . Net Each... $\$ 299$ No. 36B302. Net Each... S2. 99
18 Drawers. $10^{\prime \prime} \mathrm{W} . \times 9{ }^{\prime \prime} \mathrm{H}$. Wt.



> HANDY-BIN
> ALL PLASTIC CABINETS
> Beautiful marbelized breakproof styrene, ideal for jewelry, sewing notions,
sundries, workshop items etc. $23 / 4$, W., $11 / 4$," D., $53 / 4$ " "tems, etc. $23 / 4$ drowers divawers have plastic dividers, can be divided into an infinite number of compartments. All cobinets are 61/4" 6 Dr
> 2 Drawers. 93/4" W. $\times 35 / 8^{\prime \prime}$ H. Wt. 2 lbs. Madel 6HB-A. $\$ 1.49$ 9 Drawers. $10^{\prime \prime} \mathrm{W} \times 5^{\prime \prime}$ \$1.99 No. 36C189. Net Each H. wif 9 15 Drawers. $10^{\prime \prime} \mathrm{W} \times 71 / 2^{\prime \prime}$ $\$ 2.99$ 1 Drawers Net Each 10 $\$ 3.99$

## REVOLUTIONARY TOOLS MAKE PROFESSIONAL EMBOSSED LABELS, NAME PLATES

PRINTS ON PLASTIC OR METAL-FOR JUST PENNIES!


Dymo Tapewriters emboss raised white letters or numerals on choice of colored, pressure sensitive vinyl tapes, or plain raised letters on metal anywhere, indoors or out. As easy as dialing a telephone. controls, lockerstape roll in handy magazine handle; (2) Emboss by simply rototing lettered dial to spellout desired words; (3) Cut-off label with attached cutter. (1) M-20 TAPEWRITER. Prints on both $3 / 8^{\prime \prime}$ and $1 / 2^{\prime \prime}$ wide plastic tapes. Feotures tob cut tape cutter that automatically cuts off tape and starts stripping action of adhesive backing. Space selector for regular or wide spacing between letters Supplied with $3^{3}$ " and $1 / 4$ " letter height "snap-in" embossing wheels. Square No 47 tape cut-off. Chrome finish. No. 47A73. Shpg. wt. 2 lbs. Each. (1) M-24 TAPEWRITER. Same OS Mi20 .................. 54.5 supplied with one $1 / 4^{\prime \prime}$ letter height embossing wheel.
No. 47A74. Shpg. wt. 2 lbs. Each
(1) M-10 TAPEWRITER. Prints on both $1 / 4 i$ and $3 / 8 \pi^{\prime \prime}$ wide plistic tab cut tape cutter. Supplied with $1 / 8^{\prime \prime}$ and $\mathrm{T}^{3 \prime}$ letter height embossing Was one roll $3 / 8$ tape. Chrome finish. No. $47 \mathrm{Blo2}$. Shpg. wt. 1 lb Each (1) M-14 TAPEWRITER. Same os M-10 above, except has enamel finish No 47 letter height embossing wheel.
(2) M-33 YAPEWRITER. Prints on $1 / i$ wide plostic ........... 4 letter height embossing wheel, has tab cut tope cutter with rounded corner
 (2) M-11 TAPEWRITER. Prints on $1 / 2$ wide plastic or metal tape. Has square plastic and one metal $7^{7}$ " letter height embossing wheels. Chrome finish Shpg wt. 2 bs. 47 A 3 . Each. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4 .

## REVOLUTIONARY DYMO HOME LABEL MAKEFE

## NOW . . . MAKE PERMANENT SELFSticking raised letter plastic LABELS FOR HOME, SHOP, OFFICE <br> FOR JUST PFNWIIES!

Identifies - Organizes - Personalizes Anything, Anywhere... Indoors or Out. Choice of 10 Colored Pressure Sensitive Vinyl Tapes in Handy Disposable Magazines.
1000 's of uses for home, shop, office, school so simply operated that everyone can use it. Just dial letters, numerals or symbols-squeeze handle, and your messoge comes out crisp white ogoinst a colored background. A squeeze of the trigger cuts off finished label and it's ready to be applied instontly-anywhere, indoors or out.
Identify: tools, fuse boxes, photos, reports, records, files, shelves, items in storage, etc
Personolize: luggage, sports equipment, toys, games, lockers, toothbrushes, school books, clothing, brief cases, etc.
Tool built of rugged cycolar plastic, has double cut tope cutter that outomotically, euts off tape and starts stripping action of adhesive backing Size $61 / 2^{\prime \prime}$ long, $6^{\prime \prime}$ high. Wt. $61 / 2 \mathrm{ozs}$ Shpg. Wt. 1 lb .
No. 47A84. Model M-4-Prints on $1 / 4^{\prime \prime}$ Wide Tape. Each

## NEW MODEL M-38D LABEL MAKER

Prints on both $3 / 8^{\prime \prime}$ and $1 / /^{\prime \prime}$ wide plastic tapes. Otherwise identical to M-4 Ho above. With on

## MONEY-SAVER BATTERY CMARGER

RECHARGES ORDINARY DRY CELL
FLASHLIGHT AND TRANSISTOR RADIO
BATTERIES, PLUS CARBON-ZINC,
ALKALINE, NICKEL-CADMIUM AND
MERCURY BATTERIES UP TO I5 TIMES
"QUICX CHANGE" TAPE MAGAEIMES
Adhesive backed, pressure sensitive vinyt topes in manty disposable mogazines $12 \mathrm{ft} . \mathrm{x}^{1 / 4}$ " wide roll. Specify Color: Grey, Yellow, Orange, Brown, Block, Red, Blue, Green, Gold.
$\$ 1.00$
No. 47A79. Per Roll
low, clear,
$12 \mathrm{ft} . \mathrm{x} 3 / 8^{\prime \prime}$ wide rol
Brown, Grey, Orange.
No. 47 A94. Per Roll.
$\$ 1.25$
POP RiveTool! Now more versatile than ever

## SETS BOTH

$1 / 8$ AND $3 / 16-1 N$. DIAMETER RIVETS

> Performs twice as many jobs as the original mode single rivet tool! Sets two rivet sizes. $1 / 8^{\prime \prime}$ for light single rivet tool! sets two rivet sizes applications where greater holding power is required. Provides the fastest, most convenient means ever for fastening jobs in al most every type of work! Whether its shop prajects or home repars, you'll find Poo Rivets can be used in place of mony types of ordinory fastenings in metal, Pood, plivets ore inserted and set trom Pop rivets are inserted and set from the some side af work piece. As nuts or bucking ordinory rivets.
> Use Pop Rtvets in place of sileet metal screws tor fostening jobs in heating and air conditioning ducts, metal screen ond door frames, metal cobinets, guttering, mai boxes, metal awnings, automobile occessories, lown mowers, etc. Use Pop Rivets in place of nuts and bolts. They're faster and easier to install \{particularly in hard-tareach placest and they stay permonently tight. Perfect TV and radia chassis.
> Use Pop Rivets in place of ordinary rivets. Does the job in a fraction af the time ond without special ham-
> User Pop Rivets in place of soldering, bfazing or adhesives. You'll do a neater, stronger job. Ond do it many times foster. RiveTool ruggedly constructed with easy grip insulated handles. Complete with assort, medium, lang rivets, back-up plates and in terchangable nose pieces.
> $\begin{aligned} & \text { terchangable nose pieces. } \\ & 16 \text { B527. Wt. } 11 / 2 \text { both Sets both } 1 / 8^{\prime \prime} \text { and } 3 / 16^{\prime \prime} \text { dia. }\end{aligned}$
> rivets. Model $\mathrm{H}-110$. Eo.
> $\$ 4.98$
> Single Rivet Model K-103. $1 / 8^{\prime \prime}$ dia. rivets only. With
$1 / 8^{\prime \prime}$ DIA. CADMIUM PLATED STEEL RIVETS
16B521. Box of $25 \ldots 44$.... 16 thick 3 . Box of $100 \ldots . \$ 1.35$ Medium for work up to $1 / 4^{\prime \prime}$ thick. Box of $100 \ldots .{ }^{2} \$ 1.79$
168522 . Box of $20 \ldots 44 \mathrm{c} 16 \mathrm{C} 544$. Box of
 $3 / 16^{\prime \prime}$ DIA ALUMINUM RIVETS
Short for work up to $1 / 4$ " thick.
168528 . Box of $15 \ldots 4 \mathrm{c}_{\mathrm{e}} 16 \mathrm{~B} 529$. Box of $50 \ldots \ldots .16$ 68528. Box of $15 \ldots 44 \mathrm{c}$, 168529. Box of $50 \ldots \ldots .1 .16$ Medilym for work up to $1 / 2^{\prime \prime}$ thick.
168531 . Box of $12 \ldots 4 c^{2} \quad 168532$. Box of $50 \ldots . . \$ 1.52$ Long for work up to $5 / 8^{\prime \prime}$ thick. 16 B538. Box of $50 \ldots \ldots . \$ 1.77$ 6ockr-up Plotes for use where holes are too large for Pop Rivets, ond as reinforcements on both sides of hole when riveting soft materials.
No. 168524 . For $1 / 3^{\prime \prime}$ Dio. Rivets. Box of $40, \ldots . . . .44 c$ No. 168524. For $3 / 16^{\prime \prime}$ Dio. Rivets. Box of $30 \ldots \ldots . .44 \mathrm{c}$
ingtall staer, aluminum RIVETS IN SEcomps
IN ANY TYPE WOPK.. uses miatually untmated


Easy to use as 1-2-3
1-Insert rivet.
2-Ploce rivet in hole of material to be festened.
3-Set livet.
INSUEES A STRONG, MEAT FULLY PROFESSIONAL
FASTEMIRE JOB EVERYTIME!
REPLACES METAL SCREWS,
NUTS AND BOLTS, ADHESIVES SOLDE:ING OR BRAZING IOINTS, ORDINARY RIYETS

## Tool and Parts Chest, Vises, Etc.



PARTS \& TOOL CHEST


Space provided for carrying smal parts and tools. Contains main tool sistors, condensers, two trays for redrawn, seamless construction, drawn, seamless construction, rounded Hard baked enamel finish $19 \%$ cover. $71 / 4^{\prime \prime} \mathrm{W}, 7^{\prime \prime} \mathrm{H}$. 37 A 230 . Shpg. wt. 7 lbs. Eg. 4.96

## "REMOVABLE" TRAY BOX

Finest quality steel with two bolt cotches; built-in padlock eye; rustproof hande. Full lock-seamed construction, rounded reinforced corners. Continuous type hinge with lid opening entirely back. Gray ripple finish. Handy Tote Troy, $211 / 2^{\times 8} 1 / 2 \times 11 / 2^{\prime \prime}$ Overall size $22 \times 9 \times 8^{\prime \prime}$
40 c 101 . Wt. 12 lbs . Each. . $\$ 8.89$

GENERAL UTILITY BOX


Handy for carrying tools on the job Automatic retracting tray. Seamless waterproof construction with rounded corners, embossed reinforcement on both cover and bottom.
Hard baked enamel finish. Size ${ }_{4}{ }^{1} 1 \mathrm{~b}^{\prime \prime} \mathrm{L}, 71 / 4^{\prime \prime} \mathrm{W}, 6^{\prime \prime} \mathrm{H}$. Shpg. wt.

$\$ 2.94$

## WILTON QUALITY VISES



Finest addition to WILTON MIDGET POWRARM AND VISE
PowRorm Vise sition. Relese caver alion securely locks work in most advantageous pozontal position. Steel vise jows are $21 / 4^{\prime \prime}$ wide open to vertical and/ar horiPowRorm is made of rugged codmium plated steel. Bo maximum of $21 / 4^{\prime \prime}$. face. Shpg. wt. 5 Ibs
No. 22A58. Model 364. Net Eoch
$\$ 15.80$
Low priced, high quality precisIon built vise, specifically designed to handle smal intricate work.
Ideal for model shops, hobby projects, and miniature electronic work. Features one-piece body, fully protected lead screw, removable steel jaws, and bolt mounting swivel bose. Capacity $21 / 4^{\prime \prime}$. law width $21 / 4^{\prime \prime}$. Red baked enamel finish. Shpg. wt. 6 lbs.
No. 22B317. Net
$\$ 5.85$
A precision built tool at WILTON CLAMP-ON VISE
screw secures vise to table cost. Solid clamp base with positive locking guide construction. $21 / 2^{\prime \prime}$ wide hardened steel wood up to $2^{\prime \prime}$ thick. Twin $21 / 2^{\prime \prime}$. Red enamel finish. Wt. $33 / 4 \mathrm{lbs}$.
No. 228197. Madel 1112 . Net Eoch...
$\$ 3.45$

## GENERAL ELECTRIC SILICONE RUBBER ADHESIVE/SEALANT



Permanently seal around bathtubs, shower stalls, lavatories, tile, countless crocks and openings. Stretches more than $50 \%$ without breaking. Potch and repoir fabrics, rubber footwear, gutters and downspouts, storm windows and doors, gaskets, convertible tops, plumbing, etc. Securely, mounts fixtures to concrete, metal, wood, plaster, or tile without using screws or noils. Ideal for installing saop dishes, towel racks, etc.
Bonds securely to almost any moteriol ... ceramic, porcelain, fobric, leather, rubber, glass, wood, metal, plastic, masonry, etc. pure fore fobric, rubber paste dries to rubber consistency, remains permonently pliable, unaffected by cold, heat, water ... use in any kind of weather.
Cholee of 4 proctical colors in convenient squeeze tube with application noz-
zle. Net wt. 3 ozs.


GUARANTEED - FOR Jo YEARS Foctory refund or expletely satisfied
Super strong odhesive ond sealant waterproofs ..won't crock, horden, shrink.

## ARGOS TUBE AND TOOL CADDIES ESSENTIAL FOR "OUT-OF-THE-SHOP" WORK

DELUXE FEATURES

- Large Tube E Tool Capacity. - Lightweight for easy corrying. - Professional appearance. - Durably built to take abuse. POPULAR JUNIOR CADDY
Lightweight, easy to carry, yet with ample capacity for corrying up to 143 tubes with room for meters ond tools. Break open design for easy identification and accessibility of both tubes and tools. Attractively covered in long wearing abrasion resistant brown vinyl. Sturdily constructed for lasting service. Has closp lock. Plostic hondle. Size $153 / 4^{\prime \prime}$ W. $\times 121 / 2^{\prime \prime} \mathrm{H} . \times 8^{\prime \prime} \mathrm{D}$. Shpg. wt. 9 lbs.
No. 40B128.
Model TC-201. Ea.. S9.69


## PACEMAKER

 CADDYAll the popular features of the above model in a larger, raomier case. Carries up to 262 tubes with room for tools, probes, soldering gun, assorted small parts. Has two clasp locks, plastic corrying handle. Durable brown vinyl covering. Meosures $21^{\prime \prime}$ W.
$\times 15^{\prime \prime} \mathrm{H} . \times 8^{\prime \prime} \mathrm{D}$. Shpg. wt. $111 / 2 \mathrm{lbs}$.
No. 40A129.
Model TC-100. Eo.S13.95


NEW SELF-ADJUSTING SOCKET WRENCH
SIMPLY PRESS AND TURN-ADJUSTS AUTOMATICALLY
7 BOLT OR
NUT SIZES


Unique self-adjusting oction instantly and automatically selects the right socket to
 notes the need for individual wrenches for each size. Tempered steel sockets of up to $13 / 4$ " long. Internal mechonism torque, permit use with bolt extensions plated steel housing. Shockproof insusm corrosion proofed for long-life. Chrome No. 16A939. Eoch. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 94.95

## DELUXE MODEL PRECISION

## SPLIT IMAGE TRANSIT

- New externol sights for fost-
- er, more accurote operation.

New prism-like optical sys-

- Simplified calibrotion system ACCURATE FOR LEVELING


## AND INCLINE MEASUREMENT

Easy as a camero to operate! One man olone can do leveling and incline measuring accurate to a fraction of inch. Ideal for on the job and around the house; for carpentry leveling, patio and terrocing duct installation, foundation work, contour plowing,
 brick laying, yard grading, irrigation, cuttering drain Ham tower and antenno No. 29824 and antenno installations, etc. Shpg. wt. 2 lbs.

Beoutiful Simuloted Leother Corrying Cose. For transit above
No. 29B25. Net Eoch

B-A LOW PRICE $\$ 4.69$


Most convenient, versatile vise ever made! It's like having a third hand finger-tip turn of the Vocu-Lever holds vight where you need it. Just a table top even vertically on the wall. Simply turn lever to release, Ideal for hobby work, shop home, school, etc. Large 21/2" release. hardened steel hove work holding " $V$ " grooves, open to $21 / 2 /$, , shpo of 3 lbs.
No. 378375 . Each
$\$ 4.95$

# Precision Hobby Tools 

## ELECTRIC GRINDING AND ENGRAVING TOOL SETS



A low cost, high quality power tool and accessory kit designed to do small preA low cost, high quality power too and accessory kit designed to do smandles eision jobs. Grinds, less collet chuck. Hos oilless, self aligning bearings mounted in felt oil retainers. 1 less collet chuck. Hos oilless, self oligning Apearimately 25,000 RPM. Fingertip $110-120 \mathrm{~V}$. 60 cycle AC-DC motor approximately includes \# 211 Moto-Tool
 with chuck ond sander; dressing stone; 4 mandrels; 3 bristle brushes; 3 cut-off wheels; 2 rubber polishing wheels; 5 polishing and sanding accessories. In fitted steel case. Shpg. wt. $31 / 2$ lbs. 212 Each ............................... 9.9 .5
No. 37A413. Model 212. Eoch
Model 211 Moto-Tool Only with chuck, $1 / \mathrm{s}^{\prime \prime}$ collet and emery wheel point. No. 37 Al 65. Each


Contains occessories for routing, drilling, grinding, engroving, polishing, sowing. Includes: 2 collets, 18 " and ${ }^{3}{ }^{\prime \prime}{ }^{\prime \prime} ; 4$ steel cutters; 4 emery points; 1 steel saw; 3 brushes; 1 screw mandrel; 1 shoulder mandrei; 1 drum sander;' 3 drills. In handy compartmented stand. Shpg. wt.
No. 37A164. Model 202. Eo. 99.95
2
Fits Models 221 ond 232 Moto-Tools Perfect for precision drilling and routing ideal for Model mokers, wood corvers, etc. "Drill press height $12^{" \prime}$ base is $53 / 4^{\prime \prime} \times 4^{\prime \prime}$. Toble can be roised or lowered, locks in any position for accuNo. 37A163. Model 225 S12. 50 Eoch

DREMEL HOBBY POWER TOOL ACCESSORIES



Steel Carving Cutters
(1) (2) (3) (4) (3) 164812 Each 164816 Each (1) 164812 .. 99 c (4) 16A816...99c (8) $164813 \ldots 99 \mathrm{c}$ (5) $164817 \ldots . .99 \mathrm{c}$

## N Y N 3 N

No. 16A819. Accommodotes s" to No. 16A820. Accommodotes 18 " to 3" shank. Each



Burstein-Applebee Co., 1012-1
\$14.95

10 to
.40 c

## DELUXE DREMEL MOTO-TOOL KIT

 A high-speed precision pocket-size mochine shop . Ideal for hobby work, lab use, schools, repairman and model makers, dentists, opticions, etc. Grinds, polishes, corves, drills, sands and sows. Does in seconds those time consows. suming jobs that are difficult to do with ordinory hand tools
Wrenchless collet chuck for easy, convenient meons of changing toals. Operates on 110 ess on $110-120$ volt 60 cycle AC/DC. 27,000 RPM. Cilless self-alignirg beannous mounted in felt retainers. Fingertip switch for rapid stort and stop or continwous operation. Wt., only 13 ozs., handles as easily as a pencil.
Kit includes: \#221 Moto-tool with chuck ond 3 collets, $1 / 8^{\prime \prime}$, "', ""; firger grip ottachment; 4 emery wheel points; dressing stone; 8 steel corving cutters; steel sow; 3 bristle brushes, steel brush; shoulder mandrel with sanding discs; screw mondrel with felt wheel; drum sander. In fitted steel cose. Shpg, wt. 4 lbs No. 37A159. Model 222.
Each 221 Moto-Tool Only
Model 22160 . Shpg. wt. 3 lbs.

## Each

## DREMEL HEAVY DUTY MOTO-TOOL KIT

Similar to tool obove but designed for heovy continuous duty operotion. More powerful-operotes at 27,000 RPM with high torque. Just os hondy-just as eosy to use-weighs only 18 ozs. Covers a wide range of industriol applications including polishing and grinding of dies and molds, pattern making, model building and production deburring. Dynomically bolanced grinds to the closest tolerances. "Sturdy shock," proof bokelite housing, size 1 ti ${ }^{\prime \prime}$ dio. $\times 1^{71 / 2 " \prime}$ long. Comes complete with $1 / 8^{\prime \prime}$ 土 $^{\prime \prime}{ }^{\prime \prime}$, $3^{31}$ " collets; finger grip attochment, 5 emery wheel 2 points, dressing stone, 8 steel cutters, steel sow,

with sanding discs, screw mandrel with felt wheel, drum sander-all in fitted steel storoge cose. $110-120 \mathrm{~V}$. AC-DC, 3 -wire ccrd with 2-prong odoptor. Shpg. wt. 4 lbs. Mfg.
No. 37C357. Model 233 Kit. Each
handy finger grip attockment. Shpg. wt. 2 libs. Mifg. No. 37B415. Model 232. Each
$\$ 29.95$
-...........

## BYI MARKING AND ENGRAVING TDOL HEAVY DUTY FOR CONTINUOUS OPERATION

MARKS AND ENGRAVES ANY
MATERIAL, EASIER, BETTER, FASTER

## $\$ \$^{49}$



Permanently identifies all types of tools, marks parts, frosts glass, tools leather "writes" on the hordest steel, oluminum, wood, plostics, copper, ceramics, stone, and many other moterials. Does hundreds of jobs easier and fasterhandles like o pencil-anyone con use it. Ideal for the hobbyist and shop, per fect for industrial use. Comfortable new hond-rest design plus smcil size and light weight permits continuous use without tiring the operotor. Reciprocating 110 volt 60 cycle AC motor delivers 7200 strokes per minute for fost, clean work. Control wheel adjusts "impoct" for fine, medium or cocrse stoke.
Unbreakoble polypropylene housing. Supplied complete with hord tontolum point. Shpg. Wt. 1 lb. Mfg. list $\$ 12.95$ No. 20A194.
Each 1 Gä 352 . Extro Point. Each
59.4,9 3 Lots,
$\$ 8.63$
f1:38


Special Mercury Switch Turrs It On-Off Automatically Performs hundreds of morking ond hobbycraft jobsfrom simple tool and equipment identification to inricate design engraving on wood, metal, plostic, glass, ceramic, etc. As easy to use as an ordinary lead pencil. Pick it up and it turns on-put it down and it turns off. automatically. Reciprocating 115 V. 60 cycle AC motor. Control wheel adjusts point impact. Durable red plastic housing. With hard steel
point. Net wt. 10 ozs. Shpg. wt. 1 Ib. 56.95 No. 20B160. Model V-69, Each No. 208161. Extra Steel Point. Each No. 208162. Carbide Point. For glass, extro .. $\$ 1.35$ foces. Eoch

32.25

## © NOW...PROFFSSSIONAL WELDING

## AT LOWEST COSTD

## PORTABLE ELECTRIC ARC WELDER

 COMPLETEREADY-TO-USE
NOTHNG ELSE
TO BUY!

- WELD • BRAZE • SOLDER • CUT IRON, STEEL, BRASS, BRONZE, COPPER, CAST IRON AND OTHER METALS!


## 5-YEAR GUARANTEE!

Factory repair or replacement if unit becomes inoperative due to defective materials or workmanship.

HIGH IN QUALITY AND PERFORMANCE - YET SO LOW COST IT CAN PAY FOR ITSELF IN A SINGLE JOB!

A really practical, dependable unit that produces professional welding you'd expect only from equipment costing much, much more. Compact, lightweight, completely portable : . take it anywherel Simple and easy to use even for the novice. Simplified insiructions explain how to do both metallic and carbon are welding, brazing, soldering, pre-heating and metal cutting. Make on-thespot repairs in almost any type of metal... even aluminum. Fix hard to replace or impossible to get parts on mowers, garden tools, pots and pans, washers, dryers, farm equipment, TV and radio chassis ... 1001 items around the home, shop or farm. Weld car bodies, cut them down, build them up make your own tables, work benches, lamps, shairs, shelves, ornamental
wrought iron fixtures, etc. Complete with input power cable and plug, combination iwin carbon ar torch-single metallic arc welding electrode holder and ground cable, welding and brazing rods, full face shield, flux, solder, carbon, grounding clip, and complete welding instructions. Operates from any properly wired 110 V AC-DC 30 amp line. Uses standard welding rods and carbons. Power unit size No. 36 C 248 . Special Earh Shipg. wt. 6 lbs.
$\$ 14.95$

MANNING-BOWMAN : בNCC (CRMDE:

[^15]
## PROFESSIONAL ARC WELDER

ONLY


WELDS - SOLDERS - CUTS BRAZES - PREHEATS

> IDEAL FOR GARAGES FARMS - SERVICE STATIONS SHOPS - INDUSTRIAL USAGE

$$
\begin{aligned}
& \text { S.YEAR GUARANTEE } \\
& \text { Fatfory repair or replacement if Unit becomes } \\
& \text { inoperative due to defective materials or work. } \\
& \text { manship. }
\end{aligned}
$$

Rugged, powerful, super-charged, precision built and engineered to handle the really tough welding jobs and provide years and years of dependable, troubletransformer with the sea heavy-duty industrial type transed in machines the same design and construction as used in machines selling for several times the price of this amazing new welder. Make or repair auto bodies, farm equipment, fences, metal furniture. hundreds of other metal items. Accomplish a wide variety of maintenance lobs in the shop, garage, factory-quickly, economically. Simplicity of operation enables anyone to weld, braze, cut, solder on the first try. Does both carbon arc and metallic arc welding with 4 heat settings ... $20 \mathrm{amp}, 40 \mathrm{amp}, 60 \mathrm{amp}$
and 80 amp. Properly ventilated and insulated for maximum cooling. Sturdy metal cabinet has baked on blue enamel hammerloid finish. Size $93 / 8^{\prime \prime} \mathrm{W}$, 9 " D, $121 / 4$. Convenient to carry from job to job for on the-spot repairs. Operates from any properly wired 110 V . AC $50 / 60$ cycle line. 28 amps input.
Complete with full head shield, electrode holder, welding cables, ground cables and clamp, power cable, assorted welding, and brazing rods, carbons, solder, flux, complete "easy-to-operate" instructions. Uses standard welding rods and carbons. Shpg. wt No. 36C247. Each..
$\$ 47.50$

## Glue Gun, Vacuum Cleaner, Etc.

NEW MULTI-PURPOSE CACUMM
CLEMMB

NOT A 5 GALION BUT A BIG 12-GAL TANK


## $\$ 1895$

Ideal for 100's of cleaning jobs in the home, basement, workshop, garage. Positive suction action makes easy clean-up of dust, dirt particles, sawdust, wood shavings, etc. . specially designed pick-up head reaches into corners, covers plarge area. Big 12 gallon tank really holds a load, use time after time without emptying. $60^{\prime \prime}$ flexible hose, 12 " chromed steel extension wand. Powerful 2.7 amp 115 V. 50.60 cyele AC motor. Fibre board tank size $18^{\prime \prime}$ H. $\times 161 / 4^{\prime \prime}$ dia., top carry handle. 9 ft . cord. With 1 each paper and cloth filter bag. \$18.95
$37 A 583$. Wi. 16 lbs. Each...... 18.95 37A584. Cloth Filser Bag.
37 A585. Paper Filter Bag .96 c
.60 c

## Aectict ITO IUII

HOT MELTED GLUE PERMANENTLY BONDS: Wood, Plastic, Fabric, Leather, Metal, Pottery, MANY OTHER MATERIALS

## 黄

Glued items are ready for use immediatelyl No lengthy set-up or drying time as
reauired with ordinary glues.
Fastest, easiest, best means ever for accomplishing 1000 's of bonding jobs in the home and shop. Not only does the melted glue bond permanently and securely in pust 60 seconds, but it provides a bond that's flexible ...perfect for gluing furniture and other objects where a certain amount of "give" is needed
sealer sticks-never drys out, no bottles or tubes to sealer sticks-never drys out, no bottles or tubes to leak.
Ideal for making and repairing wooden items, leather goods, metal and plastic articles.plus scores of hobbycraft uses. Special white sealer stick provide instant-set, water-proof caulking around bathtubs, shower stails, windows, tile, etc. Gun has high impact plastic housing, Co
No. 11 B 262 Shpg, wt. $11 / 2$ lbs. Each............ \$5.44 No. 11B263 Thermogrip Glue Sticks. Pkg. 7 No. 118264 Thermogrip White Sealer Sticks


HAND STAPLER
Small and camyou anywhere 1001 uses in workHandsome two-tone brown and nickel ${ }_{22}$ finish. Shpg. wt. 10 oz. 22C272. Box of 1000 Staples.... 29 c

7-IN. 'SNIPS
High quality drop forged steel shears cut straight os well as right or left curves. $15 / 8^{\prime \prime}$ polished blades. Lgth. Shpg. wt. 6 oz. Kraeuter $27707 . \quad \$ 220$
No. $16 A 542$. Each . . No. 164542 . Each$\$ 220$


## SUPREME "VERSAMATIC" WONDER TOOL REVERSIBLE SCREWDRIVER \& SPEED REDUCER FOR ELECTRIC DRILLS


\$1121
MOST VERSATILE UNIT OF ITS KIND YET PRODUCED.
Fits directly Into chuck of ony drill - Boosts power 7 times - Converts any light duty drill for heovy work.

Will lighten the work-load of any mechanic professional or amoteur. Eliminates usually tough Reduces the speed of a power drill by seven times and through torque increases the power by a like amount. As a sensational odded feature-runs in reverse with one easy twist; both drives and removes all screws, big or little. fast . . sofe! Drives and removes nuts- $1 / 4^{\prime \prime}$ socket drive included; with the addition of $1 / 2$ chuck similar to that listed below handles such heavy duty jobs as large diometer drilling with hole sows, auger bits, etc in metal or mosonry; plus precision topping. Bits and tops last for longer, cut more efficiently. all routine jobs. Includes: Versomatic unit: stand ard screwdriver bit; No. 2 Phillips type bit; $1 / 4$ " tion monual. Fully guaranteed.
No. $37 \mathrm{B1} 23$. Wt. 3 lbs. Complete Set No. 168852. $1 / 2^{\prime \prime}$ Geared Key Chuch. For use with obove. Each
$\$ 11.21$ $\$ 5.49$


Electric tool operations are foster, surer, more precise with this omozing new device. Just "dial" the proper speed for the job, regardless of work material, and the finest professional quality results are assured every time. Allows slow speed to start holes when drilling or sowing; eliminates bounce and masonry. Easily saves its cost in drill bits and sow blades alone.
Sanders can be run at any speed desired. . . from full speed for the roughest lumber to the slowest speed for fine finishing sanding. Eliminotes ruts and gouges in delicate work.
For use on Universal AC-DC or series DC motors up to 5 amps. Unbreakoble all metal housing size $21 / 4^{\prime \prime} \mathrm{D}$. $\times 25 / 8^{\prime \prime} \mathrm{W} . \times 37 / 8^{\prime \prime} \mathrm{H}$. Clip on back for use on belt or hanging on wall. On-off switch. 6 ft .3 -cond, cord. Operates from 120 volts AC. Shpg. wt. 2 lbs.
No. 37 B28. Each
$\$ 11.95$
BVI ELECTRIC PAINT SPRAYER TRIPLE NOZZLE TURRET SPRAYS:

- PAINT VARNISH GARDEN SPRAYS - MOTHPROOFERS ETC.

Unique rotating turret enables you to select the correct nozzle for every spraying need. Produces fon-shaped sproy for painting large, flot surfaces! round sproy for general painting; fog-like sproy for garden sprays, mothproofers, etc. Completely self-contained-simply plug-in, pull trigger and sproy. Fool-proof, clogproof, trouble free. Gradurated 24 oz contoiner Cónvenient hanging hook. Trigger on-off switch. Operating mechanism sealed in shockproof head. Adjusting knob for light or heavy sproy. 115 V 60 cy Shpg. wt. $31 / 2$ lbs.
No. $36 B 185$. Model V5850. Each... 4,
 prayer

## NOW PROFESSIONAL WOODWORKING AT LOWEST COST

## REVOLUTIONARY NEW "SABRE-LATHE" POWER WORKSHOP



UNBELIEVABLE LOW PRICE
AMAZING
VERSAIILITY
QUALITY AMD
PERFORMANCE

IT DOES ALL THIS


GRINDER


DISC SANDER, POLISHER


TABLE JIG SAW


DRUM SANDER

Greatest power tool value we have ever been able to offer! Just imagine ... five individual power tool functions featuring a really practical, fully dependable wood lathe and including a table iig saw, grinder, drum and disc sanders... all for much, much less than you would normally pay for a lathe alone.
Turns out professional qualiry work...fine furniture iegs, beautiful decorafive placques, cabinets and tables, all sorts of useful furniture pieces for the home. Simple and easy to change from one tool function to another in iust seconds.
Powerful 2.8 amp motor supplies 3 speed ranges $-3700,3300,3100$ RPM - for powerful 2.8 amp motor supplies 3 speed ranges - 3700 , 3300,3100 RPM - for handling rough to fine
trol and on-off switch.

HOLE SAW SETS FOR ANY ELECTRIC DRILL.


Just the ticket for cutting holes fast and clean in wood, plastics, metals, etc. Set consists of 7 high speed shatterproof sows - 1 ", to $21 / 2^{\prime \prime}$ by $1 / 4$ 's. Cuts 3 times faster than other hole sows selling for twice os much. Rugged alloy tool head
drill for holding blades.
$\$ 5.88$ No. 16B878. Per Set
14-IN-1 SET. Sow sizes- $7 /^{\prime \prime}$ to $21 / 2^{\prime \prime}$ by $1 / 1 /{ }^{\prime}$ s.
pilot drills.
No, 228273.
$\$ 11.19$

## SHOPMATE ELECTRIC SCREWDRIVER

## $\$ 2995$

QUICKLY AND EASILY DRIVES OR REMOVES \#4 THROUGH \#12 SLOTTED OR PHILLIPS HEAD SCREWS

POWERFUL REVERSIBLE AMP MOTOR
One of the handiest tools you can own! Ideal for ossembly work, building and repalring cabinets, furniture, boats . countless jobs around the home and shop. Compact and lightweight for fatigue-free operation. Unique screw bit finders make it easy to line up and engage the bit heod with the screw head slot. 100 to 1 gear reduction assures high torque. Positive clutch action. Bali thrust ond self-lubricating bronze bearings. No lood speed 325 RPM. Instant release on-otf switch, and reverse switch. Complete with 2 slotted screwdriver bits, one Phillips bit.
Combination aluminum mirror finish and Lexan housing. Overall length $81 / 2$ 6 ft . 3-wire cord. $115 \mathrm{~V} .25-60$ cycle AC. Net wt. 23/4 Jbs. lbs.
No. 37B5. Model 1895. Each.

Lathe has sturdy steel tubing bed for stability and accuracy. Adjustable tool res॥ ${\text { with positive locking thumb screw. Accommodates wood pieces up to } 18^{\prime \prime} \text { long, }}_{4^{\prime \prime} \text { dia. }}$
Includes $8 \times 8^{\prime \prime}$ jig saw table and 3 assorted blades (length of blade stroke ${ }^{3}{ }^{\prime \prime}$ "), $41 / 2^{\prime \prime}$ grinding wheel with guard and eye shield, $41 / 2^{\prime \prime}$ wire brush, $41 / 2^{\prime \prime}$ buffing pad, 2 disc sonding sheets and adjustable table work rest, 2 drum sonders, allen 115 V .60 cycle, AC . Comes tool, face plate. Heavy-duty 6 ft . 3 -wire cord. die-cast power unit housing.
$\$ 34.95$

## SCREW AND NUTDRIVER ATTACHMENT

 DRIVES SCREWS, NUTS, BOLTS QUICKLY \& EASILY FITS ANY ELECTRIC DRILL$58984^{59}$
Drives slotted and Phillips crews, hex and square nuts and bolts.
c

Now, any electric drill becomes a power screwdriver and nutdriver Eliminates hours of tough, tiresome hand work-nan-slip clutch engages by applying pressure-automotically disengages when screw or nut is driven home. Special bit holders prevent bits from slipping off screw. Includes: 2 slotted sockets $1 / 4$ " and fis ", socket wrench holder with ball lock.
No. 22c73. Shpg. wt. $11 / 2$ lbs. Special Each..................

## IMPROVED MODEL

THOR "SPEED SNIPS" ELECTRIC SCISSORS


GREATER POWER
FASTER, SAFER, EASIER FOR EVERY CUTTING JOB

- Cuts Grill Cloth

- Drapery Materials - Suiting, Etc.


More convenient than ever! This improved version of the popular Speed-Snips electric scissors eliminates tiresome hand cutting. Perfect for hi-fi installers, service shops, toilors, housewives-anyone requiring professional quality scissors. Safe even for children, fully approved by UL and CSA. Lightweight and easy to handle, non-tiring even ofter hours of use. Precision ground chrame plated blades stoy sharp longer. Durable
Dupont Zytel case. Overall size $61 / 4^{\prime \prime} \mathrm{L} \times 11 / 2 \mathrm{~W} \times 21 /{ }^{\prime \prime} \mathrm{H}$ With 6 Dupont Zytel case. Ov
foot cord. Wt. 9 ozs.
No. 37A314. Each.
$\$ 5.95$

## Drill Bits, Taps \& Dies, Etc.

## CENTURY "MAGIC BLACK" HIGH SPEED DRILL BITS AND SETS


(1) MB3 DRILL SETS 13 high speed mechanics length drills Sizes 18 " to $1 / 4^{\prime \prime}$ by 64ths. Use with power or hand drill on metal, wood plastic, etc. Handy Huot index container. Every drill is instantly accessible. Shpg. wt. 1 lb .
No. 16A382. Per Set.
(2) MF-7 DRILL SETS

7 high speed drills. Sizes $\frac{1}{18 \prime}$ to $1 / 4^{\prime \prime}$ by 32 nds. Use with any power or hand drill on metal or wood, plastic, No. 16A667. Per Set.

## (3) MB525 DRILL SET

5 high speed drills. Sizes $1 / 4^{\prime \prime}$ to $1 / 2^{\prime \prime}$. All hove $1 / 4^{\prime \prime}$ shanks-makes possible their use in $1 / 4^{\prime \prime}$ electric drills. Sizes $1 / 4^{\prime \prime}$ H $^{\prime \prime \prime} 3 / 8^{\prime \prime} 4^{2}{ }^{\prime \prime \prime}{ }^{\prime \prime}$ and $1 / 2^{\prime \prime}$ in plos-
tic Cose. Shpg. wt. 1 lb . $1 / 4$ Ćase. Shpg. 'wt. 1 lb.
tie Co. $16 B 840$. Per Set. No. 16B840. Per Set.

(4) INDIVIDUAL BITS Type 999PT. Mechanics lengths. $=1 / 4$ dia. shanks.


MASONRY DRILLS
For drilling in concrete, ploster or brick. All have $1 / 4^{\prime \prime}$ shanks. $\begin{array}{lccc}\text { Stk. No. } & \text { Size } & \text { Length } & \text { Net Eo. } \\ 16 A 669 & 1 / 4^{\prime \prime} & 4^{\prime \prime} & \$ 1.06 \\ 16 A 670 & 3 / /^{\prime \prime} & 4^{\prime \prime} & 1.28 \\ 16 A 671 & 1 / 2^{\prime \prime} & 6^{\prime \prime} & 1.61\end{array}$

"SCREW-DRILL" SET
DRILLS! COUNTERSINKS! AND COUNTERBORES!
ALL IN ONE EASY OPERATION
4 SIZES-\#6, \#8, \#10, \#12
The quick, sure way for screw driving in wood, plastic, fiber, sheet oluminum, etc. Chrome-vanadium drill bit with nickel plated hardened steel holder drills pilot hole, countersinks and counterbores to desired consists of 4 sizes for $\# 6, \# 8, \# 10$ and $\# 12$ screws. $1 / 4^{\prime \prime}$ shank fits all hand and electric drills.
No. 16C227. Set of 4


## 2-SPEED ANGLE DRIVE

Reduces speed to one-half, or doubles speed of any electric drill.
Reduces speed for buffing, drilling in mosonry, steel-doubles speed for sanding, etc. Swivel angle drive for working in close quarters of any ongle dling. Shpg. wt. $11 / 2 \mathrm{lbs}$. $\$ 3,39$

(1) NO. 21 TAP $G$ DIE SET

Popular set for the rodiomon or hobbyist. Consists of excellent quality high carbon olloy steel taps and solid dies, sizes $6-32,8-32,10-24,12-24$ and 1/4-20 plus Top and Reamer Wrench with hardened jaws, and ruggedy conNo. 22B187. PER SET
$\$ 8.38$
(3) TAP WRENCH

Sliding handle type. Knurled hold 16 He 12 tops.
(1) TAPS

Made of high corbon, alloy steel. 1"O.D. solid dies. Made of high carNo. Size O.D. Each bon, alloy steel $1241630 \quad 2-56 \quad .086 \quad \mathbf{\$ 0 . 5 7} \quad$ Stk. No. 12 A1503 $12 A 1504$ $12 A 1505$ 12 A1506 $12 A 1507$ 12A1508

## (3) DIE STOCK

chuck Holds $1^{\prime \prime}$ O.D. dies for accurate cut o. 16B346. Each 2 Kaps.

| $4-36$ | .112 | .36 |
| :--- | :--- | :--- |
| $6-32$ | .138 | .36 |
| $8-32$ | .164 | .36 |
| $10-24$ | .190 | .39 |
| $10-32$ | .190 | .39 |
| $1 / 4-20$ | .250 | .44 |

THOR-SPEEDWAY

## DRILL PRESS STAND

## CONVERTS ALL $1 / 4$ " \& 3/8"

 DRILLS-SPADE OR PISTOL GRIP-TO DRILL PRESSDo those tough and accuracy requiring jobs with ease. Ideal when using attach ments for routing, mortising, shaping, sanding, etc. Indispensable for tapping and precision drilling. Drill securely locks into cradle mounting-moves up, down or rototes on supporting column. Has professional rods and pinion gear feed with heavy duty clock spring return mechanism
Easy to read depth scale with threaded lock nut stop for repeated drilling to pre determined depth. Depth of throat $4^{\prime \prime}$ Sturdy "" dia. column and heavy cast base with slots for bench mounting.
No. 37 B347.
Shpg. wt. 8 lbs. Each....... 51.95
ROTARY FILE SET WITH $1 / 4$ " SHANK TO FIT ANY ELECTRIC DRILL, DRILL PRESS,

FLEXIBLE SHAFT
Ideal for shaping, finlshing, routing, deburring, in metal, wood, plastic, leather, rubber, etc. Milled from solid tool steel, ${ }^{\text {hardened }}$ and tempered.
Shpg. wt. $1 / 2 \mathrm{lb}$. No. 16C694. Special, Set . . \$3.99


## TWIST DRILL AND TOOL SHARPENER

Fits any electric drill. Simple and easy to use. Accurately sharpens any drill chisels, carving tools, knives, scissors etc. Includes $3^{\prime \prime}$ grinding wheel with $1 / 4^{\prime \prime}$ shank and guard, drill holder, adjustable tool rest. Shpg. wt. $11 / 2 \mathrm{lbs}$. No. 16C695. Net Each.
$\$ 1.49$


## HI-SPEED COPE-SAW DRILL-BIT



NOW HIGHEST QUALITY AT
SENSATIONAL LOW PRICE
Works With Any Electric Drill
DRILL, SAW, REAM metal, wood, plastic, etc Drills own starting hole-upper port of bit is used to cut, saw or ream circles, ovals, squares ters, mechanics, electricians, radiomen, hobbyists, etc. Abrosive resistont, high speed steel Withstands severe continuous use without breasinds severe continuous 4 use $^{\prime \prime}$, withou ALL PURPOSE BIT for metol, wocd, plastic No. 16A673. Net Eoch S1.95 WOOD BIT specificolly designed for plyword Beaver boord, etc-any type wood. \$1 95 HEAVY METAL BIT. For cutting heavy iron, steel, brass, oluminum, etc.

(1) AUTOMATIC CENTER PUNCH

## MILLERS-FALLS HI-SPEED COUNTERSINK

For simple and accurate punch marking before drilling. Just push and mechanism does the rest. \$3,45 No. 16A666. Eoch....... S3,45
(3) CAN'T-ROL CENTER PUNCH No. 16A366. Each

## 29-PIECE DRILL SET

FOR USE WITH ALL HIGH-SPEED ELECTRIC DRILLS

```
BIG IMPORT VALUE
```

TO SAVE YOU \$\$\$
Countersinks in metol, wood, plastic etc., to admit heads of screws. Fine grade high-speed steel. $1 / 4^{\prime \prime}$ shank No. 164909 . No. Each.


SIZES 1/16" TO
${ }^{5695}$
Complete set of the most often needed drill bits at an unbelievoble low price Precision ground of quality chrome vanadium steel for fast, accurate drilling in wood plastic, metal etc. Standard iobber lengths, straight shank type. In handy indexed metal stand. Quality import.
No. I6A580. Shpg. wt. 2 lbs . Speeial Eoch

## Portable Electric Drill, Saws, Sander, Grinder



Rugged, dependable $7^{\prime \prime}$ saw with powerful 11/4 H.P. motor glides through any material from wollboard to rough $2^{\prime \prime}$ lumber. Races through $2 \times 4^{\prime}$ s even of $45^{\circ}$ angle. Toilor fit handle and perfect bolance rombine to provide easiest handling. Built-in externally odjustable safety clutch ends common couse of motor burnout and blade kick back. Precision built 8 amp motor delivers 4900 RPM through helical drive gears. Heavy duty sole plote insures accurate cuts. Simple, positive fingertip adjustments for depth of cut and bevels $0^{\circ}$ to $45^{\circ}$. Maximum depth of cut 2 is" $^{\circ}$, maximum eut of $45^{\circ}, 2$ 亩
Equipped with calibroted rip guide and 3 -wire cord.
Bright finish die cost aluminum housing. IIS V. 60 cyele AC. Shog. wr. 13
No. 37B270. Each
$\$ 19.95$
No. 16A581. 7" Combination Blade. Each
$\$ 2.29$


Superibr to ony sander we've seen of this amazing low price! Revolutionary new motor design produces a positive straight line action with no whip or bounce. extremely powerful, connot be overloaded. Supplies 7200 is" strokes per minute for rough or fine finish sanding. Runs smooth and stays cool even under con-
tinuous operation. No slip lever oction sandpaper clomps. Uses $1 / 3$ sheet standard tinuous operation. No slip lever oction sandpaper clamps. Uses $1 / 3$ sheet standard
$9 \times 11$ sandpaper. Ball brite finish die-cast aluminum housing. 110 V .60 cycle AC. 6 foot 3 -wire cord. Shpg. wt. 5 lbs. 3 Lots
No. 37 B29. Model 310 \$11.21 Each.

$\$ 11.21$| Each |
| :---: |
| Eats |

$\$ 9.97$

## Portable Electric Drills, Sander, Saw

## thor exceptional value portable electric drills

## "THERMO-WELP" RUAN-QUT PROTECTED MOTORS ALL ARE IMDUSTRIALKY RATED, GSA APPROVED ballabearine comstiauction

NEW VARIABLE SPEED ELECTRIC DRILLS
Variable speed at your finger-tip for controlled drilling in steel, wood, plastic, etc. The harder you squeeze the trigger, the faster the drill will run ... from ORPM ta full speed.

1/4-INCH VARIABLE-SPEED


Variable speed plus high quality throughout ... tops in performance and handling ease. Powerful 2.5 mp burn-out protected motor and ball bearing constructhon lets you tackle many jobs that most $1 / 4$-inch drills con't handle. Moximum speed 2200 RPM. Momentary contact switch with locking pin. Rugged die-cost housing with beige-tone finish. 6 ft .3 -wire cord. Overall length $81 / 4^{\prime \prime} .115 \mathrm{~V} .60 \mathrm{cy}$ AC. Shpg. wt. 5 lbs.
No. 37 C391. Each
\$19.95
STANDARD MODEL. As obove, less variable speed
feoture
No. 37 A568. Each.
$\$ 10.95$

3/B-INCH VARIABLE SPEED

## $3 / \mathrm{s} "$ Geared Chuck With



Speed Con-
Yinuously
Yariable
From 0 to
s2795

An extremely reliable, extra powerful $3 / 8^{\prime \prime}$ drill featuring variable speed cantrol for precise drilling in mosonry, stone, steel, etc. Rugged 3 omp burn-out protected motor delivers up to 900 RPM through double reduction precision hobbed gears. Momentary contoct switch-locking pin for continuous operation Durable die-cost housing with beige-tone finish. 6 ft 3 -wire cord. Overall length $81 / 2^{\prime \prime} .115 \mathrm{~V} .60 \mathrm{cy}$. AC No. 37 C 392 . Shp. wt. $51 / 2 \mathrm{lbs}$.
Each.
\$27.95
STANDARD MODEL. As above, less variable speed
feature. ${ }^{\text {No. }}$ HA567. Each.


Outstanding professional feotures and performance make this super powerful $1 / 2$-inch drill the pertect choice for any job in the home, around the shop or on the form. All steel precision hobbed gears. No load speed All ing pin for continuous operation. Die-cost housing with metallic beige-tone finish. 6 ft . 3 - wire cord. Overall length $141 / 2$
No. 37 A565. Each..
\$28.95
REVERSIBLE $1 / 2-1 N$. DRILL. As above with revers ing action-eases bit out under its own power.
No. $37 A 566$. Each.....................................


## THOR JIG SAW

BALL BEARING CONSTRUCTION
Powerful burn-out protected ${ }^{3}$
amp motor-cuts through $2 \times 4^{4} \mathrm{~s}$ at $45^{\circ}$ angle.

Fost, easy cutting in wood, metal, plas tic. ...even $2^{\prime \prime}$ lumber! Rips, scrolls, cross-cuts, makes intricate patterns a cinch. Makes its own starting hole. Bevels $45^{\circ}$ either side by odjusting tilting bose. Produces $30005 / 8$-inch cutting strokes per minute. Metallic beige-tone finished die-cost housing. With easygrip top handle, rip guide, 3 assorted blades. 6 ft. 3-wire cord. 115 V 60 cy AC. Shpg. wt. 4 les. $\$ 17.95$ 168103-Fine Wood Cutting Blade..39c 168703-Coorse Wood Cut. Bld.......39c 16B104-Metal Cutting Blade...........42c


## FABULOUS NEW VARIABLE SPEED ELECTRIC DRILLS!

## BY MANNING-BOWMAN DIV. OF MEGRAW EDISON

THE EXACT SPEED FOR EVERY DRILLING JOB...WOOD,
PLASTIC, METAL, MASONRY! NO BOUNCE OR DANCE EVEN ON CURVED OR IRREGULAR SURFACES

Exact speed needed for every concelvable drilling job from delicate, precision work to drilling in plastic, masonry, wood and metol simply by varying work to drilling in plastic, mosonry, wood ond metol simply by varying Center punching in hard materials no longer necessary.... just start drilling Center punching in hard materials no longer necessary. just start driling
at slow speed until hole is started, then breeze on through at speed desired. at slow speed until hole is started, then breeze on through at speed desired. Incredible controi with no bounce or mancing.
SC/4-IN. VARIABLE SPEED DRILL. Speed continuously variable from 0 to 2000 RPM. Full 3 omp motor precision ground ball-thrust and self-lubricoting bronze bearings. Switch has push-button lock for continuous full speed operation. Bright bearings. Switch has push-button lock for continuous als speed operat side hondle. Geared chuck with key. 3 -wire cord. Overall length $8^{\prime \prime}$. 115 V .60 cy . AC.
 $3 / 8-I N$. VARIABLE SPEED DRILL. Has the extra power and capacity for heavy duty drilling in mosonry, stone, etc. Speed continuously voriable heavy duty driling in mosonry, stone, etc. Speed continuously variable
from 0 to 1000 RPM . Full 3 amp motor, precision ground ball thrust bearfrom oiled-for-life bronze beorings. Double gear reduction. Locking pin on switch for continuous full speed operotion. Bright finish die-cast aluminum housing with removable side handle. Geored chuck with key. 3 -wire cord.


## 1/4-IN. MODEL <br> 

3/8-IN. MODEL
${ }^{5} 16^{95}$

REGULATE SPEED FROM
G RPM TO FULL SPEED WITH YOUR TRIGGER FINGER

FULL TOZRUE
AT AL Spesp
-NOLOSS N POWER

# ME MAYE SHOPPED AMFRIGA TO BRING YOU THESE OUTSTANDING POMER TOOL VALUES: 



A really dependoble all-oround utility drill for the home craftsman and hobbyist. Husky 2.6 amp motor delivers plenty of power for drilling in
wood, metal, etc. 2000 RPM no load speed. Prewood, metal, etc. 2000 RPM no load speed. Pre-
cision ground ball-thrust beorings. ish die-cost aluminum housing. Geared chuck with key. 3 -wire cord. 115 V. AC.
No. 37 A 598 Shpg. wt. 4 ibs.. Eoch.... 88.88

## (2) FINE FINISHING SANDER

Sands to a satin-smooth finish-allows anyone to furn out professional quality work. Positive
straight line action delivers 14,400 strokes minute without whip or bounce... assures a smooth, scrotch-free surfoce on every job weight with comfortable easy grip handle. Sturdy phenolic housing. $3 \times 6^{\prime \prime}$ " sponge sonding pod uses opprox. $1 / 3$. sheet stondord $9 \times 11$ " poper. 2 amp
$115 \mathrm{~V} . \mathrm{AC}^{2}$ Shpg. wt. $51 / 2 \mathrm{lbs}$. No. 3iD93. Each
$\$ 8.88$

## (3) SABRE SAW

Powerful, fast cutting in any material from wood to steel. Accurctely scrolls, cross-euts, rips, notches An indispensoble tool for numerous shop projects. and home maintenance. Lightweight shop projects for easiest handling. Adiustable bose tilts to $45^{\circ}$ either side. Air streom keeps line of cut free of sowdust. Full 3 omp motor delivers 3000 cutting strokes per minute. Oiled-for-life bronze bearings. Convenient push-button switch. Enameled finish die-cast aluminum housing. 3 -wire cord. With 3 assorted blades. 115 V . AC. No. 37 C 87 . Shpg. wt. 5 lbs. Each
$\$ 8.88$

## EXTRA BLADES FOR SABRE SAW

No. 16C586-Fine Wood Cutting Blade. Eo... 38 c No. 16 C 587 -Coarse Wood Cutting Biade. Ea. 38 C $45 c$


## COMPLETE WITH $\mathbf{\$ 8 . 9 5}$ VALUE TABLE SAW

Attoch in just seconds. 244 sq. in. work areo,
adiusioble rip guide and mitre gouge.
Power pocked, fully dependable . .. glides through any materiol from wallboard to $2^{\prime \prime}$ rough lumber, even $2 \times 4$ s at $45^{\circ}$ angle. Built-in safety clutch. Precision built 8 omp motor delivers 4,900 RPM through oversize helical reduction gears. Lifetime lubricoting bronze bearings. Positive fingertip adjustments for depth of cut and bevels $0^{\circ}$ to $45^{\circ}$. Moximum depth of cut $2 \mathbf{F}^{\prime}$ ", moximum cut at $45^{\circ}, 23^{\circ} 3^{\prime \prime}$. With calibroled rip fence, crosscut blade, '3-wire cord. Bright finish die-cost oluminum housing. 115 V. 60 cycle AC. Shpg. wt., saw and table 21 lbs. No. 374586.
No. 168585. No. 1 B8585. $71 / 4$ " Combination Blade. Each. $\$ 1.99$

FOR RUGGED JOBS SELECT YOUR DRIVE SOCKET SET FROM B-A!


## 16 PIECE

$1 / 4-1 N C H$ DRIVE SOCKET SET
Versatile set ideal for repair and odjustment of ignition systems, corburetors, etc. Extremely hondy for
repoiring rodios, TV's, home opoliances. Includes: repairing, radios, TV's, home oppliances. Includes,
 heod handle reversible ratchet. In compartmented metal box. size $67 / 8 \times 3 \times 11 / 4,4$ No. 37 AS96. Shpg. wt. 2 lbs . Each 204


## 15 PIECE

1/2-INCH DRIVE SOCKET SET
The most popular size sackets for automotive, aircroft, industrials occomplishes 100 's of jobs
in the shop ond "on the form. Consists of: twelve 12 -pt. sockets ${ }^{\text {I6 }}{ }^{\prime \prime}$ to $11 / 8^{\prime \prime}, 15^{\prime \prime}$ Swingtheod handle, reversible rotchet, oll in sturdy compartmented metal chest. Shpg. wt. 8 lbs. No. 37A594. Each


## 16 PIECE

3/8-INCH DRIVE SOCKET SET Perfect for mechanical and electrical work in the home, shop, garoge. Includes: one $3 / 8^{\prime \prime} 6$-pt. socket, eight 12-p, sockets $10^{\prime \prime}$ : 8 , $16^{\prime \prime}$ sp universal iont reversible ratchet. Supplied in hoeder, compartmented metol box. Size $17 \times 511 \times 114^{\prime}$ Shpg. wt. 6 lbs .

# Unusual Tool Values! 

HANDY POCKET ADJUSTABLE WIRE STRIPPER

$61 / 2$ INCH LONG NOSE PLIERS


With side cutters. Quality, German Craftsman made. Polished head, milled jows.
No. 16A994. NeP Eoch....... 995

## WIRE BENDING JIG



Bends and shapes wire for making racks, novelties, tools, monogramsdozens of useful, decorative articles. Forms wire sizes up to $1 / 4^{\prime \prime}$ diameter steel. Complete with jig, steel bending pins, instructions and project diagrams. Shpg. wt. $1 / 2 \mathrm{lb}$.
No. 11 C 291.
Special Each
996

## ROUTER DRILL <br> 

SAWS, DRILLS, ROUTS, FILES Fits every electric drill. Makes Fits every electric drill. Makes
its own storting hole-cuts any its own starting hole-cuts ony
shape or direction in wood, shape or direction in wood,
metal, plastic, etc. High speed steel, top quality. No. 168963. Special Eoch 995

## PLANE-RASP



Provides necessary magnification to aid in inspecting and repairing minioture parts ond equipment. Corefully pens of fine quality. No. 16B242. Net Each


Always needed tool for eutting copper, brass, aluminum and other rigid tubing up to "" dia. Ideal for refrigeration work, light plumbing, heating, etc. Equipped with hardened steel rollers and handy slide-lock reamer. Quality import. Shpg. wt No.
No. 11 A287. Net Each
995

## Quickly (3) Flaring Tool

Quickly and easily flores capper, brass, and aluminum tubing for at taching fittings. Has six floring dises from " ${ }^{\prime \prime}$ "to $5 / 8^{\prime \prime}$. Yake hos swive cone ond slide bor hondle. Quality import. shpg

S1.89
Net Each.
. 1.0
COMPLETE SET, Tubing Cufter and Floring Tool
$\$ 2.25$

### 5.0 POWER EYE LOUPES

JEWELERS TYPE
WONDERFUL FOR
ANY MINIATURE
WORK No. 11 B481. EACH. . . . . . No. 11 B80. EACH. . . ..........


## ELECTRONIC DRAFTING TEMPLATES

For the Engineer,
Student, Experimenter, Hom, Serviceman, Etc.
(1) $i$
$11 \rightarrow 10 \gg 6$
il

(2)

(3)

Extremely useful, exceptionally occurate transparent templates contain the latest revisions in electronic symbols for precise schematic drawings.
(1) COMPLETE ELECTRONICS TEMPLATE

Contains symbols for chassis connection, caparitors, fesistors, switches, crys tals, relays, connectors, fuses, ground, botteries, rectifiers, tubes, antennas ransformers, transistors, lamps, meters, plugs, receptacles etc. Size $91 / 2 \times 51 / 2=$ No. 298119.
Eoch
(ㄱ) UNIVERSAL TEMPLATE
Contains circles, rectangles, hexagons, and various electronic symbols. Shows degrees 0 to 90 , has $5^{\prime \prime}$ side rule. Size $73 / 8 \times 51 / 8^{\prime \prime}$. No. 29B120. Eoch.
(3) POCKET-SIZE ELECTRONICS TEMPLATE

Contains symbols for tubes, capacitors, batteries, relays, headphones recti fiers, transistors, etc. Size $8 \times 3$ No. 29B121. Eoch.

## AUTOMATIC SIPHON PUMP

Permits transferring of liquids from one container to another. Ideal for pumping gasoline from auto to lawn mower, can, or another auto. 2 double octing check valves give smooth pumping action. Made of tough, durable non-sparking polyethylene plastic. 6 ft . overall



X-ACTO SOLDER AID KIT
All the tools needed for fast, efficient solderingl Just select the proper aid for the job and insert in chuck on either end of wooden handie-knurled nurs hold fools securely. Supplied in handy Include five blades. Knife and scraper includes five blades: knife and scraper, tip and steel' brush. Made of hioh qualtip a stinum and steel. Shpo wt $1 / 2$ lb

No. $16 A 853$.
Eoch.
51.98


6 most needed sizes from sin" blade solid bioss chrome plated handles swivel tops. Plostic separator type swivel tops. plostic separator type
case. Shpg. wt. 8 ozs. . 29

## TOOL KADDY



Holds tools of ony shape and size, Ideal for the TV service shop, goroge, home workshop, etc. All metal, easily mounts on wall or workbench. Shpg. wt. $1 / 2 \mathrm{lb}$.
No. 16 A951. Eoch

## SAFETY EYE GUARD



PROTECTS EYES FROM FLYING
PARTICLES, DUST, SPRAYS
Provides protection to eyes when sonding, sowing, grinding, spraying, etc. Lightweight, non-fogging cleor, plostic guard has, ventilated sides. Fits over guard hos ventilated sides. Fits ove
regulor eye glasses. Shpg. wt. $1 / 2 \mathrm{lb}$. No. 164895

996


NUT DRIVER SET
7 SIZES
$\$ 359$


Top quality, sockets, sizes, ${ }^{\prime \prime}{ }^{\prime \prime}{ }^{\prime \prime \prime}{ }^{\prime \prime}$,
 In enameled steel wall bracket. Shpe. wt. 1 lb.
53.59


FINDS CENTER OF ANY
STUD OR BEAM
Ideal for hanging pictures, mirraris, cobinets, etc. Simple and easy to use. Eliminotes ofter-instatlation patch work so often necessory when studs ore missed when nailing or drilling. Shpg.
wt. $1 / 2 \mathrm{lb}$.
No. 164899 . Each. . . . . . . . . . 89 E No. 16A899. Each

## AUTOMATIC RATCHET

 SCREWDRIVER

DRIVES AND REMOVES SLOTTED AND PHILLIPS SCREWS
Has three ratchet positions: left, right, and rigid. Red plastic shockproof handle. Nickel, plated body. Complete with regular $1 / 4^{\prime \prime}$ slotted and \#2 Phillips
b. Quality import. b. Quality import.

S1.9?

## Automotive Testers \& Accessories

## POWER CONVERTER



Highly efficient, fully transistorized. Plugs into cigarette lighter receptacle, supplies 117 voits AC power ot 125 watts continuous duty (up to 150 watts supplies 117 volts AC power ot 125 watts continuous duty (up to 150 watts 10 to 125 , from 12 volt battery. Will operate any equipment requiring 10 to 125 watts including dictoting machines, transceivers, small motors, under dash or in glove comportment. Wt. 5 lbs. No. 29B53. Each.

TRANSISTORIZED 6-AMP
BATTERY CHARGER FOR 6, 8 OR 12 VOLT BATTERIES

## S-TEAR GUARANTEE

Just return to factory for repair (Include only $\$ 1.00$ for handling)

- Charges at full 6 ampere rate.
- Ammeter shows charging rate and con
difion of battery.
- Completely safe - has built-in auto-

Tanc roser circuir breaker.

- Taper type charge, automatically seduces charging rate as battery reaches full charge.


Highly efficient, economical two transistor design which insures long life and dependable service. Has ammeter to show charging rate and battery condition (low, medium and full charge). Selector switch for 6,8 or 12 volts. 6 ft . AC cord and
6 ft . leads- with battery clamps. Has automatic reset circuit breaker. Aluminum 6 ft . leads- with battery clamps. Has automatic reset circuit breaker. Aluminum
case size $31 / 2 \times 41 / 2 \times 5$ inches. Wt. 6 lbs. Operates on 115.120 volto AC . 10 No. 35B267. Model BC2. Ready to Use.

## SURE-FIRE COLD ENGINE STARTS WITH FAMOUS SCHAUER KAR-START

Model A8478. Applies 5 times the normal amount of spark to the plugs at the instont of starting Automotically disconnects when engine is running will not damoge plugs or distributor
Only three connections to moke. For either 6 or 12 volt ignition systems. Size $31 / 2 \times 21 / 2 \times 2^{\prime \prime}$ Wt. 6 ozs.
No. 29B368. Net Each

## AUTO-FLEX MAP LITE

Produces a soft white light for map reading, finding lost articles, etc. Opoque white lens softens light, won't hamper driver's vision. Seven inch chrome gooseneck ollows firm placement in almost any position. Convenient offton switch. Op 12 volt outo systems. Supplied with 15 watt lamp. Shpg. wt. $1 / 2 \mathrm{lb}$. Quality import. No. 29A464. Eoch.
$\$ 2.95$


## EMERGENCY WARNING LIGHT

 Bright flashing red signal is visible for several hundred yards. Fostens any place on car by large $3^{\prime \prime}$ rubber suction cup, works in any position. $21 / 2$ " dia. $\times 21 / 4$ " high red dome. On-off switch. No. 294465 . Shpg. washlight cells (not included). 1 lb . Quallty import. Each.. S2 49 No. 21A1. "D" Flashlight Cell. Each.
## INDIVIDUAL AUTOMOTIVE TESTERS



MODEL 9 POWER TIMING LIGHT

Delivers brilliant white light, powered from 110 AC outlet. Permits perfect alignment of timing mark and pointer. No vibrator ar movin parts to wear out. Works on al 6-12 or 24 volt system.
Handsome plastic case, pistol grip No. 29A438. Net Each.
$\$ 15.95$
(1) COMPRESSION TESTER Testing for compression is considered the first step in engine tune-up. Model 5 pin-points trouble in valves, pistons, rings, gaskets and marked to show correct operating range for engine.
The instructions serve as a guide to proper testing procedure. $21 / 2^{\prime \prime}$ meter dial is easy to read. Has off-set stem to reach hard to service rear ylinders. Universal rubber cone fits into spark plug hole. $61 / 2^{\prime \prime}$ overall. Wt. 1 lb . No. 29A413. Model 5.
Complete.
$\$ 2.95$

## (2) MOTOR GUIDE-VACUUM

 FUEL PUMP TESTERTests the engine fuel pump and vacuum system. A must for proper carburetor idle odjustment. The vacuum test determines condition of valves, valve springs, shows a choked muffler or leaky manifold. Also tests pressure and suction of fuel pump and all other vacuum operated devices on the car. $21 / 2^{\prime \prime}$ dial has four color zones for easy reading. Reads o-30 vacuum and $0-7 \mathrm{lb}$. pressure. Furnished with bracket for dash mounting if desired.
Complete with illustroted instructions. Wt. 1 lb.
No. 29A415. Model 47.
Each . . . . . . . . . . . . . . . . . . . . . . 25.95


## (3) IGNITION TIMING LIGHT

 A quick accurate method for testing and adjusting 6, 12, or 24 volt ignition systems., Uses stroboscopic principle of light which "stops" timing, determine condition of ignition system, timing mark while engine runs. Use to adjust synchronize double points, test action of automatic spark advance, discover worn distributor shaft and many other troubles. Consists of special prefocused neon light, mounted in rugged plastic case with 3 ft . leads and insulated connectors. Complete with instructions No. 29A414. Wt. 1 lb. Model 3. Eoch.$\$ 2.95$

(4) REMOTE STARTER SWITCH

ELIMINATES NEED OF SECOND MAN WHEN TURNING ENGINE Consists of a heavy duty storter type push button switch, and extra lang leods with insulated connecting clips. Wt. $1 / 2 \mathrm{lb}$. Complete with instructions. No. 29A412. Model 4.
Each
CLAMP-ON STARTER-GENERATOR CURRENT INDICATOR NEWLY STYLED TESTER WITH BUILT-ON CLAMP CONNECTOR
Simple to use, no need to disconnect wires. You get accurate ampere reodings by simply clomping meter over the cable. Color coded scale reads 400-0-400 amps for storters, 60-0-60 amperes for generators. Rugged plastic case. Complete with instructions for its use.
No. 29A449. Wt. $1 / 2 \mathrm{lb}$.
Model 61. Net Each.
$\$ 2.95$


## 4-WAY EMERGENCY BLINKER SWITCH

Floshes both front parking lights ond both toil lights simultoneously. No need for flares or flashlight when cor is stolled or parked at roacside. Warns on-coming motorists of your position. Off-on slide switch, red indicator light mounted on $13 / 4 \times 21 / 4^{\prime \prime}$ aluminum panel. With wire and instructions. Quolity import. \$1 $\mathbf{N}$. 29A463. Each.


DAYLIGHT AUTO SAFETY RUNNING LIGHTS


Required in Some States as an Outstanding Safety Addition for Any Automobile Mounts at front of car. Automatically turns ing motorists and pedestrians. Provides proven safety advantages for daylight, dusk and night driving. Smartly designed with high impact shatterproof lens and 21 CP 12 V . lamp. With 8 ft . connecting lead and mig. hardware. $23 / 4$ " diameter. No. 29A446. Each
\$1.95

## Automotive Testers And Ignition Systems

## Acrotach TRANSISTORIZED TACHOMETER

EASY TO READ $31 / 2$

DIA. DIAL

PRECISION TACHOMETER FOR CAR, TRUCK OR MARINE ENGINES, 6 OR 8 CYLINDER 12-VOLT NEGATIVE GROUND

- Works with conventional ond tronsistor ignition systems. Does not offect their performonce.
- Hondsome styling-precision built.
- Illuminated dial. Universal mounting
- Adjustable set-pointer. Zener stabilized.
- Complefely self-contolined.

Accurarely indicotes engine speed, reods 0 to 8,000 RPM. Reference pointer can be set for correct shifting speed, safe RPM or best gas mileage point. Simple to install, complete with all necessary mounting hordware. Mounts above or below dash on steering column, in ponel or control console. Swivel base, permits adjusting to correct viewing angle. $31 / 2^{\prime \prime}$ dia, $\times 23 / 4$ deep. Wt. $21 / 2$ lbs. Complete with simple installotion instruc=
tions ond connecting cable
No. 35 B 311 . Eoch................................

Keep your car tuned to peak performance and maximum gasoline mileage SAVE MONEY!
DWELL TACHOMETER THE MOST
COMPLETE UNT
EYER OFFRE
AT THS
LOW PRICE

TUNE UP ELEGTRONICALEY ANY MAKE CAR 4, 6 OR 8 CYLINDER-6 OR 12 VOLT

- Accurate Instrument Co. Model BT1 62 complete with
everything, ready-to-use.

- Giant $61 / 2^{\prime \prime}$ meter for accurate readings. Easily seen from any position while moking engine adjustments.
- Three Dwell angle ranges 0-45, 0-60 and $0-90^{\circ}$. Covers all requirements of any $4-6$ or 8 cylinder cars of foreign or do-4-6 or
mestic make.
Dual Tachometer ranges, 0 to 1000 and $0-5000$ RPM. Provides engine speed indicotion needed for carburetor, automotie cotion needed for carburetor, automatic transmission and other adjustments re-

Latest design, incorporating modern circuitry with huge meter. Campletely self contained. Requires no outside bottery connection. Simple to operate, has only three switches, plainly morked for selecting type of test, with insulated clip type connecting leads. High impact molded case with unbreakoble plastic meter face. Size $7 \times 71 / 2 \times 5$ ibs. 35A463. Model BT162. Net Ea


Improves engine performance-reduces down time-easy cold weather starts -smoother performance of all engine speeds.
Acrofire 900 . Has heavy duty primary reloy which connects Acrofire to cor battery, no need to rewire or olter original lgnition switch circult. This eliminates the most difficult part of instolling many transistor ignition systems. Has plug and receptacle connectlons for quick change-over to conventional system. Tune-up can be done on conventional system with ovailoble test equipment and then switched over. Also provides the sofety of two ignition systems. Acrofire system includes the fork. instructions and diograms outline simple instollotion
 No. 35899. Net Each

## RADATRON AUTO GAUGES




Replace indicator lights with precision gauges for amps, oil pressure ana woter temperature. Beautiful chrome under dash die cast mountings. Each kit complete with all necessary fittings and connectors.
(1) Trio Set Model 5043. Illuminated. Consists of $0-80 \mathrm{lb}$. oil pressure gauge, chrome panel plus all connectors and fittings for installation. No. 29B370. Complete Trio Kit Model 5043.
$\$ 14.95$
(2) Dual Madel 4053. Hlluminated. Populor dual set consisting of $0-80 \mathrm{lb}$. oil pressure gauge, 60-0-60 ammeter, die cast chrome panel and all connectors No. 29B372. Complete Dual Kit Mo
(3) Single Units - Illuminated

Water Temperature Gauge. Electric 150 to $250^{\circ}$ F. With Mounting.
No. 29B373. Model 2353 Camplete Kit
$\$ 8.95$
Oll Pressure Gauge. $0-80 \mathrm{lb}$. With mounting.
No. 29B376. Model 2153 Complete Kit.
Ammeter Gauge. 60-0-60. With Mounting
No. 29B382. Model 2253 Complete Kit

NEW DELTA MARK TEN
TRANSISTORIZED
IGNITION SYSTEM

$$
\$ 9995
$$

- increases acceleration and general per-- FORMANCE. INCREASE IN GASOLINE MILEAGE. - SPARK PLÚGS LAST 3 TO 10 TIMES LONGER. - ELIMINATES IGNITION TUNE-UPS. - INSTANT STARTS IN ALL WEATHER.
- INSTALLS IN ONLY 10 MINUTES IN CAR, BOAT OR TRUCK.

FOR ALL 12 VOLT NEGATIVE GROUND ENGINES
OPERATE
CAR,
BOAT,
TRUCK
MORE
EFFICIENTLY Incorporates the acknowledged advantages of capacitive discharge with those of solid state electranics. Mare complete combustion process gives you greater mileage while actually keeping your engine cleaner. Even though the Mork Ten generates 3 to 4 times more energy, your spark plugs lost 3 to 10 times longer Not affected by extremes of temperature, oltitude, or humidity. Extremely adaptable to competition cors and boats. input current-1 -5 amps depending on engine RPM. Output voltage- 400 volt discharge pulse. Instolls in less than addition of directly to a standard ignition system with no rewiring addition of ports. Shpg. wt. 4 lbs.
No. 29A462. Each
$\$ 39.95$
SUPER ACTROTACH TACHOMETER


## - BEAUTIFUL

## - ACCURATE a STABLE

$250^{\circ}$ wide sweep scale. Beautiful all chrome case, 3 color dial and Do-Gio orange needle and pointer. Indirect illuminotion. One-piece universal mounting. Adjustable set pointer.
Transistorized circuit. Works on any 6 or 12 volt system, 6 or 8 cylinder, posltive or negative ground. Zener stablized. Magnetic shielded. Calibratad diameter, $3^{\prime \prime}$ deep. Wt. 3 lbs.
No. 35C98. Net Each
$\$ 27.95$

## Panel Meters


(1) 3 INCH RECTANGULAR MODELS 27, 57, 37, 47. Bright finished black hole. Accurocy within $2 \%$. Scale length $2{ }^{9}{ }^{9}{ }^{\circ}$. . DC meters use modified $D^{\prime} A r s o n v a l$ movement. AC ore ironvane type.
(2) MODERN "WIDE-VUE" $31 / 2$ " METER MODELS 1327, 1357 with 3.14 " scale length. Has one piece molded wrap oround cover of highest quality clear plastic, case color durable black. Will add beauty and modern styling wherever used. All DC movements are self shielded core magnet movement eliminating calibrotion problems in metal panels or in mognetic fields. $\because 0-25$ and 50 microommeters excepted. AC meters are moving vane type. Mounts in $23 / 4^{\prime \prime}$ hole.
(3) $41 / 2^{\prime \prime}$ RECTANGULAR MODEL 29 and 59. Large, accurate, open face instruments with long easy-to-read scales. Black bakelite base, 471 " $W$, $4 \frac{d^{3}}{} \mathrm{H}$. Mounts in round hole. Body diameter $23 / 4^{\prime \prime}$. Scale length 3 登"". OUANT
QUANTITY PRICES: 10 to 24 deduct $10 \%$ from "Each" price; 25 up
deduct $15 \%$ from "Each" price.

| Range MA | Model Stock No. No. |  | Net Each | Model No. | Stock No. | Net Each |  | del Stock No. | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-1 | 27 | 2941288 | \$14.10 | 1327 | 29A1025 | \$14.85 | 29 | 2941333 | \$15.45 |
| 0-5 | 27 | 29A1289 | 14.10 | 1327 | 2941026 | 14.85 | 29 | 294133 | \$15.45 |
| 0-10 | 27 | 29A1326 | 14.10 | 1327 | 29A1027 | 14.85 | 29 | 2941334 | 15.45 |
| 0-15 | 27 | 29A1327 | 14.10 | 1327 | 29A1041 | 14.85 |  |  |  |
| 0-50 | 27 | 29A1328 | 14.70 | 1327 | 2941029 | 15.30 | 29 | 29A1102 | 16.35 |
| 0-100 | 27 | 29A1291 | 14.70 | 1327 | 29A1030 | 15.30 |  |  |  |
| 0-150 | 27 | 29A1329 | 14.70 | 1327 | 29A1031 | 15.30 |  |  |  |
| 0-300 | 27 | 2941293 | 14.70 | 1327 | 2941034 | 15.30 |  |  |  |
| 0-500 | 27 | 2941294 | 14.70 | 1327 | 29A1035 | 15.30 | 29 | 2941337 | 16.35 |


| UA | M | el Stk. No. | Eoch | Model | Stk. No. | Each | Model Stk. No. |  | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-25 | 27 | 29A1274 | \$22.65 | , | 29A1036 | \$22.20 | 29 | 29A1338 | \$25.00 |
|  | 27 | $29 A 1275$ | 19.35 | 132 | 2941037 | 18.90 | 29 | 29A1339 | 20.85 |
| $0-100$ | 27 | 2941276 | 17.10 | 1327 | 29A1038 | 17.25 | 29 | 29A1358 | 19.05 |
| 0-200 | 27 | 2941277 | 15.45 | 1327 | 29A1039 | 15.75 | 29 | 29A1359 | 7.10 |
| $0-500$ | 27 | 2941322 |  | 1327 | 29A1040 | 15.45 | 29 | 29A1340 | . 35 |
| 00-0-5 | 27 | 29A1103 |  | 327 | 2941111 | 15 | 9 | 2941104 | 5.60 |
| DC AMMETERS |  |  |  |  |  |  |  |  |  |
| Amps | Model Stk. No. |  | Each | Model | Stk. No. | Eoch | Model Stk. No. |  | Each |
| O-1 | 27 | 29A1278 | \$14.70 | 1327 | 29A1001 | \$15.15 | 29 | 29A1341 | \$16.20 |
| 0-3 | 27 | 2941323 | 14.70 | 1327 | 29A1002 | 15.15 |  | 294341 |  |
| 0-5 | 27 | 2941324 | 14.70 | 1327 | 29A1003 | 15.15 | 29 | 29A1342 | 16.20 |
| 0-10 | 27 | 2941279 | 14.70 | 1327 | 29A1004 | 15.15 |  |  |  |
| 0-25 | 27 | 29A1280 | 14.70 | 1327 | 29A1005 | 15.15 | 29 | 29A1343 | $\begin{aligned} & 16.20 \\ & 16.20 \end{aligned}$ |
| 0-50 | 27 | 29A1281 | 14.70 | 1327 | 29A1006 | 15.15 |  | 29A1365 |  |
| 50-0-50 | 27 | $29 A 1325$ |  |  |  |  |  | A.365 |  |
| DC VOLTMETERS (1000 OPV; 500 volts and up 2000 OPV) |  |  |  |  |  |  |  |  |  |
| Range V. Model Stk. No. Each |  |  |  | Model | Stk. No. | Each | Model Stk. No. |  | Each |
| 0-3 | 27 | 29A1310 | \$14.85 |  |  |  |  |  |  |
| 0 | 27 | 29A1311 | 14.85 | 1327 | 2941095 | \$15.75 |  |  |  |
| 0-10 | 27 | $29 A 1298$ | 14.85 | 1327 | 29A1007 | 15.75 | 29 | 29A1020 | \$16.35 |
| 0-25 | 27 | 2941312 | 14.85 | 1327 | 29A1008 | 15.75 | 29 | 29A1021 | 16.35 |
|  | 27 | 29A1299 | 14.85 | 1327 | 2941009 | 15.75 | 29 | $29 A 1022$ | 16.35 |
|  | 27 | $29 A 1313$ $29 A 1300$ | 14.85 14.85 | 1327 | 29A1010 | 15.75 | 29 | 2941023 | 16.35 |
| 0-300 | 27 | $29 A 1300$ $29 A 1301$ | 14.85 | 1327 1327 | 2941011 | 15.75 | 29 | 29A1345 | 16.35 |
| 0-500 | 27 | 29A1314 | 15.60 | 1327 | 2941096 | 16.50 | 29 | $29 A 134$ $29 A 134$ |  |
| $0-2000$ | 27 | 29A1303 | 20.10 |  | 9 | , | 29 | 29 A1364 | 21.90 |
| 0.5000 | 27 | 29A1024 | 21.30 |  |  |  | 29 | 29 A1350 | 23.10 |


| 0-1.5 | 157 | 29A1315 | \$13.80 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $0-5$ | 57 | 29A1316 | 13.801357 | 2981067 | \$13.95 |  |  |  |
| 0-10 | 57 | 29A1317 | 13.801357 | 29A1013 | 13.95 |  |  |  |
| 0-15 | 57 | 2941271 | 13.801357 | 29B1068 | 13.95 | 59 | 29A135i | \$15.60 |
| 0-25 | 57 | 29A1318 | 14.10 . |  |  |  |  |  |
| 0-100 | 57 | 29A1320 | 15.30\|1357 | 2981071 | 15.15 |  |  |  |
| 0-150 | 57 | 29A1272 | 15.151357 | 2941014 | 15.45 | 59 | 29A1352 | 16.35 |
| 0-300 | 57 | 2941273 | 15.15!1357 | 2941015 | 15.45 | $59$ | 2941353 | 16.35 |


| AC AMMETER |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Range | Model Stk. No. |  | Each | Model | Stk. No. | Each |  | N | Each |
| O-1 A. | 57 | 29A1282 | \$13.50 | 1357 | 29A1016 | \$13.80 | 59 | 2941354 | \$15.90 |
| 0-3 A. | 57 | 29A1283 | 13.50 | 1357 | 29A1098 | 13.80 |  | 29435 | \$15.90 |
| O-5 A. | 57 | 29A1284 | 13.50 | 1357 | 29A1017 | 13.80 | 59 | 29A1355 | 15.90 |
| $0-10 \mathrm{~A}$. | 57 | 2941285 | 13.50 | 1357 | 29A1099 | 13.80 | 59 | 29A1356 | 15.90 |
| 0-25 A. | 57 | 29A1286 | 13.80 | 1357 | $29 A 1018$ | 14.25 |  | 29A1360 | 16.50 |
| 0-50 A. | 57 | 29A1287 | 13.80 | 357 | 29A1019 | 14.25 |  | 29A1357 | 16.50 |

## (1) MODEL 57 AC MILLIAMMETERS (1) MODEL 37 R.F. AMMETERS  <br> $\begin{array}{rlrrrlll}29 A 1295 & 0-15 & 875 & \mathbf{S 1 3 . 5 0} & 29 A 1305 & 0-1.5 & \text { Internal } \\ 29 A 1296 & 0-100 & 20 & 13.50 & 29 A 1306 & 0-3 & \text { internal } & 16.50\end{array}$

(2) NEN SIMPSON TAUT BAND METERS

Tout band movement offers increased reliability, higher sensitivity, lower resistance and greater ruggedness
No. 2981265 . Model 1327T. $31 / 2$ Inch 0-10 Micioamp DC. Net Ea. . . . $\$ 29.70$ No. 2981267 . Model 1327T. $31 / 2$ Inch 0-50 Microomp DC. Net Eo...... $\$ 20.55$
No. 2981269 . Model 1327T. $31 / 2$ Inch $0-100$ Microamp DC. Net Eo.. . . . $\$ 18.90$

(1) Type 327 T and 3375 conventional black bakelite square flush mounting. Mounts in round $23 / 4^{\prime \prime}$ hole. Cose front $3 \times 3^{\prime \prime}$
Triplett New " $G$ " Series Meters. A modern design that offers greater flexibility and interchangeability
The Model "G" may be mounted two different ways. Conventional flush mount ing illustrated in fig. (2) or mounted behind the panel using the bezel fig. (3) for a modern picture window appearance. Also feotures Triplett's self-shielded bar ring magnet and one-piece die-cast frame. $21 / 2^{\prime \prime}$ meters have $2.48^{\prime \prime}$ scale length; $31 / 2^{\prime \prime}-3.16^{\prime \prime}$ scale length.


NEW SIMPSON WIDE-VUE $11 / 2$ 8 $21 / 2-1 N$ METERS Model $1212 C 11 / 2^{\prime \prime}$ Type has scale length of 1.5 inches for
easy readings. Mounts in $11 / 2^{\prime \prime}$ round hole. Foce, overall easy reodings.
size $13 / 4$ " square.
Model $1227 \mathrm{C} \quad 21 / 2^{\prime \prime}$ Type has scale length of 2.5 inches.
Mounts in $2.17^{\prime \prime}$ dia. hole. Face, overall size $21 / 2^{\prime \prime}$ square.


## DC GALVANOMETERS-SELF SHIELDING $31 / 2 \mathrm{IN}$.

 $\begin{array}{llllll}2981203 & 1327 & 31 / 2 & 50-0-50 & 75-0-75 & 18.80\end{array}$

## SIMPSON VOLUME LEVEL INDICATORS

$11 / 2$ and $31 / 2^{\prime \prime} \mathrm{VU}$ Meters. Self shielding meter movement, reference level 1 milliwatt, 600 ohm line. Both hove "A" scale for monitoring wire lines.


## Shurite \& JBT Panel Meters, Amprobe Testers

LOW COST SHURITE PANEL METERS


MODEL 850

- Aftroctive new design.
- For sturdy dependoble service.
- Wide selection of ranges.

Calibrated for non-magnetic panels. Accurate within $5 \%$. White, metal scale, block calibrations. DC meters polarized-vane solenoid type; AC meters double vane repulsion type, round hole. Extend $11_{5}^{7}{ }^{\prime \prime \prime}$ behind panel


Model 850 - Clear Plostic Cose. Case Model 950 - Black front $2 \mathrm{y}^{\prime \prime} \mathrm{W}$, $2{ }^{\text {s }}$ " H . DC MICROAMMETER-Clear Plastic DC MICROAMMETER-Block Metal
Range Stk. No. Mig. No. Each
$\begin{array}{llll}0-500 & 19 B 240 & 8902 & \$ 4.30\end{array}$
DC MILLIAMMETER-Clear Plastic

| 1\% | 198300 | 8300 Z | \$4.15 |
| :---: | :---: | :---: | :---: |
| 0-3* | 194274 | 83322 | 4.15 |
| 0-5 | $19 \mathrm{B3} 1$ | 8302 | 3.00 |
| $0-10$ | 198302 | 8303 | 2.75 |
| 0-15 | 198304 | 8304 | 2.55 |
| $0-25$ | 198305 | 8305 | 2.55 |
| $0-50$ | 198306 | 8306 | 2.5 |
| 0-100 | 198307 | 8307 | 2.5 |
| 0-150 | 198308 | 8308 | 2.55 |
| 0-200 | 198309 | 8309 | 2.55 |
| 0-300 | 198310 | 8310 | 2.55 |
| 0-500 | 198311 | 8312 | 55 |
| os | adjust. |  |  |



## NEW SHURITE EDGEWISE METERS



Model 350 presents the "New Look" in low cost panel meters. Hos cleor polystyrene meter front with contrasting block escutcheon. Mokes possible many new designs and panel layouts. Escutcheon size $23 / /^{\prime \prime}$ long, $7 / 8^{\prime \prime \prime}$ high. Meter extends $13 / 4^{\prime \prime}$ behind panel. Rear depth 1 虎", width $15 / 8^{" \text { ". Mounts }}$ in $1211^{\prime \prime} \times 1{ }^{3}{ }^{3}{ }^{\prime \prime}$ eutout with two serews from the
front. Movenent specifications some os Model 850 above.

DC MILLIAMPS

| Range | Stk. No. | Mfg. No. | Each | Range | Stk. No. | Mfg. No. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 198223 | 3104 | 53.35 | 0-1 | 19B225 | 3300 | \$3.70 |
| $0-10$ | 194442 | 3107 | 3.35 | 0-5 | $19 \mathrm{B226}$ | 3302 | 3.45 |
| 0-15 | 19A443 | 3108 | 3.35 | $0-10$ | 194446 | 3303 |  |
|  | AC | VOLTS |  | 0-25 | 19B231 | 3305 | 35 |
| 0.15 | 19B480 | 3404 | 53.45 | 0-50 | 194450 | 3306 | 5 |
| $0-150$ | 19 A 476 | 3406 | 4.10 | 0-100 | 194475 | 3307 | 5 |
|  | DC | AMPS |  | 0-200 | 19 B 232 | 3309 | 3.35 |
| 0-3 | 198224 | AMP202 | 53.35 | $0-300$ | 198233 | 3310 | 3.35 |
| 0.5 | 19 A 445 | 3203 | 3.35 | 0-500 | 19 B 234 | 3312 | 3.35 |
| $0-10$ | 19B481 | 3205 | 3.45 |  | AC | AMPS |  |
| 10-0-10 | 19B482 | 3213 | 3.65 | 0-5 | $19 \mathrm{B483}$ | 3503 | 3.45 |

EDGEWISE $S$ METER NO. 3333. EDGEWISE VU METER. To meosure Measures relative signal strength. volume in audio transmission cir-
Ranges $0-40 \mathrm{db}$. accuracy $+5 \%$. cuits. Range -20 to +3 VU . RectiSame as Model 350. Has suggested fier type. Pointer at -20 . Type No. circuit.
No. 19B394. Net Eech. . . . $\$ 3.45$ No. 19B239. Net Each. . . . . S5.50


Snap around type Volt-Ammeter. Close the probe jaws around conductor of the circuit under test and read current directly on meter scale. Valtage checks are made by the use af safety type leads. It is possible to safely and cacurately determine load condition of equipment without shut down.

## (1) POPULAR PRICED AMPROBE JUNIOR

Measures current and voltage is small in size, convenient to carry and use. Measures $21 / 2 \times 43 / 4 \times 1^{\prime \prime}$. Wt. 11 az . Choice of two models, both complete with Measures
35A307. Model Y525. For 0-25 Amps. AC, 0-150-600 Valts AC. 35A308. Model Y500. For O-100 Amps AC, $0-150-600$ Volts AC YOUR CHOICE EACH
$\$ 22.50$
(8) AMPROBE JR. TESTMASTER KIT IN LEATHER CASE

Complete onmmeter, valtmeter, ammeter. The only precision instrument thio measures voltage, omperage and resistance instantly within $3 \%$ accuracy. Ohm meter measures resistance with plug-in battery attachment for test leads. Com plete Kit includes Amprobe Jr., Energizer, Onmmeter Probe, safety other cose.

## TM-YO-500. 0-100 Amps. Net Each

$\$ 37.85$

## (3) AMPROBES MOST POPULAR MODEL RS-3

Does 3 jobs, measures omperes, volts ond anms resistonce. AC omp. range $0-5 / 15 / 40 / 100 / 300$. AC volts $0-150 / 300 / 600$. Ohms scole for measuring resistances, tracing circuits and checking for opens. Reads 25 ohms center scale, 2000 ohms full scole. Most complete tester ovailoble. With leather cors. No. 354581 . Wt. 12 oz . Net Each
$\$ 57.50$
(4) Model A45L Energizer divides Amprobe Meter reading by 5 X and 10 X for checking low current equipment. Also divides line cord so Amprobe may be used for current or voltage checks without hoving to split line cord. weatherproof pouch. Wt. 3 oz. 35A310. Model A45L. Each

## JBT ELAPSED TIME METER

Indicates accumulated operating time of $A C$ electrical and electronic equipment. Registers $1 / 10$ hour steps to $9,999.9$ hours total, then resets to zero automotically, in round $31 / 2^{\prime \prime}$ bokelite cose: mounts in $23 / 4^{\circ}$ hole. For $110-130 \mathrm{~V}$. 0 cy. AC. Shipg. wt. $11 / 4$ lbs.
$\$ 16.75$

## NEW WIDE-NUMERAL <br> ELAPSED TIME METER

Model 31-EXW. Easy to read wide numerals register to $99,999.9$ hours, white on block with tenths in block on white. Resets to zero outomatically. Black molded cose $31 / 2^{\prime \prime}$. mounts in $23 / 4^{\prime \prime}$ hole. For $110-125$ volts 60 cycle

## No. 29B1332. Net Each

## JBT FREQUENCY METERS

Model 34FX. 9 Reeds 60 cycles. Covers range of frequency from 56 to 64 cycles. Accuracy $\pm$. $2 \%$. 100 $31 / 2^{\prime \prime}$ molded case, mounts in $23 / 4^{\prime \prime}$ hole. No. 29A1297. Model 34FX. Each.
Model 31FX 5 Reeds 58-62 cycles 130 volts occurocy $\pm .3 \%$ for meosuring frequency of power source. Molded No. 29Al 307 . Model 31 FX. Eoch.

## SHURITE POCKET METERS

## No. 4128 BATTERY TESTER. Has two scoles, $0-50$ volts

 finished.No. 16A734. Net Each
NO. 4123 FOR ALL RADIO AND HEARING AID BATTERIES from 1.5 to 45 volts. Scale has green zones to indicate satisfactory condition of batteries in these voltages aperating $22.5,30,33,45$. Tests are made under normal operating lood for


NO. 4152 TRANSISTOR BATTERY TESTER. $0-2-10$ voltage scale. For the new Mercury cells and transistor batteries. Indicates battery strength with No. 16B718. Net Each

## CONANT INSTRUMENT RECTIFIERS



## Triplett, Hickok \& Weston Instruments



MODEL 310 POCKET SIZE V.O.M.A.
Only $23 / 4^{\prime \prime} \times 41 / 4^{\prime \prime} \times 1 /{ }^{18}$. ${ }^{2}$ Plast leather case with belt clip (listed below). Complete miniature 20,000 ohm ${ }_{5}{ }^{\text {per }} \mathrm{K}$ volt meter, 5 SC volt ronges $0-1200$. AC D ranges $0-1200$ volts of 5 K ohms/volt. Microamperes $0-600$, DC mils 3 ronges $0-600$, ohms 0 to 20 test leads and removable negotive ar common test prod ot meter end. Complete with test leods and bottery. Wt. 14 az No. 354352. Net Eoch
$\$ 40.00$ No. 35A353. Model 369 Corrying Cose for 310 Meter. Eoch

## TRIPLETT CLAMP-ON ADAPTER

Model 10 adapts Model 310 obove for checking amps without breaking circuir or interrupting work No, 35 Al00, Complete reody to use. Eoch Model 101 provides line separation and in

## MODEL 100 COMPLETE CLAMP-ON SET

Consists of 310 Multimeter, No. 10 Clomp-On Adoptor, No. 101 Line Sep arotor, No. 379 Leother Corrying Cose ond No. 311 Leods. Checks AC Current without breaking circuit. Measures AC
ond ohms. Save $\$ 3.50$ over ports bought individually. No. 35B64. Complete Model 100 Set
$\$ 70.00$

## 630 ALL-TIME FAVORITE MULTIMETER

Proven dependobility over a long period of time hos mode this instrumen the all-time fovorite. 20,000 ohm per volt sensitivity $D C$ and 5000 ohms $A C$. accuracy $2 \%$ DC and $3 \%$ AC voltoge ranges $0-3-12-60-300-1200-6000$ Onms $1-1000-10,000$. Megs $0-1-100$. DC microomps $0-60$. DC milliomps O- $1.2-12-$
 No. 35A170. Model 630. Complete with leads. Net Each.
$\$ 55.00$
FULL-VIEW MODEL 630PL V.O.M.A.
20,000 O.P.V. DC-5,000 O.P.V. AC. Features DC polarity reversing switch, instant vision, wider spreod scoles, with new streomlined plostic front meter AC frea. response 5 to 5000000 cos. Single selector switch hos $21 /{ }^{\prime \prime \prime}$ recessed knob flush with panel. Precision resistors. DC Volts Ranges: $0-2.5-10-50-1$
$250-1000-5000$. Ohms Ranges: $0-1000$, 10000 ohms; $0-1-100$ megohms $250-1000-5000$. Ohms Ranges: $0-1000,10,000$ ohms; $0-1-100$ megohms.
AC Volts Ranges: $0-3-10-50-250-1000-5000$. DC Current Ranges: Microamp: 0-100. Milliomp: 0-10-100-1000 MA. Output: Condenser in series
 No. 35 B67. Model 630PL V.O.M.A. Net

SUPER-PRECISION MODEL G30APL TYPE 3 Model 630APL is identical to 630PL obove except hos 1 . mirrored scale. Has suspension type meter, overload protected.
$\$ 65.00$

## OVERLOAD PROTECTED 630PLK

## No expensive repair and down-time because of accidentol miss-use or over

 for other specs. Great for schools, labs and mointenance shops. No. 35846. Model 630PLK. Net Each$\$ 85.00$
NEW SUPER-SENSITIVE MODEL 630-NS
NEW. 200,000 ohms per volt DC and 20,000 ohms per volt AC. This tre mendous increase in sensitivity made possible by suspension meter movement with no pivots, bearings or hoir springs. It is extremely rugged with good repeatobility. 62 temperature ond frequency compensated ronges. AC and DC to 1200 volts in 14 ronges, -20 to +77 DB in 12 ranges. $D C$ microamp DC milliamps and DC amps up to 12 amps in 10 ranges. Ohms
ranges to 100 meaohm in 6 ranges. Case size $341 \times 51 / 2 \times 71,2^{\prime \prime}$ with stroo ronges to 100 megohm in 6 ranges. Case size $312 \times 5 \frac{1}{2} \times 7 /{ }^{2}$ with strap
hondle. Weight 4 lbs . No. 35A465. Model 630 -Ns. Complete. Reody to Use. Each.
$\$ 100.00$

## BLACK LEATHER CARRYING CASES

## No. 639-0s for all 630 and 631 series Tpipleft testers. Permits use of instrument

 in cose. Protects and eushions. Has built in stand No. 35B68. Net Each
## TRIPLETT G/P SERIES INSTRUMENTS

IDEAL FOR SCHOOLS, LABS, SHOPS

- Overload protected. Unbreakable cases. Uses $31 / 2$ inch 320 series meter. 5 -way binding posts - Rnife edge pointers. Highest Triplett quality. A practical design for shop, production line, school instruction and professional lab
$x^{4 \prime} \mathrm{~W}, \mathrm{x}^{\prime 2} 1 / 2^{\prime \prime} \mathrm{D}$. $\mathrm{Wt} .11 / 2 \mathrm{lbs}$.

| Stk. No. | Range |
| :--- | :--- |
| 358523 | $0-1-5-25$ |
| 358527 | $0-1-10-100$ |
| 358528 | $0-1-5-25$ |
| 358529 | $0-30-120$ |

Description Each DC Volts $\quad \$ 29.30$ DC Amps $\quad \mathbf{2 8 . 9 0}$ AC Volts $G 60$ AC Milliamps
$35 C 53$

TRIPLETT MODEL 631 COMBINATION VOM \& VTVM 34 ranges. VOM sensitivity 20,000 ohms per volt DC, 5000 for AC and VTVM meg ohms. $5^{1 / 2}$ clear plastic faced meter with expanded scales. VOM Ronges
bath $D C$ ond $A C$ volts $0-3-12-60-300-1200$. DC Microamperes: $0-60 . \mathrm{DC}$ Mils both DC ond AC volts 0-3-12-60-300-1200; DC Microamperes: 0-60; DC Mils 0-1.2-12-120-1200. DC Amps 0-12; DB -20 to +63 ; Ohms $0-1500-15 \mathrm{~K}$ and operated. Size $313 \times 51 / 2 \times 71 / 2^{\prime \prime}$. Wt. 4 lbs . 35A313. Model 631. Complete, Reody to Use
$\$ 75.00$

## TRIPLETT MODEL 666-R VOMA POCKET-LAB

Hondy, rugged "Pocket Lob" with 3 -inch 200 Micro-amp. Meter Single recessed, molded selector switch. Ranges: AC-DC Volts: 0-10-50-250Resistance: $0-3000-300,000$ Current: $0-10-100 \mathrm{ma}, 0-1$ amp $(250 \mathrm{mv})$ Resistonce: 0-3000-300,000 ohms; $0-3 \mathrm{Meg}$. Compensated Ohmmeter circuit.
Block molded cose, handy pocket size 3, No. 35 Al03. Wt 2 lbs. Completet size 3 朝 $\times 57 / 8 \times 2$ 名
$\$ 40.00$

## HICKOK FAMOUS TESTERS

800A TUBE, TRANSISTOR \& DIODE TESTER

> TECHNICIANS BEST CHOICE


Feoturing Dynomic Mutual Conductance test of ALL types of receiving and television tubesgas tests, future life tests, with readings directly "Good-Bod" scale. Also with English reoding, diades. Has same circuit foatures as and diodes. Has same circuit features as other portoble instrument-at a soving in costl In sturdy removoble hinged lid case red leotherette covered. Size $163 / 4 \times 113 / 4 \times 7 \frac{1}{2} 2^{\prime \prime}$. Wt. 16 lbs . for 110 -130 $163 / 4$
Na. 35B179. Model 800A
Tube Tester. Net Each
\$219.95
MODEL 470A ELECTRONIC VOLT-OHMMETER


It is quick, accurate and simple to use. Advanced
Hickok designing provides all VTVM ranges on a large 7 inch meter with only two basic scoles. It simpllfies readability, reduces errors due to crowding. Features a single unlt probe ovoiding the clutter of multiple leads. Has 8 AC and DC voltage ranges: 5 to 1500 valts. 8 peak-to-peak $A C$ ronges: 1.4 to 4000 volts. 8 resistance range: $\times 1$ to $\times 10$ meg. Frequency
range 15 cps to 2.5 MC . Input impedance: $D C$ volts 17.7 megohm; $A C$ volts impedance: 17.7 megohm paralelled with 150 uufd. For 115 volts 60 cy . with leads.

$\$ 89.50$

Order Test Instruments Now-Pay as you use them. It is easy with B-A's Revolving Charge Plan. Sce back of order blank for details.

## WESTON TEST INSTRUMENTS WESTON MODEL 749 <br> AC CLAMP VOLT-AMMETER


> pocket

oocket size, easy to hondle highly dependable
Ideal for the electrician and serviceman. Black balt-ammeter. with shatterproof meter window. Safely insulated for 750 volts. 6 ampere ranges $0-6-15-30-60-150-300$ and 3 valtage ranges 0-150-300-600. All scales are easy ta read from ony angle. Accuracy $\pm 3 \%$ on $50-60$ cycle and $\pm 5 \%$ on 400 cycle for full scale value. Size $71 / 2^{\prime \prime}$ long. $3^{\prime \prime} \times 11^{\prime \prime}$. Wt. 14 oz . No. 35A128. Complete with Carrying Cose and Leods Net Each
No. 35 A129. Net Eoch
$\$ 51.50$


## WESTON 980 MARK II MULTIMETER

A highly sensitive instrument which maintoins extreme occations: 7 DC volt ronges to 4000 volts of 20.000 ohms per volt $2 \%$ accuracy; 6 AC volt ranges to 1600 volts at 1000 ohms per valt $3 \%$ accuracy; 4 DC milliamp ranges to 800 mils; 0 to 80 DC microamps; $0-8 \mathrm{DC}$ amps; 5 fused resistance ronges to 10 megohms. Simplified, single dial switching for all ranges. Black molded crock-proof case, engraved panel with white markings, 7 It $^{\prime \prime} \mathrm{H}, 61 / 4^{\prime \prime} \mathrm{W}, 3^{3}$ D. including knobs. Wt. 3 lbs.
No. 354561 . Net Each. .....

## RCA-B \& K-Simpson Testers

## RCA <br> PIONEER IN COLOR TV OFFERS THE FINEST INSTRUMENTS FOR COLOR TV SERVICING <br> 

WR64B COLOR-BAR/DOT/CROSSHATCH/GENERATOR Provides all essential color TV test patterns. Simple operation with only 3 controls. Crystal contraled, rock-steady patrerns, no jitrer or crawl. Hos ten bar alignment of $X$ and $Z$ demodulators. Also provides the crosshatch pattern and the dot pottern for covergence odjustments. Has shorting switches for Red, Blue the dot pattern for covergence adjustments. Has shorting switches
and Green. Size $131 / 2 \times 10 \times 8^{\prime \prime}$. Wt. $131 / 4 \mathrm{lbs}$. Complete with coble tion book. Shpg. wt. 16 lbs. No 35 B388. WR64B Ns.

## W091B 5-INCH SCOPE

Heavy duty precision scope especially suited for servicing both color and black and white TV receivers, monitors, broadcast equipment, TV distribution systems, Hi-Fi and communications systems. Essential for trouble-shooting"in chrominance circuits, observe color burst signals and in tracing and aligning. Response circuits, observe color burst signals and in tracing ond aligning. Response colibrated. Has Z-axis .nput, continuously adjustable sweep, provision for direct calibrated. Has Z-axis .nput, continuously adjustable sweep, provision for direct vertical plate connections. A 2 -stage sync. separator for easily checking
zontal and vertical sweep sync. Complete with low capacity probe and cable, ground cable, Green-Graph screen with instruction book. No. 35C378. Shpg. wt. 30 lbs. Net Each

## WR69A SWEEP GENERATOR

Especially suited for color TV alignment. Tops for visual allgnment of both TV and FM receivers. Has preset switch positions for all VHF TV channels, FM broadcast and TV video, chrominance and IF frequencies. Output on fundamental frequencies, no beat notes or harmonics ore used. Continuously adjustable sweep. Dual position attenuator for smooth control over 60 db range for TV and FM channels, 70 db range for IF ond video. Has voltage terminals for use with marker odder. IF/Video frequency continuously tunable from 50 KC to 50 MC in 6 ronges. Sweep frequency band width continuously adjustable from 50 KC to 20 MC on IF/Video and FM; 12 MC max. on TV channels. Has return trace blanking and adjustable 0 to -12 bias volts. Cabinet size $135 / 9 \times 10 \times 7{ }^{\prime \prime}$
Shog. wt 16 lbs . Shog. wt. 16 lbs.
$\$ 295.00$

## B \& K TEST INSTRUMENTS <br>  <br> High Speed Multiple Socket Tube Testers For Fast, Reliable Testing.

## MODEL 707 DYNA-QUICK TUBE TESTER

Dynamic mutual conductance tube tester. Obsolescense-proof. Tests all TV and radio tubes, nuvistors, new 10 -pin tubes, 12 -pin compactrons, European Hi-Fi tubes, voltoge regulótors and many industrial tube types.
It's fast, with professional occuracy. Tests each section for shorts, grid emission, leakage and gas. Makes life test. 7, 9 and 10 pin stroighteners. Complete tube reference chort in lid
Black leatherette covered case $161 / 8 \times 153 / 4 \times 5 \frac{1}{8 \prime \prime}$. Wt. $15 \frac{1}{2} \mathrm{lbs}$. Operates n.

## MODEL 606 TUBE TESTER

Compact, portable, low cost tester. Easy to carry and easy to use. Tests the newest tube types as well as all of the old commonly used types in TV and radio sets. Test Nuvistors, 10 and 12 pin Compactrons, Novars, voltage regulators, Thyratrons, European hi-fi and many industrial types Checks for all shorts, grid emission, leakage ond gas. Highly dependable results obtained by testing tubes under actual operoting conditions. For 117
 No. 35 B5 13. Net Each.
$\$ 79.95$

## B\&K MODEL 1076 TELEVISION ANALYST

Now With Keyed Rainbow Color Display Model 1076. Eliminates guesswork no oscilMoscope needed. Supplies test signal for each seporate stage, you watch results on TV set itself By point-to-point signal injection you
Can signal trace ony stage. By use of generoted test pattern you actually see the condiated test pattern you actually see the condi-switch-type tuner for chonnel selection. Negative bias supply, AGC Keying pulse and a high-level test signal to operate o picture tube direct.
Shpg. wt. 34 lbs. Supplied with standard test Cabinet size, $17 \times 10 \frac{1}{4} \times 10^{\prime \prime}$ Shpg. Wt. 34 lbs . Supplied with stattern slide pransporencies whe clear acetate and slide halder, all necessary cables and leads. Operates on $110-120$ volts 60 cycle AC. No. 35 A302. Complete Each
$\$ 329.95$

## SIMPSON QUALITY INSTRUMENTS



## MODEL 260-5 MULTIMETER

Better than ever. High sensitivity 120,000 o.p.v. DC volts: 5000 o.p.v. AC rolts). Provides $D C$ volts ranges of $0-250 \mathrm{MV}, 2.5,10,50,250,1000,5050$ volts, $A C$ volts ranges of $0-2.5,10,50,2501000,5000$; $A C$ volts with inter a 100500 MA . 10 Amps 4 RB res from -20 to +50 amps, 1,10 , 100,500 db; Resistance readings $1 / 5 \mathrm{Omm}$ to 20-Meg! 5" Meter. Frequency response With test leods, manuol and built in stand, $51 / 4 \times 31 / 8$. Wt. 5 lbs. 529 No. 35A60. Simpson Model 260-5. Net Each
52.95

NEW MODEL 260-5M-Comblnes all the features of the 260-5 described above, plus o mirrored scale ond knife edge pointer. It offers clearer read
ing at any ongle and good repeotability. No. 35B61. 260-5M Mirrored Scale Model. Net

Model 260-5RT in Roll Top Cose. Heavy molded bakelite cose with test lead space-bakelite roll cover protects instrument, roils up out-of-way of touch! Complete with test leads. Wt. 9 lbs
No. 35B5I. Net
$\$ 58.95$
New Protected Model 260-5P. Built-in meter protection makes this VCM "goof-proof". Ideal for students, apprentices, for explering unfamiliar equipment. Combined protection includes: reset bufton pops out to indicate overload, cannot reset circuits while averload is present. Protective circuit does not require massive overloods, all ranges protected except 1000 and 5000 volts $D C$ and $A C, 10$ amps DC. Same ranges etc. as $260-5$ No. 35C24. Model 260-5P. Net Eech
$\$ 79.95$
Model 261. High accuracy version of $260-5$. Has mirrored scale, special cali brotion scale for increased accuracy, burn-out protected, input protected by No. 35850. Model 261. Net Eoch.
$\$ 62.95$
No. $354264,25,000$ Volt DC Probe for 26Q Models. Each
\$11.50

## MODEL 270-3 MULTIMETER

The Extra Quality Laboratory Instrument featuring: Greater accuracy. - Now uses self-shleld hi-flux meter movement, spring bocked jewels, special calibrotion | circuit for greater accuracy, overload protected. |
| :--- | :--- |
| 20,000 ohms occuracy |
| $1 / 4 \%$ full scale |
| act | 20,000 ohms per volt. AC accuracy $2 \%$ full scole 5,000 ohms per volt.

Mirrored scale. Knife-edge pointer. Ranges: 7 DC volts from 250 MV to 50 Mirrored scale. Knife-edge pointer. Ranges: ${ }^{7} \mathrm{DC}$ volts from 250 MV to 5000 volts. - 6 AC volts from 2.5 to 5000 volts. AC volts (output) 4 ronges
 to 10 amps in 6 ranges.
20 megohm in 3 ranges.
Black molded case $51 / 4 \times 7 \times 31 / \mathrm{a}^{\prime \prime}$. Wt. $51 / 2 \mathrm{lbs}$
No. 35A41. Model 270-3. Net Eoch
367.95

No. 35A165. Carrying Cose, for Model 260-270. Wt. i ib. Net.......s9.95
NEW SIMPSON 312 VTVM
40\% less circuit looding than most VTVM's. Input resistance is 16 meg , not the usual 11 . Large easy cuitry. Ronges. DC ${ }^{2}$ volts $0-0.5,1.5,5,15,50,150$, 500 , i500. AC volts (RMS I meg input) $0-1.5$, 5 , 15, 50,150 500, 1500. AC volts (peak-to-peak) $0-4,14,40,140,400,1400,4000$. Resistance ronges $\mathrm{R} \times 1$, $\mathrm{R} \times 10$, $\mathrm{RX10}, \mathrm{RXIK}, \mathrm{RX1OK}$ RX100K RXIM. Freq. resp. $\pm 3 \%$, 15 cps. to 3 Mc cps . on all $A C$ ronges through 150 volts. Accuracy: $D C$ and $A C \pm 3 \%$ full scale, resistance $\pm 3 \%$ of ave $105 / 125$ V. $50 / 60 \mathrm{cps}$. With 3
Size $73 / 4 \times 63 / 4 \times 33 / 4^{\prime \prime}$. Wt. $43 / 4 \mathrm{lbs}$. Size $73 / 4 \times 63 / 4 \times 33 / 4$. Wt. $43 / 4 \mathrm{lbs}$. Each
No. 35 C 27 . Model 312 VTVM. Each No. 35D34. RF Probe \#0152
 No. 35B37. High Voltage Probe \#oiss.... $\$ 11.75$

## NEW B\&K MODEL 1245 COLOR GENERATOR

Transistorized--small size. For quick, eosy ad
justment of convergence, demodulotor alignment,
color sync, color fit, horizontal and vertical size, linearity and overscon. Provides actual TV station type signal. Highly stoble crystol controlled keyed rainbow color disploy, dot pottern, crosshatch, horizontal and vertical lines. Instont warm-up. built-in color gun killer and chroma level control. Size $243^{\prime \prime}$ high, $87 / 8^{\prime \prime}$ wide, $81 / 4^{\prime \prime}$ deep. Wt. 4 lbs No. 35B230. Complete ready to use



With dual purpose Uni-Probe, a nalt turn of Probe tip selects $A C$ or $D C$ function. Laboratory precision, professional quality, new engineering design exceptionol stobility, $41 / 2$ inch meter, con't burr-out circuit, odiusts to zero
center, $1 \%$ multipliers. Meosures directly p-p voltages of complex and sine center, $1 \%$ multipliers. Mesures directly P-p voltages of complex and sine
wove. $0-4,14,42,420,14004200$ volts D-p. DC/RMS up to 1500 volts, $(30,000$ with high voltoge Probe). Resistonce 0.2 to 1000 Megs. in 7 ronges, with no skip. Calibration without removal from cabinet. One zero center for all ranges. Frsquency range to 3 MC (up to 250 MC with PRF Probe). Smortly styled gray cobinet, etched panel, controsting knobs. Size $81 / 2 \times 5 \times 5$; Wt. 7 lbs. For use on 117 V. 60 cycle AC. No. 35A281. Model $\mathbf{2 3 2 K}$-Build it Yourself Kit
$\$ 29.95$ No. 35A282. Model 23.2. Factory Wired and Tested. \$49.95


MODEL 249
$\square$


MODEL 249 DELUXE PEAK-TO-PEAK VTVM WITH EASY TO READ $71 / 2$ INCH METER
All functions ore the some os Model 232 described above except Modet 249 is equipped with o $71 / 1$ INCH METER with the odded convenience of easy-to-read large scoles to permit fost accurate readings. Ideal for bench or lobarotory use. Size $13 \times 81 / 2 \times \times 5^{\prime \prime}$ Wr. 9 lbs. No. 35A283. Model 249 K -Build it Yourself Kit $\$ 39.95$ No. 35A284. Model 249. Factory Wired and Tested $\$ 59.95$ HVP-2 High Voltoge Probe with 1090 meg. resistor 249. Extends range to 30,000 volts. Wt. I ib.
 ${ }_{214}$ HVP-2 High Voltoge Probe with 740 meg resistor. Use with $\mathbf{5 0 . 9 5}$ 214. Extends ronge to 30,000 volts. Wf. I Ib. Each
No. $\mathbf{3 5 A 2 8 6}$. Factory Wired. ready to use. Net Each
$\$ 6.95$

## MODEL 221 VTVM WITH $41 / 2$ INCH METER

The most popular and reliable VTVM with a great record of dependable performance. Uses a stable double triode balanced bridge circuit with $1 \%$ multiplier resistors. Meter adjusts to center zero for discriminator alignmelts, $0-5,10,100,500,1000$ lextended to 30000 with hich voltage volts,
probe listed abovel.
anms
0 input resistance 25 Megs on DC, 3 Megs on AL, trequency response 20 to $200,000 \mathrm{cps}$. 9 , ${ }^{7}$ " high $\times 6^{\prime \prime}$ wide $\times 5^{\prime \prime}$ deep. Wt. 10 lops. No. 35 B 17 . Model 221 K Build-It-Yourself Kit
$\$ 25.95$
No. 35A157. Model 221, Factor Wired ond Tested
$\$ 39.95$

## ACCESSORY PROBES FOR EICO VTVM'S

PTP11K Peak-to- Peak Probe for M
No. 35 A 285 . Kit Form. Wt. $1 / 2 \mathrm{lb}$.
Net Each

| Net Each |
| :--- |
| PRFIIK |

PRFIIK RF Probe for Models 232
No. $\mathbf{3 5 B 1 1 1}$. Kit Form. Accurate to 200 MC . Net Each
$\$ 4.95$

UP UNI-PROBE. Selector type replacement probe for $A C$ or $D C$ function some Os used on all Eico 232, 249 etc. VTVM testers.
$\$ 6.95$

## 1030 VARIABLE, REGULATED POWER SUPPLY



Featuring: Reguloted continuousiy variable DC volts 0.400 , continuous current of $0-200$ volts $100 \mathrm{MA}^{\circ}$, ot $200-400$ valts, 150 MA . Intermittent current of $0-200$
valts, 125 MA . Bios voltoge from $0-150$ volts, 2 MA . Bias voltoge from $0-150$ tion $4 \%$ or .5 volt for $\pm 10$ volt line
variation. Ripple, less than 3 MV RMS variation. Ripple, less than 3 MV RMS.
Also supplies 6.3 volts 3 omps. 6.3 volts $\begin{array}{lll}\text { Aiso supplies } 6.3 & \text { volts } 3 \text { omps. } 6.3 \text { volts } \\ \text { center topped } 3 \text { omps. } 12.3 \text { volts of } 3\end{array}$ amps, and 6.3 volts of 6 amps. Input 117 volts $\pm 10 \% \quad 50-60$ cycle, 160 watts. Has dual range 0-200, 0-400 voltmeter and 0-200 DC milliameter. $81 / 2^{\prime \prime} H_{\text {. }} 21 / 2^{\prime \prime} W_{\text {. }}$ $71 / 2^{\prime \prime}$ D. Wt. 25 lbs. Kit. Ea.... \$59.95
35 B $^{2} 59$. Model 1030. Kit. 35 B588. 1030 Factory Wired.
$\$ 99.95$

COMPLETE KIT EICO 460 5-INCH SCOPE $\$ 0195$ For color or Bleck \& whine Tv Service

- Ideal for industrial research, and maintenance work
- 5.MC bandwidth and DC amplifiers
- Surpasses in features and perform. ance 'Scopes selling for many times the kit price.
Outstanding Feotures: Will provide dis tinct 3.58 MC sync. burst and 3.58 MC oscillator signals in color TV receivers. - Band width $D C$ to 4.5 MC useable to tenuator both AC step compensated of tenuator, both $A C$ and $D C$ position. tivity. Built-in voltaae calihrotor - 6X horizontal expansion. Push-pul vertical amplifier throughout. Coth ode follower input both in $V$ and $H$ - Voltage regulated vertical amplifier - Automatic sync. limiter and amplifier - Intensity modulation, sawtooth output 60 cycle test signal. © 60 cycle variable phose hor. sweep. Uses SUPI CRT. Bezel will accommodate standord photo. grophic equipment. Weight, 26 lbs. Size $13 \times 81 / 2 \times 16^{\prime \prime}$
 Na. 35A336. Model 460. Factory Wired No. 35A336. Model 460. Factory Wired
and Tested. Net Eech..... $\$ 129.50$



## EICO MODEL 380 100\% TRUE NTSC COLOR GENERATOR

A precision crystal controlled rock stable generator enobling the operator to do an exact color checkout to NTSC standards for color television. Generates 1, R-Y signals. Has adjustable bar and demodulator adjustment, plus 7 standard color state saturated Color and White Dot-Bar Generator. Provides precisely shoped, completely standard signals for setting up and servicing color precisely shoped, nical and service data refer to a $100 \%$ fully saturated NTSC color signal which Model 380 supplies. Generates 11 color signals, dots, crosshatch horizontal which vertical lines. Every signal is precisely correct. 3 crystals control each basic frequency. High stability is further assured by use of solid-state design. Cabinetsize $81 / 2 \times 53 / 4 \times 63 / 8^{\prime \prime}$. Wt. 8 lbs . For 117 V . AC operation.
No. 35 B 14 . Foctory Wired......

Now Improved 369. Featuring post injection marker principle. For toster more occurate TV and FM alignment work. Circuit response is not offected the output will reproduce a clear workable scope poliminated by traps in set, Has purely electronic sweep circuit, independent of
Has purely electronic sweep circuit, independent of morker section. Five MC. All fundamental, funing with $6: 16$ to $40 \mathrm{MC} ; 32$ to $85 \mathrm{MC} ; 75$ to 216 Marker generator has four ronges covering 2 to 225 MC . Output $50^{\circ}$ ohms. (supplied with instrument) is used for o rapid marker check ond for TV sound alignment. $81 / 2 \times 121 / 2 \times 7 \prime$. Operotes on $105-125 \mathrm{~V}$. AC, 60 cy .50 Wotts. 358396 . Model 369. Wt. 16 lbs. Complete Kit.
$\$ 99.95$

Now Model 435 Scope exceptional performonce, compoct size. Complete TV for sharper and brighter trace. and detail equal to 5 -inch scopes, but with tortionless vertical ond harizantal troce expansion with mu metal shield. Disdia. permits drift-free positioning and expansion to several times the screen from DC to 4.5 MC (useful to 10 MC ) 1 meg. input. Harizontal amp re-
 calibroting voltage is provided. 4 sweep ranges plus 200 MV -Vertical peak-to-peak colibroting voltage is provided. 4 sweep ranges plus TV-Vertical and TV-
Horizontal positian. Size $81 / 2 \times 53 / 4 \times 125 / 8^{\prime \prime}$. Shpg. wt. 15 lbs. No. 358591 . Madel 435 . Easy-to-build Kit. Each....................
$\$ 99.95$ No. 35 B590 Model 435 Factory Wired and Tested. Each.
$\$ 149.95$

## SCOPE PROBE KITS

35A119. PSDK Demodulotor probe, signal tracing. Range to 250 MC \$3. 85 35A288. PLGK Low copacity for waveform tracing wide-band circuits $\$ 2.85$

# NATIONALLY FAMOUS EICO KITS ARE YOUR REST BUY 

MODEL 628 साCD TUBE TESTER
just it for radio \& tv SERvicemen, hobbyists, experimenters


#  <br> FACTORY WIRED <br> $\$ 59.95$ <br> HO MONEY DOWH 

Simple, fast operation-has 13 lever type switches, roll tube chort ond 3color $41 / 2$ inch meter with replace, weak, good scale and 0 to 100 matching scole. Tests 7-9-10 pin miniatures, octol, loctal, 5 and 7 pin nuvistors, novars and compactrons. Checks for emission, shorted elements, open elements and continuity. Test all picture tubes with CRU adapter shown at right. Has line adjust control and protective overload lamp. Roll chart will be reissued as needed to keep up to date. Gray cabinet with corrying handle. Size $91 / 2 \times 121 / 2 \times 41 / 4^{\prime \prime}$. W W . 11 lbs.
No. 35 B391. Model 628 Complete
$\$ 44.95$
No. 358391 . Model 628 Completc Kit. Ready to use
No. 358390 . Model 628 Factory Wired. Reat
.. $\$ 59.95$

EICO MODEL 667 TUBE \& TRANSISTOR TESTER
THE
SERYICEMAN
AND
TECHNICIANS
BEST BUY!
FACTORY WIRED
S129.95

## NO MONEY DOWN

Features Dynamic Conductance Tube Test, a composite test showing mutual conductance, plote conductance, and peak emission capabilities. Short test is direct reading for shorts as high os 20 megohms
Speedy testing with unexcelled accuracy-tests most every domestic or foreign receiving tube made. All the nuvistors, novars, compactrons, miniotures and sub-miniatures, octals and loctols. Also many low power transmitting and special purpose tubes, regulators, ballost tubes and pilot lomps. All tests are made under actual operating conditions, combining mutual conductonce with peak emission test. Test transistors by goin and leakage method shown direct on meter. All color and black and white CRJ tubes can be tested using Cry adopter listed below. Lonvenient roll chart is brought up to date periodically. Hos fast acting push buttons and lever switches, ${ }^{4} / 2^{2}$ full view meter and line voltoge odjuster.
$\$ 79.95$
cycle. Wt. 20 lbs.
No. 35 B381. Model 667 Complete Kit.
 or 667 tube tester.
No. 35 B389 CRU Adopter

## FIGO UNBEATABLE \$\$\$ SAVING T:STERS



MODEL 315 DELUXE SIGNAL GENERATOR
Feotures: Extreme stobility of oscil lotor circuit, bond-spread vernier tuning ( $0-100$ scole), illuminated pointer Frequency range 75 KC to 150 MC 7 -separately calibrated scales-ot accurccy of $\%$ \% or better on oll ranges. 4-step. RF-shielded output multiplier very ow leakoge. VR tube mointains fluctuations 400 pure sine-wove fluctuotions. 400 cy . pure sine-wove oudio modulates RF, is AF ortenuated for external use. Connections rubprof pornel heouy steel case is $13 \times 12 \times 7$ Wt . 21 lbs . $\$ 59.95$ 35All7. Model 315K $\$ 59.95$ No. 35B48. Model 315 Factory wired ond Tested, ready to use $\ldots \$ 79.95$

MODEL 147A DELUXE SIGNAL TRACER

- Has both visual and aural signal monitors.
- RF chonnel goin permits tracing up to receiver inout
For RF-IF and oudio signal tracing in TV, RF and AM receivers. Visual (with electron-ray tube), and oural (through oudspeoker, indicaticn of the signol. High RF sensitivity permits signol tracing in tuner ond IF. Noise localizer detects noisy resistors, condensers, solder joints. One probe and ground lead serves for oll
Wt 10
W. 10 lbs
 Complete Kit. No. 35A276. Model 147A
Foctory Wired.
\$19.95 Wt. ${ }^{6}$ lbs
No. 35832 No. 35 B323. Model 955 Wired. Net
.$\$ 39.95$


## 680 TRANSISTOR \& CIRCUIT TESTER

 For accurate tronsistor and diode testing plus o special VOM for testing transistor circuits. DC current 5 ranges 50 and 500 micro-amp, $5-50-500 \cdot \mathrm{MA}$. DC Volts 5 and sistor measurements 1 CBO , 1 CEO for both signal ond power types. $D C$ Beta 2 ranges 2 to 30,20 to 300
direct. $A C$ Beta indirect. direct. AC Beta indirect. Accuracy $3 \%$ overall. Comes complete with batteries. Black bakelite case $63 / 4 \times 51 / 4$
$\times{ }^{6}$ Wt. 3 Ibs. Fuli instructions.
$\$ 25.95$ No. 35A318. Model 680 Kit. Net. No. 35A317. Model 680 Wired. Net.


## MODEL 377 AUDIO

## GENERATOR

For servicing, testing and designing amplifiers, speokers, etc., used in Hi Fi and public address systems. Uses Wien Bridge oscillator circuit. Ronges; sine wave 20-200,000 cps, square wave $60-50,000 \mathrm{cps}$. Accuracy $3 \%$ or 1 cDs , output 10 volts across 1000 ohms, constant output over wide frequency range. Fór use on $105-125 \mathrm{~V}$. quency range. For use on $\mathrm{AC} 50-60 \mathrm{cps}$. Gray wrinkle steel case AC $50-60 \mathrm{cps}$. Gray wrinkle
$71 / \mathrm{B} \times 111 / 8 \times 75 / 8^{\prime \prime}$. Wt. 14 lbs 35A586. Model 377K Kit. \$39.95 Net Each
No. 35A587. Model 377, Factory Wired and Tested................ $\$ 54.95$

MODEL 324 RF SIGNAL

## GENERATOR

A low priced, high quolity generator with frequency range for servising color and mono-chrome TV, FM and AM radio. Covers 150 KC to 435 MC , UP to 145 MC on fundomentals. Quality and performance compore to the most expensive instruments. Speeificotions. RF output 100,000 mikrovolts; 400 cy . AF output 10 volts; 6 to 1 vernier dial; coorse and fine RF attenuators; Colpltts oscillat or; externol modulstor amplifier; 50 ohm output, Groy, wrinkle finished cobinet $8 \times 10 \times 43 / 4$. For $115-125$ V. $50-60$ cycle AC. Wt. 10 lbs.
35 A 331 . Model 324 K Kit. $\$ 32.95$ Model 324 . Factory wired reody to use. 35A330. Net Eoch

## EICO 565 MOST POPULAR 20,000 OHM PEIR VOLT MULTIMETER

HAS 31 RANGES, $41 / 2$-inch, 50 -micro-amp meter, hand calibrated and tested rectififi; eosy-to-read, fuli seale ronges; DC/AC/output volts: $0-2.5,10,250,1000,5000$.
DC Current: $0-100-M i c r o-A m P-0-10-100-500 \mathrm{MA}, 0-10$ Amp. Ohms: $0-2000,200 \mathrm{~K}, 20 \mathrm{Meg} .5 \mathrm{D} . \mathrm{B}$. Ronges, -12 to +55 . Extro rugged construction. Cose is $53 / 4 \times$ $51 / 4 \times 3^{\prime \prime}$, leather handle. Wt. 3 lbs.
$\$ 24.95$ 35A204. Model 565 Foct. Wired, Coinplete. Ea......... $\$ 29.95$ MODEL 556 MULTIMETER 1000 O.P.V. Features a large $41 / 2$ inch Meter for more accurate readings. $1 \%$ precision resistors, 38 full scole ranges. AC or
 6 db ranges; -20 to +69 . 400 Microomp Meter. Bake-


EICO 540 UTILITY TESTER
Designed for the handy man and the do-it-yourselfer.
Low cost multi-range meter for locating defects in irons, fans, TV, radio, outomobite batteries, etc. Meosures AC sistance up to 1,000 ohms. Neon lamp checks leakage sistance up to continuity, Kilowott scale shows power consumption. Has continuity, Kilowott scale shows power consumption. Has
good-bad reading for 6 or 12 volt storage botteries. Black bakelite case $31 / 4 \times 61 / 2 \times 31 / 2^{\prime \prime}$ with clear lucite
 No. 35A386. Model 540 Factory Wired. Net... $\$ 15.95$


$529^{95}$ FACTORY
WIRED

- Special transistor voltage ranges and 1 volt.
- Fuse protection.


## RCA WV38A

## VOLT-OHM MILLIAMMETER

 WV38A Multimeter. All new volt-onm meter withexelusive .25 and i volt ranges exclusive. 25 and 1 volt ranges required for tran-
sistor servicing. 20,000 ohms per volt DC and 5000 ohm per volt AC. Accuracy $3 \%$ DC, $5 \%$ AC Full scale. Eight DC And six AC ranges to 5000 volts. 6 DC current ronges $0-50$ ua to 10 amps. Frequency response 10 cycles to 50 KC , useable to
500 KC 500 KC . 3 resistance ronges to useable to - Polority reversing switch. Fuse protection - Large $51 / 4^{\prime \prime}$ meter "for eosy reading. Bakelite case size $51 / 4 \times 67 / 8 \times 31 / 8{ }^{\prime \prime}$. Shpg.
No. $35 A 90$. Model WV $38 A K$ Complete Easy to Wire Kit. Net Each \$29.95 No. 35A89. Model WV38A. Foctory Wired Com. plete. Net Each., ...................... $\$ 47.95$

${ }^{5} 29^{95}$
FACTOR
WIRED
\$46.95

- World famous RCA Voltohmyst circuit.
- Simply ond quickly assembled.


## EICO MODEL 250

AC VTVM \& AMPLIFIER

## ctim



## s499 ${ }^{\mathrm{kr}}$

$\qquad$

EICO 965 FARADOHM BRIDGE/ANALYZER
".stas

## RCA WV77E

## VOLTOHMYST

Now you may
fabulous savin
fobulous soving! Fethe most popular VTVM at - 11 meg input imp. -Uitra slim probes. Lead storage in the handle. Wide view 400 microomp meter. $1 \%$ tolerance resistors. Seven overlapping voltage ronges 0 - 1500 volts. © Peak-to-
 sponse
ranges
$\frac{1}{2}$
$5 \%$
to
1000
100
meg. : 7 overlapping ohmeter ronges 2 to 1000 meg . Zero center indication
for discriminotor olignment for discriminotor alignment. Metal case shields against magnetic fields. Gray-blue finish. $73 / 4 \mathrm{x}$ $55 / 8 \times 43 / 4^{\prime \prime}$. Wt. 4 lbs . 115 volt operation. No. 35 A289. Model WV77EK Complete Kit. Net Each.
No. $35 A 71$. WV77E. Factand
$\$ 29.95$ $\$ 46.95$


SAVE
$\$ 21.55$ Wired
$\$ 79.50$

## RCA WV98C

## SENIOR VOLTOHMYST

Features accuracy of $\pm 3 \%$ full scale, both $A C$ and $D C$. Has eight DC voltage ranges 0 to 1500 volts. Fourteen $A C$ ranges: seven peak-to-peak from 0 to 4200 volts, seven RMS (sine wave) 0 to 1500 volts, frequency to 3 MC . Seven ohm ranges 0 to 1000 megohms. For 115 -125 volts, 50-60 cycle AC. Sturdy blue-grey cast aluminum cabinet $61 / 2 \times 7 \times 33 / 4^{\prime \prime}$ No. 35 A3s5. Complete Kit, Net Each...... $\$ 57.95$ 35A367. Fact. Wired 8 Tested, Net Ea......
. $\$ 79.50$
WG301A Crystal Probe. 30 cps to 250 MC
No. 35 A395. For WV98C G WV87B. Eoch..
WG289 HI-Voltage (50K) Probe.
No. 35A263. For WV98C G WV87B. Eoch...
. $\$ 7.75$
. $\$ 15.45$


## NEW 102A BURN-OUT PROOF MULTIMETER

 Has a built-in semiconductor circuit to prevent burn-outs caused by accidental overloads. No more expensive repairs and loss of time when accidentally mis${ }_{5}$ used. Hos $31 / 2$ inch $2 \% 800$ microomp D'Arsonval type plostic front meter. ronges: 0 to $6,60,300,600,3000$ volts. 3 AC current ranges: 0 to 30,150 , 600 MA . DC current ranges: 0 to $6,30,130 \mathrm{MA}$ and 0 ranges: 0 to 30 , 150 , ance ranges: 0 to 1000 ohms, 0 to 1 megohms. No. 35 B43. ModelMODEL 109A EMC 20,000 OHM PER VOLT METER NOW INCORPORATES BURN-OUT PROTECTION DC voltage ranges lat 20,000 o.p.V.) $0 / 6 / 60 / 300 / 600 / 3,000$; AC voltage ranges (at 10,000 o.p.v.) - $0 / 12 / 120 / 600 / 1200 / 3000$. Resistance ranges, $0 / 20 \mathrm{~K} / 200 \mathrm{~K} / 0-20$ Megohms. AC current ranges $0-30-300 \mathrm{MA}, 0-3$ amps DC current ranges, 0-6-60-600 MA. DB ronges, minus 4 to plus 67 db All ranges above ore on self-contained batteries. Round cornered, molded bakelite cose, with strap, is $51 / 4 \times 63 / 4 \times 27 / 8^{\prime \prime}$. Wt. 3 lbs .
No. 35 A202. Model 109 A Complete Kit. Net No. 35 ClO . Model 109 A Factory Wired. Net Each

## EMC COMPARATOR BRIDGE

AND IN-CIRCUIT MODEL 801 CAPACITY CHECKER
 $\$ 38.95$ COMPLETE KIT

```
Measures
- Meosures copacity in 4 ranges
10 mmfd. 5000 mfd .
- Complete, ready to us
```

It measures candensers in or out of circuit for opens, shorts or intermittents. A resistance and capocity checker which measures actual capocity leokage and power factor. Measures capacity in four ranges 10 mm fo to 5000 mfd . Resistance in four ranges 5 ohm to 500 megs, power factor from thorted condensers above 50 between. I and 5000 mfd . Will check open or shorted condensers above 50 mmf in circuits not shunted by excessively low resistance. Size $10 \times 7 \times 5$ ". Wt. 7 lbs.
No. 35 Al59. Model 801 Completc Kit. Net Each
\$24.95
No. 35 Al58. Model 801 Factory Wired. Net Each

## TEST INSTRUMENT FOR EVERYONE AT LOW PRICES!

DELUXE TUBE TESTER KIT COMPLETELY MODERN! COMPLETELY FLEXIBLE! EMC MODEL 213

```
PRICED WITHIN
THE REACH OF
    EVERYONE
```

\author{

- Hobbyists <br> - Experimenters <br> - Sfudenfs <br> - Servicemen
}


## WITH PROFESSIONAL LOOK!

## fACTORY <br> WIRED <br> \$32.25 <br> ${ }^{\mathrm{s}} \mathbf{2 1}^{100}$

- Checks all new tubes- 12 prong (Compactron) Nuvistor, Novar G 10 prong tubes.
- Also octal, loctal, miniature and 9 prong tubes.
- Obsolescense proof.
- Easy to buildeasy to use.


## EMC RF SIGNAL GENERATOR 502

THE FIRST TIME AT A PRICE THIS LOW Covers frequency range for all tuning ond aligning requirements of AM and FM radios, in 6 bonds fram 115 KC to 110 MC , second harmonic to 220 $M C$. RF accuracy $11 / 2 \%$. Includes 400 cycle internal modulation controlled with off-on switch and provision for external modulation. Uses individual slug tuned coils for each bond. Colpitts oscillator ond a cothode follower output. Planetary drive permits fine frequency odjustment. Size $65 / 8 \times 65 / 8$
$\times 4^{\prime \prime}$ Wt. 4 lbs. Complete with output lead ond
 No. 358424. Model
No. 35 B425.
502


## SENCORE PROFESSIONAL TIME SAVING, MONEY MAKING TEST INSTRUMENTS



## TR139 IN-OR-OUT OF CIRCUIT TRANSISTOR TESTER

Ideal for radio, TV, $\mathrm{Hi}-\mathrm{Fi}$, recorder, etc., trouble shooting as well as production testing, sorting ond identifying. Being able to check all transistors and diodes, in or out of circuit is a real time saver because much present day equipment has transistors and diodes soldered in.
TR139 identifies NPN or PNP type of flick of switch, transistor is protected even if leads are reversed.
Beta is accurately read on meter, simply turn the knob and push test button.
ICBO values (amount of leakoge) shown in microomps, some transistors show correct Beta but ore inoperative because this leakage is too high.
Beto in circuit tests are accurate even with shunt impedance as low os 100 ohm. No set-up booklet needed, you follow simple directions furnished with the in-
No. 35B455. Net Each
$\$ 89.50$

## CG10 COLOR GENERATOR POSITIVELY YOUR BEST BUY!

Provides ten standard RCA type color bar patterns; NTSC phased colors, the standard of the industry. Also crosshatch individual vertical and horizontal lines and adiustable white dots. Has full compliment of 14 horizontal and 10 vertical lines. adiustable white dots. Has full compliment of is instizontal and Requires no warm-up time, provides all patterns instantly at a flick of the switch. Requires no warm-up time, provides all patterns instantly at a flick of the switch. Has interlace control for dot bounce that varies from set-to-set, Rugged all steel cabinet, $101 / 4^{\prime \prime}$ long, $33 / 4^{\prime \prime}$ high, $8^{\prime \prime}$ deep.
$\$ 89.95$

## MU140 DYNAMIC MUTUAL CONDUCTANCE TUBE TESTER

A must for color TV and industrial equipment servicing. True mutual conductance testing, completely checks over 3000 tubes; novars, compactrons, new mognovals, including most foreign types. Simple to set up tests, in fact set-ups can be made from tube manual data. Hos expondable socket area to assure obsolescence protection.
MU140 tube tests can be completely relied on because Mutual Conductance Test measures the ratio of signal in to signal out in microhms, Emission Test is mode at tube's full roted cothode current, Grid Leakage is measured as small as $1 / 2$ microamp or 100 megohm and short lest checks each element against oll others for shorts of 180 K ohms or less. Housed in vinyl covered steel ottache type cose. Shpg. wt. 20 lbs
No. 35B454. Net Eoch
\$169.50


It is the quick to leader among tube testers, reliable and versatile yet simple and buck to use. A tester that finds tube froubles other testers miss, soves call bocks. Tests over 2500 types for cothode emission, grid emission, leakage,
 No. 35 A185. Model TCi36. Shpg, wt. 9 lbs. Net Each

## SWEEP CIRCUIT ANALYZER MODEL SS137

Improved for all TV including color. Quickly and positively locotes horizontal and vertical sweep circuit troubles in seconds, no guesswork, without removing chassis from cabinet.

- Push-button testing for most circuits by use of odaptor plug-in socket. - Circuits are tested completely with TV set furned on
- Horizontal and vertical test made by substituting signal from the tester. - 2nd anode voltage to 30 KV read direct on test meter. All steel case hos mirror in detochable cover, two AC outlets are provided Size $101 / 4 \times 91 / 4 \times 31 / 2^{\prime \prime}$. Wt. 10 lbs.
No. 35B153. Complete with Instructions
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RC121 COMPONENT SUBSTITUTOR
Easy to use, time saving tester which provides, at the touch of a switch, on the spot substitution of 121 watt resistors from 10 ohms to $5600,121 / 2$ watt from 10 K to 5.6 megohm, 20 wire wound 20 watt resistors from 2.5 to 15,000 chms. 10 capacitors from 100 mmf to .5 mfd ot 600 volts. 10 dual electrolytics may be used singly or combined to provide 2 mfd to 250 mfd at 450 volts. Rectifiess, selenium .5 amp .800 PIV and 5 amp at 800 PIV. Has surge protector and all capacitors are automatically discharged when out of use. A total of 81 values are combined to provide quick substitution in ony circuit. Comes complete with four test leads and instructions. Wt. 6 lbs.
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## TR115 TRANSISTOR TESTER

Accurate test on all transistors, diodes and rectifiers. Has simple set up chart, reads transistor gain, leakage and indicates good or bad directly in Beta on the meter scale.

Connot become obso verse current on diodes. No. 35 A557. Model TR115


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HERE ARE THE SPECIFICATIONS:
DC Voltmeter Ranges: $0-3,30,150,300$ and 1500 volts
Zero Center Voltmeter (for discriminator alignment etc.) Ronges: 0-1.5, 15, $75,150,750$ volts.
AC Volimeter. RMS Ronges; 0-3, 30, 150, 300, 1500 volts.
Accurocy oll voltage ranges $\pm 3 \%$ full scale-Input resistance 11 megohm. Peok-to- Peok Ronges: 0 to 8, 80, 400, 800 volts.
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Compares with tube testers selling for as much as $\$ 50$. Made for B-A by one of Americo's leading tester manufacturers.

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AC volts ronges: $0-6,0-30,0-120,0-600$ ond $0-1200$ volts. DC current ronges AC volts ranges: $0-6,0-30,0-120,0-600$ ond
$0-60$ microomps, $0-1.2 \mathrm{MA}, 0-12 \mathrm{MA}, 0-300 \mathrm{MA}$; Resistance ronges of $0-10,000$ $0-60$ microomps, $0-1.2 \mathrm{MA}, 0-12 \mathrm{MA}, 0-300 \mathrm{MA}$; Resistance ronges of $0-10,000$
ohms, $0-100,000$ ohms, $0-1$ meg. and $0-10$ meg; Decibeis -20 to +17 db. hos ohmeter zero odjust, rotary range switch, oll bakelite cose, large ${ }^{\prime \prime \prime}{ }^{\prime \prime}$ meter foce. Size $61 / 4 \times 41 / 8 \times 2^{\prime \prime}$. With test leods, self-contained bottery, and instructions. Shoce. Size wt . 3 libs
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No. 60447
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Prints large easy to read raised letters instantly can use, it. Just dial letters, numerals or symbols-squeeze handle message comes out crisp white agoinst a colored background. Full-vie allows you to see each letter as it is printed. A squeeze of the trioge cature finished lobel leoving double-cut tab for easy removal of protective ats off bocking. Tool built of tough, durable plastic. Complete with one roll of tope. Shpg. wt. No. 1 l7899. Eoch
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AMERIGAN MADE INSIKUMENTS ON BEAUTHFUL WOOD GRAINED PANEL FOR WAL!

Precision made with accurately etched aluminum METERS dials. Equipped with individubl odjustments. Con- MIERS structed like ship's instruments, right down to the ROTATE worm glow of polished brass, simulated by o heovily FOR metalized finish which retains its beautiful lustre VERTICAI
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Combine with contact microphone (see No. 22C239 on page 49, any PM speaker and 6 volt bottery for concert quality, auditorium volume guitar amplification.
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Produces high level upward scream and downward wail. Drive ony 8 ohm
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Ready to use preamp. Increases modulation to optimum for dependable transmissions. Use any $11 / 2$ volt battery.
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Will transmit code signals up to several hundred feet to your rodio nests to o telegraph key and o 9 volt transistor battery. No. 41A147. For AM Radios. Each.
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Will transmit guitar into nearby radio with no cables. Connect to crystal
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## CODE PRACTICE OSCILLATOR MODULE

## 88

Operates from ony $11 / 2$ to 6 volt battery and any PM speaker. Only three connections to any PM speaker. Only three Anyone can assemble this highly satisfoctory oscilliator from the instructions supplied with No. 41 B43. Each

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## COMPLETE CODE PRACTICE KIT

Eosy to build. Includes code module, fine quality import key, speaker, bottery holder, batteries and instructions. Easily mounted on wood base (not supplied)
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59c
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Choice Each No. 41 B 34 -Negative Ground No. 41B35-Positive Ground

69 c

## SUB-MINIATURE IN34A DIODE

## $24 c$

## 22

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18A15. 24 - $25-99, ~$
Spec. 21 Each... 100
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## SENSITIVE LIGHT ACTUATED SWITCH



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MOUNTING DEVICES FOR TRANSISTOR CIRCUITRY


## BATTERY HOLDERS

Some os used in most transistor portables. Has standard snop-on battery Sturdy plastic construction.
(1) Holds 4 "D" Cells.

No. 14A60. Eoch.
(2) Holds 2 "AA" Cells. No. 14A61. Each. (3) Holds 4 "AA" Cells. No. 14C64. Eoch. . . .
(4) Holds 4 "AA" Cells. (4) Holds 4 "AA" Cell No. 14C65. Cach........... $+\boldsymbol{1}$ Set of Male and Female Snop-On Fasteners.
No. 12A1341. Per Set.

## $\$ 1.49$

 49c 59c 59cPERFORATED BOARDS
vick convenient way for assembling tronsistar circuits. Top quality prepunched boords. Unclad bakelite for wired circuits; copper-clod for printed circuitry. Is" thick. है dia, holes set IE" between centers.

UNCLAD BOARDS


Top quolity import reploces Burgess 2U6, RCA VS-312, Evereody 216, etc.

 No. 29B307. $21_{8}^{3} \times 33 / 8^{\prime \prime}$ 。 Eoch

## $25 c$

 No. $298308.331 \times 63 / 4 \%$ Each. . . . 45 c No. 29B310. $101 / 2 \times 7{ }^{18}{ }^{1 \prime}$. Each, . $\$ 1.20$ COPPER CLAD BOARDS No. 29B311. $3 \mathrm{~h} 1 \times 63 / 4$, ". Each. . . 70 c No. 29B312, $7 \frac{18}{6} \times 63 / 4$ Eoch... 1.60 29B100. $1^{\prime \prime}{ }^{\prime \prime}$ dia. clips. 100 For $\$ 1.75$
## SUB-MINIATURE PLUG $=39 \mathrm{c}$ <br> 2-woy. Mates jack ot right. Solder terminals. Borrel size $1^{\prime \prime} \mathrm{L}$. $\times 3 / 8^{\prime \prime}$ dia. No. 17C454-Red Your Choice No. 17B399-Black No. 17 B475-All-Metal. Each. . . . 39 c 10 Lots Ea... 35 c 100 Lots Ea... 33 e

CLEAR PLASTIC CASES (1) All with hinged lids.

No. 178482 . $43 / 4 \times 25 / 8 \times 1^{\prime \prime}$ D. 29 S 18A1268. $67 / 8 \times 33 / 8 \times 11 / 8^{\prime \prime} \mathrm{D}$. Net Each No. 11 A 965,8 sin $^{3} \times 41 / 8 \times 11 / 4^{\prime \prime}$ D. A?
Net Eoch..................

## ALUMINUM MINIBOXES

 (2) Notural oluminum finish 20C558. $23 / 4 \times 21 / 4 \times 15 / 8^{\prime \prime}$ W. Ea. . . 85 c 20C565. $4 \times 21 / 4 \times 21 / 4^{\prime \prime}$ W. Eq. . . . 80 20C567. $5 \times 4 \times 3^{\prime \prime}$. W. Ea....... $\$ 1.05$ $5 A 271$. $6 \times 5 \times 4^{\prime \prime}$. W. Ea. . . . . . $\$ 1.30$
## SUB-MINIATURE JACK

## REG. 24C EACH



Closed circuit type. Motes with plug
of left. Mounts in $1 / 4^{\prime \prime}$ hole in of left. Mounts in $1 / 4^{\prime \prime}$ hole
ponels up to $1 / 8^{\prime \prime}$. Jock hole $1 / 8^{\prime \prime}$. No. 17 B 248 . 10 Lots, Special Each 51 Each.

## MINIATURE COMPONENTS

## (1) ALL ARE BRAMD MEW! fully guarantesb!

## DYNAMIC EARSET



Lightweight, high quality imported headsets. 3 ft . cord, plug, jack. 17A349. 2000 Ohm.
17A337. 15 Ohm.
CHOICE, EACH.
CRYSTAL EARPHONE
Extro sensitive
high - power high imped cord. Import

| No. |
| :--- |
| 17 A 2475 |



MINIATURE TRANSISTOR AUDIO TRANSFORMERS


## MINIATURE SPEAKERS FOR

 TRANSISTOR POCKET PORTABLES
## PERFECT FOR REPLACEMENT $\dot{\text { BUI }}$ BUILDERS AND EXPERIMENTERS TOOI

(1) Exact replacement for most pocket size portobles. Also fine for all sorts of other minioture devices. Only inch deep aver Mount by spore soving less than $1 / 4^{\text {" behind ponel. Mount by space soving }}$ imports.
No. 22A44-2" Round. No. 22A351-21/2", Round No. 22A350-2 $1 / 4^{\prime \prime}$ Round. No. 22A45-23/4" Round Choice Each

9910 Lot
89c
Tiny Size. Measures $3 / 4 \times 5 / 8 \times 5 / 8{ }^{\prime \prime}$ For amplifier and radio circuits using the standard types of trans. Highes as listed on opposite page. Highest quality import.
No. 17C659. Input. Pri. 20,000 ohms; sec. 1000 ohms.
No. 17 C660. Driver. Pri. 10,000 ohms; sec. 2000 ohms C.T. No. 17C661. Output. Pri. 500 ohms C.T.; sec. 3.2 ohms.

No. 17A634. Crystol Mike Input. Pri 200,000 ohms; sec. 1000 ohms. Your Choice Each 89c

## (1) Miniature 365 Mmfd .

 Variable With Dial Only $1^{\prime \prime}$ square $\times 1 / 2^{\prime \prime}$ deep. Close with clear plastic $1_{1 / 4}$ dio. dial with gold trim ond numerals. Knurled No. 17 C 407 Special Net Each.For ${ }^{7} \pi$ Hex Rectifier type DO-4, TO-64, R2 and R6.
No. 41 A16
Per Set for One Rectifier


For 11 Hex Rectifier type DO.5, TO-48 and R3.
No. 41A162
Per Set for One Rectifier
30c MOUNTING KITS


Includes all necessary hordwore and insulators for moking professional (1) "Diamond Shape" TO-3 Type. No. 41 Al.
Special Eoch 515 (1) "Door Knob" TO-36 Type. S1P
No. 41 A2. Speciol Each......


(2) Subminiature 455 KC IF And Oscillator Cails
Only $3 / 8^{\prime \prime}{ }^{\prime \prime} 5$ as., $^{1 / 2^{\prime \prime}}$ H. Slug tuned, printed circuif, mtg. fully shielded. No.17A27. 1st if Import Spec. No. 17A28. 2nd IF
No. 17 Chaise
Oscillator
Each... 490

## RECTIFIER MOUNTING KITS

Each set contains ${ }^{6}$
pieces: insulating washpieces: insulating wash-
ers, solder lug lock washer and nut.

(3) Super-Sensitive "VariLaapstick" Miniature Antenna Powerful high-Q type topped for tronsistor circuits. STunes with, 365 $\times 2$ mid condenser. Mounts in onty hole. No. 178335 Net Each

59c

## (2) REALLY TINY PM SPEAKER

Measures only $11 / 2^{\prime \prime}$ dia. $x 1^{\prime \prime}$ deep. Features amazing quality for its extreme small size. $3-8$ Na. 178543 Special Eoch
No. 17B543. Special Each.
$\$ 1.49$

Just right for transistor and other sub-miniature circuits. $1 / 8 \times l^{\prime \prime}$ long shaft. Linear taper for volume and tone.

| Ohms Resistance | Stk. No. | WITCH Each | 10 Lots Each | WITH <br> Stk. No. | PST SW Eoch | ots Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 5000 \\ & 10,000 \\ & 50,000 \end{aligned}$ | 14 C300 <br> 14 C301 <br> 14 C302 | $\begin{aligned} & 59 c \\ & 590 \\ & 500 \end{aligned}$ |  | 14 C334 <br> 14 C335 | $\begin{aligned} & 89 \mathrm{c} \\ & 89 \mathrm{c} \end{aligned}$ | 789 |



## MINIATURE CRYSTAL MIKES

Only $1^{\prime \prime}$ dia. X $13^{\prime \prime}$ deep-perfect for concealed location uses. Also fine as replacement cartridge for regular crystal mikes. Extremely sensitive with good output. High impedance. Import made.
No. 17 D423.
Special Each
As above $2^{\prime \prime}$ diameter.
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## D) You save sss D)ALi EATAS TRANSFORMERS AND CHOKES <br> ALL ARE BRAMD NEW! <br> fULLY GUARANTEED!

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REG. NET VALUE
OVER $\$ 14.25$
${ }_{A}^{6.3} \mathrm{~V}$.@ 4 A.: 5 V . @ 3 A. 115 V . AC pri. Windings electrostoticolly shielded. Size $45 / 8 \times 37 / 8 \times 43 / 8$. Wt.
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${ }_{A C} 3 \mathrm{~V}$. @ 6 A.; 5 V . @ 3 A. 115 V AC
shielded. Size
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electrostoticolly shielded. Size $45 / 8 \times 37 / 8 \times 414^{\prime \prime} . W_{t}$.
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3 Secondories-135 V. @ 110 MA , 125 V.@ 40 MA 6.3 V.@2 A. Popular upright mounting, fully shielded. Primary 117 V . AC. Made for GE to power a high quality tuner and amplifier; finest ever for all sorts of $21 / 2 \times 27 / 8 \times 3^{\prime \prime} \mathrm{H}$. No. 13B114. Special Each. 298 Secondaries-130 V. @ $120 \mathrm{MA}, 6.3$ V.CT@3.5 A. An exceptional transformer for modern silicon diode cir$3 \times 25 /$ " $^{\prime \prime} \mathrm{H}$. Shpg. wt. 4 lbs .92

MIDGET POWERS FOR TRANSISTORS AND TUBES


FINEST QUALITY AT TREMENDOUS SAVINGS UP TO 50\%! JUST RIGHT FOR BUILDERS, EXPERIMENTERS
POWERS ALL SORTS OF SMALL DEVICES, SUCH AS PREAMPS, RECEIVERS, BIAS SUPPLIES, ETC.

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$\times 2^{\prime \prime} \mathrm{H}$. Mtg. centers $21 / 4^{\prime \prime}$. Shpg. wt. $\frac{x}{1 / 2} 2^{\prime \prime} \mathrm{H}$. Mitg. centers $21 / 4^{\prime \prime}$. Shpg. wt. No. 17C568. $\$ 149 \quad 10 @ \$ 139$
Spec. Each... (1) 150 V . @ 50 MA Sec. Tapped for filament 6.3 V.@ 1 amp. Size $15 / 8$ $\times 13 / 4 \times 2^{\prime \prime} \mathrm{H}$. Mitg. ctrs. $2^{\prime \prime}$. Shpg.
wt. $1 / 2 \mathrm{lb}$.
134284.
Special Eo...
(1) 300 V.CT@ 50 MA Sec. Seporote filament 6.3 V.@ 2 amp. Size 2 fo $\times 2^{\prime \prime} \times 2^{\prime \prime} \mathrm{H}$. Mtg. ctrs. 2tie". Shpg. Wt. $11 / 2$ lbs.
13 A548. $\$ 19$ Lots, 10 Lot 99
Enech... $\begin{array}{ll}\text { Special Eo. . } \$ 219 & 10 \text { Lors, } \$ 199 \\ \text { Each... }\end{array}$

MINIATURE VARIABLE POWER SUPPLY KIT
Power supply provides $0-12 \mathrm{~V} . \mathrm{DC} @ 6 \mathrm{MA}, 0-9 \mathrm{~V} . \mathrm{DC} @ 10 \mathrm{MA}$. Contains transformer, bridge rectifier, 2 condensers, potentiometer and diagram
No. 3 Cl 28.
Speciol Eoch

## MATCHING MIDGET FILTER CHOKE



740 V.CT@ $110 \mathrm{MA}, 12.6 \mathrm{~V} . \mathrm{CT}$ @ 7 A 6.3V.CT@3.7A,5V.@3A Half shell mounting type. $41 / 2 \times 33 / 4 \times$ $23 / 4^{\prime \prime}$ above chassis. Wt. $81 / 2 \mathrm{lbs}$. No. 130159.
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FULLY ENCASED POWER TRANSFORMER

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550 V. CT @ 30 MA. Drawn steel case, wax impregnated extro well shielded. For pre-omps, etc. requiring low hum design. Two 6.3 V . Fil. 0.5 A ; One 6.3 V . @ 1.7 A . Size $21 / 4$ $\times 23 / 4 \times 3^{\prime \prime} H$. Shpg. wt. $21 / 2$ lbs.
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UNUSUAL FINE QUALITY MIDGET POWER TRANS.

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222
$15 / 8 " \mathrm{H}$. Shpg. wt. 1 lb . 10 @ $\$ 129$
No. $18 \mathrm{D} 516 . \$ 139$ No. 18 D 516.
(1) 120 V . @ 70 MA Sec. Isolated center tapped filament 6.3 V . @ 2 amp. Size $21 / \times 21 / 2 \times 21 / 4{ }^{\prime \prime}$ H. Mtg. ctrs. $31 / 8^{\prime \prime}$. Shpg. wt. 2 lbs.
$13 \mathrm{B476}$
Special Ea. $\$ 299$
Each...
$\$ 3.95$

A rore find, bargain priced. Perfect motch for use with transformers as obove roted to 30 MA . DC resistance $1{ }^{3} \mathrm{It}^{\prime \prime} \mathrm{mtg}$. ctrs.
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Spec. Each. 10 Lots
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For Transistor Device
(3) 12 V @ 10 MA Sec. Size $13 / 8 \times 7 / 8 \times$ $11 / \mathrm{s}^{\prime \prime} \mathrm{H} . \mathrm{Shpg}$. wt. 3 oz .
 9 21.5 V. @ 100 MA . Sec. Size Itłx $11 / 2 \times 19 /$ a $^{\prime \prime}$ H. Shpg. wt. $1 / 2 \mathrm{lb}$. No. 18c45.
Special Ea.. 990
Each.
EOt,
896 Special Ea... 40 VT 110 MA Sec Size 2 x $15 / 8 \times 15 / \mathrm{g}^{\prime \prime} \mathrm{H}$. Shpg. wt. 1 lb . Size $2 x$
 MALLORY FULL WAVE SILICON BRIDGE RECTIFIER


Molded case . 200 Volts PIV@1.5A.
with wh case .688 L. x. 469 H. x .25 T. with $11 / 2^{\prime \prime}$ leads. Recommended for transistor power supplies, bias and relay supplies, dozens of other applications Limited quantify at this special price. No. 17B163.
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(1)

(1) $5.5 \mathrm{HY} ., 50 \mathrm{MA}$. DC resistance 300 ohms Strop mto bose Size 111 $13 / 8{ }^{\prime \prime} \mathrm{H}$. with $2^{\prime \prime}$ mtg. ctrs. Wt. I lb. Reg. net value $\$ 1.50$
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(1) 8 HY, 75 MA . DC resistance 290 ohms. Strap mtg. type. Size 2 者 $\times i 3 / 4$ $\times 2$ H. Wt. Ib. Reg. \$2.60
$\$ 1.99$
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Speciol Each.
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(3) SUPER VALUE! heavy duty 8 hy. 200 MA

DC resistance 120 ohms. Half-shell mtg. Size only $3 \times 21 / 2 \times 23 / 4^{\prime \prime} \mathrm{H}$. Reg. net of teast $\$ 6.00$. Wt. 3 lbs.
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(3) HIGH POWER 8 HY@ 300 MA CHOKE

DC resistance 70 ohms. Strop mtg. $37 / 8 \times 4 \times 45 / 8^{\prime \prime} \mathrm{H}$. Wt. 8 lbs . Reg. net over \$14.00.
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## HIGH VOLTAGE TRANSFORMER FOR CATHODE RAY TUBES

Primary 115 V. Maximum. Secondary 1150 V. @ 2.5 MA. Has 10-1 ratio. Output valtage can be changed by changing primary voltage. Use for high voltage menters. Shpg. wt. $11 / 2$ lbs. menters. Shpg. wt. $11 / 2$ Ibs.
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FILAMENT TRANSFORMERS AT BIG SAVINGS!


## ALL HAVE 117 V. 60 CY. AC PRIMARIES

(1) 5 V @ 6 AMP 2500 volt test insulation. Size $21 / 4$ $318 \times 17 / 8^{\prime \prime}$ with $31 / 8^{\prime \prime} \mathrm{mtg}$. ctrs. Wt. 2 15/8" H. with $21 / 2^{\prime \prime}$ mtg. ctrs los.
No. 13A242. Special Each. 1.99 No. 17 B 392 . Wt. $11 / 2 \mathrm{lbs}$. 51.99
Import Special......... (1) 6.3 V . @ 1 AMP

Size $15 / 8 \times 27^{\prime} \times 11 / 2^{\prime \prime}$ with $23 / 8^{\prime \prime}$ Size $2 \times 31 / 4 \times 13 / 4^{\prime \prime}$ with 2 fli" mig. ctrs. $^{\prime \prime}$.


No. (1) 24 V . @ .6 AMP Size $2 \times 23 / \mathrm{m}^{\prime \prime}$ with $3^{\prime \prime} \mathrm{mrg}$ ctrs.
Wt. $11 / 416 \mathrm{~s}$. Special Each. 39
No. 18 C 644 . Sper
6.3 V. @ 3 AMPS

(8) 24 V. @ 2 AMP. Size $25 / 8 \times$ No. 13C501. Wt. $21 / 2 \mathrm{lbs}$. Special Each

with $31 / 8$
10 Lots,
Each.
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For 50L6, 50B5, 18 A8888.
Special Eoch $59(10$ Lots,
Each.. 99 For 6V6, 6AQ5, etc., to $3-4 \mathrm{ohm}$ V.C. $23 / 8 \times 13 / 8 \times 13 / 8^{\prime \prime} \mathrm{H}$. Shpg. wt. 1 ib
 (2) 70.7 VOLT LINE-TO-VOICE COIL

5-Watt. Tapped for 5, 2.5, 1.25, . 62 and . 31 watts. Secondaries 3.2-4, 6-8 5hm. Size $1 \mathrm{f}_{8} \times 2^{33 / 8} \times 11 / 2^{\prime \prime}$. Wt. $3 / 4 \mathrm{lb}$. Reg. net value $\$ 3.24$.
No. $13 A 238$.
Special Each


MULTIPLE VOLTAGE TRANSFORMER 12 V. CT $\& 48$ V. CT SECONDARIES Primory 115 V . Separate 12 V . CT @ .5 amp and 48 V . different voltoges con be obtalned from one transfarmer Size 2 " $\mathrm{H} \times 2 \times 2^{\prime \prime} \mathrm{H}$. Shpg. wt. I Ib.

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| Speciol Eoch .......... S1.99 |
| Each... |
| Eats, |

## ISOLATION TRANSFORMERS

FOR TESTING
Reduces shack hazard particularly when used with $A C-D C$ equipment. Needed by servicemon and highy recommended for TV sets, hi-f1 amplifiers, etc. can be paralleled for higher power. Convenient AC cord with Dlug ond volt $50-60$ eycle. 250 Watts. Size, $45 / 8 \times 348 \times 47 / 8{ }^{\prime \prime}$. Weigh $121 / 2$ Jbs.
\$14.95
SAVE! MIDGET POWER SUPPLY KIT 300 VOLT OR 150 VOLT DC 50 MA DUAL POWER SUPPLY FULLY ISOLATED FROM 110 VOLT AC LINE

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FINE FOR POWERING SMALL
FINE FOREIVERS, PREAMPS, TEST
GEAR, BIAS SUPPLIES ' TEAALL
Modern silicon diode rectifier, for cool operation and instant output. Filament winding fully isolated, 6.3 V . @ 2 omp . Size $2 \mathrm{~B} \times 2 \times 2{ }^{\prime \prime} \mathrm{H}$. Choke rectifiers. Includes diogrom
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SORTS EXPERIMENTAL DEVICES
Primary $4000-14,000$ ohms. 8 wotts. Primary $4000-14,000$ ohms. 8 wotts.
Matches $3.2,8$ or 16 ohm V.C. Size
 5/0 $\times 213 \times 11 / 2$
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for use on a variety of equipment. Shpg. wt. 3 la
No. 358320-6 V. Output
Your Choice


## B-A's SENSATIONAL NEW BATTERY-POWERED

 TRANSISTOR PA SYSTEM KIT
## unbellevable low price

- Very small and compact.
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- Operates anywhere from 4 "D"
botteries.


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EXTRA BIG SAVINGS Tubular Electrolytics


Now while they last，spectacular sav－ ings on high quality hermetically sealed electrolytics．Stock up at these low， low prices．Compact sizes． 50 MFd．＠ 25 V．5／8×15／8＇ No．178229． 5 for 20 For
4 MFd ＠ $50 \mathrm{~V} .3 / 8 \times 1$ 的
20 For
16 Mfd．＠ 150 V．5／8x13／8 No．18B791． 5 For 20 For
40 Mfd．＠ 150 V． $3 / 4 \times 2$ to
20 for
80－20 Mfd．＠ 150 V． $1 \times 3$ No．18B804． 5 For 20 For．

TV HIGH－VOLTAGE CERAMIC CAPACITORS


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49 c
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Standard Hi－Vo Kap type for TV re－ placement or as coupling condenser in shunt ted plate circuits．Has 8－32 male and 6－32 female terminals．
 MITE SIZE CERAMIC DISCS


600 WORKING VOLTS DC Finest quality general purpose ceramic capacitors feoturing excellent high small size，and rugged construction All are fresh stock－Fully Guaranteed

| Stock No． | Cap． Mfd． | $\begin{aligned} & 10 \\ & \text { For } \end{aligned}$ | $\begin{aligned} & \text { "100 } \\ & \text { For } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 15 A1210 | ． 00001 － | 59c | \＄4．95 |
| 15A1219 | ． 000002 | 59c | 4.95 |
| 15A1211 | ． 000047 | 59c | 4.95 |
| 15A1212 | ． 0001 | 59c | 4.95 |
| 15A1213 | ． 00047 | 898 | 4.95 |
| 15A1214 | ． 001 | 59c | 4.95 |
| 15A1215 | ． 002 | 59c | 4.95 |
| 15 A1216 | ． 005 | 59c | 4.95 |
| 15 A1217 | ． 01 | 59c | 4.95 |
| 15 A1218 | ． 02 | 79c | 6.95 |

＊Minimum 10 per Capacity
KIT OF 50 OF ABOVE： 4 each ． 00001
$.00002, .000047, .0001, .002$ and
．005； 8 each .00047 and $.001 ; 6$ each ．01； 4 each .02 all 600 V ．or higher． No． 18 A 18.
Special Per
$\$ 2.79$

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B－A SPECIAL PURCHASE OF BRAND NEW CAPACITORS DIRECT FROM ORIGINAL PRODUCERS MAKES POSSIBLE THESE FANTASTIC SAVINGS！


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## TUBULAR <br> ELECTROLYTICS <br> AS LOW $3 \bigcirc$

ACH， 10 IOT
Finest quality compact tubular capacitors her metically sealed in aluminum container with plastic sleeve and tinned copper leads．Dua types shown are metal－cased，have cordboard sleeves，vinyl insulated leads and common negativ

| Mfd． | Size | Stock No． | Each | $\begin{aligned} & 10- \\ & 49 \\ & \text { Each } \end{aligned}$ | 50 or Over Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 250 | 3161360 | 18A749 | 59c | 53c | 49c |
| 500 | 7／8× $2^{\prime \prime}$ | 18 A750 | 75c | 688 | 61c |
| 1000 | $1 \times 2{ }^{\text {² }}$ | 18A751 | 99c | 90 c | 81 c |
| 2000 | $1 \times 3^{\prime \prime}$ | 18A753 | \＄1．19 | \＄1．07 | 96c |


| 10 | 1／2x14／8＂ | 17B239 | 39c | 35c | 32c |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 25 | $1 / 2 \times 18 / 8{ }^{\prime \prime}$ | 15A418 | 44c | 39 c | 35 c |
| 50 | $8 / 8 \times 15 / 8{ }^{\prime \prime}$ | 17B252 | 39c | 35 c | 32 c |
| 100 | 1／2x170\％ | 178240 | 49c | 44c | 40c |
| 250 | 7／8×110＂ | 18A771 | 79c | 71c | 64c |
| 500 | $1 \times 2{ }^{\prime \prime}$ | 18 A772 | 99\％ | 90c | 81c |
| 1000 | $1 \times 23 / 4^{\prime \prime}$ | 17A342 | \＄1．16 | \＄1．05 | \＄． 95 |
| 2000 | $13 / 8 \times 3^{\prime \prime}$ | 17A344 | \＄1．26 | \＄1．13 | \＄1．02 |


| 4 | $3 / 8 \times 11 /{ }^{1 / 1}$ | 188462 | 33c | 30c | C |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | $1 / 2 \times 118^{*}$ | 15 A419 | 36 c | 33c | 30 c |
| 25 | $1 / 2 \times 15$ | 178287 | 38c | 34 c | 31c |
| 50 | 8 的15\％${ }^{\prime \prime}$ | 178288 | 42c | 38c | 34c |
| 100 | 30815／8＊ | 178251 | 58c | 52c | 47c |
| 150 | 7／8x2＂ | 18 A789 | 46c | 42c | 39 c |
| 250 | $1 \times 2$＂ | 18 A790 | 52c | 47c | 42c |
| 500 | $1{ }^{1} \times 2{ }^{\text {\％＂}}$ | 18A942 | \＄1．19 | \＄1．07 | 96 c |
| 1000 | 1 x3＊＊ | 178345 | \＄1．26 | \＄1．13 | \＄1．02 |
| 2000 | $13 / 8 \times 3^{\prime \prime}$ | 17A348 | \＄1．38 | \＄1．24 | \＄1． 12 |


| 8 | 1／2x1\％${ }^{10}$ | $18 A 792$ | 35c | 32c | 29 c |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 12 | 46x14＂ | 18 C 415 | 38 c | 34 c | 31c |
| 16 | \％／813／8＂ | 18A979 | 39c | 35 c | 32c |
| 20 | $8 \times 8 \times 21 / 8$ | 18A634 | 40c | 36c | 33 c |
| 30 | $3 / 4 \times 18{ }^{\prime \prime}$ | 17A961 | 44c | 40c | 36 c |
| 40 | $8 \times 2{ }^{3}$ | 15A413 | 49c | 44c | 40 c |
| 50 | $34 \times 250$ | 18A985 | 49c | 44 c | 40 c |
| 80 | $1 \times 2{ }^{\frac{3}{16}}$ ． | 18C454 | 56 c | 51c | 46c |
| 100 | $1 \times 21 / 2^{\prime \prime}$ | 18A796 | 72c | 65 | 59 c |


\section*{ <br> $\left.140\left|13 / 8 \times 3 \frac{1}{2}{ }^{n}\right| 18 \mathrm{C} 719|\$ 1.49| \$ 1.35 \right\rvert\, \$ 1.22$ <br> | 450 W．V．DC |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 3／8x11／80 | 18B463 | 39c | 35 c | 32 c |
| 2 | $5 \times 16$ | 184847 | 43c | 39 c | 35 c |
| 4 | $5 / 8 \times 17 / 0^{\prime \prime}$ | 18 A848 | 45c | 41c | 37 c |
| 8 | $3 / 4 \times 1{ }^{6 / 8}$ | 17A225 | 45 c | 41c | 37 c |
| 10 | $3 / 4 \times 14 \times 1$ | 18B465 | 49 c | 44c | 39c |
| 12 | $3 / 4 \times 14{ }^{10}{ }^{*}$ | 18 A849 | 54 c | 49 c | 44c |
| 16 | 7／8x ${ }^{18}$ | 17A232 | 54 c | 49 c | 44c |
| 20 | $1 \times 2{ }^{\prime \prime}$ | 17B254 | 59 c | 53c | 48 c |
| 30 | $1 \times 23{ }^{\prime \prime}$ | 17A233 | 64c | 58c | 52c |
| 40 | $1 \times 214{ }^{\prime \prime}$ | 178286 | 72c | 65 c | 59 c |
| 60 | $1{ }^{1} 3 \%$ \％ | 18A851 | 95c | 87c | 79c |
| 80 | $13 / 8 \times 23 / 6$ | 178238 | \＄1．10 | 99c | 90c |
| 100 | $1 \times 415$ | 188471 | \＄1．49 | \＄1．35 | \＄1．22 |
| 8－8 | $1 \times 2{ }^{8 / 8}$ | 17A234 | 68c | 61c | 55 c |
| 20－20 | $1 \times 21 \%$ | 17A231 | 99 c | 90c | 81 c |
| 500 W．V．DC |  |  |  |  |  |
| 20 | $1 \times 2{ }^{\prime \prime}$ | 18 A871 | 79c | 720 | 5 |

MOLDED MYLAR TUBULARS
Superiar quality malded tubulars fabricated with Du pont＇s renowned dielectric＂Mylar＂．Provides more rug ged，longer life service．Maintains excellent electrical characteristics of high temperature $\left(550^{\circ} \mathrm{C}\right.$ to $130^{\circ} \mathrm{C}$ ） Moisture resistance，non－inductive，and thermoset．Every－ one brand new and perfect．Buy plenty now at far less than you would usually pay for ordinary paper tubulars

| Mifd． | Size | Stock No． | Each | $\begin{aligned} & 10- \\ & 49 \\ & \text { Each } \end{aligned}$ | $\begin{aligned} & 50 \& \\ & \text { Over } \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ． 0001 | \％x1＂ | 18 A399 | 12c | 10c | 9c |
| ． 00025 |  | 18A589 | 12c | 10c | 9 c |
| ． 0005 | \％ $\mathrm{max}^{\prime \prime}$ | 18 A591 | 12c | 10c | 9 c |
| ． 001 | S他1＂ | 18A592 | ＋12c | 10c | 9 c |
| ． 002 | \％$\times 1$＂ | 18A594 | 12c | 10c | 9 c |
| ． 0022 | 561＊ | 18A595 | 12c | 10c | 9 c |
| ． 0047 | $8 / 8 \mathrm{ml} 1^{\prime \prime}$ | 18A605 | 12c | 10c | 9 c |
| ． 01 | 3／8×11／4＂ | 18A613 | 14c | 12c | 10c |
| ． 022 | 75x11／4＂ | 184621 | 14c | 12c | 10c |
| ． 05 | $1 / 2 \times 112^{\prime \prime}$ | 18A700 | 21c | 18c | 16c |
| ． 10 | 36x19＂ | 18A706 | 24c | 21c | 190 |
| ． 22 | 8／8x17／8＂ | $18 A 713$ | 30c | 25 c | 22c |
| ． 25 | 119x14＊ | 18 A714 | 36c | 30c | 27c |
| ． 50 | $8 / 4 \times 214^{\prime \prime}$ | 18A726 | 59c | 49c | 45c |
| KIT OF 36 |  |  |  |  |  |
| 3 each ．001，．002，．003，．0047； 4 each ．01，．022，．033，．05，．1， 25. All 600 volts． <br> 18C769．Per Assortment． |  |  |  |  |  |

MOST NEEDED SUB－MINIATURE ELECTROLYTICS


FOR TRANSISTOR AND OTHER MINIATURE CIRCUITRY
Best quality American made by top producer．Fully insulated tubular plas－ tic case．Axial leads．All 25 working volts DC．

| Stk．N | Mfd． | 5 For | 25 For |
| :---: | :---: | :---: | :---: |
| 18C285 | 5 | \＄1．48 | S6．76 |
| 18 C 286 | 10 | 1.48 | 6.75 |
| 18 C 287 | 25 | 59 | 6.85 |
| 18C288 | 50 | 8 | 8.96 |
| 18 C 291 | 100 | 1.88 | 8.95 |
| Kit of 15 of above： 3 each $5,10,25$ ， 50 and 100 Mfd ．All 25 V ．DC． No．18C296． <br> Special Per Asst． |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## REVOLUTIONARY NEW MALLORY PVC MYLAR CAPACITORS



Highly Reliable
NEW SPACE－SAVING SHAPE Moisture proof flexible blue polyvinyl will not crack，is unaffected by sol dering iron heat．

| Mfd． | Size | Ea． 10 Lots |
| :---: | :---: | :---: |
| ． 01 | $18 \times 3 / 8$ | .15 .12 |
| ． 05 | $1 / 4 \times 1{ }^{\frac{2}{8}}$ | .15 .12 |
| ． 1 | $8{ }^{9} \times 18$ | ．21．16 |




| .15 | .11 | .08 |
| :--- | :--- | :--- |
| .15 | .11 | .08 |
| .15 | .112 | .08 |
| .18 | .12 | .08 |
| .24 | .16 | .10 |
| .27 | .21 | .15 |

50 MINIATURE MYLAR CONDENSERS FOR TRANSISTOR RADIOS


LATEST UPRIGHT MOUNTING Fine import quality miniature Mylor by－pass upright mounting condensers os used in thousonds of small tran－ sistor rodios and other tiny devices． All 100 volts working．
Contains： 5 each ．1，．02，．04，． 001 ；
10 each ．01，．05，．005．
No． $17 C 525$.
$\$ 3.95$

## TUBULAR ELECTROLYTICS FOR PRINTED CIRCUITS

## REG．SI．17 JUST THE TICKET FOR PRINTED－CIRCUITS IN TV ETC．

50－30 Mfd；
Size $1 \times 21 / 4 "$
18 C 708. Ea．．
5

S0－50 Mfd．，
Size $1 \times 21 / 4$.
18 C 709 ．Ed．．．

| $75-30$ |
| :--- |
| Size $1 \times{ }^{\text {M }}$ |


75c
$\$ 3.29$

TWIST PRONG ELECTROLYTICS

EXTRA BIG SAVINGS!
39c
FAMOUS BRANDS
aluminum cans

| 450 W. V. DC |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Mfd. | $\begin{aligned} & \text { Size } \\ & \text { In. } \end{aligned}$ | Stock No. | Each | $\begin{gathered} 10 \\ \text { Each } \end{gathered}$ |
| 20-20 | $1 \times 3$ | 188778 | \$1.09 | \$ 0.99 |
| 30-30 | 13682 | 184920 | 1.39 | 1.25 |
| 40-40 | 13\%83 | 188779 | 1.59 | 1.39 |
| 20-20-20 | $11 / 6 \times 2$ ! 6 | 184931 | 1.49 | 1.33 |
| 40-40-40 | $1318 \times 31 / 2$ | 18 A932 | 1.99 | 1.75 |
| 80-40-20 | 13 - ${ }^{3} 4$ | 18 A933 | 2.19 | 1.89 |

2000 Mfd @ 15 V . Size $13 / 8 \times 2^{\prime \prime}$.
 18C858. Ea. 39c 10 Lots Eo...35c 500-500 Mtd. @ 18 E864 in 18C864. Ea..49C. © 16 V . Size $13 / 8 \times 13 / 4^{\prime \prime}$. 18 C 857 . Eo.. 49 c 10 Lots Ea...44 c $18 \mathrm{C857}$. Eo...49C 50 V . Size $15 / 8 \times 33 / 4^{\prime \prime}$ $1500-500 \mathrm{Mfd}$ @ 50 V . Size $15 / 8 \times 33 / 4$ c 18 L 866 . Ea... 59 c 10 Lots Ea... 49 c 120 Mfd . @ 150 C . Size $1 \times 23 / 4$ 188690. Eo... 49c 10 Lots Ea...44c 100-100 Mfd. @ 150 . Size $1 \times 21 / 8$ 18C785. Ea.. 59 c 10 Lots Ea... 49 c 180 Mfd.@450 Ea.. 49c 10 Lots Ea.. 44c 18B775. Ea..49c 10 Lots Ea..44c
$40-40 / 10 \mathrm{Mfd}$. @ 450 V. $/ 25$ V. Size 18 A36 18A369. Ea...69c 10 Lots Ea.. 59c $80-4-4-200 \mathrm{Mfd}$; @ 475-450-450-25
V. Size $1 / 8 \times \times^{9}{ }_{16}$. 18B689, Ea...69c 10 Lots Eo.. 59 c HIGH CAPACITY LOW VOLTAGE KIT For Solid State Equipment


Ten assorted high copacity-low voltage single and multiple sections. Lotest cuits or replacement use. Includes some of obove plus ather real good useable sizes. All brand new-worth several times our low price
No. 188404 .
$\$ 2.95$
Socecial per Assortment.
5000
VOLT
5000 VOLT FILTER
HIGH CAPACITY-
$\$ 495$
SIMILAR RATED UNITS COST OVER \$35.00
New production surplus from modern spoce oge projects. Very small size for voltage ond capacity HV supply on high capacity filter for HV supply on
iinear RF power amplifiers. Exact capocity stamped on each. Shpg. wt. 2 lbs.
3.6 Mfd. @ 5000 V . Case only $21 / 4 \times$ brackets otrached do sides.
No. 18 c889. Special Eoch..

GENERATOR FILTER

.5 Mfd . @ 250 Valts far auto radios Metal encased with insulated lead.



HUGE SAVINGS ON RESISTORS!

 Net Each.
s 100 For
.$\$ 4.95$
$\% 100$ For

Minimum of 10 per value
Kit of 100 of obove: Consists of $75-1 / 2$ watt and $25-1$ watt in most popuNo. 158908 . Special Per Asst.
$\$ 4.95$


| 5 | 100 | 500 | 3000 | 20,000 |
| :---: | :---: | :---: | :---: | :---: |
| 10 | 150 | 1000 | 5000 | 25,000 |
| 20 | 200 | 2000 | 10,000 | 50,000 |
| 50 | 300 |  |  |  |


| No. 26A121 | Net Eg. | 10 Ea. |
| :--- | ---: | ---: |
| 5 to 5000 Ohm | $\$ .44$ | $\$ .39$ |
| $10,0000 \mathrm{hm}$ | .54 | .45 |
| 20,000 Ohm | .59 | .49 |
| 25,000 Ohm | .64 | .53 |
| 50,000 Ohm | .71 | .59 |
| (1) 20 WATT FIXED- $2 \times 7 / 16^{\prime \prime}$ |  |  |


| (1) 20 WATT FIXED- $2 \times 7 / 16^{\prime \prime}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 5 | 100 | 500 | 5000 | 20,000 |
| 25 | 200 | 1000 | 10,000 | 40,000 |
| 50 | 300 | 3000 | 15,000 |  |
| No. 264122 |  | Net Ea, | 10 Eo. |  |
| 5 to 5000 Ohm | $\$ .58$ | $\$ .48$ |  |  |
| 10,000 to 40,000 | Ohm | $\mathbf{8 9}$ | .59 |  |
| (2) 10 | WATT ADJ. | $-13 / 4 \times 5 / 16^{\prime \prime}$ |  |  |
| 10 | 50 | 500 | 1500 | 5000 |
| 25 | 100 | 1000 | 3000 | 10,000 |


| No. 26A125 <br> 50 to 5000 Ohm <br> $10,000 \mathrm{Ohm}$ <br> $25,000 \mathrm{Ohm}$ <br> 50,000 Ohm | Net Ec. 10 Eo. <br> $\$ 1.39$ S 1.16 <br> 1.46 1.22 <br> 1.72 1.43 <br> 1.80 1.50 |
| :---: | :---: |
| (2) 100 WATT | ADJ. $-61 / 2 \times 3 / 4^{\prime \prime}$ |
| $10 \quad 100 \quad 1000$ | 10,000 50,000 |
| 505005000 | 25,000 100,000 |




## IRC AXIAL-LEAD POWER WIRE-WOUND RESISTORS



Please specify Stk. No. and resistonce volue.

| 1 | 25 | 250 | 2000 | $10,000 \%$ |
| :---: | :---: | :---: | :---: | :---: |
| 5 | 50 | 500 | 3000 | $15,000 \%$ |
| 10 | 100 | 1000 | 5000 | $25,000 \%$ |

5 WATT Ea.. $268 \quad 10$
$26 A 135$. Each.. 19 Precisely wound element seoled in ce- 26
ramic case with axial wire ieads for
speedier installation. Campact size 10
perfect for use in tight spaces. Can 10
be installed flat against chassis and 26
2 or more stacked. Tolerance $10 \%$. 100 Precisely wound element seoled in ce- 26
ramic case with axial wire ieads for
speedier installation. Campact size 10
perfect for use in fight spaces. Can
be installed flat against chassis and 26
2 or more stacked. Tolerance $10 \%$ Precisely wound element seoled in ce- 26
ramic case with axial wire ieads for
speedier installation. Campact size 10
perfect for use in tight spaces. Can 10
be installed flat against chassis and 26
2 or more stacked. Tolerance $10 \%$. 100 Precisely wound element seoled in ce- 26
ramic case with axial wire ieads for
speedier installation. Campact size 10
perfect for use in tight spaces. Can 10
be installed flat against chassis and 26
2 or more stacked. Tolerance $10 \%$. 100


MAlloa
VITREOUS ENAMELED WIRE-WOUND RESISTORS In most needed resistance values. Finast quality resistors wound on mil
grade steatife forms. Silver soldered
connections between wire and lug.

Please specify Stk. No. and resistance. (2) 25 WATT ADJ, $-2 \times 9 / 16^{\prime \prime}$ | 5 | 100 | 1000 | 5000 | 15,000 |
| ---: | :--- | :--- | :--- | :--- |
| 25 | 300 | 2500 | 10,000 | 25,000 |
| 50 | 500 |  |  |  | No

5 to
No. 26A124 Net Ea.
5 to 5000 Ohm

10,000 to | (2) 50 WATT ADJ. $-4 \times 9 / 16^{\prime \prime}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 50 | 500 | 2000 | 5000 | 25,000 |
| 100 | 1000 | 3000 | 10,000 | 50,000 |

## VELVET-SMOOTH

 VOLUME CONTROLSSmoothest action volume controls we have seen. Highest quality American made. Popular compact size only t/"
dia. Universal flotted $3^{\prime \prime}$ shaft, easily dia. Universal flatted $3^{\prime \prime}$ shaft, easily cut to desired length. Fine for replocement or construction. Lineor
taper. Switch rating 3 amp (@) 125 V

| Ohms Resistance 50,000 100,000 $1 / 2$ Meg 1 Meg |  | Less Switch$\begin{array}{cc} \text { Each } & 10 \text { Lots Ea. } \\ \$ .49 & \$ .44 \\ .49 & .44 \\ .49 & .44 \end{array}$ | With SPST Switch <br> Stk. No. <br> Each 10 Lots Ea. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Stk. No. |  |  |  |  |
|  | $18 \mathrm{C432}$ |  |  |  |  |
|  | 18 C 433 |  |  |  |  |
|  | 18 C 434 |  | $18 \mathrm{C442}$ | \$.79 | $\$ .89$ |
|  | 18 C 435 |  | $18 \mathrm{C443}$ | . 79 | 69 |

## MOST NEEDED PARTS

## ALL ARE BRAMD MEW! fULIY GUARAMTEED!

## SAVE ON MALLORY VIBRATORS FRESH STOCK! <br> ${ }^{5}{ }^{29}$

3 types to cover most replacement needs ot o sub-
stantial saving


Stondard 4 Prong-Replaces Mallory 294, 859, 901 M ; Radiart 5300, 5301,
 3 Prong - Replaces Mallory G874/ G883; ATR 1343; Delco 8550; Radiart 6330, etc. $\$ 29$ 10 Lots, $\$ 1919$
Nó. 198206. 4 Prong Replaces Mallory G859; ATR 1340, 1344 ; Radiart 6326, etc. No. 19B204. \$ $29 \quad 10$ Lots, $\$ 1919$
Eoch. . . . .


500 MA SELENIUM RECTIFIER
High density. 130
RMS rating, 380
maximum peak inverse roting.
17B1101. Ea. ....99c
BATTERY CHARGER KIT


Amozing low price! Top quality parts to build a compact, dependable charger for 6 or 12 valt batteries. For or similar transformers of your choice. Kit Contoins 4-2 amp stud mtg. rectifiers, hdwe. kits for rectifiers, $3 x$ No. 41 B48
Special Eoch
$\$ 2.00$
MINIATURE VARIABLE VOLTAGE POWER SUPPLY KIT


Operates Transistor devicess such as pocket radios from
A truly miniature power supply perfect for operating transistor devices such as radios, code oscill lotors, pre-amps, ond experimentol devices from 110 V. AC. Continuously variable O-12 V. DC. Excellent for hand wired or printed circuits. Provides O-12V.DC @ ${ }^{6}$
$M A, 0-9 V D C @ 10 M A$. Hum
 former- size only $13 / 3 \times 7 / 10 \times 1 / \mathrm{s}^{\prime \prime}$ H., minioture full wave bridge rectifier, 2 miniature condensers,
miniature pot ond diagram. No. 3C128.
Special Each
$\$ 3.95$

EXPERIMENTERS AND BUILDERS


## ALL ARE

 brand mewt fuLLY gUARAMTEED!
## CHASSIS MOUNTING

 AC SOCKETS

Fits standard AC plugs. Fine for repoirs or new construction. Mounts in ${ }^{7}{ }^{\prime \prime} \times 3 / 4$ hole. Mig. etrs. $11 / 8$


TWO-WIRE
JIFFY CONNECTOR


Handiest ever for quickly ottaching and removing speaker leads, 115 V . trical and electronic movices for elec: the auto electronic devices around the auto, shop, etc. Consists of top male and female polarized plugs male with $15 \%$ stranded size 18 plugs Sol thile 23 C lop 19 C
2-WIRE Midget AC LINE CONNECTOR SET


Perfect and handy for extending AC cords, speaker leads, etc. Smoll tive connection. Import savings No. 17 A75 Per Set.

24 c sat. 99 C
SAVE ON GE NE2A NEON LAMPS


Extremely popular $1 / 25$ watt bulb as used for pilot light ossemblies, volume level. indicators. Unbased, long. Requires 200,000 ohm series resistor for 105-125 V. Operation



SAVE ON THESE ALWAYS NEEDED TUBE SOCKETS aLL ARE TOP BRAND, FINEST QUALITY, AT LOWEST PRICES ANYWHERE

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | PRICED BELOW |  |  |  | MANUFACTURER'S R |  |  |  |  | REGULAROEM |  |  |  |  |  |
| Stock No. | Fig. | Pin | Insul. | Mig. Hole | Mtg. Ctr. | Each | $\begin{gathered} 10 \\ \text { Each } \end{gathered}$ | $100$ <br> Each | Stock No. | Fig. | Pin | Insul. | Mitg. Hole | Mitg. Ctr. | Each | $\begin{aligned} & 10 \\ & \text { Each } \end{aligned}$ | $\begin{aligned} & 100 \\ & \text { Each } \end{aligned}$ |
| $18 \mathrm{B668}$ | 1 | Octal | Bakelite | 14" |  | . 12 | . 11 | . 09 | 17870 | 5 | 7 Min . | Ceramic | 8/8 | $7 / 8^{\prime \prime}$ | . 28 | . 24 | 20 |
| 18 C 210 | 2 | Octal | Bakelite | 11/8" | 11/2" | . 08 | . 07 | . 06 | 18C894 | 4 | 9 Min. | Bakelite |  | 11/8" | . 11 | . 10 | . 08 |
| 188159 | 2 | Octal | Mica | 11/8" | $11 / 2^{\prime \prime}$ | .11 | . 10 | . 07 | $18 \mathrm{B456}$ | 4 | 9 Min . | Mica |  | $11 /{ }^{\prime \prime}$ | . 12 | .11 | . 09 |
| 188677 | 3 | Octal | Bakelite | 14." | $15.8{ }^{\prime \prime}$ | . 15 | . 14 | . 12 | $18 \mathrm{B652}$ | 5 | 9 Min . | Mica |  | 11\%' | . 19 | .17 | . 15 |
| 184832 | 3 | Octal | Ceramic | 1颜" | $18 / 8$ | . 29 | . 24 | .15 | 188487 | 5 | 9 Min . | Ceramic |  | 11\%" | . 28 | . 24 | . 20 |
| 18C893 | 4 | 7 Min . | Bakelite |  | 7/8" | . 08 | . 07 | . 05 | 18A1083 | 6 | 7 Min . | Wafer |  | $1^{\prime \prime}$ | . 07 | . 05 | . 04 |
| $18 C 639$ 188653 | 4 5 | 7 Min . | Ceramic Mica |  | $7{ }^{7 \prime \prime}$ | . 12 | . 10 | . 08 | 18B455 | - | 9 Min . | Wafer |  | 118" | . 08 | . 06 | . 05 |

MINIATURE SOCKETS With SNAP-ON SHIELDS


Low loss isolantite ceramic with shield base and snap-on ploted metal shield with hold-down spring. 7-pin shield 7-Pin Socket 6 Shield. Reg. Net 44 c No. 178273
Net Eoch. 395
10 Lots 29 9-pin Socket \& Shield. Reg. Net 520 No. 18 C206. Ea. . 39 c c 10, Eo. 33 c LOOK AT THIS SAVING! RF CHOKE

## OCTAL PLUG AND SOCKET SET



RATED 21/2 MN 125 MA
Popular four pie type for use in high frequency circuits of receivers ond transmitters. Reploces Notional types
R50 and Rioo. Small size R50 and R100. Small size, only 1 x $x$
ti" dia. with axial leads. Humldity th" dia. With oxial leads.
proof vornish impregnoted.
No. 18842.
Net Each.. 446 Each... 396

## BIG SAVINGS

TYPE 47 PANEL LAMPS


Fine quality import

DIALCO PILOT LITE ASSEMBLY FOR GE
NE51 NEON LAMPS


Latest styling with $1 / 2^{\prime \prime}$ plastic dome lens. Built-in resistor for use with NE5 1 and NE5 IH bulbs on 105-125 V. Mounts in $11^{\prime \prime}$ hole. Requires $111^{\prime \prime}$ depth. Solder lugs. Less bulb. Rated 75 W . UL listed Type 132-2708 - 991. Specify - Red, Amber, or Clear.
 GE TYPE NE51 BULBS 16B170. NE51. Ea. 20c 10 Ea. $16 e$ 16A150. NESIH. Ea. 22 c 10 Ea . 18 c


SEMI-MIDGET
365 MMF VARIABLE CONDENSER


Top quality, all brass and aluminum construction with smooth action boll bearings. $1 / 4^{\prime \prime} \times 48^{\prime \prime}$ lang shaft. Convenient ponel or base mount. Size



DUAL 365 MMF VARIABLE CONDENSER

## $\$ 119$



Beautifully made with boll-bearing rotor and built-in trimmers. Size only extends $7 / 8^{\prime \prime}$. For tuned radio frequency, erystal, transistor and experimental circuits. Shpg. wt. $1 / 2 \mathrm{lb}$. No. 18B483. S1 $19 \quad 10$ Lots,
Eoch.....

## PROFESSIONAL STYLE EQUIPMENT KNOBS

 Beautifully made, will really dress up equipment. Skirted, $1 \frac{1}{8}^{7}{ }^{\prime \prime} \mathrm{D}$. with white filled 0 to 10 marking. and No. 17 A672. $29 E 10$ Lots, 355 Un-numbered, white pointer on skirt. No. 17 B674. Block or Gray..... 39 c SAVE! LAST YEAR'S PRICES SLASHED NATIONAL EQUIPMENT KNOBSMolded of glossy durable silver-groy hove bross shaft inserts and two Allen hex serews to fit a $1 / 4$ shafts. Boy plenty
while they lost of a fraction of regulor while
cost.

| Stk. No. | Description |
| :--- | :--- |
| 18 B549 | $13 / 4^{\prime \prime}$ Dia. Round |
| 18 B547 | $21 / 4^{\prime \prime}$ Dia. Round |
| 18 B55 | $210^{\prime \prime}$ Dio. Skirted |
| 18B552 | $11 / 4^{\prime \prime} \times 13 / 4^{\prime \prime}$ Spinner |
| 18 B550 | $13 / 4^{\prime \prime} \times 2112^{\prime \prime \prime}$ Spinner |
| $18 B 548$ | $21 / 4^{\prime \prime} \times 3^{\prime \prime}$, Spinner |

 $\begin{array}{ccc}\text { WITH POLISHED CHROME INLAYED IN CENTER OF TOP } \\ \text { Stk. No. Size Each } & \text { Set }\end{array}$



BIG IMPORT SAVINGS

## TOGGLE SWITCHES

 SPDT-CENTER OFFReally small size - only $1 / 2^{\prime \prime}$ square. With 10 amp current rating. Specia impart saving.
17 A372.
$\$ 6910 @ \$$
155 Special Each.

lytic Capocitors. Extr
with plastic sleeve.


MINIATURE 365 MMFD TUNING CONDENSER
For radios and crystal sets. Regular $1 / 4$ " shaft exiends $3 / 4^{\prime \prime}$ to take any knob. Only
$11 / 2^{\prime \prime}$ square $4^{\prime \prime}$ deep. $11 / 2^{\prime \prime}$ square $\times 1 / 2^{\prime \prime}$ deep.
No. 17896 . Special Net Each

YOU SAVE $\mathbf{S S S}$ BARAITS

EXPERIMENTERS AND BUILDERS

ALL ARE
BRAMD MEW!
fully guaranteid!

## POPULAR MIDGET

"APC" VARIABLE


* With Red Pointer Line


## GENUINE "K-TRAN" <br> IF TRANSFORMERS

Universal input or out-
put
permeput, permeability tuned
from top and from top and
bottom. Silbottom. Sil-
ver mica copacitors, low loss base, oluminum cans, 4 lugs. Only $21 / 8^{\prime \prime}$
$3 / 4^{\prime \prime} \mathrm{Sq}$. 3/4" Sq.
No. $18 \mathrm{~A} 87-455 \mathrm{KC}$. $18 \mathrm{~A} 88-262 \mathrm{KC}$.

25 Poir, Each
POWERFUL RADIO LOOPSTICK ANTENNA

## Improves performance of small radios

 by taking place of inefficient ald loops and antenna hanks. Easy to infor building small radio receivers. $1 / 2^{\prime \prime}$ $\times 21 / 2^{\prime \prime}$. Very well made.

PAIR OF SLUG-TUNED 456 KC MIDGET IF'S
 OVER $\$ 2.00$ VALUE
 Universal input or output. Alwoys Compact size $3 / 4^{\prime \prime}$ sq. $\times 2^{\prime \prime} \mathrm{H}$. Per meability tuned from top and bottom Alum. shield, low loss insulation, lugs. With mtg. clips. Imported of Greot Savings. 99 c ADJUSTABLE SLUS TUNED


SPECIAL VALUE IMPORT

| Stk. No. | Mox. Min. <br> Mmf. Mmf. Eoch |  |  | $\begin{gathered} 10 \text { Lots } \\ \text { Each } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| 82 | 17 |  | \$.39 | 5 |
| ${ }_{188680}^{188101}$ | $\begin{array}{r} 180 \\ 8 \\ 8 \end{array}$ | 8 | . 99 | 4 |
| 178267 |  |  |  |  |
| 188681 | (3) 140 | 7 | $1:$ | 9 |

(1) is screwdriver odjustment type.
(2) has standard $1 / 4^{\prime \prime}$ shaft.

## VELVET SMOOTH

 VERNIER DIALS

COMPARE WITH DIALS SELLING FOR OVER $\$ 4.00$ Planetary drive ratio 8 to 1 in $180^{\circ}$ counter clockwise. Brushed silver dial with deep-etched black-filled marking molded black phenolic. Surface mounting for $1 / 4^{\prime \prime}$ shoft. Fine quality import
No. 7C269. $11 / 2^{\prime \prime}(36 \mathrm{MM})$ diameter
 No. 17C274. 2" (50MM) diam er. Special Each
$\$ 1.59$
$\$ 1.39$ 4 Lots, Eoch. $\mathrm{B}^{\prime \prime}$ i70 MMi diameter No. with vernier to read $1 / 10$ scale division. Each. $\$ 2.394$ Lots, Eoch.. $\$ 2.19$ SLUG TUNED CERAMIC COIL FORM WITH SHIELD

OVER
$\$ 1.00$

## 36c

Ceramic form $1 / 2^{\prime \prime}$ dia., $1 / 8^{\prime \prime}{ }^{\prime \prime} \lg$. Comes already wound with 2 close-coupled coils



## BIG GRAB-BAG OF PARTS



Brand new top quality components easily removed. Perfect for experi menters, builders, etc. Over 200 of the most frequently used resistors, condensers, diodes, RF chakes, tube sackets assembled on slotted terminal strips... takes just o touch of the soldering iron to remove and use Better buy plenty of this terrific parts value!
No. 188262. Grab-Bag of Parts.
$\$ 1.88$

## (日) YOU SAVE SSS Q MA LEATAS <br> SWITCHES <br> ALL ARE BRAND NEW! fULLY GUARAMTEED!

H\&H LOCK SWITCH 99 c

Mandy for preventing unouthorized pperation of any electrical equipment. Fine for alarm systems, door openers, fixed and moblle transmitting equipment, etc. SPST. Rated 3 amp @ 250 V., 6 amps @ 125 V. 15" dio.
 U.L. approved. With one key.
No. 18A943. Special Eoch. ... No. 18A944. Extro Key. Each... 16 c

BAT HANDLE TOGGLE SWITCHES BARGAIN PRICED!

hank solder the No ,

| Stk. No. | Action | Fig. | 125 V . | 250 V . | Net Each | 10, Ea. | Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $18 \mathrm{B290}$ | SPST | 1 | 6 | 3 | \$0.48 | \$0.40 |  |
| $\begin{aligned} & 18 B 673 \\ & 18 A 21 \end{aligned}$ | SPDT | 1 | 3 | 1 |  | S. 50 | - 0.30 |
| 18425 | DPDT | , | 3 | 1 | . 76 | - 68 | . 57 |
| 18 D 175 | SPST | 2 | 20 | 10 | - 79 | -78 | - 6 |
| 18B22 | SPDT | 3 | 15 | 10 | . 68 | -78 |  |
| 18 D 170 | DPST | 3 | 15 | 10 | . 77 | .48 | 98 |
| 18 D 176 | DPDT** | 3 | 15 | 10 | . 89 | .77 | . 63 |

## SALE PRICE

## CARLING SPST TOGGLE

SWITCH WITH WIRE LEADS Compact, bakelite enclosed with two $2^{\prime \prime}$ wire leods. UL approved. 6 amp @ 125 volts $38_{2}^{2}$ dia. $\times 1 /$ " $^{\prime \prime}$ long mtg. shank.
No. 18 A574.


SUB-MINIATURE 10-AMP TOGGLE SWITCHES Perfect for miniature equipment. 10 amps @ $125 \mathrm{~V} . \mathrm{AC}$. Mtg. shank $3_{3}^{3}{ }^{\prime \prime}$ $\times 3 / 8^{\prime \prime}$ long. Hardwore included. 17A25.SPDT. 119 LoLs, $\$ 108$ WITH Spec. Each... 1 Each... 108 HANDLE


POPULAR BAT HANDLE DPDT TOGGLE SWITCH Bakelite encosed. Chrome on-off plate Rated 3 amp @ 125 V. $\frac{1}{2}{ }^{\prime \prime}$ dia. $\times 3 / 8$ No. 17B439. 45
Eoch...... 10 Lots, 36
Eoch. . DPDT TOGGLE SWITCH CENTER OFF


Bot handle, bakelite case, red and black on-off plate. Screw terminals. Roted 3 amp @ 250 V., 6 mp @ 125 V. Quality import. No. 17C249.
Each...... 685
Each., 555 TOGGLE SWITCH PLATES. Nickel ploted steel with on-Off markings. Use with stondord ${ }^{\frac{3}{2}}{ }^{\prime \prime}$ dia. mount ing shafts.
12A785. 5c 10 For 30 c

ROCKER SWITCHES


Right up-to-date . . . same as used on latest hi-fi equipment, intercoms, test instruments, appliances, etc. Compoct and rugged, exceptionally reliable. Offpanels with octuated portion of molded black knob recessed. Mounts on 15 , ceniers, extends $11 / 4$ " behind panel with solder lugs. All Americon made by Stackpole. 3 position.

| Stk. No. | Action | Each $10 @$ Ea. |  |
| :--- | :--- | ---: | ---: |
| 180510 | SPST | $\$ 0.39$ | $\$ 0.88$ |
| $18 D 511$ | SPDT | .41 | .85 |
| 180512 | DPDT | .48 | .45 |
| 180513 | DPDT* | .59 | .54 |

## DOUBLE ROCKER



Lots of uses for this versatile switch. One side SPST, other SPDT. Center terminals can be cut apart for individual witching of voltoges, audio circuits etc Mounts on $13 / 4^{\prime \prime}$ centers. Switch knobs and body $11 / 4 \times 11 / 4 \times 11 / \mathbf{N}^{\prime \prime}$. 5 amp @ $125 \times 31 / 4 \times 1 / 250$ D. Roted ged Cutler Hommer construction. Rug No. 184581.
Special Eoch. . 39 P 10 @ ${ }^{2}$ Each. 35 228

BIG SAVINGS! MICRO AND ACRO SNAP-ACTION SWITCHES MICRO SNAP-ACTION MINTATURE SWITCH


Ultra small V-3 type. Handles large electrical loads and resists vibration $10^{1} \times{ }^{7}$ amps @ 125 or 250 V git $\times 7 / 8 \times 1 l^{\prime \prime} \cdot$ Insulated plunger travels
$.047 / 0 . \mathrm{T} . .031^{\prime \prime}$.
No. 18 C 256
Special Eo.. 9 F $\quad \begin{aligned} & 10 \text { Lots, } 395 \\ & \text { Each... }\end{aligned}$
MINIATURE MICRO ROLLER LEAF SWITCH


Versatile SPDT contacts. Bakelite case $3 / 8 \times 5 / 8 \times 11 / 8^{\prime \prime}$ long. Serew terminals. Removable mounting bracket. Rated
10 amps @ 125 volts Micro V3-67 10 amps @ 125 volts. Micro V3-67. $\left.\begin{array}{l}\text { No. 18A523. } \\ \text { Special Each }\end{array}\right\} \quad 10$ Lots, 84


SPST normally open, momentary con tact. For all sorts of miniature AC battery powered DC devices
Molded insulated housing and red button. Solder terminals. Really small, only $3 / 8^{\prime \prime}$ dia. $\times 1$ " long over import at less than $1 / 2$ usual cost. No. 17 C333
Net Each... 35 Eoch. 10 Lots, 29 Every Item NEW, TOP QUA

##  <br> PLUNGER TYPE

 DOOR SWITCHNormally closed, SPST like used on appliances, cabinet doors, burglar alarms, etc. Installs on any door or Insulated case $1+\frac{3}{8} \times 5 / 8 \times 5 / 9 \%$ screws. proved. Rated 15 amps @ 125 V . No. 18 B770
Special Ea... 58 E Lots 29 E 100 Lots, Each

## PLUNGER TYPE SPDT

Type 1PLI. UL.15A @ 125 V. Lug No. 18 Cl 93
Special Ea.... 49 E 10 Lots 4 Eoch... 45

SPST LEAF TYPE SNAP-ACTION SWITCH



Curved arm actuator functions same as popular roller type. SPDT, 15 amp @ 125 V . Screw terminals with lugs.
Micro $B Z-2 R M 37$. No 18C360 No. 18 C360. 99 S 10 Lots, 915
Spec. Each. SPST-Normally Closed. Has short lever type actuotor 15 amps @ 125 RWi3. Screw terminals with lugs. WZ-
 POPULAR MICRO SPDT ROLLER LEAF SWITCH


A real "rare find" ages this popular switch is first time in of a bargain price. Long life roller actuator with extended overtrovel. Bakelite enclosed with, screw terminals, sixe $1+8 \times 17 x$ $11 / 2^{\prime \prime} H$ Rated 15 A.@ 125 V. AC. Type BZ-2RW822.
 Special Each . Each. . .
100 Lots Each. . . . . ........ $\$ 1.10$


U/L approved. 3A @ 125 V . SPST normally closed circuit. Turns on light or other signal when door is snap-in mtg . in $34^{\prime \prime}$ hole. $13{ }^{\prime \prime}$ Mo $10{ }^{3} \mathbf{B}^{\prime \prime}$ No. $18 \mathrm{C402}$
Special Ea.. $39-\quad 10$ Lots, 355
Each. .

Popular hard-to-find leaf actuator type. Bokelite enclosed with quick connect terminals. Leaf $2^{\prime \prime}$ long pro versatility. Rated 15 amps@ 125 V Unimax WLL76-Y. Normally open. No. 188569.99 E 10 Lots, 901
Spec. Each. 99

## SLIDE SWITCHES



Small with black bakelite slide han dle. Solder lugs. 1 bomp @ slide honStock
No. Action Each $10 @ 100 @$
$18 A 534$ SPST 10 c

 | 178390 | SPDT |  |  |
| :--- | :--- | :--- | :--- |
| 178403 | DPST | 14 c | 9c |
| 18 c | 8 c |  |  | 188802 DPDT 15c 12c 10c



## TELECHRON CLOCK-TIMER

"Full feature" switch mechanism as used on many clock radios. for building in or adding to existing equipment. Heavy duty clock controlled switch handles up to 15 amperes 115 V . AC, tuming "on" at any preset time up to 11 hours later. Circuit remains "on" until furned "off" manually. Also has separate "sleep" switch timer for "on" operation of switch controlled circuit up to 60 minutes, then automatic "off". Manual control also operates switch independently of either timer allowing "on" or "off" when desired.
Has two front timer control knobs plus rear knob for time and alarm set. Rear shaft extends $41 / 2^{\prime \prime}$ from front mounting surface. Clock face has black background, white hands and hour morkings, no numerals. Size $35 / 8 \times 2 \times 17 / 8^{\prime \prime}$ behind ponel 115 V .60 cy . AC powered. No. 18B110. Special Each..
$\$ 3.49$
BIG SAVINGS ON MERCURY SWITCHES

MINIATURE
MERCURY SWITCH


SPST normally "on" or "off". Slight tip sends mercury to other end for silent operotion. $\quad$ Only ${ }^{\prime \prime}$. Wia. $\times 1 / 2^{\prime \prime} \mathrm{L}$. Wire leads No. 18 c224
Special Each. 695
10 Lots 596

## HI-CURRENT HONEYWELL

 MERCURY SWITCHESRated conservatively 10 amps 115 V . AC. $5 / 8^{\prime \prime}$ dia. $\times 21 / 2^{\prime \prime}$ long. $8^{\prime \prime}$ wire leods. SPST for timers, relays, flash


MAGNETIC REED MERCURY SWITCH


## 59 c

spst

GREAT
EXPERIMENTERS ITEM

Mercury pool contact handles .9 amps . Internal magnetic reed controlled by permanent or electric mognet (not velope causes reed to make or breok velope causes reed to make or break contact. Excellent for experimenters. Removed from new equipment. $1 / 2^{\prime \prime}$ Removed "rom new equipment. ${ }^{2}$. SPST, Normally Closed
 Eoch

NEW MAGNETIC PROXIMITY SWITCH
CIRCUIT CLOSES WHEN MAGNET APPROACHES SWITCH actuates from magnetic field no mechanical contact required


An exciting new concept of proximity
switching at a tremendous saving.

## USED FOR

Alarm Systems. Limit switch. - Rotational counting. Liquid lovel. High speed communicator. - Door ar window wiok and many fians. Nine suggested applicetions with diagrams supplied.

Hermetically sealed glass tube contains precious metal contacts rated 15 wotts Max. 1 amp or 250 volts AC. Measures $2^{\prime \prime}$ long, ${ }^{\circ}$. diameter with $5 / 8$ leads. Magnet it $\times$ is" $^{\prime \prime}$ square. Both easy to mount because of small size and weight.
$\$ 1.95$
with $3 / 4^{\prime \prime}$ wire leads MINIATURE PROXIMITY SWITCH. Only $3 / 4$ " long, $3^{32}$ " dia, with $3 / 4$ wire leads
 No. 17B389. Special Eoch


LIGHT SENSITIVE PHOTO CELL AND RELAY

The two basic components, a high quality extra sensitive relay and a light sensitive cell ...plus circuit diagrams for building useful and interesting devices . . day-night control of lights or other electrical equipment, Might actuated burglar alarm and remote control TV "Commercial Killer. Mony other uses will suggest themselves to the experimenter and engineer. Fine for production or traffic, caunters, door openers, etc. Tiny glass $1 /{ }^{\circ} \mathrm{H}$ has SPDT 1 ampere contacts. Completed control Operates on 115 V . AC. No. 17 A609.
Soecial Light Cell and Relay
$\$ 3.97$

DPDT SUB-MINIATURE MICRO-SWITCH


Tiniest we hove ever seen. Has roller ype leaf actuotor, 5 A. contacts, tur ret solder terms. Size $13 \times 1 / 2 \times 9{ }^{\prime \prime}$ Reg. $\$ 3.34$ volue
No. $18 \mathrm{C102}$
$139 \begin{aligned} & 10 \text { Lots } \\ & \text { Eoch }\end{aligned} 19$


## MOMENTARY

## SPRING RETURN

## SWITCH

SPST normally closed. Rated $3 / 4$ amp. at 125 volts. Popular panel mount bakelite push type. Well insulated. Mounts in $\$ 5^{\prime \prime}$ hole in panels up to
$5 / 8^{\prime \prime}$ thick.
No. 178391. Spec. Ea. 10 Lots Eoch.


ROTARY SWITCHES


1 POL. 8 POS. SHORTING Use for switching oudio circuits without noise. Also hundreds of other applications. $13 / 8 \times 11 / 8^{\prime \prime}$ wofer, ti" depth. Mounts in $3 / 88^{\prime \prime}$ hole. $1 / 4^{\prime \prime}$ shaft



3 POL. 3 POS. CERAMIC Wide $60^{\circ}$ indexing and ceramic insulation, minimizes, RF losses. Non-short, ing. $2^{\prime \prime \prime}$ dio. $\times 1^{\prime \prime}$, depth. Stondard $1 / 4$



Noise-free, continuous rotating; no stops, detents or pigtails. Adjacent points shorted as switch is rotated. Dia. $21_{1}^{16}$ $1 / 4^{\prime \prime}$ shaft, std. $3 / 8^{\prime \prime} \mathrm{mtg}$. bushing. $\left.\begin{array}{l}\text { No. 18C503. S } \\ \text { Special Each } \\ \text { Each.. }\end{array}\right\}$ bincatis

## TIMERS AND SWITCHES

## ALL ARE BRAND MEW! fULIY GUARANTEED!

## TOP QUALITY FOOT CONTROL SWITCH



FINEST QUALITY—MADE FOR COMPTOMETER
Fine for remote control of tape recorders ham gear, photo devices, etc. Two SPDT10A.@ $125 \mathrm{~V} . \mathrm{AC}$ micro switches operate in a 2-step sequence as pedal is depressed. Grey wrinkle finished steel cose, rubber tread, 6 ft . Belden cable. Originally made for comptometer. Special Eoch. 2,18

## HAND-OPERATED

 REMOTE CONTROL SWITCH

Excellent for remate control applications. $11 / 8^{\prime \prime}$ dio. $\times 21 / 4^{\prime \prime}$ sturdy bakelite encosed switch is specially designed for hand-held operation, or may be pone maunted if desired. Unique switching arrangement permits SPST operation of two circuits with switch orm common to both circuits. Contacts are normally open. Complete with 20 ft . 2 -conductor plastic covered cable. Has cable clamp and screw terminals. Terrific volue. No. 188410.
Complete.... 695
$10 @$
Eoch. 55C

4 PDT LEVER SWITCH


Positive acting for oudio switching speokers, telephones, model railroads etc. Rated 3 omp @ 120 V .2 serews on front for mounting. $21 / 8$ 5/8" behind panel spoce
No. 17C120. Import Special
99c

## (Q) YOU SAVE SSS Dincaits <br> hobbyist FINDS <br> ALL ARE <br> BRAND NEW! fully guaramterd!

LIGHT SENSITIVE PHOTO CELL


Tiny glass enclosed cell, $f \times 11 /^{\prime \prime}$ dia. Cell resistance changes with light. Operates sensitive AC relay without amplifier. Interesting and practical circuits included. S9(
No. 20A22. Spec. Ea......

## BIG BARGAINS FOR MODEL RACING CAR HOBBYISTS



TINY HIGH POWERED MODEL MOTOR MADE FOR HOT TRACK RACING CARS
Very small, $1 \times I 1 / 2^{\prime \prime}$ long. Develops high torque, revs up fast on any DC power source up to 14 V . Permanent magnet field. Runs either direction. Brass sleeve bearings .080" dia. X "f" shaft. Limited quantity of this bargain price.
No. 18C768. Special Each
99 c
DC POWER PACK FOR MODEL MOTORS
Output 14 V . DC up to 1.4 A. Has screw terminals, 6 ft . AC cord ond plug.
Top quality priced way low because of a lucky buy. Operates on 115 V AC. Top quality priced way low because of a lucky buy. Operates on No. $18 \mathrm{C7} 67$.
Special Eoch
$\$ 2.88$

## LOOK AT THIS FANTASTIC BUY!

MIDGET REVERSIBLE DC MOTOR


B-A's lucky find of 25,000 at a fraction of regular monufacturer's cost makes possible this fantastic offer! We have sold
thousands of similar types previously at prices ranging from 50 c to $\$ 1.00$ each. Operates from $11 / 2$ to 6 V . dry cell batteries. High torque, PM type for model cars, boots, toys, etc. $11 / 2 \times 11 / 2 \times 13 / 8^{\prime \prime} \mathrm{H}$. Shoft $3^{3 \prime}$ "dia. $\times \frac{B^{\prime \prime}}{16}$.
$\begin{array}{ll}\text { No. } 18 \mathrm{~B} 379 . \\ \text { Special } 3 \text { for. } 99 & 12 \\ \text { For... } 3.49\end{array}$

## CONSTANT SPEED DC MOTOR



54
49
Centrifugal governor for constant speed. Made originally for battery operated recorder. Runs either di$13 / s^{\prime \prime}$ dia. Hurry-Limited Quontity. No. 18C895 Special Each
$\$ 1.49$

## ELECTRICALLY OPERATED MIDGET CLUTCH

## AMAZING VALUE!

100's OF USES FOR

- EXPERIMENTER
- MODEL BUILDER - HOBBYIST

12-14 VOLT DC


Ideal for remote control of small motor operated devices, such os midget autos, boots, toys, tools ... or electric drive for tope machines, turntables, mechonically $12 \mathrm{~V} . D C$ or 60 oz.-inch of 24 V . DC. Becomes oz.-inch holding power a is held stationory. Con be battery operoted 1125 MA @ 12 V.DC or 250 MA @ 24 V . DC) for clutch in model devices. Small shaft (if:") is ideal for friction drive against rubber wheels, large shaft ( $\mathrm{zig}_{8}^{\prime \prime \prime}$ ) fits $3 / 8^{\prime \prime}$ couplers. Extro powerful, only 15 oz. Weight; high quality and precision machined fraction of its original cost. Flange mount with two ", holes. Body dia $17 / 8 \times 1{ }^{\circ}{ }^{\prime \prime}$ " deep.
$\$ 4.95$
No. 18A987. Special Each
115 V. AC VARIABLE POWER SUPPLY FOR OPERATING
Consists of 24 V AC
Consists of $24 \vee A C$ tronsformer, silicon rectifier, Ohmite power rheostat to No. 18 A956. With wiring instrutions, and bleeder resistor

230
B-A-Since 1927 the Symbol of Savings and Service!

RELAYS AT SMASHING BARGAIN PRICES!
115 VOLT AC P \& B 115 VOLT AC P\&B HIGH POWER RELAY


Compact size, molded bakelite barrier, nylon bobbin, quiet continuous duty operation plus absolutely beauH . Single $6-32$ stud mounting.
No. 19A550. DPDT 8 Ampere.
No. 19A550. DPDT 8 Ampere.
Speciol $\$ 3.25$ 10 Lots
Eoch.
100 Lots, Each . . . . . . . . . . . $\$ 2.85$ LATCHING RELAY LATCHING RELAY

6 PDT 5A
CONTACTS

## $\$ 3^{95}$

Reg. Net Reg. Net
$\$ 12.60$


Seldom found at bargain prices. Heavy duty, quiet operating-made for continuous service. Molded phenolic base $21 / 2 \times 21 / 8 \times 21^{7 / \prime} \mathrm{H}$. Screw terminals. None better for controlling motors, big transformers, etc. Potter \& Brumfield PR7 series. $\mathbf{3} \mathbf{3} 49$

Operates by momentary pulse of 115 V . AC power to either coil. Armature latches mechanicolly; is releosed by pulsing other coil. Has almost unlimited appiications for remote control. Contacts easily paralleled. 2-hole channel mounting,
 PKB23AY.
No. 18C951. Special Each.

SAVE 50\% AND MORE ON AC POWER RELAYS!
ALL HAVE 110 VOLT 60 CY. AC COILS

(1) Comor 4PDT 2 Amp. Unusually fine construction. Especially well suited for No. 18 C 200 . $\$ 219$ 10 Lots, $\$ 199$
Eoch. Each. Spec. Each. $\quad$ Eoch.
(2) Guardion DPST 4 A. Contacts. One normally open, one normally closed. Size

(2) Philtrol SPDT 5 A. Contacts Coil has solder lugs. Size 1 思x
$H$. Reg. net of least $\$ 3.50$.
 (3) Philtrol DPDT 5 A. Contocts Coil has solder lugs. Size $18^{\prime \prime} \times 1 \times 11 / 2$

(1) Philtrol 3PDT 5 A. Contocts Coil has solder lugs. Size $13 / 4 \times 1 \times 13 / 4^{\prime \prime}$ H. Reg. 18 C 39 . $\$ 199 \mathrm{I} 10$ Lots, S 175 No. $18 \mathrm{C} 359 . \$ 199 \quad 10$ Lots, S175
Spec. Eoch
Each... (8)RBM DPST 10 A. Contacts. Size $13 / 4 \times 1{ }^{3} \times 1{ }^{\frac{1}{1 / 4}} \mathrm{H}$. Mtg. bracket removable. Reduces height $1 / 4^{\prime \prime}$. Reg. $\begin{aligned} & \$ 3.65 \\ & \text { No. } 18 \text { Clo6. } \$ 159 \\ & \text { Spec. Each. }\end{aligned} \quad \begin{aligned} & 10 \text { Lots, } \$ \mathbf{3 9} \\ & \text { Eoch... }\end{aligned}$
Spec. Eoch.. Eoch... 1
SENSITIVE RELAYS AT UNMATCHED BIG SAVINGS!


Would Cost of Least \$2.15 Regularly

## MINIATURE SPDT

5500 OHM DC RELAY
Popular tiny style being used for model control, electronic automatic keys, etc.
keys, etc.
Size only $3 / 4 \times 1 \times 7 / 8^{\prime \prime} \mathrm{H}, 5500$ ohm coil. SPDT contacts roted 1 omp. 2.9 MA operoting sensitivity. Simple 2 hole mtg. Wt. 1 oz. $\begin{aligned} & \text { No. 18B199. } \$ 169 \\ & \text { Spec. Each.. } \\ & \text { Spa Lots, } \$ 139 \\ & \text { Each... }\end{aligned}$

EXTRA POWERFUL
110 V. AC SOLENOID


Most powerfut, most useful we've ever offered. Exerts 20 to 30 lb . pull with $1^{\prime \prime}$ stroke. Armature positively positioned in core. Intermittent duty.
Size $23 / 4^{\prime \prime} \mathrm{L} . \times 23 / \mathrm{g}^{\prime \prime} \mathrm{W} . \times 21 / 2^{\prime \prime} \mathrm{H}$. Size $23 / 4^{\prime \prime}$ L. $\times 23 / 8^{\prime \prime}$ W. $\times 21 / 2^{\prime \prime} H$.


\section*{| 0 | 0 | 6 |
| :---: | :---: | :---: | :---: |
|  | 2 | 6 | <br> Insulated Nylon Construction <br> }



## MINIATURE SPST

 5000 OHM DC RELAY A real fine quality tiny size sensitive relay. Nylon bobbin provides complete insulation. Has adjustment for varying contact spacing to change operating sensitivity. Simple 2 -hole mounting, Coil has wire leads. Size
 115 V. 60 CY. AC SOLENOID

MINIATURE 115 V. AC SPST N.O. RELAY
Rated 3 amps @ 115 V. AC. May be used as sensitive $10,000 \mathrm{ohm}$ DC relay. Popular miniature size for remote control applications. Single 2 -hole mounting. Size $11 / 8 \times 1 \times 13 / 8^{\prime \prime}$. Big special purchase makes possible this low, low bargoin price.
No. 18 B 270 .
Special Each
$690^{5} 52.95$
HEAVY DUTY 10 AMP 12 V. DC POWER RELAY

## (40) 0 <br> AT LEAST A

Popular size solenoid at a bargain price! Max. 55 oz . lift, $5 / \mathrm{B}^{\prime \prime}$ stroke. Intermittent operation. Frame size $2 \times 11 / 4 \times 11 / 2^{\prime \prime}$ high. Laminated armature positively positioned in frame. Mounting flange removable.
No. 18B308. Special Each . . . . 996


Single pole, double-break, 10 amp . con tacts. Heavy duty construction, very com pact size. Excellent for ignition by-pass relay, DC mobile power supplies, auto motive accessories. Coil resistance
ohms. Allied control style BO11. $15 / 8$ $11 / 2 \times 1150$,
No. $18 B 807$.
Special Each........... $\$ 1.69$

DA rou save sss Bintians

## RELAYS

## (G): BRALD ARE <br> fULIY gUARANTEED!

SPST 115 VOLT AC
LATCHING IMPULSE


REG. COST UP To $\$ 8.00$ Contacts are alternotely opened or closed on momentary application of coil voltage and remain in last position until next impulse. Contact orrangement, SPST, 10 omps. Excellent for push button on-off remote control. $11 / 2 \times 21 / 4 \times 21 / 4$ " H . Made by Automatic Electric, Div
No. 184947.
Special Each
$\$ 2.85$
SIGMA HERMETICALLY SEALED SENSITIVE DPDT 9000 OHM RELAY

## $\$ 2^{95}$

AT LEAST A
$\$ 15.00$ VALUE


Highly sensitive, precise operoting relay perfect for circuit control in light cells, alarms, model controls, counting and sorting devices, etc. Highly shock resistant. Size only $13 / 4^{\prime \prime}$ high $\times 1^{\prime \prime}$ square. DPDT contacts rated 2 amps. 50 MW operating sensitivity Simple 2 stud mounting. Hook type solder terminals. Diagram on each relay.
c. P. CLARE MERCURY WETTED CONTACT RELAY

A rare buy of a fraction of reg. cost.



HG1077 SPDT 5 amp contacts with 4000 ohm coil operates on 7.2 milliomp pull-in, 6.2 milliamp release. Octal plug in base, diagram shows pin connections. Hermetically sealed in high pressure hydrogen. Features billions of operotions of speeds up to 60 per second with no contoct wear or bounce. Guaranteed brand new. $25 / 8^{\prime \prime}$ high $1 \frac{1}{16}{ }^{\prime \prime}$ dia. above octol base. Wt. ${ }^{4}$ oz.
No. 18C912. Net Each.... S4.95 ADVANCE HI-CURRENT 24 VOLT DC RELAY


Reg. Net $\$ 6.90$
$\$ 188$

- SMALL SIZE STRUCTION
Features small size, sturdy construction. A natural for control circuits up to 15 amps. DPST. Size $1 /{ }^{2}$. ${ }^{2}$ high, bose, $W t .41 / 2$ ozs.
in 188793 . Special Each. $\$ 1.88$


## (日) YOU SAVE sss RGALS <br> BLOWERS \& MOTORS <br> ALL ARE <br> BRAND NEW! <br> fULLY GUARANTEED!

B-A Special Purchase GEAR DRIVE MOTOR


FOR 115 V
60 CY.
$\$ 195$

Fine quality shoded pole motor with enclosed gear train. Surprising amount Requires $1 / 4,13$ RPM clockwise rotation for free wheeling shaft when not run ning.
Originally mode for RCA remote TV controls. Fine for building tuning devices, displays barbecue pits, etc. Size $51 / 8^{\prime \prime} \times 33 / 4^{\prime \prime} \times 21 / 4^{\prime \prime}$. Shpg. wt. $11 / 2$ lbs.
No. 18 B 52.
Special Each. . . . . . . . . . . .

## SLOW SPEED

GEAR DRIVE MOTOR


Continuous duty shaded pole induc tion motor. Fully enclosed gear train elops high torque for all sorts of develops high torque for all sorts of detation, but eosily chonged to turn clockwise.
Perfect for barbecue spits, displays mall machines, etc. Size $3 \times 21 / 2 \times 37 /$ H. Wt. 2 lbs

## G.I. 4-POLE CHANGER

 \& RECORDER MOTOR

SMOOTH, QUIET,
HEAVY-DUTY

Shaded pole induction type, for 115 V .60 cy . AC, $1 / 70 \mathrm{HP}$ cont. duty
1740 RPM . Has plenty power for oll sorts of devices ... quiet fans, tape recorder-player mechanisms, "record turntables, displays, ete. "f", shaft extends $1 \frac{1}{16}$ " one side, $15 / 8^{\prime \prime}$ other. Oilite bearings. $33 / 8$
mtg . $\mathrm{Wt} .3 \mathrm{l} / 2 \mathrm{lbs}$. No. 188299 . Special
$\$ 3.59$
Smaller G.I. Motor similar to above. Single ${ }^{3}$ " $\times 7 / 8^{\prime \prime}$ shaft with 2 step pulley oftached suitable for round or small $V$ belts. Size $3^{\prime \prime \prime}$ below shaft $\times 27 / 8$ square.
No. 188307 . Special.
$\$ 2.49$

WHOPPING SCOOP VALUES! 115 V. AC BLOWERS


FOR COOLING, DRYING, VENTILATING, EXHAUSTING, ETC.
High quality, dependable, efficient, quiet-operating blow- atus, forced draft to furnaces, exhausting bad odors or running Torrington wheels; well designed glossy black equipment clus hitchen, lab, etc., cooling of tubes and enomel housings. wheels, well designed glossy black
Fine for photo dark-rooms, forced ventilation of appar-

| Stock No. | Illus. | Air <br> Cap. <br> CFM | Free Air RPM | Full Load Amps. | Wheel Diam. | Intake Diam. | Outlet | Flange |  | verall oss Fla W. | $20$ <br> (e) <br> D. | Lead Length | Wt. Lbs. | Mfg. List | Spec. Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 A82 | (1) | 320 | 1410 | 1.27 | 51/4" | $4 \frac{23}{3}{ }^{\prime \prime}$ | 35/7x258\% |  |  |  |  |  |  |  |  |
| 4A83 | (2) | 15 | 3160 | 0.21 | $2^{\prime \prime}$ | ${ }^{4 \frac{23}{3}}{ }^{\prime \prime}$ | 11/4" Rnd. | 214* Rnd. | $83 / 8$ $35 \%$ | 111/8" | $81 / 4$ 3 | $12^{\prime \prime}$ | 10 | \$21.20 | \$17.95 |
| 4 A 201 | (2) | 100 | 2870 | 0.74 | 3540" | $31 / 8{ }^{\prime \prime}$ | 21/8" Rnd. |  | 515" | 67\% | 3 ${ }^{\text {3 }}$ | $12^{\prime \prime}$ | $21 / 2$ | 8.75 | 7.75 |
| 4A84 | (2) | 140 | 3020 | 1.02 | 3氣 | $31 / 8{ }^{\prime \prime}$ | $212^{\prime \prime}$ Sq. | 51/3"x4" | 77" | 618 | 6 63 | 12" | $43 / 4$ | 11.45 | 9.95 |
| 4A85* | (3) | 108 | 1530 | 0.58 | 51/4" |  |  | $5 / 8 \mathrm{x} 4$ " | 83 ${ }^{\frac{3}{3}}{ }^{\prime \prime}$ | $6^{63}{ }^{\prime \prime}$ | 81/ | 6"****** | 53/4 | 12.15 | 10.15 |
| 4A86 | (4) | 525 | 1570 | 3.25 | 65/6" | $5 \frac{18}{1 / 3}$ | $53 / 8{ }^{\prime \prime} \times 41 / 4^{\prime \prime}$ | $65 / 81 \times 55 / 8{ }^{n}$ | 11/8* |  | 810\% | $12^{\prime \prime}$ | 5 | 12.90 24.95 | 10.69 20.95 |

## EXTRA RUGGED GEAR MOTORS AT BARGAIN PRICES



Unusually good construction and craftsmanship not found on or dinary motors. Provide high torque for tough motor applications Shaded pole motor runs in any position. Fully enclosed die-cast oil tight gear case. Continuous duty operation 4 holes spaced $23 / 8^{\prime \prime}$ opart on gear cose for easy mounting. For 115 V .60 cy . operation. Shpg. wt. 3 lbs.
(1) 9 RPM Counterclockwise Rotation. $1 / 4 \times 7 / 8^{\prime \prime}$ shaft. Overall size $31 / 4 \times 51 / 2^{\prime \prime}$. Also has mig. feet on gear cose
No. 18B408. Speciol Each.
$\$ 3.69$
(2) Electrically Reversible Motor. 11 RPM rototion. is Overall size $31 / 4 \times 31 / 4 \times 53 / 4$
No. 18 B409. Special Each.
$\$ 6.95$


NEW COMPACT SIZE SLOW SPEED GEAR MOTORS FOR DISPLAYS, ROTISSERIES, MACHINES, EXPERIMENTERS
Shaded pole motor with enclosed gear heod, $1 / 4^{\prime \prime}$ dia. $\times 3 / 4^{\prime \prime}$ Ig. output shaft bronze bearings. Full lood current 0.2 A. Mounts with 2 mochine screws through geor housing. Size $2 \frac{18}{8} \times 118 \times 21 / 2^{\prime \prime}$ mox. behind mounting.


## DAYTON EXTRA HEAVY DUTY SLOW SPEED GEAR MOTORS



B-A EXCLUSIVE! 115 VOLT AC-DC MOTOR WITH FOOT CONTROL

- powerful $1 / 15 \mathrm{mP}$ ar lasta $512^{\circ} \mathrm{s}$ valuet AC-DC MOTOR.

ALL


THE MOTOR. Powerful, series-wound brush type. Designed for sewing machine service, therefore ideal for other rugged duty iobs. Rototes counter clockwise. With full 115 V . AC 25 to 60 cycles, or 115 V . DC applied direct to motor, no-load speed is approximately 10,000 RPM. With foot control theostat, speed can be varied smoothly from slow to fast. Exact degree of variation depends on motor lood. Motor shaft is .250 dia., extends ${ }^{\frac{13}{3} \text { " }}$ from housing. Pulley supplied is for round or small V-type belts; attaches with set screw. Overall size: $21 / 4^{\prime \prime}$ high, $25 / 8^{\prime \prime}$ wide, $43 / 8^{\prime \prime}$ long exclusive of shoft Mounts with two screws threaded into bottom of motor case, glossy black enamel finish, with attached $23^{\prime \prime}$ lead. Name plate rating 1.5 ompere.
FOOT CONTROL. A top quality, wire-wound resistance unit built for proper speed control of the obove motor Non-wearing slider arm gives control from full resistonce to zero. Heavy steel housing has streamlined, modem shape, glossy black enamel finish, non-marring rubber for safety. Size 33 ," other electrical parts fully enclosed $10^{\prime}$ AC cord and $33 / 8^{\prime \prime}$ W, $55 / 8^{\prime \prime} \mathrm{L}, 21 / 2^{\prime \prime} \mathrm{H}$. Supplied with $10^{\prime} \mathrm{AC}$ cord and plug and special plug-in junction block to accommodate motor and light or other device. Light outlet is independent of foot control.
No. 33C76. COMBINATION DEAL - Motor
Wonderful for powering motor driven models, toys, roung. wt. 4 lbs. While They Last........... 5.97
hobby tools, etc., to convert foot tread


B-A EXCLUSIVE BUY!
Q $/ \begin{gathered}\text { YOU SAVE } \\ \text { on these shech }\end{gathered}$ EARGAIS

- Industrial quality for continuous use,
- Whisper quiet 4-pole Redmond motor.
- Dynamically balanced $10^{\prime \prime}$ blade. Maves 900 CFM. Fantastic buy on a $10^{\prime \prime}$ fan of such extra high quality! Much better than used in home cooling fans. Has balanced ormature motor like used in expensive tape recording drives and a 4 blade aluminum fon designed for high air delivery with minimum noise. Blode hub is mochined steel with Allen hex screw. Use for air circulators, exhoust fans, heat boosters and all sorts of other uses. Bolts extend from motor housing for eosy mig. Motor $31 / 2^{\prime \prime}$ dia. Overall length $7^{\prime \prime}$. For 115 V . AC. Shpg. wt. $51 / 2$ lbs. No. 18 B 28 . Extra Special.
$\$ 6.95$
FAN, METERS TESTERS, TUBES


NEW DAYTON QUIET MIDGET BLOWER


4-IN. "MUFFIN" FAN | REPEAT |
| :---: |
| OF A |
| SELLOUT |$\$ \$ 88$



RATED 100 CFM

115 V.
60 CY.
Perfect for farced ventilation to cool equipment. Midget size makes it easy to install this blower inside cabinet or enclosure. Long life shaded pole motor. Very qFiet tor $11 / 4^{\prime \prime}$ dio output with $21 / 2^{\prime \prime}$ dio flange. Mtg. holes in flange. Overall size $3 \times 4 \times 43 / 4^{\prime \prime}$. Shpg. wt. $2 \mathrm{lbs} . \$ 5,95$
No. 18427 . Special Each....

## MDDEE

 COOLING FAN

Highly efticient, quiet operoting, continuous duty. Made especially for circulating cooling oir through electronic equipment, music systems, transmitters, etc. Very highest quality. Noiseless induction motoranteed perfect. Made by Rotron. guoranteed perfect. Made by Rotron. No. 5 B58. Special Each
$\$ 9.88$
Compoct just right for use in equip ment for cooling tubes, transformers, and other components. Helps provide Powerful, quiet-operating, non-rodio interfering motor with $21 / 2^{\prime \prime}$ oluminum fan blade. Frame size $2 \frac{2}{8} \times 11_{6} \times 3^{\prime \prime}$ high. For 115 V. 60 cy . AC. Shpg. wt. $21 / 2 \mathrm{lbs}$. special Each. No. 188280 .

SAVE! MINIATURE PANEL METERS

$$
\$ 395
$$

ONLY $15 / 8^{\prime \prime}$ SQUARE LATEST MODERN DESIGNED CLEAR PLASTIC CASES
Standord D'Arsonval moving coil type with zero set. Mounts in tront or behind spanel in $11 / 2$ black numerals. Precision quality import. At least a $50 \%$ sovings.
Stk. No. Type Each Stk. No. Type Each 17 A552 0-1 DCMilliamps $\$ 3.95$ 17A557 0-100 DC Microamps $\$ 4.95$ $17 A 556$ 0-50 DC Microamps $4.95 \quad 17 B 558$ " $S^{\prime \prime}$ Meter Cal. 0-9 3.95


## POPULAR 2-IN. EDGEWISE TYPE <br> Precislon moving coil instruments with zero set.

 Beautifully constructed, top quality throughout. Excellently shielded against mognetic fields. Scales calibrated block on bright metal with red front. Mounts in $5 / 8 \times 13 / 8^{\prime \prime}$ rectangular hole. Wt. 2 oz .17B268. ${ }^{\prime \prime} \mathrm{s}^{\prime \prime}$ Meter Cal. 0-10. Ea.. S3.49 No. 17B270.0-1 DC Milliamperes. Ea.. $\$ 3.99$ No. 17 B 271 . VU Meter. Eoch........ $\$ 3.99$


## PACK-OF-FIVE MINIATURE TUBES



## HURRY! HURRY!



Greatest tube sole event ever! Here ore first quality TV and radio receiving tubes by such top makers as RCA, Raytheon, Hitachi, etc., of prices way below usual. by such top makers as RCA, Raytheon, Hitachi, etc., of prices way below usual.
Dealers and Servicemen stock up now and tuck-away extro profits. Hams, HobbyDealers and Servicemen stock up now and tuck-away extra profits. Hams, Hobailists, etc., save $\$ \$ \$$ on repairs and building projects. Buy spares, too, while availoble of such tremendous sovings. Buy with camplete confidence, all meet the some high performance standards of tubes ot regular cost. "High quality imports.

| Tube Type 183, 1K3, 1G3GT | Net <br> Each <br> $\$ 0.80$ | $\begin{gathered} 10 \\ \text { Asst. } \\ \$ 0.72 \end{gathered}$ | $\begin{gathered} 25 \\ \text { Asst. } \\ \$ 0.60 \end{gathered}$ | $\begin{aligned} & \text { Tube } \\ & \text { Type } \\ & \text { 6BE6 } \end{aligned}$ | $\begin{aligned} & \text { Net } \\ & \text { Each } \\ & \$ 0.47 \end{aligned}$ | $\begin{gathered} 10 \\ \text { Asst. } \\ \$ 0.43 \end{gathered}$ | $\begin{gathered} 25 \\ \text { Asst. } \\ \$ 0.39 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3BZ6* | . 59 | . 54 | . 49 | $6 \mathrm{BL7}$ | . 80 | . 72 | . 65 |
| ЗСВ6\% | . 59 | . 54 | . 49 | 6BQ6* | . 99 | . 90 | . 81 |
| 5 AM8 | . 72 | . 65 | . 59 | 6BU8 | . 63 | . 57 | . 52 |
| 5U4GB | . 88 | . 80 | . 72 | 6 C 4 | . 36 | . 33 | . 30 |
| $5 \cup 8$ | . 80 | . 72 | . 65 | 6CB6\% | . 63 | . 57 | .52 |
| 6 AL5 | . 44 | . 40 | .36 | 6CG7/6FQ7* | . 66 | . 60 | . 54 |
| 6AQ5 | . 55 | . 50 | . 45 | $6 J 6$ | . 33 | . 30 | .27 |
| 6AS5: | . 66 | . 60 | . 54 | 6SN7GTB* | . 88 | . 80 | . 72 |
| 6AU4: | . 88 | . 80 | . 72 | $12 A T 7$ | . 59 | . 54 | . 49 |
| 6AU6\% | . 39 | . 36 | . 33 | 12AU7A* | . 66 | . 60 | . 54 |
| 6AW8 | . 80 | . 72 | . 65 | 12AX4* | . 59 | . 54 | . 49 |
| 6AX4\% | . 66 | . 60 | . 54 | 12BE6* | . 44 | . 40 | . 56 |
| 6BA6* | . 44 | . 40 | . 36 | 35 L6GT: | . 64 | . 59 | . 55 |

TESTERS FOR ADJUSTING \& MONITORING TRANSMITTERS OR ANTENNAS
Forwarded/Reflected
Uses the some perfected design
principles found in expensive instru-
ments. Exceptionolly well construct-
ed. Measures relative power output
ond \% reflected power on 52 ohm
coox line. Transmitter output can
be monitored continuously by leav-
ing in circuit. Simple to use. Scale
colibroted in SWR. Size $43 / 4 \times 21 / 4 \times 2^{\prime \prime}$
With 50239 connectors.
358576 . Import Special $\$ 1.95$

R. F. Field Strength Meter Mokes transmitter or antenna tuning
quick and easy. Gives positive indi-
cotion of radiated signal on sensi-
tive microammeter. Has sensitivity
adjustment, collapsible onterna. In-
cludes erystal earphone for monitoring
transmitter speech quality. Requires
no battery. In groy enameled case
$23 / 8 \times 13 / 8 \times 31 / 8{ }^{\prime \prime} \mathrm{H}$. Magnet in bottom
holds tight to any steel surface.
Speciol 1 mport Value
No. $358572 . . . . . . . . . . .$.


## D rou save sss ontrailis

 AMATEUR AND CB
## 0 <br> ALL ARE BRAND NEW! FULLY GUARANTED!

## MINIATURE

6 V. SYNCHROS


Minioture size for ontenna direction in dicators, for home-made weother instruments, experimenting, etc. Units ore other at the remote indicating position 5 wire interconnecting cable required The shafts will remain precisely in step when external rotation force is applied to the shaft of the source unit Made by Bendix for aircraft equipment signed for 26 V AC equipment. DeWorks efficiently from (a) 400 cy. use. Y. Wiring $190^{\prime \prime}$, shaft $1 / 8 \times 1 / 44^{\prime \prime}$ long. S 595 88348. Shpg. wt l lb. Per Pr. $18 \mathrm{B1} 35.6 .3 \mathrm{~V} . \mathrm{AC}$ Transformer. $\$ 1.19$

CRAMER RUNNING TIME METER

## $56{ }^{63}$

READS
UP TO
9999.99

HOURS


Digital readout in hours, tenths and one hundredths. For measuring elapsed time electronic equipment, Commonly used on electronic equipment, transmitters, receivers, industrial machines, etc. Accurate Resistor supplied for 115 V . 60 cy . AC. AC. is $21 / 4^{\prime \prime}$ sq., $31 / 2^{\prime \prime}$ behind panel. Readout dials are behind $17 / 8 \times{ }^{0}{ }^{\prime \prime \prime}$ plastic face Made by Cramer, Model BH, for an ex Pensive computer. Being offered elsewhere for
No. 18 B 29
Special Each
$\$ 6.95$

## reveral

## CIGARETTE

LIGHTER PLUG
Fits 6 or 12 volt outo cigorette lighter Hos $32^{\prime \prime}$ leads and lugs. Use for emergency lights, CB equipment, recorders, IV and 100's of other uses. Quality
import.

SAVE ON THESE IMPORTED CODE SETS!
TRANSISTOR CODE
PRACTICE OSCILLATOR


Top import value compores with other oscillators selling for twice this price. Perfect for the learning beginner or the professional who wants to keep in practice. Variable pitch control. Switch selects tone, light or combination oper-
ation. Built-in speaker hos sub-minia ation. Built-in speaker has sub-miniafure headphone jock. Oscillator size $61 / 8$
$\times 31 / 2 \times 25 / 8^{\prime \prime}$. Key, batteries and instruc$\times 31 / 2 \times 25 / 8^{\prime \prime}$. Key, batteries and instructions supplied. Shpg. wt. $2 \mathrm{lbs} . \$ 995$
No, 22 A40. Complete Unit.

Beautifully made import. Gives clear steody "code note" at ample listening evel, or will operate one or several pairs of headphones wired in parallel. Two sets, each with headphones and mit code messages 100 ft. apart Uses standard flashlight battery No. 22A61. Less Battery. Wt. I lb. $\underset{\text { Noch }}{\text { Eoct }} \quad \$ 1.95 \underset{\text { For }}{2} \$ 3.59$ No. 21A1. Bottery for obove.... 14c
-ACTION SPEED KEY
We thought we had seen em all
but this one is different, even betfer than the famous J-38. Quadruple ball bearing pivots give key fast action -. ideal for novice, perfect for high speed operator. Base is bright polished solid brass, silver contacts. Fully adjustable for the right "feel ." Nickeled, knurled hardware, shorting lever switch and standard black knob. Believe us, this import is on unusual value and would ordinarily cost several times more. Shpg. wt. $11 / 2 \mathrm{lbs}$. No. 17.B601 Special Each
$\$ 2.95$
it's even better than


CODE PRACTICE SET


Finest key we've seen of onywhere
near this low price. Neot, import made with heavy $1 / 8^{\prime \prime}$ contacts, bright plated sturdy steel lever arm, fully adjustable spring and spacing, brass hardware, molded bakelite bose. Wonderful for code proctice or ham station operoting.
No. 174810. Special Each
69 c
ARRL LEARNING THE CODE
for No. 16463. Each...............60c HI-FREQUENCY BUZZER


Fine componion for key above. Gives clear, steady "code" note. Fully odjusttery. In molded bakelite case $2^{\prime \prime}$ dia Imported, of lowest cost ever. No. 22B51. Special Each. $_{8}$ 21A1. ER950 Battery. Net Ea 14853. Clip-in Bottery Holder Net Each

QUALITY HEADSETS AT LOWEST COST EVER!

Communications Quality IMPORTED HEADPHONES

AMAZING LOW COST MAGNETIC HEADPHONE
 phone. Polished bakelite case. Excellent etc., 1000 ohm. Duroble 4 ft cord attached. Notise
READY MADE WITH CONNECTORS ATTACHED


High quality Americon made coox cables with plugs ottached. Eliminates troublesome problems
of installing plugs. Soves time and money. For omateur and citizs. Soves bend, fixe and money 28201. 20 FF . RG58U, reducer ond PL259
one end, lug terminals other end. Each
$\$ 295$ 2A 204. 20 Ft. RG58U with reducers ond
PL259 both ends. Shpg. wt.
$\mathbf{\$ 2 9}$ 28207. 60 Ft. Iow loss Polyfoom RG8U with $\$ 945$ PL259 both ends. Shpg. Wt. 7 lbs . Each...
28210.100 Ft . low loss Polyfoom RGBU with PL259 both ends. Shpg. wt. 11 lbs . $\$ 1 \mathbf{2}^{\mathbf{9 5}}$ Each Page 132 for new low prices on long lengths of coox.

## HIGH QUALITY CRYSTAL HEADPHONES

Professional quality to meet laboratory standards while priced within the range of ham, experimenter, hi-fi habbyist, etc. Exceptional flot response from 65-13,000 cps. High impedance 85,000 ohms permits monitoring without oppreciable effect on associated equipment. Adjustable double heodband, chrome plated, covered with soft cushion plastic same os professional types used by airline pilots, etc. Cord with standard phone tips. Lightweight only 8 oz. Shpy. wr. I tb.
No. 22447 . Import Speciol $\$ 5.95$


## STETHOSCOPE TYPE CRYSTAL EARSET

import savings


Modern, lightweight, under-chin design. Fully adjustoble. High impedance, wide range. 3 ft. cord.
No. 178202 . Special Each...

## SAVE! COAX

## CABLE CONNECTORS

| Stk. No. | Type | Each | 10 Ed. |
| :---: | :---: | :---: | :---: |
| (1) 18 A 806 | PL-259 | \$0.45 \$0.42 |  |
| (2) 184805 | SO-239 | .45 | .42 |
| (3) 178185 | M-359 | 1.24 | 98 |
| (4) 188809 | PL-258 | . 85 | .75 |

15-SECTION TELESCOPIC PORTABLE ANTENNA

## reg. net at least DOUBLE OUR PRICE <br> s1 95

4635/" COLLAPSES TO $53 / 4^{\prime \prime}$ Dozens of uses-portable AM or FM radios, CB waikie-talkies, etc. Sturdy all-brass, heavily chrome plated. Bot tom section $9 / 16^{\prime \prime}$ dia., with 6-32 No. 18C794
No. 18 Cl 94
Special Each
$\$ 1.95$

SENSITIVE DYNAMIC MICROPHONE


SIZE
DIAMETER
ONLY $13 / 4$ IN.
B-A Buyers are constantly on the alert for unusual "finds" priced right for is this dondy little microphone/ speaker with coupling transformer. Has many uses as a mike replacement cartridge, as an extra sensitive sound pickup device in detectaphone sound pickup Tiny transformer sup plied for high impedance 100,000 ohm amplifier input. No. 18C609. Special.

CRYSTAL HAND MIKE REG. NET $\$ 5.70$

## $\$ 199$

PRODUCT OF FAMOUS MMERICA
MAKER

Top quality $\begin{aligned} & \text { originally intended } \\ & \text { for use with a } 2 \text {-way radio selling for }\end{aligned}$ over $\$ 125$. High impedance, high output, wide range. Fine for home recording, paging, detectophones, ham and citizens band gear etc. Truly neat and compact; Grey plastic housing, $248 \times 21 / 8 \times 7 / 8^{\prime \prime}$ fits hand per-
fectly. 30 to 10,000 cps response. Output level -48 db . Attoched 5 ft . shielded coble. Wr. 1/2 lbs. $\$ 1.99$
No. 18A62. Special Each.

CRYSTAL MICROPHONE


Best mike value we've seen. Built and imported for use with a fomous make tope recorder. High impedance with exceptional clear cut response and high output. Bequtiful grey plosdesk case $3 \times 21 / 4 \times 1 / 4$ held use 5 or shielded cable. Shpg. wt. $1 / 2$ lb shielded cable. Shpg. wt. $1 / 2 \mathrm{lb}$
No. 18 A 536 .
Special Each. .............. With Stond. $5^{\prime \prime}$ base dia. $71 / 2^{\prime \prime} \mathrm{H}$.
with chrome stem.

## HEAVY DUTY TYPE

 "5-WAY" BINDING POST| 39C |
| :---: | :---: |
| VALUE! |
| Each 10 LOPs |
| IMPORTED |
| TOSSAVE |
| MONEY |

NOW AT A PRICE EVERYONE CAN AFFORD Takes up to No. 12 buss wire or pin tip through cross hole, spade lug or wire loop under the cap or banan plug in the top. Brass 10-32 hardware, heovy shank for high current, mounting collore insulated and mounting collar ore insulated Mounts 78 . above panel, $5 / 8^{\prime \prime}$ dia Specify choice Red or Block. $\underset{\substack{\text { No. 18C651. } \\ \text { Special Each }}}{27 \text { Each. 24P }}$ 100 Lots, Eoch. . . . . . . . . . . . . 21 c INSULATED FEED-THRU TERMINAL

Tie-point terminal for mounting components, for high voltoge and RF feed-thru, etc. Fully insulated. LeakNo. $18473^{1 / 4}$. Mounts 10 Lots, 19 e Spec. Eo....24F Eoch... 196 MIKE COIL CORD


99c
Conductor

Shielded- 2 Unshielded conductors. Extends to 5 ft ., retracts to $10^{\prime \prime}$. Tough, flexible grey vinyl jacket over vinyl insuloted codmium-bronze conductors. For superior to ordinary eords. Ends stripped No. 29C157. Top Quality Import 995

SUB-MINIATURE PLUG \& JACK SET


Real tiny size. Plug measures only $11 / 8^{\prime \prime}$ long overall $x$ " ${ }^{\prime \prime}$ dia. Solder type for $1 / 8^{\prime \prime}$ or smaller 2 cond. or shielded wire. Jack mounts in $1 / 4^{\prime \prime}$
 Spec. Per Set 39C Eoch..29C BARRIER-TYPE TERMINAL BLOCKS


Finest Kulka, same os Jones \#141 $1 / 8$ W. $\times$ 10-TERM. $51 / 8^{\prime \prime}$ L. Reg. value 73 c .
No. $18 \mathrm{C} 795 . \mathrm{L}$. 10 Lots, No. Each. 25 Each. 498
Spec. Each $31 /{ }^{\prime \prime}$ W. type lugs. Req. $\$ 1.04$. With $3 / 4^{\prime \prime}$ W. type lugs. Reg. \$1.04. No. 18 C930. $59 \quad 10$ Lots, 858
Special Each 8. 16-TERM. 73/4" L. Reg. volue $\$ 1.07$.

 25 FOOT MIKE-AUDIO EXTENSION CABLE


FULLY SHIELDED
Standard $1 / 4^{\prime \prime}$ phone plug with plastic finger grip and portable jack molded grey shielded mike cable. No. 24233. Special Eoch
$\$ 2.39$ TELEPHONE TYPE PLUGS AND JACKS


Patterned like popular "telephone plugs" and interchangeable with them. Standard
4 wire fype, with code marked screw 4 wire fype, with code marked screw intercom systems, phones, etc. Surface intercom systems, phones, etc. Surface jack, for exposed wing, mounts with 2 screws. Flush lack, for concealed wiring, electrical outlet box. (Box not supplied'. Specify Ivory or Brown. Es (1) 178275. Portahle Plug. Ea 178277. Flush Jack. Ea.

## MOST POPULAR ST

 PLUGS \& JACKS BARGAIN PRICED

PHONE ICED

(1) FLAT TYPE PLUG. Two conductor.
(3) STANDARD PHONE JACKS Use where space is limited. Protrudes Mates with $1 / 4^{" \prime}$ plugs. Fits $3 / 8^{\prime \prime}$ hole. only $1 / 4^{\prime \prime}$. Bakelite shell. screw con- 18 B856. OpenCircuit 178236 . Closed
nectors
10 Lots,


## (2) STANDARD TWO-CONDUCTOR

2) STANDARD TWO - CONDUCTOR
PLUG. For 1 or 2 poirs of phones with either pin tip or lug type cords. Bake- For stereo headsets, etc. Motes with , ithe (3) ALL METAL SHIELDED PLUG. An- (3) SLIM IN-LINE JACK. Two circuit type other top quality import value. $1 / 2$ " $x$ for phone or mike extension $1 / 4 /$ phen $^{\prime \prime}$ phone plug. long, $1 \frac{1}{16}$ " nickel plate brass shell. Two- $1 /$ " $^{\prime \prime}$ dia. Quolity import.
 (4) MODERN SLIM DESIGN PHONE PLUG AT BIG SAVINGS. TOP quality import made. Neot $1 / 2^{\prime \prime}$ dia. $\times 15 / 8^{\prime \prime}$ long bakelite shell. Two-way with solder port made.

No. 17 C 665.
Net Eoch
29 C
10 Lots
27 c
PLUG AND JACK SET


FOR MAKING PHONE, MIKE,
ETC. CABLE EXTENSIONS
Latest style slim design. Standard $1 / 4^{\prime \prime}$ plug and jack combination only
 SLIM SHIELDED PLUG
Big savings on fine quality import Two-way with solder lugs and cable clamp. Standard $1 / 4{ }^{\prime \prime}$ plug and slim style
$60 c$.


## PL68 PLUGS

Popular 3 conductor mike plug for .206" dia. jacks as used with Collins, Gonset, and other communications geor. Reg. net over $\$ 2.00$. No. 18 A385.89 10 Lots, 75
Special Eo... 3-WAY PHONE PLUG Finest quality import of a savings Standard $1 / 4^{\prime \prime}$ plug with solder lugs. Black bakelite shell $3 / 4^{\prime \prime}$ long.
No. 17C285. Special Each

## (A) You save sss baratis <br> CORDS, WIRE, SPECIALTIES <br> (18)

BELDEN 71⁄2-FT. HEAVY DUTY AC LINE CORD

## WILL OUTLAST 6 ORDINARY

 CORDSHeavy flexible, tinned copper conduc tors sheathed with liberal thickness of good live rubber and attoched to rugcontacts. A superior, extremely flexible all purpose cord. Pearl aroy


## U/L AC LINE CORDS

Extra flexible "zip-apart" size 18 or plastic cords with molded attachment plug. Free end stripped
No. 198911 .
No. Choice Each 296 For. . 52.19 $71 / 2$ Ft. White 33
194918 . Eo.. 30
for. 52.49 9 ft. Brown $39 \underbrace{10}_{\text {For. }}$. 52.99 18 Ft. Gray 69 F For. $_{10}^{10} 5.99$

25 \& 50 Ft. Heavy Duty EXTENSION CORDS


25 FEET

Moisture-proof extro flexible vinyl cord sets with "molded-on" UL approved caps and connectors. For indoor and outdoor use with powe tools, opplionces lighting equipment C. Specify Block or Red

I\# 16-2 CONDUCTOR
3A123. 25 FT . Wt. $1 \mathrm{lb} .$. . 8 3A124. 50 Ft. Wt. 3 lbs. Ea... $\$ 3.49$ 18/2 LAMP AND
APPLIANCE CORD


Highest grade, extra flexible plastic conductors. Fine for speaker hookups, , for speaker hookups,
 1000 Ft. For. . . . . . . . . . . $\$ 20.95$ Cord Retainers Wedge type fits $3 / 8$ to $1 / 2$ dia. holes. Grips two conductor zip cord firmly Flexible block polyeth No. 17 A 784.
Pkg. of 5.
$49 c$

NEW SUB-MINIATURE 3-WATT TRANSISTOR AMPLIFIER

CHROME-PLATED HI-FI PHONO PREAMPLIFIER


Provides extra stage of amplificotion for use with mognetic cortridges, tape players and mierophones with ampli preomplifier. Wide bandpass range (20-20,000 cps) insures perfect im pedance match. Has slide switch for selection of proper equalization R1AA (phono) or tope Beoutifully made chrome plated. Surposses units selling for considerably more. Self-powered for $110-125$ volts $A C$. Wtih 12AX7 tube. Shpg. wt. 2 lbs.

## STEREO PHONO

 PREAMPLIFIERSimilar to above but adds extra stage of amplification for using stereo magnetic cortridges and stereo tape play built-in stereo omplifiers not hoving With tubes. Wt. 4 Ibs. $S 195$
No. 33 A 22 . Speciol Eoch

Used in mony makes of imported recorders. Perfect for building or experimenting. Universal mtg. brackets with $3 / 4$ to $1^{\prime \prime}$ slotted mtg . holes and center pivo DC res. 660 ohms; imped. 3500 ohms. Bias current 2 MA . bracket. $1 / 2$ track, current 4 MA . Hardware and instructions included. 2 MA , erase 320 ohm, 95 No. 17B320. Import Special
$\$ 3.95$
 4-TRANSISTOR SUBMINIATURE PUSH-PULL AUDIO AMPLIFIER


Meosures only $31 / 2 \times 2 \times 7 / 8$
(1/2×2×7, prowith phenos, tape recorders, PA, and many other oudio devices. Two oudio stoges are followed by a push-pul output stage. Input impedance 550 listed below for input transformer as mike. Output impedonce cartridge or mike. Output impedonce 8 ohms. Freq Color coded to 0,000 cps. - 4 db . cor coded leads assure simplified trols ect to speakers, volume confor 's $V$. Alin has snap-on connector circuit mounting board provided with 4 mounting holes. board provided with cluded.
No. 22 C 242 . Special Each. S5 5-4
No. 21A185. 9 V Battery. Eoch. 29 c Crystal Input Transformer

## REMOTE CONTROL

 EXTENSION SET

Convenient on-off control of TV, Radio, Appliances, etc. from a disrance. 10 ft . \#18 plastic cord with switch at one end, plug-in receptacle No. 19A893. Brown CHOICE No. 19 A893. Brown CHOICE
No. $19 A 894$. Ivory EACH
 GIANT SAVINGS ON PHONO COMPONENTS
HAVE FUN \& SAVE - BUILD YOUR OWN PHONO!


TOP VALUE! 3 TUBE PHONO AMPLIFIER

- PLUS 4-INCH PM SPEAKER
- FINE FOR STEREO CONVERSIONS

A real sweet deal! Fine quality amplifier as used in the better record play3 tube ( $50 \mathrm{C} 5,12 \mathrm{AV6} 35 \mathrm{~W}^{4}$, Has seporate volume and tone controls 5 wotts output, with excellent tone. $A C-D C$ cord and plug. Includes heovyOutput Transformer W. ${ }^{2}$. PM Anico $v$ Speoker and No. 22B87. Complete with Tub
No. 22B200. Amplifier only (less tubes). Net Each.
ALLIANCE 4-SPEED PHONO MOTOR \& PHONO ARM ONO ARM motor with retractable 45 RPM center adapter plus fine import phon phono arm complete with turnover cartridge with sopphire standard microgroove needles. Motor requires $21 / 2^{\prime \prime}$ below mto plote. 115 V .60 gy an. No. 37C181. Shpg. wt. 5 lbs. 5595
No. 37B188. Alliance Phono Motor \& Turntable Only

## 4 TUBE STEREO PHONO AMPLIFIER



HIGHEST QUALITY $96^{\prime \prime}$ AUDIO CABLE Molded-on Phono Pin Plugs Both Ends

- Extra fine, extra flexible American made shielded oudio No. 17B127. Special Each. .....................


## REPLACEMENT PHONO CARTRIDGES \& ARMS



FITS
ALL PLAYERS

## (1) UNIVERSAL <br> ALL-GROOVE

For all players., Use with all-groove needle. Std. $1^{1 / 2 \prime \prime}$ mtg. Output 3 to 5 quality. Less needle.
No. 17A629. 99
Net Each....99- 10 Each..91ค

## (1) CRYSTAL ALL-GROOVE

Standard replacement for single, 3 or 4 speed players using single needle cartridge. Only $3 / 4 \mathrm{oz}$. tracking pres-
sure. 3.5 volt output. Rest clip and sure. 3.5 volt output. Rest clip and thumb screw needle chuck. Top American make. Needle Included
16A622.S1.95 $10 @$ Each. 51.59

## 8 8 $4+75$

STEREO VERSION $\$ 2.49$
(2) UNIVERSAL TURNOVER

With sapphire stondord and microgroove needles. Regular $1 / 2^{\prime \prime}$ mounting for oll changers and players. Output $3 V$. Range 40 to $13,000 \mathrm{cps}$.
No. 174673 . $\$ 17510$ @ $\$ 159$ Import Spec... 175 Each.. 159 STEREO VERSION of above. No. 17A194. Import Spec. ... $\$ 2.48$
10 @ Each................. $\mathbf{\$ 2}$ (2) RONETTE TURNOVER Popular type DC500 replaces virtually oll monaural turnover cartridges. Fits $1 / 2^{\prime \prime}$ mtg. centers, has dual sapphire needles. $\mathbf{3}$ volt high output crystal is

ideal for small phonos. \begin{tabular}{l}
ideal for small phonos. <br>
No. $17 B 605$. Special Net. . . <br>
\hline

 

$\begin{array}{l}\text { BIG IMPORT } \\
\text { SAVING }\end{array}$ \& 5 \& 35 <br>
\hline
\end{tabular} (3)

(3) PHONO ARM WITH TURNOVER CARTRIDGE Fine for replacement or for building your own phono. Plays all 4 speeds. sturdy lightweight retractable mounting type complete with turnover cortridge described of left (17A673), orm rest and hardware. Groy hammertone finish.
No. 22A385. Special Each. 52.35
(3) STEREO ARM \& CARTRIDGE
As obove, but with stereo turnover cartridge for playing all records monaural and stereo. Output 3 V .
Ivory finish. lvory finish.
No. 22A386. No. 22A386. Special Each.. S2
BIG SAVINGS ON FAMOUS MAKE STEREO CARTRIDGES

## TAKE CARE OF $90 \%$ OF ALL REPLACEMENT NEEDS

ASTATIC 13T CERAMIC STEREO CARTRIDGE
Most popular Astatic cartridge of all. Used in hundreds of top moke phonographs and consoles. Ceramic element. Sapphire stylii tips, 20-15,000 cps response.
No. 17 C 567.
Net Eoch.
ASTATIC 13 TX CARTRIDGE Extra savings on diamond model. Same as above, except with .7 mil Sity

## WITH DIAMOND $S$ STHS .7 MIL. STYLUS

RONETTE STEREO TURNOVER CARTRIDGE
Save dollars on this extremely popu ar cartridge. Sapphire stylii for all rec ras-monaural and stereo. Freq. Resp 30 to 'Standard $1 /$ grams trackin pressure. St
No. 17 A446.
$\$ 3.99$
WITH DIAMOND STYLUS for stereo ond LP, sopphite for 78 RPM. $\$ 5.95$
No. 60A8. Specioil Eoch. POPULAR VACO TURNOVER CARTRIDGES

Voco Stereo Turnover with mtg. bracket. Type ST2X os used in most BSR, VM, etc. changers Has standord $1 / 2^{\prime \prime} \mathrm{mtg}$. Also threaded for single hole motg. Replaceoble sopphire stylii. No. 17474.
Special Each
$\$ 2.89$

## 

Vaco Turnover. Popular TO-45 used in thousonds of changers and players. Will replace most other makes of monoural turnover cartridges. Limited quantity Reploceable stylii.
$\begin{array}{ll}\text { 17B106. } \\ \text { spec. Eo. } \\ \text { 1. } & 105 \\ \text { Eoch. }\end{array} 1.75$


## EUPHONICS U11

CERAMIC STEREO
Fine quality cartridge used in thousonds of phonographs. Also exact re placement for EV-26 and similar cort ridges. Ideal for improving fidelity of present phono or in converting monoural to stereo. Freq. response 16 25,000 cps. 2 grams tracking force. Snap-in bracket supplied for stondard $1 / 2^{\prime \prime} \mathrm{mtg}_{\mathrm{f}} .7 \mathrm{mil}$ dio. stereo and 3 mil sopphire flip-under needle. S4, 77 No. 17871 . Speciol Eoch. No. 60B13. Speciai Each

## BIG PRICE SLASH ON GENUINE DIAMOND NEEDLES

LOWEST PRICE IN B-A HISTORY!


Daring B-A deep price slashes on finest quality hand cut, polished diamond needles. Nowhere will you find o needle of such high quality at such low cost. Last far longer than regular needles with far less wear to records. Every one carries full one year guarantee. Just return for replacement Made especially for B-A by leading needle manufacturer
(1) For GE RPX Series. Stylus assembly (4) For Vaco ST100, ST-20, etc. 7 mil replaces RPJ-013A with 3 mil sapphire and 1 mil diamond tips.
608128. Speciol, Net Each... \$1.89
(2) For GE RPX Series. 1 mil diamond
"slip-in" stylus only, to fit above ossembly. Replaces Rpj-01D. 60A85. Special, Net Each . . . . . \$1.89 (2) For GE VR1I Series. 1 mil diamond slip-in" stylus replaces 4GO1D. 60A37. Special, Net Eoch . .... \$1.89 (3) For GE VR227. 7 mil diamond stylus replaces VR222.
60B15. Special, Net Each . . . . $\$ 1.89$
(1) For All Ronette Monaural. 1 mil diomond stylus for TO $222,284,400$, etc. Also used in Vaco. 608131. Special, Net Each . . . \$1.89 (5) For Astatic Stereo 76Ts, 86 TS ; Voco Stereo T45. 7 mil dia. tip.
(4) For Vaco ST100, ST-20, etc. .7 mil
diomond tip. 60B14. Special, Net Each. . . . . S1.89 (5) For E-V 21 and 26 Series. .7 mil diomond tip
608150. Special, Net Each . . . . \$1.89 (5) For Ronette Stereo. 7 mil diamond stylus for OV, BF40, etc.
60B148. Speciol, Net Each . . . S1.89 (8) For Sonotone 8T G 8TA Series. Replacement for the most popular Sonotone stereo cartridge. 7 mil diamand and 3 mil sapphire tips.
60A11. Speciol, Net Each.... S1.89 (6) For Sonotone 2T Series. 1 mil diomond and 3 mil sapphire tips. Popuor N2T type.
60B130. Special, Net Each. . . . $\$ 1.89$
(7) For Euphonics U-8 and U-9. . 7 mil dio. and 3 mil sap. tips.


## Q YOU save sss <br> ON THESE SPICIAL benrgains

popular ASSORTMENTS


## ALL ARE BRAMD MEW!

 FULLY GUARANTEED!
## SAVE ON SEE-THRU

 PARTS CABINET

The perfect way for storing smal items and parts. Crystal clear heavily molded plastic drawers, $53 / 4^{\prime \prime} \mathrm{L} \times 218$ W $\times 11 / 4^{" D}$, are spillproof and divide into several compartments with regray enamel flnished cabinet, size $91 / 8^{\prime \prime} \times 131 / 8^{\prime \prime} \times 61 / 4^{\prime \prime} D$ with 24 drowers No. 40896.
Wt. 6 lb . Spec. Eo
$\$ 5.99$
WITH DEEPER DRAWERS FOR LARGER ITEMS
Some size and construction as 24 drawer above, but with 16 deeper film, and other lorger items. Perfect companion piece to obove. Shpg. wt
No. $36 B 80$. Special Eoch. .
BUY A PAIR AND SAVE
One each of 24 drawer and 16 drower.
CLEAR PLASTIC BOXES


Handy for condensers, resistors, switches, and all types of small radio
hardware. Size $7 \times 31 / 2 \times 1$ With hardware. Size
hinged lid.
1841268 . Ea.. 510 Lots, 555 FAMOUS B-A WAREHOUSE ASSORTMENT

## VALUE \$195

New Modernized
Version ... Greater Than Ever


3 Lbs. Chuck Full of Costly Elec. tronic Parts and Hordware Swliches, Condensers, Resistors,
Controls, Transformers... efc, etc.

A package to truly amaze you! A tremendous value of only a small froction of the original cost. Definitely not the usuol flaor sweepings but very useful and castly parts. Try one! If you are not happy blame our Sol 238

Ten Assorted, including both singles and duals, in popular copacities and valtages. All new, fully guoranteed. A terrific value. One or two is worth
the price of the entire assortment. the price of the entire assortment.
No. 18 B 63 .
10 Assorted . . . . . . . . . . . . ROTARY SWITCHES


Assortment of Ten-ony one of which s worth more than the price of the at. Anyane experimenting or bullding will find good use for olf.
No. 18A436. Asst. of Ten....

## PARTS ASSORTMENT



Consists of a mixture of various type Condensers, Resistors, Switches, etc. as in assortments on this page. A real Surprise Packoge. urprise Packoge

100 MOST NEEDED INSULATED RESISTORS


Highest quality insuloted resistors in popular resistances. All American IRC, Stockpole, etc. Includes $75-1 / 2$, W. and 25-1 W.
No. $19 B 796$. Asst, of 100

30 SUB-MINIATURE 1. W.V. ELECTROLYTICS


Tiny electrolytic condensers used in transistor radio and other minioture circuits. All
5 each $6,30,50$ W.V. Kit contains
100
mfd ; 10 5 each $6,30,50$ and $100 \mathrm{mfd} ; 10$ eoch 10 mfd . Big import savings.
No. 17 B 526 . No. 17 B 526.
it of 30
$\$ 3.95$
25 MOLDED MYLAR TUBULAR CONDENSERS


Less than 8 c each for super hioh quality condensers that usually cos from 15 c to 55 c each. Contains 12 olways pópulor sizes. No. 18 B 401.25 Asst. For. .

## 10 TUBULAR

ELECTROLYTICS


Includes I each 25,50 and 100 Mfd @ 50 V. $40 @ 150$ V.i 2 each 80
$80-20 \mathrm{Mfd}$ @ 150 V. $8-8 \mathrm{Mfd}$ @ 450 V . . add it up! $\$ 9.54$ reo value! No. 18C373. 10 Asst. For. 2 SWITCH ASSORTMENT


10 Assorted. Toggles, push-buttons slides, and even expensive microswitches. Use of 1 ar 2 switches poys for the whole lot.
MICA CONDENSERS


35 Assorted popular capacities, some volues to top quality with regulor buy, over $\$ 5.00$ worth.

8 Coils, Assorted Colors high quality thermoplastic insulated hook-up wire. All size 20 stranded copper wire in popular colors ... red. groy,
green, blue, yellow, etc.
$\mathbf{2 A 8 1 .}$. Asst. of $200 \mathrm{Ft...}$.

FERRITE BAR ANTENNA COILS

## 79c

Replaces coils in most transistor radios. Sizes $23 / 8^{\prime \prime}, 21 / 9^{\prime \prime}$ and $13 / 4^{\prime \prime}$ $79 c$

50 MOLDED PLASTIC TUBULAR CONDENSERS


Popular selection of 200,400 and 600 $V$. highest quality plastic impregnated condensers. Includes a wide range of regularly cost from useable sizes that No. 18A232. ?

50 TV KNOBS_HANDY For REPLACEMENT


50 different types including concentric, channe selectors, tuning, etc or 3 worth thervice work. Use of 2 No. $18 \mathrm{C312}$.
50 Assorted . . . . . . . . . . . .
FOOT BUMPER KIT

## 69c



Consists of 16 pieces, 4 sets of 4 matched bumpers. Includes recessed, small. Mighty handy ta have around No. 18C23. Speciol Per Asst..
INSULATED RCA TYPE PHONO PLUGS


Tight fitting plastic insulated sleeve over plug enables calor coding stereo inputs, etc. and eliminates annoying

Kif of 10.
$59 c$

YOU SAVE ON THESE EVERYDAY NEEDED ITEMS! SCREWS \& HEX NUTS


Always needed small hardware
Consists of 100 each $4-40 \times 1 / 2^{\prime \prime}$. and - $32 \times 1 / 4^{\prime \prime}$ RH machine screws; $1 / 4$ dia. 4-40, $6-32$ and $8-32$ hex nuts; machine screws and 75 No. $6 \times 1 / 2^{\prime \prime}$ sheet metal screws. 3.29 No. $11 A 498$. Per AsRDẄARE

$\$ 15$

Nuts, washers, grommets, springs, clamps, eyelets, screws, etc. A port to fill practically any occasional need. Over 600 pieces contained in a clear plastic box.
No. 11 A335. Net Each. . $\$ 1.15$ No. lla335. Net Each...
HIGH FIDELITY
CONNECTING CABLES

cobles. Each 36 inches long with RCA type pin plugs molded to each end. black, green, red and yellow. No. 178686.

TERMINAL STRIP ASST.


25 Assorted popular types in various who builds or repairs. No. 1889. 25 Pieces

PLASTIC \& VARNISHED CAMBRIC ASSORTED SPAGHETTI
 high orade extruded plastic and cambric tubing in 3 ft . lengths. Always hondy for countless needs. and you get it at a fraction
value. Shpg. wt. 1 lb .
No. 18 A284.
Per 60 Ft. Lot
895

> HEAVY DUTY

SOLDERLESS TERMINALS


High current "Amp" like needed in automotive work, 2 -way radio, etc Solid copper, crimp or solder. $1 / 4$ hole. 18B189. Per Asst. of 100. 995 RUBEER GROMMETS


High quality, tough black rubber. ADprox. 50 pieces in populor sizes to fit holes from $1 / 4$ to $5 / 8^{\prime \prime}$ dia. in metal ponels. Big Savings! No. 18A509.
Per Assortment, Special
69
PIN PLUGS AND JACKS


RCA type pin plug and jack so popular for Phono, Recorder, Auto Radio or anywhere, a single pin plug and lack is needed.
No. 17895. Per Asst.
95c


A B-A treosure chest value! Hondiest, most complete deal of its type available anywherel Contains the condensers most needed in everyday electronics work spilling over in handy metal storage unit included.
Every piece top make. All at a fraction of regulor price. Your overage cost per condenser less than 7 c and the cabinet is free.
Just look of what you get: 20 Tubular Electrolytics, both single and duals, 50 Molded Tubulars, 200,400 and 600 volts in most popular capacities; 50 Dise Ceramics; ond 35 Midget Micas. 155 pieces total, all very useable values.
Heavy gauge steel storage unit with "see-thru" clear plastic drowers meosures $10^{\prime \prime}$ wide, $61 / 1^{\prime \prime \prime}$ high, $6^{\prime \prime}$ deep. Regular net value cabinet alone \$2.99. Shpg. wt. $71 / 2 \mathrm{lbs}$

CHEST FULL OF RESISTORS
250 RESISTORS PLUS METAL STORAGE CABINET
Another B-A fabulous offer, the perfect componion to the condenser deal Anove Everyone will want' a pair of these sensotional money sovers. Just obove. Everyone will wani a pair of enough of the unmatched value? Average cost per resistor less thon 4 c and the cabinet is free.
Here's what you get: 200-1/2 Watt and 50-1 Watt Insulated Resistors in Heres whot you get: 200-1/2 Watt and $50-1$ Waft insulated Resiscrsole, most popular resistance values. Al new, fúlly guaronteed. Includes Metal etc.: 250 pieces total-all brand new, fully guaranteed. Inciudes Meto
Storage Unit, as with above. Shpg. Wt. 6 lbs . No. 18 A235. COMPLETE KIT SPECIAL EACH
No. 36B302. Extra Cabinets Type 12HBA

HOT VALUE! BARGAIN WIRE ASSORTMENT

## $(0) 250 \mathrm{FT}$

Highest quality thermoplastic insulated tinned copper \#24 stranded hookup wire in $5-50 \mathrm{ft}$. coils, assorted colors Shpg. wt. 1 lb. A terrific buy, regular value at least $\$ 2.70$
No. 2 A215. 250 Ft . Asst. . . . . .

## 2 LBS. OFTEN NEEDED

 SELF-TAPPING SCREWS

Handiest hardware assortment you'l buyl A big variety of sizes and lengths in Hex, Phillips, Round, etc. - prac tically all head styles.
No. 118385.2 Lb. Asstmt... 995 SOLDERLESS TERMINALS

100 Assorted most popular types and sizes as used with the Amp Hand Tool shown on page 106 inctudes ring tongues, slotted tongues, splice con nectors, etc. An assortment that will 18B742. Per Asst. of 100 .. . . . BUNDLE OF SPAGHETT


Handy bundle of 24 pieces, each $9^{\prime \prime}$ long, varnished high grade tubing in assorted colors and sizes.
No. 18 A69. Per Asst....... 59
No. 20 TIINED COPPER WIRE


Always handy to have around for "eady use. Fine for space wound 20 c 8 HEAVY DUTY
RUBBER FOOT BUMPERS


Toughest, non-marring molded rubber with internol molded-in washer. it" D . $\times 3 / \mathrm{s}^{\prime \prime} \mathrm{H}$. Mounts with single screw.
Will hondle heovy loods. No. 18C191. Special, 8 For . . . 48 RELAYS \& SOLENOIDS


Includes 2 solenoids, 3 relays. Most for piece worth the cost of entir ment.

##  <br> yOU SAVE SSS a Bincims

## POPULAR

 ASSORTMENTS
## (18) ALL ARE FULLY GUARANTEED!

## COMPUTER BOARDS

LOADED WITH PARTS


3 printed circuit boards, each loaded with brand new, high quality Americon made ports. You get at least 10 transistors, minioture metal encased electrolytic capacitors and resistors, in cluding $1 \%$ and $5 \%$ tolerance.
Can be easily desoldered and punched board used for dozens of projects. Wiring easily removed or $1 / 8 \times 25 / 8$. Boards alone worth more than our unbeliev able low price!
No. 18D377. While
Quantities Last, 3 For
99c
BIG EXPERIMENTER
SEMICONDUCTOR ASST.


Super volue. A selection of most popuar semiconductors. Experimenters and hobbyists will find hundreds of uses for 4 NPN and 2 power transistors, 42 amp. 200 PIV silicon rectifiers, 20 general purpose diodes and $43 / 4$ watt zener diodes with morked voltages. 298

## 200-FT. WIRE KIT

 PREVIOUS SELL-OUTBACK AGAIN:


BOTH ENDS ... READY TO SOLDER Saves time, work, and $\$ \$ \$$ tool High est quality thermoplastic insulated hookup wire, machine cut, stripped and tinned, ready for instont use. No more fumbling around with cutters, strippers ond the like. Simply pick the Consists of several hundred solder. 4 inch to 2 ft . -in ossorted colors, both solid and stranded, sizes 20 to 22. About the handiest wire ossortregular value. Shpg. wt. 1 lb . 18B316. Approx. 200 Ft., Ea.. 9

## SAVE \$ \$ ON B-A's TOP QUALITY IMPORTS

- LATEST PROFESSIONAL DESIGNS


## ATRRACTVE NEW BALL DESYGW



## ALL-DIRECTION DYNAMIC MIKE

A real sweetheart in looks and performance! Equal sound pickup from all sides. Perfect size and weight to grip comfortably.
Excellent choice for all kinds of mike uses-voice or music. Hand held or fits $5 / 8^{\prime \prime}$ stand with slip-in odaptor peroture or humidity. Response $40-$ $13,000 \mathrm{cps}$. Output - 52 db . High impedance. Black and chrome. $15 / 8^{\prime \prime}$ top dia. $x \quad 61 / 4^{\prime \prime}$ long. Convenient on-off switch. Detochable 5 ft . cables. Imported of fantastic sovings. Shpg. wt. 1 tb.
No. 29 C 348 . Special Each... $\$ 11.95$


## LATEST DESIGN SLIM DYNAMIC MIKE

 Latest slim design for hand held opplicotions or fits stand with instant slip-on swivel odaptor sup-plied. Single direction pickup Fine for PA, paging, recording etc. Compact and rugged, will withstand lots of hord usage. Not offected by high temperoture or humidity. Response 40-12,000 cps. Output - 52 db . High impedance. Handy on-off slide switch. Only 51/"' long, $11 / 16^{\prime \prime}$ diometer.
Black ond chrome finish. 5 ft detochable cord. High quality im port. Shpg. wt. I lb. \$10.95

- AMAZINGLY FINE PERFORMANCE


## B-A'S MOST POPULAR MIKE!

CARDIOID DYNAMIC MICROPHONE SINGLE DIRECTION PICK-UP DUAL IMPEDANCE
Fine for PA , recording, both voice and music. Will stop or greatly reduce feed-back howl on PA systems and allow greater working dis-
tance from mike. Quickly changed from regular high impedance to 50 ohm low impedance, allowing long mike lines without frequency loss. Has off-on switch and detachoble Output -62 db . Swivel mounting for $5 / 8-27$ stands. Swivel mounting Shpg. wt. $11 / 2$ lb.
No. 368289 . Sperial Ea.... $\$ 13.95$


## LAVALIER DYNAMIC MICROPHONE

Satin Chrome Finish

> With 15-Ft. Cable

Exceptional value. High quality, fine performance, and attractive appear-
once ore special feotures of this great once are special feotures of this great tions when you need to move around leaving hands free. Dynamic high impedance unit odds ruggedness not directionol sound pickup. Complete with neck card. Mike can be also hand held. Hos $15-\mathrm{ft}$. ottoched cord.
Respanse $50-5,000 \mathrm{cDs}$ Output -55 db . Beoutiful sotin chrome finish. Imported for big sovings
No. 29B330 No. 29B330.
Special Each
510.95


## JACKPOT SAVINGS ON MICROPHONES



## FABULOUS VALUES . . COMPARE WITH MIKES AT 2 OR 3 TIMES OUR PRICE

## CRYSTAL <br> LAPEL MIKE

A notural for hidden de-
tectophones, heoring detectophones, heoring de vices, etc. Non-directional and gives crisp, clear speech reproduction. Hi
impedance, hi output type impedance, hi output type with spring clip for of
toching. Weighs only 2 oz . Srushed bright metal case $15 / 8^{\prime \prime}$ dio.. $3 / 44^{\prime \prime}$ thick with 5o. cable. Wr. 8 oz
Nperial Each.
Spa ${ }_{3}$ Lots, Each .....\$2.19

SLIM HAND-HELD CRYSTAL MICROPHONE
With handy slide on-off switch and de tachoble 57" cable. Rugged and small weighs only 6 oz . Tops for voice or music. Wide range response; output -65 db ; high impedance. Beoutiful sotin finished bright cost metal housing $47 / 8^{\prime \prime} L, 11 / 8^{\prime \prime}$ max. dia. Shpg. wf. I lb.
Supplied with swivel cradle holder for use of mike, on fioor or desk stand. Has standard 5/8"-27 thread.
No. $36 A 285$.
Special Each $\quad \$ 3^{95} \begin{gathered}3 \text { Lots, } \\ \text { Each }\end{gathered} \quad \$ 3^{75}$

## RUGGED DYNAMIC

 MICROPHONEEspecially suited for hard usage. Beaufifully proportioned for desk stand or floor stand. instantly removable from swivel "stick" mike odoptor for hand held ged for PA paging recons; plenty rugged for PA, Doging, recording, confer ence sefups, etc. Response 80-8,000 cps, output - 56 db. High impedance. Hos slide type an-off switch and detochable $6-\mathrm{ft}$. coble. Approx. $71 / 2^{\prime \prime}$
long, $11 / 4^{\prime \prime}$ dia. black and chrome ${ }^{\text {in }}$. long, $1 / 4$ dia. black and chrome fin No. 294409 .
Quality Import.........
5.95

## DESK MIKE STAND

b-A LEADER VALUE MIKE FLOOR STAND



YOU CANTY CET
MORE STAND FOR THE MONEY

Holds All modern mikes
without tipping-yet easy
to use and move.

Full size brass tube stem is highgloss double chrome plated. Easily odjustoble from $35^{\prime \prime}$ to $64^{\prime \prime}$ in
height by simple, domage-proof height by simple, domage-proof scrotch on the chrome fubes. Weighted $10^{\prime \prime}$ dia. base is finished in boked wrinkle enamel, hos pods to prevent floor mars. 5/8"-27 Thread. Shpg. wt. 9 lbs. $\$ 5.88$
No.32 bls Net Each....... $\$ \mathbf{8}$

Becutifully mode import with $5 / 8^{\prime \prime} x$ Gray plastic 5 all standard mikes. with chrome finished diameter bose upright even with heovy mike. Shpg Wf. $1 / 2 \mathrm{lb}$
No .29 b 228. Special Each

BOOM ATTACHMENT
Centers mike over pickup areo. Attoch to $5 / 8^{\prime \prime}-27$ stand. For piono and similor uses where regulor mike stand can't be used. 32 inch chrome plated boom. Wt. $31 / 2 \mathrm{lbs}$.
No. $32 \mathrm{B14}$. Net Each.
5.10

## ALL-PURPOSE <br> SLIMLINE DYNAMIC

A high quality sensitivity mike. Perfect for recorders, paging, ham stations, non-directional. Dynamic high impedance unit. Gives crisp, smooth wide-range reproduction. Case is beoutifully finished in chrome and black, $31 / 4^{\prime \prime} \times 3 / 4^{\prime \prime}$ dia. Response and black, $31 / 4^{\prime \prime} \times 3 / 4^{\prime \prime}$ dia. Response
$50-13,500$
cps. Output level -55 db . Detachable $5-\mathrm{ft}$. coble. Imported at
at Defachable $5-\mathrm{ft}$. cable. Imported at
great savings. No. 29 B 350
No. 29 B 350.
$\$ 7.95$



Adapts one to 4 high impedance sound sources, microphones, funers, phono graphs, recorders, etc., into a single high impedance input at your recorder or amplifier. Hum-free battery powered wide range transistor amplifier provides addi tional gain as desired. Separate gain controls for each channel allow mixing and fading without 'nteraction. Input jacks are standard phone plug type; output, phono pin plug.
In gold finished case $57 / 8 \times 23 / 4 \times 2^{\prime \prime} \mathrm{H}$. with brown and gold knobs and mar-proo rubber feet. Shpg. wt. 2 lbs.
No. 29A411. Imported at Big Savings. Special Each
$\$ 7.95$

## STEREO VERSION OF ABOVE

Same basic principles as unit above but has dual stereo circuits. Adapts 2 separate sets of 2 high impedance sound sources, microphones, tuners, phono records, etc. into two single high impedonce inputs at your stereo recorde or amplifier. Shpg. wt, 2 lbs
No. 31893 . Import Special
$\$ 10.95$


CERAMIC MIKE - NEW DESIGN AND FEATURES $\$ 3^{49}$ Small enough, sensitive enough for concealing in pocket.

At last, the Derfect mike for tape recording, public address, hams-what have you of a truly reolistic price. Available for the first time with longlasting ceramic element. Really rugged, not offected by high temperature or humidity. Small-and lightweight ... tits comfortably in hand, balanced and weighted to set squarely on desk. Amazing performance! Frequency, response $60-8500 \mathrm{cps}$. Output level: - 45 db. Sturdy tan plastic cose, $211^{\prime \prime} \mathrm{H} . \times 21_{16^{\prime \prime}} \mathrm{W} . \times \mathrm{I}^{\prime \prime} \mathrm{T}$. Weighs only $31 / 2$ No. 20B600. Special, Net Each.
$\$ 3.49$

## TAPE RECORDER MIKE



High quolity mike mode by Euphonics. Made expressly far recorder applications. Small and extremely lightweight designed for hand-held use or sits flat on desk. Finest quality for superior high outaut, wide ronge performance. Freq. grey and ton plostic body. Flexible 5-ft grey and ton plo No. 18 C699.
Special Each
$\$ 1.99$
HIGH QUALITY PJ-055B PHONE PLUG
 BRAND NEW PRODUCTION? Not Wor Surplus Designed especially for critical communications equipment to meet military specificatiors. . A superior plug for any use. Fits standard $1 / 4.2$ mochined. Internal insulation is blue, latest lowloss high dielectric type. Complete with lug orminols ond bross screws. Don't miss this op portunity ta stock up ot terrific sovings. 496 No. 18C897. Special Each............ 100 Lots, Each.. 39 c
10 Lots, Each. 44 c POPULAR AUDIO "Y" ADAPTERS
(D) Two RCA type phono jacks connected in parallel to RCA type pin plug. Chrome finish, fully shielded. 69e No. 17 A692. Import Special, Eo..... Se in parallel and terminated into RCA in parallel and terminated into RCA
type pin plug by $4^{\prime \prime}$
shielded cobles. type Din plug by $4^{\prime \prime}$ shielded cobles. Alurability. conners molded on to cable for durability. No . 17 A 696 import special, ea.... 88 c


PHONE PLUG TO
PIN PLUG ADAPTOR Adapts microphones, headphones, cables, etc. having standard $1 / 4^{" 1}$ phone plug to fit RCA pin jock on equipment. No. 174690. Imported Speciol Each.

69c 10 Each.


FEMALE MIKE CONNECTOR TO PHONE PLUG ADAPTOR Converts stondard screw-on cable connectors to fit 1/4" jock. No. 18A318 Spec. Each
$35 c{ }^{10}$ Lots 29c


## DYNAMIC DUAL IMPEDANCE MIKE

PERFECT SOUND PICKUP in all directions

## SLEEK NEW STYLING GINEST WORKMANSHIP PERFORMANCE . . . PLUS!

##  <br> ANOTHER FINE <br> ${ }^{5} 16{ }^{95}$

Beautiful ond very practical. So nice you simply must see it to fully appreciate the overall good looks, excellent performance and fine quality. Built for general purpose work of all kinds... PA church, tape recording. wherever appearance and sound both count. Pickup is uniform in all directions. Response $50-15,000 \mathrm{cps}$, output - 55 db , impedance 600 or 50,000 ohms allowing use of extra long mike line if needed. Head tilts from full vertical to horizontal, fits $5 / 8-27$ stand. Has slide on-off switch and detachble 2 -cond. shielded 20 ft . cable. Size $81 / 2 \times 11 / 2^{\prime \prime} \mathrm{max}$. dia. Brushed chrome with black perforoted grille. Shpg. wt. 2 lbs. No. 298259. Special Import.
$\$ 16.95$

## DELUXE <br> ALL-DIRECTION DYNAMIC MIKE

Outstanding quality and superb design. General purpose mike for PA and recording applications. Exceptionally popular with musicians and entertainers. Long cord allows extra freedom of movement. Hand held design, or fits $5 / \mathrm{B}^{\prime \prime}-27$ stand with slip-in odaptor supplied. Equal sound pickup from all sides. Rugged construction withstands lots of hard use. Has convenient on-off switch. Response $50-15,000 \mathrm{cps}$. Output - 52 db. 18 ft . detachable cord. Brushed chrome finish. Amazing import



PROFESSIONAL DESIGN DYNAMIC MIKE SMOOTH NATURAL SOUND ON VOICE OR MUSIC

A beoutiful mike you will be proud to own. Perfect for recording, public oddress, paging and general use. Completely versotile. Use on its own odjustoble desk stand, for hand-held opplications or on standard 5/8"-27 floor stonds. Excellent sound pickup from all sides. Rugged construction. Withstands heat and shock. Die cast all-metal body and base. Has convenient off-an switeh. Output - 52 db. Response 50-15,000 cps. 5 ft . detochable cord with standard $1 / 4^{\prime \prime}$ phone plug attoched. Block sotin and brushed chrome. Imported to give you big sovings! $21 / 2 \mathrm{lbs}$.
No. 298275 . Spec. Ea. $\$ 14.95$


DYNAMIC MICROPHONE ELEMENTS TOP QUALITY-BIG IMPORT SAVINGS
Hi-impedance 50,000 ohm cartridges like used in high quality import mikes. Use for replocements or for built-in mike applications. Matching ransformers attached
Sensifivity - 55 db . Response 50-12,000 cps. $11 / /^{\prime \prime}$ dia. $\times 15 / 8^{\prime \prime}$ deep.
No, 29 A327. Special Eoch
$\$ 4.95$
Sensitivity - 52 db . Respanse 40-13,00
dia. $\times 13 / 4$ deep.
No. 298328 . Special Each
$\$ 5.95$

## B-A's SPECIAL VALUE

## CERAMIC COMMUNICATIONS MICROPHONE IDEAL FOR CITIZENS BANDAMATEUR

All the wanted features. Made to B-A specs by a leading American Microphone producer. Has coiled cord press-to-tolk relay switch, ceramic long-life cartridge. Best ever for replacement on CB and ham equip ment. Fine for all the new mobile rigs. Response 80-7,000 eps. Output -54 db .5 ft . coiled cord. Professional grey plastic case silver trim. Cose only $35 / 8 \times 21 / 2 \times 11 / 2^{\prime \prime}$ T. With
dosh mtg. bracket.Wt. $1 \mathrm{lb} . \$ 587$



WITH ALNICO V HIGH EFFICIENCY MAGNETS The measuring stick for speaker efficiency and its value is the
Mognet Weight. Be sure you check when you compare prices. All have 3.2 ohm voice coils lexcept 32 A 70 and 22 B59 which are 6.8 ohm: and 22 Al 25 which is 45 ohmt for intercoms)

| Size M | Mag. Wt Oz. | Illus. | Depth | Stk. No. | Eoch | 10@ Each | 24@ Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3" | 1.00 | 3 | $26^{\prime \prime}$ | 224235 | 1.75 | 1.59 | 1.44 |
| 3'" | 1.47 | 3 | $2{ }^{4}$ | 22B74 | 1.92 | 1.75 | 1.59 |
| $4^{\prime \prime}$ | . 55 | 3 | $11 / 2^{\prime \prime}$ | 22Ci89 | 1.19 | 1.09 | . 99 |
| 4"' | 1.00 | 3 | $21^{3}{ }^{\prime \prime}$ | 22879 | 1.39 | 1.29 | 1.29 |
| $4^{\prime \prime \prime} \dagger$ | 1.00 | 3 | 2 | 224125 | 1.95 | 1.78 | 1.62 |
| 4 " | 1.47 | 3 | 21.4 | $22 A 124$ | 1.93 | 1.75 | 1.58 |
| 5 | 1.00 | I | $21^{3 \prime}$ | 22878 | 1.59 | 1.49 | 1.49 |
| 5 | 1.47 | 1 | 2\%:" | 22879 | 1.99 | 1.81 | 1.85 |
| 5" | 2.15 | 1 | 2 \%', | 228316 | 2.35 | 2.14 | 1.95 |
| $6{ }^{\prime \prime}$ | 1.47 | 4 | 2 訛" | 22881 | 2.09 | 1.89 | 1.39 |
| $6^{\prime \prime}$ | 2.15 | 4 | $2{ }^{6}{ }^{3}$ | 22882 | 2.69 | 2.49 | 2.31 |
| $8^{\prime \prime}$ | 2.15 | 1 | 315 | 22852 | 2.99 | 2.79 | 2.45 |
| 8' | 3.16 | 4 | $3 \%$ | 22C96 | 3.59 | 3.39 | 3.09 |
| 8'\% | 6.8 | 4 | $4^{\prime \prime}$ | 22859 | 5.45 | 4.95 | 4.85 |
| $10^{\prime \prime}$ | 3.16 | , | $4^{\prime \prime}$ | 33871 | 4.39 | 3.99 | 3.51 |
| 12' | 2.15 | , | 476" | 348166 | 4.35 | 3.95 | 3.55 |
| $12^{\prime \prime}$ " | 6.8 | " | 51. | 32470 | 8.95 | 8.35 | 5.84 |
| $4 \times 6{ }^{\prime \prime}$ | . 1.47 | 2 | $26{ }^{\prime \prime}$ | 22 B80 | 2.09 | 1.89 | 1.89 |
| $5 \times 7{ }^{\prime \prime}$ | " 1.47 | 2 | 216 | $22 B 62$ | 2.59 | 2.38 | 2.16 |
| $6 \times 9$. | - 2.15 | 2 | 31. | 22853 | 3.29 | 2.99 | 2.85 |
| $6 \times 9^{\prime \prime}$ | . 3.16 | 2 | 31\%" | 22883 | 3.59 | 3.29 | 2.89 |

May Now Be Assorted for Quantity Prices Mognet Weight. Be sure you check when you compare prices.


## WORLD-FAMOUS NORELCO 8-INCH TWIN CONE HIGH FIDELITY SPEAKER



Heavy duty Alnico $V$ PM speoker with 1 oz. mognet. Premounted transformer matches speaker to amplifiers, phonos, radios, etc. using $35 \mathrm{~L} 6,35 \mathrm{C} 5,50 \mathrm{B5}$, 50C5, 50EH5, 50L6, efc.
22C149. $\$ 10$ @ $\$ 155$
Special Each... 168 Each. Special Each

## TWIN-CONE $6 \times 9^{\prime \prime}$



Big 6 oz. ceramic magnet for 10 watts of power. Whizzer cone for exrended range tone. $3^{3 / 4}$ V.C. Mullow mtg., $23 / 4.20$ or 40 ohms. SholNo.
242


FITS MOST UNUSUAL SPACES Nothing else like it to compare! Fits where no other speaker -will fit while providing unusually fine performance. Mounts horizontally or vertically in bookcoses, cabinets, drawers ... tucks oway conveniently anywhere. Top moke with 1.47 oz . Alnico $\vee$ magnet. $3.2 \mathrm{ohm} V$
$\mathrm{No} 22 B 282.$. Special Each
$\$ 2.99$

NEW MULTIPLE IMPEDANCE SPEAKERS
FOR USE WITH TRANSISTOR AUTO RADIOS
Use with transistor auto radios for replacement or
rear seat speaker installations. Readily adjusts fo rear seat speaker installations. Readily adjusts for
10,20 or 40 ohm impedance. $6 \times 9^{\circ}$ of shallow design, only $21 / 4^{\prime \prime}$ deep. Heavy 2.18 oz . cup magnets, i" voice coils
No. $22 A 395$. $5 \times 7^{\prime \prime}$. Net Each
No. 22A396. $6 \times 9^{\prime \prime}$. Net Each
$\$ 2.99$
4×6 IN. PM SPEAKER WITH HEAVY 1.47 OZ. MAGNET
 SAVE! B-A SPECIAL PURCHASE An exceptional buy! Regularly worth over $\$ 3.00$. Right for replocements, reor seat speakers, etc. 3.2 ohm voice coil.
No. 224401 . $\$ 11910$ Lots, 99 No. 22A401.
Special Each $\$ 19 \begin{aligned} & 10 \text { Lots, } \\ & \text { Each... }\end{aligned} 99$


Superior quality import of amozing fect price. Worth at least double. Per$23{ }^{\circ}$ " 0 sweet 16 s, replacement, etc. $2^{33} \mathrm{~B}^{\prime \prime}$ D. 8 ohm V.C. 2.1502 magnet. $\begin{array}{ll}\text { No. } 22 A 42 \\ \text { Special Eo... } \$ 139 & 16 \text { For. } \$ 19^{95}\end{array}$

 nico
Shpg. Wt. 2 lbs.
No. 22 Cl 46 . Special Eoch. $\$ 1.69$
$6 \times 9^{\prime \prime}$ TWIN-CONE TRU-FIDELITY SPEAKER


Powerful heovy duty, high quality twin-cone speaker. Perfect for improved tone in record players, rodios, Tear sets, automobile radio dosh and rear sea installations, etc. Electronic design and principle some as found in the more expensive .high-fidelity speakers. Inner cone carries the high notes. outer cane the lows. 3.2 ohm
No. $22 \mathrm{~B} 275 . \$ 499$ No. $22 \mathrm{~B} 275 . \$ 499$ Lots, $\$ 449$
Net Eoch
Each..

Thousands sold of \$726. Now B-A spe purchoses permit even for greoter sovings. You would usually expect to pay 3 times as much type qual quality. Ideal replacement for older type speoker in record players, TV sets, rodios, or for hi-fi systems where space is limited. Handles up to 10 watts. Frequency response (1),000 cps. Impedance 4-6 ohms No. 34B207. Special Each
$\$ 4.99$


Will improve tonal performance of ony radio, TV, phono or hi-fi hoving single cone speaker. Appearance and performance of speakers costing mony ( 6.8 more. Heovy duty $12^{\prime \prime}$ wooter Crossover of 2000 cps . Rated 12 watts. Response $50.15,000$ eps. 8 ohms.
No. 344309 . Special Each $\quad \$ 9.95$

## 4-INCH PM SPEAKER

WITH OUTPUT TRANSFORMER


## EXCEPTIONAL NEW COAXIAL HI-FIDELITY 8-INCH SPEAKER

## shallow desicn <br> $\$ 9^{95}$

## FULL-RANGE

40-18,000 CPS
Features $110^{\circ}$ wide
ongle sound dispersion.
A whale of a lot of speaker at $B-A^{\prime}$ s amazing low price. Real high quality. Full range, distortion free, true coaxial speaker for Hi Fi, public address, paging and bockground music. Only 3 deep, mounts in standard 4 walls. Mig. brocket provided for 70 volt iransformer. 20 wotts power, freq. respons? $40-18,000 \mathrm{cps}$, crossover of 2000 cps , screw terminals. Wt. 3 lbs.
No. 34 A379. Special Each.
$\$ 9.95$

## 12-INCH GUITAR SPEAKER <br> 595 Special design for optimum performance with guitors and other musical instruments. High efficiency for clear distortion-free sound ot high volume. Exceptionally well made. Heavy bosket frame and special cone designed for bass note reproduction of guitars. Made for B-A by a top American manufacturer. 6.8 oz. magnet, $11 / 2^{\prime \prime}$ voice coil. Shpg. wt. 5 . lbs. No. 34B224. <br> $\$ 8.95$



Big, full ronge, high power speoker for music systems, auto rear seat installations. etc. Deep cone, dustproof $1^{\prime \prime}$ No. $228350^{4-8}$ ohm.
No. 228359.
Speciol Eoch
$\$ 2.99$
1.47 oz . Alnico $V$ mag. 3.2 ohm $2 \times 6^{\prime \prime}$ No. 22 C236. List $\$ 5.60$ Ea... $\$ 1.89$ $3 \times 5^{\prime \prime}$ No. $22 C 237$. List $\$ 5.30$ Ea... $\$ 1.79$ $4 \times 8^{\prime \prime}$ No. 22C238. List \$6.30 Ea. \$2.19

## 8-INCH MAGNAVOX

 PM SPEAKERHeary Duty 2.15 oz. Alnico V
 Extra good quality--for music systems, PA, replacement, etc. 3-4 ohm voice No. 22C115. \$199 10 Lots, $\$ 185$
Each. . . .
Eoch. . 4" 45 OHM INTERCOM AND OUTDOOR THEATRE


Weather resistant type with 1.47 oz . Alnica magnet. Square $4^{\prime \prime}$ frome. Perfect intercom or theatre replocement.
Correct impedance for many transistorized devices.


# リNTETAM VALUES TN ENTENSTON SPEAKERS 



WIDE RANGE SPEAKER
In Walnut Enclosure WITH BUILT-IN VOLUME CONTROL Complete, ready to hook up to any radio, TV, phono, hi-fi, etc. Beoutiful Walnut finished hardwood enclosure with ottractive modern grille Completely enclosed for finest baf Provides tull wide-range tone BuiltProvides hull wide-range PMe. Bultin fader control varies volume without $4-8$ ohm $V$. 5 wip 8 lbs system No. 34C194. Inrport Special


4-INCH PM SPEAKER IN WOOD BAFFLE HANDY MIDGET SIZE-MOUNTED AND READY TO USE
Finished 2 -tone natural wood miniature cabinet, closzd at rear. Contains full $4^{\prime \prime}$ speaker with heavy magnet 3.2 ohm V. C. Fine for intercom, re mote or chairside TV-radio extension. A dandy speaker for code practice short wave listening, audio experimenting of all kinds. Built-in two prong pack and plug for quick conShpg. wt. 2 Ibs.
No. 228300 . Imp
\$3.27


## HIGH EFFICIENCY <br> 8 INCH SPEAKER

SPECIALLY DESIGNED AND LOW PRICED FOR MULTIPLE SPEAKER Real good buy! Sove over唯 estoblishments, doctors offices, business tiple sponts, homes anywhere mulmusic, low level poging systems, etc. High efficiency design provides excellent response Sha en the lowest powered amplit. Shallow construction, only $21 / /^{\prime \prime}$ deep. 2.4 Oz. territe magnet. mpedance Made in U.S.A. Shpg. wt.



SPEAKER FITS UNDER PILLOW

## ${ }^{5} 2^{79}$

Low impedance magnetic unit operates o
bone conduction principle. Connects to out
put transformer of set, or with oddition of plug can be plugged into earset or extension Listen to Rodio or TV Without speaker lack of sets so equipped, $2{ }^{7} \mathbf{7}^{\prime \prime}$ dia. ductor plastic insulated cord. Instructions in-


## CEILING-WALL SPEAKER IN FLUSH MOUNTING BAFFLE

Pipe music from radio, hi-fi, etc. ${ }^{\dagger}$
any room of the house, office, plan etc. easily and economically. Heovy duty $61 / 2^{\prime}$ speoker is premounted in blush mounts- no cutouts necessary -to ceiling or wall. $91,2^{\prime \prime}$ dia. $21 / 2$ deep. 8 ohm No. 228324.
Special Eoch
$\$ 4.95$
$\$ 196$



HIGH-EFFICIENCY LEVEL CONTROLS (L-PADS)
For adjusting and matching the listening levels of 2 or more speakers used in a multiple speaker system. Matt silver and black $2^{1} / 2^{\prime \prime} \times 2^{\prime \prime}$ panel plate with black plostic contour knob. Mounts in panels up to $3 / 4$. No. 178325-8 Ohm. Special Import Volue No. 178327-16 Ohm. Choice Net Eoch

- Contolis borh speakers, main ond remote from one location. Fine for HilFidepth behing, ponel

69c

## 8 OHM L-PAD AT LOW COST

Insert in line between amplifier and speaker to adjust speaker volume independently of other speakers in the system. 2-section wire
wound ceramic insulation. Handles speaker power ta 6 watts. $1 / 4^{\prime \prime}$ shaft, ${ }^{3} 8^{\prime \prime}$ lang, ${ }^{3} 8^{\prime \prime}$ bushing Shpg. wi. 6 oz.
No. 17 A4lo.
No. 17 A4l
Special Eo.
$\$ 1.39{ }_{\mathrm{for}}$
$\$ 5.00$


PORTABLE 4-IN. SPEAKER WITH 20-FT. CABLE

## ALI PURPOSE SPEAKE

 A MULTITUDE OF USESCleverly designed plastic encased unit on swivel stand. Provides personal listen. ing at the chairside, bedside, on the patio Conne. without loud disturbance to orhers Connects by clipping leads directly to exceptional clarity. Only 4 ." diameter. Perfect for TV Hi-Fi, radio code proc erfect for , Modio, code proc 20 rice, shortwove listening, etc included. No. 22C323. Special Each.... $\$ 2.99$

## NEW

LOW
PRICE
FANTASTIC TUBULAR ACOUSTICAL SPEAKER SOUND FLOWS FROM BOTH ENDS Absolutely amazing sound reproduction. you must hear it! Provides big speaker performance with unusual outo rear seot, TV, etc. Midget plugs outo rear seot, TV, etc. Midget plugs provided for transistor radios. Tucks away onywhere -- behind sofo, under table, in bookcose-or mounts easily on ceiling, heodboord, ete., wherever desired. $2^{\prime \prime}$ long, $33 /$ " $^{\text {foot cord. Shpg. wt. } 5 \text { Ibs. With } 12}$
No. 34 A276. Import Speciol

## [UCOWPARABE EIL-F SPEAKER BUYS


(1) GIANT 15-INCH FULL RANGE SPEAKER

Absolutely amazing performance ot surprising low cost. Outperforms speakers usually costing much, much more. Big power handling capacity of duces clean rich bass tones to 30 cps with high frequency range extending to over $13,000 \mathrm{cps}$. Full Special Each
$\$ 9.95 \underset{\text { for }}{\text { poir }}$
\$15.95
(3) G.E. $12-1 N C H$ FULL-RANGE SPEAKER

Best $12^{\prime \prime}$ speaker value we've ever offered. Just great for hi-fi and stereo, multiple speaker systems, etc. Meets all tests ... wide freq. range ... Jorge power handling obility, high efficiency of low power levels. Low resonant frequency, 1" double wound oluminum voice coil, exceptional overall quality. Rated 10 watts
 Wt. 4 lbs.
No. 34B319. Special Volue..................... $\$ 5.95$ Pair
For

SMALL PARALLEL WIRE
Neot groy plastic insuloted 2 -wire 24 paralle coble. Extro flexible with size fect for hi-fi ond intercom installotions. Eosily concealed. Dio. only. 058 No. $2 c^{2} 33$
Per $100^{\prime}$
$\$ 1.29$ For.


## ANOTHER FABULOUS BUY 15-IN. TWIN-CONE HI-FI SPEAKER

## BUILT FOR ELECTRONIC

ORGANS BYTOP SPEAKER MANUFACTURER

## AMERIGAN MADE

HANDLES UP TO 30 WATTS MUSIC POWER


A terrific speaker of considerably less than its usual value. Built by quality conscious maker for the wide-range and high-power sound requirements of electronic organs. Designed for top hi-fi performance with both woofer and tweeter cones, extra large $13 / 4^{\prime \prime}$ voice coil, huge 2 lb. Alnico $\vee$ magnet and rugged frame. Sound response is smooth over entire tonal range. Provides unusually low bass response, sparkling crisp


## GAVIE <br> NORELCO high fidelity SPEAKERS SPECIAL PURCHASE OF WORLD FAMOUS TWINCONE SPEAKERS MAKES POSSIBLE TREMENDOUS SAVINGS <br> COMPARE AT $\$ 30.00$ $516^{88}$

Out they go at the lowest cost ever! Never betore onywhere a speaker of
this outstanding high quality of such a low, low price. World famous for its this outstanding high quality af such a low, low price. World famous for its
incomparable high fidelity sound recraduction.

NORELCO 12 -INCH RWIN-CONE MODEL AD4277M
Latest improved model superseding the popular 9760 M . Now better than eve. Employs two cones which are always in phase octave above 10,200 pioducing clean smooth wide range response 35 to $18,000 \mathrm{cps}$. Features new powerful Ticonal VII voice coil magnet for maximum efficiency and damping. Magnet wt. 17 oz . Flux density 8000 gauss. Power hand ting


NORELCO 8-INCH TWIN-CONE MODEL AD4877M
New improved version of the popular selling Modal 9710 M at bis sovings.
Some famous design as above. Specs. are: freauency response 50 to 20000 Same famous design as above. Specs. are: frequency response 50 to 20,000
cps. Heavy 15 oz. Ticonal Vil mognet. Flux density 13,000 gauss. Power handling capacity 10 watts peak. V.C. impedance $4-6$ ohms.


NORELCO S-INCH TWIN-CONE MODEL AD 3500 M
Amazing wide-range response ond terrific power for its size. Provides true high fidelity performonce. Especially well suited where only limited speaker space is available. Also use in multiples of 2 or more for truly fantastic results. Freq. response 130 to 19,000 cps. Heovy Ticonal VII magnet. Flux
density 11,000 gouss. Peak power handine caoocity 5 wat ts. C . density 11,000 gouss. Peak
$4-6$ ohms. Shpg. wt. 2 lbs.
No. $22 A 46$
Speciol Net Each

## $\$ 4.88$

$\$ 8.50$
NORELCO 12-IN. TWIN-CONE MODEL AD4201


Now, famous quality of economical new low cost. An amozing value with performance that surpasses speakers priced of over twice as much. No socrifice hos been made in effi-
ciency or fidelity. Provides unusually clean response with unexaggerated bass and silky smooth highs. New Ferroxdure ceramic magne requires less depth-only $41 \mathrm{n}^{5 / \prime}$ overall-enables
easier installation in cobinets, etc. Extro high easier installation in cabinets, etc. Extro high flux density of $42,600 \mathrm{mnxwells}$. Frequency resoonse 40 to 15.000 cps . Power handling co pacity 10 watts with 15 watts peak. V.C. imp.
5 ohms. Wt. 27 lbs. Compare ot $\$ 20.00$ 5 ohms. Wt. 27 lbs . Compore of $\$ 20.00$
No. 34 A
Spec. Net Eo..... $12.88{ }_{\text {For }}^{2}$
$\$ 19.50$


## RECORDING LEVEL METER

Con be odded to most re-
corders. For better than corders. For better than showing proper signal to make good recordings. Meter has basic movement of $\mathrm{O}-1$ $7 / 8 \times 18^{4} \times$ in" $^{\prime \prime}$ deep. Supplied


MINIATURE TUNING METERS


Same type funing indicator used on expensive Hi-Fi tuners and receivers. Modern styled
rectangular foced meters with rectangular foced meters with
D'Arsonval movements.

Mounts behind panel with only $1_{16}^{7} \times 13 / 8^{\prime \prime}$ clear plostic bezel exposed. Also for SWR bridges, field strength meters, experimental devices. High quality import.

## SAVE ON COMPONENTS FOR 2, 3 AND 4-WAY SPEAKER SYSTEMS



## SUPERSONIC 4-INCH HORN TWEETER

Superbly engineered and beauifully made to extend the high frequency perfarmance of ony high fidelity speaker to a super-sonic range of over 20,000 cps . Adds life ond brilliance to musical reproduction. Highly efficient driver with edgewise wound aluminum voice coil gives flot frequency response without annoying distortion from 1500 cps . Total flux of 30,000 moxwells handles power of 20 wotts. Heovy die-cost sotin gold horn with self-standing odjustquires $31 / 2^{\prime \prime}$ dio. hole. Depth $5^{1 / 2^{\prime \prime}}$. Shpg. wt. $21 / 2 \mathrm{lbs}$. Big Import Savings. No. 22A380-8 Ohm. Your Choice No. 22A383-16 Ohm. Each
$\$ 11.95$

## (2) HORN LOADED COMPRESSION TWEETER

Actually the price belies the quality. Here is on exceptional value! Same acoustic design as used with the more expensive speoker systems.
Long throat modified hyperbolic horn provides wide angle high frequency sound dispersion and is compression loaded to flatten the response curve. Handles 20 wotts of power with a flat frequency resoonse from 2000 to 20, Handles 20 wofts of power with o las. 8 ohm . $3 \times 71_{4} \mathrm{~s}^{\prime \prime}$ flange requires $2 \times 6^{\prime \prime}$ baffle cutout. $61 / \mathrm{g}^{\text {" }}$ deep. Low-lustre black and metallic gold.
Shpg. wt. $21 / 2 \mathrm{lbs}$. American made
No. 34C235. Special Net Each.
(3) EXPONENTIAL HORN TYPE MID-RANGE TWEETER

Fills the need for mid-ronge horn in 3-woy speaker systems or mid-range and tweeter in 2 -way systems. Same type as used in costly home and theatre systems ... at a small fraction of their usual cost. Long $10^{\prime \prime}$ horn with $3 \times 91 / 2^{\prime \prime}$ mouth reproduces $900-20,000 \mathrm{cps}$ smoothly, cleanly, and efficiently ... free of "humps" or "peaks" in the response curve, without distortion, and with high output to motch even large woofers. $4 \times 101 / 2^{\prime \prime}$ flange requires $3 \times 9^{\prime \prime}$ cutout. 20 watt power rating. Low-lustre black and metallic gold. Overall length $111 / 2^{\prime \prime}$.
$\$ 7.95$ No. 34C236. Shpg. wt. 4 lbs. Net Each.
(1) and (3) TWO-WAY LC CROSSOVER NETWORKS

FOR 2 OR 3-WAY SPEAKER SYSTEMS
(1) Compact Inductive-Capacitive Network feeds frequencies above 2000 cycles to tweeter, below 2000 CDS to woofer. Insertion loss only 1 db Solder lug terminols for omplifier, woofer, tweeter. 8 ohms. $\$ 3.95$
No. $34 \mathrm{C} 232,31 / 2 \times 2 \times 13 / 8^{\prime \prime}$. Shpg. wt. 8 oz. Net Each........ $\$ 3.920$. crossover. inserfion loss only $1 / 2$ db. Use with mid-range tweeter and wooter for 2-way speaker combination; or for woofer, mid-ronge, and Solder lug terminals. Complete instructions included. $31 / 2 \times 41 / 4$ " báse plate, $2^{\prime \prime \prime}$ high.
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## BUILD YOUR OWN 2 OR 3-WAY SPEAKER SYSTEMS WITH THESE B-A STEP-UP KITS



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Special Each Special Each

$\$ 9.95$


MID-RANGE STEP-UP KIT NO. 2 Add to woofer-tweeter 2-way speoker system, or single speaker, to improve midange and lower high-frea. rabe above No 34 C234 2-Way Crossover, and Mid-Range Nolume control. 34 C238. Special Each....... \$11.95

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Genuine high frequency tweeter with hard curvilineor cone, fully encosed rear. Crossover recommended $1800-2000$ eps. Frequency response 1800-20,000
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PARABOLIC CONE TMEETE• WITH CROSSOVER INCLUDED

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WIDE-RANGE 15-WATT
12" OVAL SPEAKER

## FINE WOOFER FOR

2 OR 3 WAY SYSTEM
Fits in more campact spaces due to oval $8 \times 12^{\prime \prime}$ design. Use with other compo$8 \times 12^{\prime 2}$ design. Use with other components shown here for excellent 2 or 3 way speaker system. $\mathrm{Hi}-\mathrm{Fi}$ consoles. Big proving sound of Hi -Fi consoles; Big 6.8 oz . Alnico $V$ magnet
8 ohm . Shog wt 4 lbs No. 34B144. Special Each. . . . . $\$ 4.95$


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Giont 17 ox. Ainico $V$ magnet - Bass response to 20 cps
- 30 wart power rating
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 Giant 17 oz. Álnico $V$ magnet combined with such outstanding feotures as big $11 / 2^{\prime \prime}$ voice coil, deep cone construction, ond flexible edge cone suspension puts this speaker in a class all by itself. Perfect also os a woofer or fine for PA and other sound applicotions where plenty of power is needed. Built by Dukane, a leader in quality sound products. Freq.
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Each
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New design for the most trouble-free lang life operation. Automatically ploys all size, all speed records-monoural and stereo. Automatic shut-off ofter lost record ploys. Rubber mat on turntable protects records. New precision tubular tone orm. Vaco stereo turnover cartridge with long-life sopphire stylii Meosures $13^{\prime \prime} \mathrm{W}, 111 / 4^{\prime \prime} \mathrm{D}, 31 / 2^{\prime \prime}$ above and $2^{\prime \prime}$ below motor plote. i $10-120 \mathrm{~V}$ 60 cy . AC. Less cords and phono leods. Handsome grey finish. Shpg. wt. 11 lbs
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$\$ 17.95$
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246
$\$ 1.49$

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. 308175. Shpg. wt. 11 lbs. Net
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| Weight | Zones IG2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 | Zone 7 | Zone 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pounds | Up to 150 Miles | $\begin{aligned} & 150 \text { to } 300 \\ & \text { Miles } \end{aligned}$ | $\begin{gathered} 300 \text { to } 600 \\ \text { Miles } \end{gathered}$ | 600 to 1000 Miles | $1000 \text { to } 1400$ Miles | $\begin{aligned} & 1400 \text { to } 1800 \\ & \text { Miles } \end{aligned}$ | Over 1800 Miles |
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| 4 | . 51 | . 55 | . 64 | . 75 | . 88 | 1.01 | 1.13 |
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| 7 | . 68 | . 75 | . 88 | 1.07 | 1.28 | 1.50 | 1.73 |
| 8 | . 73 | . 81 | . 95 | 1.18 | 1.41 | 1.66 | 1.92 |
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| 20 | 1.32 | 1.54 | 1.86 | 2.40 | 2.85 | 3.51 | 4.06 |
| $\begin{aligned} & \text { e. Ex- } \\ & \text { ra } \end{aligned}$ | . 04 | . 05 | . 07 | . 09 | . 11 | . 14 | . 17 |

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| cs. | Rail | Air | Roil | Air | Rail | Air | Pail | Air | Rail | Air | Rod | Air | Rail |  |
|  |  | 5.2 |  | 5.20 |  | 5.2 |  | 5. | . | 5. |  | 5.20 | 3.7 | 5.20 |
|  |  | 5.2 |  | 5.20 | , | 5.20 | 3.85 | 5.20 | 3.90 | 5.20 | 3.85 | 5.20 |  | 5.20 |
|  | 3.70 | 5.20 |  | 5.20 | 3.90 | 5.20 |  | 5.20 | 4.2 | 5.20 | 4.25 | 5.20 | 4. | 6. |
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|  |  | 5.20 | 3.75 | 5.20 | 3.90 | 5.20 |  | 5.42 | 4.40 | 5.42 | 4.60 | 7.34 |  |  |
|  | 3.75 | 5.28 | 3.75 | 5.20 | 3.90 | 5.28 | 4.15 | 6.56 | 4.40 | 6.56 | 4.60 | 9.12 |  |  |
|  |  | 6.1 |  | 5.20 | 90 | 6.10 | 4.15 | 7.70 | 4.49 | 7.70 | 4.60 | 0.90 |  |  |
|  |  | 8.1 |  | 5.75 |  | 8. |  | 10.55 |  | 10.55 |  | 5.35 | . 70 |  |
| O | 3.7 | 10.2 | 3.75 | 7.00 | 3.9 | 10.20 | 4.1 | 13.40 |  |  | 4.6 | 9.8 | 5.7 |  |

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## 正

221
Mixe
Stand
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| Mixer |
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## *JUST PLUG IMTO 115 VOLT AC OUTLET OR OPERATES ON 6 FLASHLIGHT BATTERIES. *SO SMALL AMD COMPACT-BARELY LARGER THAN ORDINARY PORTABLE RADIOS.

Beautiful design solid state 7 -transistor radio-phono you have been looking for Handsome dork-grey case with ivory trim. Top removes revealing 3 speed deluxe phono with high quclity flip-over ceramic cartridge. Plays 7, 10 or 12' records of $33 \mathrm{l} / 3,450.78 \mathrm{RPM}$.
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## LOOK HOW LITTLE IT COSTS EACH MONTH TO BUY SO MUCH AT B-A!

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charges-is added to your balance charges-is added to your balance
each month. $3 / 4 \%$ for balances each month
over $\$ 500$.
Use it to easily determine
your small monthly poyment.

REVOLVINE GMAREE AGGOUNT PAYMENT TABLE

| Monthly <br> Payment | Unpaid Balance <br> TTotal amount less <br> any down payment |
| :---: | :---: |
| JUST | BUYS |
| $\$ 5$ | $\$ 20-100$ |
| $\$ 6$ | $\$ 101-120$ |
| $\$ 7$ | $\$ 121-140$ |
| $\$ 8$ | $\$ 141-160$ |
| $\$ 9$ | $\$ 161-180$ |
| $\$ 10$ | $\$ 181-200$ |
| $\$ 11$ | $\$ 201-220$ |
| $\$ 12$ | $\$ 221-240$ |
| $\$ 13$ | $\$ 241-260$ |


| Monthly <br> Payment | Unpaid Balance <br> (Total amount less <br> any down payment) |
| :---: | :---: |
| JUST | BUYS |
| $\$ 14$ | $\$ 261-280$ |
| $\$ 15$ | $\$ 281-310$ |
| $\$ 16$ | $\$ 311-340$ |
| $\$ 17$ | $\$ 341-370$ |
| $\$ 18$ | $\$ 371-400$ |
| $\$ 19$ | $\$ 401-440$ |
| $\$ 20$ | $\$ 441-480$ |
| $\$ 21$ | $\$ 481-500$ |
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Electronies World. "The anti-skoting force adjustment, when set according to the instructions, was quite ac curate and resulted in substantial reduction in measured distartion of the outer groove wall channel at very high velocities".
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No. 30 B 306 Each.

No. 308306 Eoch.
h.
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No. 30B305 Each
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Each
$\$ 7.9 E$
Optional Extension Mike
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i



BURSTEIN-APPLEBEE 1012 McGEE ST., KANSAS CITY, MISSOURI 641 C


[^0]:    Never fails to make perfect recordings every time. Sclid-state electronics, reliable construction throughout, assure years of constant use. Makes 60 min . Uses low-cost $3^{\prime \prime}$ reel of tape and inexpensive batteries. Speed control sec . justs tape speed for weak batteries. Also permits use of 2 or more control adfor "talking letters". Sensitive dynamic speaker-mike 2 or more recorders of the modern, attractive case. With 9 volt battery ard "D" flash-ou cells, tape and 2 reels. Size $101 / 2 \times 358 \times 21 /{ }^{\prime \prime}$ " lmported 2 fligh No. 31A332. Shpg. wt. 4 Ibs. Super-Special Each........................... 4.88

[^1]:    Judged by B-A's oudic experts as the most outstanding speaker value of this fantostic low price. True full range high fidelity quality, a compliment to ony stereo system. Also ideal as extension speaker to ony console or component system. Compact, only $13^{\prime \prime}$ H. $^{\prime} \times 10^{\prime \prime} \mathrm{W}$. $\times 7^{\prime \prime} \mathrm{D}$. Heort of system is wide range $8^{\text {s.2 }}$ high compliance speaker coil. Handles up to 25 watts power long throw boss, exceptional mid-ronge and clean crisp highs. High

[^2]:    efficiency design permits fullest response from even the lowest powered amplifier. Mognificently styled solid wolnut enclosure in oiled finish. Small size permits use on standard bookshelf, end toble or any other confined area. Output impedance' 8 ohms. Easy to hook-up, has standord RCA pin plug with 8 ft . specker coble. Shpg. Wt.
    No. 348275.
    Eoch. 29.95
    ${ }_{\text {For }}^{2}$
    for...
    $\$ 55.00$

[^3]:    Heart of system is femous maker: 12 inch speaker providing fine bass, whizzer supplies upper mid-range with lover end of mid-range supplied through specially designed 6 inch mid-range speaker. Super $31 / 2$ tweeter provides finest high range coverage. Brilliance control permits adjustment to personal listening requirements. All of these precision components have been assembled into a specially tuned enclosure to provide the fullest response possible. Compact size with absolutely no compromise in quality was accomplished through special engineering techniques. Would be a fantastic value even at considerably more than this low, low B-A pricel Beautiful ciled walnut cabinetry . . . a plus attraction to any decor, a complement to any high fidelity stereo system. For shelf or floor use, finished on all four sides. Specifications: Frequency range 25 cps to beyond audibility. Impedance 8 ohms Shpg. Wt. 40 lbs. Power handling capacity 20 watts. No. 40C197. Spedial Each

[^4]:    MODEL KR-314-T. Popular original equipment pickup with high output turnover cortridge for playing all speeds, $16,331 / 3,45$, and 78 RPM. Ideal tor replocement on portable phonogrophs where ruggedness at low cost is
    required. Base of pickup retracts into tone arm for use on phonos having ow clearance in the lid Supplied complete with mounting hardw orm rest. Mfg. list $\$ 6.95$.
    No. 14A501. Model KR-314-T Pickup. Net Each.
    S4.08
    Same as above except equipped with Astatie 74TS high output stereo No. 14A502. Model KR-74-TS Pickup. Net Eoch. . . . . . ........... 8.85

[^5]:    Model N2561 FM-AM Master Station. Silver finish with rough-in box No. 36 Cl 54 . Net Each
    T Model N2562 FM-AM Moster Station Copper finish
    No. 36Cl56. Net Each wt. 16 lbs. \$123.47

[^6]:    

[^7]:    A completely tronsistorized flush-woll intercom system. Provides room to room communication from master to remotes or trom temotes to remores. Additional feature permits one or more rooms to "monitor" ony
    or rooms tor bottery life is ossured by the fact thot when master "talk-listen"
     switch is in "stondby" there is no current drain. However ony remote moy still coll the moster by pressing his tolk-listen " switch which couses o 'beep' tone of the master.
    Flve selector switches of the moster ponel enobles the master to select any or several of the remote stotions ov setting the proper switches to either "on" position door remate 200 ft - 3 -conductor cable all rough-in material LLess bot dor 5 h , 2 ith position Der its tery). 5th switch position permits oddifional remore to be odded see betow
    No. 36 C159. List
    $\$ 89.95$
    Net $\$ 53.85$
    No. 36 C159. List $\$ 89.95$ Net................................... 276
    No. 21 1137. 9 V . Bottery for above. Evereody $276 \ldots . . . . . . . . . . . . . . ~$
    Extro Indoor Remotes with box, for
    No. 36 C 160 . List $\$ 9.95$ Net Each.
    …..... \$1.36

[^8]:    Fantastic receiver for short wave listener as well as amateur radio operator. Feature packed, provides performance normally found in much more expensive units. Beautiful appearance .. lighted black dial is highlighted by extruded aluminum front panel and grey-blue steel cabinet. Full coverage in 4 bands: $550-1600 \mathrm{KC}$, 1.6-4.5 MC, 4.0-12.0 MC, $11.0-30.0 \mathrm{MC}$ Special calibration charts for Amateur 10, 15,20, 40 and 80 meter bands and Citizens Band; Foreign Broadcast 13, 16, 19, 25, 31, 41 and 49 meters Modern circuitry for AM and SSB phone or code with separate product detector for SSB/CW reception; illuminated signal strength meter operating in all modes, peaking $Q$-multiplier for optimum, selectivity to meet critical receiving requirements, separate RF and audio gain controls, full time AGC for SSB/CW as well as AM, automatic series-gate noise limiter, full wave transformer-operated power supply.
    Controis: Main tuning, bandspread tuning, band selector, audio gain, RF gain, selectivity, BFO pitch, noise limiter, function switch, mode switch. Front panel headphone iack. Tuner output. Size $75 / /^{\prime \prime} \mathrm{H}, 131 / 2^{\prime \prime} \mathrm{W}, 9^{\prime \prime} \mathrm{D}$. Shpg. wt. 28 lbs. For 120 V 60 cy. $A C$. Was $\$ 99.95$ in B-A's 1965 Catalog. While They Last..... $\$ 84.95$
    No. $35 B 77$. Was

[^9]:    Out-features, out-performs many sets priced at considerably more than B-A's surprising low, low price. Perfect size for corrying, for coat pocket or purse. Amazing tone quality with wide-range dynomic speaker and extropower amplifier. Super-sensitive ten transistor circuit gets long-range reception with telescooping FM whiv ontenno, extra-long AM ferrite core ontenno. AFC with switch eliminotes drift. Vernier slide-rule tuning. Powered by just 4 inexpensive pencell botteries. With botteries and cose. $\$ 19.95$
    No. 60 C97. Special Import Value.

[^10]:    Finest Radio Performance Imaginable .. . with power. ful chassis incorporating 7 high gain puned circuits. including tuner RF sfage. Provides exceptional sensitivity and selectivity. Also features full AVC and full range tone control.
    More Economical and Trouble-Free Operation . . . tranMore Economical and lifeuble-free increased efficiency and less
    sistors assure longer than $1 / 2$ the normal battery drain. Instant operation at the flick of a switch.
    Manual Tuning Vw Custom Radio. Mfg. List \$47.95.
    No. 31 Each 66
    Net Ean $\$ 34.75$ Each $\quad \$ \quad \$ 33.57$
    
    No. 31 A167
    Net
    Each.... $\mathbf{4 4 . 0 7} \underset{\text { Each... }}{3 @}$
    \$41.97

[^11]:    NEW JOHNSON CB MATCHBOX. Connects between tronsceiver and coax feed line to antenna. Corrects impedance mis-match, eliminotes stonding waves, improves performance of equipment. Handles up to ' 15 watts power. $4 \times$ Johnson 250-49. Net Each
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    No. 35 B5 Johnson 250-849-1. Net Each
    $\$ 14.95$

[^12]:    

[^13]:    "Turn the blade-not the handle". Blade rotates for easy carving both verticolly and horizontally. Textured white handle, light olive trim. Sofety switch. Leather textured storoge troy
    Hole in handle for comfort, cutting ease. Knife resis safely, convenlently. Blades do not touch toble. Spring-loaded on/off button operates with convenient fingertio control.
    120 volts AC, 100 wotts. 193/6" overcll length, 6 ft . defachoble cord. Shpg No. 36 Bl
    $\$ 24.96$

[^14]:    KITCHEN-AID MODEL 4C. (Now with lorger 4 at. copacity). Full $1 / 8$ E.P. motor, electrical governor cantrolled, 10 definite speeds for every need Easy to read up-front mixing guide and motor speed control. Hos recessed easy-hold hand grip. Cost base $87 / /^{\prime \prime} \times 13 / 8^{\prime \prime}$ ", overall height $135 / \mathrm{l}^{\prime \prime}$. Com.
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    No. 31 A 308 . | No. 314308. |
    | :---: |
    | Net Each...................... |

    $\$ 51.28$
    Each...

[^15]:    - Built-in water cooling troy ond work light.
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    Low priced, ruggedly constructed grinder packed with teatures normolly found only in higher priced units. Pertect for hobbyists, model makers, home craftsmen, etc. Powerful industrially roted 3.2 omp .3450 RPNA motor, has lifetime, self--lubricating bronze beorings throughout Has $2-41 / 2^{\prime \prime}$ wheels, 1 -coarse and 1 -fine grit. Adjustoble tool ${ }^{2}$ rests moke ongle grinding easy. Pressure die-cost oluminum housing with baked ename, finish. Size $9^{\prime \prime}$ wide, $61 / 2^{\prime \prime}$ high, $7^{\prime \prime}$ deep. Weight only $91 / 2 \mathrm{lbs}$. for easy portability. 3 -wre cord 115 V. 60 cycle. AC. Shog th 11 ibs. No. 37 C 50.
    Each.
    \$14.95

[^16]:    A real periormer. Packs a lof of punch for its small size and lightweight Plenty of power for classrooms, lectures, sales meetings, ouctions, etc. May also be used for many portable opplications such os out on the sports field in giving group instructions, for poging, elc
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