## afayette

## RADIO

TELEVISION
ELECTRONICS


- By Mamin Inler Telemision lume NEW YORK 13, N.Y., 100 SIXTH AVE. BOSTON 10 , MASS., 110 EEDERAL 5 T. NEWARK 2, N. J., $2 \ell$ central ave. BRONX 58, N.Y., 542 e. Forłham ro.


## Curicic 951 A

## 2 <br> aqnecocuder

 FIRST CHOICE OF ENGINEERS

MAGNECORD SPECS PTO3-AH \& PTO-AH FREQUENCY RESPONSE $15^{\prime \prime}$ lape speed-flat from $50.15,000 \mathrm{cps} \pm 2 \mathrm{db}$
 3) $)^{-1}$ lope speed-flat from $50-4000 \mathrm{CD}$ S Exceeds 50 SIGNAL with less than $2 \%$ harmonic distartion MAXIMUM FLUTTER
Less than 0.3\% maximum (measured peak-fa-peok) 117 volf, 50 cycle, single phase AC

Mognecorder is used by more angineers and broadeasters than all other professional recorders combined-prool positive of Mognecorder suparioriry in the fieid. in professionol moonetic ape recording. Precision engineered each provides matimum flexibilify and dependobilly for a minimum investmant. Widely used in the outomotive, oviotion and other manufoctuping fields, os well as broadeast industry, schools, universities, and laboro cories. Thetr outstanding reputation hos bean copned only by strict odherence to fine quality of all times.

## PT63-AH THREE HEAD RECORDING MECHANISM

With this three head Magnecorder you can manitar directly fram the lape while recording. Separate erase, record and playback heads are triple shielded to prevent crass-polk and hum and each can be individually aligned or replaced. Hos high speed forward feature for fast cueing and editing. Records af $15^{\prime \prime}$ and $71 / 2^{\prime \prime}$ speed; camplete with quick-change capstans far bolh tape speeds. Uses standord $7^{\prime \prime}$ reets and rewinds 1200 feet in 40 seconds. For use with Magnecord PTo3-J ar PT- 7 amplifiers, listed below. "'xil"' gray hammerlaid enamel panel. In black leatherette cavered waad portohla case, $18^{\prime \prime} \mathrm{W}, 8^{\prime \prime} \mathrm{H}_{1} 151 / 2^{\prime \prime} \mathrm{D}$. Shipping weight 46 lbs 350.00 MAGMECO NET 333.00 MAGE3-S RECORD AND PLAYBACK AMPLIFIER

PY63-3 RECORD AND PLAYBACK AMPLIRA Complementary amplifier for the P163.AH recording mechanism above, this unit has separote recard and ployback omplifiers for the simultaneous playback of lape while recording. Single low-impedance mictide zeutput and 10 put, olso bridging input. Hos 600 ohm balanced, zero level output and 10 walls of audio wilh terminals for externol speaker. Has mon or speaker. Switch for $71 / 2^{\prime \prime}$ or $15^{\prime \prime} / \mathrm{sec}$. Ape speed equalizotion. Switch for reading bios, recard or playback on VU meter. $7^{\prime x} \times 19^{\prime \prime}$ grey hammerloid panel for rack mounting when removed from portable cose. (Can be used with PT6-1M4 for low-level mixing up ta 4 low-impedance mikes.) In black leatherette covered wood case, $20^{\prime \prime} \mathrm{W}, 8^{\prime \prime} \mathrm{H}, 15^{\prime \prime} \mathrm{D}$. MAGNECORDER PT63-J Amplifier. S'hpg. wt. 40 lbs ....... NET 387.00 MAGNECORDER PT 63 -JX-As obave, less cose..................

## PTS-AH RECORDING MECHANISM

This basic mechanism has long been recagnized os one of the great values This basictessional field. Has separate erase and record/reproduce heods in the provssion 71 " ind is" sepe spend copstans. Has high speed forward ond includes $1 /{ }^{2}$ and and editing. Uses standard $7^{\prime \prime}$ reels ond rewinds群 1200 feet 40 sech wood carrying case, $18^{\prime \prime} \mathrm{W}$ ${ }^{\text {rack }}{ }^{\circ} \mathrm{H}_{1} 15 / 2^{\prime \prime} \mathrm{D}$. Shipping weight 46 lbs .隹g Mechanism

NET NET 299.00 MAGNECORDER PTO.AHX-As above, less cose

## PTS-J AMPLIFIER

For use with PT6-AH, or as oll purpose amplifier, single mike input. Cambinotlon recard/reproduce amplifier hos 10 wotts audia with terminal for external speaker. One low impedance mike input, alsa bridging input. Output: zero level of 600 ohms, bolanced, plus 10 w audio. Monilor speaker, Complete with lubes ond interconnecting cobles. Specify for $15^{\circ \prime}$ or $71 / 2^{\circ 4}$ equalizer. Grey hommerloid panel $7^{\prime \prime} \times 17^{\prime \prime}$, may be rack mounted. In black leatherette covered wood cose, $18^{\prime \prime} \mathrm{W}, 8^{8^{\prime \prime}} \mathrm{H}, 151 / 2^{" \prime} \mathrm{D}$.
MAGNECORDER PT6.J. Shpg. wt. 31 lbs
NET 248.00
MAGNECORDER PT6-JX-As above, less cose........................ 232.00 PT6-IM4-Multi-Channel Law Lever Mixer. For up to faur $30 / 50$ ohm low impedonce mikes. Plugs into input on PT6.J op PT63-J amplifiers. Amplifier gain control masters oll mikes. 4 lodder type oltenuotors ( 2 db per step). PTh control masters oll mikes. 4-With Connon receptocles and plugs. Wf. I3 lbs..........NET 74.50


## NEW! PT7 RECORDING EQUIPMENT

## PT7 EQUIPMENT SPECIFICATIONS

FREQUENCY RESPONSE: Flat from $50-15000 \mathrm{cps} \pm 2 \mathrm{db}$ af $15^{\prime \prime} /$ second. Flal from $50.7500 \mathrm{cps} \pm 2 \mathrm{db}$ al $71 / 2^{\prime \prime} /$ secand. SIGNAL TO NOISE RATIO: Over 55 db with less than $2 \%$ harmonic distortion. FLUTTER AND WOW: Less than $0.1 \%$ maximum (peak-to-peak) of $15^{\prime \prime} /$ second less than $0.2 \%$ maximum (peak-to-peak) at $71 / 2^{\circ "}$ second. INTERLOCKED PUSH-BUTTON CONTROLS: Forward, SIOP, Rewind, of Hi-Speed. Can be remotely controlled. POWER: 117 volts, 60 cycles AC.

## PT7-A RECORDER MECHANISM

This great new recarder mechanism isatures three heods; Erase Record, Reproduce. Each can be individually replaced or aligned. Triple shielded to eliminate crasstalk or hum. Also has new positive drive speed reducer. This nen-slip system provides perfect timing of tape-recorder to recorder-no last program time. Instanta. neous start and stop-up to full speed or stop in less than $1 / 10$ second. Hi-Speed forward ond rewind-full $101 i^{\prime \prime}$ reels in 1 min-
ute; $7^{\prime \prime}$ reels in 30 seconcs. 2 -Speed switch on panel changes bath $71 / 2^{\prime \prime}$ and $15^{\circ \prime}$ speeds electrically. Tape lifts automatically from heads in Hi-Speed Forward or Rewind. Two flywheels-a double Ilter-driven by a flexible neoprene gear-toothed coupling assures accurate timing always. No slippage or wear. No lubrication is required at any time. A perfected, dependable recorder drive, surpassing all others. Grey hammerloid panel $19^{\prime}>101 / 2^{\prime \prime}$. In black leatherette covered wood case, $20^{\circ \prime} \mathrm{W}$, $11^{\prime \prime}$ $\mathrm{H}_{1} 18^{\prime \prime} \mathrm{D}$. Space for $1012^{\prime \prime}$ NAB reels in case. Shpg. wt. 82 lbs. 468.00 MAGNECORDER PT7-A. NET $\mathbf{4 6 8 . 0 0}$
MAGNECORDER PTT-AX-Above, less portcase

## PT7-P AMPLIFIER

This 3-channel, high level mixing amplifies has separate record and playback amplifiers. Inpuls for 3 low impedance $30 / 50$, or 250 ohms mikes have separate pre-amps for each with high-level mixing. Also bridging input. Output: zero level at 600 ohms, balanced and 10 watts of audio for monior, or external speoker. Switch for $71 / 2^{11}$ or $15^{\prime \prime}$ equalization. Switch to read bias, record or playbock on $4^{1 \circ}$ VU meter. Complete with tubes, Interconnecting cables are attached to PT7-A Mechanism. In $20 \times 8 \times 18^{41}$ deep portable case.
WI. 45 lbs
MAGNECORDER PT.7P. NET 440.00 PT7.C LINE LEVEL AMPLIFIER. Input 600 ahms, balanced, also bridging input. Output: zera level of 600 ohms, balanced. $71 / 2^{10}$ or $15^{\prime \prime} / \mathrm{sec}$ equalizatian. Reod bias, recard or playback on $4^{" 1} \mathrm{VU}$ meler. Camplete with tubes - no oudio omplifier. Size: 7x19x18". Shpg. WI. 82 lbs . NET $\mathbf{3 3 4 . 0 0}$ PTI.CC CONSOLE COMBINATION. CONsists of PI7-AX and PT7-C haused in chrome. trim black wood cabinet, with formica top.



Fthere can be - the ever-increasing goodwill of thousands upon thousands of satis-

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## HIGH FIDELITY FM-AM TUNERS



An ideal Armstrong FM luning unir, complete with selt-contained power upply and incor porating automatic frequency contral which poraring be switched off when desired. Whers a moy be switched oft when desired. Whers a this oxcellent funer is a worthy oddition to make this excellent funer is a warthy addition to make your podio listening plaasure complete, Cove
ors 88 and 108 Me band with a fiot audio re. ors 88 and 108 Me band with a flot audio re.
sponse from 15 to 15,000 eps $\pm 11 / 2$ db. 2-stage coscade limiter used to ensure freedom from nolss: funed RF sloge increoses golr ond re. duces image Inferference. High lmpedance output leeds into any high fidelity amplifier Drift compensofed. No drift ofter 2-minute warm-up. Controls: Phono-FN.TV.Recorder; Volume: Tuning. Tube complement: 3-6AU6 7F8, 2-6SJ7, 6H6, 6J6. Tuning "ey'" 6AL7; 5Y
 $83 /{ }^{\prime \prime}$ " 0 . mokes for easy mounting in cobinets" shelves, bookcoses, drowers, elc. Edgellighted dial colibrated in megocycles and channel numbers. Rugged construction. Highest quality componenis. Complete with dial escutcheon knobs, shiolded coble and connectors. For IIS volts 60 cycles $A C$. Full Instructions. Shpg. wi. 14 lbs.
Browning Model RV.10A-
List $\$ 154.15$
NET 94.57

## BROWNING MODEL RJ-12

FM-AM TUNER
Precision engineered for high fidelity reception on the 88-108 Mc FM band and 530 to 1650 Kc AM stondard broadeast band. Has separate RF and IF esystems on both bands for marimum performonce; no coll switching. No drifl on FM ofter 2-minute worm-up. Uses minioture on FM ofter $2 \cdot m i n u t e$ worm-up. tubes on RF and IF amplifiers for moximum
gain. FM oudio response 15 to $15,000 \mathrm{eps}$ gain. FM audio response 15 to $15,000 \mathrm{cps}$
$+11 / 2 \mathrm{db}$; $A M$ response 20 to $6,600 \mathrm{eps} \pm 3 \mathrm{db}$. $\pm 11 / 2 \mathrm{db}$; AM response 20 to $6,600 \mathrm{cps} \pm 3 \mathrm{db}$.
High impedonce oulput for connection to ony High impedance oulpul for connection to ony
high quality oudio amplifier. 2-stage cascode limiring insures moximum noise rejection on FM. AFC circult on FM moy be cut out of will. Channel selector swlich includes phono.TV. Recorder positions, which provides volume control directly on luner. Throe signal (phono.TV. Recorder) inpuls ore located of baek of tuner. Recorder) inpuis ore located of back of uner. Panel conirols include ON-OFF switch, Iuning, Yolume, and FM.AM.Phono-TV.Recordor swlich. FM ontenno input is 300 ohms. FM onfenno can olso serve AM. Lorge, dge. Lighied silderule dlal hos vernier for smooth, osy funing. Tubes: 3-6AUG, 1-7F8, 1-6SK7, 1-65G7, 2-6SJ7, I-6H6, I-6SA7, l-6J6. Hos 6AL7GT funing in: dicotor and IN54 erystal detector. Slze: $733^{\prime \prime}$ H., $131 / 2^{\prime \prime}$ W. "q" D. Supplled with tubes, es. cuicheon, knobs, interconneciling wire cind in. strucilons. Shpg. wf. 18 lbs . List $\$ 210.60$. Browning Model RJ-128NET...
129.21

Browning PF. 12 Power Supply - For RJ. 12 B Tuner. Operoles on $115 \mathrm{~V},, 60$ eycles AC. Power consumption 80 wotts....

For the discriminating high fidelity enthusiost who Intends to combine a fine funer with the best speokers and amplifiers. Recelves standard broodeast ( $530-1650 \mathrm{ke}$ ) and FM band ( 88.108 mc ). Less than 10 miceovalts produces 30 db nolie reduction in FM bond. 5 miero. valts sensitivity on AM. Seporate RF ond if systoms for AM and FM. No coll swltching. Automotic frequener control assures coriect Automotic frequener contral assures coriect luning on FM and may be switehed off, If
desired. FM uses duol coscode limiting in Armitrong circult. Two stoges of oudlo ompli. ficatlon with treble and boss controls glve 20 db boost in elther tone range. FM oudio pesponse flot from $15-15,000$ eyeles $\pm 11 / 2 \mathrm{db}$. AM-IF syslem gives 9 ke and 4 ke bandwidths. Signal inpuls for Phono.TV.Recorder ielected by bandswlich and fed through volume control to there sloges. $20,000 \mathrm{ohm}$ oulput impedance. tither 300 or 72 ohm input for FM ontenno Either 300 or 72 ohm input or FM ontenno
provided. Tubes: $5-6 A \cup 6$, 1-7FB, $2-6 A L 5$, provided. Tubes: 5-6AU6, 1-7F8, 2-6AL5, l-6AL7 (tuning oye), 1-5Y3 (rectifier). Hos self-contained power supply. Operates on 115 volts, 60 cycles AC. Slze: $71 / 2^{\prime}$ H., $17^{\prime \prime}$ W. ${ }^{\prime \prime}$ D. Supplied with tubes escutchoon, plastle window, knobs and complote instrucllons. Shpg. wf. 26 lbs.
Browning Model RJ-20A List $\$ 235.50$
.net 175.17

## F5PEY MODEL 511B AM-FM HIGH FIDELITY CHASSIS

Mere's a custom built chassis designed for high quality performane on stondard broad. cost ond stolic.free FM bands. The FM elrcult includes tuned RF omplifier stoge, two stages of high gain IF amplification, and a rotlo detector circult. These features provide low nolse level between stations, freedom from AM interference, oose of tuning and plenty of gain. A funed RF amplifier in the AM circult assures improved selectivity and senslifility. Sel has buili-In preamplifier for vorlable reluctonce pickups ond phono input jock with switch. Equlpped with separate bass and treble controls and begang funing condenser. Two on. tennas ore included: a loop for standard broodcort, ond a folded dipole for FM. Th multi-top output transformer permits usi of populor high fidelity speokers ond dividing notworks, op to mateh o stondord 500 -ohm Ino for remote instollations. Provision for external ontonnas. Tubes: 2-68A6, 2-68E6, 1-65G7. 1-65 H7, 1-6AL5, 1-6C4, I-5Q7, 1-7F7, 26V6GT, 1-65C7. All lotest pype pubes. Has syzgT reclifier. Includes knobs and dial escutcheon. For $105.125 \mathrm{~V}, 50 / 60$ eycles $A C$. Dimensions: $131 / 2^{\prime \prime} \mathrm{W}_{\text {. }}, 81 / 2^{\circ 1} \mathrm{H} ., 10^{\circ} \mathrm{D}$. 5 hpg . Dimensions: 12 lbs.
IP150s-Espey Model S118-
With Tubes.

A highly selectlve and sensilive FM-AM tunep of precision design and loboratopy quality. Sensitivily on FM is less than 5 mierovolfs. Frequency rongas: 88-108 me for entife FM bond; 540.1620 C on standard broadcast AM bond. The FM circuit is temperature compensoled for negligible drift and feapures three IF sloges, iwo coscade limiters and Foster Seeley discriminator. Inductive tuning on both AM and FM for high " $Q$ " selectivity. IF bandwidth on FM: 150 ke of 6 db down: on AM, 8 ke of 3 db down. Has bulls-in power supply, and phono inpul jock and switch position. 300 -ohm FM onfenna also serves AM. $8^{\prime \prime}$ slide rule diol callbeated for casy-formad, linear funing. Tubes: 4-6CB6 2-6AUG, 2-6A.5. 2-68A6, 2-6BE6, 1-6J6. Hos $1-6 \mathrm{X}_{4}$ rectifipr. For 105.125 volts, i\$ cyeles $A C$. Chassis dimensions: $8^{\prime \prime}$ D. $15^{\prime \prime}$ W. $63 / 4^{\prime \prime} \mathrm{H}$.
Shpg. wt. 15 lbs .
Brooks Model 5 T14 Tuner.
107.75

## LAFAYETTE FM TUNER

Enginaered to Lafoyatte's own rigid specifications with features never before avalloble of many times its remarkobly low price. Just check these imporiont speclfications and see for yourself why wo think it li one of the blegest FM buys to be found. Automatic Frequeney Control to give you needle sharp tuning-so necossory for true frequeney response on FM. Two Microvalts Sensitivity means that you get for better than overage reception in fringe orsas and ideal recoption in normal reception oreos. Full Armstrong Clrcult uses high goln minlature pubes: 4-6AGE, 1-6AE6, 2-6AU6, 1-6AL5 discriminalor, 6P6 AFC. Has $6 \times 4$ rectl. fier. Patented callbrated tuning head uses permeobility funing for high " $P$ " selocitve RF eireults. No frequancy dififf after initial warmup perod. Covers entire FM band from 88-108 mc. Controlied solectivily for maximum Image rejection. Adjocent channal 60 db down. Full limiling oction with only 2 mierovolts input. Meets FCC standard de-emphosls response of 20 ke. Rugged, non-critical construction on comparl chassis. Slie: $131 / 1^{\prime \prime} W_{1, ~}^{71 / 0^{\prime \prime}}$ D., $534^{11}$ H. $8^{\prime \prime}$ Illuminoled slide pula dial; lineap puning. For 115 volts, 60 eveles AC. Completo with fubes. Shpg wf. is lbs.
P22449-Lefoyette FM Tuner.
68.69

## FOR CUSTOM INSTALLATIONS



## MEISSNER MODEL 9-1093 FM-AM TUNER \& AMPLIFIER

Undoubtedly ane of the finest high quality FM-AM tuners and amplifiers an the market today. Frequeney rang $535-1620$ $k e$ on standard broadeast band and $88-108 \mathrm{mc}$ on the FM band. Audio fidelity is flat from 50 to $15,000 \mathrm{cps} \pm 2 \mathrm{db}$. Hum level 65 db below full autput. Dasigned for use with crystol or magnetic pickups (requires 6SC7 tube not supplied). Sonsitivity is less than 20 miçovalls. Tuner has a two-position AM salectivity cantral for distant or local reception. Phono inpul jack contralled by panal switch. A combination tone control provides bass boost up to 11 db at 40 cps , and treble altenuation up to 13 db at $10,000 \mathrm{cps}$. Output designed for 8 to 16 -ohm speaker. Twa indoor antennas ore supplied-one Indaor folded dipole ( $300-0 \mathrm{hm}$ ) for FM, and one $12 \times 16^{\prime \prime}$ nalse reducing loop for AM. Provision is made for connecting extornal $A M$ and $F M$ antennos. Tubes: 3-65K7, 1-6SA7, I-6H6, 5-6AG5, 1-6C4, 2-9001, 1-6AL5, 1-6SN7GT, 2-6L6, 26J5. Hos 5Y3G and 5V4G rectifiers, and 6U5/6G5 funing indicator. Chassis mountIra spaee: Tuner-141/" W. $^{\prime \prime} 121 / 4^{\prime \prime}$ D. if"1 W.: Amplifier- $71 / 0^{\prime \prime} \quad \mathrm{D}_{\text {., }} 161 / 4^{\prime \prime} \mathrm{W}_{\text {. }}$ H . For $105-125$ volts, $50 / 60$ cycles AC. Supplied complete with lubes, two antennas, escutcheon and knabs. Shpg wt. 50 lbs. List price $\$ 432.35$.
Melssner Model 9-1093-
NET.
254.21

## MEISSNER MODEL 9-1091C FM-AM TUNER

Covers AM band from $527-1620$ ke and entire FM band from 88.108 mc . Sersi. livity 10 microvolts. Frequancy response $30.15,000$ cycles $\pm 2 \mathrm{db}$. Hum level 60 db below full output. Seporate bass and troble contrals. 10 db boast at 40 cycles: 12 db aftenuation of 8000 cyeles. If volts output af high impedance terminals; 2 volts at 500 -ohm terminals. Equipped with input for cerystal phona. FM section requires 300 -ahm dipole. Tubes: 4-6日A6, 1-6C4, 2-6日E6, 3-6AG5, 2-6AU6, 16AL5, 2-6J5. Also has 6U5/6G5 tuning indicator and 5Y3GT rectifier. Operatos on 105. 125 volts, $50 / 60$ eveles $A C$. Dimensions: $165 / /^{\prime \prime}$ W., 101/4" D., 83/" H. Supplled camplete with tubes, escutcheon, knobs and hardware, but less antonnas. Shpg. wf. 23 Ibs. List Price $\$ 341.70$. NET: Mor Model 9-1091C-
200.90

MEISSNER MODEL 9AJ FM-AM CHASSIS

Melssner engineered this fine FM.AM chassls with one thought in mind-high chassis with one thought in mindinigh unbelievably madest cast, Gives you facilitios for complete FM, AM and phono operation. Even o powor outlat plug is Included to provide power for your phona motor. Designed for custom Installations or for converting obsolete radio combinations. The highly senslive and selective chassis features two sepa. rate FM IF coils and two separate AM IF coils, plus a four-saction gang candecoils, plus a ouresection gang candenser. All controls ore on the front operates on phono as well as radio. Oversized components, such as heavy duty Thordarson power transformer, assure long life and trouble-free operation. Wide audio fidelity is capable of pawer ing a fine speaker with excellent tone reproduction. New High " $O$ " die-stamped loap for AM and built-in FM antenna are included. Chassis is equipped with terminals for axternal antennas when rerminals rores: 3 a
 AL5, ,-6BE6, 1-6ATb, l-6V6 power am1ifior and $5 Y^{\prime}$ rectifier. Siza: $1114^{\prime \prime}$ W. $81 /{ }^{\prime \prime} H^{\prime},^{\prime \prime}$ D. Shpg. wh. 16 lbs . Supplied with tubes, dial escutcheon and knobs. List Price $\$ 118.30$.
Meissner Model 9AJ..........NET 69.53 Meissner 8BT-As above, but requires ex. ternal amplifior

NET 64.78

## MEISSNER MOOEL 8C FM TUNER

Adds static-free recoption to any AM recoiver, instantly converting it for FM use. Provides the ultimate in listening pleasure without outside electrical inter. ference. Can be used with any high qually pawer amplifier having a high qually power amplifier having a high tenna Input. Sensifivity 40 microvalis. tenna
Output flat within 2 db from 50 to 15,000 cps. Larg " $51 /{ }^{\prime \prime}$ " slide rule dial calibrated In me and channel numbers for easier tuning. Unit is also equipped with a tuning control and a cambination volume control and power switch. Built-in power supply for 105.125 valfs, $50 / 60$ eveles AC. Attractive walnut cabinet $12134^{\prime \prime} \mathrm{W}^{\prime}$. $634^{\prime \prime}$ $\mathrm{H}_{\mathrm{i}} 8^{\prime \prime} \mathrm{D}$. With lubes. Shigg. wt. is lbs. List \$91.15.
Melssner Modej 8C............NET 53.61
Melssner Madel 8CC chassis anly Same as abave less cabinet. Size: $111 / 4$ " W., $71 / 2^{11} \mathrm{D} \mathrm{i}^{61} \mathrm{H}$. Shpg. wf. 10 lbs. 47.97


RADIO CRAFTSMEN MODEL RC- 10 FM-AM TUNER \& AMPLIFIER
An acknawledged leader in its field. This high fidelity tuner has a flat frequency range of $20-20,000$ cps. Ih. cludes such deluxe features as automatic frequency control which eliminates annaying drift; a funed RF stage on bath FM and AM: built-in preamplifier; cantinuously varloble bass and treble cantrals. Sensitivity is 5 micravalts on bath bands, Bass variable to 12 db baost ar 10 db cut at 70 cps ; treble to 8 db baast or 15 db cut af $10,000 \mathrm{cps}$. Controls: Bass; ON. OFF/Volume ; Tuning: FM.AM.Phona-IV Selectar: Treble. Has bullt-ln loop antenna far AM and $\boldsymbol{7 2}$ or 300 hm input for FM; built-in FM antenna. Edge lighted slide rule dial. Complete with 11 tubes and $6 \times 5 \mathrm{GT}$ rectifier, dial esculchean, knobs and instructions. Chrome plated chassis measures $1311^{\prime \prime} \mathrm{W}$., $91 / 2^{\prime 1} \mathrm{D}$. $7^{11} \mathrm{H}$. Operates on $105-125$ volts, 60 eycles AC . Shpg. wt. 16 lbs. List $\$ 219.00$
Radio Craftsmen Model RC.10...........NET 131.50

## MODEL RC-2 HI-FI AMPLIFIER

Companion unit to the abave tuner, 10 watts of undistorted output obtainable at 4, 6, 8, 15 or 500 ohm impedance taps. Frequency range 20 to 20,000 cyeles $\pm \mathrm{db}$. Overall gain of 70 db , including inverse feed. back. Hum level 70 db below rated autput. Input 500,000 ohms. Chrame plated chassls measures joxiow $\times 6^{\prime \prime} \mathrm{H}$. Complete with four lubes plus ractifier. "For $105-125$ volls, 60 cyeles AC. Shpg. wi. 12 lbs, List Price \$71.65.
Radio Crafismen Model RC.2...............NET 42.90


FM-AM TUNER \& AMPLIFIER
Wail-known deluxe tuner and ampllfier for the discriminating listener who wants exceptional performance, Fine superheterodyne circult with improved FM, stabilized against drift. Full range bass and treble conirols operate on both radio and phono. Wired ond equipped with switch for connection of variable reluct. ance of crystal pickup. Uses a 6 -gang condenser and tuned RF circuits on FM and AM, A preamplifier stoge is Included for reluctonce pickup use. Tuner includes oleven latest type tubes. The 5148 ompllfier contalns the power supply and is designed specifically far use with the 513 B tuner. It includes 6 tubes and 2 rectifiers, and features parallel push-pull autput, selfbalanced phase inverter, inverse feedback and an extended range high fidelliy response. Impedance seloctive for any speaker fram 4 to 500 ohms. For use on $105-125$ volts $50 / 60$ cycles AC. Tuner dimensions: $131 / 2^{\prime \prime} W^{\prime}$ i $^{\prime} 81 / 2^{\prime \prime} H^{\prime \prime} 9^{\prime \prime} \mathrm{D}$. Ampllfier dimensions: $131 / 2^{\prime \prime}$ W. $71 / 2^{\circ \prime} H^{\prime \prime}{ }^{\prime \prime}{ }^{\prime \prime} \mathrm{D}$. Supplied complete with fubes. Espey Model $5138 / 514 \mathrm{~B}$,
129.50


BOGEN DBIO 10-WATT AMPLIFIER
A now, improved model of this populor ond recommended omplifier for high fidellity radlo and phono systems. Feotures a shock mounted preamplifier with compensoled inputs for GE, rickaring, crystal ond LP cortridges, and truly
effectivo, saparate bass and treble controls. trequency response is flat from 30.18,000 cycles wifhin I db. A potching arrangemont on rear of chassis permits simple switching of radio
funer and high level crystol cortridges into the omplifier with the proomplifier out of the cir. culi. Outputs: ${ }^{4,} 8^{8} 16$ ahms. Hum level is 23 db, bellor thon RMA standord. Power can-
sumptlon: 70 waths of $117 V .60$ cycles AC. Size (with eage): $11^{\prime \prime}$ W. $7^{\prime \prime}$ D., $71 / 10^{\prime \prime}$ H. Shpg. wl. I5 lbs. Camplete with tubes.
Bogen Madel DB10. List $\$ 90.75 . . . \quad 53.36$

Model EXT-4, 4.F1. Extenslon shaft kit for obove omplifier permits parfect custam instollations. block assembly, hordware and instructions. EXT-4-
11.31

BOGEN PHIO 10-WATT AMPLIFIER
Universally pralsed by independent consumer reseorch organizations. Features 4-position multi-range tone control to provide the best pial. Deep Bass, Mellow Bass with braodened high trequeney pesponse, Wide Range, and Exiended Range for FM. Power output of 10 walts and peak of 14 watts. Frequency response $40.15,000 \mathrm{cps} \pm 1 \mathrm{db}$. Input sircuit accommo. dates any erystal phono or output of radio. iv luner. Inpul impodonce 500,000 ohms. Out 80 db below full rated oulpuf. Powar cansumption: 60 watts at $117 \mathrm{~V}_{\mathrm{y}} 60$ cycles AC
 lifier. Size:
II lbs. List 556.38.
Bogen PHIO Amplifier
33.15

Model EXT-2. Extension shaft kil to permit simple custom installation of above amplifier. trol shatt extensions ( $4 . \mathrm{ft}$.) plus finished wooden block assembly, stoples, seraws for mounting Ond instruction sheet.
6.47

HF-I HIGH FIDELITY HARNESS
The new Bagen HF.I is a switch and coble horness card infer-connecting ony tuner, record changer and amplifier in highides selaction of thons. A single contral provides selection af Power On. Two AC receptocles are bullt in. Cobles are 4 H . Tor amplifier and 2 ft . for phano ond tuner, all with conhectars. Bogen HF-1 Horness-shpg. wt 2 lbs 4

BELL 2122-A 10.WATT AMPLIFIER
A fine, medium-priced high fidelity omplifier. incorporoling Importont feofures usuolly found only in more expensive units. Hos four inputs netic Plekups, with bulli-in pre-amp for each of the latter. Individual equalization for each 10 walts output ot less than $3 \%$ distortion. Hum level 65 db below rated outpul. Oulput impedonce ${ }^{3.4}$. 6.8 and 15.18 ahms. Controls: Bass;
Troble: Volume; ON-OFF. Tubes: $2-6 V 6 G T$,

 Model 2122 A-R Amplifier. Same as above, but with separate control bax for etecirical pemote contral through 4-ff. shieldod coble: 62.24

BELL 2145-A ALL TRIODE
HIGH FIDELITY AMPLIFIER
A truly fine all-triade, remote controlled high Tideulty amplifier for the discriminating listener. trol cobinet con be lacoted at your fingertips for luxury listening, up to 25 feet away from the moster amplifier. Frequency range $20 \cdot 30,000$ ${ }_{2} \mathrm{cps} \pm .25$ db. Power raling 20 wath al $7 \%$.ess han level 80 db below rated autpur. Six inputs: For pickups I low-level mognetic, I high-level, magnatic, I erystal: for rodia, I low-loval, on remate cabinet: Selectar Switch, Volume Control, Bass. Treble, On-Off Swlith. Output impedance, $4 / 8 / 16$ ohms. Supplied with ${ }^{3-}$ $12 A U 7, ~ 3-12 A X 7, ~ 2-6 S N 7 G T A, ~ 2-684 G$. Hos
5V4G rectifier. For 117 volts, $50 / 60$ cyeles AC. Size: Remole Unit $4 / / \times \times 10 \times 31 /{ }^{\prime \prime}$ deep; Power Amplifier, $7 \times 17 \times 812^{\prime \prime}$ deep. With complote InBELL $2145-A$, List $\$ 298.50$........NET 175.52 20 Ft. Extension Cable. For use with remate unlt lop remote installallon. BELL 2148. List $\$ 11.00$ NET 6.47 BOGEN PX-I5 15-WATT AMPLIFIER This naw PX-15 is watl $\mathrm{De}_{\mathrm{e}}$ Luxe omplifier is on electranie instrument of truly high fidelity. Features dual tone controls for bass and treble; and similar magnetic pickups. Frequency range $30 \cdot 20,000 \mathrm{cps} \pm 11 / 2 \mathrm{db}$. Hum 75 db below roled outpur. Has exclusive Range Master Control, operating independently of tone contrals, to DC heated flloments on pre-omp and voltoge omplifier fubes for minimum hum. Oupput impedances: $4 / 8 / 16 / 500$ ahms at terminal sirip and ${ }^{2}$ speoker sockels. Complefe with $12 \mathrm{SJ7}$. Size: i5x8x91/4" deep. Far 117 V., $50 / 60$ evclos AC. Shpg. wt. 25 lbs.
BOGEN PX-15. Llit $\$ 160.33$..........NET 94.28 BOGEN EXT-5-Sel of 5 mechanical 13.75
extensian shatis for obove...........NET 13.7

MASCO MA-IOHF AMPLIFIER
A 10-wott, 4-input high fidelly ompllfier with buillifn compensotion and sufficient goin fer varioble peluctonce plekups. Two inputs are -qualized for cuppent types of variable relucppickups, and the fourth is unequalized for rodio input. Separote treble and boss tone controls permif up to 12.5 db boost of olienuation et 50 cycles. and 50 cycles. Frequency response is $\pm 1 \mathrm{db}$ from 40 to 20,000 cycles when the tame controls ope set for "llat" response. Two humbolancing adjustments bring the hum level down 70 db from roled output. Output impedances are 2, 4, 8, 16 and 500 ahms. Pawer requirements: 75 wolts af 117 valts, 60 eycles AC. Agolng in a rodio ar phonogroph. Gray hammerione chossls, $12 \times 7 \times 61 / 2^{\prime \prime}$ high. Tubes: 2-6SL7GT, 1-6SC7, 2-6V6GT 1-5Y3GT (rec-
tifier). Complete with tubes. Shpg. wt. 20 lbs. MASCO Model MA-IOHF. 55.25 List 593.96.
on Shoft-3-ft, long fer cabinat or ponel mounting. Supplied with two coupling cannectors
THORDARSON T-32WIO AMPLIFIER A 10 -watt audio omplifiep ovallable with optlanot plug-In preamp, Pre-wired sockef is a fube. Amplifier hos odequato gain without preomp to abtain full autput from ordinary erystal plekup or funer. Frequency response
$20.20,000$ eps. Hum level 70 db below rated autpul. Low harmanic and intermadulation distortion. Also features continuausly varloble and pepances: $3.4,6-8$ or $15-16$ ohms, lerminated to a four-serew ierminal boord. Includes sel!. contoined power supply. Tubes: 1-6SL7G ${ }^{-}$, 2-6V6GT, 1-5Y3GT (rectifier), Gray hammertane finish chassls, $101 / 4 \times 61 / 2 \times 31 / 2^{11}$ deep. Shpg. wt. 13 lbs. List 565.95.
Thordorson T32Wio Amplifer
38.78

THORDARSON T-32WOO PREAMPLIFIER Separate plug-in unit designed for use with T32W 10 Amplifier. Frequency campensated with pickups. Bass compensation can be remaved for fiot respanse when microphone oparalion is desired. Complete with tube. Shpg, wh. I It. List $\$ 11.90$.
Thordorson T32W00 Preomplifier
7.00

THORDARSON T-3IWIOAX AMPLIFIER
loW. HI-FI omplifler for overoge phono use. Response $40.15,000 \mathrm{cps}$, flat within db . Feo. ond treble cantrals, I mike and I phano. Hum level 60 db below rated output. Output: 4, 3 , 15, 125, 250,500 ohms ovallable of 8 -prong receptacle. For $110-120 \mathrm{~V}$ ibs, $50 / 60$ eycles
With tubes. Shpg. wt. 22152.90 . Thordarson T-3iwioax Ampllier NET.................................................................. 89.91


FOR CUSTOM INSTALLATIONS

BROOK 12 A3 AMPLIFIER
with Remote Control Preamp
Deslgned primorily for home use and os port of o sound system thot demonds the widest oudio frequeney ronge at negli. fible distortion. This 10 .wall, hi-fi ompli. stope ond output translormers of speciol design peduce hormonic distortion and infermadulation to the vornishing point. Tronsiont peok circult permits handing increase in distortion. Frequency range $20-20,000$ cycles within 0.5 db . Hum level 75 db below full roted output. Three in. puts: one for tuner or TV, 80 db goin; db goin, compensoted for plekup ond recording chorocteristics. Output impedonces: 2, 4, 8, 16, 20 ohms. 500 ohms un. grounded. Remote control preomp contoins oll controls ond can bo placed up to 50 fe et from the omplifier (siondard housed in compoct, hondsomely finished cobinel with solid walnul ands and o polished, oxidized-copper cover. Conpllot Light ond Power Switch. Boss ond treble controls consist of steppod, two sloge R-C networks. Power consumption: 110 wotts of 117 volts, $50 / 60$ cycles AC. Hos o 5U4G reclifier. Preomp has 4-65J7.

 Brook 12A3 Amplifier \& 198.00 Brook 12A Bosic Amplifier - Some os obove but withour preamp and remote control cobinol. Has no controls.
$\$ \mathrm{hpg}$. wt. 22 lbs . Shpg, wt. 22 lbs. 118.50

BROOK IOC3 AMPLIFIER
with Remote Control Preamp This brilliont 30 wotl oll-triode, high fidelity omplifier will odd the dimension of "prasence" to your rodio, record ond
iv listoning. Using only low-mu triodes for exceptlonolly brilliont ond cleon re. production. Has a patented Automolic
Blas Controt for increased power output ond tficloncy. Frequency ronge $20-20,000$ eps $\pm .2 \mathrm{db}$. 10 Cz consists of o bosic with 6 H . coble, containing all contros: making It adapiable for custom cablnat Tnstollations, or toble use. Remore conlrol unit may be used up to 50 ft . from
bosic omplifier, 5 input chonnels: 2 for rodio tuners. 2 for low-leval magnotie pickups and I for microphone. Both bass and treble controls ore 8 estep switch type. Other controls ore Volume Input Sepreamplifier is housed in a compact cobinet hondsomely finished with solid wolnut ends and a luelie coverits to give optimum results on ony recording, iV or rodio progrom. They ore porticulorly usotul in molntoining noturol tone when operoling o speoker of low volume. Pre. $2-2 A 3$ (or 300B), iSN7, 6-655, ond has a SUAG rectifier. Power is ovollabla to onces $2 / 4 / 8 / 16 / 20 / 500$ ohms. Remote
 For 117 volls, $50 / 60$ cycies. Shpg. wt. 45 lbs. With fubes.
(With Remote Conploi). NET 315.00 Basic Amplifer only, no controls. 228.00
BROOK IOC
NET 228

RADIO CRAFTSMEN MODEL C500 ULTRA-FIDELITY AUDIO AMPLIFIER
This brand-new all-triode omplifier, produet of the fomed Radio Crottsmen orgonIzorion is based on the fomous Williamson circult. The amazing degree of "presunce" offered by this omplifier, when ord players must be heord to be truly oppreciated. Totol harmonic distortion less than $0.1 \%$ of 10 wotts of mid.fre. quancies. Roted of 15 wotts nominol with - frequeney response of $20.20,000$ eps $\pm \begin{aligned} & 0.1 \mathrm{db}: 5 \text { to } 150,000 \text { eps } \pm 2{ }^{2} \mathrm{db} \text {. Intop. } \\ & \text { modulotlon distortion loss than } 0.5 \% \text { of }\end{aligned}$ 10 wolts. Hum ond nolse level 90 db below roted output. Employs 20 db of in. verse feedbock ond direct-coupled, split. lood phose inverter feeding triade drivers
ond Closs A operoted triode outpur fubes.

By following closely D.T.N. Williomson's choice of output tubes and ariginal pequirements for the output tronsformer,
omazing performance hos boen ochloved. amazing pertormonce hos boen ochioved
The tronsformer is fully polted In o stoel case and feotures interieoved windings, low leokege inductonce, high primary inductance, ond full power outpur over the entire oudio spoctrum. Other com. ponents ore os coretully selected. The plote: $131 / z^{\prime \prime} \times 71 / 2^{\prime \prime} \times 8^{\prime \prime}$ deep. Output im. pedonceif ond 16 ohms nominol. Tubes 2-6SN7GTA, $2-K T 66$ ( $6 L 6$ ). Hos
rectlifier. For 117 volts, 60 cps, AC fectiphep. For 117 volts, 60 cps , AC. Shpg
wt. 2516 s . WI. 25 Ib . RAFTSMEN C500. NET.

NEW SCOTT 214-A 20-WATT
Remote Control Amplifier
The now H. H. Scoll 20 . Wott High Fidelity Amplifier combines low price. unsurpossed convenience of insollotion ond operotion, ond the superb performonce Consists of the 120 A Equolizer-Preomplifier, ond $220 . \mathrm{A}$ Loborotory Power Ampllfier described below.
Type 120.A Equalizer.Preamplifier. A now front-and remole control unit with input solector ond 8-position record-compensator switch. Hos outomotic loudness control (operotes on highs and lows). Individual threeschonnel treble and boss tone controls provide attenuoltion or boost of 6 db per octave Input-level adiust. mont for motching mast pickups. DC operaled pra-.
omplifier. Handsome mohogony cobinet, $10^{\prime \prime} \times 412^{\prime \prime} x$ $61 / 4$ " deep. Complete with 6 -ft. remate coble for con. nection to most power amplifiars. SCOTT 120-A. Shpg. wf. 10 lbs.

NET 74.72
Type 220.A Loboratory Power Amplifier. Closs A throughout, this is an outstonding basic amplifier for from $121022,000 \mathrm{cps}$. Negligible hum ond distortion $\mathbf{1 0 . 1 \%}$ of peok). Hormonic distortion $0.5 \%$ of 20 wotts. $0.3 \%$ of $15,0.2 \%$ of 8 . Hum tevel 86 db below fuli speoker domping ond less thon 2 do regulotion. For
 SCOTT 214A-includes 120-A ond 220-A NET 189.87


SCOTT 210-B 20.WATT AMPLIFIER
Undoubtediy one of the finest omplifiers mode. True high fidellity design combined with o dynamic nalse suppressor provide full-ronge, noise.irce roproduction record surfoce nolse ond turntoble rumble without losing "highs" ond "lows." Harmonic distortion of Intermodulation less thon. $1 \%$. Frequency ronge floi from 12-22,000 eycles with controlled cup-otf chorac. reristics beyond. New type loudness control sclenti. of oll levels. Individual boss and treble controls. Maximum treble boost $23^{\circ} \mathrm{db}$ of 15,000 cycles; moximum
 lovel 80 db below full outpur. Compensoted preomplifier operoted entiroly on DC. Filter contral limits onge
 For $117 \mathrm{~V}, 60$ crelos $A C$. Domountoble bronze panel. Scott 210.8 Amplifier-shpg. wt. 23 lbs.... 219.52


SCOTT III-B DYNAURAL CONVERTER
Reduces onnoying record serotch and motor rumble In ony high fidelity systom. Uses new mutuol conductsycles ond a useful range from $20.15,000$ cycles. Chossis mounts near other equipment. Single control locatid of end of extension cable. Operoting power for unit abrained through plug. High impedonee input ond out. put circuits motch most systoms. Suppied with $2=65 G 7$ cobles ond ocecssories. $7 \times 33 / 441 / 41$. 2909 Scott 111 -8-Shpg. wf. 41/2 lbs. 29.99 Scott 112.8 Dynourol Preomplifier-Similor 10 obove oxcept hos preomplifior equalized for magnetic pick. ups, 3-position high frequency conirol and 3-position for AM funer use is olso included.
Seott 112-B-5hpg. wt. 6 lbs
49.98

## McIntosh Laboratory

## Standard Custom Amplifiers

Useful Bandwidth 10 to 200,000 cycles

- Exceptionally High Eficlency
- Negligible Impulse Distortion
- Negligible Impuls Cistortion

These high tidelity amplifier: ore the product of years of development of on audio amplifier free of distortion, both single frequency and intermodulotion. At continuous full power of 50 wolts, ond instantaneous power of 100 watts from two 6LG6 tubes. Model 50W-2 gives substantially less than $1 \%$ distortion over a frequency ronge of 20 to $20,000 \mathrm{cps}$ without overloading. The $20 \mathrm{~W}-2$ gives similar performance for 20 wolts. Useful bondwidth of both, from 10 to 200,000 cycles, keeps hormonic ond phase distortion of the low value achieved and desired. Impulse distortion has been virfually eliminated. Both amplifiers have a domping lactor of io. Output impedance 600 ohms bal. onced: $4 / 8 / 16 / 32$ ohms bolonced of unbol. onced: N/8/16/ and inverter omplifier input is onced. Noise and inverter omplifier input is
io db below roted output. A unique feoture of io db below roted output. A unique feoture of the Meintosh is the plug-in unit orrongement permitting instant substifution of sections of the rior quality, high efficiency and full dynamic range, thele omplifiers hove corned a super. lotive reputation. Ask the mon who has heord one.

MODEL 50W-2. This 50 wath model consists of one power amplifier and one power supply unit. Eoch chossis is $83 / 10$ " $\times 63 / 4{ }^{4} 43 / 4$ highi mount on a standard rack panel $7 \times 19^{\prime \prime}$. Tube complement: 2-6LG6 or 1614, output: 2-6J5, driver: $12 A X 7$ invertor amplifier: $12 A \times 7$ preariveritier (as required). There ore 2-5U4G rectifiers. Aluminum groy Hommertone finish. Shpg, wi. 60 lbs . Melntosh $50 \mathrm{~W}-2$

NET 249.50
MODEL 20W-2. This 20 wall model is on one chossis $81 / 1$ " $\times 81 / 4$ " $143 / 4$ " high. Tube comple. ment: $2-6 \mathrm{~V} 6 \mathrm{G}$ output: $2-6 \mathrm{~J} 5$ driver: 12AK7 inverter omplifier: 12AX7 preomplifier los required). Has 524 recllifier. Aluminum gray Hammertone finish. Shpg, wf, 28 lbs . 14950 mertone finish. Shpg, wf, 28 lbs. ${ }^{\text {MET }} 149.50$

Model AE-2A Amplifier Equolizer
For use with either omplifier obove. Has 5 input circults: 1) crystol phono: 2) FM.AM tuner: 3) Pickering pickup; 4) G.E. pickup: 5) low-level mike-oll on selector switch. Hass control 20 db boost 12 db droop. Treble cons onit ron, ion for ony recording. 300 and 600 cycles turnovers of a do octave. Moster volume control. Connector for oblolining power from maln omplifier, and connecting equalizer output to power omplifier. Mohogony finlshed case, brown hommertone panel; size, $11^{\prime \prime} \mathrm{W}, 3^{1 / 4^{\prime \prime}} \mathrm{H}$." $101 /{ }^{\prime \prime}$. Moy be operoted UP to 30 ft . awoy. Shpg. wr. 10 lbs.
McIntosh AE-2A
NET 74.50

## LEAK "POINT ONE" AMPLIFIER

This is the fomous English 12 -watt, high fidelity triode amplifier with $0.1 \%$ total harmonic distorlion, Faotures a 3-stage triple loop feedbock circuif resulting in a hum ond nolse level botween 80 and 72 db below 10 wolts. The main loop gives 26 db feedback over the entire amplifier. Output stage uses two, 25 -walt triodes in push-pull. Frequency response $20-$ $20,000 \mathrm{cps}$ ot $\pm 0.1 \mathrm{db}$. Tolal harmonic disfortion: $0.1 \%$ of 1000 cps: $0.19 \%$ of 60 eps ; $0.21 \%$ of 40 cps; oll of 10 walts. Input impedance I meg. Output impedances: $1.7-2.3$, 8 -$9.2,15-20,27-36$ ohms. Preomplifier is enclosed in a separate remote control unlt with a $\mathbf{4 2}^{\prime \prime}$ connecting coble for plug-in oltochment to the omplifier. Power is obtained from the omplifier. four seporote panel controls for bass, Ireble. volume ond input selection, give effective can: volume and input selection, give effective can. trol and correctlon for the various speed and type records, different pickups, mikes and tuners. English tubes used, reploceoble with standord 6J7, 6SN7, 616 ond 5U4G. Power consumption 120 woits of 105.125 volts, $50 / 60$ eycles AC. Amplifier size: $121 / 2 \times 10 \times 81 / 4^{\prime \prime}$. preomplifier size: $10 \times 3 \times 2 \frac{3}{4} /^{\prime \prime} \mathrm{H}$. Shpg. wr. of both units, 40 lbs.
Leak "Point One" Amplifier
2 Preamp
192.00

Leok "Point One" TL/12 Amplifiter
only (No Controls)...
153.70

## CABINART CUSTOM STYLED CABINETS FOR RADIO \& TV

MODELS 21 and 22 AMPLIFIER, RADIO-PHONO, SPEAKER CABINETS


Cobinorf's matched units moke it eosy to select your own cabinet orrangements for rodio, felevision, phonogroph and speoker components. They ore beoutitully designed modern cabinets of selected veneers, experfly constructed to lost a lifetime. Great core has been taken to ossure the best possible ocoustics without socrificing the fine custom styling.

MODEL 21. Record chonger, omplifier ond rodio cobinet of $1 /{ }^{\prime \prime}$ furniture veneer. Meosures $351 / 2^{\prime \prime} H_{-1} 231 / 2^{\prime \prime} \mathrm{W}$. $18^{\prime \prime}$ D. Record chonger comportment mounted on boll beoring slides. Doors cover radio and omplifier control ponal. Available in Red or Cordovon Mohogany, Limed Oak, or Medium Walnup finishes. (Specity finisn.) Cobinart Model 21-Shipg. Wf. 75 Ibs
138.00

MODEL 22. Boss refiex speaker cabinet identical in size, style and finishes to Matal 21 . Baffle volume $\mathrm{b} / \mathrm{zcu} \mathrm{ct}$. Fiberglass insulation; monks cloth grille. Suppited with blonk baffle unless cutout desired is specified (no extra chorge). (Specify finish.) Cabinort Model 22-Shpg wt. 75 lbs

## MODELS 10 and 11

 SINGLE UNIT RADIO-PHONO SYSTEM CONSOLE CABINETS

NOTE: Write for literalure ond prices on other fine Cobinort deluxe cobinels for custam installotions.

MODEL 10. Designed to occommodote most record chongers, rodio and speoker systems. Speoker enclosure has a boffle volume of 5 cuble feef. Record changer drawer mounted on boll bearing slides. Overall dimensions: $351 / 2^{\prime \prime}$ H. 35 $1 / 2^{\prime \prime}$ W. $18^{\prime \prime}$ D. Avoiloble in Red or Cordovan Mahogany, Limed Ook or Medium Wolnut finishes. Cabinort Model 10 -Shpg. wf. 100 lbs . (Specity finish.) 180.00 MODEL 11. Same as above except with record storage space instead of speaker enclosure., Can be used with Model 22 speaker cobinet as - componlon plece. Cobinart Model 11 -(Specify finish.)
180.00

MODEL 28. Economy model record changer, amplifier and rodio cobinet with open foce control panel. Overall dimensions: $351 / 2^{\prime \prime} \mathrm{H}_{\text {. }}$
 $231 /{ }^{\prime \prime}$ W. $18^{\prime \prime}$ D. Availabl
on Birch. Shpg. Wt. 75 lbs.
Cabinart Model 28-(Specify finish.)
72.00

MODEL 27. Motching speaker cabinet. Some style, size and finish os Model 28. Boffle volume $61 / 2$ cubic feet. Fibergloss insulation. Cabinart Model 27 -Shpg. wr. 60 lbs. (Specify finish.)
48.00 MODEL 295. Television chassis cabinet meosures $351 / 2^{\prime \prime} \mathrm{H} .2^{\prime \prime} \mathrm{W}$., $22^{\prime \prime} \mathrm{D}$. Siyle and finishes same os Models 27 and 28. Cabinort Madel 295-Shpg. wt. 75 lbs. (Specify finish.)
81.00

## COMPLETE HIGH FIDELITY ENSEMBLES

Illustrated below are five complete high fidelity ensembles, made up of components listed in this catolog. These are but a few ippical exomples of high fidelity groupings of the literally thousonds which can be assembled from the tuners, amplifiers, speokers and record playlng equipment we can supply. They constitute the bosic elements. the "heart" of high fidelity reproduction systems.

These systems ore "matched", that is, all the units are complentary to eoch other for optimum performonce. Any other high fidelity system of your choice most certainly can be selected from the pages of quality components in this book. Should you need or desire assistance in the selection of units for your ideol system our high fidelity experts will be very happy to help in every possible monner.


## ENSEMBLE HF-I

This complete rodia and phona ensemble consists of ESPEY Model 5118 AM-FM Tuner-Amplifier Chossis......104.50 WEBSTER Model 100.270 Three Speed Changer.... Whree Speed Chang
UNIVERSITY 6200 12-Inch Speoker.... High Fldelify
Ensemble
HF-1 Ensamble HF-1 NET TOTAL 163.89

## ENSEMBLE HF-2

This complete rodio and phono ensemble cansists of ESPEY 513 B FM-AM Tuner \& ESPEY S14B Amplifier........ 129.50 WEBSTER 106-27 Changer.. 37.83 GE Long Ploy Cartridge.... 5.85 GE Standard Cartridge...... 5.85 UNIVERSITY 6201 Speoker 44.10 High Fidelity
Ensomble HF-2
Shpg. wt. 78 lbs.
NET TOTAL.
223.13

## ENSEMBLE HF-3

This complete radio and phono ensemble consisis of:
RADIO CRAFTSMEN
AM-FM Tuner
RADIO CRAFTSMEN
RADIO CRAFTSMEN
Audlo Amplifier................... 131.50

WEBSTER 106-27 Changer. 42.90 GE Long Play Cartridge.... 5.85 GE Stondard Cartridge...... 8.85 STEPHENS Model PI02FR 15-Inch Speaker.
Ensemble HF-3
Shpg. wt. 87 lbs .
NET TOTAL.
293.02

## ENSEMBLE HF-4

This complete radio and phono ensemble consists of
BROWNING Model RJ-20A
AM-FM Tuner........................ 175.17 8ROOK 12A
Basic Amplifier .............. 118.50 GARRARD RC-80 Changer.. 39.00 GE Long Ploy Cartridge.... 5.85 GE Standord Cartridge...... 5.85 JENSEN Model H. 510 1 JENSEN Model H. 510 15-Inch Speaker
Ensemblo HF-4 Ensemble MF-4
Shpg. wt. 125 lbs. NET TOTAL



## ENSEMBLE HF-5

This complete phono system (no radio) consists of:
BELL 2122A Amplifier
..49.45 WEBSTER 106.27 Changer.... 37.83 GE Long Ploy Cartridge...... 5.85 GE Standard Cartridge........ 3.85 GENERAL ELECTRIC SI2010 12-Inch Speaker ....................19.95 This system requires only the addition of a funer for use as a complete radio-phono system). Ensemble HF-5
Shog. wt. 45 lbs.
NET TOTAL.


## NOTE ON ADAPTATION

The systoms listed above, or any other system of your own choice, is supplied with each unit in its manufacturer's corton, and with manufacturer's instructions for use and assombly. If you are not fomilsar with "hooking-up" various components of radio equipment, or should you desire us to arrange the system so that you merely
have to plug logether two or three explicitly labeled cobles, we can da this for you for the small charge of $\$ 7,00$. This charge includes interconnecting cobles ond plugs, testing for proper operation as a unified system, and a single shaet of instruetions, so simple that anyone can follow them successfully.
ADAPTATION CHARGE FOR ANY HIGH FIDELITY SYSTEM............ $\$ 7.00$


MODEL G-610 15" TRIAXIAL
The first integrol 3.woy loudspeoker bystem offered. Feotures threo independently driven units. Hos two compression driver and horn combinotions, plus o heovy duty direct rodio. tor, and 3-chonnel lactricol crossover ond
control network. Here is a truly ultro high fidelity speaker with o frequency range of 20.20 .000 cycles ond the finest reproduction ever olfoined. Eoch unit covers port of the totol response ronge and dividing networks supply them signals within their respective and horizontal radiation. Input impedance 16 ohms al input ferminals to system on network chossis. 8affle opening $133_{4}{ }^{\prime \prime}$; O.D. $15 \% \%^{\prime \prime}$ overall depth 10 4 .". Crossover and control notwork hos transition frequencies of 600 and 4000 eycles. Controls include overall leval control, Axposition high frequency contro, room size ond brightness eantrol size of network complete with speaker unit ond crossover network. Shpg. wt. 50 lbs.
ST900 Jensen Model G. 610 Speoker SystemList $\$ 382.50$. 224.91

MATCHING TRANSFORMERS FOR G610 Especially designed for Gablo speoker system described above when an impedance other thon 16 ohms is required. Mounts directiy on network chassis. Plug connections to chassis and speaker. For 4 or 8 ohms input.
Llist
ST847 Jonsen Model T-202-
net 12.11
For 500.600 ohms
MODEL A-110 CONTROL NETWORK Provides odjustable lovel ond hlgh frequency pange controls for Model H-510 and K-310 spackers. Mounts direetly on speaker housing. Plug. in connections; no wiring changes neces. sary. Can be used T-102 and T-103. Supplied with network, spooker connection cord and plug, level control and H.F ronge control on Sotin brass, flush-pype escutcheons, bar knobs and mounting screws. Shpg. wt. 5 lbs. List $\$ 31.50$.
ST832 Jensen Model A-11018.52



JENSEN HIGH FIDELITY SPEAKERS AND BASS REFLEX CABINETS


P12-N


MODEL K-210 12" COAXIAL
Provides high fidelity repraduetion in a unit of small size ond maderate cost. Ideal as a modernizing speaker for radio receivers, phono. graphs ond iv sets equipped with inferior 12
speoker units. Hos bulf- in frequency-divisian system. Pawer roting 12 wotts. Input impedonce 8 ahms. Boffle opening $101 / 2^{\prime \prime} ;$ O.D. $12 / /^{\prime \prime} ;$ depth 6 h." Shpg wt. 8 lbs.
ST831 Jensen Model k-210.
23.23

MODEL ST836 "L"' TYPE VARIABLE CON. TROL. For seporope high frequency control of Model K.210 speoker. Impedonce 16 ohms, Supplied complefe with flush.type sotin brass Jevelcheon ond bor knob.
List $\$ 5.25$ Model ST836-
NET 3.09

PLUG-IN MATCHING TRANSFORMERS FOR H-510 AND K-310 SPEAKERS Dasigned to provide alternotive input impedances for H-510 and K-310 cooxial speokers. once. Switch on chossis gives eholee of two impedance volues. No wiring necessary-merely insert connecting plug into socket on speoker Corminol ponel. Can be used with Modal A- 110 ST833 Jensen Model T-101 Transformer Assembly-Impedance 4 and 8 ohms.
ST834 Jensen Model T-102-500.600 and 250 ohms.
ST835 Jensen Model T. 103-10,000 and 5000
ohms CT. For plote or high impedance line coupling.
Any of Above, Each, List $\$ 13.25$.
Net, Each

JENSEN DELUXE BASS REFLEX CABINETS
Hondsme, beoutifully finished speaker cabinets constructed of selected woods and hand rubbed to a lustrous wolnut finish. Distinctive styling combined with perfect acoustical design, moke these fine enclosures ideal for home or professional instollations. Has contrasting bronse wire grille. Accommodates Jonsen or other high fidelify speakers. $31 \times 271 / 4 \times 133 /{ }^{\prime \prime}$.
ST157 Jensen D151-For $15^{\prime \prime}$ Speakers. Shpg wt. 50 Ibs.
ST156 Jensen D121-For $12^{\prime \prime}$ Speokers....... 50.51


IMPERIAL CUSTOMODE CABINET A striking new bass reflex speaker cabinet of unusual design thot permits use in on upright posifion or as o low-boy ${ }^{\text {in }}$ speaker and can be easily and quickly removed for installation. Merely unserew the four decorative bross dises from the tront. Positive, easy aligning and Posten.
ing of speoker to panel is accomplished by mochine serews and onchor nuts which are set into bock of pona. Concealed cut-outs, covered by removable motehing for H-F Ronge and Level Controls if used. Size: $36 x 24 x 18{ }^{\prime \prime}$. Supplied with removable grilled eloth-serean assembly with two or Cordavan Mohogany finish.

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JENSEN PM CONCERT SPEAKERS
Heovy- duly highly efficient spookers for use in oll types of rodios, TV sets, public oddress equipment and high quality radio-phononeaded. Completely dustproof. All models less output transformer.

| Stock | Model | 3ix. | Watti | Voice Coll | Wi., lbs. | List | Iach |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ST169 | Ps-R | 8 | 9 | 8.8 | 4 | 16.40 | 0.64 |
| St121 | PIo-R | 10* | 10 | 6.8 | 5 | 18.70 | 11.00 |
| stio3 | P12-R | $12^{*}$ | 12 | 6.8 | 7 | 21.20 | 12.47 |
| 57673 | P12-0 | 12 * | 13 | 8 | 9 | 32.90 | 19.35 |
| 57656 | P12-N | 12" | 15 | 8 | 16 | 56.50 | 33.22 |
| ST678 | P15-0 | $15^{\circ}$ | 14 | 8 | 15 | 44.25 | 26.22 |
| ST654 | PIS-N | 15* | 20 | 8 | 17 | 70.50 | 41.45 |

JENSEN EXTENDED RANGE SPEAKERS
Single-unit, direct radiator speakers, recommiended os replacement to improve performance of existing rodio. TV and record ploying equipment. Also exceillent for monitoring in broodcast studios. Alnico 10,000 eyeles. Supplied less oulput transformer. See poge for suitoble matching transformers.

| Stock ${ }^{\text {a }}$ | Model | size | Wetts | oice Coll | Wi., Ibs. | List | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 37827 | P3-7X | 5 | 7 | 3.4 | 3/2 | 9.30 | 3.59 |
| 57826 | P6-18 | 6 " | 5 | 3.4 |  | 10.35 | 6.09 |
| 57825 | P8-5x | $8{ }^{\circ}$ | 7 | 6.8 | 5 | 15.20 | 8.94 |
| 57828 | P12-3x | 12* | 9 | 6.8 | 6 | 21.20 | 12.47 |



## MODEL 6201 HI-FI COAXIAL

Enjoy belonced response and full range reproduetion with this $12^{\prime \prime}$. 25-wott, high fidelity cooxiol speoker. Low frequencios handled by lorge, one-plece moided cone; high frequencles by a tweeter driver unit and horn cooxiolly mounted. Tweeter provides high frequency ore that blends with low frequency output to form a unlform orea of sound $80^{\circ}$ wide. A bullt-in 2000-cycle erossover notwork ossures maximum efficiency of the woofer and tweetor. The high requency control is wired to the speaker and permits variable adjustment of the balanc botween highs and lows. Has powerful, 24-0t Alnico $V$ magnet of special design. Oversized oice coll wound on $2^{\prime \prime}$ duralumin support Input impedonce 8 ohms. Depth $8^{\prime \prime}$. Supplied whith erossover network, high frequency ottenuator alreody wired to specker and coble for mounting it to panel. Shpg. wt. 9 lbs University Model 6201
44.10

## MODEL 6200 12" HI-FI SPEAKER

Answers the need for a top quality, but moderotely priced speaker with o range of 45-10,000 eps. and a power handling copocliy of 30 watis. $3^{\prime \prime}$ dlometer duralumin dome of apex af speciolly eurved one-piece molded cone reinforeses the high frequeney response. Rim treatment on cone minimizes possiblility of diophragm distortion and adds to life of the cane. Heat generated in speaker is dissipated by irculated filtered air created by back pres sure of speaker diaphrogm. Nominal impedance $6-12$ ohms. Hos some mognet os 6201 Depth 4 -15/64 ${ }^{\prime \prime}$. Shpg. wt. 7 Ibs.
University Model $6 \mathbf{2 0 0}$
20.58

## 12" AND 15" SPEAKER BAFFLES



Finished ond unfin ished batfiles for HIFi speókers. Coroful acoustic design assures excellent parformance. Constructed of $1 / 2^{1 "}$ plywood and equipped with speaker mounting boord, scrows, four insulating pads, tacks and special grille cloth. $12^{\prime \prime}$ cablne $231 / 2 \times 331 / 6 \times 125 /{ }^{\prime \prime}$ : shpg. w1. 30 lbs. $15^{\prime \prime}$ cobinot, $25 \times 331 / 4 \times 13 \%$ "; shpg wt. 35 lbs P22067-12 ${ }^{\prime \prime}$ Unfinished
19.90

P22068-12' Tan Leatherelte

22.38

P22065-15' Unfinished 23.65

P22066-15' Tan Leatherette 26.13 Any of above supplied with additional cutout for tweeter at extro cost of.............. \$3.00 Eoch

## TUFFLEX INSULATION

Sound absorbing insu lating material. May be used far lining in terior of radio-phonogroph consoles ond speaker cobinels. $1 / 2$ thick. Sold in widihs of Il". $7 . f t$ minimum length sold. 1.00 Longer Lengths Por $F$

## NEW MOOEL DIFFUSICONE-12

This 12" 30 -wolt speoker new principle of duol horn orrangement giving wide ongle, high fidelity response of on omozingly low cost. This design sats up iwo distinct sound wave poths. One follows poth direction of inner horn, the other follows path of auter horn. Dural dome directly over voice coil octs as radial pro jectar. Has a frequency response af 45-13,000 cps with uniform fiold pottern. Impedonce 8 ohms. Importont features include exclusive W-shope Alnico $V$ permonent magnat which reduces reluctonce and surface leakape losses, on oversized $2^{10}$ volice coll on dural form, and a unique mothod of using filtered oir clireulated by bock pressure of diaphragm to dissipote heot. Depth $4 / 2^{\prime \prime}$. Shpg. wt. 7 lbs.
University Diffusicono-12
26.46

MODEL 4410 CROSSOVER NETWORK Inductance-capacilance type. Prevents low frequencies from entering iweeter and eliminates high frequencies from woofer. Crossover frequency 600 sycles. Input impedance 6.12 ahms. Includes on external, completely wired high frequency attenuator permitting adjustment of bolonce highs and lows. With $36^{\circ}$ cable for panal mounting. $41 / 3^{\prime \prime} \mathrm{H} . \mathrm{H}_{4} 91 / 4^{\prime \prime}$ L. $3{ }^{\prime \prime} \mathrm{D}$. Use with 4408 and 4409 iweeters Shpg wt 5 lbs 20.58 University 441
20.58

MODEL 4420 CROSSOVER NETWORK. SAm as obove exeept with crossover frequency of 2000 cycles. $31 / a^{\prime \prime} \mathrm{H} ., 77^{2}{ }^{\prime \prime}$ L. $21^{\prime} \mathrm{D}$. Shpg wt. 3 lbs.
University 4420 Nefwart
11.76

## MODEL 4405 HIGH PASS FILTER

A simple economical meons of preventing low requancies from entering tweoter circuit. Fre quencies below 2000 cycles are shunted to the cone speoker all others ore permited to atuate the tweeter Housed in sturdy die cast aluminum cose and Holudes a high deacas luminum cose, and includes a high frequenc yolume control. $31 / 2^{\circ "} W_{\text {. }} 21 / 4^{" 1} \mathrm{D}$., 2 ? $3^{\prime \prime} \mathrm{H}$ hpg. w. 2 lbi.
University 4405
5.88

NOTE: We carry the complete lines of Univer sily and Jim Lansing "Signcfurg" Speakers siyy and Jim Lonsing signature" Speakers. Write for liferature ond
not listed on this poge.

## MODEL 4401 SINGLE TWEETER

Extends upper registor of existing speakers to 15,000 cycles. Handles the output of 15.20 wat amplifiers when used with ony sultable PM of field excited $10.18^{\prime \prime}$ cone speoker, and the correct high poss filter or crossover network. High conversion efficiency. 8-oz. Alnico mog not. Power: 6 watts of high frequency. Imped
 Shpg. wt. 4 lbs.
University 4401
11.76

## MODEL 4402 DUAL TWEETER

Response essentially flat from 2000-15,000 eycles Power: 12 walts of high trequency. Has wide dispersion orea, $100^{\circ}$ horizonial, $50^{\circ}$ vertical Unique shope of die-cost horn provides wider and more even distribution of high frequencles. Impedonce (units in porollel) 6.8 ohms. Models 4405 high pass filter or 4420 network recommended for use with this tweeter. $91 / 2^{\circ}{ }^{\circ} \mathrm{W}$. $2 \% H^{* H} .5$ 年" $^{2} \mathrm{D}$.
University 4402-Shpg. wt. 6 lbs........ 23.52

## MODEL 4408 6-WATT TWEETER

Response 600-15,000 cycles. Low frequency cut off 600 cycles. "Cabro" horn conslits of onepiece oluminum costing and gives wide vertical and horizontal distribution. Eosily handias 15. 20 watt amplifiers when used with sultable crossover and efficient cone speoker. Requires 4410 crossover. Impedance 12 ohms. 518" H . $73 / 0^{\prime \prime}$ W.i $111 /{ }^{\prime \prime}{ }^{\prime \prime}$. Shpg wl. 5 lbs. University 4408 Tweeter.
16.17 MODEL 4409 25-WATT TWEETER. Similor to above except hondles 25 wolts of high fre quency power. Depth $121 / 2^{\prime \prime}$. Con toke undlstorted power of 25.40 W . amplifiers when used with large cone speaker, University 4409 -Shpg. wf. $7 \mathrm{lbs} . . . . . . . .23 .52$

## MODEL 4407 TWEETER ADAPTOR

Converts any $12^{\prime \prime}$ conventional type speaker to a cocxial type when used with Model 4405 high poss filter listed on this page. Response essentially flat from 2000.15,000 cycles, Im pedance 12 ohms. Power: 6 watts of high tre puency Yeptical dispersion $40^{\circ}$ hopizonto quency. dispersion $60^{\circ}$. Eosy to instoll. Consists of ing, a iweeter mounting strap and all noees-
 sary hordware.
$3^{3}$. Shing
$\mathbf{n}^{2}$.
3". Shpg, Wt. 6 lbs.
University Model 4407
14.70


MODELS
D. 130 \& D. 131 12 \& 15 LOW

## JIM LANSING SIGNATURE SPEAKERS

## MODEL D-130 15 "

The fomous Jim Lansing precision engineered and constructed speakers are mode to supply the finest loudspeaker performance possible without compromise, dependent only on your audio system. The 15 -inch D-130, with a power handling capacity of 25 watts, has a virtually flat fequeney pesponse from 50 to 12.000 eps. Has o one-piece molded cone with aluminum high frequency center diophragm. Uses on edge wound ribbon volce coil with a diameter of $4^{\prime \prime}$. $3^{\mathrm{l}} \mathrm{ib}$. Alnica $v$ permanent magnet. Nominal impedance 16 ohms. Complately enclosed manent magnet. Nominal impedance magnet mounted in heovy, figid oluminum frame. O.D. 15 ' magnet mounted In heovy, rigid aluminum, frame. O.D. 15 i"' depth $53 / 9^{\circ}$ Lisi $\$ 1$
Jim Lansing
Jim Lansing 0.130 Signoture Speaker-Shpg. wf. 23 Ibs .
70.40 MODEL D-131. Same design and construction features of D.130, except In $12^{\prime \prime}$ size and 20 -wall power input. O.D. $121^{\prime \prime} 3^{\prime \prime}$ depth $5^{\prime \prime}$. Shpp. wt. 20 lbs. List $\$$
Jim Lansing D-131 Signoture Speaker
67.20

MODEL 208. A moderate priced $8^{\prime \prime}$ model with a power input of 12 watts. Has 15 or. Alnlea $\vee$ PM. dge wound ribbon voice coll and aluminum high frequency center diaphragm vented to eliminato nonlinear compression effects. Impedance 8 ohms. O.D. $81 / 2^{10}$; depth $37 / 3^{\prime \prime}$. Voice coil diometer $2^{\prime \prime}$. Llsi $\$$ Jim Lansing Madel 208-Shpg. Wf. 5 lbs
24.32

STEPHENS TRU-SONIC HIGH FIDELITY SPEAKERS

## Model 106-AX-15" Coaxial

Designed for highest quallty custom installa tlons, monitoring for broadeast stotions and motion picture reproduction. Renowned os one of the outstanding speakers. Combines in o single assembly a new low resonant, low fresingle assembly a new low resonant, low frequency reproducer of the cone type, ond o type with a complomentory crossover network, Frequaney range $35.12,000 \mathrm{cps} \pm 5 \mathrm{db}$; usable range, 20-15,000 cps. Power handiling copacily. 20 watts. 1200 eyele erossover. Wide angle dispersion $40^{\circ} \times 80^{\circ}$ on high frequencies. 16 ohms input impedance. Hos $61 / 2 \mathrm{lb}$. Alnico V mognet. 8offle opening $131 / 2^{1 / 2} 10 \mathrm{i} / 2^{11}$ deep. Shpg. wt. 35 lbs.
STEPMENS 106.AX.
List $\$ 166.00$
NET 122.01

## Model 102FR-15" Cospiral

A suparb high fidality speaker with 20 wotts powor handling copacity. Seamless, molded curvilionar cone for lowest frequencles ond Silvar splral differential diffuser give greater extended range and more efficiency thon any single voice coll speaker. Range: 30 to 14,000 eps; flat $\pm 5 \mathrm{db}$ from 50 to $9,500 \mathrm{eps}$. Its superior performonce results in port from the use of a powerful 4 lb . Alnico $V$ magnet. Suitable for outputs from 8.16 ohms nominal im. pedance. $81 / 2^{\prime \prime}$ deep. Shpg. wt. 30 lbs. List pedan
STEPHENS 102FR
NET 69.09

## Model P22FR-12" Co5piral

Similor to obove, but 15 watts capacity. Ronge $40-14,000 \mathrm{eps}$. $21 / 2 \mathrm{lb}$. Alnico V magnet. Shpg. wr. 28 lbs .
STEPHENS P22FR

## Model 409-2-Way Sysiem

For those who demand o superb high fidelity speaker installotion, this Stephens 2 .woy system is an ideal choice. Mounted on lis own heary baffle boord, ready for Installation in custom cabinets for phonoradio units, or in seporate speaker enclosure. Rich, resonant bass tone, extended pesponse from 35 to $14,000 \mathrm{cps} \pm 5$ db . The 409 systom consisis of the $814 \mathrm{H}, 4$-cell horn with the P. 15 high frequency driver, the 800X-2, 800 eycle erossover, and the P52LX low frequency driver who o 4.2 lb . Alnico V mognet. Input impedance is 10 to 20 ohms. Power handling sapocity 20 watts. $27^{\prime \prime} \mathrm{H}, 18^{\circ} \mathrm{W}, 141 / 2^{\prime \prime}$ D. Shpg. wt. 50 Ibs . List $\$ 212.00$.

STEPHENS 4092 -Wor System
155.82

## Model P-52LX-15" Woofer

This powarful 15 -inch low frequancy driver is designed for custom performance with a separate "tweeter". Cone resonance 55 cycles; power handing capocity 20 watls. Has 4.2 Ib Alnico $V$ mognet. Input impodance 16 ohms ( 8 ohms avallable on order). $85 / \mathbf{n}^{" 1}$ deep. Shpg. wt. 30 lbs. List 578.00 .
STEPMENS P-52LX
NET 57.33

## Horn-Driver-Crossover

814.H. 4.Cell Morn as used in Model 409. Shpg. wt. 12 lbs. List $\$ 28.00 \ldots \ldots . . . . . . .$. NET 20.58 P.15. HF Driver os used in Model 409. Shpg. wi. I5 lbs. List $\$ 62.00$ NET 45.57
800X-2. 800 eyeles Crossover Network. Shpg. $800 x \cdot 2.800$ eyeles Crossover Networt. Shpg.
$w t .10$ Ibs. Llst $\$ 28.00 \ldots . . . . . . . . . . . . . . . . . . . . . . . . . . . ~$

Model 409-2-Way Systems In Modern Cabinets

The Model 409 2.Way Speoker System, de. seribed at left, is available in soveral cabinat stylings expressly designed not oniy for thair acoustic corresiness but for thele eye appeal. Exceptionally sturdy construction, finest hordwood vaneers used throughout. Hond finished by moster craftsmen. Avallable in mahogany or "blonde", bleoched mahogan'y finish. 412-M Mohogany Cobinet System. 341/2" H, 23" W. $17^{\prime \prime}$ D. cabinet as illustrated, contoining 404 systam. Shpg. wf. 120 lbs. List $\$ 346.00$. 412-M System. NET
254.31
412.B System. Some os obove in Blonde. 412.8 System. NET 254.31
612-M. Mahogany Cabinet only, os above. Shpg. wt. 70 Ibs. List $\$ 140.00$
612-M Cabinet, only .NET 102.96
612.8. 8lond Cobinel only, as obove.

612-8 Cobinet, only............................NET 102.90
410-M Mahogany Cabinet System. $30^{\prime \prime} \mathrm{H}, 34^{\prime \prime}$ $\mathrm{W}, 20^{\prime \prime} \mathrm{D}$, cabinet os illustrated, containing 409 system. Shpg. wf. 130 lbs. List $\$ 372.00$.
410.M System

NET 273.42
410.8 System. Same as above, in Blonde.
410.8 System ..................................... 273.4
810.M Mahogany Cobinet only, as above. $610-\mathrm{M}$ Cobinet, only........................NET 123.4
610-8 Blonde Cabinet only, as obove.
610.8 Cobinet, only.

## ELECTRO-VOICE HI-FI SPEAKERS AND CABINETS

## Model SP15-Super-Fifteen

With this incomporable Rodox Super-Fifteen you anloy reproduction so cleor, so vibront that the lllusion of "presence" pervades the room. This large 15 -Inch speaker with of frequency respanse of $70.13,000 \mathrm{cps} \pm 5 \mathrm{db}$ has a power handling capaciry of 30 watts and employs a huge $51 / 4 \mathrm{lb}$. Alnica $V$ magnet. Heory cast alu. minum frame: specially treated and damped $15^{\prime \prime}$ cone reduces transients and intermodulo. tion distortion. Mechonical crossover, operat. ing of the bth octove directs high frequency pulses to the Rodox h.f. propogotor. This pulses to the Rodar h.fiopropagotor. This octer. Bose cone resonance 38 eps ; h.f. cone resonance 250 cps . Input Impedonce 12 ohms. Volce coil of lightwelght. dgewise wound alu. minum ribbon. O.D. $151 /{ }^{\prime \prime}$ " $81 / 0^{\prime \prime}$ deep, bafle opening $131 / 2^{\prime \prime}$. Shpg. wf. 35 lbs.
List $\$ 120.00$
ELECTRO-VOICE SPI5.
70.56

## Model SP12-Super-Twelve

Similar to above, but with 25 wolt capocity and 3 lb. Alnico $V$ magnet. Impedonce 8 ohms. O.D. $121 / 2^{\prime \prime} 31^{\prime \prime}$ deep; boffle opening $11^{\prime \prime}$ Shpg. Wf. 30 lbs.
ELECTRO-VOICE SP12. List $\$ 90.00$ NET $\$ 2.92$

## Model SP12-B Radax-Twelve

Utilizes the superlative Rodaz principle os above, but with 15.20 walt power capacity and $11 / 2 \mathrm{lb}$. Alnico $V$ mognat. Frequency range 75 to $13,000 \mathrm{cps} \pm 6 \mathrm{db} .8$ ohms impedonce. O.D. $121 \%^{\prime \prime} ; 6 \%^{4 P}$ deep; bottio opening II". Sphg. wf. $73 / 4$ lbs. List Price $\$ 45.00$.
ELECTRO-VOICE SP12.8..............NET 26.46



## 15" DUPLEX SPEAKER

Model 604B. The standard professional unit, two-woy speaker system that is among the finest in the industry. Delivers top quality performonce for those who demand the best. Large 15" low frequency speaker with multicellulor high fre quency unit delivers from 30 to $16,000 \mathrm{cps}$ with essentially flat response. Disporsion ongles: $60^{\circ}$ hori zontal, $40^{\circ}$ vertical-means excellent evan response in most instoliations Speaker includes a matching 1000. cycle crossover network with adjustable HF controls. Rated at 30 watts. Amplifier impedance required, 16 ohms. Speaker depth $111 / 2^{\prime \prime}$. Shpg wf. 48 lbs . List $\$ 212.01$. ALTEC 604 B : N1000B CROSS. OVER
159.00


## ALTEC-LANSING HI-FIDELITY SPEAKERS

## 15" MULTICELL DIA-CONE

Model 6038 - An excellent repro ducer having a large $15^{\prime \prime}$ cone for desp, fich bass reproduction and exelusive Altec-Lansing Dia.Cone for high frequency reproduction. Multicellulor dispersion horn in front of dia-cone provides smooth distribution. Meets the tremendous demand for an economical high quality speaker for the high fidelity enthusiast. Dla-Cone principle reproduces frequencies over 2000 cycles from an aluminum diaphragm secured directly to a $3^{\prime \prime}$ voice coll. Diacone and low fre quency cone ore coupled logether by a mechanical dividing nelwork. $60^{\circ}$ horizontal, $40^{\circ}$ vertical dispersion. 8 ohms impedance: 25 watts rating. List $\$ 100,00$. $7^{10}$ deap. Wt. 21 bs. ALTEC 803B $\qquad$

## DIACONE SPEAKERS

Model 600B 12" Diocone. An economically priced high qualify speaker using the metal diaphragm Dia.Cone princlple, for excellent high frequency rasponse while large $12^{\prime \prime}$ cone covers spectrum below 2000 cycles. Ideal for home and Industrial applications. Roted of 20 watts: B ohms impedance. $51 / 4^{\prime \prime}$ deep. Shpg, wI. 15 lbs. ALTEC 600 B -List $\$ 62.00$
46.50

Model $400 \mathrm{~B} \mathrm{~B}^{\prime \prime}$ Diacane. Lowerpriced version of above for high fidelity use where space and welght are limitations. Uses exclusive Diacone principle for quality repro. duction. 12 watts rating; 8 ohms Impedance. $35 /{ }^{\prime \prime}$ deep. Shpg. wh. 7 lbs.
ALTEC 400B-List $\$ 30.00$ NET.
22.50

## MODEL 605 CABINET

Exquisite, hand rubbed hardwood speaker enclosures that pravide bolonced frequency response. Sim ple, attroctlye style harmonizes with all fine furnifure and enhances any surroundings. Excellent design and construction for housing $12^{\prime \prime}$ or $15^{\prime \prime}$ speakers. All joints glved ond re. inforced with screws to eliminate vibrations and reverberations. In terior lined with moisture resistant sound absorbing material. Rich looking metal grille and matching grille eloth. Size: $38^{\prime \prime}$ high, $30^{\circ}$ wide, $16^{\prime \prime}$ deep. Model 605A for 15" speaker, 605B for 12"
ALTEC-Model 605A in Walnut
ALTEC-Model 605A in Mahogany ALTEC-Model 605B in Wolnut ALTEC-Model 605B in Mahogany Shpg. wf, 149 lbs
Shpg. Wr. 44 lbs.
150.00



FAMOUS MAKE HIGH FIDELITY SPEAKERS


15A10CO

RCA 51552 15" Duo Cone Utilizing the unique magnetic struefure Duo-Cone arrongement, de. veloped by Dr. Olson, famed RCA ocoustical outhorliy, this $15^{\prime \prime}$ speakor, with its range of $40-12,000 \mathrm{eps}$ is outstanding for eustom Installa. tions in high fidelity unlts. Two separate voice coils, each drive one of the duo-cones: at crossover frequencles, around 2000 eps, both cones vibrate as a single unit, to ovoid annoying crassover interference. 25 watl power hondling copacity. 16 ohms impedance. 2 lb. Alnico $V$ magnet. saffle opening: for flange mounting, $151 / 2^{\prime \prime}$; for rim mounting, $131 / 4$. $615^{\prime \prime}$ doep. Shpg. Wt. I8 lbs. List 82.50 . 5 . 48.51

MASCO HI-FREQUENCY ADAPTOR
 Gives true high frequency response when added to your present speaker. No filter network or additional spoce required. Becomes parl of cone.' Response over 15,000 cyeles. Impedonce (units in serios) 6.8 ohms. Power 8 walls. $51 / 4^{11}$ dia., $23 /$ " $^{\prime \prime}$ D. With mounting sereen for $12^{\prime \prime}$ speoker.
Shpg, wf. 3 lbs.
Masco HFT100-12.
22.23

HFT100-15-For 15 speaker, 23.81

PERMOFLUX Royal 12T-8-1 speokerthis all new Permoflux 12 . inch hi-fidelity speaker feoluresslotted edge cone and on extra lorge spider for super-soff suspension. Provides excellent low frequency response. Because the cone Is curvilinear and deeper than usual speakers, and special stiffen. Ing treotment given to the throat, the, high frequency response compares with that of for more expen. sive reproducers. It is ideal for home unlls, P.A., wired music, montioring, etc. Provides a ronge of 50 to 12,000 eps with exceptionaliy low distortion leval. 10 watts power hondling; 8 ohms impedance; extra heary Alnico $V$ mognet. $53 / 1^{" ~ d e e p . ~}$ List \$27.50. Shpg, wt. 5 lbs . PERMOFLUX 12T-8-1...
16.17

## PERMOFLUX Royal 8T-8-1

Where space is an importont con sideration but a fine speoker is required for high fidelity Installalions of home, studios, P.A., etc., this Permoflux 8 inch will omply sotisty most requirements. Capable of a 50 to 12,000 cycles frequency range with low distortion at 8 watts power handling copocily. Has a I. inch voice coil with on impedonce of 8 ohms. Depth of only 4 inches: powerful Alnico $V$ mognet. List 22.50. Shpg, wt. 6 lbs . PERM OFLUX 8T-8-1........ 13.33

## WHARFEDALE Super

 12/CS/ALProduct of G. A. Briggs, noted British outhority. This 12 inch speaker, utilizes the cloth suspension principle for superior t, ansient response as well as reduction of unwanted bass response. Has a trequenè range of 30 to $18,000 \mathrm{cps}$ with a power handling capacity of 12 watts. Cone resonance at $35 / 45 \mathrm{cps}$. Volce coll impedance 15 ohms Amazingly clean highs achieved by spacial cone with bakalized apex and corefully wound aluminum voice coil. $12 \frac{1}{6 \prime \prime}$ O.D. $7^{\prime \prime}$ depth, Shpg, wt. 20 lbs
WHARFEDALE 12CSAL., 57.60

## GE S1201D 12-Inch

This deluxe $12^{\prime \prime}$ Alnico V PM speoker is very popular for home hi-fi units, public address, etc. where 25 watts handling power with 50 $13,000 \mathrm{cps}$ frequency range of mod. erate cost make it a universal favorite. Incorporates late speoker design developments for brilliant highs, mallow bass response. Heary Alnico $\vee$ mognet, oluminum base voice coil, Impedonce 8 ohms. Beoutlfully plated finish; equipped with universal transformer mountings. 5\% deep. List \$33.95.
Shpg. wl. 1 lbs .
GE S12010 $12^{\prime \prime}$ Speaker, 19.95

## QUAM 15" COAXIAL

 This excellent $15^{\prime \prime}$ cooxial high fidelity speaker utilizes the famous "Adjusta-Cone" suspension principle which assures precision centering of voice coll for finest repro. duction. Moderately priced, yet capable of 55-10,000 cps response at 20 watts power handling capacity. This is an ideal speaker for those who want good quality but must conform to budgetary considerations. 6-8 ohms impedance: large Alnico $V$ moqnet. $1^{\prime \prime}$ O.D., $83 / 1^{14}$ deep. List $\$ 47.50$. Wt. 15 lbs. QUAM I5A10CONET.27.93

## QUAM 12" COAXIAL

Has all the design and construction features of the Model 15A10C described above except in smaller sizb: "Hos o 12" low frequency and 3" high frequency unit having a capocity of 14 wolts. 6.8 oz. Alnico $V$ permonent mognet. Voice coll impedance $6-8$ ohms. Depth $6 \mathrm{HJ}^{\prime \prime}$. Shpg, wt. 10 lbs, List $\$ 30.00$.
NET
17.64

NOTE: Lafayette's large assortment of high fidelity speakers includes many other models of the manufacturers listed here. Also, our stock is regularly hept up-todate as various manufacturers announce new and improved models. Descriptive literature and prices available on request.

## latest

## GARRARD "TRIUMPH" 3-SPEED CHANGER

The newast addition to the Gaprard line, the Cadilloc of record ployers. Designed for music lovers who demond the finest in record performance. The now Gorrard "Triumph" plays all $331 / 3$, 45 ond 78 RPM records. Features automolic switch.oft after playing last racord of any slack of 10 or 12 inch records. A separate spindle is supplied for use on 45 RPM recards 10 change them cutomatically. Heavy duty, silent motor, and heavlly waighted turn-table for change sper Muting switch stlences pick up arm when changer is changing fecords, constont speed. Morg sorrard "Triumph" is supolied with Jewel mounted, true-tangent pick-up orm. The new Gorrard rriumph is suppled wh two plug-in heods and mounting hordwape for most crystal ond magnetic cortridges. Ac-
 Extends $21 / 2^{\prime \prime}$ below mofor board, $51 / 2^{\prime \prime}$ obove. For operation on $100-130$ volts, 60 cycles AC. Cortridges not included. MODEL RCBO. Shpg. Wi. 20 lbs.
39.00

GARRARD PLUG-IN CRYSTAL CARTRIDGE
Garrard plug-in shell for "Triumph" changer, complato with dual stylus, furn-over crystal cortildge.
P13523-Shpg. Wt. I Ib..
5.10


## 

MODEL 106-27. The famous new Webster-Chicago 3-speed moael, designed for wie with G.E., Pickering or Audak varioble reluetance cartridges. Plays all makes, all sixes and all speeds of records. Three speed swith makes the changeover to different speeds, fost and effortless. Improved lightweight orm makes it unnecessary to adjust welght when shifing from standard to LP pecords, a muting switch silences pickup between cycles. Arm comas to rest after ploying last record. 3 plosilc spiders ofe provided for use with 45 RPM records. Motor board measures $14^{\prime \prime}$. $14^{\prime \prime} .5 \%^{\prime \prime}$ above plate, $319^{\prime \prime}$ below. For 105 to 125 volts, 60 cycles $A C$. Less cartridges and pro-amp.
37.83

MODEL $106-27$-Shpg. Wr. $18 \mathrm{lbs} .$.
MODEL 106-1. Similap to above but supplied with wide range crystal cortridge and tandem needle. No preemp required. Supplied with hardware.
MODEL 106-1
MODEL 100.1. This is a slightly imaller version of Model 106.1 . Meosures $12^{\prime \prime} \times 12 \mathrm{y}_{4}$ ", Halght above motor plate $51 / 32^{\prime \prime}$ below plate $25 /{ }^{2}$ ". Complate with "Tondem Needle," crystal captridge. No muting switch. MODEL 100-1. Shpg. Wt. 15 lbs .
MODEL 100-270. Similar to model t00-1, exeept that pickup orm is supplled with GE Triple Ploy variable reluctance cartridge, (lllustroted) 38.81 MODEL $100-270$. Shpg. Wt. 15 ibs...

## V M TRIOMATIC RECORD CHANGERS

- Dual Needle, Reversible Cariridge - Automafic Siop Afier Last Record - Intermixes $10^{\prime \prime}$ \& $12^{\prime \prime}$ Records

Velvet Acilon Velocity Trip
With VMi line of new changers, all you have to do is to load the records you want played on the spindle, select the speed you want and then flip the switch to ON position. The Allnew VM Triomatic plays $331 / \mathrm{g} .45$ and 78 RPM recopds of all sizes completely automaticelly. The improved lone orm will unfollingy come down into the cad in groove of the record. If the tone arm is accidentally held during the playing of o record, or if lifted purposely for placement on another part of the record, there wlil be no damage to the cyeling mechanism of the changer, absolutely jamproot VMs "flat air-cushlon drop" assures a gentle dropping motion of the record to the turnioble. Unit is avallable with reversible crystal, or GE varlable reluctance cartridge. Dimensions are $141 / 2^{\prime \prime \prime} k 12 \frac{1}{2^{\prime \prime}}$. $5 \frac{1}{4^{\prime \prime}}$ above mounting plate and $21 / 0^{\circ}$ below mounting plate
Madel 950 with purnover erystal captridge
29.62
32.0

Madel 955. As above but on metal bas
Model 950 GE with GE triple play cartridge and dual stylus.............................................................
Model $955 G E$. As above but on matal bose
35.19

## MARKEL THREE-SPEED CHANGER

The world's only complete 3 -speed changer which automatically ploys all speeds, $331 / 3,45$ and 78 RPM-and all record sixes, $7^{\prime \prime}, 10^{\prime \prime}, 12^{\prime \prime}$-and automatically plays both sides of $10^{\prime \prime}$ and $12^{\prime \prime}$ " ecords continuously in sequence, without turning them over. Also plays them as ingle sides for drop mechonism albums. Wilt provide up to a hours of continuous playing ingle sidas ror drop mechanism al Martel will hondle stock of 12 of $10^{\prime \prime}$ iecord without touching the chongep, The Markel will hande stock 12 of any records;

$1533 / /$ RPM, 1045 RPM or 1278 RPM.
The Markel changer is equipped with a completely interchangeable head, using a crytal The Markel changer is equipped with a completely interchangeable head, using a crytal
cartridge with twin semi-permanent styli and rich.fidelity tone orm. The changer automatically stops and shuts off when the last record in ony stack of $10^{\prime \prime}$ or $12^{\prime \prime}$ pecords is ployed. You may relect any record and automatically permilt the next record to play th the sequence previously ielected. The ton arm will automatically peposition itself if thrust out of position, moved of any time, or held while it's in cycle. It cannof lam. All eyeling mechonism is at rast during operation. Improved push-off post ond the exclusive rall-off mechanism prevents cecord chip or ceack. Records rall off the patented three rubbep wheel mechanhsmo they can't breat Moy be used on any 110 volt, 60 cycle $A C$ source. Dimensions are $15 / h^{\prime \prime}$ " $143 / 4^{\prime \prime} \times 10^{\prime \prime}$ high. 7 inches above ond 3 incher bolow mounting plate. Shipping Wi. 23 Ibs. List $\$ 99.50$
MARKEL MODEL 74
NET
63.39

Model 75. Above player mounted on wood cabinet base. Shpg. Wi. 26 lbs.
......N
. .69 .76

## CHANGER BASES

A) Sturdy mefal bases for Webster or Garrard Chongers. Brown finish; felt feot. 4.09 P22355-For Webster 100 models P22356-Fop Webster 106356 models. Shpg. Wi. 5 lbs. 4.09
6.18

P22358-For Garfard RC.8O.

## MOUNTING PANEL FOR WEBSTER CHANGERS

B) $16^{\prime \prime} \times 16^{\prime \prime}$ sturdy, unfinished wood panels completely cut-out, with mounting holes.
P16314-For Model 100
P16315-For Models $356 \& 106$
1.96


## RECORD CHANGER CABINET

C) Glistening wood, mahogony veneer.finished table cabinet. twin hinged top. $12^{1 / 2^{\prime \prime}} \mathrm{H}_{1} 161 / 2^{\prime \prime}$ $\mathrm{W}, 151 / 2^{\prime \prime} \mathrm{D}$. Shipping Weight, 12 ibs. P19425-For Webster 356 and 106 series P19424-For Webster 100 series P19423-For VM Triomatics P19426-With blank ponel board. Any model above...

## SLIDE-RAIL HARDWARE KIT.

D) For mounting pecord changaps in pull.sul drawers ín radio cabinets, etc. Providas neat and ottractive installation. Ali hardware included. Handy in construction of new, and conversion of older sets. P16328-Wt 3 lbs...
1.18


## GENERAL ELECTRIC HIGH FIDELITY PHONO EQUIPMENT

## Single Stylus Cortridges ( $A$ )

Variable reluctonce cortridge with reploceoble sopphire stylus for lang ploy ( $33 / 3$. 45 RPM) records. Provides smooth, wide ronge reproduction. doton type styli, used In all models. Requifres preomplifiep. For pickup orms with $1 / 2^{\prime \prime}$ mounting centers. Shpg. wt. oz.
P13485. RPX041-List $\$ 9.85$ NET 5.85
Some os obove, but for standard, 78 RPM rec. ords. With reploceoble needle. P13500. RPX040-List $\$ 9.95$

NET 5.85
Broodeast Type. A professional type cortridge with very wide ronge response. Chromium cose Less stylus.
P13497. RPX046-List \$11.45 NET 0.73
Replacement Ports KIt, for Triple Ploy captpidge. Includes, spring, washers, plostir knob $W{ }^{W} .2$ oz.
P13552. RKPOOQ-LIst 25

## "Triple-Play" Cortridges (B)

Thase convenlent duolestylus "Triple. Ploy" vorl. oble reluctance cartridges do the work of two cortridges. A simple iwist of the knob brings either long-ploy or standard styll Into pasition and eliminates plug-in heads. With $.001{ }^{\prime \prime}$ and pl $000^{\text {reploceable siyll, }}$
P13409. RPXO50-List $\$ 13.95$
NET 8.20
Broodcost Type. Similar to obove, but wider range, professional type. Chrome-plated. Less


GE Transcription Arm (F)
Used by broodcost stations and thase desiring finest quality reproduction of lateral transcrip. tions and records. Mounts the GE cartridges listed of left. Magneslum alloy used for moring parts reduces mass of orm. Precision cone bearings used fop low frietion. For records up to 17/4. Shpg. wt. I Ib P13514. FA.21.A

NET 40.18
RWP-001-Counterwelght to adopt above orm for LP records.
3.77

GE Replacement 5tyll (G) For Single Stylus Cartridges

| $\begin{aligned} & 8 \text { 8eok } \\ & \text { No. } \end{aligned}$ | Type | Tip | Radius | List | VET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\overline{\text { P108 }}$ | 11PगOn | Sambirs | . 01 | \$3.50 | \$2.08 |
| P144 | $11 . J 1016$ | Sanphir. | .0125 ${ }^{\circ}$ | 3.71 | 2.06 |
| P128 | 11P:1004 | Nspmire | 1010 | 27.15 | 18.06 |
| P145 | M1.5002 |  | .1025* | 2\%.[11) | 18.17 |
| P109 | H1.J00: | 1hambilil | 100: | 27.60 | 18.17 |

## For Triple-Play Cartridges

P942 HIJ00i Knanlifu
P129 181..1010 Namhire




## Single Stylu: Pickup Arm (D)

GE pickup orm with either sfondord or LP cortridges. For use with ony single racard player: for $10^{\prime \prime}$ or $12^{\prime \prime}$ recards. Simple to in. stall; requires single hole mounting; hos $24^{\prime \prime}$ leod, maunling rest and lemplate. Factory bol anced; adiustable. Shpg. wf. I lb. List $\$ 15.95$ Stondord cartridge

NET 9.38
P13501. UPX007
NET NET 9.38

## Triple-Ploy Pickup Arm (E)

Fine new tone arm for ploying oll three speads. Hos GE "Triple-Play" cortridge. Boll bearings for smooth loterol movement. Single $1 / 2^{\circ}$ hole mounting; has $24^{4 "}$ lead, reil and remplote. list sig.
Shpg. wi. 2 lbs.
P135i8. UPXOOG
net 11.73

## GE Pre-Ampllfiers (C)

Self powared preomp for use with GE or similor magnefic cortridges and pickups. Has 65 C 7 lube in equolizing circult, plus rectifier. In. cludes input jock and $14^{\prime \prime}$ output leod with
 P13473. UP $\times 003$-List $\$ 17.95$ NET 10.55
Externol powered preomp. Same as above, less rectifier. Filoment and plate supply abtained fram receiver ap omplifier P13465. SPXOOI-LIst $\$ 11.90$

## FINE QUALITY TAPE AND DISC RECORDERS

## BELL MODEL RT-65-B 3-SPEED TAPE RECORDER

- Records Up to 4 Mrs. on $\mathbf{1 2 0 0 - F t}$, Reel
- Frequency Response $70-8000 \mathrm{cps} \pm 3 \mathrm{db}$
- Records From Microphone or Phono-Radio - Professional Quality - Self-Contained

Here's a tape recorder with features that make it desiroble for either seml-professional or home use. Ideal for conferences, interviews, meatings and recording of music, and for home recording by fomily and friends. Plays or records on $5^{\prime \prime}$ or $7^{\prime \prime}$ reels. Neon indicator ligh shows proper recording level. Has both volume and tone control for compensation where required. Hos three frward speeds: $17 / \mathbf{B}^{\prime \prime}, 33 / 4^{\prime \prime}$ and $71 / 2^{\prime \prime} / \mathrm{sec} .178^{\prime \prime}$ speed gives 4 hours of recording on one 7 " reel, 2 hours on $33 / 4^{\prime \prime}$ speed. Frequency response is 70 to 8,000 CPS $\pm 3 \mathrm{db}$ of $71 / 2^{\prime \prime} / \mathrm{sec}$. Uses paper or plostic tope on which you con rewind or erose one-half the tope at a time. 8 -wott $6^{\prime \prime}$ Alnico V PM speoker is outomaticolly disconnected when using externol speoker. Record from microphone, externol rodio or phono. Output 3.2 ohms and high impedance for heodphones. Fast forword and rewind of $45^{\prime \prime} / \mathrm{sec}$. Controls: Rewind-OFF. Forward; Tone with AC switch, Erase or RecordPloybock; Volume, Equolization Switch. Tubes: Ploybock; Volumed Equolization Swith. Tubes:
$1-12 A X 7 ; 1-12 A U 7$, $1-6 \mathrm{VGT}$. Has $6 \times 5 \mathrm{GT}$ rectifier. Power 80 wotts of 117 V ., 60 cycles AC. Removable hinged cover, portable cose,
 six $5^{\prime \prime}$ reels and three $7^{\prime \prime}$ reels, mike cables and accessories. Recarder is complete, reody to operate with crystal microphone, and 6 feet of cable, o 600 ft . reel of type $A$ pope, o 5 inch lake up reel, instructions and tubes. Shpg. Wt 40 lbs. List' Price, $\$ 186.50$.
Bell Model RT-65-B Recorde
124.30

NOTE: See front cover for Mognecord tepe recarders. We also carry REVERE, PENTRON BRUSH, WEBSTER ond PRESTO, OUR stock is extensíve ond we can fill any requirement. Send in your order specifying manufacturer': model number, or write for prices and data.

## MEISSNER MODEL 4DR HOME DISC RECORDER

Undoubtedly one of the best values ever offered in o home recorder. Although built to professional stondords, it is priced for the professional stondards, it is priced for the
modest budget. The unit records ond plays modest budget. The unit records ond plays
bock records at $33-1 / 3,45$ and 78 RPM. Bushing supplied readily converts recorder for 45 RPM cutting and playback. You can record direct from mike, onother phono, radio or funer at 160 lines per inch on discs up to $10^{\prime \prime}$ in diometer. Frequency response up to 4500 cps ( $50 \%$ higher than other instruments of cps (type). Plays back records up to 12" in diameter. Crystal playback cartridge includes dlameter. Crystal playbock cartridge includes
$.001^{\prime \prime}$ ond $.003^{\prime \prime}$ roplaceoble twin styll for standard and misrogroove records. Other outstanding feotures include two builp-in $5^{\prime \prime}$ PM speokers with provision for on external speaker if desired, a separate volume control for each of the two inputs, ond a neen light recording level indicator. Tubes: 65J7, 6SL7GT, 6V6GT. Hos $6 \times 5 \mathrm{GT}$ rectifier. Hondsome portable wood cose with red, simulated alligotor covering, $161 / 4 \times 123 / 4 \times 91 / 4^{\prime \prime}$. Removable hinged cover $161 / 4 \times 123 / 4 \times 91 / 4{ }^{\prime \prime}$. Removable hinged cover
hos spoce for carrying records. Supplied comhos spoce for carrying records. Supplied com-
plete with fubes, mike, shielded coble and instruetions. For 110.120 V., 60 cycles AC. Shig. wt. 40 lbs. List 199.35.
Meissner Madel 4DR - Not................ 117.21

## PENTRON BASIC TAPE RECORDING MECHANISM

This heovy duty bosic recording mechanism is designed for use with o combinotion rodiophonagroph custom installation that already hos a high gain amplifier wlith special equolization. It records radio programs, discs or zation. It records radio programs, discs or
"live" recordings through a mike. A $1200 . \mathrm{ff}$. reel of tope gives you two hours of recording time at a speed of $33 / 4^{\prime \prime} /$ second. Only holf the tape width is used at a time. After one hour the reels are reversed and recording is done on the other half. Frequency response 85.5000 cps within 3 db when used with recommended circuit. Unit is equipped with o single-lever control for selecting Record-Play, OFF and Rewind positions. Has extra fast forward speed and rewind. Supplied with oscillator coil for construction positions. Has extra fast forward speed and rewind. Supplied with oscillator coil for construction
 takeup reel includ
tape not included.
tape not included.
Model 973 M - Pen

## MASCO "SOUND-REEL" DUAL-TRACK

 DUAL-SPEED TAPE RECORDER

Mike ond rodio/phono. THREE OUTPUTS: coil; 500 ohm IIne. HEAVY DUTY MOTOR: elapsed recording time used in minutes. C Constant tape speed. NO ACCIDENTAL ERAAPSTAN TURRET DRIVE: Eliminates tope slippoge. recording is possible. TONE CONTROL. for A record push-bution must be depressed before speoker PLAYBACK EQUALIZATION. Sepor playbock use only. POWER OUTPUT; 5 watts to AM Tuner in 37 R models. Aluminum Ceporate for $7.50 \mathrm{ln} . / \mathrm{sec}$, and $3.75 \mathrm{in} / \mathrm{sec}$. Self-contained Model D-37 - Complete portoble dual speed tape recorder, with mike, 600 ft . plostic tope, tote-up reel and portable case. P22637 - List $\$ 243.00$ NET.
162.00

These new Masco "Sound-Reel" dual-speed, dualtrack magnetic tope recorders affer flexibility and oconomy with two tope speeds that give wide frequency response with freedom from distortion. Check quency response with freedom from distortion. Check footures: duAL RECORDING SPEED: $1.50 \mathrm{in} / \mathrm{sec}$, sec. for 2 hr . dual trock, i hr. single track. FRE. QUENCY RESPONSE: $80.8,500 \mathrm{cps}$. $\pm 3 \mathrm{db}$. at 7.50 $\mathrm{in} . / \mathrm{sec}$. $80-5,000 \mathrm{cps}$. $\pm 3 \mathrm{db}$. at $3.75 \mathrm{in} . / \mathrm{sec}$. NEON LEVEL INDICATOR for recording volume level. ERASE \& 81AS: AC Type, 60 Kc . Oscillator. $6^{\prime \prime}$ ALNICO V PM SPEAKER, heavy duty type. MONITORING JACK: for heodphone monitoring. REWIND SPEED: 1200 feet in three minutes. TWO INPUTS:


## FOR TAPE RECORDERS

Pig. A, SCOTCH RECORDING TAPES. Made sonilive lapes, Scolch Brand offers the od. vonteges of belfer frequency response of slow by the world's lorgest manufacturer of pressuferecording speeds; low nolse leveli greater signol strength; even and constant trocking: less cross-talk; greoter freedom from breakoge: -ase of editing and cleoner erasures with low power. Frea. responie $50-8000 \mathrm{cps}$ of $71 / 2^{\prime \prime}$ per second. All on plostic reels ereept os indicated.
Trpe 101A-Mognetic Coating focing-in

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Slock } \\ & \text { Not } \end{aligned}$ | 5180 | $\begin{aligned} & \hline \text { List } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & 1.11 \\ & \text { Each } \end{aligned}$ | $\begin{gathered} 124 \text { more } \\ \text { Each } \end{gathered}$ |
| P16298 | 1/4*1200 ${ }^{\text {f }}$. | \$3.50 | 2.23 | 2.10 |
| P16199 | 1/4*x 600 ht . | 2.25 | 1.50 | 1.35 |
| P16291 | 1/4"x150 $\%$. | . 75 | . 50 | . 45 |

Type 1018-Mognefle Cooting facing-out Poper Base

| P16296 | 1/4"1200 f\%. | \$3.50 | 2.23 | 2.10 |
| :---: | :---: | :---: | :---: | :---: |
| P16297 | $1 / 4 \times \times 600 \mathrm{H}$. | 2.25 | 1.50 | 1.35 |
| P16292 | 1/4"xi50 H . | 75 | . 50 | . 45 |

Type IIIA-Magnetle Cooting focing-in Plostic Base

| P16409 | 1/4"2400 A. | 13.85 | 9.23 | 31 |
| :---: | :---: | :---: | :---: | :---: |
| P1640: | 1/4"22400\%. $\dagger$ | 11.00 | 7.34 | 6.60 |
| P16410 | 1/4*1200 ft. | 5.50 | 3.67 | 3.30 |
| P16412 | \%" $\times 600 \mathrm{H}$. | 3.50 | 2.33 | 2.10 |
| P16414 | 1/4** 150 H . | 1.00 | . 67 | . 60 |

Type 1118-Mognetic Cooting Facing-out Plostic 8ose

| P16411 | 1/4"×1200 ${ }^{\text {f }}$. | 5.50 | 3.67 | 3.30 |
| :---: | :---: | :---: | :---: | :---: |
| P16413 | 1/4*x600 | 3.50 |  |  |
| P16415 | 1/4* $\times 150 \mathrm{H}$. | 1.00 | 2.67 |  |

Fig. B, SCOTCH EMPTY PLASTIC REELS. SUP plled with thoir own index box. Clear plastic.

| Stock <br> No. | Dio. | Holds | List | Each | 12 or more <br> Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| P16417 | $7^{\prime \prime}$ | $1200^{\circ}$ | .75 | .50 | .45 |
| P16418 | $5^{\prime \prime}$ | $600^{\circ}$ | .65 | .43 | .39 |
| P16419 | $3^{\circ}$ | $150^{\circ}$ | .30 | .20 | .18 |

Scotch Leader and Timing Tape No. 43 For cose in editing breaks. Hos $3 /{ }^{11}$ spoced morkings for occurote timing. $1 / 4^{*+} \times 150 \mathrm{ft}$. 12 \& more.

Ea. 30 . Typo 11. Splicing Splleing Tape
melol utility P96416-(Lots of 12
Flo. C MAGNETIC TA SPLICER. An excollent occessory that splices topes occurately and ellminates boint nolise, Bolt ends of lape are cut simultoneously. Nickeled brass finlih. Wi. ilb.
1.47

SHURE 815 TAPE RECORDING HEAD Use of heod (not Illustroled), doubles recording lime of ony size roll of tope. Records $1 / 2$ sid of stondord 8 MM. $1 / 4^{\prime \prime}$ tape. Unit perm/tis ful hour of recording on $1200^{\circ}$ of 8 MM tope, of $71 / 2^{" \prime}$ per second. Good erase emimiency. Mounted in hum-shielded cose. Uniform output; good trequency response.
SHUR BIS HEAD.
SHURE 812 Magnefle WIRE RECORDING HEAD
Used for recording, reproducing and erosing Wire graove is polished and correctly contoured for best results. Frequency response ond output level are isisntlolly flat. Enclosed in compoel hum shlolding case; head furnished with standard 4.prong adapler base. Exact replocement for Shure Madal WR- 12 Mead. Shppiwn. 11 oz .
8.82

## FOR WIRE RECORDERS

Fig. D. Webster-Chicogo Recording Wire. Truetest Recording Wire

| Our Stock No. | Wobstor No. | Spool Slze | Each | $\begin{gathered} 10 \text { of } \\ \text { mope, Es. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| P16300 | W. 173 | 15 Min . | 1.81 | 1.45 |
| P16301 | W.174 | 30 min . | 2.69 | 2.16 |
| P16302 | W-175 | 60 Min . | 4.41 | 3.53 |

## TRUTEST RECORDING WIRE

For use with all wire recorders. Tested unlform quallify ossures good tonal reproduction ond long life.

| Slock No, | Spool Size | Price |
| :---: | :---: | :---: |
| P16311 | 15 Min. | 1.19 |
| P16312 | 30 Min. | 1.80 |
| P16313 | $60 \mathrm{Mh}$. | $\mathbf{2 . 9 4}$ |

Empty Metol Spools, suitoble for replocement On most wire recorders,
P16305-Lots 19 , Eo...73e 10 ever, Eo 594 Webster-Chicago Nylon Thread Leoders. Type N200. For use in edining pecorded wire op replacement of original wire leader. simpll. fles threading. 100 foot, for all stondord wire Plecorder
P16327.
1.37

P16318
Pair 14
Fig. F. Webster Recording Wire Spool Album, Confains 10 spool-size boxes in sturdy burgondy finished cordboord. Tilles can be wriften on boxes.
P96307-5hpg. wt. I lb.
984


## MAILING BOX

Provides hondy and cosy meth. od of malling recording wire and sending messages between the office ond field, otc. P16326-(Pkg. of 10)

394
Flg. 6. Webster-Chicogo Model 2904 Head moy be used for replocement of any heods now in use on Webster-Electronic Memory" Wife Recorders. This improved heod gives beller, flotfer, more unlform frequency response than unlts on original models. Useful for eecording ond erosing, os well os for reproduction. Pock. age includes the recording heod, cortridge cop, and mounting serew. All Instructions for proper installation are Included.
5.88

Takeup Drum for all Webster Wire Webitor No. TD424. Illus. in Fig. E. P16322
1.98

## RECORDING NEEDLES

Lopped edge sapphire cutting needle for ocelate discs. Precision cut jewel. Over 5 hours culting life.
P1 1 1.
3.23

Like obove, but with Long Shonk to fit Presto Profestional and Brush culting heods. 198..
3.45

Sopphire cutter ground to W.E, specs. For acetate discs. About 10 hours llfe.
steel cutting needte for acetate; in
4.25
ground and lopped. Flotlened Shank
iduolly P439-pkg. of 4 .

59
Stollite cutter for ocelole dises. Extremely Qulef. Cuts hundreds of sides. 1.18

Individuolly polished steel cutter for ocepote discs. Will cut 15 ta $2510^{\prime \prime}$ discs.
P348-Pochage of $4 . \ldots . . . . . . . . . . . . . . . . . . . . . . . . ~$ 94

Allay culter for acelate; harder than steel Pollish while they cut. Hond lopped. 95

## FOR DISC RECORDERS

## PRESTO RECORDING DISCS

Fig. H. Professional disics for commercial and home vis. Green Label discs are stondard size, both sldes guaranteed perfect. They are especially recommended for microgroove work. 8rown Label disci are similar to oreen label. but have only one side guaranteed perfect. Orange Lobel discs have same locauer coat. ing, with lighter aluminum bose. Masters ore Identical to green lobel but hove lorger diamefers for processing. Bose Thicknesses: $\$ .064$; elers for processing
$\$ .056 ;{ }^{-.052: ~ \# .040 .}$

| Stock No. | Sise | Label | $\begin{aligned} & \text { Net } \\ & \text { Each } \end{aligned}$ | Sid. Phg. | Wi. Lbs. | Notpe Pkg. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P11940\$ | 171/4" | Masfar | 4.20 | 20 | 33 | 67.20 |
| P11933 ${ }^{\text {P }}$ | $16^{\prime \prime}$ | Green | 2.81 | 25 | 30 | 56.25 |
| P11941 ${ }^{\text {P }}$ | 16" | Brown | 2.25 | 25 | 30 | 43.00 |
| P11942. | $131 /{ }^{\prime \prime}$ | Master | 1.95 | 30 | 25 | 46.80 |
| P11967* | 131/4" | Green | 1.95 | 30 | 30 | 46.80 |
| P11992* | 12" | Green | 1.54 | 25 | 15 | 30.75 |
| P11943* | 12" | Brawn | 1.20 | 25 | 15 | 24.00 |
| P11963 | 12* | Orance | 1.15 | 50 | 22 | 34.50 |
| P11944* | 10* | Green | . 98 | 25 | 10 | 19.50 |
| P11962 | 10" | Oronge | . 85 | 50 | 18 | 25.50 |
| P119611 | $8{ }^{\prime \prime}$ | Orang | . 55 | 50 | 15 | 16.50 |
| P11960 | $61 / 2{ }^{\prime \prime}$ | Orange | . 40 | 50 | 16 | 12.00 |

## RECORDISC RECORDING BLANKS

For Semi-Professionol and Mome Use. Orange Label: Processed poper bose with o cellulose Nifrate cooling. Double foced.

| Stock | Dio. | Each | 6 \% 0 |
| :---: | :---: | :---: | :---: |
| P11969 | 61/2" | . 20 | 0 |
| P11970 | 8 | . 27 | 1.26 |
| P11971 | $10^{\prime \prime}$ | . 40 | 1.80 |

Red Label: Professional grode with cellulase nitrate cooling. $021^{\prime \prime}$ aluminum base.

| Stock | Dia. | Each | 5 \% 01 |
| :---: | :---: | :---: | :---: |
| P11972 | 61/2" | . 27 | 1.20 |
| P11973 | $8{ }^{\circ}$ | . 33 | 1.50 |
| P11974 |  | . 33 | 2.40 |
| P11975 | 12* | . 67 | 3.00 |


| Purple Label: Aluminum based, low cost disc. |  |  |  |
| :---: | :---: | :---: | :---: |
| Stock | Dia. | Each | 5 Por |
| P11945 | $61 / 2^{\circ}$ | .20 | .90 |
| P11946 | $8^{\circ}$ | .27 | 1.20 |
| P11947 | $10^{\prime \prime}$ | .40 | 1.80 |

AUDIODISC PROFESSIONAL BLANKS
Red Label: Aluminum bosed blanks with coop. ings on both sldes. For highest quality wark in broodcost stotions, recording studias, etc.

| Stock | Dia. | Eoch | 25 lor |
| :---: | :---: | :---: | :---: |
|  |  |  |  |


| P11989 | $8{ }^{\text {" }}$ | . 59 | 13.23 |
| :---: | :---: | :---: | :---: |
| P11994 | 10" | 81 | 18.37 |
| P11995 | 12" | 1.34 | 30.13 |
| P11996 | $16^{\prime \prime}$ | 2.45 | 55.12 |

Yellow Lobel: Both sides coated on oluminum bose. Suifoble for school and studio use.

| Sfock | Dio. | Eoch | 25 for |
| :---: | :---: | :---: | :---: |
| P11990 | $8{ }^{\circ}$ | . 49 | 11.02 |
| P11997 | $10^{\prime \prime}$ | . 66 | 14.70 |
| P11998 | $12^{\prime \prime}$ | 1.08 | 24.25 |
| P11999 | $10^{\circ}$ | 1.93 | 43.36 |

## MAGNETIC RECORDING TEXT

Complete foxt by the outstonding recording enginear, S. J. Gegun. Covers theory of the mognetic recorder, ocoustic factors in mag. netic recording. mognelism, equipment, appll. cations, instrumentorion and use. A detalted and outhoritative discussion of fundamentals. Dimensions: $6^{\prime \prime} \times 9^{\circ "}$; 254 poges; 146 illuitrotions. Postpaid in U.S.A.
P20182
P20182
5.00

## lafayette "SHOW SETS"

## "WAKEMASTER"

## Wish Exclusive Lullaby Switch

 This ufterly dellghiful "Wakemaster" radio ond clock plays for as much as on hour befor shutting off outamotically after you hove been lulled to sleep. In the morning it awakens you to your fovarite music or news. Fop heary sleepers, it sounds a buzzer 10 minutes ofter purning on in the morning. A high goln superhet, combined with the fomous Telechron sweep second olorm mechonism, this exqulsite little set uses four high efficiency tubes. Hos 3525 rectifior. Has sensltive built-in loop. Alnico V PM speoker, Automatic Volume Contral. Excellent tone. Approved for operation on $110-120$ volis 60 cycles $A C$. $61 / 4 \times 10 \frac{1}{4} \times 51^{\prime \prime}$. Shpg. wi. 10 lbs. P554-Walnut Finish
26.25

P555-lvory Finish
Ps5s-lvory Finish ........................................ 27.25

## AC-DC "RANGER"

This beautifully fashioned "Ronger" is very aptly named, since lits extended funing range covers not only all of the standard broodcast band but the extended police band too. As brilliont in performonce as it is striking in eppeorance, this powerful superhet combines sonsifivity and excellent tone quality in a sturdy plostic cabinet of gleaming beouty, enhanced by a modern lattice-work grille. Hos built-in, powerful Looptenna, high rotio vernier tuning, easy to see llluminoted slide rule dial and an excellent Alnico $V$ speaker for tone and valume that will aefualiy amaxe you with its big set quality. For operation on 110 volts $D C$ or $A C 50 / 60$ creles. $91 / 2 \times 51 / 2 \times 51 / 2^{\prime \prime}$. Shpg. wt. 7 lbs.
P564-"Ranger"


## 3-WAY PORTABLE

This small, lightweight plostle, easy to carry personal portable will capture your heart the moment you lurn it on. Operates on AC, DC or self-contoined batteries. Sturdy, shatterproof maroon polystyrene cabinat hos a smort bronze grille. Highly sensitive super het circuit uses the latest miniature tubes: IR5, IT4, IV5, 3 V4 power pentode. Has instant acting selenium rectifier. Bullt-in Loop. tenno and a highly efficient Alnico V PM spooker for excellent wide range tone quolity and suprising volume. Modern slide-rule dial with big numerals. Covers all the broodcast bond from 540 to 1600 Kc . Extro sturdy carrying hondle. P427-Shpg, wI. 8 Ibs. Less Botteries
Battories for obove: 1 eo. required.
22.95 Shpg. wt. 2 lbs.
Type G3-41/2



## AC-DC "GEM"

The beautiful performonce and matchless styling of this perfect liftle "gem" of an AC. OC Superhet ore certoinly unequalled at this sensationally low price. Features a sensitive three tube, plus rectifier, suparhat circuit for operation on 110 volts DC or AC $(50 / 60$ cycles.) Covers the 540 to 1650 Ke AM broodcast range. The exquisitity proportioned cabinet, only $51 / 2^{\prime \prime} \mathrm{high}, 83^{\prime \prime}$ wide and $41 / 0^{\prime \prime}$ deep is ovoilable in a lustrous ebony or gleaming ivory finish. Tiny, weighing lust over 3 lbs., it is ideal for the kitehen, children's room, den, rumpus room, etc. Fine Alnico Y PM speaker for wonderful tone. Comes complete with built-in antenno hank for operation anywhere. Shpg. wh. 6 lbs. P440-
Ebony Fintsh.
13.45

P441-Ivory Finish ........................................... 14.45

## AC-DC SUPERHET

This excellent little AC-DC Suparhat with its hondy corrying handle on its real bokellte cobinet is definitely one of the bast buys wo've offered in a long lime. Expromely sensitive and selective, it covers the entire AM band from 550 to 1700 Ke (which includes the extended pollice band). Features a sensitive built-in loop, A.Y.C., two I.F. Pransformers, powerful 5-inch Alnico V PM speoker and a large llluminated airplane type dial. The efficient, advanced design superhel circuit uses: 12SA7, 125K7, 12507, 50L6GT. Rectiffer is 3525 . For operation on $105-125$ volis DC of AC 50/60 cycles. Overall size: $81 / 4{ }^{\prime \prime} \times 5 / /^{\prime \prime} \times 51 / 2^{\prime \prime}$. With tubes. Shpg. wl. \& lbs. P565-Walnut Finish
16.95

P566-Ivory Finish

## FM-AM RADIO

Enjoy all the noise-free, ficelity reception of FM and all the variety and distant reception of $A M$ with this beoutiful toble model rodio. If is designed to lake advantage of all the inherent improvements in today's stations. Recelve slatic-free FM on the 88-108 Mc bard and the fine AM programs not yet duplicated of out of range of FM, on the $540-1700$ Kc AM band. Circuits hove been carefully designed for sensitive, efficient operation. Seporate IF colls for eoch band. Features continuous tone control, beom.power output, large Alnico $V$ PM speoker, and built-in AM and FM anpennas with provisions for external ontennc where desired. Uses: $2-6 \mathrm{BJ6}$, $12 \mathrm{AT7}$, 68 Hb 12AL5, 12AT6, 35L6. Has 3525 pectifier. For $105-125$ volts DC or AC ( $50 / 60 \mathrm{cyc}$.) $12 \times 8 \times 7^{\prime}$ Complete with fubes. Shpg. wi. 13 lbs. P819-FM-AM Radio


Replace your present obsolete chassis-or build a new custom installation with this truly terrific value in an FM.AM radio with builtin preamplifier for variable reluctance pickups. Features a lowell true fidelity provide much higher priced radios of only a few yours ago. Were so sure that you'll be enthusiastic about this great buy that we will permit you to return it within 30 days of purchase date for full refund, less transportalion charges, If you are not entirely pleased with it. Advanced modern circuits in this fine set include compensated preamplifier for OE and other variable polvelance piekups;-high and low impedance phone loop and folded dipole, 10 -watt push-pull beam power audio output; illuminated slide rule dial. Frequency range covers 88-108 Mc on FM and $550-1700 \mathrm{Ke}$ on AM. 65H7 bATS $15 \mathrm{C7}$, operation on $105-125$ volts, to cycles AC. $g^{\prime \prime} x 13^{\prime \prime} x \neq 1 / 2^{\prime \prime}$ dep.
IP1215-Shpg. wt. 25 lbs. $\qquad$ 69.50

Ideal for
Custom


DESIGNED CABINETS 4
THE MODERNE. COnsists of the PI 215 FM. AM Chassis, Webster $100-270$ changer with GE "Triple-Ploy" cartridge and 12" speaker loft. Changer is mounted in a slide out drawer. Chassis is mounted in adjacent space having a hinged overhang slideaway door. Atrocilive matching speaker grilse chat Blonde finish with beveled moldings and offset legs $33^{51}$ high, $361 / 2^{\prime \prime}$ wide, $17 / 440.50$ 1P1223-Blonde.
199.50 P1222-As above, Mahogany 82.50 3P116 79.50 Shag. wt. of cabinets only, 100 lbs.
THE RONLEIGH. Same set as the Moderne but in the quite elegance of traditional styling, with authentic period moulding and bronze hardware, 371/4 deep. Mahogany only 3pl24-Shpg w. los lbs.
199.50 12 Concert speaker with heavy Alnico tested by our trained sound-crattsmen so that superb performance is assured.

Easy to Install
Tremendous Savings
Fine Auto Radios


CUSTOM DESIGNED FOR 1948-1951 FORD, DODGE, PLYMOUTH, CHEVROLET, HUDSON, STUDEBAKER, HENRY J
These fine, custom-designed auto radios are made especially for recent and late model popular cars. Full, simple installafin instructions enable anyone to installand sore plenty. Na cables, no brackets, no holes to drill. Superhet circuit has five tubes, plus rectifier, for super-performance. Three gang tuning condenser, tuned R.F. stage assure fine sensitivity. Fine toned Alnico $V$ speaker, A.Y.C.; cosy vision slide rule dial. Exeepilionally low drain from your cor's 6-volt battery. Simple one or iwo unit construction, depending on car. Requires no experience to install. simple, clear directions included.

IP674-For Ford 1951 IP675-For Chevrolet 1951 1P676-For Henry J 1951 1P678-For Plymouth 1951 1P677-For Dodge 1951 1P671-For Studebaker 1950 \& 1951 1P665-For Hudson 1948-49-50-51 1P660-For Ford 1949-1950 1P664-For Chevrolet 1949-1950 1P662-For Dodge \& Plymouth 1949-50 Any Above, List Price, $\$ 59.95$. Shipping Weight 14 lbs . DEALER'S NET, EACH................ 46.95

Universal Type Auto Radios
These single unit construction, universal mounting auto radios mount under the dashboard of most cars and trucks and bring you hours of listening
joy as you travel. joy as you Travel.
Standard Model. A low-cost 4. lube and rectifier auto Superhet with big set performance. Fits all cars: simple universal mounting. Fine sensitivity, AbC. Illuminated slide rule dial. Very low b-voli
battery drain. $101 / 2 \times 61 / 4 \times 41 / 2^{\prime \prime}$ metal case. II lbs. battery drain. $101 / 2^{\times 51 / 4 \times 41 / 2^{\prime \prime}}$ metal case. II lbs. Standard Model... $\qquad$ 32.25

De Luxe Model. Powerful 5 -tube and rectifier radio with RF stage and IF trap to eliminate interference.
Has antenna compensator, matches any auto aerial. Tunes 540 to 1650 Kc. Noise suppressor equipment supplied for average cor. Illuminated
slide rule dial: Alnico $V$ speaker: Brown Hamslide rule dial: Alnico $V{ }^{s p e a k e r: ~ B r o w n ~ H a m-~}$
meroid finish metal case, $51 / 4 \times 41 / 4 \times 121 / 2^{\prime \prime}$. Complete with tubes; for 6 volt operation. $5 h p g$. wt . 13 lbs . 1P623- $\qquad$

## CUSTOM QUALITY TV CHASSIS



## Lafayette "YEARS AHEAD" TV VALUES - WITH COLOR ADAPTOR OUTLET•

 - ADAPTABLE FOR FUTURE UHF •
# 19950 

includes
cuARAMTE:

20-Inch Console

15950
cinclupes GUARANTEE feptial TAX
 17-Inch
Console 2anso is not only one of the rock. plavision console any price, but our and 6 17 inch tslarisollable al guarontee on por you'll find This outstonding of its type oro one year gue tor you that on oultor tor This ousonsies con Includas on Ther's's value sol includes F. when knob boltom prucrante on otvis odsce odeptable one.control tuning clear. months gulofetto. ond is also the simplilhed ono give you a clear. only of Ladaptation ond Just turn the si" picture time your fine FM sith any color odapre scene. Justioglare 17 " pame same time yod for use with and comes on block-foce ontiog of the lock provided the The ACC and cond the block- plcture thone input lock plo to operate. avolly at afl bright sloody pled in. Phold be simpliabliliy and auorizontol AFC is portectly tur. No sel could plelury so oulput and horituner cavers is pord player. Control maintarizontal wonplivity 12 channe wondoriul ia reontrost Contricioney ho this high sonstivle to UHF. A wone. Wont ta limes: high dine tealures. and is adoptome with lis fint ols are clevarly: limesther fine fhonnols and noods your home the controks Tubes used: aro presont chonnoker noods youlahniss? front panil. bAC7. $6 T 8$, all pro $V$ PM spol vericol of door on the $3-6 A, 2$, 6 ALS Hor. Oulput.



ovbi Domperigh, $21^{18}$ wide.
 shpg. ipl $\mathrm{I}_{6}$-Lotavetro Foderal Excise Tobos including

Recilifler picture tube $22^{\prime \prime}$ deep.

Splist-Latoyett 20 Foderol Exclse rax kind oscope.)
(Above price includes fode on fube
and 6 months warraniy

## 17" TABLE MODEL TV SET

Where space is at a premium in the smaller home or aportment you'll find this superb Lofoyette 17 -Inch toble model television sel a genuinely amozing value, You'll nat socrifice big picture size ond yot you can locote this set almost anywhere and improve your decor. The super-power chassis in this toble model sel ts identical with the fine $17^{\prime \prime} \mathrm{TV}$ console shown above, except for the speoker which is a five-inch Alnico V PM unit. And like its console counterpart there is o full year gavarantee on all parts, 6 months guoranty on all tubes. Tuning operotion is simplicity ifself. Just turn the selector knob and there's your picture and sound perfectly tuned in-and because of the inherent stobllity of the chassis, that's where they stay, for completo TV enjoyment. A phonoinput lock is provided for use with any record ployer or record changer. TV. phono switch on reor of cobinet. A sensitive 12 -chonnel funer is adoptoble for poter UHF reception. Color-adoptotion outlot is provided on reor of chossis. later UHF reception. Color-adoptotion outlet is provided on reor of chossis: Tube complement is identical with 217 conser For 117 volis 60 cycles AC. 5 hpg . wt. 87 ibs. 139.50 1P185-17" Table Model TV
(Above price includes Federol Excise Tox and one year worraniy on ports and 6 months warronty on tubes. Table not included.)


## AMATEUR • SHORT-WAVE • HIGH

## MODEL S-38-B AC-DC ALL-WAVE RECEIVER

The rodio that amazes even the expertsl Pulls in broadcast stations in weok signal areas where ordinary sets fail. In shart a great new four-band law-cost communicotions resciver that is tops in value. Provides continuaus reception from 540 KC 10 32 MC with full electrical bandspread for aperation on AC or DC. Has self-cantained $5^{\prime \prime}$ PM speaker. Offers world-wide reception for the short wave listener and the new padio amateur. Has regular communications-type contrals for greater flexibility, of aperation: Main tuning conprol in megacyeles with separate bondspread dial having on apbitrapy scale; speaker-phone switch; AM-CW switch; Bond switch; Stondby switch and on-affvalume. Headphone tip locks on the peop af the cabinet. An unusual AC-DC superheteradyne circuit using a 12SA7 converter, a $125 K 7$ IF amplifier, and 8FO, a 12507 Detector, 1st Audio and AVC; and a 50L6GT beam power oulput. Uses a 3525GT rectifier. The S-38.B was designed specifically to provide maximum sensitivity and selectivity - in no way comparable to ordinary radios hoving the same number of fubes. The cabinet is tops in styling olong communicotians - rig lines; a pleh satin black finish with light gray, ponel leftering. Airodized speaker grille in top, green dial, red slide switches. Size: $127 / a^{\prime \prime} W_{1}, 73 / /^{\prime \prime} H_{1}, 71 / 4^{\prime \prime} \mathrm{D}$. For aperatian on $105-125$ volts DC and AC $40-60$ cycles. Camplete with tubes and speoker.
Hallicrafters Model S-38-8 - Shpg. wt. 14 paunds.
49.50

## S-40-B COMMUNICATIONS RECEIVERS

A well-known standard communications receivep in the medium-priced bracket is the Hallicrafters $5 \cdot 40$.B. Contains the same sensitive powerful circult as af former years, yet combines the newest in circuit and style pefinements to keep it up there where it belongs - o tap performer that will stand up and stand aut in any closs of communications equipment. Combines tap sensitivity with real selectivity. High signol-to-nolse ratio. Covers 540 KC to 43 MC including the standard broodeast and omateup bands. The tuning dial is precisely calibrated for 6 amoteur bands. Pointer remoins stationary dial face rotates. Equipped with electrical bandspread. The improved circult features outomatic volume control, automatic noise limitep, variable-pitch BFO, $5^{\prime \prime}$ PM speakep, phone lack and volume control on-aff switch. Temperature campensotor in oscllator circuit insures tap stability. Employs 6SG7 RF; 6SA7 Converter; 2-6SK7 IF's ( 455 KC ) ; GSC7 1st Audio. BFO; SKGG output; OHO 2nd Defector, Automatic valume contral and Automatic Noise Limiter. Uses a 5Y3GT rectifier. Cabinet is of satin-block finished steel, measures $9^{\prime \prime} \times 181 / 2^{\prime \prime} \times 11^{\prime \prime}$. Speoker grille an front panel. For $105-125 \mathrm{~V}$., $50-60$ eycles AC. $A C$. Complete with tubesiand instructions.
99.95 Model S-40-8 Shipping Weight 33 lbs.
Madel S-40 BU. Exactly the same as the S-40-8 in reseption parformance but operates from $110,130,150,220$, or 250 valis, and from 25 - 1060 eycles $A C$. This is the perfect overseas receiver - for missianaries, explorers, world-fravelers and amoteufs in ather countries. The type of rig Stanley would hove glven Dr. Livingstane, we presume. This set will provide strang, clear reception where most other sets fail. Hollicrafters Madel S-40-8U' - Shpg. wi. 35 lbs. 109.95 Madel 5.77 - Same as $5-40-8$ but for 115 volts AC or DC

## MODEL SX-62 "SWL" RECEIVER

The world's finest receiver for the all-wave listener. Outperforms any ordinary broadcast reseiver on ony frequency - standard braadcast, shopf-wave of FM. If represents an outstanding achievement in all-wave receiver engineering. Simplicity of operation combined wlth superb reception never before found in this type of equipment. A single tuning cantral covers the wide-vision dial. Only one bond lights up ap a time. In addition, a 500 KC crystal colibration oscillatar is built in enabling yau ta adjust the dial pointer for pin-point accuracy. Gives cantinuous coverage from 540 KC to 109 MC an 6 bands. Push-pull output delivers a full ten walts af audio pawer, flat from $50-15,000$ eycles. A bossboost cireuit and 4 -position tane contral permit enough vorition of tone to please the most critical listener. Twa If ond iwa tuned RF stages assure moximum sensitivity and improved signal to nolse ratio on VHF. A 6 -position selectivity switch with crystol filter aperates on frequencies between 540 KC and 30 MC . Other features include seporate RF and AF gain contrals, temperotupe compensoted and voltage regulated ascillatar, 500 and 5000 -ohm outputs, 300 -ahm antenno input and o spectal socket for external pawer. Piano-hinged, gray steel cabinet with satin chrome trim meosures $20^{\prime \prime} \times 10 \mathrm{~V}^{\prime \prime} \times 16^{\prime \prime}$. Contoins: 2-6AG5's, RF, 7FB Converter, 6SK7 1st IF, 6SG7 2nd IF, 6 H6 ANL, 2-7H7 FM Limiter and AM Detector, 6 H6 Discriminatar, 2-6V6 Ótput, 7 A4 8 FO.FM Tuning Meter Amplifier, 6 C4 erystal calibrator, plus a VR150 valtage regu: Ikitor, 6SL7 Inverter, and SU4G Recififief. Far 105.125 volts, $50-60$ eycles. Hallicrafters Model $5 \times-62$ - Shpg. wi. 70 Ibs..
289.50

Hallicrofters Model $5 \times 62 \mathrm{U}$ - For $115,130,150,220,250, \mathrm{~V}, 25.60$ eycles AC .
302.00

## MODEL S-76 DOUBLE CONVERSION RECEIVER

This is the only dauble superhet with 50 KC second IF and gioni-sized "S" meter. Provides all the advantages of image.free reception. Adjustable if provides 5 -pasition. bandwidth variable from 500 cycles to 5 KC of 6 db dawn, and fram 5 ta 20 KC at 60 db down. Cavers four bands continuously: $538-1580 \mathrm{KC}$; 1720.4900 KC ; 4.6 .13 MC , 12-34 MC. Pravides electrical bandspread funing. Oufput far 3.2 or 500 -ohm exiernal speoker, ar headphones. Employes: 1-6C86, 2-68A6, 1-6C4, 1-68E6, 1-6AL5, 1-6SC7, 1-6K6GT, 1-6AU6. Also uses a VR-150 valtage regulator and 5 Y3GT rectifier, Gray steel cobinet with piono hinge top measures $181 / 2^{\prime \prime} \times 9^{\prime \prime} \times 91^{\prime \prime}$. External pawer, remote contral connections. Complete with tubes ond instructions. 115 volts, $50-60$ cycles AC . Hollicrafters Model S-76 - Shpg. wt. 40 lbs.
169.50

## MODEL SX-71 DOUBLE CONVERSION RECEIVER

A double conversion receiver value packed with feotures specifically asked for by Homs. Extra sensitivity, selectivity ond stabitity; definitely superior imoge relection plus bulliin narrow band .. 1 microvalt sensitivity with 50 milliwatis autput. Temperature compensation. Valtoge regulation. 538 KC to $35 \mathrm{MC}, 46.56 \mathrm{MC}$. Three watt output terminals. Employs: 68 AO RF, 6C4 Osclllator-6AU6 Mixet, 6 BE 6 2nd Converter, $3-6 S K 7$ 1F, 6H6 ANL, and deloyed AVC, $6 S C 7$ 8FO/lst Audio, OAL5 detectop and 6KOGT Audió Output. VR. 150 valtage regulator, 5 Y 3 GT rectifier. Satin black cabinet, chrome trim, hinged tap. Size: $181^{\prime \prime} \times 7^{\prime \prime} 8^{\prime \prime} \times 12^{\prime \prime}$. For $105-125$ volis, 50.60 cycles. Hollicrofters Model $\$ x-71$-Less speokep. Shpg. wt. 33 lbs...
Hallicrofters Model SX-71U-115250 V, 25.80 cycles.
209.50

## R-46 MATCHING SPEAKER

Matching $10^{\prime \prime}$ PM speaker in metal cabinet for use with $\mathrm{SX}-71,5.76$ and $5 \times-62,80$ to 5000 cyele range. 500 -ohm matching transformer.
Hollicrofiers Model R46 Speokep $-15 \mathrm{~W} . \times 107 / \mathrm{H} .107 / \mathrm{B}^{\prime \prime} \mathrm{D}$. Shpg. wi. $17 \mathrm{lbs} . . .19 .95$

## MODELS S-81, S-82 CIVIC PATROL RECEIVERS

Compoct, eosy-to-operote now. FM recoivers covering police, fire, taxicob, truck, private telephone, rollrood and other incustrial frequencies. Especiolly sulted for civilion defense groups in metropoliton oreos where o relioble, low-cost receiver is required for industrial and emergency service communicotions. Heodphone tip jocks on reor. 8uilt-in PM speoker. The newly-designed FM chassis provides the low-frequency drify ond highsignol to nolse ratlo. Regular model 5.81 covers VHF FM frequencie: 152 to 174 MC, low-bond model 5.82 covers $\mathrm{H} / \mathrm{F}$ FM frequencles 30 to 50 MC . Two if stoges fop extro sensilivity to pull in weok stotions. Steel cobinet in block wrinkle finish. Slize $12 \% \mathrm{a}^{\prime \prime} \times 7^{\prime \prime}$ sensifivity to pult in weok stotions. Steel cobinet in block wrinkle finish. Slze $12 \% a^{\prime \prime} \times 7^{\prime \prime}$
$x 71 / 4^{\prime \prime}$. Use single or twin lead ontenno wire. Employsi $12 A 7$ Oscillotor Converter, 2-128A6 IF Amplifiers, 12ALS Ratio Defector, 12SQ7 AF Amplifier, and a 5016 Output. Also has a selenium rectifier.
Hallicrafters Model 5 -81 - HF Receivar - Shpg. Wi. 14 lbs
49.50 Hollicrofters Model 5-82 - VHF Receiver - Shpg. Wi. 14 lbs..
.49 .50

## MODEL S-80 DEFENDER RECEIVER

A new super-sensitive long-life bottery radlo for remote oreas and emergency civil defense operollons. Short-wove band 6-18 MC (Covering alrcroft, amateur, foreign broodsast and internotianol news frequencles) ossures you of 24 -hour reception und er almast any conditions, even in weak signol oreas where stondord broodsast band "blocks out" in doytime. Ideol for use either as a primory rodio in oreos without electric power of os on emergency rodio wherever dependoble reception is required regardless of possible power follure. (Can sastly be used with low cost AC to DC Power Converter if desired). Space insid. cabinet for long-life 1,000 hour bottery. 8uiltin PM speoker. Covers the stondord broodcost band: 5401700 KC ond one shortwove band 6.18 MC . Sotin black plostlc cabinot $173 / 4^{\prime \prime}$ wide, $97 / \mathrm{s}^{\prime \prime} \mathrm{high}$, $93 / 6^{\prime \prime}$ deep. 8ottory spoce meosures $16^{\prime \prime} \times 8^{\prime \prime \prime} \times 41 / 2^{\prime \prime}$. Employs four low-droin miniature tubes: IR5 Oscillotor-Mixer, IU4 IF Ampllifior, IUS Detector, AVC and AF Amplifiar, and a $3 V 4$ Output. 8ottery pock is not included with recoiver. Uies a single wire or double ontenno. Hos o conventional 4-prong power plug for $11 / 2$-volt " $A$ " ond 90 -volt " $B$ " to fit into 8urgess 17GD60, General 60DL-11L, RCA VSO99, Sears 06308, Ward: 51, and similor A8 bottery pocks. Bottery life 750.1000 hours.
Hallicrafters Model 5-80 Defender Recelver - Shpg. wt. 12 lbs.
44.50

## MODEL S-53A COMMUNICATIONS RECEIVER

Unquestionobly the finest small cammunications recolver bull. Ideol where moximum performance is required in smoll space. Cover sthe broodcost band $540-1630 \mathrm{KC}$ and four short-wove bands $2.5-31 \mathrm{MC}$, ond 48.51 MC . Circuit contoins two IF stoges for for: reoching sensitivity. Electrical bondspreod tuning to seporote stotions on crowded bonds, with collbration for all bonds. Switches for outomotic noise limiter code reception ond high-low tone. Has a phono jock for ploying records. Heodphone tip jocks on rear. Contoins o built-In PM speoker. Temperoture compensoted to reduce foding due to frequency shiff. The S-53A incorporates the most modern circuit features and employs
 BFO.1st AF, I SKGGT AF Output ( 2.5 wolts). Also employs o SY SGT os o rectifier. BFO. 1 it AF, 1 OK6GT AF Output ( 2.5 wolts). Also employs o SY3GT as o rectifier.
The S.53A communicotions receiver is olso equipped with o volioge stobllized oscillator. Block sotin steel cobinet with brushed chrome trim. $129 / 8^{\prime \prime} \times 7 \times 73 / 4^{\prime \prime}$. Top swings up on full-length piano hinge at back. Hallierafters Model $\mathrm{S}-53 \mathrm{~A}$ - Shpg . wi. 19 lbs.
79.95

## MODEL S-78A FM/AM CHASSIS

A new rodiation-proof FM/AM chossis to moet the populor demond for a medium priced unit with top-performance chorocteristics. Offers outomatic Frequency Control assuring cleorest possible reception of FM stations by eliminoting the human erfor in tuning; os the stotion is opproached this circuit "rokes over" electronically and holds the stotion in perfect fune. Now rodiotion-proof is especiolly importont in that normal the station in perfect fune. Now radiotion-proof is especiolly imporiont in that normal
oscillation from many ordinary FM receivers has been severaly criticized by the FCC oscillation from many ordinory FM receivers has been severely critielzed by the FCC
for interfering with VHF oircraft novigotionol oids. The new $S-78$ avoids this rodiation by extensive shielding and filtering so thot even the stringent stondords proposed by the FCC ore eosily met. The recoiver covers the standard broadcost band 540.1700 KC ond FM 88 to 108 MC. One funed RF, iwo IF stoges. Audio response $50-14,000$ cycles. Soven-wott push-puli output. Full range tone control, bond witch, volume ond tuning. Tuning knobs and escutcheon ore furnished. The receiver is equipped with o phono input jock. Ten tubes plus a rectifier. All in oll, it is o chosslis thot will be prized by experts ond vostly preferred by omoteurs all over the world who desire o prized by experts ond vostly preferred by omoteurs oll over the world who desire O ond broodcost bondio. Size overall $121 / 2^{\prime \prime}$ wide by $73^{\prime \prime}$ high ond 11 " deep. Hollicrofters Model 578A Chossis - Shpg. wt. 25 1bs.
89.50

## S-72 PORTABLE COMMUNICATIONS RECEIVER

## You'll olwoys be in touch with the outer world wherever you go with this extro

 sensitive oll-wove portoble rodio. Designed bath for better thon overoge feception, even in weok signol orecs, ond for the radio amoleur. One RF stage, iwo IF stoges far for reaching sensitivlly. Sullt-in loop antenno for broadcost, plus 61 -inch collopsible tortip for short wove. 8ond spread tuning knob for separation of short-wove stations. whip for short wove. 8ond spread tuning knob for separation of short-wove stations. $1500 \mathrm{KC}, 1500$ to $400 \mathrm{KC}, 4.3 .13 \mathrm{MC}, 12.31 \mathrm{MC}$. Includes oircroft ond polise bands plus 180, 80, 40, 20, 15, ond 11.10 metor omotour bonds. Slide rule diol colibioted for each bond, with 'full' electricol bandspread for shorp pin-point tuning. Mas tunad RF stage, provides high sensitivity ond selactivily. Employs IT4 RF Amplifior, IRS Oscillotor, IU4 Mixer, 2-1U4 Amplifier, IUS Detector Amplifier IU5 BFO, 3 VA Audlo Oulput. Also employs a selenium rectifier. In oddition, the $\$ \mathbf{7 2}$ hos RF goin control which outomotically turns on BFO ond cuts out AVC for cade reception. It has o bullf-in $41 / 2^{\prime \prime}$ speoker. The long wave model gets airport towers and ronges, Ideal for oirplone owners. Thenty of wensitivity for far-distant stotions, even where ordinary receiving sets foil. Plenty of sensitivity for for-distant stotions, even whore ordinary receiving sets foil.
The long wove madel olso gets morine beocons, gives rough "DF" beorings if ever lost in a fog. Precise construction and skillful engineoring will bring you superb performonce on the shart wove bonds plus fine quolity reception of your fovorite broodeast progroms. 8 rings lond, seo, and oir communicotions from all ports of the world plus hours of enjoyment on the amateur band. Brawn leatheratte cabinet, $14^{\prime \prime}$ wide, $121 / 4^{\prime \prime}$ high, $71 / 4^{\prime \prime}$ deap. Spoce inside for power cord and headphones. Hallicrofts Modol 5 - 72 -Shpg. wt. 18 lbs 109.95 Model 5-72.L. Long wove version of the S-72. Covers 175 KC to 420 KC band in ploce of the 12.31 MC band. For marine,, oviotion, etc. Hollicrofters Model $5.72-\mathrm{t}$ - Shpg. wt. 18 Ibs...
119.95


S-78A



## $78^{\circ}$ RPM PHONO PLAYER

Here's a fine, low cost, 78 RPM phono-ployer that is fine for home, school, vocations, ote. Plug into any 110 volt bo cycle AC outlet and listen to your fovorite $10^{\prime \prime}$ and $12^{\prime \prime}$ records. Really excellont tone, modern amplifior. AlReally excellent fone, modern amplifer sep. nico speaker, fine crystol cartridge. hoi sep. erate tone ond volume controls. Durable batho erette covered sturdy cors with
fittings. A peolly excellint buy. P22672-Shpg. wt. 10 lbs . $\qquad$ 16.12

## 3-SPEED ATTACHMENT

 Plugs right into phono input o your radio or amplifier. Crystal pickup with $.002^{\prime \prime}$ needle, for $331 / 3,45$ and 78 RPM records, up to $/ 2^{\prime \prime}$. Built in volume control. on/off switch. Positive speed control. Leotheratte case, $51 / 4 x$ $121 / 2 \times 101 / 4^{\prime \prime}$ deep. For $110^{\prime}$ volls 60 evcles AC. With $4 . \mathrm{ft}$. coble and plug. P22690-Wt. 10 lbs..... 13.50
## 3-SPEED PORTABLE PLAYER

## - Dual-Turnaver Cortridge

- Alnica V PM Speaker

Ploy any size record up to $12^{\prime \prime}$ with this new, extromely compact portable 3.speed phono. player. A simple slide switch instantly regu lates the motor for $331 / 3,45$ and 78 RPM. Preel sion bullt motor for "wowless" reproduction af all speeds. All wood, leatherelte covered cose in ottractive two-tone finish, houses a full sized Alnico $V$ PM speaker and a carafully designed powerful two-tub and rectifier amplifier. Lightwelght pickup arm, with dual turnover crystal cartridge. Ercellent tonal reproduction with exceptional volume. Equipped with volume contral tone control and on/off with volume conira $10{ }^{\prime \prime}$ conn with andor switch. Cose is $13{ }^{2} \times 101 / 2 \times 5 / 12$ with sturdy corrying hande and ornamertol hordwore ro odd a note of smartness. With tubes. For $110-120$ volts 60 cycles $A C$ P22701-Shpg. wt. 12 lbs. $\qquad$

## THREE-SPEED AUTOMATIC PORTABLE PHONO

This deluxe three-speed portable phono ployer will reproduce a stack of $331 / 3,45$ or 78 RPM records automatically. Powerful amplifier uses 2 tubes and has a separate rectifier. Fine Alnico V $5^{\prime \prime}$ PM speaker for excellent tone and volume. Featherweight pickup features a dual reversibel cortridge-eoch with lis own longlife needle. Seporate volume and tone controls. Provides instant changeover to ploy 78 RPM and both speeds of long-play resords. Oversize case, of durable leotherette over sturdy wood, permits playing of $12^{\prime \prime}$ records with lid closed. Quiet, smooth operating changar for yeari of trouble-free performance. For operation on 110 . 120 volts 60 cycles AC.
Shpg. wf. 23 lbs.
P22702
50.95

## 3-SPEED PHONO-RADIO PORTABLE COMBINATION

What a dream combination this handsome unit is! A wonderful sounding rodlo for the broadcast bond, combined with a three speed phono player, all housed in a beoutful simulated natural rawhide covered case with genuline split cowhide stitched edges. Truly handsome, it is a joy to both the eye and eap. A sensitive Superhet radio, using 4 fubes and rectifier covers the broadcast band from 550 to 1650 Ke . The record player has a lightweight dual-needle crystal cartridge permitting you to select the right pressure for 78,45 or $331 / 3$ records of all sizes. $5^{\prime \prime}$ heavy duty dynamic speaker provides excellent tone and volume ( 2.2 watts). Extra large loop antenna assures dependable reception from near and far. Automatic motor control switeh. Instant phono-radio changeover. For $110-120$ volts, 60 cycles $A C$. $111 / 2 \times 143 / 4 \times 61 /{ }^{\circ \prime}$
JP568-Shpg. wt. 18 lbs...
39.50

## 3-SPEED DE LUXE PHONO With GE Triple-Play Cartridge

This deluxe 3-speed portoble phono combines the finest features woive ever offered In a unit of this type. Lightwaight 8-gram arm with GE "Triple.Play" variable reluctance cartridge for standard and lang-play mierogroove records. Adronee-engineered 4 -fube plus rectifier amplifier provides 6 watts of audio. Has separate tone contral; valume contral, an/off switch. $6 \times 9 / 4 / 4$ oval Alnico $V$ speoker for fine tone and volume. Sturdy motor with positive, -speed control. Plays 11 records with lid closed. Two-tone jumbo brown simulated alligator leather cover on $133 / 4 \times 71 / 4 \times 71 / 4$ " carrying case. For 110.120 volts, 60 eycles. P22649-Shpg. wf. 15 lbs.
39.50

## THREE-SPEED

## PROFESSIONAL TRANSCRIPTION PLAYER

A highly desirable instrument for schools advertising. agencies, sales meetings, demonstrotions, home, tic. Equipped with o mierophone plug for use with o erystal mike. Ploys up to $16^{\prime \prime}$ records of 78, 45 $331 / 3$ RPM, standard and microgroove. In $331 / 3$ RPM, standard and microgroove. In
simulated leather covered, two-part simulated caseather covered, One part contains fine carrying cose. One part conioins fine $8^{\prime \prime}$ Anico V PM speaker, and is detach-
able for remote plocement. Ampllfier has push-pull output, uses 3 tubes and rectifier; oupput 5 watts. Full range tone control. Heavy duly, wow-free motor with bolanced furniable. $16^{\prime \prime}$ tronseripilion orm, lightweight erystal pictup with iwist styif. Complete with tubes, speaker cable and plug. For $110-120$ valts, 60 eycles $A C$. P22703-
Shpg. wt. 17 lbs
48.50


## Sefayette 8 WATT SINGLE \& DUAL SPEAKER SOUND SYSTEMS

## DUAL SPEAKER PORTABLE

Never before has so much value been braught pogether in one com. plete 8 watt sound systeml Expertly engineored to the highest stondords, ond especially designed for store demonstrations, carnival and circus barkers, lecturers, masters of ceremony and others requiring small audience coverage up to 800 persons. Smoll, compoct construction makes carrying easy from one place to another.
Here ore matched units-complete whith everything you need to operate a quality publie oddress syssem. The simple plug arronge. ment makes installotion ond operation, fost and eosy. Lofoyette's 8 wolt amplifior is guoronteed for one full year and covers repleament or repair of any materiols ond workmanship. Separote microphone ond phonogroph inputs and controls permit use of recorded music os a bockground for announcements. This feoture odds a profes. sionol smoothness to your presentotions. All components ore mounted in a single portable carrying case measuring $13 \times 10 \$ / 0 \times 17^{\prime \prime}$, and cov. ered in handsome simulated rawhide in ton finlsh. Eoch of the two 8" PM speakers is mounted in a section of the two-plece case. In. cluded also is o Shure Model 710A crystol micraphone on O 6. inch desk stand with 7 feet of cable and plug. The Amplifier its into the cose for carrying. 70 feet of coble ( 35 feet for each unlt) is affoched to the speokers and is reody to plug into the amplifier. Complete 8 Wott Duol Ponobie System. Nothing else to buyl Consists of lafoyette 8 wolt amplifier whith tubes two $8^{\prime \prime}$ heouy duty PM speakers with 70 feet of coble ( 35 feet ottached to eoch speoker); hondsome two.section carrying case; Shure Model 710 A crystal micro. phone with 7 ft . of cable and mike stand adapter; all plugs and connectors. Reody to install ond to operate. With instructions.
2P500-Shpg. Wt. 30 lbs.
49.50

Add 5.88 to price if odjustable mike floor stond is desired.

## SINGLE SPEAKER PORTABLE SYSTEM

Similar to obave but with single speaker and $35-\mathrm{ft}$. cable and plug. Mounted In carrying case.
2P502-Shpg. W\&. 27 lbs..
45.50

## DUAL SPEAKER INDOOR

Here is the same high quality, low price cambination as found in our dual speaker portoble unit, but especiolly engineored for permonent instollations. You get the famous Lafoyolte 8 Wott Amplifier ( 12 Watts Peck Output), two 8 inch PM Speakers designed for high response oudio work, iwo handsome fobricoid covered wall boffles (useful for permanent and somi-permanent use), one Shupe Micro. phone Model 710A (the "REX" model in 8urgundy Red metallic finish), one floor stond, 35 feet of speoker coble for each speaker ( 70 foet totol), seven feet of microphone coble, and all needed speaker ond microphone plugs and odopiers. Unit comes completoly as. sembled and ready to use on 105.125 volts, $50 / 60$ cycles AC. And as usual, you get lofayette's full year guoronfee covering defective parts or workmanship on the amplifier. 2P 503-Shpg. Wi. 30 lbs.
52.50

## SINGLE SPEAKER INDOOR

A complote systom, nothing olse to buy. Conslsts of Lofoyette 8 Watt amplifier ( 12 watt peak output) with tubes; one $8^{\prime \prime}$ PM, heavy-duty, speaker; one $8^{\circ \prime}$ wall bofle; one Shure 710 A microphone with 7 ft . feet of cable and mike stond odapter and 35 ff . of speaker cable and plug. With instructions. 2P504
39.50

If desired with floor stand odd 5.88 to obave price.
B-WATT AMPLIFIER SPECIFICATIONS
 POWER OUTPUT.......... 8 Watts- 12 Wotts peok GAIN \& INPUTS.. Microphone 105 DB, 2 Meg. FREQUENCY RESPONSE

Phono 75 D8, $1 / 2$ Meg.

CONTROLS
15..........

50 to $10,000 \mathrm{CPS} \pm 2 \mathrm{D} 8$ .....(3) Microphone, phono, tone TU8ES..IT IMPEOANCE .....6L6G, 6SC7, 5Y3GT OUTPUT IMPEDANCE....................... 48 ohms POWER CONSUMPTION..
.70 watts DIMENSIONS
$.7^{\prime \prime} \times 101 / 2^{\prime \prime}$
" $53 / 4^{\prime \prime}$
P157-8 Watt Amplifier with fubes.... 24.75



## Safayette 18-WATT PORTABLE \& INDOOR SYSTEMS

## DUAL SPEAKER PORTABLE SOUND SYSTEM

Here is o complete partable P.A. or music systom pocked with the most modern feotures and priced to please the modest budget. Sets up in a very few minutes-ready to operate. No technical knowledge is necessary to operate this unit. This system is ideal for lectures, sales meetings, auctions, for traveling dance bends, square and folk dance leaders, folk song singers, audition and rehearsal halls and many other similar opplications. Among the many features of the many other similar opplications. Among the many features of the amplifier you will finud electranic mixing of microphone and phanomicraphone. This imparts a smaath prafessional quality to your presentations. Through the use af Inverse Feedback hum and distortion are reduced. The use of a continuaus tone cantrol permits variation of tone to your individual toste, ond also reduces undesirable feedback due to odverse "an location" conditions. Amplifier is fused for complete protection against breakdowns. The output circuit consists of two beam power 6L6G tubes in Push-Pull orrangement feeding an output transformer with secondory tapped at 2.4.8.15 and 500 ohms. All components are carefully motched to assure excellent performance and trouble-free operation.
Complete system includes two GE 25 wolt 12 -inch PM speakers; the popular Astatic JT-30 erystal micraphane and floar stand; a strong fobricaid cavered, twa section, partable case; 100 feet of speaker cable ( 35 feet for each speoker), and shielded cable for the micraphane. Speaker and microphane plugs are included also. The dimenphane. Speaker and microphane plog $163 / 4$ inches wide by $241 / 4$ inches sions of the case when closed are $14 / 8$ inches deep. Amplifier is supplied camplete with tubes. System is ready to instoll and aperate. For 105 to 125 voles, 60 eycles AC. U/L oppraved.
2P505-Shpg. Wt. 80 lbs
88.25

Complete system as above (2P505) but with Shure Model 55 mieraphane.
$2 P 527$
124.20

Complete system as 2P505 but including a three speed phono-top.

## DUAL SPEAKER INDOOR SOUND SYSTEM

it's easy to set up this P.A. system in small dance halls, school ouditoriums, churches, gymnosiums, etc. This economy indoor system gives excellent caverage in an area of about 25,000 square feet. Everything is included far immediate installation and operation-even cables and plugs are attoched to speakers and microphone for fost, simple assembly.
Complate system includes a high quality 18 -watt amplifier (see specifications below): twa GE 25 watt, 12 inch PM speakers; two handsome wall baffles; 70 feet of speoker cable ( 35 feet attached to eoch speaker); and and adiustable tolescaping mike floor stond, -everything you need, nothing else to buy. For 105.125 volts, 60 cycles AC. Complote system, including fubes, U/L appraved. 2P506-Shpg. Wi. 75 lbs.
94.50

Camplete system as above but with Shure " 55 " dynamic microphone. 2P 528.
130.45

Complete system as 2P506 but with 3-speed phono top. 2 P529

## MASCO MODEL ME-18 AMPLIFIER SPECIFICATIONS POWER OUTPUT <br> 18 Wotts <br> 24 Watts

PEAK POWER
GAIN
CONTROIS... Three-Microphane, phana, tone with on/aff switch INPUTS.....................................Microphane and phonogroph TUBES..................1-6SJ7, 1-6SC7, 2-6L6G, 1-5Y3GT rectifier OUTPUT..................Topped of 2-4-8-15:500 ahms POWER CONSUMPTION............... 93 watts, 117 volis, 60 CPS, AC HUM LEVEL................................................... 56 DB below 18 watts FREOUENCY RESPONSE......................... 50 to 10,000 cycles $\pm 2$ D8 DIMENSIONS
2P470-Masco 18 Wott Amplifier with tubes
48.90

Some os above except with 3-speed phonogroph top.
2P 530

## MASCO JMR 2 WAY INTER-COM

A complete two-station intercam system with ane master and one remate. Ideal as baby "nurse" or for communication between ony two points. Includes 50 feet of 3 conductor coble and complete instructions for easy installation. Plug into light sacket, cannect the twa stations with the cable and it's ready to aperate. The master has its own volume cantrol, on-off switch, and press-to-talk switch. Remate statian also-has a press-ta-tolk switch' far ariginating lts own coll and ta provide privacy if desired. Units are suitoble far use as a two-way paging system. Unbreakable cast aluminum housings finished in walnut hammertane. Sizes $65 / 9^{\prime \prime} \mathrm{D} . \times 71 / 9^{\prime \prime} \mathrm{W} . \times$ $51 / 4^{\prime \prime} \mathrm{H}$. For 110 valts, $A C$ ar $D C, U / L /$ approved. Complete system with tubes and cable. Shpg. Wt. 10 lbs.
2P389
NET..... 33.34
Type JMRW-Same as above, but finished in white
2P390
NET.......... $\$ 35.84$
Additionol cable for above systems,



## Lafayette 27 WATT MOBILE SOUND SYSTEM

Really iwo sound systems for the price of onel Plenty of power for ony job - either mobile ar indoor. Operates from ony 6-volt storoge bottery ar regular 110 -valt, 80 cycle lline of full 27 wotts from either supply. Switching from one voltage to the other is ouromatic merely change the plugs at the rear of the amplifier; nothing to get out of arder and cause a burn out. Equipped with rugged allweother hermeticolly sealed projectors and driver units. Universol mountings permit plocing prajectors on top of sound trucl., field tripods, speoker plorforms, roofs ar towers to carry sound clear ond strang to point desired. Speaker lines ond mierphone coble disconnect reodily by means of plugs so thot entire system con be carried indoors in o few minutes. Another feature of the heavy duiy amplifier is the batiery sover switch which allows you to eut off the plate valtage on 6 -volt $D C$ aperatian, thereby saving current during idle periads. The amplifier is equipped with o built in phonograph mator ond turntoble for playing standard 78 RPM records.
Complete 27 Wait Mobile System includes amplifier with pubes, for 6 -valt $D C$ and 110 -volt AC; iwa 20 inch University PH type prolectors with two MA- 25 driver units and 35 feet of cable attached to each horn; ane Shure Model 505C hand micraphone with push-ta-talk switch and cable; all needed plugs and connectors, standard phono top on amplifier. Ready to install and operate.
2P507 - Shpg. Wi. 98 lbs.
166.50

Same as above but with 3 -speed phono-top.
2 2P508 - Shpg. W. 100 lbs. $\qquad$ .168 .50

Some system as obove but supplied with the Shure "Hercules" Madel 510C cantrolled reluctance micra. phane. Mike sulted for tropical cauntries ar caastal areas. Balanced armature transducer achieves high sensifivity and good fidelity. Frequency response 100 ta 7000 CPS. Oupput level down 52.5 db . Metal green finish. With desk stand.
2P509. $\qquad$ 158.50

## CAN ALSO BE USED AS INDOOR SYSTEM

Lafoyerfe's 27 -wott Wigh Fidelity Mobile Sound system is olso ideally suited for indoor use. For Outdoor use it's useful areo of operation is obout 45,000 square feet. In fixed installations indoors, it's average useful are of operotion is 750,000 cubic feet. The list of possible uses would include Hotel Lobbies, Gorages, Stores, Restouronis, Audiworiums, Offices, Assombly Plonts, Closs' Roams, Foctories, Bollrooms ond Skoting Rinks. In addition to regulor PA work, civil defense users will find this unit perfect for their needs. When oll other sources of power foll, it can be connected to a car battery. The Inverse feed-8ock design in the amplifier elrcuit greatly reduces distartion and objectionable hum, encauntered at very high audio levels. Electronic mixing of all input circuits provides a professional quality la your wark by ollowing continuous bockground music when one ar both microphones are in use. Volume af microphones and phonograph can be increosed or foded indopendently or tagether. Brilliant speech reproduction, true musical fidelity, and the economical price combine ta make this sound system a hard to-beot value.

## AMPLIFIER SPECIFICATIONS

POWER OUTPUT: 27 WOtts
PEAK POWER: 38 WOHIS
OAIN: Microphane 125 DB, Phanagraph 78 D8
CONTROLS: 2 mikes, phono, tone with on-aff switch
INPUTS: Two mikes and one phono
TUBES: 1-6SJ7, 2-6SC7, 2-616G, 1-5V4G (rectifier)
OUTPUT: Tapped 2-4-8-15-500 ohms
POWER CONSUMPTION: 100 Wolts, 117 V., 60 cycles AC
HUM LEVEL. 55 D8 below 27 Watts
FREQUENCY RESPONSE: 50 to 10,000 cycles $\pm 208$ DIMENSIONS: $15^{\prime \prime} \times 8^{\prime \prime} \times 8^{\prime \prime}$
Recessed handles in iwa calor Hommerione finish cabinet.
2P473 - Amplifier with single speed phono-top....
115.89

2P474 - Amplifier with 3-speed phano-top....
.117 .89


## MASCO MASTER TO REMOTE 5 STATION SYSTEM

A popular type intercom system for affices, schools, labs, factaries, atc., wherever there ls need for privote inter-affice talk betweon a supervisor and up ta 5 subordinates. Moster station has press-to-tolk switch, station selector, volume contral and on/off switch. Remotes have press-to-talk feature to originate calls and insure prlvacy. Size: $65 / 5^{\prime \prime} \times 71 / 8^{\prime \prime} \times 51 / 4^{\prime \prime}$. Shog. wi. 6 lbs. far master. $41 / 2$ lbs., remole. For 110 volis AC/DC. With tubes.
2P391 - Type JMS Master Station
26.99

2P392-Type 1R - Remote Stotion, Each
NET 9.53
3-Conductar Cable far above Intercom System.
P16148-100 Ft...
1.47 Per Fi., NET.
.............

## MASCO ALL-MASTER JNTERCOM SYSTEM

Similar to above system, but with each statian a moster. Far instant communication between any or all masters at any time. Up to six masters passible in ane system. All stations have press tatalk switch station pasca
 w1. 6 lbs each. Complete with tubes. 2P393 - Type IMS Master Stotion. NET, Each
26.99

P16093-7 Canductor Cable, for up ta 6 statians. $\qquad$ por ft. 10 c P16091-5 Conductar Cable, for up la 4 stations............................er fi. 7 f


## Sarayette CHALLENGER 30 WATT SOUND SYSTEM

## DUAL SPEAKER 30 WATT PORTABLE SYSTEM

This 30 .watt sysfem is ane of our masi popular madels - big enough for proctically ony purpase. Large halls, schoal gyms, night clubs, ouditoriums, churches, civil defense users, otc. will find this system perfectly suited for their needs. The Lafayette Challenger 30 -woit amplifier features controls for two micraphones, and ane phana with factlities for mixing the inputs. Tone contral permits adlustment for any degree of ocaustic variation. Inverse feed-back for betler smoother response.
Complote Portable System includes the 30 watt amplifier with alt tubesj one Shure 710 A microphone with shielded cobley ane adjustable mike floor stond two GE 25 watl 12" PM speokers oach with 35 feet of coble and plug attached; corrying case as shown. For $110-130$ volts, $50 / 60$ cycle AC.
29510 - Shpg. Wt. 80 lbs,
99.95

Same as above, but with single speed phono-top
2P515.
Same os 2P510 but with Shure " "55" dynomie microphone. 2P516
Some os 2P516 with single speed phonotop.

## 30 WATT OUTDOOR SYSTEM

Includes Lafoyatte's 30 -watt Challenger amplifier; two University PH 20" weatherproof reflex trumpets with 2 University MA25 drivers ane Shura 710A microphone with shielded cable; one desk stand; all speaker and micraphane plugs and full sel af instructlons. With 70 feet of speaker coble ( 35 feet each speaker). 2 P512 - Shpg. Wi. 56 lbs
129.75

Camplete system as above with o Shure " 55 " dynamic mike. 2 P5 13
. 165.50
Camplete system as $2 P 512$ but with single speed phana-top.
2 P 514
. 146.70
Complete system as $2 P 513$ but with single speed phonotop. 2P532 $\qquad$ ..180.45

## DUAL SPEAKER 30-WATT INDOOR SYSTEM

The permonent sound system especially designed for lorge holls, churches, school gymnasiums, night clubs, auditorlums, plus a voriety of installations requiring medium power. The heavy duty amplifier, feoturing "push-pull" output, and the shure 710 A semi-directional crystal microphone combine to give perfarmance exceptlanally free from hum and distartion. There are fwa handsame wall bafles de from hum and distorition. There are two handsame wall bafles de-
signed to yleld aptlmum ocoustical respanse. Two heovy PM 25 wati $12^{\prime \prime} G E$ speakers ore supplied with 35 feet of cable attached to each speoker. A terminal strip and socket make speaker cannection fast ond easy. A micraphane fiaar stand, odjustable from 35 to 62 inches, is alsa included. If desired, the amplifier can be supplied with a phano-fop.
Complete $30-$ Wan Indaar System includes the amplifier with all tubes; twa GE 12" PM 25 watt speakers; Shure Madel 710A crystal micraphane with length of shielded cablej twa handsame wall type baffes, 70 feet of speaker cable attached ( 35 ff . to each speaker); all plugs, hardwore, Ready to Install and aperate. 2 2P511-Shpg. Wt. 78 lbs.
98.50

Some as above but with Shure " 55 " dynamic microphone. 2 P 517
Same as 2P511 plus a single speed phano-top.

| AMPLIFIER SPECIFICATIONS |  |
| :---: | :---: |
| AMPI................................................... 30 Wa |  |
|  |  |
|  |  |
| OUTPUT IMPEDANCES......................... $4,8,15$ ohms, 70 valts |  |
|  |  |
| DIMENSIONS.................. $15^{\circ \prime} \mathrm{W}_{\text {., }} 10^{\prime \prime} \mathrm{D} ., 8^{\prime \prime} \mathrm{H}$. (Less phona) |  |
| Feotures extractor type fuse, malded sockets and recessed handles. <br> 2 P 443 - Complete 30 watt amplifier with tubes.......... 56.92 |  |
|  |  |
| Complete amplifier with tubes and single-speed phana-top. 2P468 |  |



SYSTEM 1 - Ono master and up to 5 remate stotians. Master can call all remotes simultaneously. (Re. quires 3-conductor cable.)


SYSTEM 2-All Másfor System. Maximum of 6 masters, if each Moximum of $\circ$ must lalk with every ather master. Otherwlse, mare than 6 may be used.

## CHALLENGER INTERCOM SYSTEM

The Challenger " $600^{\prime \prime}$ master station will operate in a system using o single master and up ta five remato stations, or in an all master system af six stations. When used in a single master - multiple remate instollations, the "Mute" position silences the background noise at the remote statians, yet the remale can still initiate a call to the master. The "All" pasitian permits a master station in either type system to call all ather statians simultaneausly. The " 600 " Master station is haused in a sturdy polystyrene cabinet, $6 \times 61 / 2 \times 7^{\prime \prime} \mathrm{D}$. Has press-ta-talk switch, 7 pasitian selectar switch and valume cantrol, an/off. The " $60 \mathrm{R}^{\prime \prime}$ remate statian has a matching cabinet and is equipped with an inltiating call bar. During canversation with the master, the remate daes nat aperate any cantral. Master station campleto with tubes, operotes on 117 valts AC/DC Underwriter's Labaratarles approved. Shipg. wt. $600,6 \mathrm{lbs}$, G0R 3 lbs. 2P383 - 600 Master Station, Each.,

NET 22.96 3P384-60R Remate Station, Each

NET 7.60
P16055 - System 1, 3 Cand, Cable. 100 Fp
...4.06; Por Ft
P16056 - System 2, 7 Cond. Cable. 100 Ft
7.35; Per Fp.

8 Bc


## Cafayette CHALLENGER DELUXE 60 WATT

## OUTDOOR SOUND SYSTEM

Here is o high powered sound system with outstonding fire quality features to take core of every type of outdoor opplication; in bolt parks, skating rinks, large auditoriums, cornivals and in armaries. Delivers tremendous power without distortion or loss of tonal clarity. In addition, four 20 -inch University type PH re-entrant reflex prolectors, and 25 watt driver units step up the efficiency of this system to such an extent as to make it equivalent to fully 90 watts in other systems. With these nan-resanant, starm-proof laudspeakers, sound can be directed aver lang distances in the apen. All vital parts are hermetically sealed far absalute pratectian against weather and to minimize ageing. The harns are supplied with universal brockets to permit mounting on roofs, light towers, otc. The high gain amplifier has three inputs: two micraphane channels and ane phanagraph channel. All these channels may be electranically mixed. Outstanding perfarmance at maximum efficiency. Neutral green steel case with perfarmance at maximum efficiency. Neutral green st
silver contral panel. Far 110.117 valts, 60 cycles $A C$.
Complete 60 -watt system includes amplifier with tubes, four 25 woft driver units, four weather-praf University PH prajectors, with faur MA- 25 drivers, one Shure Madel 710A crystol micraphane with seven MA- 25 drivers, ane shure Madel shielded cable, adiustable microphane noar stand and all plugs and hardware. With 140 feet of speaker cable ( 35 feet far each speaker). Entire system is shipped ready ta install and to aperate. Amplifier is supplied with all fubes. Shipping weight 150 lbs .
2P520
234.75

Same system os abave, but with Shure Madel " 55 " uni-directianal moving soil microphane.

## 2P523

279.50
[16
The bafles iltustrated of left are included with the 60 -watt indaor sys. fem described on this page.

## INDOOR SOUND SYSTEM

The same high power system as described at left is available in a specially designed indoor unit. Substituted for the projector horns are four General Electric Alnico V, heavy dupy, 12 inch PM 25 watt speakers and four handsomely finished wall baffles. The use of four 25 . watt speakers in this orrongement prevents voice coil burn-out and subsequent costly repairs. The wall baffes ore praportioned to yield fine acoustical quality over a "long-shot" distance. Solidly constructed, they are built to give years af trouble free use. The amplifier features constant valtage output far ease af speaker matching, extractar type fuse, twa ailffilled high valtage filter capacitars, resessed corrying handles, and Inverse-feedback design for better response.
Complete system includes the 60 -watt amplifier with tubes; ane Shure Madel 710 A crystal micraphane with seven feet of cable and plug; adjustable microphane floor stand; 140 feet af speaker cable ( 35 feet ottached ta each speaker) and faur wall baffes. Unit is camplete with all connectars ready to install and aperate. 2 P 251 - 5 hpg . Wi. 150 lbs
157.25

Same system as described abave (2P251), but with Shure Madel 55, uni-directional, maving call, dynamic micraphane.
2P522
192.85

## SPECIFICATIONS-60 WATT AMPLIFIER

OUTPUT
GAIN \& INPUTS FREQUENCY RANGE OUTPUT IMPEDANCE TONE CONTROL TUBES USED
…............... 2-6SF5 Solectan OSFS, ectane'i Frequency Range Selectar
Mi. 60 watts normal oupput Mikes 120 db , Phana 85 db $4,8,15$ ahms -70 and 140 vs .

HUM AND NOISE LEVEL. $\qquad$ $1-5 Y 3 G, 2-807$. 1-6V6GT plus 62 1-5R4GY rectifiers LINE DRAIN

## N.

$\qquad$ .220 wotts at 117 v., 60 cycle AC DIMENSIONS $17^{\prime \prime}$ wide, $111 / 2^{\prime \prime}$ deep, $91 / 4^{\prime \prime}$ high Lafayette 60 Watt Amplifier camplate and with tubes. 2P162-Shpg. Wt. 60 lbs.

## MASCO S-WATT MUSICAL AMPLIFIER

This madern, complete musical instrument amplifier, in lightweight portable case, is ideally suited far musicians, lecturers, singers, barkers, auctianeers, etc. High quality amplifier and large, heavy duty 8 inch speaker insures excellent tone and repraductian. Three channel inpup permits mixing af vaice with music. Canveniently lacated cantral panels otop attractive twa-tane brawn and ton fabricaid-cavered hardwaod carrying case. Extremely law hum level assures quiet aperatian. Will accammadate any standard musical instru: ment, pick-up ar micraphone. U/L approved. Complete with iubes. Far 117 volt, 60 cycle AC operation.
2 P 467 - Shpg. Wf. 15 lbs.
.NET
39.69

## S-WATT AMPLIFIER SPECIFICATIONS

POWER OUTPUT................................. 5 watts of less thon $5 \%$ harmonic distortion
 FREQUENCY RESPONSE...................................................... 2 db 100 ta 8000 CPS
POWER GAIN $\qquad$
 $.6 S I 7 G T, 6 Y O G T$, $6 \times 5 G T$ (Recllfiar)
TUBES.
HUM LEVEL................................................................................................. at 117 valts, 80 CPS
$\qquad$ .30 watts of 117 vaits, $13^{\circ 1}$ high

# UNIVERSITY PROJECTORS, DRIVERS, SPEAKERS 



UNIVERSITY REFLEX PROJECTORS
High efficiency exponential alr column type projectors. Heary-gouge oll spun metal horns with corrosion resistont finish. Conversion efficlencies to $50 \%$. Will handle 30 watts output. Suppled with universal "U" type mounting brackel. Battleship grer finish, waterproofed. Less drivers.

| Model | Dia. | Langth | Cutoff | Disp. Angle | Lbs. | Eoch |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PH | 201/4" | $153 / 4$ | 150 cps | $85^{\circ}$ | 10 | 17.05 |
| LH | 20\%" | 19'0'0, | 120 eps | $75^{\circ}$ | 15 | 26.17 |
| SMH | $161 /{ }^{\prime \prime}$ | $12^{\prime \prime}$ | 200 cps | $95^{\circ}$ | 6 | 14.41 |
| GH | 309/8' | 27\% ${ }^{10}$ | 85 cps | $65^{\circ}$ | 22 | 35.28 |

## UNIVERSITY PAGING SPEAKERS

Intercommunicator "booster" speaker hos high projecting powar. Clear sound output over. comes foctory nolses. Use as "Talk Back" spoakers in infercom systoms. High sensitivity permits initiating or answering colls at a distance. Though copoble of producting adequate volume with low power, these speakers con handle more power than ony other speaker of comparable size and welght. Supplied with adjustable mounting brackel.

| Model | Watts | Ohms | Freq. cps | Lbs. | Eoch |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MIL-8 | 3 | 8 | 400. 9,000 | 5 | 14.70 |
| MIL-45 | 3 | 45 | 400-9,000 | 5 | 15.43 |
| 188 | 12 | 8 | 300-10,000 | 7 | 19.11 |
| CR | 18 | 16 | 250-6,000 | 11 | 24.70 |

CAR-TOP HORN CARRIER


UNIVERSITY MODEL ZYC CONNECTOR
Used with two driver units to provide Up to 60 wotts Uor any trumpet or prolector. University Model 2 YC -Shpo

## JENSEN SPEAKERS

## STANDARD PM TYPES

Moderately priced, xeoptionally good in per formance, and highly recommended for replacemont use in radio and television receivers, re carders, public address equipment, intercommunication systems and similap applications. Highly afficient Alnico $V$ mognats insure moximum gap onergy and speoker life. Cones-selocted for unfformily of response. All modes. solected for untproof. Supplied less output transformers (see proof. Supplied less output transform
listing of output transformers bolow).

| Model | Jensen No. | Size | Watts | V.C. Ohms | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| P4-X | ST-113 | $4^{\prime \prime}$ | 2 | 3.4 | 2.94 |
| P5-X | ST.740 | $5^{\circ \prime}$ | $21 / 2$ | 45.50 | 3.26 |
| P5.x | ST. 105 | $5^{\prime \prime}$ | $2 / 2$ | $3-4$ | 3.12 |
| P6-W | ST-109 | $6^{\prime \prime}$ | 3/2 | $3 \cdot 4$ | 3.76 |
| P8.U | ST. 116 | $8{ }^{\prime \prime}$ | 6 | 3.4 | 6.00 |
| P8.y | ST-115 | $8^{\prime \prime}$ | 5 | 3-4 | 5.12 |
| P8.51 | ST-104 | $8^{\prime \prime}$ | 8 | 6.8 | 8.06 |
| P69.7 | 5T.811 | $6 \times 9.1$ | $71 / 2$ | 3.4 | 6.97 |
| P10.T | ST-119 | $10^{\prime \prime}$ | 8 | 6.8 | 7.50 |
| P12.7 | ST. 101 | 1210 | 9 | 6.8 | 8.53 |



JENSEN UNIVERSAL OUTPUT TRANSFORMERS Designed for coupling speokers to diferent impedance requirements of various amplifier output ubes. Universal fube transformers match V.C. to 4500,7000 , 10,000 and 14,000 ahms. Universal line transformers match V.C. To $500,1000,1500$ and 2000 ohm lines. Moisture protected by heovy wax Impregnotion. May be mounted directly on speaker.



| Application | Watts | Terminals | Sec. Ohms | Each |
| :---: | :---: | :---: | :---: | :---: |
| Univ, Tube | 25 | Pln Tip | 6.8 | 6.88 |
| Univ. Lin* | 25 | Pin Tip | 6.8 | 6.88 |
| Univ. Tube | 16 | Pln Tip | 6.8 | 5.08 |
| Unlv. Line | 16 | Pln Tip | 6-8 | 5.08 |
| Univ. Tube | 10 | Pin 1 D | 6.8 | 3.53 |
| Univ. Lino | 10 | Pin Tip | 6.8 | 3.53 |
| Univ, Tube | $61 / 2$ | Solder Lug | 3.4 | 1.76 |
| Univ. Line |  | Solder Lug | 3.4 | 1.52 |
| Univ. Line | $31 / 2$ | Plin Tip | 3.4 | 2.37 |
| Univ, Tube | 31/2 | Solder Lug | 3.4 | 1.52 |

JENSEN VOLUME LEVEL CONTROLS
Model ST-276-6.8 ohms, 5 watt.
Model $57.760-3.4$ ohms 5 watt
Model $57-411-8$ ohms, $/ 5$ wolt...
For all horn type speakers and baffles used in mobile PA work. Waterproof plywood and angle fron construction. with adlustableps and guther hoak with adiustable straps Included. Size: quickly attached or removed. Will not mor cap finish. Easily and
5.88

UNIVERSITY DRIVER UNITS
Phenolle diophragm; Alnico mognel. Hermatlcally sealed. MA. 25 pecommended for single speaker systems. $41 / s^{\prime \prime} \mathrm{D} \times 33 / 4^{\prime \prime} \mathrm{H}$. SA.HF effective in locotions where nolse level is high. $4^{1} / 2^{11}$ D. $x^{43} 4^{\prime \prime} \mathrm{H}$, PA. 30 has bullf-in tine matching Pransformer. 165, 250, 500, 1000, 2000-ohm ferminals. Constant voltage tops $30,20,10,5,21 / 2 \mathrm{~W}$ permit 3 db changes with eoch siep. PA. 30 moin. peins high varying intensity levels over long periods for broodcosting chime music from church steeples. $63 / 4^{\prime \prime} \mathrm{D} . \times 63 / /^{\prime \prime} \mathrm{H} .5 A-30$ is heory duty general utility driver unit with builf-in trans. former. Same impedonces as PA. 30 plus 45 ohms.

| Model | Range cps | Watts | Ohms | Dbs. |
| :---: | :---: | :---: | :---: | :---: |
| MA.25 | $90.6,000$ | 25 | 16 | Each |
| SA.HF | $90.10,000$ | 25 | 16 | 6 |
| PA. 30 | $80.10,000$ | 30 | 16 | 6 |
| SA. 30 | $90.10,000$ | 30 | 16 | 10 |

## UNIVERSITY WIDE ANGLE SPEAKERS



COBRA. 12 concentrales pow. er in horizontal plone. 2W-25 covers two areas effectivaly
with a single drivar unlt. Sizes: COBRA. 12 141/" Iong $20^{11} \times 9^{\circ 1}$ mouth: $2 \mathrm{~W}-25,201 /{ }^{2}$ long, $8^{\prime \prime}$ dia. mouth. Weight 9 lbs. each type.

| Model | Wotts | Ohms | Dispersion | Freq. eps | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| COBRA.12 | 12 | 8 | $120^{\circ} \times 60^{\circ}$ | $250.10,000$ | 26.46 |
| 2W-25 | 25 | 16 | $120^{\circ}$ eo. horn | $350.6,000$ | 28.22 |

UNIVERSITY LINE MATCHING TRANSFORMER MODEL CTR-20
Designed for use with University speakers in
indoor or outdoop insfallations. Assures perfect performanee throughout the ronge of the speakers with which they are used. Housed in waterlight enclosure with die cast mounting bracket which octs as combined support for both the transformer and speaker. Easily mounted on any trumpet or scrowed to ony surface. Primary impedances: 45-500-1000-1500-2000 ohms. Seeondapy impedances: 4.8 .16 ohms. 25 Watts Shpg. wf. 4 lbs. University Model CTR-20

UNIVERSITY MODEL PMA ADAPTOR For mounting any University " $U$ " bracket speaker stondard $1 / 2^{\prime \prime}$ plpe. Shpg. wt. 3 lbs.

88


2W-25




## GENERAL ELECTRIC SPEAKERS

## GE MODEL S1203D

Popular 25.wott 12 inch P.M. speakep used in Lofoyette public address systems. Highest offielency insured by powarful 9 oz . Alnico $\mathbf{V}$ magnet, which incorporates the latest engineering developments in sclentlific tone peproduction. Recommended for use with public address systems and for replocement in home radios. Aluminum foil base volce coils, molded cones. Melal base construction provides for greater heat dis. sipation, which results in higher watlage handling capocity. Has universal transformer mounting brackets. All ports treated against corrosion. Plated finish Lustaron treated. 8 ohm V.C. GE Model S 203 D -Shpg. wf. 8 Ibs....... 13.94

## GE PUBLIC ADDRESS SPEAKERS

Aluminum bose volce coils provide high woltage output and will not warp. Molded cones assure high nidelity and brillant frequency response. Plated finish protacted by new Lusteron treatment. Assembled with universal transformer mountling brackets. All have 8 -ohm Vole Coll. Alnico $Y$ magnets.

| Model | Dlo. | Alnico $V$ | Watts | Wt., lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| \$12180 | 12.". | 6.8 or. | 12 | 7 | 11.50 |
| 512030 | $12^{\prime \prime}$ | 9 or. | 25 | 8 | 13.88 |
| 512010 | 12' | 14.5 oz . | 25 | 9 | 19.95 |

## GE REPLACEMENT SPEAKERS

Alnico $V$ mognets, aluminum foll base voice coils, molded cones, universal transformer mounting brockofs. $\mathbf{3 . 2}$ ohm voice coils.

| Model | Dio. | Watts | Mognet Or. | Each |
| :---: | :---: | :---: | :---: | :---: |
| \$4000 | $4{ }^{\prime \prime}$ | 4 | 1.3 | 2.88 |
| 55250 | $51 /{ }^{11}$ | 4 | 1.3 | 3.20 |
| 56250 | $61 / 4^{\prime \prime}$ | 4 | 1.3 | 3.73 |
| 56500 | $61 /{ }^{\prime \prime}$ | 4 | 2.98 | 4.55 |
| 57030 | 6x9 ${ }^{\text {¢ }}$ | 8 | 1.47 | 5.09 |
| 58000 | $8{ }^{\prime \prime}$ | 8 | 2.98 | 6.06 |
| 510000 | $10^{\prime \prime}$ | 12 | 6.8 | 10.42 |
| 512000 | $12^{\prime \prime}$ | 12 | 6.8 | 11.17 |

## AUTONE AUXILIARY SPEAKER

Large $6^{\prime \prime}$ PM Speaker mounts in shalf bahind rear automobile seot, enobling possengers to enjoy elear automobile seot, enobling possengers to enjoy clear
reception without distracting driver. 3.way control reception without distracting driver. 3.woy control
swifch mounts on dash, permitting operation of front and reor speakers separately or together. May also be used with home recaivers. Wire, escutcheon plate and grille Ineluded.

## SPEAKERS - BAFFLES - ACCESSORIES

LAFAYETTE PM SPEAKERS
High quolity permonent mognet speakers. High permeability Alnico mognefs used for urmost efficlency. One-plece cones, plated molal frames. Valee coils for oll sires, $3-4$ ohms. All supplied less outpur transformer

| Stock No. | Dia. | Nor. Watts | Peak Wotts | Wt. Lbs. | Eoch |
| :---: | :---: | :---: | :---: | :---: | :---: |
| P18000 | $2^{\prime \prime}$ | 2 | 4 | 1 | 1.48 |
| P18001 | $3^{\prime \prime}$ | 2 | 4 | 2 | 1.59 |
| P18002 | $4^{\prime \prime}$ | 2 | 4 | 2 | 1.79 |
| P18003 | $4 \times 6^{\prime \prime}$ | 2 | 4 | 2 | 2.25 |
| P18004 | $5^{\prime \prime}$ | 3 | 5 | 3 | 1.79 |
| P18005 | $6^{\prime \prime}$ | 5 | 7 | 3 | 2.21 |
| P18006 | $6 \times 99^{11}$ | 5 | 7 | 3 | 3.44 |
| P18007 | $8^{\prime \prime}$ | 7 | 1 | 4 | 3.18 |
| P18008 | $10^{\prime \prime}$ |  | 11 | 6 | 4.50 |
| P18009 | 12'1 | 10 | 12 | 7 | 5.67 |

LAFAYETTE FIELD COIL SPEAKERS
Ideal for general replocsmant in AC.DC radios, amplifieps and inter communication systems. Frequency response from 100104500 cps , when properly baffled. Molded one-plece cones, 3.2 ohms V.C. tov' Auso

| Stock No. | Dia. | Ohms | Mox. Watts | Wt. Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| P18015 | $3^{\prime \prime}$ | 450 | 2.5 | 3 | 2.16 |
| P18016 | $4^{\prime \prime}$ | 450 | 3 | 3 | 2.39 |
| P18017 | $5^{\prime \prime}$ | 6 Volt ${ }^{\text {f }}$ |  | 3 | 2.49 |
| P18018 | $5^{\prime \prime}$ | 450 | 3.5 | 3 | 2.49 |
| P18019 | 5' | 3000 | 3.5 | 3 | 2.49 |
| P18020 | $5^{\prime \prime}$ | 1800 | 3.5 |  | 2.49 |
| P18021 | $6^{\prime \prime}$ | 6 Volt ${ }^{\text {d }}$ | 5 | , | 2.92 |
| P18022 | $6^{\prime \prime}$ | 1000 | 5 | 4 | 2.92 |
| P18023 | ${ }^{\prime \prime}$ | 1800 | 5 | 4 | 2.92 |
| P18024 | $8^{\prime \prime}$ | 1000 | 7 | 6 | 3.63 |
| P18025 | $8^{\prime \prime \prime}$ | 1800 | 7 |  | 3.63 |
| P18026 | $8{ }^{\prime \prime}$ | 2500 | 7 | 7 | 3.63 5.67 |
| P18027 | $10^{\prime \prime}$ | 1000 | 10 | ? | 5.67 |
| P18028 | 12' | 1000 | 12 | 9 | 6.84 |

QUAM ALNICO PM SPEAKERS Alnica $\vee$ magnet provides maximum performonce with minimum woight. High converslon foctor. 3.2 ohm V.C. Less Trans. $31 / 2^{\prime \prime}, 4^{\prime \prime}, 51 / 4^{\prime \prime}$ in square frame.

| Quam No. | Dlo. | Mox. Watts | $\begin{aligned} & \text { Mognet } \\ & \text { Or. } \end{aligned}$ OI. | Depth | Shpg. WI. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3407 | $31 / 2^{11}$ | 2.5 | . 68 | 111/3? ${ }^{\text {a }}$ | 1/7 lbs. | 2.35 |
| $4{ }^{4}$ | $4^{\prime \prime}$ | 3.0 | 1.0 | $23_{16}{ }^{\prime \prime}$ | 3/4bs. | 2.50 |
| 4407 | $4^{\prime \prime}$ | 3.75 | . 68 | 21/32". | $3 / 4 \mathrm{lbs}$. | 2.35 |
| 46407 | $4 \times 6^{\prime \prime}$ | 3.5 | . 68 | $115 / 1 \%^{\prime \prime}$ |  | 2.62 |
| 541 | 5"1 | 4.5 | 1.0 | 23/10.0 | I lbs. | 2.62 2.47 |
| 5407 | 5'1] | 4.0 | 1.68 | 23/10." | 11/4 lbs. | 2.47 2.73 |
| $52 A^{\prime}$ | 51/4" | 6.0 | 1.0 | 2 $21 /{ }^{\prime \prime \prime}$ | $11 / 4 \mathrm{lbs}$ $11 / 4 \mathrm{lbs}$. | 2.82 |
| $6 A^{694}$ |  | 6.0 8.0 | 1.0 1.4 | 219/16 | 11/2 lbs. | 4.41 |
| 6942 | $61 /{ }^{11}$ | 5.0 | 1.47 | 25/11 | 1 lbs. | 3.00 |
| 7421 | $7^{12}$ | 6.0 | 2.15 | 231/32 ${ }^{\circ}$ | 1 lbs. | 4.26 |
| 8421 | $8^{\prime \prime}$ | 8.0 | 2.15 | 31/1" | 2 lbs . | 4.23 |
| 12431 | $12^{\prime \prime}$ | 10.0 | 3.2 | $41 / 12$ | 31/4 lbs. | 6.67 |

## QUAM TELEVISION SPEAKERS

Field coil speakers for TV replacement. 3.4 ohm voice coll

| Quam No. | Dia. | Max. Watts | Fisld Ohms | Shpg. Wt. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $5 E 62$ | $5{ }^{\prime \prime}$ | 3.5 | 62 | 11/9 lbs. | 2.70 |
| 5E95 | $5^{\prime \prime}$ | 3.5 | 95 | $11 / 2 \mathrm{lbs}$. | 2.70 |
| 46E62 | $4 \times 6{ }^{\prime \prime}$ | 3.5 | 62 | $11 / 2 \mathrm{lbs}$. | 3.12 |
| 46895 | $4 \times 6^{\prime \prime}$ | 3.5 | 95 | $1 / 7 \mathrm{lbs}$ : | 3.12 |
| 6E62 | 61/2" | 5 | 62 | $11 / \mathrm{lbs}$ | 3.18 |
| 6E95 | 61/2" | 5 | 95 | 1/4 lbs. | 3.18 |



Sturdily bullt of selected waod. 8rown leatherette covered. Shpg. wf. 6 lbs

| Stock No. | Speakier | H. W. D. | Each |
| :---: | :---: | :---: | :---: |
| P20060 | $6^{\prime \prime}$ | $81 / 2{ }^{71 / 2 \times 41 / 4}$ | 1.89 |
| P20042 | $8^{\prime \prime}$ | $101 / 2 \times 9 \times 6 / 9^{\prime \prime}$ | 2.45 |
| P20055 | $10^{\prime \prime}$ | $14 \times 12 \times 81 / 2$ | 3.15 |
| P20056 | $12^{\prime \prime}$ | $15 \times 14 \times 10^{11}$ | 3.65 |

## CARRYING CASES

Amplifier, $12^{\prime \prime}$ Speakers-Holds iwo $12^{\prime \prime}$ spook. ers plus omplifier. Amplifiep bolts to panel-slides in or out of cose quickly. Holds any amplifier to $14 \times 14 x \mid 1 "$. Firm corner construction whit metal shiolds. 4 snap locks. Mode of $y^{\prime \prime}$ " thick plywood covered with Tan simulated rawhide. Size: $163 / 4 \mathrm{~W}$ $\times 243 / 4 \mathrm{H} \times 145 /{ }^{\prime \prime} \mathrm{D}$ P22056-Shpg. wf. 24 lbs
11.95

Amplifier: $8^{\prime \prime}$ Speaker-Holds both ompliffor and an $8^{\prime \prime}$ speaker at the same time. Heavy plywood construction with handsome tan simulated rawhid covering and caprying handle. Firm double-protection cornep construction. 4 sturdy snop locks. Size: $13 \times 105 / 9 \times 17^{\prime \prime}$
6.50

P22053-5hpg. wf. 10 lbs..
Amplifer, $8^{\prime \prime}$ speakers-Some as above except for amplifier and iwo
$8^{\prime \prime}$ speokers. $13 \times 10 \$ \times 17^{\prime \prime}$
P22054-5hpg. wt. 10 lbs
7.50


EAKER $10,00 \mathrm{CPS}$
AIIV-50YO $\begin{aligned} & \text { BIV }-2 E T!!!\end{aligned}$

## goz. ALNICO V MAGNET

Here's an excellent fidelify powerful $12^{\prime \prime}$ PM speaker that is by far the best buy avallable for any comparable speaker with the same per. formance capablitios. Highly recammended formance capabilities. Highly recommended for replacement use or original instaltation in
top quality radio-phona installations. Ideal for Pop quality radio-phona installations. Ideal for
PA use. Hondles 25 watts of power without distortion or significant lass of bass ar treble frequencles. Uniform response assured over the rang from 50 to $10,000 \mathrm{cps}$. Alnico $V$ mognai olone welghs ounces. Precision formed alu minum base voice coll. Voice coll impedance, 8 ohms., Perfectly aligned cail and molded cane construction. Precision ongineering of parts built into this speoker for years of trouble.free service. This is one of the outstanding values we have ever offered. Shpg. wi. B lbs P19299
25 Woft, $12^{\prime \prime}$ PM Speaker
6.95


## SUPER-SPECIAL 12-INCH

## HI-FI COAXIAL SPEAKER

We've never hod o hiffi speoker buy to com. pare with this ane! A genuinely high-qually 12.inch coaxial PM speaker with frequency range from 50 to $15,000 \mathrm{cDs}$, full 10 watts output, plus built-In high pass filter- for less than $\$ 15.0011^{\prime \prime}$ woofer has 32 oz . Alnico 5 mognef , 3.2 ohm VC impedanco. Combination of woofer and tweeter operates from 8 ohm source. Requires no special contrals. Dustproof, sturdy frame. Order yours while we can still supply! P19298Shpg. wt. 8 lbs. Quantities Limited....... 14.95

## 10-WATT P.A. SPEAKER



Here's a real buy in a 12 -inch heary duty PM speoker for P.A. or other work where you need a speaker that can take lil Heary 6.8 ounce Alnico magnet with 8 ohm voice coll. Sturdy codmium plated frame and heavy duly cone. Frequency response to above $10,000 \mathrm{cps}$. Shpg. wt. 6 lbs.
PI9296-SPECIAL, NET
5.95

## 12-INCH REPLACEMENT SPEAKER

Quantities llmited on this fine 12 -inch replocement specker. Order yours now while we con still supyly at this dollar saving deep cut price. 4.7 ounce Alnico $V$ magnet, $3-4 \mathrm{ohm}$ voice coll. ideal for perking up old and new sols with "tired" drivers and dried out cones. Shpg. P19297-SPECIAL, NET.
5.45

## SPEAKER ACCESSORY ITEMS

WALSCO ORNAMENTAL GRILLE


Heary perforated grille, beoutlfully "brushed brass" plated and lacquered witth gold finish effect. For use over cloth of screoning in custom built rodios, P.A Speokers and juke boxes.
1.76 Pl9493-Sixe $12^{\prime \prime} \times 18^{\prime \prime}$
P19494-Size $18^{\circ \prime} \times 24^{\prime \prime}$

## SPEAKER GRILLE CLOTH

A beauliful, decorator material to match both cabinat and hame furnishing. Handsome friere pattern. $50^{\prime \prime}$ wide, cut to your specified length.
P20949-Per Yord
P19496-12" $\times 12^{\prime \prime}$
2.10

## WALNUT WALL BAFFLES

Beautifully polished walnut boffle for De Luxe sound systems. Frieze gille eloth.
P21325-6.Inch
P21326-8-inch
P21327-10-inch
P20051-12-inch
SPEAKER SHIMS Non - magnteic Monal shims. .0 ch
$.006^{\prime \prime} .008^{\prime \prime}$ $.010^{\prime \prime}$ shims. In plastic caso with penell clip. P19649-39

FLOCKED GRILLE SCREENING Protective grille for rodio, intercom. etc. Won't teor, froy. 564 P19487-8x11'
P19489-18×24, ${ }^{\prime}$, Brown.............. 1.88

## RADIO SERVICE CEMENY

> $\left\{\begin{array}{l}8 \\ y\end{array}\right.$For cementing replacemeni cones and repairing torn cones. Vibration.proof waterproal, last diying. P15314-2 or bottle, brush aftoched to COD

> 39
> P15315-4 ox. boltle
> P15315-4 or. bottle
Pis $316-8$ or botlle P15317-1 pf. botlle



## SHURE MICROPHONES \& ACCESSORIES

## NEW "SMALL UNIDYNES"

MODEL 555-Completely new, small sized unidirectional moving coil dynamic mikes. Designed for high overall efficlency and extended peok-free frequency response. Rugged coil construetion protects system against atmospheric conditions and mechanical shock. Recommended for fixed station use in Police, Fire and Transportation services. These unils reduce reflection and reverberation and permit the performer to stand at a considerable distance from the mike. Smooth $40-15,000$ eps response at front. deod af rear. Impedonces: $35-50$ ohms; 150-250 ohms; and high ohms. Multiimpedance selector switch included. Output level -60.5 db at high impedance. Supplied with $20-\mathrm{tt}$ cable and plup assambly. Standard $5 / 1^{\prime \prime}-27$ thread. size: $3 \frac{1}{10^{\circ}} \mathrm{H}_{\text {. }} 21 / 16^{\circ \prime}$ W. $31 / 10^{\circ}$ D. Shpg. wt. $31 / 4 \mathrm{lbs}$.

NET 42.63

MODEL 556S-Same appearance and general characterlstics as 555 axcept designed for studio broadeasting and TV use, and similar applications requiring top quality perform. ance. This model also features a Cannon connector and a specially designed shock insulalion unit. $20-1 t$. cable and plug assembly Included. Shpg. wt. $41 / 2 \mathrm{lbs}$.
Shure Model 5565 ......................NET 58.80

## STANDARD UNIDYNES

MODEL 55 - Standard size, supar-cardiold dynamic mike for general purpose use. Tech. nical data simllar to Model 555. Output leval af high impedance -57.5 db . Has builtin connector and $20-\mathrm{f}$. cable and plug. Sizo: $41 / 4^{\prime \prime} H$ H. $31 / 4^{\prime \prime} \mathrm{W}^{2}, 31 / 2^{21}$ D. Shpg. Wf. $51 / 2 \mathrm{lbs}$. Shure Model 55-
List $\$ 72.50$
.NET 42.63
MODEL 556-For broadcasting use Features internally lsolated cartridge and external vibration absorbing unit. Otherwise similar to Model 55. Shpg. wt. 5 lbs.
Shure Model 556 -List $\$ 100.00$....NET 58.80

## MODEL 51 "SONODYNE" DYNAMIC

lugged, pressure.type unit with wide-range frequency response and semi-directional pick. F. Features multi-impedance switeh for low ( $35-50$ ohms), medium ( $150-250$ ohms) or high impedance. Moving coll olement in magnatic field principle. Has built.in receptacle and a two-conductor shielded cable with mierophone plug altached. Response $60 \cdot 10,000 \mathrm{cps}$. Output leval -52 db of high impedance. Suppiled with $15-\mathrm{ff}$. cable and plug. Satin chrome case Shpg wt. 31/2 lbs. Shure Model 51 -List $\$ 45.00$........NET 26.46

MODEL 7IOA "REX" CRYSTAL MIKES Ideal for hams, low-cost P. A. systems, and as a replacement for home recording microphones. Designed for high speech intelligibility Hand-hold, needs no desk stand. Has a broad base that fifs firmly on table without Hipping, Frequency response $60-9000$ eps. High imped once. Output level -50 db . Supplied with $5-\mathrm{ft}$ shielded cable. Die-cast case in burgundy-red metaltie finish. With stand adapter. Size: 24,1 W., $31 / 4^{" 1} \mathrm{H} . \mathrm{H}^{2} 11 / \mathrm{m}^{\prime \prime}$ thick. Shpg. wt. $11 / 2 \mathrm{lbs}$ List $\$ 10.95$.
Shure Model 710 A
Model $7105-S a m e$
NET 6.34
switch.... 7.61

## MODEL 5IOC "HERCULES"

## CONTROLLED RELUCTANCE MIKES

Appearonce same as 710 A , but magnetic type For rugged, general purpose use especially where humidity is a problem. Response 100 7000 cps . Oulput level -52.5 db . High impedance obtained without a transformer. With 5 -ft. shiolded coble. Green metallic finish. $\mathbf{8 . 8 2}$
Shure Model 510 C -List $\$ 15.00$ NET Model Slos-
Same as above with swileh.
NET 10.00

## MODEL 707 CRYSTAL MICROPHONE

Ideal for low-cost P.A. systems, call systems amateur phone transmitters and similar appli.' cotions. Good response characterlstics free from peaks. Semi-directional pickup. Moisturefrom peaks. Semi-directional pickup. Moisture-
proof Blmorph erystal. High impedance. Outproof Bimorph crystal. High impedance. Outwith solin chrome finish on front grille. s/i'-27 thread. $2 \frac{1}{3 \prime \prime}$ diamefer. Supplied with " 7 -ft. cable. Shpg. wt. $21 / 2 \mathrm{lbs}$.
Shure Model 7074 -List $\$ 15.50$........NET 9.11

## MODEL 520 "GREEN BULLET"

## CONTROLLED RELUCTANCE MIKE

Same appearance as 707A, but magnetic type. Proctically immune to high temperalures and humidity. High output ( -52 db ), $100-7000 \mathrm{cps}$ response and high impedance withoul need of transformer. Green finish, plated grille. With 7-ft. cable. List $\$ 17.50$
Shure Model 520
net 10.29

## MODEL SOSC "RANGER" <br> CONTROLLED RELUCTANCE MIKE

Especially recommended where long lines are used and a rugged hand-hald mike is needed Designed for high speech intalligibility. High impedance; oulput level -50.5 db . Has heary dupy SPDT leaf type switch for push-lo-talk operation. Frequency response 100 to 9000 cps. supplied with 5 -ft. three-conductor shielded cable. Ideal for outdoor P.A., mobile com. cable. dieal for outdoor P.A., mobile communicalions, hams and
shows. Shpg. wf. $1 / 2 \mathrm{lbs}$.
shows. Shpg, wf. $11 / 2$ lbs.
Shure Model $505 \mathrm{C}-$ Lis!

## MODEL 737A "MONOPLEX" CRYSTAL MIKE

High output, unidirectional, super-eardioid crystal mike with 14 to 1 front-to-rear pickup ratio. Reduce pickup random sound by $73 \%$. Uses same lype of phase-shifting nelwork as Shure broadcast mikes. Operates under odverse conditions of background noise and reverbera. tion where a conventional mike would be pracrically usoless. High impedane: - 54 ap put. Case pivots at rear and can be pointed toward desired saund. Has built-in cable connector and 15 - ft . shiolded cable. $5 / 1 \mathrm{~s}^{-"-27}$ thread.
 Satin chrome finish. Size:
$17 /\left.\right|^{\prime \prime}$ thick. Shpg. wt. $21 / 2$ lbs.

| Shure Model 737 -List $\$ 39.75$.... NET 23.37 |
| :--- |

MODEL 76B LAPEL MICROPHONE Designed for P.A. lecturing, portable transmitters and other general uses requiring intelligible reproduction of speech. Pressureactuated diaphragm type erystal mike with maisture-sealed Bimorph crystal. Response 40 6000 cps. Accentuated high requency response Output level -57 db . Only $11 / \mathrm{s}^{\prime \prime}$ diameter and $11 / 2$ ounces net weight. Equipped with lapel clip and 20-4t. shielded. singlo conductor cable. Shure Model 768-List $\$ 27.00$..... NET Gray finish. Shpg. wt. I Ib.
15.88

MODEL RS CONTROLLED RELUCTANCE REPLACEMENT CARTRIDGE
Avallable for service installation and replace ment of crystal mika cortridges in Shure cases of Model 707A. Also replaces cartridges in cases of other manufocturers' models of similar cassig of other manufocturers' models of similor
design where space permits. Acoustically condesign where space permifs. Acoustically controlled, balanced armature transducer un.
affected by heat and humidry. Supplied with affected by heat and humidty. Supplied with rubber mounting ring, $21 / 4^{\prime \prime}$ averall dlameter:
$1 / 10^{\prime \prime}$ thich. Depih of corlridge $7 / \mathbf{s}^{\prime \prime}$. Shpg. wt. 408.

Shur Model R5-List $\$ 10.00 \ldots \ldots . . . . .$. NET 5.88

## MODEL A838 ON-OFF MIKE SWITCH

Rotapy pype ON-OFF switch. Quickly attached to any cable-connector type Shure microphone. Durable, dependable; no soldering necessary. Internal plug estoblishes connections. Bakelife arrow knob. Shpg. wl. I lb. Shure Model A83B-List \$6.50........NET 3.82

## MODEL A86A CABLE TYPE

 TRANSFORMERSolves the problem of installations requirng long lengths of mierophone cables without loss of high frequency response. Offers addiroinal versatilty when used in conjunction wlth Models 55, 555, 556, 5565 and 51 dynamic mikes which use on impedance matehing switch. Motches 35-50, $150-250$ ohm mikes to high impedance amplifer inpuf. $15 / h^{\prime \prime}$ diameler: $21 /{ }^{\prime \prime}$ L. With
2-ft. cable. Shog. wr. $11 / 2 \mathrm{lbs}$.
Shure Model A86A-List $\$ 16.00$ NET 9.41

## AMPERITE KONTAK MICROPHONES

Folthfully reproduce the vibrations of any musical instrument. Moistureproof rubber case. Frequency response 40.9000 cps. Easily attached without tools. Operate with high or low gain amplifiers. Outpue - 40 db. Size: $1 / 4 x 3 x l^{\prime \prime}$. Supplied with $15-f t$. cable. Shpg. wi. 2 lbs. Lisi $\$ 12.00$ P13675-Amperite Model SKH. High Impedance.

NET 7.06 P13690-Amperite Model KKH. Same os above, but wit P13690-Amperite Model KKH. So
bulli-in volume control. List $\$ 18.00$..
with 10.58 MODEL KF. Foot control for above mikes. With 15-H. cable. Shpg. wt. 4 lbl. List $\$ 18.00$.
P13663-Amperite Model KF
NET 10.58


## LAFAYETTE CONTACT MIKES



High impedance pickup for use with any musical instrument. Easily installed without special strings or changes. Enclosed In soft, non-marring material. With $8-\mathrm{ft}$, cable. Shpg, wt. 4 lbs List $\$ 13.23$
P13746-Less volume control.............NET 5.95
P13745-With volume control.
List $\$ 16.74$.


## ASTATIC MICROPHONES

## NEW ASTATIC MODEL DK-I

 CRYSTAL MICROPHONENon-directlonal, high impedance unit for studio and P.A. Feotures reduced size ond design which ollows unobstrueted, least disprocting view of performor. Eycellent frequency range, with rising chorocteristics befween 2000 and whth rising chorocterisilics batween 2000 and
5000 cps . Output level -55 db . Crystol element 5000 cps . Output level -65 db , Crystol element hos moisture-proof coaling : Brushod chrome $10 . \mathrm{F}$. rubber covered, shielded single conductor coble. Shpg. wt. 2 lbs.
Astatic Model DK.1-Llst $\$ 22.00$. NET 12.94 Model OK-1-S-As above with OFF.ON swlith

NET 14.52

## ASTATIC MODEL T-3 CRYSTAL MICROPHONE

For studio sefups, omoteur rlos, intercom systems. P.A. Installations and high qualify recording. Mike heod may be tilted with ease and pickup polfern mode semi- or non-directlonal. Outpul lovel -52 db . Frequency re. tponse unlform from $30 \cdot 10,000 \mathrm{eps}$. Equipped with inferchongeoble plug and sockel con. nector and $15 . / 1$ cable. All chrome finish. Grille dlometer $21 / 10^{\prime \prime}$; depth $3^{\prime \prime}$. Overall helght $61 / 10^{\prime \prime}$ Shpo. wl. 3 lbs.
Astotic Model T.3-Lisl $\$ 27.35$... NET 16.08 Model GT-3. Same as obove except with Grip. To. Talk desk stond. Holght $113 / 16^{\prime \prime}$. Shpg. wt. 5 lbs.
Astatic Model GT-3-List $\$ 40.40$ NET
23.76

## ASTATIC MODEL DN DYNAMIC MIKES

All-purpase $\qquad$ Tilling-head, swivel mount permits semi. or non-directional positlons, Corafully proportioned ocoustic circuil highly domps the nofural fesonance of the moving system to provide o response charaeperlstic substanillally flot from 50 to 70,000 eps. Output leval opproximately -55 db . Model DN.MZ is hlgh impedance type. Overall height, $6 H^{\prime \prime}$ : depth $41 / 2^{\prime \prime}$. Opolescent grey and bright
 ehrome finish.
Astotic Model ON-HZ
Llst $\$ 29.50$
net 17.35
Model DN.MZ - has multi-impedonce transformer and impedance selector switch to provide choice of 50,200 and 500 ohms of high Impedonce.
Astatic Model ON-MZ
Astatic Mod
Llst $\$ 39.75$
NEt 23.47

## TURNER MICROPHONES

TURNER PROFESSIONAL DYNAMIC
MODEL U9S. Saddle illts $90^{\circ}$ for semi- or nondirectional use. Frequency response $40-9000$ eps. Oulput -52 db . Swlich on mike gives choice of $50,200,500$ or high limpedance. Gun metal of $50,200,500$ or high mmped ance. finlish. Supplliod with 20. .ft coble and connec.
tor. Shpg.wt. 5 ibs. List $\$ 42.50$. NET $\mathbf{2 4 . 9 9}$
Turner Model UQs. Turner Model U9S

## TURNER MODEL 22D DYNAMIC

High impedance. Fop amoteurs, call and paging systems. $90^{\circ}$ tlliting heod permits semi- or non-dlrectlonal operotlon. High quality Alnico magnet. Froquency response 90.9000 cps . Output -54 db . Supplied with 7 - ft . cable and connector. Chrome finish. Shpo. wt. $21 / 2 \mathrm{lbs}$. List $\$ 27.25$.
Turner Model 220
NET 16.02

## TURNER MODEL 22X

SHOCKPROOF CRYSTAL MIKE
High qualliy, humidily protected cerystal. Shockproof mounilng. Hos outomatic borometric compansator. Some deslon and choracteristics as Model 22 D described above, except har output of -52 db . Shpg. Wl. $21 / 2 \mathrm{ibs}$. 13.23
Turner Model $22 x-$ List $\$ 22.50$. NET 13. NOTE: We con supply ony microphone to fill your requiroments. Send us your order specity. your requifaments, Somd as and type number. Or if you wish, wrife for prices and ilferalure.

ASTATIC MODEL 200 "VELVET VOICE" CRYSTAL MICROPHONE
Convertible iype crystal mike with o wide range response. May be used as desk, hand or floor stond style to meet every need. Output level -52 db . Froquancy respanse $30-10,000 \mathrm{cps}$. Gold finish housing and handle; bright chrome grille; brown boked nomel, detochoble base. Overoll hoight $73 /{ }^{\circ \prime}$., grille diameter $21 / 2^{\prime \prime}$, depth $211 / 16^{\text {h }}$. Supplied with $10-\mathrm{ff}$. shielded cable. Shpo. w1. 2 lbs.
Astotic Model 200-List s13.95. NET 8.20 Model 200.5-As obove with ON.OFF switch

## ASTATIC JT-30 CRYSTAL MIKE

Used extensively for omoteur, publle oddress and home recording. Output fovel -42 db . sufficiont for use with high goin omplifiers. Supplied complate with concentric cable connector, wood handle, interlocking metal base, and $10-\mathrm{fl}$. cable. Wood hondle can be removed and microphone used on floor stand. Opales: cent gray with bright chrome grille. Overall helght $8^{\prime \prime}$ : grille diometer $21 / 16^{* \prime \prime}$ depih $31 / 16^{\prime \prime}$. Shpg. wf. 3 lbs.
Astatic JT-30-List $\$ 16,95$
NET 9.97
ASTATIC MODEL JT-3OC CERAMIC MIKE Similtor to Model JT. 30 except has ceromic element. Output leval -62 db . Supplied with 5.ft. coble, shpg. WI. 3 lbs.
Astatle JT. 30 -List $\$ 16.15$...........NET 9.50

ASTATIC WR-40 MULTI-UNIT MIKE
Substantialiy fiat frequency response up 10 10,000 cyclos. Connot be acoustically overloaded. Output leval -56 db . Can be used with coble up to 200 feep long with negligible loss of output. Bright chrome finish. sotin loss of output. Bright chrome $33{ }^{\circ \prime}$. Diameter
 15.ff. coble. Shpg. wt. 4 lbs .

Astatic WR-40-List $\$ 43.25$
NET 25.43

## ASTATIC "SYNABAR" MODEL DR-10 UNIDIRECTIONAL CARDOID CRYSTAL MICROPHONE

Meets the highest requirements of cleor-toned performance quality-for the world of professional speaters and entertainers. Speciol sin. tered metal acoustic filter attenuotes rear sounds by is db-a drop which just about makes the "Synabar" dead from the rear. Superb response, 50 to $10,000 \mathrm{cps}$, enhonced by Response Selector swltch which provides ideal pickup for tither cpisp volce or general music ond voice. METALSEAL crystal protects forever ogoinst molsture or dryness. - 54 db output. High impedonce. Sotin chrome finish. With is ff . single conductor shielded cable and defachoble cable connector. Overall helight, $8^{\prime \prime}$. Grille dlameter $31 / 3$
Astatic Model DR-10
List $\$ 37.25$
net 21.90
Model DR-10-S-Above with OFF.ON
iwitch
NET 23.49

AMERICAN MICROPHONE MODEL 022 FULL VISION DYNAMIC MIKE
Permit full vision of the artist while performing. Omni-directional pickup by the small I' diametor heod. Output level -52 db . No preamp required. Has 30.50 ohms and 40 . 000 ohms impedances. Finished in gold and block. Quickly and wasily detached from stond by slide lock. Can be ued on stand, suspended, or as a hond mike. Equipped with "latch lock," Cannon plug and 25 .
ff . cable. Shpg. wt. 4 lbs. List $\$ 75.00$ ff . cable. Shpg. wf. 4 lbs. List $\$ 75.00$ 022

# ELECTRO-VOICE MICROPHONES 

## ELECTRO-VOICE MODEL 950 CARDAX CRYSTAL MIKE

Provides wide-angle front pickup, dead of rear Simplifies microphone and speaker plocement. Has dual frequency response - flat for high fidality sound pickup (outpup -57 db ), or rising charoctoristic for extro crispness of speach (output -50 db ). Tilroble head. Fully enclosed, moisture-sealed crystal element. Hos bullt-in coble connector and ON-OFF switch. Satin chrome finish. $3 / 8^{" \prime}-27$ threod. Slze: $21 / 2 \times 27 / 0 \times 61 / 4{ }^{\prime \prime}$. supplied whith $18 . \mathrm{ft}$. coble. Shpg. wt. 3 lbs. List $\$ 42.50$.
Electro-Volce Model 950
NET 24.99

## ELECTRO-VOICE MODEL $911-20$

 "MERCURY" CRYSTAL MIKESubstantially flot response from $50-8000$ eps. with on output level of -50 db . Con be used with ony stondard omplifier using high imped. ance Input. High copocity crystal fully enelosed for greater moisture protection. Tiltable head. Hos bulli-in ON. OFF switch. Supplied with 18 -ft. coble and built-in $5 /{ }^{\prime \prime}-27$ threod connector. Solln chrome finish. Size: $23 / 4 \times 31 / 5 \times$ $61 \mathbf{q}^{\prime \prime}$. Shpg. wt. 3 lbs. List $\$ 29.50$.
Electro-Voice Model 911-20 NET 17.34

## ELECTRO-VOICE MODEL 611-20 "MERCURY" DYNAMIC MIKE

Feofures long-life Acoustalloy diophragm. Smooth response from $50-8000 \mathrm{CDs}$. Output level -55 db . Non-directional. Moiches any inpul:
$\mathrm{Mi} .2,50,150,250$ or 500 ohms Impedance. TilfMi. $y / 9^{\prime \prime}-27$ threod coble connector. Supplied with 18 ft . cable. Sotin chrome finish. Size: $23 / 8 \times 31 / 6 x$ $61 / 4^{\prime \prime}$. Shpg. Wr. 4 tbs. List 539.50
Electro-Voice $611-20$
NET 23.22

ELECTRO-VOICE MODEL 636 "SLIMAIR" DYNAMIC MICROPHONE
Exceptionally fine for P.A., recording and generol purpose use. Rugged and versotile slim design. Specially treoted head stops wind and breoth blosts. Frequency response $60-13,000 \mathrm{cps}$. Output level -55 db . Has high and low impedonce selection. Omni-directional. Uses Alnico $V$ magnet. Swivel head permits $90^{\circ}$ vertical tilt. Trpe MC. 4 connector. $3 /{ }^{\prime \prime}-27$ threod. Bross caso in sotin chrome finish. Size: $101 / 4$ long, $11 / 10^{\prime \prime}$ diometer. Supplied
Electro-Volce Model $636 \ldots . .$. NET $\mathbf{3} 8.22$

ELECTRO-VOICE MODEL 655 "SLIM-
TRIM" HI-FI TV-BROADCAST DYNAMIC
Proved in studio and remote use. Long-life Acoustalloy diophrogm and high officient mag. netic structure ossure ultro wide ronge high fidelity response. High output level gives ex cellent signal-to-nolse patio. Omnidiractional becoming slightly directive of extromely high frequencies. Completely self-contained, slender dynamic microphone with a response of 40 15,000 cps. within 2.5 db . Special "pop-proof" head stops wind and breath blasts. Needs no auxiliory equipment. Impedance 250 ohms easily changed to 50 ohms. Has Connan XL-3 connector with $1 / 3^{\prime \prime}$ pipe threod. $1 / 9^{" \cdot} \cdot 27$ odopter supplied. Made of high tensile oluminum. Size $11^{\text {" }}$ long, $11 / 10^{\prime \prime}$ diameler. With $18-\mathrm{ft}$. broodcos type coble. Shpg. wt. $11 / 2 \mathrm{lbs}$.
List $\$ 200.00$
Electro-Volce Model 655 .........NET 117.60

## MICROPHONE STANDS AND ACCESSORIES

## ATLAS "FULL GRIP" MICROPHONE STANDS

The "full-grip" clutch mechonism and smooth-acting telescoping tube, permit fost, quiot odjustments at oll times without wear or slipping. Height odjustment from $35^{\prime \prime}$ to $64^{\prime \prime}$. Groy shrivel base gives moximum stability and includes self.leveling, shoek-absorbing base pads plus three additional "onti-tip" points located between the bose pods. Full chrome ploted tube assemblies for lifetime woor. 8ase diameter $10^{\circ}$. All models terminote in o $5 /{ }^{" \prime}-27$ throod. Shpg. wt. 9 lbs.
Allos Model MS-10C
5.88

Some as above except heavier and with tube extension to 65 . Shpg. wt 12 lbs
6.32

Allas Model MS-12C
Same as above except full chrome finish on base and lubs
7.64

ATLAS "VELVET ACTION" DESK STANDS MODEL TS-6 ADJUSTABLE
A decorative and fine appearing stand suitable for use on o banquat table. Uses "full-grip valvet action" control odjustable from $18^{\prime \prime}$ to $32^{\prime \prime}$. Full chrome finish base and tube assembly. Base diam. oter $8^{\prime \prime}$. Supplied with bose pods. 5.20 Aflos Model TS-6-Shpg. Wt. 5 lbs
5.29

MODEL DS5.5 FIXED. Some finish and warkmonship as floor models. $6^{\prime \prime}$ fixed height. 8 ase diameler $6^{\prime \prime}$. Felt base pads included
Allas Model D5.5-Shpg. wt. 2 lbs
1.76

MODEL DS-7 ADJUSTASLE, From $8^{\prime \prime}$ 10 $13^{\prime \prime}$. Uses heory duty ${ }^{\prime \prime}$ " and $1 / 0^{" ~ r u b i n g . ~}$
Atlos Model DS.7-Shpa
2.94


## SPECO "MAX-MIXER"

For odding and mixing two addifional microphones nol provided for by regular amplifier input. No complicated connections; just plus into mike lock of omplifier. Has 3 individually controlled high impedance inputs. With $\delta$-ft. cable connector and phone plug odaptor.
P13642-Shpg.wf. 21/2 lbs.
11.14

ATLAS BABY BOOM ARM Quickly and cosily aftoched to ony floor stand. Has universol swivel for adjusting and locking into position. Adjustoble for waight of any mike. Length of orm ${ }^{32}{ }^{\prime \prime}$
4.41

## ATLAS BRACKET CLAMP

 Can be used directly as microphone support, or with boby boom orm. Clamps to overhong: Ing edge of table or piono. Cnrome finish.
Aflos 8C-1-Shpg. wf. 2 lbs.
2.06


Mike Flanges, Exiension Rods For neat, inconspicuous permonent mounting on desk top, pulpit ond amoteur rigs. Fils all stondord /n $^{\prime \prime}-27$ mikes. Bose diom. eter $11 / 4^{\prime \prime} .3$ mounting holes with $1 / s^{\prime \prime}$ mountIng centers. Extension rods mole on both ends.


## MIKE ADAPTERS

Adapts special filtings to standard mike stands.
P13368-1/ "-27 female to $1 / 2^{\prime \prime}$ mole threod (RCA)
P13368-
P1336-
P13370- long, $3 /{ }^{\prime \prime \prime} \cdot 27$ male running threod.
441
P13370-4:"-27 tomale to $5 / 9^{\prime \prime-27}$ femal coupling.

## SNAP-ON

## MIKE ATTACHMENT

Atroches ony mike to ony floor stand. 2 -section ball bearing spring sleeve per. mits quick removal of oftochment. No threoding necessory. One section permonenlly fastoned to stond, other to brass. Allos SO-1............ 1. 62


ICA SHIELDED 3-WAY JACK Phosphor brance spring jock. Nickal brass shell. P13520.

984
P13522-Less shell

## FLEXIBLE GOOSENECK

## Altacher to any mike stond. Can be used where moderote odjustment

 is required. $1 /{ }^{\prime \prime}-27$ threod; mole and femole ends. Chrome finish.AMPHENOL MICROPHONE CONNECTORS
 Pollshed chrome plated bross fittings with $5 / 1^{11}-27$ threods

| Typ | Fig. | Description | Eoch |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & 75 . M C 1 F \\ & 75 . M C 1 M \\ & 75 . P C 1 M \end{aligned}$ | $\begin{aligned} & \text { A } \\ & \text { C } \\ & \text { C } \end{aligned}$ | Femole with coupling ring <br> Male. Fits above cannector <br> Male. Non-shorting, chassis mount. <br> Fits MCIF | $\begin{aligned} & .26 \\ & .21 \end{aligned}$ |
| $\begin{aligned} & \text { 75.CL.PCIM } \\ & \text { 75-MCIF.A } \end{aligned}$ | $\begin{gathered} \mathbf{D} \\ \mathbf{E} \end{gathered}$ | Fits MCIF <br> As obove, except closed circuif Angle type, femole connector cou- | . 18 |
| 75-MC1P | F | pling ring. Use with PCIM, ate. Adaplor. Connects MCIF to standord phone plug | .59 .29 |

SERIES 80. SINGLE \& DOUBLE PIN TYPES
Designed far shielded cobles, concentric lines, patch cords, photo cell leads ate. Eloments ore high dielectric block bakelite. Receptacles mount in $5 /{ }^{\prime \prime}$ " holes.


B 5 )
$c \theta$

| Type | Fig. | Descripilon | Eoch |
| :---: | :---: | :---: | :---: |
| 80 M * | 8 |  |  |
| 80F* | A | Fomale receptosle | . 42 |
| 80C* | C | Female chossis receptocle | . 26 |
| $80 \mathrm{MC2F}+$ <br> $80 \mathrm{MC2}$ M | $\hat{\mathbf{B}}$ | Female receptocle | . 52 |
| 80 PC2Ft |  | Mole conneclor | . 52 |

- Single contoct type. t Double contoct type.

SERIES 91. THREE \& FOUR CONTACT CONNECTORS
Polorized shells. Posilive serew-type connection. Clamp grips cable securely offer ossembly, eliminaling pulling, ond twisting strain on sodered contocts.

| Type | Fig. | Description | Eoch |
| :---: | :---: | :---: | :---: |
| 91 MC3M* <br> 91MC3F* <br> 91 PC3F* <br> 91 MC4M <br> 91 MC4F <br> 91PC4Ft | $\begin{aligned} & A \\ & B \\ & C \\ & A \\ & B \\ & C \end{aligned}$ | Male connector <br> Female receptocle <br> Femole chossis receptacle <br> Mole connector <br> Female receptocle <br> Famal chassis receptocle | .65 .65 .32 .71 .71 .35 |

## CANNON TYPE XL CONNECTORS

For mikes, PA systems, radio equipment and electrical installations requiring up to 3 wires and 15 omps. copocity. Latchlock dovice permits easy ond positive insertions and ramoval. 'Zinc shells. tsteel
,


| $\begin{aligned} & \text { Type } \\ & \text { xL-3-12: } \\ & \mathrm{XL}_{2}-3.11 * \end{aligned}$ |  | Mescription Male (pin insert) Female (socket Insert) | Eoch .88 .91 |
| :---: | :---: | :---: | :---: |
| CLAMP TYPE PLUGS |  |  |  |
| $\begin{aligned} & \mathrm{XL-3-12SC} \mathrm{\uparrow} \\ & \mathrm{XL}-3-115 C \uparrow \end{aligned}$ | 4 4 | Male (pin insert) <br> Femole (socket insert) | 1.97 2.00 |
| WALL RECEPTACLE |  |  |  |
| $\begin{aligned} & \mathrm{XL}-3-14 * \\ & \mathrm{XL}-3-13 * \end{aligned}$ | 2 | Male (pin insert) <br> Female (socket Insert) | . 71 |
| PANEL RECEPTACLE |  |  |  |
| $\begin{aligned} & \text { XL.3-14N*** } \\ & \text { XL-3-13N } \end{aligned}$ | 3 3 | Mole (pln Insert) <br> Female (iocket insert) | . 85 |



## MICROPHONE DUST COVER

Keops dust, grif ond moisture from working parts. Permits use of sensitive mikes in windy oreas. Reproduction is $95 \%$ truw with the cover in place.
P13450.

## STANDARD DRY BATTERIES

or radio，laboratory or industrial use．Suftix letters of battery number crowe typer of terminals．Pl－Plug－in；SC－Spring Clip．All others hav at $3,4 \% 16$ and $221 / 4$ volts．ORDER BY MAKE AND TYPE Nolta；it tapped

| Burgess Type | $\begin{aligned} & \text { RCA } \\ & \text { Type } \end{aligned}$ | Volts | Size Inches | Shpg．  <br> Wi． Std． <br> Lbs． Pkg． |  | Not Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | $\begin{array}{l\|l} \hline \text { Sgle. } & \text { Sid. } \\ \text { Lots } & \text { Pkg. } . \end{array}$ |

## 5156PIf

$5156 S$
4156
4156
21308 $21308 \mathrm{PI}+$ $21308 \mathrm{SC} \dagger$
$10308 \mathrm{PI} \dagger$ $10308 \mathrm{PIt}+$ 2308PIt $\dagger$ 2308 231 $\dagger$ 2308 SC $\dagger$ W30BPX W30BP Z30BP
Z20NX
Z60BP

## vsi3i

VS131
VS 102
VSisiz
VS027
VS027
VS127
VSO26
VS126
VSI12
VS112

## ＂B＂BATTERIES

| 22312 | $41 / 82^{3} 8 \times 2^{3} / 4$ | 2 | 10 | 1.58 | 1.44 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $221 / 2$ | $416 \times 21 / 2 \times 21 /$ | 2 | 5 | 1.58 | 1.44 |
| $221 / 2$ |  | 1 | 5 | 1.53 | 1.39 |
| 45 |  | 15 | 6 | 3.61 | 3.28 |
| 45 | $8.6 \times 411 / 4{ }^{101} / 2$ | 15 | 6 | 3.61 | 3.28 |
| 45 | 81 | 13 | 6 | 3.48 | 3.16 |
| 45 | $816 \times 4!6 \times 7 \frac{14}{4}$ | 13 | 6 | 3.48 | 3.16 |
| 45 | $81.02^{91}$ |  | 6 | 2.85 | 2.32 |
| 45 |  | 8 | 6 | 2.55 | 2.32 |
| 45 | $41 / 1821 \% \times 5$ | 31 | 5 | 1.97 | 1.79 |
| 45 |  |  | 6 | 2.01 | 1.83 |
| 45 | $3^{11 / 46 \times 211 / 8 \times 37 / 4}$ | 13 | 6 | 3.43 | 3.12 |
| 45 | $31 / 6 \times 1764196^{\prime \prime}$ |  | 5 | 2.22 | 2.02 |
| 30 | 3\％$\times 211$ | 2， | 6 | 6.49 | 5.90 | | 5360 |
| :--- |
| 2370 PL |
| 2370 BP |

＂C＂BATTERIES


GEIGER COUNTER BATTERY
U200


## FLASHLIGHT CELLS



PORTABLE＂A＂AND＂B＂COMBINATION PACKS

| Burgess Type | $\begin{aligned} & \text { RCA } \\ & \text { Type } \end{aligned}$ | Volts | Size Inches | Shpg wt． Lbs． | Not Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2 \mathrm{TXX40}$ |  | 11／2／60 | $2^{2196 \pi} 114631 / 2$ | 2 | 2.31 |
| 4GA42 | $\checkmark \mathrm{SOS}^{2}$ | $11 / 2 / 63$ | $9 \times 2 \times 491$ |  | 3.14 |
| 5DA60 <br> 17GD60 | $\begin{aligned} & \text { VSO } 43 \\ & \text { VSO22 } \end{aligned}$ | $11 / 290$ 1.290 | 596x $11 / 10 \times 6$ \％ | 5 | 3.90 |
| 6TA60 | VS054 | 1：2，90 | $10.2104 \times 4 \times 14$ |  | 5.21 |
| F4A50 |  | 6，75 | 91砍 11 | 5 | 4.05 3.86 |
| F4AG0 |  | 6190 | $8{ }^{10} / 6 \times 2^{10} 9 \times 4^{11}$／ | 5 | 4.20 |
| T5250 | Vsoso | 6． $71 / 275$ | $81 / 6 \times 3^{11} 6 \times 2116$ | 4 | 3.68 |
| G5A42 | V5038 | $71 / 2163$ | 9 91x 213 亿x41\％ |  | 3.15 |
| T6260 |  | 719190 |  | 4 | 4.03 |
| F6A60 | Vsol9 | 7． 9190 | 9 yx 24 4 | 6 | 3.96 |
| T6260 | $\checkmark 5057$ | 7\％39190 | 10／6x ${ }^{1 / 4} \times 9 \times 4 \times 13$ | 7 | 4.17 4 |
| G6E63 | VS047 | $9190{ }^{\text {9／90 }}$ |  |  | 4.03 4.38 |
| F6A60P | vS058 | $9 / 90$ | $9^{8} 1 \times x^{23} 8 \times 4^{23}$ |  | 4．14 |

## PORTABLE＂A＂BATTERIES

| Burgess Type | $\begin{aligned} & \text { RCA } \\ & \text { Type } \end{aligned}$ | Volts | Stzo Inches | Shpg Wt． Lbs． | Std． Plg． | Net Each |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Sqle． Lots | Std． Pkg． |
| 2D |  | 1421 | 2\％炛190830 | \％1 | 12 | 43 | 9 |
| 2 F |  | 11 |  | 1 | 1 | 4 | ． 52 |
| 4 F | VSOO4 | 112 | $28 / 1025 / 541 / 4$ | 2 | 6 | ． 81 | ． 74 |
| ${ }_{6}^{2 R}$ | vS036 | 114 |  | 4 Oz | 48 | ． 09 | ． 08 |
| 4FL | vS005 | 135 |  | 3 | 3 | 1.16 | 1.05 |
| $8 F$ |  | $11 / 2$ |  | 136 | 1 | 151 | ． 71 |
| D3 | VS072 | 4 | $3^{2}$ 10 110 |  |  |  | 1.37 |
| F3 | VS067 | 4 |  | 1 | 6 | ． 54 | ． 49 |
| G3 |  | 415 | $4 \times 1313 \times 41646$ | $2^{3 / 2}$ | 6 | ． 63 | ． 57 |
| F4PI | V5009 | 6 | $4 \times 5 \times 24 / 8 \times 4$ | 2 | 6 | ． 69 | ． 73 |
| 2 F 4 L | VSO1 | 6 |  | 2 | 2 | 1.54 | 1.40 |
| 24 | $\checkmark$ V068 | 6 |  | 1／2 | 12 | ． 46 | ． 42 |
| B5 | VS129 | 711 |  | ， | 6 | ． 77 | ． 70 |
| C5 | V 5065 | 76 |  | ． 13 | 6 | ． 77 | ． 70 |
| T5 | ．．．．．．． | 74 |  | 11 | 3 | 1.08 | ． 96 |

PORTABLE＂B＂BATTERIES

| A30 | VSO14 | 45 | 39，$\times 216 \times 45$ | 3 | 2 | 1.88 | 1.71 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B30 | VSO13 | 45 45 | $41 / 8 \times 210.4051 / 6$ | 3 | 2 | 1.88 | 1.71 |
| W30P！ |  | 45 45 | $2^{310} \times 117 \times 5$ |  |  | 1.74 | 1.58 |
| 230 | vsois | 45 | $33,0 \times 2$ \％ $1 / 4 \times 40$ | $2^{1 / 2}$ | $6$ | 2.11 | 1.92 2.00 |
| XX30 | VS | 45 | $217 / 4 x^{1 / 6 x} 33$ | 3／4 | 2 | 1.62 | 1.48 |
| K45 |  | 6712 | $2910 \times 1 \% \times 2{ }^{2} / 6$ | $1 / 2$ | 6 | 1.93 | 1.75 |
| XX45 | VS016 | 67 ／2 |  |  | 6 | 1.93 | 1.75 |
| N60 $\times \times 69$ | VS090 | 90 |  | $11 / 8$ | － | 2.51 | 2.28 |
| XX69 | ．．．．． | 103\} |  | 114． | 6 | 3.74 | 3.40 |

## IGNITION－LANTERN－TELEPHONE BATTERIES

| Burgess Type | $\begin{aligned} & \text { RCA } \\ & \text { Type } \end{aligned}$ | Volts | $\begin{aligned} & \text { Size } \\ & \text { Inches } \end{aligned}$ | Shpg Wt． Lbs． | Std． Pkg | Not Each |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Sale Lots | $\begin{aligned} & \hline \text { Std. } \\ & \text { Pkg. } \end{aligned}$ |
| 6 |  | $13 / 2$ | 61／221／4 diam | 13／61 | 12 | ． 53 |  |
| 4FH | VS106 |  | $2910 \times 296 x^{1 / 6}$ |  |  |  | ． 53 |
| 4 F 2 H <br> $4 \mathrm{~F}_{4} \mathrm{H}$ | VS138 |  | $210 \times 31965$ | $3^{1 / 2}$ | 8 | 1.13 | 1.03 |
| ${ }_{\text {F }}^{4 \mathrm{~F}} 4 \mathrm{H}$ |  |  | $23 \times 8 \times 2$ | 13 | 6 12 | 1.32 .59 | 2.29 |
| 4FSH | vS139 | 7 H |  |  | 12 |  | $\underline{.54}$ |
| 4F6H | VS140 | 9 |  | $91 / 2$ | 4 | 3.19 3.74 | 2.90 3.40 |

## BATTERIES FOR HEARING AIDS

| Burgess Iype | $\begin{aligned} & \text { RCA } \\ & \text { Type } \end{aligned}$ | Volts | Size Inches | Shpg Lbs． | Std． <br> Pkg． | Not Each |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Sgle． |  |



| U1OE <br> U15E <br> U20E <br> $\mathrm{XX22E}$ $\times \times 30 \mathrm{E}$ <br> XX30E |  | 15 $221 / 2$ 30 33 45 |  | 2 2 3 7 7 7 | 24 24 24 24 24 | .72 .87 1.06 1.35 1.54 | .65 .78 .96 1.23 1.40 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |



MALLORY GRID BIAS CELLS AND CLIPS
Used to blas Class A sudio tubes（or Intitial source of blas RF．IF and AVC）．Use in sertes for higher
voltage． voltage．



In Lots of 100 Assorted
Deduct an Additional 5\%

| TYPE | LIST | NET | TYPE | LIST | NET | TYPE | LIST | NET | TYPE | LIST | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 2 AS | 2.20 | 1.16 | 6BL7GT | 2.90 | 1,53 | 6T7G/6Q6G | 3.20 | 1.65 |
| 0 A2 | 3.20 | 1.65 | $2 A 6$ | 2.65 | 1.40 | 6BNG | 3.20 | 1.69 | 678 | 2.90 | 1.53 |
| OA3/VR75 | 2.65 2.90 | 1.32 1.45 | $2 A 6$ | 2.65 | 1.40 | 6B96GT | 3.20 | 1.69 | GUS/GGS | 2.00 | 1.06 |
| ${ }_{0} 082$ | 2.90 3.55 | 1285 | 2A7 | 3.20 | 1.69 | 6BY5G | 2.65 | 1.40 | 6U6GT | 2.20 | 1.16 |
| 083/VR90 | 3.20 | 1.65 | 2 E5 | 2.65 | 1.40 | 6 C 4 | 1.65 | . 87 | 6U7G | 2.20 | 1.16 |
| OC3/VR105 | 2.65 | 132 | 2V3G | 5.25 | 2.93 | 6 CS | 1.65 | . 87 | GV6 | 3.20 | 1.69 |
| 003/VR150 | 2.65 | 132 | 2×2A | 4.35 | 2.05 | 6 CSGT | 1.65 | 116 | GMAGT | 1.80 | 1.06 |
| 0Y4 | 4.80 | 2.54 | 3A8GT | 4.80 | 2.54 | $6 \mathrm{C6}$ | 2.20 | 1.69 | 6W6GT | 2.20 | . 1.16 |
| 024 | 1.65 | . 87 | $387 / 1291$ | 2.65 | 1.40 | 6 CBG $6 \mathrm{CB6}$ | 3.20 2.00 | 1.06 | 6W7G | 2.65 | 1.16 1.40 |
| 024A |  | 1.20 | $3 \mathrm{C} / \mathrm{S}^{\text {K }} \times 1$ | 3.20 | 1.69 | 6CB6 | 2.00 |  |  |  |  |
| 024G | 1.65 | . 87 | 3D6/1299 | 2.65 | 1.40 | 6CD6G | 6.00 | 3.18 | $6 \times 4$ | 1.50 | . 79 |
| 143 | 2.20 | 1.16 | 3E5 | 2.20 | 1.16 | $6{ }^{6} 6$ | 2.20 | 1.16 | $6 \times 5$ | 2.65 | 1.40 |
| 1A4P | 3.90 | 2.06 | 3 E 6 | 2.65 | 1.40 | 608G | 3.20 | 1.69 | 6X5GT | 2.50 | 1.79 |
| 145 GT | 1.80 | . 95 | 3LF4 | 2.65 | 140 | 6 6F5 | 1.85 | 1.87 | 627 G | 3.90 | 2.06 |
| 146 | 3.20 | 1.69 | 304 | 2.20 2.40 | 127 | 6FSGT | 1.65 | . 87 | 6ZY5G | 2.20 | 1.16 |
| 1A7GT | 2.20 | 1.16 | $3056 T$ | 2.40 2.00 | $\underline{2106}$ | 6F6 | 2.00 | 2.06 | 7A4/XXL | 2.00 | 1.06 |
| 1485 | 3.20 | 169 | 354 $3 V 4$ | 2.00 2.00 | 1.06 | 6F6G | 1.65 | . 87 | $745 \times$ | 2.20 | 1.16 |
| $1 A C 5$ | 2.20 | 1.16 | 3V4 54 | 1.05 | 1.06 | ${ }_{6 F 6 G T}$ | 1.65 | . 87 | 7 7A6 | 1.80 | . 95 |
| 1ADS 1AF4 | 2.20 2.20 | 1.16 1.16 | 5AZ4 5 T 4 | 1.35 4.80 | 2.54 | $6 F 67$ $6 F 7$ | 3.20 | 1.69 | $7 A 7$ | 1.80 | . 95 |
| 1AF4 | 2.20 | 1.16 |  |  |  |  |  |  |  |  |  |
| 1AF5 | 2.20 | 1.16 | 5U4G | 1.50 | . 79 | 6F8G | 3.20 | 1269 | 7 A8 <br> 7AD7 | 1.80 3.20 | +.95 |
| 183GT/8016 | 2.65 | 1.40 | 5 V 4 G | 2.40 | 1.27 | 6G6G | 2.65 1.65 | $\underline{.87}$ | 7A以7 | 1.80 | 1.95 |
| 184P | 3.90 | 2.06 | 5W4 | 1.65 | . 87 | CH6 CH6 6 | 1.65 1.80 | . 95 | $7 A G 7$ | 2.20 | 1.15 |
| 185/25S | 3.20 | 1.69 | 5W4GT $5 \times 4 \mathrm{C}$ | 1.65 | . 87 | 6H6GT | 1.80 | . 79 | 7AH7 | 2.20 | 115 |
| 187GT | 3.20 . | 1.69 | $5 \times 4 \mathrm{G}$ | 1.80 | . 95 | 6.j5GT | 1.50 | . 79 | 7AJ7 | 2.20 | 1.15 |
| 1 C 3 | 2.65 | 1.40 | 5Y3G | 11.35 | . 71 | 6.56 | 2.65 | 1.40 | 784 | 1.80 | . 95 |
| $1 \mathrm{C5GT}$ | 2.20 | 1.16 | 5 5 3 GT | 1.05 | .79 | 637 | 2.00 | 1.06 | 785 | 1.80 | . 95 |
| $1 \mathrm{C6}$ | 3.20 | 1.69 | ${ }_{5}^{574}$ | 1.65 | . 87 | 6.77 G | 2.20 | 1.16 | 786 | 1.80 | . 95 |
| $1 \mathrm{C7G}$ | 3.20 2.65 | 1.69 1.40 | 523 524 | 1.65 2.65 | .87 1.40 | 6J7G | 2.20 | 1.16 | 787 | 1.80 | . 95 |
| 1C8 | 2.65 | 1.40 | 524 |  |  |  |  |  |  |  |  |
| 1DSGP | 3.90 | 2.06 | 6 A3 | 3.20 | 1.69 | 6J8G | 3.20 | 1.69 | 788 | 1.80 3.20 | . 9.65 |
| 107G | 3.20 | 1.69 | 6A4/LA | 3.20 | 1.69 | 6K5GT | 2.40 | 1.27 | $7 \mathrm{7C4}$ | 1.80 | 1.69 |
| 108GT | 3.90 | 2.06 | 6A5G | 3.90 | 2.06 | 6K6GT | 1.50 | .79 | $7 \mathrm{7c6}$ | 1.80 | . 96 |
| 1E5GP | 3.90 | 2.06 | 6 6. 6 | 2.65 | 1.40 | ${ }_{6 K 7} 6 \times 1$ | 1.80 2.20 | 1.16 | $7 \mathrm{C7}$ | 1.80 | . 96 |
| 1E7GT | 3.90 | 2.06 | 647 | 2.20 | 1.16 | 6K7G | 2.20 2.20 | 1.16 | 7E5/1201 | 2.85 | 1.40 |
| 1 E 8 | 2.20 | 1.16 | 648 | 2.20 | 1.16 | 6K7GT | 2.20 2.65 | 1.16 | 7 lE 7 71201 | 2.65 | 1.16 |
| 1 1F4 | 2.65 | 1.40 | 6A8G | 2.20 | 1.16 | 6K88 | 3.20 | 1.69 | 7 F 7 | 2.65 | 1.40 |
| 1F5G | 2.65 | 2.40 | 6A8GT | 2.20 | 1.16 | 6K8GT | 2.40 | 1.27 | 757 | 2.20 | 1.16 |
| 1F6 | 3.90 | 2.06 | 6AB4 cme | 2.00 2.65 | 1.06 1.40 | 6K8GT | 2.65 | 1.40 | 758 | 3.20 | 1.69 |
| 1F7G | 3.90 | 2.06 | 6AB5/6N5 | 2.65 | 2.40 | 6L5G |  |  |  |  |  |
|  |  | 1.27 | 6AB7/1853 | 3.20 | 1.69 | 6L6 | 3.55 | 1.88 | 767/1232 | 2.65 | 1.40 |
| $1 \mathrm{G} \mathrm{C}^{\text {1/ }}$ | 2.90 | 1.53 | 6ACSGT | 2.90 | 1.53 | 6L6G | 3.20 | 1.69 | $7 \mathrm{H7}$ | 2.00 | 2.06 |
| $1 \mathrm{G6GT}$ | 2.65 | 1.40 | 6AC7/1852 | 2.90 | 1.53 | 6L6GA | 3.20 | 1.69 | 717 | 2.65 | 1.40 |
| 1H4G | 2.20 | 2.16 | 6AD7G | 3.20 | 1.69 | 6 L 7 | 2.40 | 1.27 | $7 K 7$ | 2.65 | 1.40 |
| 1H5GT | 1.65 | . 87 | 6AF6G | 2.65 | 1.40 | 6L7G | 3.20 | 1.69 | 7 L | 2.65 | 1.40 |
| 1H6G | 3.20 | 1.69 | 6AG5 | 2.40 | 1.27 | 6N6G | 3.90 | 2.06 | 7N7 | 2.20 | 1.16 |
| 1H6GT | 3.20 | 1.69 | 6 6G7 | 3.20 | 1.69 | 6N7 | 2.40 | 1.27 | 797 | 2.00 | 1.66 |
| LUGG | 2.90 | 1.53 | 6AH6 | 3.90 | 2.06 | 6N7G | 2.40 | 127 | 7 7 7 | 2.20 | 1.16 |
| 1]GGT | 3.20 | 1.69 | 6A. 5 |  | 3.50 | 6N7GT GP5GT | 2.40 2.40 | 127 | 757 $7 V 7$ | 2.65 2.65 | 1.40 1.40 |
| 1 L 4 | 2.00 | 1.06 | 6AK5 | 3.90 | 2.06 | 6PSGT | 2.40 | 1.27 | 7 7 |  |  |
| 126 | 2.65 | 1.40 | 6AK6 | 2.20 | 1.16 | 697 | 2.00 | 1.06 | 7W7 | 2.65 | 2.40 |
| $1 \mathrm{LA4}$ | 265 | 1.40 | 6AL5 | 1.80 | . 95 | 6076 | 1.80 | . 95 | 7X6 | 2.20 | 1.16 |
| 1LA6 | 2.65 | 1.40 | 6AL7GT | 2.65 | 1.40 | 6a7GT | 1.80 | . 95 | 7K7/XXFM | 2.65 | 1.45 |
| 1LB4 | 2.65 | 1.40 | 6AQ5 | 2.00 | 1.06 | $6 \mathrm{R7}$ | 2.65 | 1.40 | $7 Y 4$ | 1.80 | . 95 |
| 1LC5 | 2.65 | 1.40 | 6AQ6 | 1.80 | . 95 | 6R7GT | 2.65 | 1.40 | 724 | 1.80 | . 95 |
| 1LC6 | 2.65 | 1.40 | 6AQ7GT | 2.40 | 1.27 | 654 | 1.80 | . 95 | 10 | 3.90 | 2.06 |
| 1LD5 | 2.65 | 1.40 | GAR5 | 1.65 | . 87 | 657 | 2.65 | 1.40 | 10Y | 3.90 | 2.06 |
| 1LE3 | 265 | 1.40 | 6AS5 | 2.00 | 1.06 | 657G | 3.20 | 1.69 | 12A6 | 2.90 | 1.45 |
| 1LG5 | 2.65 | 1.40 | 6AS6 | . | 3.65 | 658GT | 2.65 1.85 | 1.40 | 12A6GT | 2.90 3.20 | 1.53 1.69 |
| 1LH4 | 2.65 | 1.40 | 6AS7G | - | 4.53 | 65 A7 | 1.65 | . 87 | 12A7 | 3.20 | 1.69 |
| 1LN5 | 2.65 | 1.40 | 6AT6 | 1.50 | . 79 | 6SA7GT | 1.80 | . 95 | 12A8GT | 2.20 | 116 |
| 1NSGT | 2.00 | 1.06 | 6AUSGT | 2.65 | 1.40 | 6SB7Y | 2.40 | 1.27 | 12AH7GT | 2.85 | 1.40 |
| 1P5GT | 2.65 | 1.40 | 6AU6 | 2.00 | 1.06 | 6SC7 | 2.00 | 106 | 12AL5 | 1.80 | . 95 |
| 195GT | 2.65 | 1.40 | 6AV5GT | 2.65 | 1.40 | 6SD7GT | 2.90 | 1.53 | 12AT6 | 1.50 | . 79 |
| 106 | 2.65 | 1.40 | 6AVG | 1.50 | . 79 | 6SFS | 1.65 | . 87 | 12AT7 | 2.90 | 1.53 |
| 1R4/1294 | 2.65 | 1.40 | 6AX5GT | 1.65 | . 87 | 6SFSGT | 1.80 | . 95 | 12AU6 | 2.00 | 1.06 |
| 1 R5 | 2.00 | 1.06 | $6 \mathrm{B4}$ G | 3.20 | 1.69 | $65 \mathrm{F7}$ | 2.00 | 1.06 | 12A ${ }^{12}$ | 2.40 | 1.27 |
| 154 | 2.20 | 1.16 | 685 | 3.20 | 1.69 | 6SG7 | 2.00 | 1.06 | 12AV6 | 1.50 | .79 |
| 155 | 1.80 | . 95 | 6B6G | 2.00 | 1.06 | 6SH7 | 2.20 | 2.16 | 12AV7 | 2.90 | 1.53 |
| 174 | 2.00 | 1.06 | $6 \mathrm{B7}$ | 3.20 | 1.69 | 6SH7GT | 2.20 | 1.16 | 12AW6 | 2.40 | 1.27 |
| 1T5GT | 2.40 | 1.27 | 688 | 3.20 | 1.69 | 6517 | 1.65 | . 87 | 12AX7 | 2.40 | 2.27 |
| 176 | 2.20 | 116 | 688G | 3.20 | 1.69 | 6SJ7GT | 1.65 | . 87 | 12AY7 | 6.00 | 3.18 |
| 104 | 2.00 | 1.06 | 6BA6 | 1.80 | . 95 | $65 \mathrm{K7}$ | 1.65 | . 87 | 128A6 | 1.80 | . 95 |
| $1{ }^{1} 5$ | 1.80 | . 95 | 6847 | 2.40 | 1.27 | 6SK7GT | 1.80 | . 95 | 12847 | 2.40 | 1.27 |
| 106 | 2.20 | 1.16 | 68 CS | 2.00 | 1.06 | 6SL7GT | 2.40 | 1.27 | 128D6 | 2.00 | 2.06 |
| IV | 2.20 | 1.16 | $68 \mathrm{C7}$ | 2.20 | 1.16 | 6SN7GT | 2.20 | 1.16 | 128E6 | 1.80 | . 95 |
| 1V2 | 1.50 | . 79 | 6BD5GT | 3.20 | 1.69 | 6S97 | 1.50 | . 79 | 12BF6 | 1.65 | - 87 |
| 1V5 | 2.65 | 1.40 | 6BD6 | 2.00 | 2.06 | 6Sa7GT | 1.50 | . 79 | $12 \mathrm{BH7}$ 12 BNG | 2.40 2.90 | 1.27 1.53 |
| 1 W4 | 2.65 | 140 | 6BE6 | 1.80 | . 95 | GSR7 | 1.80 1.80 | .95 | 12 BNG 12 BT | 2.90 1.50 | 1.53 .79 |
| 1 W5 | 2.65 | 1.40 | 68F5 | 2.20 | 1.16 | GSR7GT | 1.80 | . 95 | 12BT6 | 1.50 | . 79 |
| $1 \times 2$ | 2.65 | 1.40 | 68F6 | 1.85 | . 87 | 6557 | 2.00 | 106 | $12 \mathrm{C8}$ | 3.20 | 1.59 |
| 1×2A | 2.65 | 1.40 | GBG6G | 4.80 | 2.54 | 6ST7 | 2.65 | 240 | 12F5GT | 1.80 | . 35 |
| 2A3 | 3.20 | 1.69 | 68H6 | 2.00 | 1.06 | 6SV7 | 2.90 | 1.53 | 12H6 | 1.80 | . 95 |
| 2A4G | 4.80 | 2.54 | 6BJ6 | 2.00 | 1.06 | 6527 | 2.20 | 1.16 | $12 / 5$ | 1.50 | . 79 |


| TYPE | LIST | NET | TYPE | LIST | NET | TYPE | LIST | NET | TYPE | LIST | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1215GT | 1.30 | 79 | $14 E 6$ | 2.20 | 1.16 | 28D7 | - | 1.80 | 50L6GT | 1.65 | 87 |
| $12 \mathrm{P7GT}$ | 2.20 | 1.16 | $14 E 7$ | 2.65 | 1.40 | 30 | 2.20 | 1.16 | 50×6 | 2.20 | 1.16 |
| 12K7G | 2.20 | 1.16 | 14F7 | 2.20 | 1.16 | 31 | 2.65 | 1.40 | $50 \times 6 \mathrm{G}$ | 1.80 | . 95 |
| 12K7GT | 2.20 | 1.16 | 14 F 8 | 3.20 | 1.69 | 32 | 3.55 | 1.88 | 50Y6GT | 1.80 | . 95 |
| 12 K 8 | 2.65 | 1.40 | 14H7 | 2.40 | 1.27 | 32L7GT | 3.20 | 1.69 | 50 Y7GT | 2.00 | 2.06 |
| 12K8GT | 2.65 | 1.40 | 14.17 | 2.65 | 1.40 | 33 | 3.20 | 1.69 | 53 | 2.65 | 1.40 |
| 12L8GT |  | 2.25 | $14 N 7$ | 2.65 | 2.40 | 34 | 3.55 | 1.88 | 55 | 2.20 | 1.16 |
| 1297GT | 1.80 | . 95 | 1497 | 2.20 | 1.16 | 35/51 | 2.20 | 1.16 | 56 | 1.80 | . 95 |
| 12S8GT | 2.65 . | 1.40 | $14 \mathrm{R7}$ | 2.65 | 1.40 | $35 A 5$ | 1.80 | . 95 | 57 | 2.00 | 1.06 |
| 12547 | 1.65 | . 87 | 1457 | 2.65 | 1.40 | 3585 | 2.00 | 2.06 | 58 | 2.00 | 1.06 |
| 12SA7GT | 1.80 | . 95 | $14 \mathrm{W7}$ | 2.65 | 1.40 | 35 C 5 | 2.00 | 1.06 | 59 | 3.55 | 1.88 |
| $12 \mathrm{SC7}$ | 2.20 | 1.16 | $14 \times 7$ | 2.65 | 1.40 | 35L6GT | 1.65 | . 87 | 70L7GT | 3.90 | 2.06 |
| 12SF5 | 1.80 | . 95 | 14 Y 4 | 2.40 | 1.27 | $35 \mathrm{~W} / 4$ | 1.25 | . 66 | 714 | 2.40 | 1.27 |
| 12SFSGT | 2.00 | 106 | 19 | 3.20 | 1.69 | 35 Y 4 | 1.80 | . 95 | 75 | 1.65 | . 87 |
| 12SF7 | 2.00 | 1.06 | 198G6G | 6.00 | 3.18 | 3523 | 1.80 | . 95 | 76 | 1.65 | . 87 |
| 12SG7 | 2.00 | 1.06 | 19 C 8 | 3.20 | 1.69 | 3524GT | 1.50 | . 79 | 77 | 2.00 | 1.06 |
| $12 \mathrm{SH7}$ | 2.20 | 1.16 | 1936 | 3.20 | 1.69 | 3525 GT | 1.25 | . 65 | 78 | 2.00 | 1.06 |
| 12SJ7 | 1.65 | . 87 | 19 T 8 | 2.90 | 1.53 | 3526 G | 2.20 | 1.16 | 79 | 2.65 | 1.40 |
| 12SJ7GT | 1.65 | . 87 | 22 | 3.20 | 1.69 | 36 | 2.65 | 1.40 | 80 | 1.35 | . 71 |
| $125 \times 7$ | 1.65 | . 87 | 24A | 2.20 | 1.16 | 37 | 1.80 | . 95 | 81 | 4.80 | 2.54 |
| 12SK7GT | 1.80 | . 95 | 2546 | 3.20 | 1.69 | 38 | 2.20 | 1.16 | 82 | 2.65 | 1.40 |
| 12SL7GT | 2.40 | 1.27 | 25A6G | 2.65 | 1.40 | 39/44 | 2.65 | 1.40 | 83 | 2.65 | 1.40 |
| 12SN7GT | 2.20 | 1.16 | 25A7GT |  | 4.00 |  | 2.00 | 1.06 | 83 V | 3.20 | 1.69 |
| 12597 | 1.50 | . 79 | 25AC5GT | 2.90 | 1.53 | 42 | 2.00 | 1.06 | 84/624 | 1.80 | . 95 |
| $12507 G T$ | 1.50 | . 79 | 25AV5GT | 2.65 | 1.40 | 43 | 2.00 | 1.06 | 85 | 2.20 | 216 |
| 12SR7 $12 S R 7 \mathrm{GT}$ | 2.00 2.20 | 2.06 | 25886 CT $25 \mathrm{C6G}$ | 3.20 2.00 | 269 | 45 | 2.00 | 1.06 | 89 | 2.20 3.25 | 1.16 |
| ${ }_{1273}^{12 S R 7 G T}$ | 2.20 2.40 | 1.16 | 25 C 6 G | 2.90 | 1.53 | 4523 | 1.80 | . 95 | $\checkmark 99$ | 3.55 | 1.88 |
| 1273 | 2.40 2.65 | 1.27 1.40 | ${ }^{25 L 6}$ 25L6T | 3.20 | 2.69 | 4525GT | 1.80 | . 95 | $\times 99$ | 3.55 | 1.88 |
| 14.4 1445 | 2.65 3.90 | 1.40 2.06 | 25L6GT | 1.65 2.00 | .87 1.06 | 46 | 2.90 2.90 | 153 | 117L7/M7GT | 3.90 | 2.06 |
| 14A7/12B7 | 2.20 | 1.16 | 25Y5 | 2.90 | 1.53 | 49 |  |  |  |  | 2.06 |
|  |  |  |  |  |  |  | 2.65 | 1.40 | 117P7GT | 3.90 |  |
| 14AF7/XXD | 2.40 | 1.27 | 2575 | 1.65 | . 87 | 50 | 8.00 | 3.18 | 11723 | 1.50 | 2.79 |
| 1486 | 2.20 | 2.16 | 2526 | 2.20 | 1.16 | 50A5 | 2.20 | 1.16 | 11724 GT | 2.90 | 1.53 |
| 1488 | 2.20 | 1.16 | 2526GT | 1.50 | . 79 | 5085 | 2.00 | 1.06 | 11726GT | 2.40 | 1.27 |
| 14 C 5 | 2.65 | 1.40 | 26 | 2.00 | 1.06 | $50 \mathrm{C5}$ | 2.00 | 1.06 | FM1000 | 3.20 | 1.69 |
| $14 \mathrm{C7}$ | 2.40 | 1.27 | 27 | 1.80 | . 95 | 50C6G | 2.90 | 1.53 |  |  |  |



| TYPE | LIST | NET | TYPE LIST | NET | TYPE LIST | NET | TYPE | LIST | NET | TYPE | LIST | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | RCA |  | RCA |  | GE |  |  | ANTA |  |  | ANIA |  |
| 3KP4 | 20.00 | 15.00 | 19AP4A ${ }^{\text {a }}$ ( 60.00 | 45.00 | 16MP4A 51.00 | 38.20 | 12KP4 | 41.70 | 31.30 |  |  |  |
| 5TP4 7084 | 60.00 31.50 | 45.00 26.20 | $\begin{array}{ll}19 A P 4 B+ & 60.00 \\ 19 A P 4 D+ & 60.00\end{array}$ | 45.00 | $\begin{array}{ll}178 P 4 A * & 36.50 \\ 17 \mathrm{CP} \text { * }^{\text {1 }} & 35.35\end{array}$ | 27.25 | 12MP4A | 41.70 | 31.30 | 19AP48* | 60.00 54.75 | $\begin{array}{r} 45.00 \\ 41.00 \end{array}$ |
| 71PP4 | 31.50 | 26.20 | 19AP4Dt 60.00 | 45.00 |  | 26.50 | 12LP4 | 35.00 | 26.25 | 20CP4* $20 \mathrm{CPA}^{\text {a }}$ | $54.75$ $54.78$ | $\begin{aligned} & 41.00 \\ & 41.00 \end{aligned}$ |
| $7 J P 4$ | 25.00 | 18.75 | 20CP4* 54.75 | 41.00 | 178P48* 42.50 | 31.75 | 12.P4A* | 35.00 | 26.25 | 200P4A* |  | $\begin{aligned} & 41.00 \\ & 41.00 \end{aligned}$ |
| 108P4A | 30.00 | 23.00 | 21AP4t 56.75 | 42.50 | 17FP4A* 37.25 | 28.00 | 12VP4 | 35.00 | 26.25 | 21EP4A | $57.75$ | 41.00 43.25 |
| 10 FPQA $12 \mathrm{KP4A}$ | 39.30 | 29.50 | GE |  |  | 27.25 | 12VP4A* | 35.00 | 26.25 | DUMONT |  |  |
| 12KP4A* | 41.70 | 31.30 | 5TP4 60.00 | 45.00 | 17VP4* 36.50 | 27.25 | 14CP4* | 35.00 | 26.25 |  |  |  |
| $14 \mathrm{CP4}$ * | 35.00 | 26.25 | 8AP4A $\quad 24.20$ | 18.75 18.15 | $\begin{array}{ll}19 A P 4 A T & 60.00 \\ 19 A P 48 & 80.00\end{array}$ | 45.00 | 16AP4t | 50.00 | 38.00 | 12LP4A* | 35.00 | 26.25 |
| 14EP4* | 35.00 | 26.25 | 108P4A* 30.00 | 23.50 | 20CP4 * 54.50 | 41.00 | 16GP4* | 50.00 40.00 | 38.00 30.00 | 14CP4* | 35.00 | 26.25 |
| 16AP4A* $\dagger$ | 50.00 | 38.00 | 10FP4 36.50 | 27.25 | 20CP4A $\quad 54.50$ | 41.00 | $16.5 P^{4}$ | 40.00 51.00 | 38.00 38.20 | 16 FPA 16 TP | 37.00 37.00 | 28.00 28.00 |
| 16GP4* | 40.00 | 30.00 | 10FP4A** 36.50 | 27.25 | 20HP4AYOLP4 \% 54.50 | 41.00 | 16JP4A* | 51.00 | 38.20 | 17AP4* | 44.00 | 28.00 33.00 |
| 16GP48 ${ }^{\text {¢ }}$ + | 40.00 | 30.00 | 12MP4A $\quad 41.70$ | 31.30 | 21FP4A* ${ }^{\text {F }}$ ( 7.50 | 43.25 | 16KP4 | 37.50 | 28.00 | 17BP4A* | 44.00 37.00 | 33.00 28.00 |
| 16KP4* | 37.35 | 28.00 | 12LP4A 34.85 | 26.15 | 21LP4A* $\quad 57.50$ | 43.25 | 16LP4 | 51.00 | 38.20 | 17KP4 | 37.00 | 28.00 |
| $16 L P 4 A *$ $16 R P 4$ | 51.00 | 38.20 | 12UP4Bt 37.35 | 28.00 | 24AP4t 101.00 | 76.00 | 16LP4A* | 51.00 | 38.20 | 19AP4A* $\dagger$ | 55.50 | 41.55 |
| 16RP4** | 37.35 37.35 | 28.00 28.00 | $\begin{array}{ll}14 C P 4 * & 35.30 \\ 16 A P 4 A+t \\ \\ 160.75\end{array}$ | 26.50 38.00 | $71 P 4$ SYLVANBA |  | 16RP4* | 37.50 | 28.00 | 20CP4* | 54.75 | 41.00 |
| $16 \mathrm{WP4A}$ * | \$71.00 | 38.20 | $\begin{array}{ll}\text { 16AP4A } & 50.75 \\ 160 P 4 A * \\ & 51.00\end{array}$ | 38.00 38.20 | $\begin{array}{ll}78 P 4 & 25.00 \\ 88 P 4 & 30.50\end{array}$ | 18.75 23.00 | 16 TP4* ${ }^{16 \mathrm{FPAA}}$ | 37.50 | 28.00 | 20CP4A* | 54.75 | 41.00 |
| 178P4A* | 36.00 | 27.00 | 16GP4* +40.50 | 30.00 | $\begin{array}{ll}108 P 4 & 30.00\end{array}$ | 23.00 | 16WP4** | 51.00 $\$ 1.00$ | 38.20 38.20 | 20.P4* ${ }_{\text {21FPA }}$ | 54.75 | 41.00 |
| 17CP4* | 35.00 | 26.25 | 16GP4B* 40.50 | 30.00 | 10BP4A $\quad 30.00$ | 23.00 | 17BP4A* | 36.25 | 27.25 | 21EP4A 21 GP | 57.60 56.75 | 43.20 42.50 |
| 17GP4* | 35.00 | 26.25 | 16KP4/16RP4 37.25 | 28.00 | 10FP4 $\quad 39.30$ | 29.50 | 17CP4 | 35.35 | 26.50 | $21 \mathrm{MP4}{ }^{\text {2 }}$ + $\dagger$ | 56.75 87.60 | 42.50 43.20 |
| 171P4* | 36.00 | 27.00 | 16KP4A* 43.25 | 32.50 | 10HP4 71.25 | 53.50 | 19AP4t | 60.00 | 45.00 | 308P4* $\dagger$ | 247.50 | 236.50 |
| 17TP4 ${ }^{\text {¢ }}$ | 35.00 | 26.25 | 16LP4A 51.00 | 38.20 | $10 \mathrm{MP4} \quad 34.00$ | 25.50 | 19AP4A朝 | 60.00 | 45.00 | 308P4-1 | 247.50 | 236.50 |

SYLVANIA CRYSTAL DIODES

Precision engineered diodes that are amall. lightwetaht and henterless. low power rectincation from DC to over 200 mc and as detectors in FM recelvers. The sllicon crystal diodes are used in certain microwave instruments such as power indicators and test probes. They also have numerous radur and induscated on body of dlode.


SILICON CRYSTAL

| Type | Description | Net |
| :---: | :---: | :---: |
| $1 \mathrm{~N}_{21}$ | 3000 mc converter | 3.75 |
| 1 N21A | 3000 me converter | 4.40 |
| 1 N218 | 3000 mc converter | 5.00 |
| 1N21C | 3000 me converter | 28.10 |
| 1N22 | 3000-10,000 mc |  |
|  | Instrument rectifier | 3.10 |
| $1 \mathrm{~N}^{23}$ | 10,000 me converter | 5.00 |
| 1N23A | 10.000 me converter | 5.65 |
| 1 N 23 B | 10.000 mc converter | 6.25 |
| 1N2S | High burnout mixer | 8.15 |
| 1N26 | 24,000 me converter | 9.40 |
| 1N31 | $10,000 \mathrm{mc}$ video det. | 8.10 |
| 1N32 | 3000 me video det. | 25.00 |

## GERMANIUM DIODE BOOK

Circuits, dats, applicatlons of diodes Chapters: recelvers and recelver appllcatlons, transm ther and amplifier appllcations, instruments and gadgets. includes 39 schematics With theory

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1.00 When purchased separately - NO CEARGE

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Gives useful screen area, voltages correct lon trap and other helpfu supuled , FRe with

Below is an up-to-date listing of special purpose tubes, fully guaranteed by the leading companles in the industry. Included are You are always purce of the lowest prevaling prices and prompt

Type Mitr EACN| Typ

## 

service when you order from Lafayette's oxtomsive tube stockg.
Abbreviations $\begin{gathered}R-G=C A C A \& \\ R-G=R C A \\ \text { A General Electric }\end{gathered}$

## PILOT LIGHTS-BALLASTS-LINE CORDS



## PHONO MOTORS - ACCESSORIES - RECORDING ASSEMBLIES

## 3-SPEED PHONOGRAPH MOTORS



## GI 33-1/3-45-78 RPM PHONO MOTOR

Compact, 3 -speed motor with powerful 2 -pole, rim drive. Lightweight construction; sinooth, quiet operation. Fan cooling permits use in partially closed cabinets. Uses two Identical Neoprene belts for 45 and $33-1 / 3$ RPM speeds. 78 RPM speed obtained direcs from rotor shaft. Speed is changed by simple, external lever movemeut. A 4 R RPM record adaptor, mounting plate, $\theta^{\circ}$ turntable and speed indicator dial are supplied. Size: $31 /{ }^{\prime \prime}$ L., $2 y^{\prime \prime}$ W., $2 \%^{\prime \prime}$ D. below mounting plate. For $115 V ., 60$ escles $\Lambda C$.
P22457-Gt Model TS. Shpg. wt. 4 lbs
6.90


## GI 3-SPEED PHONO MOTOR

 A deluxe, $33-1 / 3.45$ and 78 RPM rim drive. throurh three separate pulleys running on oll-impregnated bearings and mounted on a turret plate. By means of a aimple lever, the desired pulley is brought into contact with the idler wheel, while other pulless remain stationary. Special loeking derice liolds turret plate firmly in driving position at anys speed. Supplied with $9^{\prime \prime \prime}$ turntable, 45 RPM record adaptor, mounting plate and speed indicator dial. Size: 33$2 \% \mathrm{~m}^{\circ 1} \mathrm{D}$. below mounting plate. For 115 V., 60 escles AC.
P22645-GI Model TR. Shpg. wt. 4 lbs.
7.26


ALIIANCE 3-SPEED MOTOR Plays $33-1 / 3,45$ and 78 RPM records. Turnable shaft equipped with $14{ }^{\prime \prime}$ " removable center disk to accommodate 45 RPM records. Speed clanke control permits instantaneous
meshing of proper idler for desired meshing of proper idler for desired speed. Qulet, dependable operanted friction type motor. Mounting cenmounting plate, $2 \% /{ }^{\prime \prime}$. For 110 V., 60 eycles AC. Shyys. wt. $31 / 2 \mathrm{lbs}$. List Price $\$ 10.05$
6.44

## DUAL \& SINGLE SPEED MOTORS GI $78 \& 33-1 / 3$ RPM PHONO MOTORS



Compact. low-cost, rim drive motor using
a Neoprene belt for slow speeds. 78 RPM speed obtained direct from rotor shaft. Speed is chansed by simple external lever movement. Designed to hold wow and rumble to a minimum. Size: $32 /$ "L., $22^{\prime \prime}$ plied with $j^{\prime \prime}$ turntable and mounting plate ready for installation. For 115 V ., bo cycles AC. Shpg. ut. 4 lbs. For 6.69 Q1 Mode! DR-Direct drive on both speeds. 4 -pole motor. With $10^{\prime \prime}$ turntable. Size: 6" L., $5 \% /{ }^{\prime \prime}$ W., $25 / 8^{\prime \prime}$ D. below mounting plate.
11.88

P22572-Shpg. wt. $61 / 2 \mathrm{lbs}$.

## GI SINGLE SPEED PHONO MOTORS

78 RPM rim-drive, 2 -pole motor with insulation between motor and mounting plate, and motor and turntable for quiet operation. Supplied with a turntable and mountink plate ready for installation. Sire: $3^{21 / 2 " L .} \mathbf{L}^{\prime \prime} 2^{\prime \prime}$ Wii $2^{\prime \prime}$ G0. cycles AC. Shps wt. 4 libs.
P2253t-G1 Model LX GI Modol Lx3-similar to above except for operation at 33-1/ RPM. P22573

## GI 78 RPM PHONO MOTOR



A low-priced single speed, rim drive motor sure table and mounting plate ready for installation. Sable and mounting plate ready or instaliation. ing plate.
P ibs
P22646-al Model LC.
3.81

## 3-SPEED STROBOSCOPE CARD

Easily and accurately checks turntable apeed of $\mathbf{3 3 - 1 / 3}, 45$ and 78 RPM phono motors. For 50 and ( 0 cycles.
P200
15 c


LYRIC RECORD CARRYING CASE
Stores 50 ten-inch records safely and conveniently. Extra strong steel and aluminum combined in con struction to form a very light and durable case. Smooth. rounded corners and welded seams sive streatnlined effect and extra strensth. Handy indexing system uses numbered tabs and dividers. Equipped with sturdy snaplock astener, rubber cushlons and leather carrying handle. Finished in two-tine brown ripple enamel.
4.55

## IYRIC RECORD HOLDER

Safely files fifty $10^{\prime \prime}$ or $12^{\prime \prime}$ records in only $12^{\prime \prime}$ of table or shelf space. Soft, red felt corers the unbreakable steel base and separators, keeping your records in perfect condition. Handy index syatem helps you locate any record in a few seconds. Coppler plated side frames are lyrc-shaped and serve as convenient
handles. Supplied with stickers and index card. Shpe. wt. 4 lbs.
P21894
2.54

## GI TAPE-DISC RECORDING ASSEMBLY

A combination tape recorder, diac recorder and playback basic unit. When connected to the proper amplifler or combined with custom installations, this unit can (1) record tape from records; (
cord dises from tape: (3) record cord alses from (4) record radio on disc: (5) record mike on disc; (6) record radio on tape; (7) play record radio on tape; (
back both tape and dises: any 78 RPM record. Tape recorling features include dual track, onehour recording time, fast forward and reverse, permanert magnet erase head. Turntable acts as flywheel, kiving constant tape speed of $3 \%$ " per second. Automatically shuts off at end of tape playback. No tape threading neressary. Mechanical interlock prevent accidental tape erasure, Simple to interchange cutting stylus and playbsek neecle. Size: $121^{\prime \prime \prime}$ " diameter at 78 RPM. For 115 V ., 60 cycles AO .
47.70

## GI 3-SPEED PHONO-RECORDER ASSEMBLY

Cuts disc recordings at 78, th and 33-1/3 RPM, at 160 lines/inch. Special converdion spring changes $33-1 / 3$ RPM speed to
$4 \overline{0}$ RPM. Speed chances dial quickly and easily shifts motor speed. Cuts records up to $10^{\prime \prime}$ diameter; plays back records up to $12^{\prime \prime}$ diameter. Has depth-of-cut adjustment, and dynamically balanced, rim drive. 4-pole motor. Compensating switch operated by speed change dial. Assembly includes dual speed motor with conversion apring, $10^{\prime \prime}$ welghted turntable, crystal cutter. erystal pickup. compensation switeh and base plate. Base plate: $15^{\prime \prime \prime}$ W., $11 /{ }^{\prime \prime \prime}$ front to back. $2 \%{ }^{\prime \prime}$ H. uboge

32.10

## REK-O-KUT 3-SPEED TRANSCRIPTION TURNTABLE

Designed for easy replacement of obsolete motors in arerage consoles. Professional quality turntable at an economical price. Balanced, cast aluminum $12^{\prime \prime}$ turntable driven by induction type motor that gives quict, smooth. vibration-free operation. Noise level is 30 db below areraze recording level. Speed change from 78, 45 or $33-1 / 3$ RPM is instantancous, without stoppink turntable or $1 \%{ }^{\prime \prime}$ above motor panel and $5^{\prime \prime}$ below 1* "obove motor panel and on binish. P22503-Rat-O-K Model 743 .


P22503-Rek-O-Kut Model LP 743. Shpg. wt. 14 lbs

## PHONO OSCILLATOR

For use with allotypes of phonos. Compact, well-built unit tunes within broadcast band. Completely wired and ready for use. Supplied with phono jack, 117 L 7 tube, antenna hank, cord plug and operating inPtructlons. For $\mathbf{1 1 0 V}$. AC-DC.

## AC-DC PHONO AMPLIFIER

Huild your own record playing unit with this economical ampliffer chassis. Equipped with a rariable tone contrul nirers two wates output. Phonagraph motor connects to the amplifier. Uses motor connects to the amplifier. Uses $110-120 \mathrm{~V}$ aio and $35 / 0^{\circ}$ rectiner. ${ }^{\circ} \mathrm{O}$ DC. Supplied with line cord and pluy, but less tubes. Shpg. wt. 2 lbs. 3.39

## RECORD PLAYER SWITCHES

Quickly connects record players, FM and TV attachments into the audio amplifer of radio sets. Provides changeover from radio to record players without introdueing hum. Cuts out radio on phono position. Shps. wt. 1 lb .
P12699
1.09 Same as abore, but with wired tube socket adaptor for single ended lst audio tubes such as $6 S 97$ and 12807.
-12692

## RECORD PLAYER SELECTOR SWITCH

New design permits use of single audio system, or umplifler, for two separate record players, such as adding e 45 or $33-1 / 3$ RPM player to an existing unit. Mounts on rear of cabinet - no soldering or wining receptacle or coax phone jack. Shipg. wt. 11b. 79 coax pho
P12691

STANDARD RECORD ALBUMS
Attractive maroon fabrikoid covers and twelve sturdy kraft paper pockets make up this strong record album. Opens flat for easy accessibility of records. Index for record title and artist imprinted on inside cover. Shyp. Wt.
P21890-For $10^{\prime \prime}$
" lecords
$68 c$
 P21890-For
P21891-For $12^{\prime \prime}$ Records .85c


## DELUXE RECORD ALBUMS

Padded corers bound with rich, brown swirl leather ette. Attractive gold embossed Gothic design on back 12 records und opens flat. A set of these handsome albums will add to the appearance of your record libums wius, shat to the appearan 3 lbs.
P21888-For $10^{\prime \prime}$ Records
1.28

P21888-For $10^{\prime \prime}$ Records
.1 .33


P21889- For $12^{\prime \prime}$ Records


HEADQUARTERS FOR SUPERIOR SOUND EQUIPMENT

# PHONOGRAPH PICKUPS - CARTRIDGES 

## SHURE CRYSTAL PICKUPS

## MODEL 93A <br> Stondord For 78 RPM Records

Tone arm selentifically curved and balaneed for talthrul tracking. LightFrent, replacement plickup. Takes up to $12^{\prime \prime}$ records. Output level 1.6 volts thencyre cartridge $80 n 0$ cps. Changeable needle with pressure $1 / 1 / 0$ Shuro Model 93 A Crystal Pickup. Less Nerdle Shure Model 96A-Satme as Model 93A except with output level of volts. With Shure carteidge Model W56A


MODEL 92H
Stondard For 78 RPM Records
Latest model crystal pickup with an output level of 3.5 volte. Extremely Ilghtwelght, Has a needle prewsure of only 1 oz. Frequency response to shure Modol 92 H Crystal Fickup-shpg. wt. 9 oz. Less Needle. . 3.23


MODEL 901D TURNOVER FOR ALL SPEEDS
Has knob for turning cartridge to elther LP or standard pastition. Excellent reproduction of weserange high fidelity pressings. Frequency
responme io 10.000 cpw . Out put level 1.2 volts for IP records and 1.4 volts for standard. Needle pressure only ${ }^{7}$ grams. With shure eartrldge namlum needles, which are replaceable
Shure Model 901D Cryatal Plekup-shig. wit. 12 oz.
9.55

## MODEL 92 U SINGLE NEEDLE FOR ALL SPEEDS

Appearance bame an model 92H. Plays both standard and LP records with a single namium tip needle. Output level 2 volts for LP records and 2.3 volus for standard records, Frequency response to
8 grams. With Shure eartridge Model W66B Shure Model 92 U Crystal tiekup-Shpg. Wt. 9 oz
5.73

## ASTATIC CRYSTAL PICKUPS



## MODEL 7D

TURNOVER PICKUP
For All Speed Records
Cast aluminum curved arm with new, tiny turnover type ACD cartridge Arm design assures reduced tracking distortion and longer record and needle itfe. Output le vel 1 volt. Frequency range $30-6000$ cpa. Cartiflge rotates in shap-action turnover mechanism. Needle pressure grams on both sides. Exceptionally monoth response. supplied with replaceable needles. 1.Igh Astatic Model 7 D Crystá Plekup-Shing. wt. 12 oz.
9.35

## MODEL 60 CRYSTAL TURNOVER PICKUP



For standard and LP records records from $333 / 1$ or 45 RPM knob at front. 8 grams needie preasure. Range $50-7000$ cis. Outninlahed in dark brown hammertin 7\% "long. Supplied with replaceable needles. Shig. Wi. 21 lbs
9.35


## MODEL 507-L-82

For Stondard 78 RPM Records
A carefully engineered plekup comnnce. Ideal for compact sets. Output volinge 3.5 Frequency fange 50 formDis. Neenle pressure $2 \%$ oz. Smooth light inish arm $7 \%^{\circ}$ long. Shug 13 los. With needl
3.82


MODEL 510-CAC For 33 $1 / 3$ \& 4 RPM Records
Features new antl-resonance swive base, 7 mounting center and per manently adjusted low needle prossure of 8 graman ourput level 1 vott Frequency range $30-11,000 \mathrm{cms}$, Die-cast arm fintshed in opalescent grey, shpe. wt. $11 / 2$ lbs. With needle.
6.32
$\qquad$
SPECIAL VALUE CRYSTAL PICKUP

Standard crygtal phono plekup for playing 78 RPM records. Curved arm provides good | tion. Shyg. wt. 1 1b. |
| :---: |
| P13530................ |

## CLARKSTAN PHONO NEEDLE PRESSURE GAUGE



Checks welght and balance of plekup arm from one gram to four ounces. Has two scales, plus calibrated dial with $4: 1$ scale multiplier.
Shing. wt. 1 lb.

# WEBSTER ELECTRIC CRYSTAL CARTRIDGE $21 / 2$ oz. zressure; outpuz 2.0 V 

[^0]
## ASTATIC CRYSTAL CARTRIDGES



FOR STANDARD 78 RPM RECORDS
Replacement units with accompanying needles for all standard makes of erystal plechums as recommended by manufacturers.

| Model No. | $\begin{aligned} & \text { List } \\ & \text { Price } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Net } \\ & \text { Each } \end{aligned}$ | Needle Pressure | Output Volts | Freq. Range |
| :---: | :---: | :---: | :---: | :---: | :---: |
| CAC-78-1 | 7.50 | 4.41 | 20 gr . | 1.35 | 30-11,000 |
| CAC-78w-1* | 7.50 | 4.41 | 20 kr. | 1.36 | 30-11,000 |
| AC-781* | 8.90 | 5.23 | 6 gr. | 1.0 | 50-10,000 |
| L-26A | 4.45 | 2.62 | 1 oz . | 1.4 | 50- 4,500 |
| L-40A | 4.45 | 2.62 | 11102. | 0.6 | 50-4.500 |
| M-22 | 5.55 | 3.26 | $2{ }^{2}$ \% Oz. | 2.9 | 50-6,500 |
| 8-2 | 5.55 | 3.26 | 2408. | 2.5 | $50-4.000$ |
| 101-A | 5.55 | 3.26 2.62 | 2: 08. | 2.5 | 50-4.000 |
| L-70A | 8.55 | 2.62 3.26 | 2110 oz , 118 oz | 1.4 | 50-4.50) 50 |
| L-71A | 6.65 | 3.91 | ${ }_{1} 120808$. | 1.0 | 50- 8.000 |
| L-72A | 6.65 | 3.91 | 14502. | 3.5 | $50-8.000$ |
| L-82A | 5.55 | 3.26 | 2\% 0 \%. | 3.4 | 50-5.000 |
| L-92A | 8.00 | 3.53 | $1{ }^{2} \mathrm{oz}$. | 2.25 | 50- 7.000 |
| LT1-M | 7.00 | 4.12 | ${ }_{1} 100$. | 1.0 | 50-10,000 |
| Lr2-M | 7.00 | 4.12 | 洘 oz. | 1.0 | 50-10,000 |
| LT3-M | 7.00 | 4.12 | \% oz. | 1.0 | 50-10,000 |
| QT3-J | 8.90 | 5.23 | 1 oz . | 0.85 | 50-10,000 |
|  | 8.40 | 4.94 | 1 oz . | 0.85 | 50-10.000 |
| U-78-9* $402-\mathrm{Mt}$ | 8.90 6.90 | $\begin{aligned} & 5.23 \\ & 4.06 \end{aligned}$ | 5  <br> 2 gr. | 0.5 | 30-10,000 |
| 402-M $\dagger$ | 8.90 | 4.06 | 12 miral Ar | 18) 0.7 | 50-10.000 |
| CARTRIDGES FOR SLOW-SPEED RECORDS |  |  |  |  |  |
| U.1* | 8.90 | 5.23 | gr. | 0.5 | 30-10,000 |

## ASTATIC SERIES "AC" CRYSTAL CARTRIDGES

 Ezceptionally smooth response; excellent tracking. In single stylus cartridge $331 / 5$ and 45 RPM microgroove records. CAC-W-J same as CAC-J except fitted for plug-in heads.

| Model No. | $\begin{aligned} & \text { List } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { Net } \\ & \text { Each } \end{aligned}$ | Neede Pressuri | Owtput Volts | Freq. Range |
| :---: | :---: | :---: | :---: | :---: | :---: |
| CAC-J. | 7.50 | 4.41 | 6 gr . | 1.0 | 50-10,000 |
| CAC-W-3* | 7.50 | 4.41 | 6 gr . | 1.0 | 50-10.000 |
| $A C-1 *$ | 8.90 | 5.23 | 5 gr . | 1.0 | 50-10,000 |
| AC-AG-3* | 8.90 | 5.23 | 8 gr . | 1.0 | 50-10,000 |
| L-29 |  |  |  |  |  |
| - |  |  |  |  |  |
|  | DOUBLE NEEDLE TUAN-OVER MODELS** |  |  |  |  |


| $\begin{aligned} & A C D-3 * \\ & A C D-1 j *(1) \\ & A C D-2 j *(2) \end{aligned}$ | $\begin{array}{r} 9.50 \\ 9.50 \\ 10.00 \\ \hline \end{array}$ | 5.59 5.59 5.88 | 6 gr <br> 6 gr <br> 6 gr. <br> gr | . 0 | $50-6,000$ $50-6.000$ $50-6,000$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| *. $001^{\circ}$ ifp for 33 hand 45 RPM:.003 tip for 78 RPM. Sapphire needle <br> (1) Same as ACD-J, with spindle for turnover knob. <br> (2) Same as ACD-J. with turnover bracket and knob. |  |  |  |  |  |

SHURE CRYSTAL CARTRIDGES

|  | For $331 / 845$ RPM Records |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model | Press. | Output | Fesp. To | NET |
|  | W31AR! W53 MCt | 7 fr \% | $2.1 V$ | 7500 cpse | $\underline{3.82}$ |
|  | Turnoverfor $33 \frac{1 / 3.45}{}{ }^{\text {a }} 78$ RPM Recorde |  |  |  |  |
|  | $\begin{aligned} & \text { W22A** } \\ & \text { W22AB } \end{aligned}$ | 8 gr . 8 gr . | $\begin{aligned} & \text { MG.Std } \\ & 1.2 V 1.4 V \\ & 1.2 \mathrm{~V} \\ & 1.4 \mathrm{~V} \end{aligned}$ | 10.000 cms | $\begin{aligned} & 6.17 \\ & 5.59 \end{aligned}$ |
|  | Single Neeote For 33\%. 45 \& 78 RPM |  |  |  |  |
|  | $\begin{aligned} & \text { W26A } \\ & \text { W26B } \end{aligned}$ | 88 cr 88 c. 8 gr | 87 V <br> .87 V <br> 2.0 V <br> 2.0 V | 8000 cps 8000 cps 4300 cms | 5.00 4.41 4.12 |
|  | Standard Cartridge For 78 RPM Records |  |  |  |  |
|  | $\overline{W 2 B}$ |  |  |  |  |
|  | W42B | 1 oz . | 1.3 V | 5000 cps | 2.62 |
|  | W56A | $1 \%$ oz. | 4.3 V | 6000 cps | 3.91 |
|  | WS6Rt | 102. | 4.3 V | $10.000 \mathrm{cms}$ | 5.14 |
|  | W57A | $1^{3 / 4} 02$. | 1.6 V | 6000 cms | 3.26 |
|  | W58A w59A | 1 coz | 1.6 V | 6000 cds | 3.26 |
|  | w59A W60A | 1 loz | 2.5 V | 6000 eps | 3.26 |
|  | W608 | 1 l | 1.6 V | 4500 cps | 5.00 |
|  | W618 | 1 oz . | 1.6 V | 4500 cps ) | 4.41 |
|  | -Sapplare beedle. tCutter-playback. IOsmlum. "2 Sapphires. 11 Sapph.. 1 Osmlum. |  |  |  |  |

## REPLACEMENT CARTRIDGES

FOR WEBSTER-CHICAGO CHANGERS
Type va7-For Webster $356-1$ changer
Type 42 changers.
Eype V42.2 For

## RCA CARTRIDGES

| Model | Pressure | Output | Each | Model | Pressurc | Output \| | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31050 | 2.7 oz . | 1.5 V . | 2.47 | 33122 | 2.7 oz. | 1.5 V . | 2.47 |
| 37158 | 3.708. | 1.50 | 2.79 | 31156 | 3 laz . | 1.5 V | 2.79 |
| 33217 | 2.7 oz . | 1.5 V . | 2.47 | 38610 | 2 oz. | 1.5 V . | 3.26 |

## RCA MAGIC TONE CELL KIT

With "Sllent Bapphire" semi-permaneat jewel tip needie for high-fidelity reproduction. Output 1 hy voles. Includes Magic Tone Cell, sapphire Jewel polnt and hardware.
4.12


AUDAX
AU-50-LP* All L-6 \& R-2 types
XX ST 12.06
COLUMBIA

| M-60-LP* | $45-1609$ | $X$ | MG | .88 |
| :--- | :--- | :--- | :--- | :--- |
| A-81-LP* | CQ | $\mathbf{Y}$ | MG | .88 |
| CROSIEY |  |  |  |  |


| C-99* | 145749 | UUVST 1.47 |
| :---: | :---: | :---: |

JENSEN 78 RPM \& LP NEEDLES


JENSEN
NEEDLE PACK
KIt contalins 3 3 Clasg c needles (2 each $78 \mathrm{RPM}, 1$ each LP). ${ }^{\text {P1 }} 110-$


## ROYAL JEWEL NEEDLE

6.00

By Jensen
Genulne sappbire point plays up to 10,000 sides. Orseet tortion. For 78 RPM. 1.47 LP needie for 33 and 45 RPM records. P175. of 13
JENSEN CLASSIC NEEDLE Oamlum alloy tip destgned for brilliant reproduction of instrumental and vocal recordinks. Spectal spring construction
minimizes hissand scratch. For 78 RPM. minimizes hissand scrateh. For 78 RPM.
P176............................ Lots of 13
I. needle for 3314 \& 45 RPM records. Lats of


JENSEN EXACT REPLACEMENT PHONO NEEDLES
Listed below are exact replacement needlea for standard pinono pickup cartridges currently in use. Types indicated with (") havo sapphire tips; sil others have osmlum tips. Point column abbreviations are as follows: records. records AU-All groove, for all speeds. Uni-Unipolne, for all speeds. Replacement needles, for all speeds. TW - Twith points, for all sp Replacement Instuctions gre supplied With each needle.
OROER ALL NEEOLES BY JENSEN TYPE NUMBER OHLY

| ELECTRO.VOICE |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Type | Cartridge Number | F9. | Point\| | EA. |
| E-90' | M12-s; H12-S; L12S | T | ST | 1.47 |
| E-90-LP* | 14-S; $22-\mathrm{S} ; 34 \mathrm{~S}$ |  | MG | 1.47 |
| E-91* | $16 \mathrm{TT} ; 22 \mathrm{TT}$ | U | TW | 2.06 |
| E-93 | 16TT; 22TT | V | TW | 1.47 |
| E-95 | M12; H12; L12 | W | ST | . 88 |
| E-95-LP | 14;34 |  | MG | . 88 |
| E-962 | 33; 33S |  | AG | . 88 |
| GENERAL ELECTRIC |  |  |  |  |
| GE.10* | $\begin{aligned} & \text { RPX-040; RPX-041; } \\ & \text { PPX-046 } \end{aligned}$ | K K |  | 2.06 |
| GE-10-LP* | RPX-040; RPX-041; |  |  |  |
| GE-11* | $\begin{aligned} & \text { RPX-046 } \\ & \text { RPX-050 } \\ & \hline \end{aligned}$ |  | $\begin{aligned} & \text { MG } \\ & \text { DU } \end{aligned}$ | $\left\lvert\, \begin{aligned} & 2.06 \\ & 3.50 \end{aligned}\right.$ |
| MAGNAVOX |  |  |  |  |
| M-02 | 560101 | WW |  | . 88 |
| M-46 | 560133 | WW | ITW | 1.47 |
| PHILCO |  |  |  |  |
| PH-10* | Dynsmic Reproducer $_{78-1622}$ | LL | 8T | 1.11 |
| PH-11 | 45-1609 | MM | MG | . 73 |
| PH-12 | 76-4649 | NN | DU | 1.22 |
| M-60-LP* | 45-1609 | PP | MG | . 88 |
| PH-14 | 35-2671 | Q9 | ST | . 88 |
| PH-15* | 35-2671 | RR | ST | 1.18 |
| RCA |  |  |  |  |
| M-70 | 70338; 70339 | P | ST | 2.32 |
| M-70-LP | 74067 |  | MG | . 94 |
| M-71 | 70338; 70339 | Q | ST | 1.18 |
| M-71-LP | 74067 |  | MG | . 88 |
| M-72* | 72551; 9890; 39919; 39550; 38598; |  |  |  |
|  | 70332; 38851 | P | ST | 2.32 |
| M-73 | 72551; 9890; 39919; 39550; 38598; |  |  |  |
|  | 70332; 39851 | ? | ST | 1.18 |
| M-74* | 75475 | R | ST | 94 |
| M-74-LP ${ }^{\text {a }}$ | 75475 |  | Ma | . 94 |
| M-75 | 75475 | S | 8T | . 88 |
| M-75-LP | 75475 |  | MG | . 88 |
| NEEDLES FOR 78 RPM RECORDS |  |  |  |  |
| DUOTONE SHOCKPROOF |  |  |  |  |
|  | $\rightarrow \mathrm{N}$ | YLON | NE | DLE |

Osmlum tip on steel spring set in nylon bumper. Eliminates damuze to needie or record if plekup drops. For 78 RPM. 5000 plays


## 78 RPM sapohire TI

 Needle. Guaranteed for 8000 plays. Tapered dural shaft ellminates tone distortlon. Prectsion ground and polished point. For tone P117 Pors of 10, Each vend tapered shap absoP118.
886

## Lots of 10, Each

## STANDARD JEWEL-TIP NEEDLES

## Duotone Durpolnt Oflset type plays up it

 4000 records. For 78 RPM.Walco Tru-Trac. Sspphire polat. Piays 5000
reords. For 78 RPM. .................................. 8 c

SHURE

| Type | Cartridge Number | Flg.\| | Point, | EA. |
| :---: | :---: | :---: | :---: | :---: |
| JP-30 | P-30; P-57; P-70;P-72; P-74AD; P-76;P-77; P-79; P-85;P-88; P-89; P-94;PN-30; W-22AB;W-23B; $\quad$ W-60B;W-60HS; W-60PN;W-61B; W-65B; Ad- <br> miral <br> 409All | K | ST | . 88 |
| JP-30-LP | $\begin{aligned} & \text { Admiral } 409 \mathrm{Al1} \text {; } \\ & \text { P-73:P-74D } ; \text { P- } 72 \mathrm{~V} \text {; } \end{aligned}$ | K | MG | . 88 |
| JP-312 | $\begin{aligned} & \text { Admiral } \\ & \mathrm{P}-71 ; \mathrm{P}-81 ; \mathrm{P}-37 \end{aligned}$ | L | Uni | . 87 |
| JPS-30* | $\begin{aligned} & \text { P-30; P-57; P-70; } \\ & \text { P-72; P-74AD; P-76; } \\ & \text { P-77; P-79; P-85; } \\ & \text { P-88; P-89; P-94; } \\ & \text { PN-30; W-22A; } \\ & \text { W-23A; W0A } \end{aligned}$ | M | ST | 1.47 |
| JPS-30-LP* | $\begin{aligned} & \text { P-73P-7AD;P. } 72 \mathrm{~V} \text { : } \\ & \text { P-72V; P-76V; } \\ & \text { W-21A; W-21AR; } \\ & \text { W-22A; W-2AAB } \end{aligned}$ | N | MG | 1.47 |
| JPS-312 ${ }^{\circ}$ | P-71; P-81; P-37 | N | Uni | 1.47 |
| WEBSTER-CHICAGO |  |  |  |  |
| NE-215 | $21 \mathrm{P}_{2} 47$, $21 \mathrm{P}^{3} 402$, <br> 21 P 403  | SS | U | 1.96 |
| NE-368 | 21 P404 | TT | DU | 1.96 |
|  | WEBSTER ELECTRIC |  |  |  |
| W-02 | M-1 | 2 | ST | 88 |
| W-05 | F14; F14-1; F14-2; F14-3; P14-4 | AA | DU | 1.47 |
| W-14* | A1; A8 | 4 B | ST | 1.47 |
| W-15* | $A 1 ; A 2 ; A 3 ; A 4 ; A 5 ;$ |  | MG | 1.47 |
| W-16 | $\mathrm{A} 1 \mathrm{M} ; \mathrm{A} 1 \mathrm{M}-1 ; \mathrm{A} 5 \mathrm{M} \text {; }$ | CC | ST | 88 |
| W-17 | $\begin{aligned} & \text { A1M } ; \text { A1M-1; A2M; } \\ & \text { A5M } ; \text { A } 6 \mathrm{M} \end{aligned}$ |  | MG | 88 |
| W-30 | Q1 ${ }^{\text {a }}$ | DD | ST | . 88 |
| W-36 | G3M | EE | ST | 88 |
| W. 36-LP | G1M |  | MG | 88 |
| W-362 $\mathbf{W}-37$ | $\begin{aligned} & \text { G2M } \\ & \text { WS } \end{aligned}$ |  | ${ }_{\text {AT }}^{\text {ST }}$ | .88 |
| W-37 W-37-LP | WS | IF | MG | .88 |
| W-38 | A9M | CC | AG | 88 |
| W-412 | Q3; A9; F-13 | GG | AG | 88 |
| W-422 | $\mathrm{C}^{9}$ | HH | AG | . 88 |
| W-49 | $\mathrm{O}_{2}$ | ${ }^{\text {JJ }}$ C | ST | 88 |
| W-72 | F16; F16-1; F16-2 | CC | ST | . 88 |
| W-73 $\mathbf{W}-81$ | F16; F16-1; F16-2 F15: F15-1 |  |  | .88 .88 |
| W-81 | $\begin{aligned} & \text { F15; F15-1 } \\ & \text { F15; F15-1 } \end{aligned}$ | CC | $\stackrel{\text { BT }}{\mathrm{MG}}$ | .88 |
| 15-LP | F7; F7-1; F7-2; Q2; |  |  |  |
|  |  | GG | ${ }_{\text {MT }}^{\text {MG }}$ | 88 88 88 |
| $\begin{aligned} & \text { JP-30 } \\ & \text { JP- } 30-L P \end{aligned}$ | F11:F11-1 | K | MG | 88 |

LP MICROGROVE NEEDLES

## OSMIUM ALLOY IIP

 Designed for long-playing and microgroove records1, ofset stank.
P120-1 mill radlus. 69 c
P1 $20-1$ mill radlus. 69
HIRE \& RUBY TIPS
OFFSET SAPPHINE \& and mlcrogroove Good for 5000 plays. For LP and microgroove
records. 1 " oflset shank. 1 mil. records. "/ " ofset shank. 1 mil.
P122-Rapphire pol
P123-Sapphire tip stralgit Noodie

# [REEHSMOM 

 TESTEQUIPMENT standard of accuracyMODEL 654-P TUBE AND SET TESTER

combination cathode conductance tube usster, battery and set tester with a senslolimas/rolt AC Tests 20,000 ohms rolt DC and 1000 onms roit AC Tests all modern tube types
 capped 16 thbes, FM and TV amplifiers. tion for merit and short tests. Has dual shoctcheck sensitivity and individual tests of multhection tubes including tuning indicators. AC and DC Voltages: $0.12 / 60 / 300 / 1200$; 6000. DC Current: $0-120$ microamps; $0-1.2$ ) $12 / 120 \mathrm{ma} ; 0-1.2 / 12 \mathrm{amps}$. S db ranges from batleries) : $0-6000 / 600,000 ; 0.60$ megs. Also teatures noise and condenser test pin jacks pilot light tegt socket, dymamic "under.lond" teries and built-in geared roll climet. Has 50 teries and built-in geared roll chart. Has 30
microamp, mort indiridually calibrated $13 \times 6^{\prime \prime}$ and includes test leads, instructions movable corer measures $12 \times 13 \times 0^{\prime \prime}$ and includes test leads, instructions
and batteries. For 10.1125 volts. $30 /$ Fo cycles AC. Precislon Model 654P-Sipg. wt. 20 lbs
107.55

Precision Model 612-P Tube \& Battery Tester-Similar to Model 654-P described abore but without set lesting fentures
71.05

MODEL 10-54P TUBE AND SET TESTER


A complete, portable sertice laboratory including tube, battery and 35 range AC-DC set tester Automatic push-button operated circuit tester With sensivity of 20,000 ohms/rolt DC and 1000 9 -pin, 7 -pin acorn, miniature, sub-miniature, hearine-ald types, ete. with direct facifities up to 12 element prongs. Roll chart included. Also features direct testing of capacitors, pilot bulbs, tuning indicators and radio batteries. $\triangle C$ and DC rolt ranges: $0-6 / 12 / 60 / 300 / 1200 / 6000$. Current ranges: $0-60 / 120$ microamps; $0-1.2 / 12 / 120 /$ $1200 \mathrm{ma} ; 0-12$ amps. Resistance ranges: $0-6000$ $600,000 \mathrm{ohms} ; 0-6 / 60$ mess. Six db ranges from $\overline{s i s t o r s}^{20}$ to $+7 \%$. $1 \%$ wirewound and metallized re circuits isolated from power line. Hardwooi Test able case with tool compartment and hinked removable cover, $13 \%$ x $17 \%$ I $6 \%$. With ohm
meter batteries and hish voltage test leads. Operates on $105-125 \mathrm{~V}, 50 / 60$ ycles AC shap. Wt 25 lbs
Precision Model 10-34P Tube \& Set Tester
136.71 Preciaton Model $10-12 P$ T
but less set testing features
Testor. Same as but less set testing features

Tube
Ses.
Supg.
99.71

MODEL CR-30 CATHODE RAY TUBE TESTER


Tests all TV picture tubes, scope tubes and induatrial CR types for true beam current all electron gun performance for proportionan electron fun performance gor proportion-
ste picture bricheness as well as additional difect testing facilities for accelerating anodes and defection plate elements. Free-point 14 leakage teating and quality tents. Voltage res. leakage teating and quality tests. Voltage reg. roller tube chart and $4 \%$ meter with srele eapecinlly desisned for CR meter with srale Quirements. Test circuits transformer isolated from power line. Complete in hardwood portable case with hinged remorable corer.
Size: $17 \% \times 13 \% \times 6 \% \%$ Supplied with standard picture tube cable, unilersal With tube test cable and instruction manual. Has Precision OR-30 Cathode Ray Tube Tester.......... 22 lbs.
97.75


MODEL E-200-C SIGNAL GENERATOR Direct reading, 0-1000 point rernier seale with a Irequency coverage of 88 kc to 120 mc on 8 bande Fundnmentils to 30 me . Highly stable ECO circuit. 400 -cycle sine-ware audio obcilletor provides modulation and external test simmal from $0-50$ volts. modulated RF, exterially modulated RF, 400 -eycle cycle audio output. Supplies its own AVO, voltage $0-100 \%$ modulation control more than triples signal utility. Cbmplete and free copy of "Servicing by sigin, Subatituri cable connectors, tubes and free copy of "Servicing by Sigual Subatitution." Binck ripple inislied
portable steel case, $10 \% ~ \Sigma 12 \times 6$ ", Operates on 110 V ., $50 / 60 \mathrm{cycles}$ AC. Shpe.wt. 17 the
Preciston Model E-200-C Signal Generator
69.82

## MODEL E-400 SWEEP SIGNAL GENERATOR



Direct reading from $2-480$ me in 7 bands ${ }_{240-480}$ me. Narrow and rilly calibrated from 0 to 1 me and 0 to 15 mc cont inuously adjustable, Basic circuit has high frequency beat oscllator plus reactance-modulated high frequency oschlator. Built-in multiple cryatal
markerccalibrator imultaneously marker-calibrator imultaneously aceommo-
dates 4 crystals indirldually rotary selected. dates 4 crystals indisidually rotary selected.
$6 \% /$ etched aluminum tuning dial and 1500 point vernier seale permit close calibration and simple resetting, 6 -posttion rotary band wititeh covers complete spectrum, Last ponicoll swltchiny necessary, Dual R Frovides nure crystal osentintor only; no able output ferel control of signals. Portable copper-plated case ion $12 \times{ }^{\prime \prime \prime}$. Complete with test cable, 2 cxystals ( 10.7 mc and 2 mc ) and Preclolon Model. E. 400 , we. 24 lbs .

## MODEL ES-500A 5" OSCILLOSCOPE

High sensitivity, wide range, roltage regulated push pull rertical and horizontal amplifiers. Vertical de hection sensitivity 02 rms volts $/ \mathrm{in}$. 2 megs input re ton sensitivity capacity 22 manfd. Horizontal deliec
 sistance. Input capncley 20 mmfd . 10 cycles to 1 mc
response of either amplifier. Scope
4 -way, response of either amplifier. Scope has 4-way, amplitude controlled synch. selection, and internal, phas able bo-cycle beam blanking for elimination of alignment retrace. Yertical phase-reversink switch permits ing. Also features linear non-frequeney discriminat ing. Aso teatures linear sweep circult 10 cycles to tion for blanking external sween. " $Z$ " asis modula trol ind andio monitoring, phone jacks at rear. Uses OP1/A CR tube. Licht shield and mask remorable and rotatable. ripple, heary gauge steel nortable case $81 / \mathrm{m}^{2} \mathrm{x} 141 / \mathrm{x} 18^{\prime \prime}$. Complete with ct tube, light shita, calibratins mask and instruction manual. Shpo Precislon Model ES-500A Oscllioscope
166.11

## MODEL 85 HIGH SENSITIVITY TEST SET

Compact. 34 range VOM Ifith sensitivity of 20,000 rolt ranges: $0-3 / 12 / 60 / 300 / 1200 /$ AC. DC and AC ranges: $0-120$ microamps: $0-1,2 / 12 / 120 \mathrm{mas}$; $0-1.2 / 12$
amps. Resistance rances: $0-8000 / 800,000$ ohms: $0.8 / 00$ megs. 8 db ranges from -28 to +70 . $4 \%$ " rectangular. 60 microamp meter has an accuracy of $2 \%$. Usea $1 \%$ wire and film-type precision resistors. Ali standerd functions are at the two tip jacks. Molded bakelite carrying case with plastic handle measures $5 \%$ \% $7 \%$ a ${ }^{\prime \prime}$ The heary gauge, etched aluminum panel is
anc protection azainst moisture and wear. Complete with ohmmeter batteries and test leads. Precision Model 85 Test Set
39.15

## MODEL 80 WIDE RANGE TEST SET

Similar to Model 85 except has senativit 1000 ohms/rolt on doth DC and AC. Volt ranges: $0.6 / 12 / 60 / 300 / 1200 / 6000$. Current ranges 0.110 meges


LO-1 Leather Instrument Case Designed for Model 85 and 80 Test Sets de interior And test leadand of shoulder strap. Positire smap-lock. Includes a too Procision LC-1 Case-Shpg, wt. 3 lbs.
9.31

## MODEL EV-20 VTVM AND TEST SET

 IIsh senaltifity, laboratory type circuit testing instrument with true zero center on all TTVM ranqes, standard 1000 ohms/rolt functions. Constant input resistance $13 \%$ mege. All-zero center VTVM ranges : $\pm 3, \pm 12, \pm 30, \pm 120, \pm 300, \pm 1200$ volts. Resiatance ranges: $0-2000$ 200,000 ohms; $0-2 / 20 / 200$ / 2000 megs . Direct reading HF FTVM Fanges: $0-3$ )$12 / 30 / 120$ roles (requires RF-10A Probe described 12/30/120 roles (requires RF-10A Probe described olims/Tolt: $0-3 / 12 / 30 / 120 / 300 / 1200$. ranges : 0.300 microainps ; $0.12 / 3 / 12 / 30 / 120$ current ma; 0.12 amps . 6 db ranges from -20 en Voltage resulated bridge circuit. Dies two $10.5+63$. cells, easily replaced at rear of cabinet. Black ripple finished steel cahinet, $101 / \mathrm{X} 9 \mathrm{~K}_{\mathrm{K}} \mathrm{x} 5$ ", has plastic handle and etched, anodized aluminum panel. ComPrecision Model EV-20 UTVM and Test Set
 Precision Model EV-20 UTVM and Test Set .... 11 lbs .
66.88

## MODEL RF-IOA VACUUM TUBE RF PROBE

 For EV-20 Test Set Connects directly to VTVM panel und provides direct high frequency roltage measarements. Includes 9002 min Preclion RF-10A RF Probe14.11

## OTHER PRECISION TEST EQUIPMENT

MODEL 40 WIDE RANGE OIROUIT TESTER- 31 rance AC-DC test
 With batteries and test leads.
Precision Model 40-Shpg. wt. 3 lbs.
25.72

MODEL LO-2 INSTRUMENT OASE-Genuine top-urain heary cowhide case especially designed for Model 40 test act. Compartment for tools
and test leads. Finished in dark brown.
Preelslon Model LO-2-Shpe. wt. 2 lbs
5.63

MODEL 858.P DUAL SENSITIVITY MULTIMETER- 20,000 and 1000 ohms/rolt DC and 1000 ohms/rolt AC. 54 ranges to 6000 rolts, 60 microamps, 12 amps, 600 megs, +70 db . Hardwood portable case $9 \times 10 \pm$ $43 / 2$. With ohmmeter batterjes and high voltage test leads.
58.55

MODEL EV-10AP VTVM-MEOOHMMETER-True zero center VTVM with $7^{\prime \prime}$ full-rles meter. Four direct reading high frequency scales (requires RF-10A probe described above). Has standard 1000 ohms/rolt hardwood portable case, $12 \times 13 \times 6^{\prime \prime}$. With tubes, batters and test
probes.
Precision Model EV.10AP-Shpg. Wt. 18 lbs.
95.30

## HICKOK TEST EQUIPMENT

## HICKOK 195B S" OSCILLOGRAPH

Has big $5^{\prime \prime}$ gereen, extra high gain vertical amplifer, sinusoldal sweep circuit and recurrent linear sweep, 10 23,000 cycles. Also has blanking circuit and phasing control. Vertical deflection sensitivity . Vis volfs ramplical amplifer inch; horizontal 15 roles RM8/inch. Vertical ampliner 2 cycles to 1 mc ; horizontal amplifier 10 cycles to 50 kc. Input impedance, vertical: 1 meg, 25 mmf ; horizontal \& meg, 35 mmf . All input terminals at front of pancl for convenience. Scope tube cradled in rubber calibrated screen. Blue hammertex steel cabinet with cycles AC. Completc with tubes. 30 lbs. .... 169.50
HICKOK 610A TV ALIGNMENT GENERATOR
HICKOK 610A IV ALIGNMEN GENERAJOR
 ate swecp generator, marker generator and ate sweep generator, marrer ger TV tosting. Supplies signal to risually, align a TV set to any of 12 chandinl and readable to $.0 \% \mathrm{ac}$ curacy. Variable sweep width $0-15 \mathrm{mc}$. Sween frequency ranges: $0-40 \mathrm{mc}, 37-75 \mathrm{mc}, 75-115$ me, $150-230 \mathrm{mc}$. Siveep deviation $\mathrm{U}-1.5$ and $0-15$ me. Self-contained markers ( $18-81 \mathrm{mc}$ and $30-48 \mathrm{mc}$ ) calibrated directly on dial to .05 mc . Separate crystal osculuator (t.5 of crysial supplied). Standby switch she fiaments on be kent Output voltage: . 60 maximum. Blue hammertex finish case with sati Anish panel $14 \times 184 \times 88^{\prime \prime}$. For $105-125$ V.. $50 / 60 \mathrm{cpss}$
219.00

HICKOK 292 X MICROVOLT SIGNAL GENERATOR
Covers all TV cbannels and mobile band fre-auenclea-on fundamentals, with an accuracy Bands A throuch G. 125 kc to 120 mc ; Band H. $150-220 \mathrm{mc}$ Modulated and unmoduHated output calibrated from . 2 to 100,000 microrolts. Self-contained crystal oscillator circult has front panel jack permitting crsstal outputs from 2.00 kc to 20 mc on fundsmentals; and to 250 mc on harmonics. 1 mc crystal supplied. Modulation fixed at 40 Wired for optional plug-in type erystal (152162 mc ) for mobile band corerage. May be externally modulated from $15-10,000$ cps. $50 / 60$ contained db meter ( -10 to +38 db (n $13^{3}$ ranges). For chrome panel. cycles. wt. 30 lbs.
266.00


## HICKOK 209A LABORATORY VTVOM

 Measures any resistance, capacitance, 10 , IF DO voltages, RMS and Deak-to-peak voltase found in radio receivers. DC rances have both zero left and zero center senle for discriminator alignment. $A C$ and $D C$ volt ranges: $0-3 / 12 / 30 / 120 / 300 / 1200$. Capacity: $0-10.000$ mmind in 2 ranges, $0-1000$ mmfd in 5 ranges. Input impedance 15 megs DO, 12 mers $/ 8 \mathrm{mmf}$ AC-DO current: $0-3 / 12 / 30 / 120 / 300 / 1200 \mathrm{ma}$. Inductance 50 mh to 100 hy by use of conversion chart. Resistance 1 ohm 0 , 10 , otin muegs in 8 ranges. Metal cabinet of hlue hammerc. Complete with high finish panel. For $105-125$ rolts. Whater cycle132.50 frequency probe, leads. tubes and batterie HICKOK MODEL PR30A PROBE-roltage multiplier probe extends HICKOK MODEL PR3OA PROBE-Voltage mult

## HICKOK 5338 TUBE \& SET TESTER

Complete all-purpose tube and set tester. Proides dynamic nutual conductance circuits for lesting the lateat tubes-including itions. Scale eads directly in micromhos-important for ac urate cheek of TV receirer tubes. $5^{\prime \prime}$ meter has REPLACE, GOOD indicated on scale. Roll chart lists all tubes. AC and DC rolt ranges: $0-20 / 200 / 500 / 1000 / 5000$. AO sensitivity 1000 ohms/volt: DC sensitivity 20,000 ohms/volt. Resistance i ohm to 100 megs on 3 ranges. DC current: $0-5 / 20 / 200 \mathrm{ma} ;(0-50$ microumps. Capacitance. 0001 to 150 mid . Leakage tests for electrolytic and paper capactors checks
ductance to 100 hyj db from -10 to +50 .
 ductance to $100 \mathrm{hy;}$; from -10 to ${ }^{\text {to }}$. Portable case covered in durable black"1eather 110-130 volts, $50 / 60$ cycles AC. Shpg. wt. 34 lbs,
HIcrok Model 5338 Tube \& Set Tester
168.00

Model 5
features.


Latest desion Lensitivity and ranges for quick, accurate measurements of sine or complex wares of TV or industrial derices. New, dnal-purpose, single unit AC -DC prove with built-in switrhing arrangement provides an input impedance of 10 megs on DC. and 30 megs shunted by 150 mmf on AC. AC and DC volt rankes: $0-1.5 / 3 / 12 / 30 / 120 / 300$ ( 1200. 7 ranges AC RMS; 7 ranges peak-to peuns (3200 rolts maximum). Ohms: $0-1 / 10 / 100 / 1000 /$ 10,000/100,000/1 meg. Frequency characteristics fat front 40 eps to 3.5 mc . zero center or dis. criminator alignment and other galranometer applicatians. Accuracy $\pm^{3} \%_{\mathrm{F}} \mathrm{DC}_{i} \pm 5 \%$ AO. ${ }^{ \pm}$meter. . ohms lead and probe, and ground lead. Shpe. wt. 10 lbs. HIckok Model 215

HICKOK 450 HIGH SENSITIVITY VOM Thinnest instrument of its kind! A rugged and dependable rolt-ohm-milliammeter with a scas tirity of 20,000 ohms/rolt DC and 5000 ohms/roit AC. Larke and safety from cracked glass. AC and DC rolt ranges: $0-2.5 / 10 / 50 / 250 / 1000 / 5000$. DC current rankes: $0-2.5 / 10 / 50 / 250 / 1000 \mathrm{ma}$; 0.50 microamps; $0-10$ amps. 5 db ranges from - 30 to microamps; $0-10 \mathrm{amps}, 0$ ohms: $0-1000 / 10,000 / 1$ mec $/ 100$ mer in four ranges with center scales of $5-50-500-500.000$ $5 \% /{ }^{\circ} \mathrm{W}$., $8 \%{ }^{\circ} \mathrm{H}$., $23^{\prime \prime} \mathrm{D}$. With test leads and batteries. Hickok Model 450 - Shpg. wh 4 lhs .

## OTHER HICKOK TEST EQUIPMENT

HIOKOK MODEL 288X Crystal Controlled SIgnal Gensrator.. 186.00 HICKOK MODEL 505 A 5" Oeclliagraph HICKOK MODEL 506-A Br Oicllograph
55.00

HCKOK MODEL $6405^{\circ \prime}$ Osclllograph
355.00

HICKOK MODEL 536 Mutual Conductance Tube Tester HIOKOK MODEL ह39A Mutual Conductance Tube Tester KOM M 271.50 HICKOK MODEL 830 TV Vorlage Calbrator HICKOK MODEL 650 TV "Videometer" Signal Tracer HIOKOK 34 Crystal Demodulator Probe

## RADIO CITY PRODUCTS TEST EQUIPMENT

## RCP MODEL 807 TUBE AND SET TESTER



Extreme free point flexibility permita any socket terminal to be used for any tube element and allows detailed open well as flament-heater continuity tests. 10 lever switches take care of every receiving tube now made. Two spare lever switches are also provided for future additions. Built-in roll chart covers 1000 tube listings. Has new 8 -prong sub-miniature socket. and neon lamp indicator. DO and AC rolt ranses: 0 10/30/500/1000/2500. 10 ampa. 4 db 10/100/1000 ma; 0-10 amps. it db ranges from $0-500 / 5000$ ohme: $0-0.1 / 1 / 10$ megs. Also tests paper, mica and electrolytic rapacitors for leakare. Hind-rubbed wood mave hinged cover, $12 \% \times 123 / 4 \times 4 \%^{\prime \prime}$. Supplied rith teat leads and betteries. Shipping weigbt 18 lbs Radio Cliy Produces Model 807 Tube \& Set Tester 75.41 ROP Model 323PO-Portable. tube tester only, less set testing 57.77 eatures
RCP Model 3230 - Counter model tube tester in open metal case. 53.85


## RCP MODEL 8773 SERVISHOP

## op. Includes

 Model 807 combination tube and set tester. AM, AF and FM generators and condenser tester. This unit is the answer to the small radio service shop that needs an economical. yet complete set of test equipment. Tests miniature, noval base and sub-minjature tubes, measures AC and DC rolts, DC milliamperes and amps, ohms, db , output volts and capactors. Housed in attructive patural finish onk case. $16 \% \times 12 \% \times 5 \%$. Supplied complete withtubes, batteries and lest leads. Shipping welght

## MODEL 447B MULTITESTER

Here is an exceptional value for a low priced AC-DC multitester. DC volt ranges: 0/.20/200/500/2500. AO vols: $0-10 / 100$ DC current: $0-1 / 10 / 100 / 1000 \mathrm{ma}: 0-1 / 10$ mps. Resistance: $0-10,000$ obms; 0.1 meg . DB meter from - 8 to +5 "n. Has $3^{\prime \prime}$ square meter with necuracy of $2 \%$. Open face
hardwood case, $5 \times 81 / 2 \times 3^{\prime \prime}$.
RCP Model $4478-$ Shipping weight 2 lbs. With batteries
17.59

ROP Model $447 B P$-Same in portable case, $61 / 881 / 24{ }^{1 / 20}$

## OTHER RADIO CITY PRODUCTS TESTERS

ROP Model TV-90 Osellloscope Sweep Generator............. 144.55
RCP Model 706 . WIde Range" Signal Generator.............. 66.15
RCP Model 654 Vacuum Tube Voltmeter........................ 56.35

## ELECTRONIC DESIGN VTVOM

 Extreme care in matching and selection of component parts has resulted in a test instrument 1 unusually high qualits. Ne volt ranges. $0-3 / 10$ 11 megs. AO rolt ranges: $0-10 / 30 / 100 / 300 / 1000$ Sensitivity 1000 ohms/rolt with aceuracy of $\pm 5$ \% Electronic ohmmeter ranges: $0-1000 / 10,000 / 100,000$ ohnis; $0.1 / 10 / 1000$ megs. Portable style metal case with strap carrying handle. Size. Operatea on $110-120$ rolts. $50 / 00$ cycles AC. Supplied complete with signal tracer probe nnd batteries. Shipping weight 11 lba.47.50 Electronle Deslgn PR9 Ediprobo-Use with any
 Elect measure IRF voltages with response of 60 eyeles through 100 mc without measure ITF voltares with response of 60
losding circuit. Shipping weight 2 lbs.


RCP Model 706A "WIde Range" Signal Generator 66. 15 RCP Model 654 Vacuum Tube Voltmeter

RCA MODEL WV-97A SENIOR VOLTOHMYST
This latest model features a full-ware, high impedance, high frequency rectifier to measure directly the peak-tn-peak roltage of waveforms 3 me . It measures De roltares resporse fint to 3 mc . It measures DC voltages from .02 to 1500 , and rims ralies of she-wave voltages from and roltake measurements rancen for resiztance and
push-pull DC amplifer bridge with inverse feed-pach-pul DC amphifier bidge with inverse feedneg. input impedance. Beter designed to read nieg. AC eonimponentit of siter designal when DC is is present and rice versa. DC roits: $0-1.5 / 5 / 15 / 50 /$ to-penk to 4200 rolts. Ohmmeter: 7 ranges 0 1000 mess. Orerall accuracy on DC $\pm 3 \%$ on $A C$. $\pm 5$ so. Blue-gray hammeroid case With
 direct probe and cable. WG-217 DC D probe, ohms lead and probe.
67.50

## RCA WG-264 DEMODULATOR PROBE

Popular crystal probe for use with WV. 97 A . Extends range to 250 me and ulso from 20 mv to 20 rolts zms in the pres. ROA WG-264-Sbpg. wt. $1 \mathrm{lb} . .7 .75$

NEW RCA MODEL WV-77A JUNIOR VOLTOHMYST
A popular test instrument back again at an amazlug low price. Has all the features of its fabuous predecessor plus greater voltage rankes,
wider frequency response, hich orerall accuracy wider frequency response, hich orerall accuracy and complete electronic nieration. AC and DC
volt rences: $0-3 / 12 /(60 / 300 / 1200$. Zero center. ing facilities for discriminator nlimmient. Can in used evel with AC present. Uses 1 meg resistor in isoluting probe with less than 2 mmf
input capacitance. Fxrellent for making measureimput capacitance Fxcellent for making measureimpedance circhits. LC polarity reversinus switch eliminates need for refersing test lend. Hith imbedance racuum tuhe diode used as signal rectifer. Flat frequency response 30 chs to 3 mc ( 50 ke to 2.0 mc when used with $\mathrm{WG}-204 \mathrm{Hc}$ nccersory probe described allove), noore than ade quinte for power lime, audio and ultra-sonic freQuencies, Measures AC in presence of DC. Himh input resistance on all olims to 1000 mega in fire ranges. Center scale ralnes $10,1000,10,000$ ohms; 1 meg and 10 megs. Uses only one $11 / 2$-rolt battery. Safely measurea continuity of low-power derices such as filaments of battery-operated receiving tubes. Carbon-film $1 \%$ multiplier resistors give lasting accurncy and dependability. Also features nepatlee-feedback bridge circuit. Durnble $4 \%$ "̈ plastic meter case set in completely alicided metal case. 200mieroamp meter morement. Supplied complete with tubes, battery, probes,
 RCA Mod
47.50

RCA WR-S9B TV SWEEP GENERATOR


Designed for the TV serviceman Who does aligning and general serricing of TV and FM receirers.
Gives comtinuous $I F$ coverage from Gives cominumus IF coverage from
300 ke to 50 me, plus contint300 kc to 50 me. plus continut-
ously rariable swcep width up to ously rariable swcep width up to
10 me . Prorides means for inspecting and adjusting rideo amplifiers, discriminators and all pic-
ture nnd sound IF amplifers. treset sind sound if amplifiers. channels $2-13$. Flat ontput within Widh. Fundamental nasillan sweep
put on all TV channels: filtered beat-frequcucundamental oseillator outIF/VF' range. Output voltage range (rma) 1 volt to I mimovolits. Maximams attenuator ratio: 20,000 to 1 on RF ranges; 4000 to 1 on IF Tankes. Zero-voltage reference line provided by return trace blanking.
 plete with tubes, SF/VF output cable. RF output cable, power cond and RCA WR-59B-Shlpping weicht 35 , 60 eycles AC.
274.50

## NEW RCA WO-57B $3^{\prime \prime}$ OSCILLOSCOPE



Built to handle every TV and radio sercice job. ${ }_{2}$ Features a direct counled. amplifter with a deflection amplifer with a deflection inel. Horizontal amplifer in rolts RMS/innh. Fre guency reaponse flat within $\pm 1.2 \mathrm{db}$ from DC to at 1 mc ; useful bejond 2 me. Hich frequency squarewave reaponse up to 100 kc. Sweep circuit frequency range $16-30.000 \mathrm{eps}$. Ifas preset fised suveep rmasi-
tions for ricwing rertical nnd horizontal sync pulses and sweep oecillator wareforms, Positive and negative synchronizing proride easy lock-in of npright or inverted pinceycle horizontal deflection voltage isf-to-right or right-to-left traces. ndjusteet by the phase control.tage is ohtained internally and can the
curying hammerold steel case with shleld, probes, leads and instructions. For "DOJ. Supplied with all tuhes. CR RCA WO-578 Osollloseopo-Shipping weight 20 lbs........195.00

## SIMPSON MODEL 260RT PORTABLE TESTER

An accurate, hich sensitivity VOM for radio and TV use. Has a sensittrity of 20,000 Prorides DC current readings as low $A C$, microamps. Resistance readings can be made to 20 meks and as low as $1 / 5 \mathrm{hhm}$. Measures automatic frequeney control diode balancing circuits, crid currents of nsellator and porver tubes, bias of power detertors, ATC diode currents, hich-mu triode plate voltage nnd others. A C and DC rolt ranges: $0-\frac{-2}{6} /$ 10/50/250/1000/8000. nC current: 0.100 microamps: $0-10 / 100 / 500$ ma; $0-10 \quad$ nmps
Ohms: $0-2000: 0-200,000 ; 0-20$ mes. 5 dit Ohms: 0-2000: $0-200,000 ; 0-20$ megn. 5 th
 finger rolls the top up around the heary molded bakelite case. Size: SImpson model Simpson Model 260RT-shipping weight a the. 45.96 Simpson Model 260 - Snme without roll top ense. Wi. 5 lbs.
Simpson Model 1-111818 Leather Carrying Caso-For Model 2f0 ... 6.61


## SIMPSON MODEL 303 VTVM

Can be used as an electronic DC roltmeter, an ohramipter, an AC roltmeter, and AF voltmeter,
and AF roltmeter (with accessory output meter and an FM indicator. DC and AO $1000 / 100,000 / 1 \mathrm{mes} / 10 \mathrm{meg} / 1000 \mathrm{meg}$. $A \mathrm{~F}$ : 0 ranges: $0-1.2 / 12 / 00$. 5 db fanges from - 20 to +63 . Input resistance 10 mess for all rantes (DC probe has 1 meq isolating resiator). AC AF response flat to 100,000 cycles. Has polarity. reversing swith and zero center galvanometer for FMI discriminator alignment and other applications. Rakelite case: $5 \% \times 7 \times 3 \%{ }^{\circ}$. For 105 , 125 V. , $80 / 60$ eycles. With probes, ground lead and manus.
SImpson Model 303-Shps. wt. 6\%/3 lbs. 57.57
simpson Model 303RT-Same with roll top case.


## ACCESSORY PROBES

Simpson Model 10-890074 High Voltage Probe
Reads to 30.000 V
SImpson Model 10.880073 Hioh Frequency Crystal Probo.

## SIMPSON MODEL 476 "MIRROSCOPE'

Ner principle of oscilloscope desimn mounts the $5^{\prime \prime}$ cathode rns tube in rertieal position, thus reducing bench space requirements to $9 \times 8^{\prime \prime}$. Cathode ray image is reflected from hich grade mirror mounterd in adjustable cover at top of cabinet. Mirror angle con be easily and quickly adjusted to any position consenient to the operator. Upright consifiction permits better layout of conirols and allowa for internal cathode ray tube connections nt the front
instend of rear. Sensitivity: vertical amplifer RMS/inch: horizontal amplifer 38 mplifer 20 mv Input finperdance: vertical nmplifler 3 mer ancli. mmf; horizontal ampliffer nmper at 15 mmf at 16 sreep frequency
$10-f 0,000$ cycles. continmously adjustable in fre overiapping ranges. Morizontnl trace
 cxpansion is orer four times tube diameter. " 7 " axis modulation 1 volts peak, blank normal truce. Vertical amplifier aris modulation. 14 cycles $\pm 3^{\prime \prime} \mathrm{db}$. Size: $16^{4} 4^{\prime \prime} \mathrm{H}$. . $^{9} \mathrm{y}^{\prime \prime}$ W., $8^{\prime \prime} \mathrm{D}$. For $105-125$ volts, $50 / 00$ Simpson Model 476-Shipping weight 30 lbs .
175.91

SIMPSON HIGH FREQUENCY CRYSTAL PROBE-FOT
cxtending

## OTHER SIMPSON TEST EQUIPMENT

## SIMPSON MODEL 240 "HAMMETER" VOM <br> SIMPSON MODEL 479 TV-FM SIONAL CENERATOR ................ 25.82 SIMPSON MODEL 387.10

 SIMPSON MODEL S55 TUBE TESTER SIMPSON MODEL 555 TUBE TESTER 77.91
## RCA HIGH VOLTAGE PROBES

Measure DC roltages up to 50 kr in high r sistnnce eircuits with your present YOM or
VTVM. Low-loss polystyrene body with leakage path to ground. Anti-coronn probe tin and grounded arrover protection haffe. Has insulated grip, fully shielded cable and separate
 kround lead. Mnltiplier reaistor is completely enelosed. Probes are sup-
plied less resistor. See listing below for resistors.
RCA WG-289-For POMs with mike-tyne terminals.......... 7.75
RCA WG-290-For YOMs with phone-tip terminals. . . . . . . . . . . . . 7.15 ROA HV PROBE GUIDE-Shows correct misltiplier to be used with RCA MULTIPLIER RESISTORS

| WQ-208- 1090 megs | WG-208- 100 megs | WQ-210-900 mers |
| :--- | :--- | :--- |
| WG-207- 991 megs | WG-209- 180 megs | Net, Each $\ldots .2 .80$ |

## OTHER RCA TEST EQUIPMENT



## TRIPLETT TEST EQUIPMENT

## TRIPLETT 3413-A TUBE TESTER



Latest model tube tester provides conclusive tube tests for ralue, inter-element shorts or leakage.
Neon short test shows slightest inter-clement short or leakake while cattuodes are hot. New 3 . position lever switches cire indiridual control for ench tuhe element. Also prorifes short and continuity test for appliances, motors, etc. Tests all receiving types, gaseous rectiflers, resistor and ballast tuhe continuity, and pilot lamps. Full range of filament roltages from 63 to 110 time guarantee meter. Illuminated roll chart. Line voltake indicator for checking linc fluctuations. Complete in counter-portable metal case with rem" Fo 115 Y 50/50 cyelea blark Triplets model 3413-A cycles.
77.91

## TV \& CRO TUBE TESTER ADAPTOR



Tests TV picture and CRO tubes for shorts, opens, flament continuity and value. Plugs into octal socket of Triplett Models 3413-A, 3413, 2413, 3212 and 3480 . A rnluable addition to your tube tester. Shp:
Triplett Model Bu Adaptor
7.74

## TRIPLETT 630 MULTITESTER

Dual, hish sensirity multitester: 20,000 ohms/rolt DC, 5000 ohms/rolt AC. DC and AC rolt ranges $0-3 / 12 / 60 / 300 / 1200 / 6000$. DC current: $0-60$ micro amms ; $0-1.2 / 12 / 120 \mathrm{nNa} ; 0.12 \mathrm{Amps}$. Resistance: 0 $1000 / 10,000$ ohms, 0,1 mer $/ 100$ nes with center seales of $4.4 / 44 / 44,000 / 440,000$ ohms. Six dirent reading db ranges from -30 to +70 . Capacitor in series with AC rolt ranges. Sinsle rotary switch. Black
molded plastic ease, $3 \% / 2 x 51 / 27 \% 2^{\prime \prime}$. Complete with molded plastic ease, 3
batteries and test leads.
Triplets Model 630 -Slipg. wt. 6 lbs.
38.71

## MODEL 630A LAB MULTITESTER

Similar to Model 630 described above but designed for laboratory use. Accurately callibrated. nirrored seale for takink readinks with an acruracy of $1 \%$. Sperial $\psi$ of 1 re resist
case supplied
with batterics und leads. Triplett Model 630 A
48.51

## TRIPLETT CARRYING CASES

Model 669 -For Models 660R and 660HH Mrultitesters. Black leather
 Model 639-For ifodel 630 Multitester. Black leather
6.37

## JACKSON FBETRIC TSST BQUMPMENT

## NEW JACKSON CHALLENGER TUBE TESTER



Uses dynamic teat principle which npplics separate element soltakes to ench tube clement. Simulates actual operating conditions. ing system provides spare circuits, switch and socket positions for future use. Simplified operation uses push-button and selectorswjtch controls. Tests all tubes including TV amplifiers and reetifers. Bullt-in roll chart provision for complete short tests. Finished in green with lrory knobs, meter
nover and pusli-buttons. 13 "W. $01 / 2{ }^{\prime \prime} \mathrm{H} ., 51 / 2 " \mathrm{D}$.
Jackson Model 115 Tube Tester--Shipping meight 15 lbs.
66.15

JACKSON CHALLENGER TEST OSCILLATOR
 A standard AM oscillator for testing FM and AM radios. and for use as an auxiliary TV marker generator. Fundamental frequencies from 100 ke to 54 me . Harmonics $5 t$ me to
218 me . Has two elreuit attenuntor for con216 mc . Inas two-erircuit attenuntor for controlling signal strencth. 400 -cycle andio modulation. or can be used for straielit IRF
 all ranges. Olerates on 10.1 -120 rols,
 With kits at same priec.
Jackson model to6-wt. it lbs... 58.31

## Jackson Model $106-w t .14 \mathrm{lbs} \ldots$ SON TEST EQUIPMENT <br> OTHER JACKSON TEST EQUIPMENT

Model 112 Ohallenger Condenser Tester
Model ORO-2
Model TVO-2 TV.FM Sweep
58.31

## SUPERIOR MODEL 670 SUPERMETER



Ahms combination instrument for rolts, ma. obms, capacity reuctance, inductance, and tics. DC volt ranges: $0-7.5 / 15 / 75 / 150 / 750 /$ $1500 / 7500$. AC volts: $0-15 / 30 / 150 / 300 /$ $1500 / 3000$. DC current: $0-1.6 / 15 / 1.10 \mathrm{ma}$; $\begin{array}{ll}0-1.5 \\ \text { andps. Resistance: } 0-500,100.000 \\ \text { ohms; } & 0-10 \text { megs. Reactance: 700-27.000 }\end{array}$ ohms; 0-10 megs. Reactance: 700-27,000 ohms: 13,000 ohms to 3 meks. Inductance: 1.75 to 70 henries; 35 to 8000 henries. : db ranges from -10 to +38 . Rugged, crackle-finished stee cabinet. Compiete
with test leads and instructions. For 110
 uperior modal 670 suparmete

## TRIPLETT 666R POCKET-SIZE VOM

A compact, vole-ohm-milliammeter festuring selector aritch of unit construction-ell reaistort, shunts, ectiner and batteries housed in molded base intend AC . DC 5000 . DC current: $0-10-100 \mathrm{ma}$ : $0-1 \mathrm{amp}$. $200 / 1000 /$ Resistance: $0-3000 / 300,000$ ohms (center scale 20 j 2000): 0-3 megs (center meale 20,000 ohms). $3^{3 \prime} 14$ etime guaranteed 0.200 microamp meter. Completely insulated black molded case, $3-1 / 16 \times 5 \cdot 7 / 8 \times 2-9 / 10^{\prime \prime}$. Black molded panel has enkraved white markings. Supplied with batteries, $50^{\prime \prime}$ test leads and instruc-
ion book.
25.97


Model 666 RL Same as 680 R but fastened in apecial black leather case
with strap handle. Can be hung up and used with case open. ......31.25

## TRIPLETT 666-HH MULTITESTER

Similar to Model 666R described above except for following diferences in ranges: $0-10 / 100 \mathrm{ma}$ and $0-2000 / 400,000$ ohmas. Has 20 mesohm or DC amp rances. All normal functions arailable from two banana jactr rith a special $\$ 000 \mathrm{~V}$. jack. Supplied complete with batterica
Trlplett Modol 666 -HH.
24.01

TRIPLETT 625-NA VOM ANALYZER
$6^{\prime \prime}$ lifetime guaranteed meter with no long mirror cale. Dual sensitivity on DC rolt ranges. DC rolts © $20, n 00$ ohms/rolt: $0-1.25 / 5 / 25 / 125 / 500 /$ $2500 ; 0-2.5 / 10 / 50 / 250 / 1000 / 5000$ © 10,000 ohms/ rolt. A0 rolts @ 10,000 ohms $/$ rolt: $0-2 / 5 / 10 / 50 /$
$250 / 1000 / 5000$. $D C$ current: $0-1 / 10 / 100 / 1000 \mathrm{ma}$ : $0-50$ mieroamps; 0.10 ands. Resiatance: 0.2000 ; 200,000 ohms: $0-40$ megs. 7 db ranges from -30 to +68 . Insulated, mlack molded case with renorable sirap handle, $23 \times 53 / 4 \mathrm{xb}^{\prime \prime}$. Batteries, ends and instructions supplied.
Trlplott Modol 625-NA-Shipg. wt. E lbs..... 48.51


## TRIPLETT EXTERNAL PROBES FOR HV TEST

Model T79-68-0-12,000V. DC for Models 630 and 630-A. Modol T79-69-0-12,000V. AC for Models 630 and $630-\mathrm{A}$ Model T78-70-0-30,000V. DC for Models 630 and $830-A$ Model T79-71-0-30,000Y. AC for Models 630 and 630-A. $>14.21$ Model T79-74-0-10,000Y. AC for Model 625NA. Model T79-70 $0-30,000 \mathrm{Y}$. DC for Model 625 NA .

## OTHER TRIPLETT TEST EQUIPMENT

## Model 2405 -A Voit-Ohm-Millammoter ( 20,000 ohms/Folt <br> Model 3434 -A TV-FM 8 weep Signal Genorator

Model 3435 TV.FM 8 weep Signal Generator.
Model 1235 TV.IF Absorption Marker
Model 1236 TV-FM Crystal Marker
Model 3432 Test Oscillator
Model $34415^{\prime \prime}$ Oscllloscope

## PRECISION ELECTRONIC SIGNAL TRACER

 Modol 201A. AC operated portable tracer. For troubleshootinu AM, FM and TV sound circufts from 20 cycles to over 300 mc . separate chamel for audio requencies. HF tube in probe witls 3 -tube high gain ampliffer makes all signals audible and does not upset most sensitire circuit. Full control of RF-1F stage prorided by nariable control and resistre aztenuator. For $110 \mathrm{c}^{2}$, 50 / 60 meles with tubes, probe and or $10 .$. Procision Electronlo 201 A Signal Tracer.. $\mathbf{3 4 . 5 0}$

## SPRAGUE TO-3 TEL.OHMIKE

Locates open, intermittent or shorted enpacitors without remoring then from circuit. Direct reading dinl, color coded solector switch. Measures . 00001 to 505 A0 cycles. 0.2500 merse insulotion resistance. 2.5 ohmis to 25 mcgs in 3 re. resistance. 2.5 ohms to 25 megs in 3 resistance ranges. DC voltage in 3 rangea ranses. Calsaeity and mearer factor of elece. trolstics mensured with rated polarizing roltage applied. Electrolstic leakase measured in ma at rated DC roltace For 115 rolts. 60 cycles. Size: $131 / 410 \times 5$


Sprague TO-3 Tel-Ohmiko-Shpg. Wt. is ibs
APPROVED ELECTRONICS AM SIGNAL GENERATOR Here is a low-priced, precision product for
laboratory technicians and radio servicemen. laboratory technicians and radio nerricemen An extremely stable signal generator corerIng long wave. broadcast and short wave frequencies. KF from 100 kc to 2 mc in
siz bands of fundamentals and 18 me to six bands of fundamentals and 19 me to
75 me in two bands of harmonics. Internal modulation of +10 cps rariable from 0 to modulation of 40 cps rariable from 0 to
$100 \%$. New RF and AF oscillators of highls stable design. Operates on 110 rolts, 60 stable design. Operates on 110 rolts, 60
cycles AC. Size: $12^{\prime \prime} \mathrm{F} ., 10^{\prime \prime} \mathrm{H} ., 8^{\circ} \mathrm{D}$. Shipping weirht 10 lbs. 200
42.58

## CHICAGO MULTITESTERS

A DC meter with the following ranges: $0-3 / 15 / 30 /$ 300 volts; $0-25 \mathrm{ma}$ and a resistance seale of $0-10,000$ ohms. Operates on two flashight cells which are included. Size: $17 \times 2 \% \times 3$ 年,


## OAK RIDGE MINIATURE TEST EQUIPMENT



## MODEL 102 high VOLTAGE TESTER

A small, lishtweight high voltage meter de simned eapecially for measuring teletision volt cres up to 30,000 volts DC. $3^{\prime \prime \prime}$ square meter, read dial microamp morement, has easy-to $0-500$, calibrated with three rollase scales: 10,000 ohmy $0-30,000$. Sensitivity telerision high voltages resistors of special accurary and stability. Four terminal greater on pancl, handle all Vour terminaliasck KV. Two hish roltage insulated probers are supplied. Tuster is self-contained and re5 quires no power source. Black bakelite case, $5 \% \times 42 \%^{\prime \prime}$. Shps. wt. 3 lbs.
Oak Ridgo Model 102
21.51


## MODEL 105 MULIITESTER

Here's a remarkable new miniature test instrument equal to any popular multitester in performance and operating characteristics-yelt-ohm-milliammeter with a combination $20,000 \mathrm{ohms} / \mathrm{rolt}$. Uses $1 \%$ sensitivity of resistors throushout. DC and AO volt ranges. $0-2.5 / 10 / 50 / 2=0 / 1000 / 5000$. Out put ralts : 0 : $2.510 / 50<250 / 1000$. DC milliamps: 0.10 / 100/500. DC microanips: $0-100$. Resistance: $0-2000 / 200.000$ ohmas; 0.20 megs. E db ranges from -12 to +55 . Sturdy, , black bakelite case measures only $3-\%_{\mathrm{m}} \times 5 / 2 \times 3^{\prime \prime \prime}$. This convenient pocket-size multitester makes on-tbe-spot serrOak Rldge Modal $105-$ wt. 4 lbs . . 38.17

## MODEL 101 SUBSTITUTION TESTER



Quickly apots the trouble in ma jority of radio and TV trouble shooting problems. Speakers can be tested by substituting built-in
test speaker with voice coll snd test speaker with voice coll snd
transformer connections or the panel. Output transformer can be switched in or out of circuit. Subswitched in or out of circuit. Sub-
stitutes 7 values of japer, cerastitutes
mlcon and electrolytic capacitars
from from 0001 to 80 mfd, and 4 100 values of 2 -watt resistors from able from panel switch.
The $0-2$ meg built-in potentiometer can also be substituted. Tester in cludes a simple audio sisnal tracer and two sets of test lead. Supplied with instructions. Durable, black bakelite case measures $5 \% x 4 \times 2 \times 4$. Shps. Oat R1d
Oak Ridge Model 101 Substitution Tester
19.55

MODEE 107 DYNAMIC TUBE TESTER
Here is a dynamic type tube tester in a handy pocket-size tube tester lite case, that measures only $5 \% / x$ $37 / 42 \%$ ". Every serviceman can instrument with complete confl dence. Checks tubes under conit operating conditions. Equipped with versatile switching that per. mits ehecking of all types of radio and TV receiving tubes. Sockets accommodate all octal, locktal, and 7 -pin and 3 -pin miniature tubes. 0
AO. Supplied complete with tube char Oalt Rldge Model 107 -Shge. wt. 4 libs.

48.95


## MODEL 106 MAGNETIC CRT TESTER

New, pocket-size cathode-ray tube tester checks all magnetic focus and deflection type tubes. A handy, lightweicht instrument that permits immediate testing of picture tube in the customer's home. Has easy-to read tuhe test scales and wo calibrated voltage acales- -500 and $0-15$ KV. Checks the tube in the set with operating oltares. Instrument includes a special interlectrode conductance tube circuit. Also testa node suputin electron kun or aish vollake anode. Suppled with duo-decal pluz and socket. x3\% x2
Oak Rldge Model 106-wt. 3 lbs... 29.35

## MODEL 108 POWER SUPPLY

For use with Model 106 CRT Tester. Supplies voltage to eheck picture thbe independently of receiver. Shpp. wt. 2 lbs.
Oak Ridg. Model 108 Power Supply..........
19.55

## MODEL 104 SYNCRO-SWEEP GENERATOR

 A Completely new instrument for sweep outputs and eliminates neecssity of depending on station serics of horizonts) or Supplies sars on channels $2-5$ for adjusting linearity. A lso supplies vertical and horizontal syne signals on channela $2-5$ to troubleshoot $\mathbf{R F}$. video detector and amplifier, and syuc circuits. Fertical or horizontal bawtooth signals eheck sweep circuitsfrom deflection coll back to sawtooth Renerator tubes. The horizontal saw-tooth signal is stions enough to generate the flyback hich voltage in television receivers. Panel controla Include selector for horisontal and vertical nync, linearity and sweep and fiyback tests, channal selector and sweep tunins. Black bakelite case, $5 \%$ x $4 / 21 / 4 "$, easily portable. For $105-125 V$., fol $/ 60$ eycles AC. With instruc tions.
Oak Ridge Model 104 Generator-Shng. wt. 3 lbs.
43.61

## MODEL 103 SIGNAL GENERATOR

## For servicing TV and FM sets.

 Generates a modulated or unmodulated RF sound or picture carrier signal on TV channels $20-28$ and $40-48$ selected by rotary switch on panel. FM roceivers can be checked. with remodulated or unmodulated 1 HF sisnal from $88-108$ me. Generator mound IF sections of any standard or interearrier type TV Ret, or to tune IF traps. Gencrates a soo-ycle signal with attenuator to check video, or atidio amplifter sections of TV sets. Alsn supplies a rad tirity of TV and PM antennas and check orientation characterist csensi- For 105-125Y. $50 / 60$, cycles AC. With tubes and instructiona. Black bakelitecase, $5 x x^{4} \times 23$. Oak Rldge Model 103 Generator-Shpg. wt. 3 lbs.


## MODEL CC CARRYING CASE

Sirong, leatherette covered wood care eapecially designed to hold any four of the testers described above. The four units can be set in the case or rentored individually as dcsired. Space is provided on one side for test Oak Ridge Model CC Case Shpy ut 1

## CORNELL-DUBILIER "BN" CAPACITOR BRIDGE



Measures accurately and quickly all capacitora between 00001 and 50 mfls . Mas Wein bridge circuit with visual "eye" to indicate balanced condition. Direct reading seale. Quickly and casily Indicatca shorts, power factor, and opens. 12A7 and GAF6G measures $3 \%$ " $x 5^{11} \times 3^{\prime \prime}$. Uses 12AT and BAF6G tubes. Supplied complete with tubes, leads and instructions. For $110-120$ O.D "BN" Capactior Bridge....... 21.94

## CORNELL-DUBILIER CAPACITOR DECADES

Use with "BN" Capacity Bridge. Calibration chart supplied with earh. Rating: 600 rolt DC; 220 rolt AC. Bakelite case $3 \% \times 5 \times 3^{\prime \prime}$. Shipping weight of each,
4 libs. Tolerance $3 \%$ or $3 \%$.
Ure with "BN" Capacity Brblge. Callbration chart supplied, with each. seight of each ${ }^{2}$ DC: 220 volt $A O$. Bakelite case $3 \% \times 53^{\prime \prime}$. Shipping
C-D Model CDA-5-.0001 to 011 mid in . 0001 steps. ( $5 \%$ ). 9.16 C-D Model CDB-3-. 01 to 1.1 mfd in .01 rofd steps ( $3 \%$ )

C-D Model CDB-5 - 01 to 1.1 mfd in .01 mfd steps ( $5 \%$ ).
C-D Model CDC-3-1 to 10 mfd in 1 mfd steps $(3 \%)$.... 21.02 18.86

## PRECISE DEVELOPMENT MODEL 909 VTVM

 In Kit Form or wiredA new racuum tube voltmeter kit with features usuully found only in more expensive test instruments. $1 \%$ resistors used in the precision circuits. 4\%" meter features sebarate $\delta$ volt $A O$ and 250 volt seales for more accurate readings on these rankes. AO and sistance: 01 to : ohm to 1000 mese sistance : 01 to 1 ohm to 1000 megs in steps DR fanges from - 20 to +55 . Amphenol chassin and mike connector used for DC put leads. Came $9 \mathrm{y} \times \mathrm{xfx5} 5^{\circ \prime}$. Kit complete with instruction book. Shpe. wt. 10 lbs .
Precise Model k909 VTVM Klt... 25.98 Model W909-As above, fuctors wirel. 44.98 Model W999-HI-Voliage Probe-Inereases


## RADIO CITY PRODUCTS 322AK TUBE TESTER KIT

 Here's a prof cssional type tube tester in kit form. Has provisions for cheek- ing indiridual sections of multipurpose tubes. miniature and sub-miniaturetubes. Il cadphone jack for noise test tubes. IIeadphone jack for noise test. leakuse test between elements and pact, sturdy construction. Open face hammertone grey finish steel case, $5 \%$
$\mathbf{1 2 \%} 88^{\prime \prime}$. Sloping pancl. For $100-130$ rolta, $50 / 00$ cycles AO. Shor. wt. 12 1 bs.


RCP Model 322aK Kll.... 28.95

## EIGD PRECISION INSTRUMENTS \& KITS



Features lever-action switches for testing each tube element. Tests all standard AM, FM and TV tubes including 9 -pin miniature, VR, masic standard and pilot bulbs. Large, $4 \%{ }^{\prime \prime}$ meter has colored markinss to indicate condition of tube. Lluminated roll chart gives tube test settings at a condition Has two leads with grid-eap connectors. Also tess for shorts and open elements. Protective overload pilot bulb. Built-in power supply. For 115 V., 60 cycles AC. Supplied with rartable steel case, etched panel

Elco Model 625 K Tube Tester KIt.
34.95

Modol 625 - As above, but factory wired.

## NEW MODEL 555K AC-DC MULTIMETER

20,000 Ohms/V. OC- $1000 \mathrm{ohms} / \mathrm{V}$. AC
Hish seusitivity YOM with 31 different ranges. DC volts at 20,000 ohms/ rolt: $0-2.5 / 10 / 50 / 250 / 1000 / 5000$. AO Se Output volts at 1000 ohms volt: same as DO. Cursent ranges: $0-100$ microamps; $0.10 / 100 / 500 \mathrm{ma}$; $0-10$ amps, Ohms: $0-1 / 100 / 100,000$. 5 db ranıes from -12 to +55 . $1 \%$ accuracy ceramic multipliers used. DC accuracy $\pm 3 \%$, $\Delta C$, $\pm 5 \%$. $4{ }^{2 \prime \prime}$ meter with 50 microamp movement. 11 igh-imp
Elco Model 555 K Multimeter K 18 .
29.95

Model 555-As above, but factory wired.
34.95

MODEL 5IIK VOLT-OHM-MILLIAMMETER
Popular, versatile instrument, most used by bervicemen. Makes a perfect, easy to assemble kit for beginners. Hus $3^{\prime \prime}$ meter and attractive etched panel. DC volt ranges: $0-5 / 50 / 250 / 500 / 2500$. AC \& output roles: $0-10$ ) $100 / 500 / 1000$. DC ma; $0-1 / 10$; DC amps: $0-1 / 10$. Itesistance: $0-5(0)$ 100,000 ohms; 0.1 meg. Supplied complete with case, parts, wire, batteries, Bchematic and pictorlal diagrams. Leas lest leads. size: $8 \times 4,05$ hpg. wt. 4 lbs
Elco Model 511K vom K/t.
14.95

Model 511-As abore, but factory wired.

## NEW MODEL S26K AC-DC MULTIMETER

A compact, pocket-size VOM with a sensitivity of 1000 olhms/rolt. High quality components and design make this kit an unusually kood value. AC \& DC volt ranges: $0-1 / 5 / 10 / 50 / 100 / 500 / 5000$. Hesistance: $0-1,10$ ohms. AC \& DC current rasges: $0-1 / 10$ ma; $0-1$ amp, 6 do ranges +00
 microamp movement. A mumphers are celte case measures $6 \% \times 3 \mathrm{~m} \times 2$ " Shpg. wt. 2 lbs.
Elco Model 528 K Multimoter KIt.
13.90

Model 526-As above, but factory wired

## MODEL 145 K MULTI-5IGNAL TRACER

High gain, high frequency trouble-shooting instrumeut. Self-contained spaker vermits tracinc of RF, 1F, FM, nudio and video circuita. Has provision for visual tracins with VTVM, for actual stage-bj-stase kain promparison. Response is over 200 mc . Can also be used as a small PA or intercon. system. For $110-125 \mathrm{~V}$., 60 cycles AC . Size: $10 \times 8 \times 4 \psi^{\circ \prime}$. Supor intercith tubes, parts, case, speaker, etched panel, schematic and pictorial diagrams. Diode probe in kit form also included. Shpg. nt. ${ }^{0}$ ibs. Elco Model 145 K Multi-Signal Tracer K Is

NEW MODEL 95OK RESISTANCE-CAPACITANCE BRIDGE \& R-C-L COMPARATOR
Measures and tests all resistors from .5 ohms to 500 mers; all capacitors from 10 mmf to 5000 m fd. Instant comparison measurement of $R, C$ and L with a complementary component as standard. Continuousiy rariable 0-n00 DC roltace source tests leakage, polarization tha power hith esse, 110 ., 60-cycle transiormer and rectiner. Aasic eye maizex8x \%". Stpg. panel, part
wt. 10 dbs.
19.95

Elco Model 950 K KIt
29.95

Elco Model 850 K KIt.......................
Model 950 -As above, but factory wired

## NEW MODEL II7IK RESISTANCE DECADE BOX

Talues from $0-99,900$ ohms with $3 / \%$ \& accuracy. New comparator position
 for fast substitution of equivalent component Size: $34 / 212 \times 3^{\prime \prime}$. Shpg. wt. 3 lbs.
Elco Model 1171K Decado Box Kit
.19 .95
Elco Model 117s above, but factory wired.
29.95

## PANEL METERS, RECTIFIERS, GEIGER COUNTERS




## SHURITE METERS

Economy model panel meters of good qualty and sccuracy. Model 550 is round and equipped with a clamp. Model 850 is square and flange mounted. Both models require a $2 \% z^{\prime \prime}$ hole. Average shpe.


DC VOLTMETERS

| Range | Mod. 550 | Mod. 950 |
| :---: | :---: | :---: |
| $0-3$ | 1.42 | 1.57 |
| 0.8 | 1.42 | 1.57 |
| 0.10 | 1.47 | 1.62 |
| $0-15$ | 1.57 | 1.71 |
| 0.25 | 1.57 | 1.71 |
| 0.50 | 2.40 | 2.55 |
| 0.100 | 1.86 | 2.01 |
| $0-150$ | 1.86 | 2.11 |
| 0.300 | 2.89 | 3.04 |
| $0-500$ | 3.82 | 3.97 |

- Indicates high resistance meters.

AC VOLTMETERS

| $0-15$ | 2.45 | 2.60 |
| :---: | :---: | :---: |
| $0-150$ | 3.25 | 3.33 |
| $0-300$ | 3.58 | 3.72 |
| DC |  | MILLIAMMETERS |
| $0-3$ | 2.11 | 2.25 |
| $0-5$ | 1.81 | 2.06 |
| $0-10$ | 1.81 | 1.96 |
| $0-16$ | 1.47 | 1.62 |
| $0-25$ | 1.42 | 1.57 |
| $0-50$ | 1.42 | 1.57 |
| $0-100$ | 1.42 | 1.67 |
| $0-1.100$ | 1.42 | 1.57 |
| $0-200$ | 1.42 | 1.57 |
| $0-300$ | 1.42 | 1.57 |
| $0-400$ | 1.37 | 1.52 |


| Range |  |  |
| :---: | :---: | :---: |
| $0-1$ | Mod. 550 | Mod. 950 |
| $0-3$ | 1.42 | 1.57 |
| $0-5$ | 1.42 | 1.57 |
| 0.10 | 1.42 | 1.61 |
| $10.0-10$ | 1.67 | 1.67 |
| $20-0-20$ | 1.71 | 1.81 |
| AC |  |  |
| AMMETERS |  |  |
| 0.1 | 2.45 | 2.60 |
| 0.3 | 2.45 | 2.60 |
| 0.5 | 2.45 | 2.60 |
| 0.10 | 2.45 | 2.60 |
| $0-50$ | 2.94 | 3.09 |

## RESISTANCE METER

Direct reading 10,000 ohms, 4.5 V . Shurite Model 550--Round. . 1.98 Shurlte Model 950-Square..2.11

FLANGE FOR ROUND METERS
Model 5A-2\%" black finish. 18c NOTE: If panel meters you reguire are not listed here, please write for prices. Space linitations prevent a complete listing.

## MARION MULTI-RANGER METERS

Foundation meters for assembling highly scales reading $0-10,0-50, \quad 0-250,0.1000$ AC and DC volts: $0-1,0-10,0-50,0-800$ ma: $0-500,0-100 \mathrm{M}$ ohms: $0-1$ meg, $0-10$ mexs: -10 to +54 decibels.

| Model | Slze | Ench |
| :--- | :--- | :--- |
| $53 S N$ | $3^{\prime \prime}$ square | 8.62 |
| 55 | $4 \% \times 4 \%^{\prime \prime}$ | 10.78 |
| 575 | $7 \times 8 \% \%^{\prime \prime}$ | 14.38 |



SHUNT AND RESISTOR KIT
Kit for Marion Multi-Ranger foundation meter. Consists of 14 metalized carbon flm resistors and $\downarrow$ wire wound shunts. $\qquad$ 8.99

## KELEKET PORTABLE GEIGER COUNTER

Responds
to radiation from radio-active
mermas. Designed for locating new deposits of caronite. pitchblende. curite or other radio-active substanees. Uranium can be found even when corcred with thick overburden. Hishly sensitive to both beta and wo ordinary fashlicht probe required. Only wo ordinary fashlight batteries are used Measures only $61 / \times 3 \% \times 210$ exceerls 50 hours. double headphones (macnet ic types single or 24,000 ohmis innpedance. Can be , 1000 to o P.A. system for clasuroom demonstred ions. Supplied with headset demonstre


Keleket Model K803-Shipping weight 3 lbs.

## PRECISION RADIATION 108 GEIGER COUNTER

New, low priced Geiget counter featuring high sensitivity to radio-active substances poeket or palm of band design fits in ore, cosmie rays, radium and $x$-rays by stantly produeing a loud series of elicks in earphone. The number of clicks inereases as counter approaches source of radio-active materinl. Tses a miniature anapliffer tube, one $22 \% \mathrm{~V}$, hearing aid oat tery and one flashlimit battery. Replacement cost of batteries fs nominal. They are easity changed hy anyone without use of tools. Geiger tube operates at 300 V , and is proterted by an antonatic safety device which prevents excessive voltage. Strong plastic case $14 \times 3 \times 5{ }^{\prime \prime}$. Suppled complete Whitheadset. batteries, radionctive sample and instruction. Preclsion Radiation Model 108 Shpg. ITt. 3 lbs .
precision radiation geiger counters
Professional type, extremely sensitive unit deterts beta particles as low as 100 K.E.V. as trell as camma rays, x-rays and cosmic rays. Has all three ways of indieating radio activity: neon flagher, ear-
phone and 3-ranke meter-2 2 and 20 phone and $3-$ ranke miter- 2,2 and 20
milliroentgens/hr. full scale. Detects even the faintest traces of uranium. Automatic voltage regulator cireuit eliminates need for any adjistments. IRugked, weatherlight cells and 2 small $45 \mathrm{~V}^{2}$. batteries Farphone, batteries, earrying belt and tube included.


## TV \& RADIO ALIGMMENT TOOLS \& TEST LEADS



## ICA TV SERVICING KIT

A compaet tool kit for all TV servicfing. Contains 9 tooly includhix one ach of numbera P15227, "Big stretch" Aliguer P15228 Tran-
 Dual Alikner: P15232. Dewp-Nib Allgier; P15235, Tuning Wand; Pl名23s, Channel Tuner; also one Stackpole core alikner. See cops bee Supplied complete in leatherette case
4.90

## "BIG STRETCH" ALIGNER

For adjnstmunt of nested iron cores of Admiral. Zenith and sinilar TV sets. Extra thin, $9^{\prime \prime}$ bone fiber tool with $6 \%^{\circ}$ blade. Alao for RCA from ends.

716 c

## TRAN-ALIGNER

All-insulated aligning tool for standard IF nnd RE, and "K-Tran" midget tranaformers, Milled at one eud, screw driver at of her. 54 ${ }^{\text {Plice. }} 28$

## SLIM-ALIGNER

Has extra thin receased blade and shin metal slaft for cranuped urob-P15228-Fiber Handle.. 71 ¢ P15228-Fiber Handle

## TUNING WRENCH

Insulated fiber with extra thin recensed blade on one end and extra thin


54


## TUNING WAND

Fxtra thin diameter to fit small coli openhigs din TV sets. Flexible riaylite "ith brass hasere in one
end and molded powdered fron core in other, Raises or lowers inductance, For Zenth TV, etc. 71

## DUAL ALIGNER

Narrow shaft fiber alignment tool for trimmers, IF transformers, ete. Dund purnose type with
driver on

## (3) - <br> CORE ALIGNER

For use on all TP sets using stackpole adjustable cores.
544


## KLEER-ALIGNER

Iovr-losa clear plastic, all Lusulated. Narrow. Kecersed hasulated blade one end extended blade on other end. $7^{\prime \prime}$ lonk.

594
SUPER-STRETCH "KLEER-ALIGNER"

12" long low-loss clear plastic rod with extended blade one end; brass noteted limet other end. $7 / 32^{\prime \prime}$ diameter. P15220


Spring prongs at eud of prods pernit changing from spade lugs to phone thps or siring clips. Handles $0^{\prime \prime}$ long. is diameter. Red and black kinklens rire. Complete with two niligator elips tiro needle point plione tips and 1.47
P12971-Pencl Prod Kit.


ICA TEST LEAD KIT
Containg a pair of teat leads With $60^{-}$red and black kink. less wire. One end equipped With faxulated phone tips other end with parable banana plike. Sunmornble in leatherette cane complete with matr of allicntor clipa, spade ligs and needle points.
2.62
 "NO BREAK" PRODS Top grade inaulated prods of solid brass, nickeled and corered rith shd one black. Thips are onerre ainted type. Other eud shar. Ninkless rubber wire hare
of solderless insulated phoue tivs. P12990-Per Pair 82 plat abore, but equipped with standard phane tips. P13000-Per Paír

734

## ICA LABORATORY PRODS

Containa remorable phono needle clucks. Extra-lonk sdim black and red handles, knurled at end for an easler krid. Hnndles are $8^{\circ}$ long and are supplited with $48^{\circ}$ length of henry-duty kinkless and extra-flex. ible rubber covered wire. Cholec of spade lugs or phone tips. P12978-spade Lugs
P12878-Spade Lugs
P12878-Phone Tips

14 tools telescope into six eany-tocarty units in conimact case, Contalus flexible serewariwer, aligninent rool. alligator site wethen, "msilated (ariver memeta) , nib) insulated square nut wrench, $2 \%$ - insuluted driver with uretal inib, \% - hex slotted hisulated wrench driver, go hex fisulated mut wrench, 5 " and © ${ }^{*}$. insulateld ${ }^{\text {driver. }}$ P15088-Complete Kit ... 5.39 As abwere less fixible rewdriver and nligning tool.
P15088
4.47


4-IN-I NEUTRALIZING TOOL
3* nut wrench with key slot and alkuluz serewdriver.
bakelite. With penc clip. $59<$ $\qquad$
UHF ALIGNING TOOL


Amphenol polsatyrene. Lange end has a metal tip. Small diameter ead lengthun
P15075

15

## ICA 5-IN-1 ALIGNER KIT

Combines $1 / 4$ " and $y / 10^{*}$ nut wrenches and miniature blade, full-sime serewdriver in a single fountain peussize tou 984

## ICA TELEVISION "CHANNEL TUNER"

Narrow, all-insulated screwritiver of machluel fiber. Ideul for deep. Inec-
 54

FIBRITE SCREWDRIVER
Two-ended serewdriver for trimmer condensers. $7^{\text {" }}$ long 25
P15151—yis diancter 45

## FIBER ALIGNER

Double bladel fiber aliguer $\tau^{\circ}$ - long, $\mathrm{h}_{8}$ " dianucter.

## HEXY-SQUARE ALIGNER



All bone fiber core nligning tool especinlly dexigued for Raytheon-Bemmut hex 011 oue end and the" square on other end P15069

## HEX-ALIGNER

(3)

All-bone, fiber iron core aligning tool. Ins 3 , 32 " hex on one end and


## ALL-PURPOSE ALIGNER

Bone fiber screwdriver ends sot in red Tentte hundic. Overall leugth $6 \%$. purposes for Motoroln and other popular recelvers of the seme tyve. 54

NEEDLE SOLDERLESS TEST LEADS


Red and black kinkless wire "ith 4 L Liber haudles, or diameter, gither type 00 , Lhuck and plionograph needle. Solderless tip type has jong voint.

 | P12975 Spude lugs .71 P129898pade lugs . 71 |
| :--- |
| P12977 Allgator .72 |

## WESTON TYPE TEST LEADS



F" long handles of red and black daenolic connected to ered wire. Lencth
B5 orerall. Sup.
plied complete with molded finger grip tips with sex serews. P12988-Per Pair
1.32

## IRC, OHMITE \& SPRAGUE RESISTORS

## 1/2, 1, 2-WATT RESISTORS-STANDARD RMA CODE-SPECIFY RESISTANCE

| Onms | Ohms | Ohme | Ohms | Ohms | Ohms | Ohms | 0 hms | Ohms | Moge. | M | Megs. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $0.27$ | 1.2 | 5.6 | 27.0 | 120 | 560 | 2700 | 12M | 56 M | 0.27 | 1.2 | 5.6 |
| ก. 29 | 1.8 <br> 1.8 | 6.8 8.2 | 35.0 39.0 | 180 | 800 | 3300 3400 | 13.1 | 08M | 0.33 | 1.5 | 8.8 |
| 0.47 | 2.2 | 10.0 | 47.0 | 220 | 1000 | 4700 | ${ }_{22 \mathrm{M}}^{18}$ | 100M | 0.39 | 1.8 | \$. 2 |
| 0.68 | 2.7 | 12.0 | 56.0 | 270 | 1200 | 5600 | 27 M | 120 M | 0.46 | 2.7 | 12.0 |
| 0.68 | 3.3 | 15.0 | 88.0 | 330 | 1500 | 6800 | 33 M | 150 M | 0.88 | 3.3 | 15.0 |
| 0.82 1.0 | 3.9 | 18.0 | 82.0 | 390 | 1800 | 8200 | 39M | 180 M | 0.82 | 3.8 | 18.0 |
| 1.0 | 4.7 | 22.0 | 100 | 470 | 2200 | 10 M | 47M | 220M | 1.0 | 4.7 | 22.0 |

OHMITE "LITTLE DEVIL"
INSULATED RESISTORS

Insulated molded plastle. Meet JAN specs. Tolerance $10 \%$. These restistors are made in Vslues as shown on RMA table above, starting at 10 ohma and up to and Including 22 megs.
Sjech
exact restatance when orderlag.

P5206A........................................... 10 \&
 P5207A one value ...................Each 100 of
 100 of one value.
NOTEß We can supply all RMA standard vaiue resistors in $5 \%$ toierance at twice the price of $10 \%$ reslstors.

## TRUTEST INSULATED

$1 / 2$ AND 1 -WATT RESISTORS

RMA color eoded Insulated realistors. Molaeure and heat resiotant. Securely anchored platali wire leads. Accuracy $10 \%$. Made in values Hhown in the RMA Code Chart above, from 220
ohms uo to and including 10 megs. Pleme muccliy ohms up to and including 10 megs. Please mpecliy
reglintance when ordering.


## IRC BT INSULATED RESISTORS

 - DPack MEET JAN SPECS
## Fully Insulated molsture-progt, fiament type plement in bakeite housing. BT' corresponis to JAN RCIO and RC20: BTA to JAN RC30 and JTB BTB to JAN RC41. Tolesance $=10 \%$. $5 \%$ tolerance avallable on speclal order at twice the prite of $10 \%$ resistors, Spectity reslatance when ordering.   1-wA 5207 BTA: 100 ohms to 22 megs. 100 of one value. ............................................... 5 \&  100 of one value. <br> Ehach 12f <br> IRC TYPE "BW" INSULATED WIREWOUND RESISTORS <br> 

Blallar to BT types, but contain a wirewound clement, completely encased in molded cots-
pound. Tolerance $-10 \%$. Specify ressiance de. pound. Tolerance $10 \%$. Specify resistance demired from RMA table listed above.
 100 of one value. $0.47-4700$ ohms. Each $6 c$
154 P5259 $14 \times 4$ ".
100 of one value.

Each 15 \&


## TRG RESIST-O-GUIDE

$3 \times 5^{\circ}$ color code chart. Old and new atyle codes.


IRC WIREWOUND POWER RESISTORS


Resistance values regularly itocked In each wattege indleated by price


EXTRA CONTACT SLIDERS FOR VARIABLE RESISTORS-


SPRAGUE "KOOLOHM" SW \& 10W WIREWOUND RESISTORS

Non-inductively wound with ceramic coated moisture resistant. Insulated for 10,000 y $5 K T$ ( 5 W slze) 1i/́xis 1


| Ohms | 5 KT | 10 KTH | Ohms | 5 KT | 10 KT |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | . 38 | . 44 | 1750 | . 41 | . 47 |
| 10 | . 38 | .44 | 2000 | .41 | .47 |
| 10 | -36 | . 94 | 2,0ul | . 41 |  |
| 20 | . 38 | . 44 | 3040 | .42 | .47 |
| 25 | . 38 | . 44 | 4000 | .41 | .47 |
| 30 | . 38 | . 44 | 5000 | . 41 | .47 |
| 40 | . 38 | .44 | 6000 | .47 | . 53 |
| 50 | . 38 | . 44 | 7500 | .47 | . 53 |
| 75 | . 38 | .44 | 8000 | .47 | . 53 |
| 100 | . 38 | . 44 | 8000 | . 47 | . 53 |
| 160 | . 38 | .44 | 10.000 | . 47 | . 53 |
| 200 | . 38 | - 44 | 12,000 |  | . 59 |
|  | . 38 | . 44 | 12,500 | .53 |  |
| 300 | . 38 | . 44 | 14.000 | . 53 | .59 |
| 400 | . 38 | .44 | 18,000 | . 56 | . 59 |
| 500 | . 38 | .44 | 17.500 |  | . 59 |
| 600 | . 38 | . 44 | 20.000 | . 56 | . 65 |
| 700 | . 38 | . 44 | 28,000 | . 65 | . 71 |
| 750 |  | .44 | 30.000 | . 72 | .76 |
| 800 900 | . 38 | .44 | 40,000 | . 88 | . .97 |
| 900 1000 | . 38 | .44 | 80,000 80,000 |  | 1.06 |
| 1000 1250 | .38 | .44 | 60,000 70,000 |  | 1.18 |
| 1500 | .41 | .47 | 70.000 |  | 1.29 |

IRC WW4 AND WW2 PRECISION RESISTORS 1 watt wirewound rests.
tors accurate within tora accurate within windings on low-loss oeramic forms having and mechanteal atrength
 WW4 have lug terml-

## Stock No. P5203 Type WMs

| Ohms | Each | Ohms | Each | Onms | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.1 |  | 1500 |  | 30.000 | 1.36 |
| 0.2 |  | 2000 | 1.20 | 40.000 | 1.34 |
| 0.5 | 1.23 | 2500 |  | 50.000 | 1.34 |
|  |  | 3000 |  | 80.000 | 1.59 |
| 5 |  | 3500 |  | 78,000 | 1.59 |
| 10 |  | 4000 |  | 100,000 | 1.72 |
| 25 |  | 3000 | 1.23 | 125,000 | 1.98 |
| 50 |  | 7500 |  | 150,000 | 2.98 |
| 100 | 1.20 | 10.000 |  | 175,000 | 2.25 |
|  |  | 12,500 |  | 200,000 | 2.25 |
| 250 |  | 15.000 |  | 225.000 | 2.47 |
| 300 500 |  | 20.000 22.500 |  | 250.000 | 2.47 |
| 500 |  | 22,500 | 1.34 | 300,000 | 2.69 |
| 1000 |  | 25.000 |  | 400,000 | 3.31 |
|  |  |  |  | 500,000 | 3.53 |



## IRE METAL RESIST-O-CABINETS

Sturdy, all ateel cablnet with lour non-splli drawers: Has 28 range ldentifled
compartmenes. size: 13, 知 $\times 10 \%$. FREE WITh purchase of any assortment
 KOWORTMENT NO. \&- 100 BW - $/$ \& BTB

## ELECTROLYTIC CAPACITORS

## CORNELL-DUBILIER - SPRAGUE <br> MALLORY

(ORDER BY STOCK NUMBER AND SPECIFY BRAND)


Small, handy dry electroytics. Sealed in drawn aluminum cans. Card With polarlty marked. Convenientiy mounted. easy to use.


## CORNELL-DUBILIER TYPE "BRH"

Etched foll electrolytics, hermetcially sealed In aluninum cans. Have exteral cardboard insulating eeve, metal mountins


CORNRTR-DUBILIER TYPE "EDL"
Cardboard cased electrotyelcs. multlple wax filled. tive. Center mounting strap. Color coded. Insu strap. Color coded. nsuends.


SPRAGUE TYPE "YVA"
ispectally dealyned to take care of both TV and radlo replacements. Small slze, hermetically gesled dry electrolytic tubulary Cardboard case with polarity marked. All duals have common negative.


MALLORY TYPES "TC" \& "TCD"

Hermetically sealed aluminum tubes with exteral insulating sleeves. For under chassis mounting. Bare tinned copper leads t each end. All duals have common nezative

| No. | MPd | V. | Sprame. | C-D | Mallory | E. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\times 140$ | 10 | 150 | TVA!408 | BR1015 | TC42 | . 62 |
| $\times 141$ | 12 | 150 | TVA1407 | BR1215 | TC43 | . 65 |
| $\times 142$ | 16 | 150 | TVA1409 | BR1615 | TC44 | . 68 |
| $\times 143$ | 20 | 150 | TVA1410 | BR2015A | TC45 | . 71 |
| $\times 144$ | 25 | 150 |  | BR2515 |  | . 73 |
| $\times 145$ | 30 | 150 | TVA1412 | BR3015A | TC47 | . 76 |
| $\times 146$ | 40 | 150 | TVA1413 | BR4015A | TC48 | . 79 |
| $\times 147$ | 50 | 150 | TVA1414 | BR5015A | TC49 | . 82 |
| $\times 148$. | 60 | 150 |  | BR6015 |  | . 88 |
| X149 | 80 | 150 | TVA1418 | BR8015A |  | . 94 |
| $\times 150$ | 100 | 150 | TVA1420 |  |  | 1.03 |
| $\times 151$ | 160 | 150 | TVA1422 |  | TC495 | 1.12 |
| $\times 152$ | 1 | 250 | TVA1501 | BR425 |  | . 59 |
| X153 | 8 | 250 | TVA1503 | BR825 | TCSI | . 68 |
| $\times 154$ | 10 | 250 | TVA1504 | ........... | TC52 | . 72 |
| $\times 155$ | 12 | 250 | TVA1505 | BR1225A | TC53 | . 73 |
| $\times 156$ | 16 | 250 | TVA1507 | BR1625 | TC54 | . 76 |
| $\times 157$ | 20 | 250 | TVA1508 | BR2025 | TC55 | . 79 |
| $\times 158$ | 30 | 250 | TVA1510 | BR3025A |  | . 85 |
| $\times 159$ | 40 | 250 | TVA1511 | BR4025A | TCS8 | . 91 |
| $\times 160$ | 50 | 250 |  | BR5025 | TC50 | 1.00 |
| $\times 161$ |  | 450 |  | BRI45 |  | . 65 |
| $\times 162$ | 2 | 450 | TVA1701 | 8R245 |  | . 65 |
| $\times 163$ | 1 | 450 | TVA1702 | BR445 |  | . 68 |
| $\times 164$ | 8 | 450 | TVA1704 | BR845A | TC71 | . 73 |
| $\times 165$ | 10 | 450 | TVA1705 | ER1045A | TC72 | . 76 |
| X166 | 12 | 450 | TVA1706 | BR1245A | TC73 | . 79 |
| $\times 167$ | 16 | 450 | TVA1708 | BR1645A | TC74 | . 82 |
| $\times 168$ | 20 | 450 | TVA1709 | BR2045A | TC75 | . 91 |
| $\times 169$ | 30 | 450 | TVA1712 | BR3045A | TC77 | 1.00 |
| $\overline{\times 170}$ | 40 | 450 | TVA1712 | BR4045A | TC78 | 1.06 |
| $\times 171$ | 50 | 450 | TVA1713 |  |  | 1.23 |
| $\times 172$ | 80 | 450 | TVA1716 |  |  | 1.65 |
| $\times 173$ |  | 500 |  | BR450A |  | . 71 |
| K174 | 8 | 500 | TVA1902 | BR850A |  | . 76 |
| $\times 175$ | 10 | 500 |  |  | TC81 | . 79 |
| $\times 176$ | 16 | 500 | TVA1905 | BR1650A |  | . 88 |
| $\times 177$ | 20 | 500 | TVA1906 | BR2050A | TC83 | . 94 |
| $\times 178$ | 30 |  |  | BR3050A | TC84 | 1.03 |


| No. | Mid. | WV1 | Sprague \| | C-D | \| Mallory! | E. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\times 200$ | 10-10 | 25 | TVA2210 |  |  | . 82 |
| $\times 201$ | 20-20 | 25 |  | EDL2202 |  | . 82 |
| $\times 202$ | 25-25 | 25 |  |  | TCD26 | . 82 |
| $\times 203$ | 10-10 | 50 | TVA2315 | EDL115 |  | . 82 |
| $\times 204$ | 8-8 | 150 | TVA2415 |  |  | . 88 |
| $\times 205$ | 16-16 | 150 | TVA2420 |  |  | 1.06 |
| $\times 206$ | 20-12 | 150 | TVA2426 |  |  | . 94 |
| $\times 207$ | 20-20 | 150 | TVA 2428 | EDL2215 | TCD45 | . 97 |
| $\times 208$ | 30-20 | 150 | TVA2421 | EDL3215 |  | 1.00 |
| $\times 209$ | 30-30 | 150 | TVA2434 | EDL3315 | TCD47 | 1.06 |
| $\times 210$ | 40-20 | 150 | TVA2438 | EDL4215 | TCD485 | 1.03 |
| $\times 211$ | 40-30 | 150 | TVA2442 | EDL4315 |  | 1.06 |
| $\times 212$ | 40-40 | 150 | TVA2445 | EDL.4415 | TCD48 | 1.09 |
| $\times 213$ | 50-30 | 150 | TVA2450 | EDL5315 | TCD497 | 1.15 |
| $\times 214$ | 50-50 | 150 | TVA2453 | EDI5515 | TCU49 | 1.23 |
| $\times 215$ | 80-30 | 150 | TVA2460 |  |  | 1.29 |
| $\times 216$ | $80-40$ | 150 |  | EDL8415 |  | 1.32 |
| $\times 217$ | 80-50 | 150 |  |  | TCDA98 | 1.38 |
| $\times 218$ | 10-10 | 250 |  |  | TCD5 2 | . 97 |
| $\times 219$ | 16-8 | 250 | AT816 | EDL16825 |  | 1.00 |
| $\times 220$ | 16-18 | 250 | AT261 | EDL16D28 |  | 1.06 |
| $\times 221$ | 20-20 | 250 | TVA2515 | EDL225 | TCD55 | 1.09 |
| $\times 222$ | 40-10 | 250 | TVA2S20 |  |  | 1.21 |
| $\times 223$ | 80-10 | 250 | TVA2525 |  |  | 1.50 |
| $\times 224$ | 8-8 | 450 | TVA2720 | EDL8D45 | TCD71 | 1.00 |
| $\times 225$ | 10-10 | 450 | TVA2722 |  | TCD72 | 1.09 |
| $\times 226$ | 15-15 | 450 |  |  | TCD 74 | 1.29 |
| $\times 221$ | 16-8 | 450 | TVA2725 | EDL16845 |  | 1.18 |
| $\times 228$ | 16-16 | 450 |  | EDL16D45 |  | 1.32 |
| $\times 229$ | 20-20 | 450 | TVA2730 | EDL2245 | TCD78 | 1.47 |
| $\times 230$ | 30-30 | 450 | TVA2738 |  |  | 1.76 |
| $\times 231$ | 40-40 | 450 | TVA2740 |  |  | 2.00 |

## TRIPLE SECTION

| Stock No. | Cap. Mid. | Whg. Yolts | Sprapue | C- ${ }^{\text {a }}$ | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\times 300$ | 20-20-20 | 150 | TVA3440 | EDL22215 | 1.29 |
| $\times 301$ | 30-25-20 | 150 |  | EDL32V215 | 1.32 |
| $\times 302$ | $30-30-30$ | 150 | TVA3444 |  | 1.38 |
| X303 | 40-20-20 | 150 |  | EDL42215 | 1.32 |
| $\times 304$ | 10-30-20 | 150 | TVA3448 | EDLA3215 | 1.38 |
| $\times 305$ | 40-40-20 | 150 |  | EDIA4215 | 1.38 |
| X306 | $40-40-40$ $80-40-20$ | 150 150 | TVA3451 | EDL.4415 | 1.44 |
| $\times 307$ | 80-40-20 | 150 | TVA3455 |  |  |
| $\times 308$ | 20-20-20 | 150-150-25 | TVA3415 | EDL2215C | 1.21 |
| -309 | $30-20-100$ | 150-150-25 | -....... | EDL2215C10 | 1.38 |
| $\times 310$ | $30-30-20$ | 150-150-25 | . .6 | EDL3315C | 1.29 |
| $\times 311$ | 40-20-20 | 150-150-25 |  | EDLA215C | 1.26 |
| $\begin{array}{r} \\ \times 312 \\ \times 313 \\ \hline\end{array}$ | $40-40-20$ $80-30-20$ | $150-150-25$ $150-150-25$ |  |  | 1.32 1.38 |
| $\begin{array}{r} \\ \times 313 \\ \times 314 \\ \hline\end{array}$ | $50-30-20$ $50-30-100$ | $150-160-25$ $150-150-25$ | TVA3430 | EDI5315C10 | 1.50 |



CORNELG-DUBILIER ELECTROLYTICS TYPE "KR" SCREW NECK
TYPE "WR" TERMINAL LUG
Typo "KR". Etched foll electrolytics for aingle hole mounting. In inverted mounting aluminum cans. With color-coded leads.
Type..WR. For replacement of discontinued wet electrolytics, 450 -volt DC units. Terminsi Jug is riveted to thresied neck. Encased in alumlnum can. ${ }^{3} \mathrm{KK}$ " mounting stud with palnut.

\section*{"MR" SINGLE SECTION <br> | No. | Typo |  | . | Ea. |
| :---: | :---: | :---: | :---: | :---: |
| $\times 900$ | KRED ${ }^{\text {K }}$ | 4 | $1 \times 2$ | 1.21 |
| $\times 901$ | KR508 | 8 | $1 \times 214$ | 1.29 |
| $\times 902$ | KR512A | 12 | $1 \times 2$ | 1.41 |
| $\times 903$ | KR516A | 18 | $1 \times 3$. | . 42 |
| $\times 904$ | KR520 | 20 | 141020 | 1.62 |
| $\times 905$ | KR530 | 30 | 153以" | 76 |
| $\times 90$ | KR540 | 40 | 18X |  |

600 Volts OC Working

## X920 KRUN4 4 ! $x^{3} x^{\circ}=1.73$



OUAL AND TRIPLE SECTION $\frac{450 \text { Volts OC Working }}{\text { No. Type Mid. DIn.EL. Ea. }}$

 | X930 KRC548 | $4-8$ | $1 \times 3^{\circ}$ | 12.73 |  |
| :--- | :--- | :--- | :--- | :--- |
| $\times 931$ | KRC588 | $8-8$ | $14 \times 2$ | 1.76 |



 negatlve.

| No. | Type | NTd | Replaces | Each |
| :---: | :---: | :---: | :---: | :---: |
| $\times 940$ | WR10 | 10 | $4-12 \mathrm{mfd}$. | 1.35 |
| $\times 941{ }^{\circ}$ | WR20 | 20 | $16-20 \mathrm{mid}$. | 1.59 |
| $\times 942+$ | WR30 | 30 | $20-30 \mathrm{mid}$. | 1.73 |
| $\times 944$ | WR40 | 40 | 30.40 mfd . | 1.85 |


| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | Cap. Mid. | Whg. Volts | Sprerue | C.D | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\times 315$ | 50-50-20 | 150-150-25 | TVA3436 | EDL5S15C | 1.47 |
| $\times 316$ | 80-20-100 | 150-150-25 |  | EDL8215C10 | 1.62 |
| $\times 317$ | $80-40-20$ | 150-150-25 |  | EDI8415C | 1.56 |
| $\times 318$ | 75-40-10 | 250 |  | EDL7V4125 | 2.03 |
| -319 | 20-20-20 | 250-250-25 | . . . . . | EDL2225C | 1.32 |
| +320 | 40-20-20 | 250-250-25 |  | EDL4225C | 1.50 |
| $\times 321$ | 40-40-20 | 250-250-25 |  | EDL4425C | 1.71 |
| $\begin{array}{r} \\ \times 322 \\ \times 323 \\ \hline\end{array}$ | $16-16-16$ $20-20-20$ | 450-450-25 |  | EDL16T48 | 1.82 1.71 |

## QUADRUPLE SECTION

| $\times 375$ | $30-30-20-20$ | $150-150-150-25$ | $\ldots .$. | EDL33215C | 1.71 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\times 376$ | $20-20-20-20$ | $450-450-450-25$ | $\ldots . .$. | EDL222245C | 2.38 |



CORNELL-DUBILER TYPE "TVC"

## METAL TUEULAR CAPACITORS

Compset, metal can tubulars designed to withstand severe climatle conditions. Non-inductively wound and oll impregnated. With mounting strap 600 Volts OC
$\qquad$



$$
\begin{array}{r}
1600 \text { Valts } \mathrm{D} \\
\hline \text { X1480 TYC1605 } .065
\end{array}
$$

## CORNELL-DUBILIER

 TYPE "TLA" OIL-FILLED CAPACITORS

\section*{ <br> | single section |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5n | ${ }_{\text {chap: }}$ | Wkg: | Mallory | c. C ¢ ${ }^{\text {d }}$ | ${ }_{\text {sorajo }}^{\text {Typuo }}$ |  |  |
| $\times$ |  |  |  | ${ }_{\text {UPTT101 }}^{\text {UPT }}$ |  |  |  |
| ( ${ }^{\text {x } 020}$ | ${ }^{1024}$ | ${ }^{3}$ |  | ${ }^{4} \mathrm{HPT} \mathrm{T}_{102}$ |  |  |  |
|  | ${ }^{1000}$ | 15 | w |  | TVL1165 |  |  |
| X ${ }^{1006}$ |  | 25 |  | CP100-25 | TV12125 |  |  |
| - ${ }_{\text {X }} \times 108$ | ${ }^{1000}$ | cois | Wposs | UP1 M-25 |  |  |  |
| 19 | 500 |  | WPots |  | TVL2330 |  | 1.51 |
| - ${ }_{\text {x }}$ | $\begin{array}{\|c} 50 \\ 100 \\ 180 \end{array}$ | 150 | \% | Upsinis | TVLL1415 |  | - 91 |
| $\begin{aligned} \hat{y}_{1} 1124 \\ \end{aligned}$ | 150 <br> 300 | $\begin{aligned} & 1505 \\ & 150 \\ & 150 \end{aligned}$ |  | UP15015 | $\xrightarrow{\text { TVILLidsi }}$ |  | +66 |
| (ex | $\begin{aligned} & 150 \\ & 50 \\ & 50 \end{aligned}$ | cisi 350 350 |  |  | TVL1622 |  |  |
|  | ${ }_{125}^{80}$ | ${ }^{350}$ | ${ }_{\substack{\text { FPF138 } \\ \text { FP1 }}}^{\text {P13 }}$ | UP8035 | TVLCL63 |  |  |
| (ex | ${ }_{15}^{10}$ | - |  | ypididi | TV1775 |  | 12 |
|  | 20 | +40 | EPP14 | ${ }^{4} \mathbf{4} 2045$ | ${ }^{\text {TVLLI }}$ |  | \% |
| (exter | (10 | $\substack{450 \\ 450 \\ 450}$ |  |  | TVL1725 |  | 15 |
|  | 125 | 400 |  |  | rut |  |  |

DUAL SECTION

| Sth. No. | Cap. Mid. | DC. Wkg. | $\begin{gathered} \text { Mallory } \\ \text { Type } \end{gathered}$ | $\begin{aligned} & \text { C-D } \\ & \text { Typo } \end{aligned}$ | Sprague Type | m CD | $\begin{aligned} & \mathrm{Net} \\ & \mathrm{Ea} . \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\times 500$ | $\begin{aligned} & 250 \\ & 1000 \end{aligned}$ | 10-8 | WP204 | UPT200 | 40 | FFF | 1.68 |
| $\times 501$ | $\begin{aligned} & 1000- \\ & 1000 \end{aligned}$ | 15-15 | WP200 | UPT11 M15 | TVL2160 | OGE | 2.59 |
| $\times 502$ | 20-20 | 150-150 | FP208 | UP |  | 8 B B | 1.00 |
| $\times 503$ | $30-30$ | 150-150 | FP211 | UP3125 | TVL2422 | $\begin{array}{llll}8 & 1 & \mathrm{~B}\end{array}$ | 1.09 |
| $\times 504$ | 40-20 | 150-150 | FP210 | UP4215 |  | $\begin{array}{llll}8 & 13 & 13\end{array}$ | 1.06 |
| $\times 505$ | 40-40 | 150-150 | FP212 | UP4415 |  | C $\mathrm{B}^{-}$ | 1.12 |
| +506 | $50-30$ | 150-150 | FPP213 | UPS315 | T | C ${ }^{\text {c }}$ | 1.18 |
| $\times 507$ | 50-50 | 150-150 | FP214 | UPS515 | TVL2435 | ${ }^{\text {C }} \mathbf{C}$ | 1.26 |
| $\times 508$ | 80-40 | 150-150 | FP216 | UP8415 | 2 | DC G | 1.35 |
| $\times 509$ | 125-100 | 150-150 | FP215 |  |  | G - | 2.00 |
| $\times 510$ | 20-20 | 250-250 | FP217 | UP2225 | TV-253 | $\begin{array}{llll}1 & 8 & 8\end{array}$ | 1.12 |
| $\times 511$ | 40-40 | 250-250 | FP221 | UP4425 | TVL2520 | D D E | 1.47 |
| $\times 512$ | 120-20 | 300-300 | FP218 |  |  |  | 2.35 |
| $\times 513$ | 30-30 | 350-300 | FP228 |  |  |  | 1.56 |
| $\times 514$ | 15-15 | 350-350 | FP225 | UP15035 |  | B $\mathbf{B}$ | 1.32 |
| $\times 515$ $\times 516$ | $20-20$ | 350-350 | FP227 | U |  | C C | 1.35 |
| $\times 516$ | 35-100 | 400-50 | FP229 |  |  |  | 1.53 |
| $\times 517$ | 80-50 | 450-50 | FP24 | $\vee 5$ |  | H H H | 2.06 |
| $\times 518$ | 20-50 | 450-250 | FP230 |  |  |  | 65 |
| $\times 519$ | 20-80 | 450-350 | FP235 | UPTz45. | 2730 | G H J | 2.15 |
| $\times 520$ |  |  | FP550 |  |  |  | 2.03 |
| $\times 521$ | 10-10 | 450-450 | FP231 | UPT114 |  | ${ }_{1} \mathbf{B}$ B | 1.12 |
| $\times 522$ | 20-20 | 450-450 | FP234 | UP2245 | TVL2755 | D D D | 1.50 |
| $\times 523$ | 30-30 | 450-450 | FP237 | UP3345 |  | OGO | 1.79 |
| $\times 524$ | 40-10 | 450-450 | FP236 |  |  | $\mathrm{F}-$ | 1.56 |
| $\times 525$ | 40-40 | 450-450 | 8 | UPT4445 | TVL2764 | H H H | 2.03 |
| $\times 526$ | 50 | 450-45 |  |  |  |  | 2.15 |
| $\times 527$ | 50)-30 | 450-450 | FP240* |  |  |  | 2.26 |
| $\times 528$ | 80-10 | 450-450 | FP245 | UPT8145 | 76 | H H H | 2.12 |
| +529 | 40-80 | 475-200 | FP250 |  |  | G | 2.15 |
| $\times 530$ | 20-10 | 475-300 | FP255 |  | 2810 | H | 2.32 |
| $\times 531$ | 15-15 | -75-475 | FP258 |  |  |  | 1.38 |
| $\times 532$ | 40-40 | 475-475 | FP262 |  | TVL2830 | $\mathrm{H}-\mathrm{H}$ | 2.53 |
| $\times 533$ | H0-50 | 475-450 | $6 \times$ |  |  |  | 2.85 |

MOUNTING PLATES FOR TWIST PRONG CAPACITORS
 For $19{ }^{\prime \prime}$ dia. cans. X894-bakelite. X895-Metal

## C-D TYPE HKGT PHOTO-FLASH CAPACITORS

For use in high-speed photographle equipment. Compact and light-
welght. Heavy duty internal leads connected io bakellte cup trisuwelght. Heavy duty internal leads connected to bakelle cup hasu-
lated termanalk. lated cerminak.

| stock No. | $\begin{aligned} & \hline \text { C-D } \\ & \text { Type } \\ & \hline \end{aligned}$ | Cap. Mid. | $\begin{aligned} & \text { Walt } \\ & \text { Sec. } \end{aligned}$ | Size, Inches L x W H | Wt. | $\begin{aligned} & \text { Net } \\ & \text { Esch } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type | Mid. | Sec. | Lxwh | Los. | Esch |





## CORNELL－DUBILIER SPRAGUE OMALLORY

（ORDER BY STOCK NUMBER AND SPECIFY BRAND）


CORNELL－DUBILIER
TYPE＂PTE＂

Molded plastle tubulars with leads welded to the capacitor $70^{\circ} \mathrm{F}$ ，and sealed．Constant capacity within $5 \%$ from


SPRAGUE TYPE ＂TM＂\＆＂MB＂

Small，rugged paper tubulars．Tough mold－ ed constriction deaigned to withstand ex－ siress．

For applications where small stze and ability to Withstand heat are most important．Triple sealed farh lead sealed and fastened to cartridge．
1600 Volts DC Working

| Stock No． | Cap．Mfd． | Sprague | C－D | Approx．Size | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\times 1300$ | 0105 | M 3－T3 |  | Yixil： | ． 35 |
| $\times 1301$ | ． 001 | MB－D1 | PTE16D1 | 8x14， | ． 38 |
| $\times 1302$ | ． 002 | MB－D2 | PTE16D2 | 如区140 | .38 |
| $\times 1303$ | ． 003 | MB－D3 | PTE16D3 | \％x1\％＊ | .38 |
| X1304 | ． 004 | MB－D4 | PTE16D4 | \％x1\％ | ． 38 |
| $\times 1305$ | ． 005 | MB－D5 | YTE1605 |  | .38 |
| $\times 1306$ | ． 0055 |  | PTE16D55 | 10x19\％ | .38 |
| X1307 | ． 006 | MB－D6 | PTE16D6 | Ax14： | .38 |
| $\times 1308$ | ． 007 | MB－D7 | PTE16D7 | \％ $\mathrm{m}_{1 / 1}$ | ． 38 |
| $\times 1309$ | ． 0075 | MB－D75 | PTE16D75 | 74x110 | ． 41 |
| $\times 1310$ | ． 008 | MB－D8 | PTE16D8 | 1／2x1y＂ | ． 41 |
| ＜1311 | ． 01 | MB－51 | PTE1681 | $1 \times 13$ | ． 41 |
| $\times 1312$ | ． 015 | MB－S15 | PTE16815 | 妸起 | .41 |
| $\times 1313$ | ． 015 |  | PTE1682 | $\left.{ }^{16} 6 \times 1{ }^{16}\right]^{\prime \prime}$ | ． 41 |
| X2324 | ． 025 |  | PTE16825 | 116x119， | ． 41 |
| $\times 1315$ | ． 03 |  | PTE1683 | 11／6x1 ${ }^{18}{ }^{\prime \prime}$ | ． 41 |
| $\times 1316$ | ． 04 |  | PTE1684 | ${ }^{1} \times 8 \times 1{ }^{13}$ | ． 41 |
| X1317＊ | 05 | TR－15 |  | $3 / 82{ }^{3}$ | .41 |
| X1318＊ | 015－．015 | TR－215 | ． | $3 \times 2$ | .47 |
| 6000 Volts DC Working |  |  |  |  |  |
| $\times 1350$ | ． 0005 | TVM－356 | PTE60T5 | 1／5x1150 | ． 79 |
| $\times 1351$ | ． 001 | TVM－216 | PTE60DI |  | ． 79 |
| $\times 1352$ | ． 005 | T M－ 256 | PTE60D5 | \％ 10 | ． 79 |
| X2353 | ． 01 | TVQ－116 | GTV6081 | $10_{102}$ | ． 82 |
| $\times 1354$ | ． 05 | TVQ－156 | GTV6085 | $1{ }^{1,4 x^{\prime \prime}}$ | ． 94 |
| 10，000 Volts DC Working |  |  |  |  |  |
| $\times 1375$ | ． 0005 | TVN－351 | PTE100T5 | ＊如 ${ }^{\text {T }}$ | ． 88 |

## CORNELL－DUBILIER MOLDED MICAS



Standard micas are $=20 \%$ ，8llver micas are $5 \%$ All are 1000 V test． 500 V DCW except slzes above． 006 which sre 600 V test and 300 V working．Types 1W，1D，1R and 1DR（FIK，A）． $\frac{\text { Type } 2 \mathrm{R}(\text {（Flg．13）．＇íxit }}{\text { STANDARD }}$ Cap．SIAVER


CORNELL－DUBILIER TYPES＂YAB＂\＆
 D CAPACITORS Sealed in drawn metal provided with and proof terminals on top or bottom of can（YAB， ottom：YAT，top）． imprexnated and alled With Djkanol＂co＂．Withstands wide tempera－ ture and voltuge changes．Equipped with rugred metal mounting brackets ＂is thick， $29{ }^{2}$＂

| $\begin{aligned} & \text { Type } \\ & \text { YABE } \end{aligned}$ | $\begin{aligned} & \text { TYPE } \\ & V A T \end{aligned}$ | Cap． Mid． | DCiw | Each |
| :---: | :---: | :---: | :---: | :---: |
| $\times 1700$ | $\times 1730$ | ． 05 | 600 | 2.12 |
| $\times 1702$ | $\times 1731$ | ． 1 | 600 | 2.12 |
| $\times 1702$ | $\times 1732$ | ． 25 | 600 | 2.26 |
| $\times 1703$ | $\times 1733$ | ． 5 | 600 | 2.44 |
| $\times 1704$ | $\underline{X 1734}$ | 1.0 | 600 | 2.76 |
| $\times 1715$ | $\times 1745$ | ． 05 | 1000 | 2.18 |
| $\times 1716$ | $\times 1746$ | ． 1 | 1000 | 2.35 |
| $\times 1717$ | $\times 1747$ | ． 25 | 1000 | 2.44 |
| X1718 | $\times 1748$ | ． 5 | 1000 | 2.59 |

## CORNELL－DUBILIER TYPE 4

TRANSMITTING MICAS


Molded In bakefite．Lug terminals and mit．holes． Slze： $11 / \mathrm{x} 114^{\circ}$ ．High insu－ and pate blocking．

| Stock No． | C－D No． | Cap．Mid． | Each |
| :---: | :---: | :---: | :---: |
| $\times 1500$ | ¢ 17050 | ．00005 | ． 71 |
| $\times 1501$ | \＄－13010 | ． 0001 | ． 71 |
| $\times 1502$ | 4－13020 | ． 0002 | ． 71 |
| $\times 1503$ | 4－13025 | ． 00025 | ． 71 |
| $\times 1504$ | t－13050 | 0005 | ． 71 |
| $\times 1505$ | 4－12010 | 001 | ． 71 |
| $\times 1506$ | 4－12020 | ． 002 | ． 76 |
| $\times 1507$ | 4－12060 | 000 | 1.06 |
| $\times 1508$ | 4－11010 | 01 | 1.26 |
| $\times 1509$ | 4－11020＊ | ． 02 | 1.79 |
| $\times 1510$ | 4－11030＊ | 03 | 2.62 |
| 1200 V．Whg． 2500 V．Test |  |  |  |
| $\times 1530$ | 4－23010 | 0001 | .94 |
| $\times 1531$ | 4－23025 | ． 00025 | ． 94 |
| $\times 1532$ | 4－23050 | ． 0005 | ． 94 |
| $\times 1533$ | 4－22010 | ． 001 | 1.06 |
| $\times 1534$ | 4－22020＊ | ．002 | 1.41 |
| $\times 1535$ | 4－22050＊ | ． 005 | 1.94 |
| $\times 1536$ | 4－21010＊ | ． 01 | 3.00 |


| 2500 V．Whg． 6000 V．Test |  |  |  |
| :---: | :---: | :---: | :---: |
| X1550 | 4－53010 | ． 0001 | 1.22 |
| $\times 1551$ | ＋53020 | ． 0002 | 1.12 |
| $\times 2552$ | 4－53025 | ． $0 \times 1025$ | 1.29 |
| $\times 1553$ | 4－53050 | ． 0005 | 1.47 |
| $\times 1554$ | 4.52010 | ． 001 | 1.65 |
| $\times 1555$ | $4.52020{ }^{\text {＊}}$ | ． 002 | 2.44 |
| $\times 1556$ | 4－52040＊ | ． 004 | 2.32 |
| $\times 2557$ | 4－52050＊ | ． 005 | 3.76 |

CORNELL－DUBILIER TYPE＂DYR＂ OIL－FILLED CAPACITORS


OH－flled，sealed metal cases with leakproof rivcted ier－ minals．Meet requirements of aircraft，marine and troy－ cat use．Molsture－proot
withstands $85^{\circ}$ C． 600 V DCW．

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | Tур＊ | Cap． Mid． | $\begin{aligned} & \text { Size } \\ & \text { inches } \end{aligned}$ | Ea． |
| :---: | :---: | :---: | :---: | :---: |
| $\times 2600$ | DXR 6005 | ． 05 | $1{ }^{1+14} \times$ ！$x$ | 2.71 |
| $\times 1601$ | DI＇R 6010 |  | $1196 \times 1 \times 8$ | 1.73 |
| $\times 1602$ | DYR 6025 | ． 25 | $110 \times 1 \times$ | 1.82 |
| $\times 1603$ | DYR 6050 | ． 5 |  | 1.94 |
| $\times 1604$ | DYR 6100 | 1.0 | 2x11 $\times$ \％ | 2.20 |
| X1605 | DYR 6200 | 20 | $2 \times 2 \times 1$ | 2.94 |
| $\times 1606$ | DYR 60055 | ．05－．05 | $1110 x \mid x$ | 2.15 |
| $\times 1607$ | DYR 6011 | 1－． 1 | 1136818 | 2.18 |
| $\times 1608$ | D＇R6022 | ．25－．25 | $11^{13} \mathrm{x} \times \mathrm{x}$ | 2.20 |
| $\times 1609$ | DYR 6055 | ．5－． 5 | $2 \times 13 \times 15$ | 2.53 |
| $\times 1610$ | 1）YK 6110 | 1．－ | 2x2×1 | 3.12 |
| $\times 1621$ | JYR 8111 | － | $1{ }^{11} \times 1 x^{3}$ | 2.47 |
| $\times 1612$ | D） 186222 | 25－． $25-.25$ | $2 \times 1^{13} x^{16} / 4$ | 2.79 |
| $\times 1613$ | DYK 6555 | ． $5-.5-.5$ | 2x2x111 | 38 |

SPRAGUE TYPE 68P MIDGET TUBULARS

| No． | Type | Mid． | Slze | Each |
| :---: | :---: | :---: | :---: | :---: |
| $\times 1050$ | 6819 | ． 25 |  | ． 41 |
| $\times 1051$ | $68 P 20$ | ． 5 | 4x140 | .47 |
| 200 Voits DC Working |  |  |  |  |
| $\times 2056$ | $68 P 11$ | ． 005 | $3 x^{11} 4^{6}$ | ． 21 |
| $\times 1057$ | $68 P 12$ | ． 006 | 和11900 | ． 21 |
| $\times 1058$ | 68 Pl | ． 01 | \％x14．40 | ． 24 |
| $\times 1059$ | $68 P 15$ | ． 02 | ＂6x11／4 | ． 26 |
| $\times 1060$ | $68 P 16$ | .05 | 1／20 | ． 29 |
| $\times 1061$ | 68 P 17 | ． 1 | 120x1＊ | ． 35 |
| $\times 1062$ | $68 P 18$ | ． 2 | 16＊x13＊＊ | ． 38 |
| $\times 1063$ | 68 P 24 | .25 | $1^{1} 4 \times 1 y^{*}$ | ． 41 |
| $\times 1064$ | $68 P 25$ | ． 5 | Sixl | ． 47 |


| 400 Volts DC Working |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| $\times 1069$ | 68P1 | ． 001 | $76 x^{11} / 4^{\prime \prime}$ | ． 21 |
| $\times 1070$ | 6883 | ． 003 | ， $\mathrm{x}^{11} \mathrm{~m}^{6}$ | ． 21 |
| $\times 1071$ | 68 P 4 | ． 004 | 1481140 | .21 |
| $\times 1072$ | 68P5 | ． 005 |  | ． 21 |
| $\times 1073$ | $68 P 6$ | ． 006 | ¢ ${ }^{13}{ }^{13}$ | .21 |
| $\times 1074$ | 68P8 | ． 01 | \％6x ${ }^{1 /}$ | ． 24 |
| $\times 1075$ | $68{ }^{69} 9$ | ． 02 | ，$x^{10}$ | ． 26 |
| $\times 1076$ | 68P10 | ． 03 | 310910 | ． 29 |
| $\times 1077$ | 68P21 | ． 1 | ${ }^{36}=\times 134^{\prime \prime}$ | ． 38 |
| $\times 1078$ | 68P38 | ． 215 | 如如䢒： | .41 |
| $\times 1079$ | $68 \mathrm{P}^{2} 22$ | ． 25 | 9x1\％ | .44 |
| $\times 1080$ | 68P23 | ． 5 | Y $\times 2{ }^{\text {¢ }}$－ | ． 50 |


| X1085 | $88 \mathrm{~F}^{\text {m }} 26$ | ． 001 | $1 x^{11 / 4}$ | ． 21 |
| :---: | :---: | :---: | :---: | :---: |
| $\times 1086$ | 68127 | ． 002 | 161140 | ． 21 |
| $\times 1087$ | $68{ }^{6828}$ | ． 003 | －6x ${ }^{11}$ | ． 21 |
| $\times 1088$ | 68129 | ． 0004 | ＂白天＂100 | ． 21 |
| $\times 1089$ | 68P30 | ． 005 |  | ．24 |
| $\times 1090$ | 68 P 31 | ．006 | $x^{11} x^{11}{ }^{\text {a }}$ | .24 |
| $\times 1091$ | 68 P 32 | ． 008 | ，461＂ | ． 24 |
| $\times 1092$ | $68 \mathrm{P3} 3$ | ． 01 | ＂ $\mathrm{w}^{101}$ | ． 26 |
| $\times 1093$ | $68 P 34$ | ． 02 | 111后x！ | ． 29 |
| K1094 | $68 P 35$ | ． 05 | ${ }^{16} 781150$ | ． 32 |
| $\times 1095$ | $68 P 36$ | ． 1 |  | ． 41 |
| $\times 1096$ | $68 P 40$ | ． 2 |  |  |
| $\times 1097$ | $68 P 37$ | ． 25 | ${ }^{3} \times 2^{30}$ | ． 47 |


| No． | Typ＊ | Mid． | VDCW | Hght． | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| X1630 | TJU 6010 | 1 | 600 | 23年＂ | 3.41 |
| $\times 1631$ | TJU 6020 | 2 | 600 | 21 | 4.20 |
| $\times 1632$ | TJU 6040 | 4 | 600 | 3楊 | 5.35 |
| $\times 1633$ | TJU 6080 | 8 | 600 | $3{ }^{11} /{ }^{\prime \prime}$ | 7.94 |
| $\times 1640$ | TJU 10010 | 1 | 1000 | 23 | 3.73 |
| $\times 1641$ | TJU 10020 | 2 | 1000 | $4{ }^{4}$ | 4.85 |
| $\times 2642$ | TJU 10040 | 4 | 1000 | 4） | 6.14 |
| $\times 1643$ | TJU 10080 | 8 | 1000 |  | 8.91 |
| $\times 1644$ | TJU 10100 | 10 | 1000 | 4 | 9.88 |
| $\times 1650$ | TJU 15010 | 1 | 1500 |  | 4.38 |
| $\times 1651$ | TJU 15020 | 2 | 1500 | 41 | 6.14 |
| $\times 1652$ | TJU 15040 | 4 | 1500 | 413 | 8.26 |
| $\times 1653$ | TJU 15080 | 8 | 1500 | 43. | 12.29 |
| $\times 1660$ | TJU 20001 |  | 2000 | 2 | 3.88 |
| $\times 1661$ | TJU 200025 | 25 | 2000 | 23＊ | 4.20 |
| $\times 1662$ | TJU 20005 | ． 5 | 2000 | 23＊ | 4.38 |
| $\times 1663$ | TJU 20010 | 1 | 2000 | $3{ }^{\prime \prime}{ }^{\text {c }}$ | 5.35 |
| $\times 1664$ | TJU 20020 | 2 | 2000 |  | 6.32 |
| $\times 1665$ | TJU 20040 | 4 | 2000 |  | 9.9 |
| $\times 1670$ | TJU 30010 | 1 | 3000 | 31\％ | 11.82 |
| $\times 1671$ | TJE 30020 | 2 | 3000 | 136 | 14.7 |
| $\times 1675$ | TJU 50020 | 2 | 5000 |  | 31.55 |

# CERAMIC CAPACITORS-PRINTED CIRCUITS 

## ERIE CERAMICONS

Small fized capacitors consisting of ceramic dielectric with gilver electrodes. Excellent high frequency characteristics and rugged construction, ldeally suited for coupling and by-passing. Maintain circuit stability and correct for ascillator drift.


For general replacements. 500 WV DC. Toler
 Size: . $812^{\circ} \mathrm{L}$.. $.250^{\circ}$ dila Style 333-1300 hri $10,000 \mathrm{mmf}$. size: $1.250^{\circ} \mathrm{L}, .315^{\circ}$ dia. Specify yo GP and capacify when ordering.

| 270 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 25 | 51 | 150 | 300 | Siso | 2000 | 4700 |
| 12 | 27 | 56 | 180 | 330 | 680 | 2200 | 5000 |
| 15 | 30 | 68 | 200 | 360 | 750 | 2500 | 5600 |
| 18 | 33 | 75 | 220 | 300 | 1000 | 2700 | 6000 |
| 20 | 39 | 82 | 240 | 470 | 1200 | 3000 | 8800 |
| 22 | 48 | 100 | 250 | 500 | 1500 | 3300 | 7500 |
|  |  |  |  |  |  |  | 10M |

## NPO CERAMICONS

2ero temperature coemcient. "Q" above 30 mm ? is 1000 or higher; below 30 mmt " $Q$ " decreases slightly us capacity decreases. Can be used as replacements for ellver tatcus. 500 WV DC.
Tolerance $10 \%$. Style $\mathrm{K}-1.5$ thru 20 mmf .

 mmf . Sise: $1.250^{\circ} \mathrm{L}, .315^{\circ}$ dik. Style $334,-150$ Spocify NPD and capaclly whon ordering. MMIEAch|MMD|Each|MMf|Esch M MflEach

|  |  |  |  | M | Eseh | MMPIEach |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\frac{1}{3} .5$ | . 29 | 5. | . 29 | 20 | . 29 | 75 | . 32 |
|  | . 29 | 6.8 | . 29 | 25 | . 29 | 100 | 2 |
| 3.3 | . 29 | 8.2 | . 29 | 33 | . 29 | 150 | . 37 |
| 4.7 | . 29 | 10 | . 29 | 50 | . 32 | 175 |  |

## N750 CERAMICONS

Negatlve temperature coetticlent. Provide temserature compenasaton to ellminate drift in electrodes. 500 WV DC Tiletic and silver $8 t j l \mathrm{l} \mathrm{K}-5,10,47 \mathrm{mml}$. Size: . $562 \% \mathrm{~L} .250 \% \mathrm{dla}$. Style L- 71 and 100 mmize . Bize: $812 \div$ L., $250^{\circ}$ dla. Specify N750 and eapacity when ordering.
Any of Above Capacities, Each
294
NOBO CERAMICONS
Similar to N780 Ceramicons. Size: $550^{\circ}$ LI... 312 : dia. Ava N080 ind: Any of Abovo Capactiles. 35 dren
Each.
$35 \nless$

## 

For by-passing RF current tu ground. All have 6-32 inreaded stud. 500 V DC W. Tolerance $\mathrm{ml}^{20 \%}$. Cupacliles avallable: Type 323 (10 ${ }^{(10}{ }^{\circ}$ 1005, 1500 mimf . Spectiy type and capacity Any of Abovec

FEED-THRU CERAMICONS


For by-passing RF to ground. silvered cermolum plabed bushing soldered in outaide electrode. Capacity 1508 mmir 500 WV DC. Tolerance $=20 \%$. $\mathrm{K}^{\circ} \mathrm{I}$. Specit 25 Es 2 , 9 ath

## AEROVOX "BPD" DISC CAPACITORS



Ideat for TV and high frequency use. 1500 V. DC lest. Ceramic di-electric separates hred atlver plates. Very low molature absoretion. low power factor, high delecance and mechanleal strenget Specify "BPD" type and capacit! when ordering
Aerovox Type "BPD"-2 and 3-5ection Cop. Mid. |Dia. |Each|Cap. Mfd. Dio. |Each

| 00047 | $\cdots{ }^{6}$ | . 15 | $2 \times .001$ | ${ }^{16}$ | . 24 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0008 | " | . 25 | 2x. 0015 | 10 \% | . 24 |
| 001 | is. | . 25 | $2 \times .002$ | 13, | . 24 |
| . 0015 | ${ }^{10}$ | . 25 | 2x.003 | ${ }^{4}$ | . 26 |
| . 0024 | ${ }^{10}{ }^{10}{ }^{\prime \prime}$ | . 15 | $\frac{2 x}{3 \times 004}$ | 教: | . 26 |
| . 005 | 10, | .15 | 3x.002 ${ }^{3 \times}$ | $3^{\circ}$ | -29 |
| . 01 | $40^{\circ}$ | . 18 |  |  |  |



ERIE BUTTON SILVER MICA CAPACITORS

Midget silver micas for VHF and UHF work. Minimum external Inductance and high Internal series resistance. CB has ring type metal shell with three soldertag ears. High poteptial terminal at elther ead for feed-thru connection. FA Is fastened to chassis with 3-48 screw. Tolerance $-10 \%$. $81 z e$


TYPES 370-FA \& CB (Specify When Ordering)

| MMI. | Each | Lots/25 | Mmp. | Each | Lots/25 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 15 | .73 | .22 | 250 | .65 | .54 |
| 25 | .73 | .62 | 300 | .73 | .62 |
| 50 | .53 | .64 | 400 | .73 | .62 |
| 100 | .53 | .14 | 500 | .73 | .62 |
| 150 | .53 | .44 | 750 | .73 | .62 |
| 200 | .59 | .49 | 1000 | 1.23 | 1.03 |



| Type | Range MMF | Temp. | Each | Lots/25 |
| :---: | :---: | :---: | :---: | :---: |
|  | 1.5-7 | NPO | . 88 | . 73 |
|  | ${ }_{4}^{3.0-30}$ | NPO | . 88 | . 73 |
| TS2A | $4-30$ $7-45$ | N500 $\mathbf{N} 500$ | .888 | . 73 |
| $\left.\begin{array}{c} \text { Oual } \\ \text { TO2A } \end{array}\right\}$ |  |  |  |  |
|  | ${ }_{3.12}^{1.5}{ }^{\text {a }}$ Ea | NPO | 1.47 | 1.22 |
|  | 3-12 $4-30$ Ea. Sec. | NPO $\mathbf{N} 500$ | 1.47 1.47 | 1.22 1.22 |
|  | 7-45 ${ }^{\text {chec. }}$ | N 500 | 1.47 | 1.22 |
| 557 |  |  |  |  |
|  | 5-25 | NPO | . 73 | . 62 |



TUBULAR TRIMMERS
For low mintmum ca pacity and high ratio of maximum to minitnum capaclty. Molded plas-
tic dlelectric. Mount on an panels having thickness of . $040^{\circ}$ to . $065^{\circ}$ Avallable in two sizes: $\mathbf{5 - 5} \mathbf{~ m m f}$. of $\mathbf{1 - 8} \mathbf{~ m m f}$. Specify Type 532 and capacity whenordering. Elther Capaclty Above
Each.
324

## AEROVOX P82 PAPER TUBULARS



Tiny, metalized-paper tubulars, Hywol $K$ impresnated. In molsture resistant, wax impreg TypeP82, capacityand voltage when ordering.

| Cap. Mfa. | $\begin{aligned} & 200 \mathrm{~V} . \\ & \text { size } \end{aligned}$ | $\begin{aligned} & \text { Net } \\ & \text { Ea. } \end{aligned}$ | $\begin{aligned} & 400 \mathrm{~V} . \\ & \text { size } \end{aligned}$ | Net Ea. | $\begin{gathered} 600 \mathrm{~V} . \\ \text { Size } \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 3x\% |  |  |  | z ${ }^{\circ}$ |  |
| . 03 |  | . 35 |  |  | 15 又 |  |
| . 05 |  | . 39 |  | . 41 |  |  |
|  | 318 8 \%: | 51 | 1 | .47 |  |  |
|  |  | . 62 |  | . 6981 |  |  |
|  |  | . 76 | ${ }^{1}$ | . 94 |  |  |
| 2.0 |  |  |  |  |  |  |

CENTRALAB TV HI-VO KAPS TV CERAMIC CAPACITORS


For ilter and bypass appliteatons In TV high voltase nowp supply, test equipment, radar transmleter low nower DC nitery voltage power supplles. Erase heavily cadmiun phated terminals. Capacity of all types 500 mmf .

| Type | Vocw | Dia. $\times 1$. | Term. | Each |
| :---: | :---: | :---: | :---: | :---: |
| TV1-501 | 10,000 | 1x.51* | A | 1.03 |
| TV2-501 | 10,000 | $1 \times .51$ * | H | 1.03 |
| TV3-501 | 10.000 | 1x.51 ${ }^{\text {c }}$ | C | 1.03 |
| TV1-502 | 20.000 | $1 \times 1.05^{\prime \prime}$ | A | 1.32 |
| TV2-502 | 20,000 | 1x1.05* | B | 1.32 |
| TV3-502 | 20.000 | 1x1.05 | C | 1.32 |
| TV1-503 | 30.010 | $1.4 \times 1.25^{\prime}$ | A | 2.65 |

CENTRALAB PRINTED ELECTRONIC CIRCUITS



Interstage Coupling Platos
Three capactors and two resistors bonded to Steatite ceramic plate and connected by metallo anver palta priked and ured on base mate. TRIODE COUPLATES
PC-70. C1, 005 mid ; C2 \& C3, 250 mmf R1 \&
 PC-71. As above, but R1 is $25 \mathrm{mpg} . . .$. . 11 c PC-80. C1, 01 mid: $\mathrm{Cl}_{2}$ \& $\mathrm{C3}, 250 \mathrm{mmg}$ R1 \&

PC=81. As above, but Ri 25 meg.
446
PENTODE COUPLATES
PC-90. C1, $005 \mathrm{mfd}: \mathrm{C} 2,50 \mathrm{mmf}: \mathrm{C} 3,2000 \mathrm{mml}$. R1 4.7 megs; R2, 1 meg; R3, 2.2 mege, $1^{114} 4 \times$ /x Centralab PC-90............ 53


## Vertical Integrator Plates

 Centralab PC-100 .005 mid. Ri, 22.000 ohmsi, R2 \& R3. 8200 ohms: H4, 22,000 onms. ${ }^{11} / 4 \times 1^{11} / x^{3} / /^{\circ}$ thick. Centralab PC-102

734

## (AUDET) OUTPUT STAGE FOR

 AC-DC RADIO RECEIVERSPrinted electronle efreult audio-detector plate with geven leads. Furnishes vaiues of all components in output stage of AC-1DC radio sers. All capacitors 450 VDCW . all resistors $1 / 5$ wati.
 R2 \& R3, 470,000 ohms. With construction bentral.

59

## (AMPEC) COMPLETE

 SPEECH AMPLIFIER

Here, In one compact unit, permanently bonded to a master plate, are all the componente of an audio ampliffer. Includes tube sockets, capacttors, wiring-everything except a volume control. tube sochets. At 1000 cps , amplincation pactor is 4000 . "A" voltage is $1.2 ;{ }^{\prime} \mathrm{B}$ " voitage 22 . Input 1 millivolt. 81 millar units are widely used in hearing alds. as mike preampliners, etc. Uses trio Ray theon CK512AX and one CK525AX tuhes. Complete 3 -stage ampliner including bulti-in sockets, but less tubes.
Drder Tubes by Type
8.82

## RADIO \& TVI FILTERS-WAVETRAPS



## CONVERTERS-CHARGERS -ELIMINATORS-VIBRATORS



## CORNELL-DUBILIER CONVERTERS

Provide smooth, dependable operation of radios amplifiers, fntercoms and other H.P. F. appli ances. Deliver 110 -volt, O0cycle AC from 6, 12
and 110 -volt DC sources. Conpletely RF filtered and 110 -volt DC sources. Completely RF filtered for broadcast, short Wave and FM. Models 6R5
6R10. $12 R 8$ and 12RU15 feature 4 -way djust able foad control switch. Model $110 R 10$ includes able load control switch. Model $110 R 10$ includes 3 -way control terminal hoard.
can be added Model $110 R 2$.

| $\begin{aligned} & \text { Type } \\ & \text { No. } \quad . \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Uses } \\ & \text { Vibr. No. } \end{aligned}$ | $\begin{gathered} \text { DO } \\ \text { Input } \end{gathered}$ | Int. | lts Cont. | $w \times \sin _{\mathrm{w}} \mathrm{H}$ | 8hpg. We.ibs, | $\begin{aligned} & \text { List } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { NET } \\ & \text { EAOH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 R5 | 3103 | 6 | 55 | 50 | 6\%x $7 \% \times 5 \%$ | 12 | 48.25 | 28.37 |
| 6R10 | 4123 | 6 | 125 | 100 |  | 18 | 68.45 | 40.25 |
| 12R8 12RU15 | 30187 3047 | 12 | 120 | 80 | 6\%x 7 \% $\times 5$ \%"\% | 12 | 48.25 | 28.37 |
| 12RU15 110 R10 | 3047 1315 | 112 | 200 150 | 150 |  | 22 | 90.80 | 53.38 |
| 110RA15 | -1315 | 110 | 200 | 100 150 | 6\%土 $7 \% \times 5 \%^{\prime \prime}$ | 10\% | 45.95 | 27.02 |
| 110R25 | 1315H | 110 | 300 | 250 | 6\% $\%^{12 \%} 4 \times 8 \%$ | 22\% | 78.20 | 45.98 |

## CORNELL-DUBILIER TV CONVERTERS



Specially designed to meet the critieal power conversion requirements of TV. Delivers. 110 volts, 40 cycles AC from 110 rolts. DC Dower source. RF fil tered for brcadcast, short wave, FM and TV. Model quency contrat and iv frequency contron. plug-in construction for the addition of "phantomWatt

| Type | Uses |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Vibr. No. | Int. Cons. |  | Who, lbe | List Price |  |
| 110RT15 | 3077 | 250 |  |  |  |  | | 110 RT15 | 3077 | 250 | 150 | $6 \% \times 12 \% \times 7 \% \prime \prime$ | 17 | 74.75 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 110RT25 | $1315 H$ | 300 | 250 | 43.95 |  |  |

 "Fully automatie power conversion and "phantomswitch.

## CORNELL-DUBILIER "PHANTOMSWITCH"

For use with Models 110 R25 and 110 RT T25. Self-conturns converter on or wiring is neceessary. Automatically awitch on the $A \mathrm{C}$ oguipment. List 51870 of

9.82

## C-D CONVERTERS FOR TAPE \& WIRE RECORDERS

 For opention of 110 V ., bo-cycle AO wire and tape recorders in 110 V DC areas-up to 150 watts continuous and 200 watts intermittent. Sineware ouptput identical to commercial power, producing wire and cape Execordings from DC equal to $\mathbf{A C}$. Completely rree of hum, hash or buzz Excellent load reenilation insurea proper roltage for record, re wind, playback or standy, RF filtered for cleur reception In broadcast band. Canbe ubed in reconding directly from radio. Manusi
ON-OFF switelh. Baked hammered enamel finish orer copperplate. Clirome bandle, rubber feet.

C.D Model 110WR15B
50.01

## C-D PHONO MOTOR CONVERTERS



For operation of antomatic and manual record players. Supplies filtered, 110-oolt, GO-cycle AC prower from 110 permanent wring installation. Output ins was leads for

 Model 110PB5 Same as abore but with ceptarle and slide switch. For external connection.

C-D BATTERY ELIMINATOR-CHARGER
Provides 8 -volt DC power from 110v., no-cyele AC source. ©0 watus continuous output. Built-in roltmeter and smmeter cive accurate, visible ndjustment of output voltage. 7 -pd ition switch Irovides chorce of 4, ${ }^{5}$, ${ }^{6}$, ${ }^{7}$, 8, ${ }^{9}$ or 10 amins. teries. Size: $7 \%$ "W., $12 \%$ "L., $8 \%{ }^{\prime \prime}$ H. . Shyp wt 18 lize Lise 863.20.
37.16

Model 110BA12-Supplies 6 and 12 V . DO for serrictig and testing sutn, trink and hoat radios and appliances. 120 . watt continuous output. Built-in ammeter and voltmeter. 7 -step switch from 8 to 20 amps it fV.,


## ( C-D AUTO 8 PORTABLE SET VIBRATORS

Cornell-Dubilier Type C-1 Unlversal e-Volt Vibrator-This model takes care of a majorlty of auto and portable set vibrator replacements. A direct replacement for Míllory types 4-4, 284, Iadiart 5300, SO-1, Utah NP-42, Deleo $\mathbf{5 , 0 4 0 . 0 0 0}$ and 5,052,878, and Meissner BO1. Shps. wt. 8 oz .

| C-D Type | Mallory Equiv. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | C-D Type | Mallory Equit. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5300 | 204 | 2.88 | 5335 |  |  |
| 5301 | 510 P | 2.88 | 5342 | $859 \dagger$ | 2.44 |
| 5303 | 2940 | 2.88 | 5400 | 248 | 4.53 |
| 5314 | 1100 | 2.88 | 5408 | 249 | 4.53 |
| 5320 | .05P | 2.88 | 5425 | 2730 | 5.38 |
| 5321 | 654 | 2.88 | 5426 | 716 | 4.53 |
| 5323 | 807 P | 2.44 | 5468-2 | 116 | 6.29 |
| 5326 5331 | ${ }^{859489}$ | 2.44 2.88 | 5469-2 |  | 5.76 |
| 6331 | $2948 W$ | 2.88 |  |  | 5.76 |


| C-D Type | $\begin{aligned} & \text { NET } \\ & \text { EAOH } \end{aligned}$ | C-D Type | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | O-D Type | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1315 | 7.20 | 3077 | 8.66 | 3103 | 7.20 |
| 1315H | 8.46 | 3079 | 11.41 | 4123 | 10.05 |
| VIBRATORS FOR MOBILE EQUIPMENT |  |  |  |  |  |
| 5506 | 4.20 | 5519 | 2.88 | 5621 | 4.06 |
| 5815 | 4.08 | 5610 | 4.53 | 5622 | 5.03 |
| 5518 | 4.08 | 5620 | 4.53 | 8823 | 4.53 |
| CORNELL-DUBILIER VIBRATOR GUIDE |  |  |  |  |  |

## ATR STANDARD HEAVY DUTY INVERTERS

Recommended for operating AC radios, PA systems, amplifiers, etc from DC voltages. Extremely well fltered to insure interfereace-fnee radio reception. All models listed below have 110 V . 60 ecycle AC output.
 ATR DOVolts Wates NET


## VIBRATORS FOR ABOVE

ATR Type 611-For 6RSC Inverter
ATR Type 11010-For $11013 S C$ Inverter
ATR Type 11011-For $110 A 1 B I I C$ Inverter
6.17 EAOH

ATR Type 11011-For 110AIBIC Inverte. 11.47


| Type | Ohargo-DO Amps |  |  |  | Slzo | Shpg. wt. lbs. | $\begin{aligned} & \text { List } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { NET } \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fig. | Max. | 10 | Volt: |  |  |  |  |
| 6 AC6 | 8 | 6 | 4 | 6 | 4\%exi\%x3\% ${ }^{\text {\% }}$ | 7 | 22.05 | 15.00 |
| 64010 | A | 10 | 7 | 6 | 6x8x4 4 " | 12\% | 30.95 | 20.22 |
| 12AC5 | A | 5 | 3 | 12 | 6x8x 4 \% | 11 | 37.95 | 24.78 |
| 6 AC4 | B | 4 | 2 | 6 |  | 5 | 16.95 | 11.07 |

## CIGARETTE LIGHTER PLUG FOR BATTERY CHARGERS

 Permits charging of batteries through cisarctte lighter receptacle. Plus fits into this receptarle. $\mathbf{B}^{\prime \prime}$ leads connect to clips on leads of charsers. Shper, wt. 6 oz.Mallory Type R655.
1.18

MALLORY MAGNESIUM-COPPER SULFIDE RECTIFIERS Replacements for battery charzers, eliminators, pin-ball machines, ete. All metal construction. Assembled under high pressure to withstand serere ribrations, sliock and
temperatures of $90^{\circ}$ to $+2085^{\circ} \mathrm{F}$. "Self-heusing" recttemperatures of $-60^{\circ}$ to +2030 F . "Selp-heading" recti-
lying film protects acsainst accidental damage due to roltage surge. IB8R can be used for reversing direction of $\mathbf{H O}$ model trains and 1B12R for $\mathbf{O}$ gauge trains.

| $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \hline \text { AO Volt. } \\ & \text { Inpus } \end{aligned}$ | $\begin{aligned} & \text { DC Volt. } \\ & \text { Ouspue } \end{aligned}$ | Cont. Amps. | Used In | $\begin{aligned} & \text { NET } \\ & \text { EACh } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 184R | 3.6 | 1.7 | 1.5 | OTC Battery Elim. |  |
| 188R | 7.2 | 3.4 | 1.5 | GTC Batery Elim. | 1.76 |
| 1812R | 10.8 | 8.2 | 1.3 | Elec. Fence Supply | 2.09 |
| 181201J | 10.8 | 5.1 | 3.2 | Mallory 3C, faC4 | 3.95 |
| F16C3 | 14.4 | 8.8 | 3.9 | Mallory 5535 | 5.33 |
| 1816CB7 | 14.4 | 6.6 | 6.0 | Mallory $5535 \mathrm{BB}, \mathrm{BACE}$ | 6.13 |
| F24H1P | 21.6 | 10.4 | 4.8 | Pin Ball Machines | 6.20 |

## SELENIUM BATTERY ELIMINATORS

For " $A$ " and " $B$ " battery replacement in portable sets for operation on 110 V ., so cycles AC. Provides completely filtered and hum-free neception. Yroves no tubes. Easy to install. Universal sockets for all types
battery plugs. Delisers 1.5 V . An and 90 V . $\mathrm{B}^{\circ} \mathrm{B}$ battery plugs. Delir
Size: $24 / 14 \% \times 6 \%$."
Size: $2 / 184 \% \times 6$ x
P15708-Shpe
wt.
P15708-Shpe, wt. 5 lbs.
P15704-S
9.85
(


GE TUNGAR BULZS FOR CHARGERS


MALIORY REPLACEMENT VIBRATORS

Meissner EO1. Shpe, wt. 8 az.
1.47

Mallory Type 4-d vibrator
e at
.......... W24Brated below are rate at $4 V$ except W245A and
$\mathbf{W} 4002$ and T4003 rated

| Type | Ea. | Type | E3. | Type | Ea. 1 | Type | Ea. 1 | Typ* | Ea. | Typo | $E$ E. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 222 | 5.38 | 247 | 4.53 | 298 | 3.73 | 742 | 4.53 | 853 | 2.88 | 953 W | 4.53 |
| 245 | 4.53 | 248 | 4.53 | 505P | 2.88 | 743 | 4.53 | 854 | 2.85 | $954{ }^{\text {9 }}$ | 4.53 |
| 245A | 4.53 | 249 273 | 4.53 5.38 | 506P 509 P | 3.73 | 748 | 4.53 | 859 | 2.88 | 1200 | 2.88 |
| W24sA | 4.53 | 2730 | 5.38 5.38 | 514 | 2.44 | 825 C | 4.06 | 860 | 2.88 | 1502 | 3.73 |
| 246 | 4.53 | 292 | 3.73 | 716 | 4.53 | 826 ${ }^{819}$ | 3.73 | 870 | 2.88 | T 4002 | 6.29 |
| 246A | 4.53 | 294 | 2.88 | 725 C | 5.03 | 852 | 3.88 | 903 M 952 W | 2.45 | T4003 | 5.76 |

## MALLORY REPLACEMENT GUIDE

Includen alphubetiral listing of radio and vibrator power supplies by manuIacturer and mocel number. Glves Mallory replacement in each case. No
charke with jurchase of vibrator. P19993 th purchase of Vibrator.
n thent VIBRATOR DATA BOOK - A complete technical manual

## MALLORY VOLUME CONTROLS



## MALLORY MIDGETROL

A high quality round shait carbon control only "fo in dia. and TV shatio sets. ampliner to any requirad lengeh and is readlly adaptable to siny type knob. Supplied with two steel shaft and knob adaptors for knurled und push-0n knobs, one Pal-nut and lnstruction aheet.

| Typa | Ohms | Taper | Type | Ohms | Taper | Typo | Ohms | Taper |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| U-12 | 5M | 1 | U-33 | 50 M | 1 | U-46 | 250M | 4 |
| U-14 | 5 M | 4 | U-34 | 50 M | 2 | U-48 | 500 M | 1 |
| U-28 | 10M | 1 | U-35 | 50 M | 4 | U-50 | 500M | 4 |
| U-19 | 10M | 2 | U-36 | 75 M | 1 | U-51 | 750 M | 1 |
| U-20 | 10 M | 4 | U-39 | 100M | 1 | U-53 | 1 meg. | 1 |
| U-21 | 15 M | 1 | U-40 | 100 M | 2 | U-54 | 1 mmeg . | 4 |
| U-22 | 15M | 2 | U-41 | 100 M | 4 | U-55 | 2 meg . | 1 |
| U-24 | 20 M | 1 | U-42 | 150M | 1 | U-56 | 2 meg . | 4 |
| U-26 | 20 M | 4 | U-43 | 200 M | 4 | U-57 | 3 meg. | 1 |
| U-28 | 25M | 2 | U-44 | 250 M | 1 | U-59 | 3 meg . | 4 |
| U-29 | 25 M | 4 | U-45 | 250 M | 2 | U-65 | 5 meg . | 1 |

Any Type Above, Each.
73
SINGLE TAPPED MIDGETROLS

| PE | Ohmeltapat |  | Typelohme fapal |  |  | Type | Ohmbitapa |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| UT-420 | 250M | 50M | UT-431 | 300M | 225 M | पT-448 | 2 meg | 230 M |
| UT-425 | 350 M | 70M | UT-440 | 1 meg. | 200M | UT-454 | 2 meg | 400 M |
| UT-429 | 500 M | 0M | UT-438 | 1 meg. |  |  |  |  |
| UT-427 | 500 M | 100 M |  |  |  | UT-451 | 2 meg | 900 |
| 430 | 500 M | 150M | UT | 2 meg . | 125 |  |  |  |

Any Type Above, Eech
1.09

| T'ype | Overall Resistance | Resisfance |  | Typo | Overell <br> Resietance | $\begin{gathered} \text { Tap } \\ \text { Rastisunce } \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Tap 1 | Tap 2 |  |  | Tap 1 | Tad 2 |
| UDT-283 | $500 \mathrm{M}$ <br> 1 Mer | $\begin{aligned} & 100 \mathrm{M} \\ & 250 \mathrm{M} \end{aligned}$ | 200 M 800 M | $\begin{aligned} & \text { UDT-295 } \\ & \text { UDT-296 } \end{aligned}$ | $\begin{aligned} & 2.25 \mathrm{Meg} . \\ & 2.25 \mathrm{Meg} . \end{aligned}$ | $\begin{aligned} & 250 \mathrm{M} \\ & 600 \mathrm{M} \end{aligned}$ | $\mathrm{B00M}$ |
| UDT-291 | 1. B Mes. | 225 M | 600M |  |  |  | Mex |

my Type Above, Ench
1.09

## TV AND SPECIAL APPLICATION MIDGETROLS

Has ined, knurled, alotted bakelite shaft, protrudes

| Typo | Ohme | Taper | Type | Ohm: | Taper |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $5 \mathrm{~S}-14$ | SM | 4 | SU-50 | 800M | 4 |
| SU-20 | 10 M | 4 | SU-54 | 1 Mes . | 4 |
| SU-29 SU. 35 S | 25 M | 4 | SU-56 | 2 Mes | 4 |
| SU-35 SU-41 | 80 M 100 M | 4 | SU-59 SU-67 | ${ }^{3}$ Mes. | 4 |
| SU-46 | 250 M | 4 |  |  |  |

Any Typo Above, Each.
88

ATTACHABLE MIDGETROL SWITCHES
Easily and quiekly attached to any midgetrol shown on Typo D Desertplion Each

$\qquad$ gingie nole, single throw
SPST Has dummy terminai
Double vole single throw. Double poie, single throw

## TV FOCUS CONTROLS

Dealgned espectaily for focus control replacement in TV sets. $1 \%$ " diameter 2" long fixed shaft. 4 watts, wire wound
1.09 Mallory Type TVF1a3- 2500 ohms (maximum 1.09

|  |
| :---: | :---: |

## CLAROSTAT SERIES "M" CONTROLS <br> Compuct carbon controls with high onerating em-

 compact carbon controls with highoperating emelement. Only 11 diameter by ion (with bwiteh IT: (deej). shatt ts $2 \%$ " long $x$, $x^{/ 5}$ and has $\$ 3-32$ brass bushink with nut. Last letter of type number ldentities the taper. Switches to fit these controta listed below:

| Type | ms | Type | Ohms | Youe |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M-5-S |  | M.2T-S |  |  |  |  |  |  |  |
|  | 1000 | M-29-U | 10 M | M- | 50 M |  | 250 M |  |  |
| M-11-S | 2000 | M-30-V | 10. |  | 50. | M- | 250M |  |  |
| M-15-5 | 3000 | M-32-S | 15N | M-46- | 50 N | M-58 | 500 M |  |  |
| M-19-S | 5000 | M-33-U | 15.. | M-47-S | , | M-68 | 5001 |  |  |
| -20- | 5000 | M-37-U | 20M | M-49-S | 100 N | M-60 | 500 M |  |  |
| -33-5 | 7500 | M-A0-S | 25 M | M-51-7 |  |  |  |  |  |
| Clarostat SW-A2-bIPRリ" switeh hor " $\mathrm{M}^{\prime}$ " Controls. <br> CLAROSTAT TAPER CODE <br> U-LIncar, stanalaril pot. <br> (I) Prift Hand, Ant and (' Blas <br> W-Lett Mand, Screen Grid <br> Volt, Phono Pickup <br> $\checkmark$ Rekhe Hand, ('Blas Rheretat <br> z-Left Hadd, Audlo Shunt. AVC. Tone <br> Y-left Hand. Audlo shunt <br> AVC for steep taper |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

DUAL CONCENTRIC MIDGETROLS
Assembly of one front and one rear sectoon makes a comptete and roor-hrordual concentric control quickly and easily. Both sections ": Mlameter Exictiy duplleates originul. Mounting depth less
gwith, $14^{\circ}:$ with switch, $145^{\circ}$ overall. No eccentricity or mechanica! binding between shates. Ench front sectlon supolled with Inner shalt, one bakelite spacer, one coupling cup, two shat ends to fit fatted or split knobs.

DUAL CONTROLS

| Front | Roar | Ohme | Tapel | Front | Rear | Ohms | Tape |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| UF13R | UR13R | $10 \times 0$ | 2 | UF54L | UR54L | 50 M |  |
| UF13L | UR13L | 1000 | 4 | UF15A |  | 100M |  |
| UF152R | UR252R | 1500 | 2 | UF15R | URISR | 100 M | 2 |
| UF23R | UR23R | 2000 |  | UF15L | UR15L | 100 M | 4 |
|  | UR23L | 2000 | 4 | UF25AA | UR254A | 250 M |  |
| UFS3R | UR53R | 5000 | 2 |  | UR254L | 250 M 500 M | 4 |
| $\begin{aligned} & \text { UF53L } \\ & \text { UF73R } \end{aligned}$ |  | 5000 7000 | $\frac{4}{2}$ | UF55A | UR55A | 500 M 500 M |  |
|  | URIAR |  | 2 | UF5SL | URSSL | 500 M |  |
| UF14L | URIAL | 10 M |  | UF16A | UR16A | 1 meg. | 1 |
| UF253R | UR253L | 25 M 25 M | 2 | UF16L | UR16L | , ${ }^{1} \mathrm{meg}$. | 1 |
| $\begin{aligned} & \text { UF253L } \\ & \text { UF34A } \end{aligned}$ | UR253L | 26 M 30 M | 1 | UF26A | UR26L | 2 meg . | 4 |
| UFSSA |  | 50 M | 1 |  | UR56L | 5 meg. | 4 |

Any of Above Front Sections, Each
Any of Above Rear Sectons, Each.
SINGLE TAPPED CONTROLS

| Front | Rear | Ohms | TapAI | Front | Rear | Ohms | Tap At |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | UR234-1763 | 250 M | 751 M | UF16-T25 | UR16-125 | 1 meg. | 200 M |
|  | UR364-T74 | 350 M | 70M |  | UR18-T254 | 1 meg. | 250 M |
| UFSE-T54 | URS5-T54 | 500 M | 50 M | UF16-T38 | UR18-T35 | 1 meg . | 300 M |
| UFS5-T254 |  | 500M | 250 M |  | UA26-T25 | 2 meg . | 200M |
|  | UR18-71253 | 1 meg. | 125M |  | UR28-T9 | 2 meg . | 900M |

## ACCISSORY PARTS FOR MIDGITROLS

D5-36-Fiatted uplt knurl shaft end. Apectal for 2 onith S-36-8pecta 3 extension shaft for tubular shaft Midgetzole. Also used for coupling a front and rear section together to rake a alngle shaft dual control tor oselllowcope and other push-pull ampliner service.

## ADJUSTABLE MOUNYING BRACKETS

For use where control mounts off chassis. Plated metal. Mounting centers: RB248, 1\%"; RB240.
24.

154 Mallory Type RB-248


## VOLUME CONTROL WRENCH

For standard volume control nuts.
15 c
MALLORY 2-WATT WIREWOUND TV E INDUSTRIAL POTS
Espectally designed for replacement of hold, posit toning, focus, etc. controls of TV sets. Also Bultable for voltage diviaer and blas applications lated contact arm type. 1800 V . AC insulation All have linear taper. Knurled, serew driver slot ted stub shaft with to standard bushing. Whth
Pal-nut.
 Type Ohms Each Type Ohms Each

| R20L | 20 | .73 | R30CT | $30 *$ | $\mathbf{1 . 0 9}$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| R20CT* | 20 | $\mathbf{R} .09$ | R50L | 60 | .73 |
| R25L | 25 | .73 | R250L | 250 | .73 |
| R30L | 30 | .73 | R500L | 500 | .73, |

## EXPLANATION OF MALLORY TAPERS

Taper No. 1-For audio or antenna shunt circults.
Tapor No. 2 - For serles clrcults or cathode voltage controla.
Taper No. 4 Lnear taper for voltaga divider clrculta.

## 3-WATY CLAROSTAT SERIES 58

 WIREWOUND CONTROLSsturdy construction, yet capable of use for delicate control work. Smooth, nolseless opreation with a high degree of stablity. Precisely wound with alloy wilre on thin bskeIlte strip. Pertect sllding contact. Shaft 11/: long with $x^{\prime \prime}$ bushing, it dlameter. All


| pe | Ohms | Ty | Ohms | Type |  |  | Ohms | Type |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 58 |  | 58-25 | 20 | 58.200 | 200 | 58 -300 | 000 |  |  |
| 58-2 | 2 | 58-30 | 30 | 158-300 | 300 | 58-5 | 5000 |  |  |
| 58-4 |  | 58-40 | 40 | 58-400 | 400 | 58-750 | 750 | - |  |
| 58-6 |  | 58 | 50 | 88-500 | 500 | 58-10M | 10M | 10-75K |  |
| 58-10 | 10 | 58-60 |  | 58-750 | 750 | 58-15 | 15 M | 10-11 | 100 |
| 58-15 | 15 | 56-75 | 7 | 58-1000 | 1000 | 58-20 | 20 M |  |  |
| 88-20 | 20 | 58-100 | 100 |  | 200 |  |  |  |  |
| Any Above, thru $\mathbf{1 0 , 0 0 0}$ ohms 15,000 ohms thru 25,000 ohms 30,000 ohms thru 50,000 ohme 75,000 ohms and 100,000 ohms. |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

## "Q" CONTROLS WITH STANDARD SHAPTS

IRC " $Q^{\prime \prime}$ controls meet theneeds of redacoment. Compat $14{ }^{\circ}$ design and short $x^{\circ}$ bushing. Fit both small sind large feceivers. Knurled.
flated and bioted
Axed sharts handle most knob requirements, $3^{\circ}$ long
supplled with 270 -ohm, 3 -whtt reslstor. Jess 8 pitch. For proper switch see Itsting below. Chart of applicacions and explanation of tapers indicated
in bottom of text column. Average shpg. Wt. 4 oz.

| Typs | Onma | Taper | Applications |
| :---: | :---: | :---: | :---: |
| G11-b/3 a11-108 Q11.110 Q13111 Q11-112 Q11-114 | $\begin{array}{r} 800 \\ 1,000 \\ 2,000 \\ 2,500 \\ 3,000 \\ 8,000 \end{array}$ | $\begin{aligned} & \hat{\mathbf{A}} \\ & \mathbf{A} \\ & \mathbf{C} \\ & \mathbf{A} \end{aligned}$ | 4, $18, \mathrm{~L}$ 4, L, i, 16, L L, $1,4,8,13,16,17, \mathrm{~L}$ |
|  | 7.600 10.000 10.000 10.000 20.000 | $\begin{aligned} & \mathbf{A} \\ & \mathbf{A} \\ & \mathbf{C} \\ & \mathbf{D} \\ & \mathbf{A} \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { 4, L } \\ & \text { 4, 16, B, L } \\ & \text { A. } \\ & 8,9, L \end{aligned}$ |
| $\begin{aligned} & \text { Q16-119* } \\ & \text { Q11-120 } \\ & \text { Q11-120 } \\ & \text { Q11-121 } \\ & \text { Q11-123 } \end{aligned}$ | $\begin{aligned} & 20.000 \\ & 25.000 \\ & 25.000 \\ & 250.000 \\ & 50,000 \end{aligned}$ | $\begin{gathered} \text { spec. } \\ \mathbf{A} \\ \mathbf{D} \\ \mathbf{A} \\ \mathbf{A} \end{gathered}$ | $\begin{aligned} & \text { B } \\ & 3,4,8,9,10,11,12, L \\ & \text { स } \\ & \frac{4}{3}, 9,10, L \\ & \hline, ~ L, L \end{aligned}$ |
| $\begin{aligned} & Q_{13-123} \\ & Q_{11}-123 \\ & \mathrm{Q}_{11} 12.12 \\ & \mathrm{Q}_{13-128} \\ & \mathrm{Q}_{11}-130 \end{aligned}$ | 50,000 50,000 100,000 100,000 250,000 | $\begin{aligned} & \mathrm{C} \\ & \mathbf{D} \\ & \mathbf{A} \\ & \mathbf{C} \\ & \mathbf{A} \end{aligned}$ | $\begin{aligned} & \mathrm{N} \\ & \mathrm{~B} \\ & 2,3,15,17, \mathrm{~L} \\ & \mathrm{E}, \mathrm{~N} \\ & 3,6,9,17, \mathrm{~L} \end{aligned}$ |
| $\begin{aligned} & Q_{13-130} \\ & \mathrm{a}_{13}-132 \\ & \mathrm{Q}_{11}-133 \\ & \mathrm{Q}_{13} 133 \\ & \mathrm{Q} 14-133 \end{aligned}$ | $\begin{aligned} & 250,000 \\ & 350,000 \\ & 1 / 5 \text { meg. } \\ & 1 / 1 / \mathrm{meg} \text { meg. } \end{aligned}$ | $\begin{aligned} & \hline \mathbf{C} \\ & \mathbf{C} \\ & \mathbf{A} \\ & \mathbf{D} \end{aligned}$ | E, N $\frac{\mathrm{M}}{\mathrm{E}}, 4,9,12,16,17, \mathrm{~L}$ |
| $\begin{aligned} & \text { Q11-137 } \\ & \text { Q13137 } \\ & \text { Q11-137 } \\ & \text { Q11-138 } \\ & \text { Q11-139 } \end{aligned}$ | $\begin{array}{r} 1 \text { meg. } \\ 1 \mathrm{meg} . \\ 1 \mathrm{meg} . \\ 1 \mathrm{meg} . \\ 2 \mathrm{meg} . \end{array}$ | $\begin{aligned} & \hline \mathbf{A} \\ & \mathbf{C} \\ & \mathbf{D} \\ & \mathbf{A} \\ & \mathbf{A} \end{aligned}$ | $\begin{aligned} & 3,12,15,16, \mathrm{~L} \\ & \underset{\mathrm{E}, \mathrm{~N}}{\mathrm{~N}} \\ & \mathrm{~N}, \\ & \mathrm{i}, 5,6,7,12,14,15,17, \mathrm{~L} \end{aligned}$ |
|  | $\begin{array}{r} 2 \text { meg. } \\ 2 \mathrm{y} \text { meeg. } \\ 3 \mathrm{mmg} . \\ 3 \mathrm{meg} . \\ 5 \mathrm{meg} . \\ 10 \mathrm{meg} . \end{array}$ | $\begin{aligned} & \mathbf{C} \\ & \mathbf{A} \\ & \mathbf{A} \\ & \mathbf{C} \\ & \mathbf{A} \end{aligned}$ | $\begin{aligned} & \text { E, N } \\ & \text { B, }, 17, L \\ & S_{E}, 14, L \\ & \text { S, 7. 14, 15, 16, 17, 18, L } \\ & 6.16,18, L \end{aligned}$ |
| $\begin{aligned} & \text { Any Above (Speclify IRC Type No.) } \\ & \text { Each..................................... } \end{aligned}$ |  |  |  |

ATTACHABLE SWITCHES FOR "Q" CONTROLS
AValtable in 8PaT or DPST. Qulckly, easity attached to all "Q" Controls. iRC Type 76-2-DFST

Each 35 ¢

## TAPPED "Q" CONTROLS

| Type | Ohms | Tap, Ohms | Taper | Application |
| :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & 250,000 \\ & 250,000 \\ & 250,000 \\ & 350,000 \\ & 350,000 \\ & 1 / 2 \mathrm{meg} \end{aligned}$ | 126,000 $60,000,000$ 36,1200000 76,000 126,000 | $\begin{gathered} \text { spec. } \\ \text { 8pec. } \\ \text { 8pec. } \\ H \\ H \end{gathered}$ |  |
|  | $\begin{aligned} & \text { y meg. } \\ & \text { meg. } \\ & \text { m meg. } \\ & \text { meg. } \\ & \text { meg. } \\ & \text { meg. } \end{aligned}$ | $\begin{gathered} 25,000 \\ 50,000 \\ 250,000 \\ 100,000 / 000,000 \\ 250,000 \\ 35,000 \end{gathered}$ | Spec. <br> spec. <br> spec. <br> spec. <br> Spec. | $\begin{aligned} & 0 \\ & 0 \\ & \frac{C}{H} \\ & \frac{H}{H} \end{aligned}$ |
|  | $\begin{aligned} & 1 \text { meg, } \\ & 1 \text { meg. } \\ & 1 \mathbf{m e g} \\ & 1 \text { meg. } \\ & 1 \begin{array}{l} \text { meg. } \\ 2 \\ 2 \end{array} \end{aligned}$ |  | 8pec. spec. spec. 8pec. Hec. | $\begin{aligned} & \mathrm{H} \\ & \mathrm{O} \\ & \mathrm{H} \\ & \mathbf{O} \\ & \mathrm{~J} \end{aligned}$ |
|  | 2 meg. 2 meg. 2 meg. 2 meg. 2 meg. | $\begin{aligned} & 1 / 2 \mathrm{meg} . / 1 \mathrm{meg} . \\ & 150,0 \mathrm{meg} . \\ & 250, \mathrm{meg} . \\ & 50,000 \\ & 5 \mathrm{meg} . \end{aligned}$ | spec. spec. 8pec. 8 рес. spec. | $\begin{aligned} & \mathbf{H} \\ & \mathrm{O} \\ & \mathrm{O} \\ & \mathrm{H} \end{aligned}$ |

Any Above (8pecify IRC Type No.)
1.09

## TABLE OF APPLICATIONS

The table below will enable you to select the proper "Q" control for the purpose you desire. The numerical keys denote television applications and the alphabetical keys indicate $F \mathrm{M}$. AM or audio applications.

| Koy | Applieatloms | K\#y | Appllestoms |
| :---: | :---: | :---: | :---: |
|  | Automate Caln Control | 17 | Vertical size Control |
| 2 | Automatic Frequency Contros | 18 | Width Control |
| 3 | Crightness Control | A | Antenna Control |
| 5 | Focus Control | ${ }^{\text {B }}$ | Antenna Grid Blas Control |
| 6 | Frelght Control | C | Antenna Grid Blas of 1 Tube <br> Antenns Grid Blas of 2 Tube |
| 7 | Forizontal Centering Control | E | Audio Volume Control |
| 8 | Horizontal Drive Control | F | Audio Control with AVC Tap |
| 10 | Borlzontal Bold Control (8y, | G | Audlo Control with Tone Tap |
| 11 | Borizontal Linearity Control | \% | Audio Control, 2 Tone Taps |
| 12 | Horizontal Size Control | K | Fader Control |
| 13 | Senslilvity Control | L | Grid Blas Control |
| 14 | Vertical Centering Control | M | RFP Plate Control |
| 15 | Vertical Hold Control (Sync.) | N | Tone Control |
| 16 | Vertical Linearity Control | 0 | Panel gectionfor L \& T Pads |

## EXPLANATION OF TAPERS

The following explanation of IRC tapers will enable you to select the volume or tone contro! haying the spectac characteristics required for any particular purpose: A-Used as pot. or rheo. where unlform change is required. antenna. Used where grld blas control in of prime D-For grld blat and antenna. Used Where grid blas control th of pritme importance. F-For antenna and grid blas control of 1 or 2 tubes. Do not use with heavy currents.


OHMITE POWER RHEOSTATS
Ceramic and metal construction. Insulated shafta Copper graphite contact reduces wear. U. L. approved. Reslstance wire is wound over a solld porcelain core. Eseh turn is locked agalnst shittlug buse. Mounts on panels up to ore the core and behe Nounts on panel $1 \%$ except Model $\mathrm{K}^{\circ}$ thlch. Depth Mod*1 "H" 25 -Walt- 1 '体" Dla.

| Type | Ohms | Each | Type | Ohms | Each | Type | Ohms; | Emeh |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0140 | I | 4.14 | 0149 <br> 0150 <br> 0151 <br> 0153 <br> 0154 <br> 0155 | 355075100126175250350 | 3.66 | 0156 |  |  |
| $\begin{aligned} & 0141 \\ & 0142 \\ & 0143 \\ & 0144 \\ & 0145 \\ & 0146 \\ & 0147 \end{aligned}$ | $\begin{array}{r} 2 \\ 3 \\ 6 \\ 8 \\ 10 \\ 15 \\ 25 \end{array}$ | 3.66 |  |  |  | 0157 | 760 | 3.66 |
|  |  |  |  |  |  | 0158 0159 | 1.000 |  |
|  |  |  |  |  |  | 0159 | 1,500 <br> 2,500 | 4. 14 |
|  |  |  |  |  |  | 0161 | 3,500 |  |
|  |  |  |  |  |  | 0162 | 5,000 | 4.34 |
|  |  |  |  |  |  |  |  |  |
| 0308 | 0.5 |  | 0317 | 35 | 4.14 | 0325 | 800 | 4.34 |
| 0309 0310 | 1 | 4.60 | 0318 | 50 |  | 0326 | 1.000 |  |
| $\begin{aligned} & 0311 \\ & 0313 \\ & 0314 \\ & 0315 \\ & 0316 \end{aligned}$ | $\begin{array}{r} 4 \\ 8 \\ 12 \\ 16 \\ 22 \\ \hline \end{array}$ | 4.14 | 0319 0320 | 125 |  | 0327 0328 | 1.800 2.500 |  |
|  |  |  | 0321 | 150 |  | 0329 | 3.500 |  |
|  |  |  | 0322 0323 | 225 300 |  | 03330 | 5.000 | 4.60 |
|  |  |  | 0324 | 500 |  | 0331 0332 | 8,000 10,000 | 4.60 |
| Model "K" 100 -Waft-3\% Dia. |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 0446 \\ & 0448 \\ & 0449 \end{aligned}$ | $\begin{aligned} & 10 \\ & 28 \\ & 50 \end{aligned}$ | 6.44 | $\begin{aligned} & 0451 \\ & 0453 \\ & 0455 \end{aligned}$ | $\begin{aligned} & 100 \\ & 300 \\ & 5000 \end{aligned}$ | 6.44 |  |  |  |
|  |  |  |  |  |  | 0460 | 2,500 | 6.88 |
|  |  |  |  |  |  | 0461 0463 | 5.000 | 7.33 |

[^1]
## IRC INTERCHANGEABLE FIXED SHAFTS

Thirteen Interchangeable fred shafts for " $Q$ " controls listed above. These shafta are interchangeable with standard shaft and are avallable when required with instructions and retainer ring. Whet ordering, specify IRC number or give mige IRC Types GQ, Ho, KQ, sQ.


## OHMITE "AB" POTENTIOMETERS

2watt. molded composition. "1/4" diameter, "化"
Requires s $^{\circ}$ mounting hole on panel up to 1 thick. CU types ere linear taper: CA types clockTolerance isper; CB counter-clockwise log. taper

Type |Ohms Type |Ohms Type Ohms| Type Ohms| Typ CU5001 50 CU2521 2500 CB2531 $25 \mathrm{M} \mid$ CU2541| $250 \mathrm{M} \mid \mathrm{CA1052}$. 1 meg.

 CU2511 250 CU1031 10 M CB5031 50 M CU5041 500 M CA2552 2.5 meg. | CU5011 | 500 | CB1031 | 10 M | CU1041 | 100 M | CA5041 | 500 M | CU5052 |
| :--- | ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CU1021 | 1000 | CU2531 | 25 M | CA1081 | 100 M | CU1052 | 1 meg |  | CU1021 1000 CU2531 25 M CA1041 100 M CU1052 1 meg.

Any Type of Ahove Eich
Type Cs 1
Switch-BpgT

## ASTATIC TONE EQUALIZER

An adjustable tone compensation network for use betwern crystal pickup and ampltaer. Mounts in s single hole and is complete with dial plate and knob. Rotary switch provides rour equailzing circuits: Bass, Shpg, Wt. 1 lb .

## IRC LCI VARIABLE LOUDNESS CONTROL

A continuously compensated control that boosts high and Maintains depth and brilliance even at whisper level. Eastly wired into any audio circult with
sumplent gain. Reguires only
one commections. Conststs of 3 variable resistance urits operated from one common shaft with the proper resistors and capacitors. Uses $Q$ control inc Type Lei Conerol-Leas Switch.

## STANCOR TRANSFORMERS

#  <br> UNIVERSAL OUTPUT <br> REPLACEMENT POWER TRANSFORMERS All primary windings for $117 \mathrm{~V}_{\mathrm{n}}, 60$ eycles AC．All secondaries CT exerpt All primary 

| Type，Applieation | Watts | Mtg． | Size | 1 | ET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| －3856 Single or PP（4M－14．11 olims） | 4 | 9 |  | 1 | 1.56 |
| A－3822 single（ $7 \mathrm{M}-10 \mathrm{M}$ ohma） | 4 | 4 | $13^{3} \times{ }^{3} \times 1{ }^{\prime \prime}$ |  | 1.47 |
| A－3823isingle or PP（4M－14M ohms） | 8 | Q | $14 \times 23$ |  | 1.68 |
| A－3850．Atngle or PP（4M－14M ohms） | 8 | J | $2 \times 2 \times 1$ |  | 1.91 |
| A－3825 Aingle（ $1500-4500$ ohms） | 8 | 4 | $2 \times 35 \times 1$ \％ 5 |  | 2.12 |
| A－3824 Single or PP（ $6 \mathrm{M}-10 \mathrm{M}$ ohms） | 8 | 0 | $2 \times 3 \times 2$ | 1 | 2.65 |
| A－3849 Elngle（1500－10M ohms） | 10 | － | $1 x^{1} \times 2 \times 1$ |  | 1.68 |
| A－3880 Push－Pull（ $4 \mathrm{M}-14 \mathrm{M}$ ohms） | 15 | 4 |  |  | 3.18 2.15 |
| A－3852 Push－Pull（ $4 \mathrm{M}-14 \mathrm{M}$ ohms） | 18 | 1 | $2 \times 31$ | 114 | 2.15 2.65 |
| A－3870 Push－Pull（ A－3830 Push－Puli（ （ $\mathrm{M}-10 \mathrm{M}$ ohnis） | 18 | J |  | $\frac{1}{2}^{1 / 4}$ | 2.65 <br> 2.88 |

FIXED IMPEDANCE OUTPUTS

| Type | Primary | Secondary | Watts | Mig． | Size | Lbs． | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A－3865 | 1500 | $6 / 42$ | 5 | A | $14.423 \times 13^{3}$ |  | 2.76 |
| A－3132 | 2000 | 3.2 | 3 | A | $1^{3} \times x^{2} 2 \times x{ }^{2}=$ | $1 /$ | ． 85 |
| A－3330 | 2000 | 3.5 | 5 | A | $14 \times 2 x^{4} \times 13$ ， | 5 | 1.23 |
| A -3876 | 2000 | 4.5 | 5 3 3 | A |  | 1 | 1.03 1.09 |
| A－3328 | 4000 5000 | 3.5 | 3 5 | A |  | 1／13 | 1.09 |
| A -3877 $A-3878$ | 5000 7000 | 4 | 5 5 | A |  | 1／2 | 1.09 1.06 |
| A－3878 | 7000 7000 | 8 | 5 | A | 2x34xiz | 2 | 1.82 |
| A -2313 $A-8114$ | 7000 7600 | 8.2 | 10 5 | ${ }_{4}$ | $14 \times 24 \times 1 \%{ }^{2}$ | $1 / 1$ | 1.82 1.41 |
| A -3129 | 8000 | 3.5 | 3 | A | $11 \times 2{ }^{10} \times 10$ | 4 | 1.03 |
| A－3879 | 10.000 | 8 | 10 | A | $14 \times 2$ ，x1\％＂ | 㛈 | 1.03 |
| A－3327 | 25.000 | 4 | 5 | A |  | ， 3 | 1.29 |


－Ifus tertiary winding to provide $10 \%$ inverse feedbac
TUBE TO LINE OUTPUTS
$\frac{\text { Single plate or push－pull plates to llne．20M ohm primary CT．}}{\text { Type Primary｜Secondary｜Mtg．Size｜Lbs．｜NET }}$

 in parallel acroas a 500 ohm llbe

INPUT TRANSFORMERS

| Typo | Primary | Secondary |  | M19． | Size | L．bs． | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A－4350 | $\begin{aligned} & 30033.3200 \\ & 125 / 50 \end{aligned}$ | 3007  <br>  125 | $50^{2001}$ | Q | $2 \times 314 \times 13^{\prime}$ | 1 | 3.47 |
| Micruphone．Plekup or Line ro Grid． gingle bution mike to single grid． |  |  |  |  |  |  |  |
| Type | Primary／S | Second＇y | Ratio | Mig． | Sixe | Lbs． | NET |
| A－4705 A－4706 | $200 / 70$100500333,$200 / 125,50$ | $\begin{aligned} & 80.000 \\ & 60.00 \\ & 89.000 \end{aligned}$ | $1: 20$ $1: 24.5$ | A |  | 12 | 1.71 1.73 |
| A－4351＊ |  |  | 1：13．3 | TD |  | $11 / 8$ | 3.70 |

－Microphone or Ine to single grid．
INTERSTAGE TRANSFORMERS
For 7000－15，000 ohms plate impedance except A－53 which is $7000-20,000$ ohms．Maximum primary DC 10 ma excepr A－420 which is 15 ma ．Alt



| INTERCOM \＆TRANSCEIVER TRANSFORMERS |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Type | Primary | Secondary | Watts | Mtg． |  | Size | Lbs． | NET |
| $\overline{A-4744^{\circ}}$ | $2001$ | $\begin{aligned} & 25 .(970 \\ & 60.000) \end{aligned}$ | 5 | VE | $\begin{aligned} & 10 x^{2} \\ & 1, x^{2} \end{aligned}$ | \％${ }^{2} \times 11$ $36 \times 1$ |  | $\begin{aligned} & 1.50 \\ & 2.29 \end{aligned}$ |
| －Intercom Input．f Transeciver input mic ac plate togrid． <br> DRIVER TRANSFORMERS <br> Single plate in push－pull artas．Primary fmpedance 10.000 ohms． |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Type } \\ & \text { NO. } \end{aligned}$ | $\begin{aligned} & \text { Pri. to } 1 / 2 \\ & \text { Sec. Ratlo } \end{aligned}$ | Max．Pri． DCMA． | Mtg． | $\mathrm{H}^{51}$ | $w: 0$ | $\begin{gathered} \text { Shpg } \\ \text { ib: } \end{gathered}$ |  | EAET |
| $\begin{aligned} & A-4713 \\ & A-4752 \\ & A-4723 \end{aligned}$ | $\begin{gathered} 2: 1 \\ 2 / 1: 5: 1: 1 \\ 3: 1 \end{gathered}$ | 30 40 30 | A | $15 \times 2$ $2 \times 3$ $1 \times x 2$ |  |  |  | 1.59 2.35 1.59 |



## CATHODE RAY TUBE POWER TRANSFORMERS

For use with type $2 \times 2$ rectifier tube in conventional $1 / 2$－wawe high voltage



FILTER CHOKES

Rated nt 10 volts 60 cycles ，with maximum DC In windings．All are tyse＂$A$＂ | mounting except as Indicat below table． |
| :---: |
| Type My．Ma．DC Ohms |

| Type | My． | Ma． | DC Ohms | Slzo | Ibs． | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C－1515 | 20 | 15 | 900 |  | 1 | 1.18 |
| C－1706 | 4.5 | 50 | 300 |  | 15 | ． 97 |
| C－1707 | 7 | 50 | 550 | 1才x2 \＃x1） | H2 | 1.06 |
| C－1003＊＊ | 16 | 50 | 580 | $2{ }_{2}{ }^{3} \times 19 \%$ |  | 1.32 |
| C－1708 | 13 | 65 75 | 500 290 |  | 1 | 1.62 1.62 |
| C－1355＊ | 8 |  |  | 21／6x2－6x130 |  |  |
| c－1002 | 15 | 75 | 400 | 2.43321 ？ |  | 1.76 |
| C－1420 $\dagger$ | 16 | 80 | 380 | $3{ }^{3} \times 2 \times 2{ }^{\circ}$ | 215 | 2.88 |
| C－1709 | 8 | 85 | 250 | $2 \times 3.42^{\circ}$ | 113 | 1.82 |
| c－2305： | 5 | 100 | 300 | $2{ }^{11} 6 \times 2 \times 2{ }^{\prime \prime}{ }^{\prime \prime}$ | $11 / 2$ | 2.50 |
| C－1001 | 10.5 | 110 | 225 | 2 ¢x4 x2： | 21／2 | 2.41 |
| C－2303 | 2.5 | 130 | 100 | $2 \times 3$ 仅处 |  | 1.65 |
| C－1421 | 7 | 140 | 185 | $3{ }^{3} / 6 \times 2 \times 5 \times 236$ | 234 | 3.29 |
| C－2304 | 2.3 | 150 | 60 | $2 \times 31 \times 13{ }^{2}$ |  | 1.71 |
| C－2309 | 3 | 150 | 90 | $21 / \times 3$ ¢ 214 ， |  | 2.06 |
| C－1710 | 7 | 150 | 200 | $25 \times 4$ x2 ${ }^{2}$ | $21 / 4$ | 2.67 |
| C－1410t | 4 | 175 | 100 |  | $21 / 2$ | 3.35 |
| c－1646t | 5 | 200 | 90 |  | \＄182 | 8.79 |
| c－1411t | 4.5 | 200 | 80 | $34 \times 3 \times 3 \leq{ }^{\prime \prime}$ | $31 / 5$ | 3.86 |
| C－1721 | 8.5 | 200 | 120 | $32 \times 33 \times 3{ }^{\circ}$ | 113 | 3.38 |
| C－1412 | 4 | 250 | 60 | $34 \times 3 \times 355^{\prime \prime}$ | 4132 | 5.59 |
| C－2308 ${ }^{\text {¢ }}$ | 8 | 300 | 80 |  |  | 7.35 |
| C－1080 | 3.5 | 50 | 200 | 16x2， 615. | ！ | 1.15 |
| c－1279 | 8.5 | 50 | 400 |  | 1 | 1.18 |
| C－1333 | 8 | 50 | 450 | 1 $5 \times 23615$＂ | 1 | 1.18 |
| C－2325 | 2 | 200 | 60 |  | $\stackrel{2}{2}$ | 2.06 |
| C－2326 | 1 | 300 | 43 |  | 3 | 2.32 |

FILAMENT TRANSFORMERS
single secondaries．All primaries 117 V．， 60 eycles except P－4082，P－4089， P－3024．P－6308 and P－ 1309 which also have plimaries tapped for 107 V ． 2500 V ．Insulation except bs Indleated．

| $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | Secondary |  | $H_{x} \text { Size }_{x}$ | Mtg． | $\begin{aligned} & \text { WE. } \\ & \text { Lbs. } \end{aligned}$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P． 4026 | 2.5 | 1.5 |  | A |  | 1.91 |
| P－4082 | 2.5 | 2.5 | $211 x^{2} \times x^{2}{ }^{2}$ | TD | 13 | 3.76 |
| P－6133＊ | 2.5 | 5 | 21103 $3^{3} 16 \times 2{ }^{\circ}$ | S |  | 3.03 |
| P－3024 | 2.5 | 10 | $3{ }^{3} 10 \times 2{ }^{3} \times 2$＂ | C | 213 | 4.00 |
| P－3060 $\dagger$ | 2.5 | 10 | $315 \times 2 \times 2 \times 2$ | 8 | $21 / 2$ | 3.67 |
| P－4088 | 5 | 3 | $31 \times 2 \mathrm{l}_{2} \times 25^{\prime \prime}$ | $B$ | 2 | 2.91 |
| P－6135 | 5 | 10 | 31／4x $\times 1 / 2 \times 2$ \％ | N | ， | 3.76 |
| P－6134 | 6.3 | 1.2 | $14 \times 2$ x13： | A | 1 | 1.59 |
| P－5014 | 6.3 | 3 | $3 x^{2}+x^{2} x^{2}$ | B |  | 2.79 |
| P－4019 | 6.3 | 4 |  | C |  | 3.85 |
| P－3064 | 6.3 | 6 | $311 \times 25 \times 2{ }^{\circ}$ | H | 21／2 | 3.61 |
| P－4089 | 6.3 |  | 3 $3 \times 3 \times 34^{\circ}$ | C | 31／2 | 4.12 |
| P－6308 | 6.3 | 10 | $31 / 527 / 5{ }^{2}$ | N | 3112 | 4.05 |
| P－6309 | 6.3 | 20 | 4 4．$\times 33 \times 3{ }^{\circ}$ | N | 7 | 7.59 |
| P－5015 | 7.5 | 4 | $311 \times 215 \times 2$＂ | B | 3 | 3.38 |
| P－6139 | 10 | 8 |  | N |  | 4.97 |
| P－81301 | 12.6 | 2 | 2x311 ${ }^{2}$＂ | A | 11／2 | 2.73 |
| P－6469； | 25.2 | 1 | 2×3／1×2＂ | A | 11.2 | 2.65 |

＊7500 V．Insul．；$\$ 10,000 \mathrm{~V}$. insul．： 11500 V. Insul．
P1996s－FREE STANCDR REPLACEMENT CUIDE－Lists over 400
Items Ineludling iransformers，power packs．trapsmitter kita snd TV

## QUALITY TRAMSFORMERS

## TRUTEST REPLACEMENT TRANSFORMERS



FILAMENT TRANSFORMERS (FIg. 1)

| Stock No. | $\begin{gathered} \text { Prlmary } \\ \text { Voltes } \end{gathered}$ | Secondary Volls | Secondary Amperes | Dimensions $H \times W \times 0$ | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| P1950 | 115.60 cy. | 6.3 ct . | 1 |  | 1.10 |
| P1951 | 115, 60 cy . | $6.3 \mathrm{ct}$. | 3 | $2 \times 3 \times 1$ | 1.69 |
| P1952 | $115,60 \mathrm{cy}$. | 6.3 ct . | 8 | $214 \times 4 \times 2$, | 2.25 |
| P1945 | $115,60 \mathrm{cy}$. | $5 \mathrm{ct}$. | 6 |  | 2.10 |

UNIVERSAL LINE TRANSFORMERS (FIg. 3)
Match voliee coll to 500,1000 , 1500 or 2000 -ohm Hipe, and to ary alingle or Duah-pult tube. shis. wt. 2 libs

| Stock No. | Watts | Sec. | Mig. Cent. | Hy W D | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| P1949 | 10 | 3.2, 6-8 | $23 /$ | 1875811/1515 | 1.49 |
| P1953 | 18 | 3.2,6-8 | 23 | $28 \times 2$ /3x1 $6^{2}$ | 1.97 |
| P1957 | 24 | 6-8. 16 | 3315 | $23 \times 314 x^{2}{ }^{\circ}$ | 2.24 |

STEP-DOWN AUTOTRANSFORMERS (Fig. 4)
Permits use of atandard voltage motors; aceensories and appllanoes with Ine voltages from 220 to $250 \mathrm{~V} .50-60 \mathrm{cycles}$. Bec. voltage $110-126$. Bulit-in receptscle. cord with plug.



## STANCOR TV POWER TRANSFORMERS

Plate-nlament typer for replacement use. All center-tapped
excent P-8158. ${ }^{\text {P }} \mathbf{- 8 1 6 2}$ has socket for rectifer meanted on except P-8158. P-8162 has socket for rectilier mounted on shell and wired to
formers see page 00.

| Type | Plate |  | Rectifit. |  | 2nd FII. |  | Dlmensions H. E Base | we. | Net |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | vac | DCMA | V | A | $v$ | A |  |  |  |
| P-8154 | 750 | 205 | \% | 3 | 5/6.3 | $2 \cdot 5.6$ | $4168312 \times 4$ |  | 9.61 |
| P. 8155 | 450 | 90 | 5 | 2 | 6.3 | 5.15 | $3182^{10} \times 311^{\circ}$ | 4 | 5.76 |
| P-8156 | 730 | 295 | 5 | 6 | 5/12.6CT | $2 / 5$ |  | $18 \%$ | 15.58 |
| P-8157 | 770 | 195 | 5 | 3 | 6.3/6.3/5 | 7.65 |  | 11/2 | 13.41 |
| P.8158 | 470 117 | 103 600 | 5 | 2 | $\left\{\begin{array}{l} 6.3 / 6 \\ 6.3 / 6.3 \end{array}\right.$ | $4.25 / 2$ | 31/63 $3^{\prime} / 4 \times 44^{\circ}$ | 6.3/ | 8.2 |
| P-8159 | 720 | 250 |  | 3 | 5/6.3/6.3 | $2 \cdot 8$ |  |  |  |
| P-8160 | $\begin{gathered} 716 \\ 329 \end{gathered}$ | $\begin{array}{r} 50 \\ 185 \\ 85 \end{array}$ | 5 | 3 | 6.45 | 12 | $41 \times 3 \times 1 \times 4 y^{\circ}$ | 10 | 10.82 |
| P-1161 | 780 | 230 |  | $3 / 2$ |  |  |  | 2 |  |
| P-8162 | 780 | 180 | B-T | , | 6.3 | 9 | $315 \times 416 \times 31 /{ }^{\circ}$ |  | 10.00 |



| Typo | Secondary AC Volts | Sec. DC to Filter |  | Mit. | Slae | $\begin{aligned} & \text { Wt. } \\ & \text { Lb: } \end{aligned}$ | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Volts | Ma. |  |  |  |  |
| P-6301 | 210-0-210 | 150 | 40 | 8 | 294101/x1 | 13 | 2.70 |
| P. 4050 | 240-0-240 | 225 | 40 | N | $33^{102} 15 \times 2$ | 21 | 3.50 |
| P-4061 | 290-0-290 | 250 | 50 | N | $31.102 \times 2$ | 23 | 3.47 |
| P-4062 | 300-0-300 | 260 | 65 | N | $3{ }^{3} \times 2 \times 2$ | $2{ }^{3}$ | 3.82 |
| P-4063 | 320-0-320 | 285 | 75 | N | $3 \mathrm{H} 2 \mathrm{y} \times 2$ | 3 | 4.85 |

## STANCOR AUTO RADIO VIBRATOR TRANSFORMERS

Exact duplteate of mounting type used in original equipment.

| Type | Mancufacturer and Number | DSV. Filter Input | $\begin{aligned} & \text { DC } \\ & \text { Ma } \end{aligned}$ | Size | Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & P-4064 \\ & P-4065 \\ & P-6472 \end{aligned}$ | Delco 724051y | 280 | 65 |  | 214 | 6.12 |
|  | Delco 7255881 | 265 | 56 | 41, | $2 \%$ | 5.82 |
|  | Motorola 258472533 | 238 | 70 | $3 \times 314 \times 2{ }^{2} /{ }^{\circ}$ | 2 | 4.06 |
| P-6472 | Colonial-Detrola D7101 | 270 | 56 |  | 2 | 4.06 |
|  | $\begin{aligned} & \text { Colonial-Bend } \mathrm{C} 217020 \end{aligned}$ |  |  |  |  |  |
|  | Colonial-Motorola C71014 |  |  |  |  |  |
|  | Motorola2534722533 |  |  |  |  |  |
| P-6473 | Zenith 95-1073 | 272 | 73 | $31 / 123 \times 2 \%^{\circ}$ | 235 | 4.62 |
| P-6476 | $\begin{aligned} & \text { Coloniai-Detrola } \\ & \text { D70267 } \end{aligned}$ | 220 | 53.5 |  |  | 4.17 |

## STANCOR ISOLATION TRANSFORMERS

100-watt general purpose type with an output of 115 V .

 P-6161-Similar to above, but $250 \mathrm{~W}, 4 \% \times 425 \% \%^{\circ} \ldots 19.11$ 350-watt laolation resting transformer to handie almort
uny televiston or radio recelver on teat. Has hrat stander receptacles, providing output voltages of 105,115 and 125 With 117 y. . 60 cycles AC input. Usea " $\mathrm{KC}^{\prime}$ ' type mountiag.


[^2]
## UTC TRANSFORMERS



UTC LINEAR STANDARD TRANSFORMERS
Response $=1 \mathrm{db} 20-20.000 \mathrm{cps}$. High permeablity eores and prectsely balafted, interleaved windings. Vacuurn baked, impregnated colls. Minimuta dis tributed capacity and leakare reactance.
CASE DIMENSIONS AND WEIGHTS

| Caso | H×W:D | Mounting | Shpg. wt |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & 25-1 \\ & 5-2 \end{aligned}$ |  |  | $\begin{aligned} & 4 \mathrm{lbs} \\ & 8 \mathrm{lbs} . \\ & 16 \mathrm{los} . \end{aligned}$ |

## INTERSTAGE AUDIO TRANSFORMERS

Hum plokud reduction compared in uncased type, $\mathbf{- 7 4} \mathrm{db}$ excent LS-19 and LS-22, -50 db . LS-1 casc. -LS-2 case

| Typs | Use | Sec. Ohms | Max. Level | Not Each |
| :---: | :---: | :---: | :---: | :---: |
| LS-19 | To PP grids | 95,000; 11/:1 | +17 do | 15.29 |
| LS-20 | Togrid | 60.000: $2: 1$ | $+14 \mathrm{db}$ | 14.70 15.29 |
| L5-21 | To PParids | 135,000:3:1 |  |  |
| Primary Impedance 30,000 Ohms. P. to P. Ior PP Plates. |  |  |  |  |
| LS-220 | To PP grids | $80.000 ; 1.6: 1$ $50.000 ; 1.3: 1$ | $+^{26} \mathrm{db}$ | 18.82 18.82 |

## OUTPUT TRANSFORMERS - To Line \& Voice Coll

Response $=2 \mathrm{db}, 25-20,000$ cprs. with minimum harmonle distortion. In Lesponse case. In LS- 3 ease. $\uparrow P P$, axed blas for cathode follower

| Typo | Pri. P. to P. | Secondary | Watts | EACH |
| :---: | :---: | :---: | :---: | :---: |
| L5.52 | 8,000 ohms | 600 to 1.2 | 15 | 20.56 |
| LS-54 | 8.000 ohms | 30 to 1.2 | 15 | 14.70 |
| $\begin{array}{r}\text { LS-55 } \\ \hline \text { S-57 }\end{array}$ | 5,010 \& 3.000 | 500 to 1.2 | 20 | 14.70 |
| 25-58* | 2,500 \& 1,500 | 500 to 1.2 | 40 | 29.40 |
| LS-60A* ${ }^{\text {¢ }}$ | 4,600 | 15 to 1.2 | 30 | 23.52 |
| LS-61 | 10.000 \& 6,000 | ${ }_{500} 500{ }^{\text {to }} 12.2$ | 15 30 | 20.58 |
| LS-62A0 ${ }_{\text {LS }}$ | 4.600 9.000 ohms | 500 to 1.2 | 30 | 29.40 |
| LS-623. | 9.000 ohms | 30 to 1.2 | 30 | 20.38 |
| LS-6L4 | 3.800 \& 4.500 | 500 to 1.2 | 55 | 35.28 |

## HIGH LEVEL MATCHING TRANSFORMER

Type LS-33. Primary Imjuedances; 50, 125, 200, 250, 333, 500 , 800 ohms. Secondary impedances: $1.2,2.5,5,7.5,10,15,20,30,50,125,200,250,333$, UTC Typo $5 \mathbf{S}-33$ Line Matching Translormer.
17.64

## HYBRID AND REPEAT COILS

Typo 5 S-140. Line to line for tsolating balanced and unbalanced eireuts. Primary and secondary $500 / 600$ ohms, 8

0-20,000
gis. Max. level $=10 \mathrm{db}$ In LS-1 case. UTC Typ-is. Three sets of balanced windings for hybrit service, center thyped Primary and secondary $500 / 600$ ohms.
17.64

## 2-SECTION FILTER CHOKE

Type Ls-90. With hum-bucking tap. Inductance in sertes 50 hy. at 50 ma.



|  |  | UTE TOROID PERMALLOY CHOKES <br> Used in audio. carrice and supersonic appllcations requiring High "Q" and great arablilty. HOA colla have maximum 200 at 5000 eycles. Hob colls have maxi mum " $Q$ " or 200 at 4000 cycles. All coll have extrmely low hum pickup and ean ond spaced close tosether. Hermetlealiy sealed and adjusted to $1 \%$ tolerance. |  |
| :---: | :---: | :---: | :---: |
| Type | Inductance | OC Ma. Max. | EACH |
|  | $\frac{12}{12} .5 \mathrm{Mh}$. | 400 | 6.86 |
| MOA-4 |  | 160 | 7.35 7.84 |
| HGA-6 | $\begin{array}{r} \text { su Mn. } \\ 80 \mathrm{Mh} . \\ 200 \mathrm{Mh} . \end{array}$ | 70 80 | 8.882 |
| HQA HQA H |  | 65 40 | 8.82 9.80 |
| HQA-12 <br> HQA-13 <br> Ha8- <br> $\mathrm{H} \mathrm{H}_{8} \mathrm{~B}$ $\mathrm{H} Q \mathrm{~B}-10$ | $\begin{aligned} & \text { 1.25 Hy. } \\ & \text { 2. Hy. } \\ & \text { 2. } \mathrm{Hy} . \\ & \text { 12. Hy. } \end{aligned}$ | 26 | 10.78 |
|  |  | 60 | 10.78 16.66 |
|  |  | 60 30 | 18.62 |
|  |  | 11 | 21.56 |



## UTC VARIABLE INDUCTORS

For use in tuned audio circults. Adjustment of set Forew on side of casc permits a change in Indurtance of plus $90 \%$ to $-50 \%$ rom the mean yalue shown. Die
 centers on
wt. 6 oz .

| Typo | Mean Hys. | Each | Typa | Moan Hys. | Eac |
| :---: | :---: | :---: | :---: | :---: | :---: |
| V1-C1 | . 0085 |  | V1-C12 | 1.3 2.2 | 8.23 |
| V1-C2 | . 0121 | 6.47 | $\checkmark 1-\mathrm{Cl}_{14}$ | 3.4 |  |
| vi-c4 | . 034 |  | V1-C15 |  |  |
| V1-C5 | . 043 |  | $\mathrm{V}_{1} \mathrm{~V}_{1-C 16}$ | $\begin{aligned} & 8.6 \\ & 13 . \end{aligned}$ |  |
| $\begin{aligned} & \mathrm{V}_{1}^{1-C 7} \overline{C 7} \end{aligned}$ | . 13 |  | V1-C18 V1-C19 | 21. |  |
| V1-C9 | . 34 | 8.23 | V1-C21 | 83. | 10.29 |
| Vi-cil | . 85 |  |  |  |  |

UTC VARITRAN VOLTAGE CONTROLS
Uses a stlding contact mding over transformer turns. Condinuously variable output voltages from 0-130. Completely shicdded. Type v-1 (alustrated) rew terminals on insulated strip. For 115 v ., 50/B0 cy cles AC.



## UTC OUNCER AUDIO UNITS

Welgh only one ounce. Ideal for portable broadcast, hearing add, aircraft and stmilar applicatlons. Uniform high fidelity response from 40-15,0010 $\mathrm{cp3}$., except $0-14$. 0-15 and units carrying DC for voice frequencies from 150-4000 cpss. Maximum ojeratig lovel, 0 db. Sealed in aluminum housings.
 shaps. wit. 5 oz.


| Type | Pri, Impedance |  |
| :---: | :---: | :---: |
| 0-1 | 50, 200/250, 500/600 | 50 |
| O-2 | $50.200 / 250,500,600$ | 50 |
| $0-3$ | 7.5/30 | 80 |
| O-4 | ${ }_{15}^{15,000}$ DC Ia Pri. | 80 |
| 0-6 | 15.000 | 95 |
| 0-7 | 15.000 DC in Prr. | 95, |
| O-8 | 15,000 |  |
| 0-9 | 15.000 DC In Prl. | 50 |
| O-10 | $30.000 \mathrm{P} \text {. } 20 \mathrm{P} .$ | 50 |
| - |  |  |
| 0-15 | 15,000 |  |



Type O-13

## UTC ULTRA COMPACT AUDIO UNITS

Small, lightweight, sultablé for compact equipment. Frequeney egipnse $30-20,040 \mathrm{cps} \pm 2 \mathrm{db}$. except which is $50-20,000 \mathrm{cp}$. Mespinimum operating level +10 db . $115 \times 11 / 3 \times 2^{\circ}$. Top or bottorn mta. 8 hiw. wt. 1 lb .


Type Pri. Impedance Ohms | Sec- Impedance Ohms

A120 $50, \frac{125,}{200}, \frac{200}{500} / 250,333,500 / 600$ A12** $50,200,500 / 50,125,200 / 250,333,500 / 600$ ${ }_{A 14} 140$ A16 15,000
A18 15.000
$\overline{\text { A190 }} 15,000$
A20 $50,125,200 / 250,333,500 / 600$ A21 $\cdot 50,200,250,500 / 600$ A $24.15,000$
A26 ${ }^{\text {A }} 2$
50.000
80.000 overall In 2 sectloas

50,000 overall in 2 sections $60,0002: 1$ turn ratlo 80.000 overall, $2.3: 1$ turn ratlo 9.41 80,000 overall. $2.3: 1$ turn ratio 11.27 50, 125, $200 / 250,333,500 / 600$ $\left\lvert\, \begin{aligned} & 50,125,250,500 / 600 \\ & 50.200 / 250,\end{aligned}\right.$ $\begin{array}{llll}50,125,200 & 250,333, & 500 / 600 & 10.58 \\ 50,125,200 / 250 & 333, & 50 / 11\end{array}$ plate to pate $\quad 50,125,200 \prime 250,333,500 / 600$

UTC UNIVERSAL INTERSTAGE EQUALIZER
Typo CGE-1. For all applications requiring freguency resplonse correction. Connects between two triode audlo stages or mater a high mpedance ( 5000 to 30,010 wnst cuits permil arighs dropped simuitaneously. Continuously adifustable to 15 db . Size: 2 高 $\times 4 \times 2$ 发". Shyg. Wt. 3 IUs. UTC CGE-1 Interstage Equalizer


UTC DYNAMIC NOISE SUPPRESSOR DUAL INDUCTOR
Type CG-50. 11 astwo High "Q" colls (.8 and 2.4 hy .) for use In ilynamic nolse suppression circults. Effectlyely sujpresses surface and nerdie noise in high fidelity; phonograph equij)ment. Diagram of entelent, tested circuitincluded with each UTC Type CG-50 Dual Inductor ............... 9.4

## PARTRIDGE HI-FI OUTPUT TRANSFORMER

Push-pull output tyrie for use in high fidelity audio equigment with Towest distorton. Featured In oripinal T. N. Willamson Amplifer circuit and buil tion Respecifications. Powar rating 16 wat
sponse $=0.5 \mathrm{db}$ from $10-50,000 \mathrm{ep}$. Impedance 10,000 ohms. All secondary windings brought out as 8 separate ohms. All seconiary bindingseted in series. parallel or yarlous serles-aprallel combinations. Becondarles: . 95 , $3.8,8.5,15.2,23.8,34.2,44,60.9$ ohms. Size: $\frac{2 \pi}{4}$


## RCA TV ISOTAP TRANSFORMER

Combines a high-low Isolation transformer for TV and a 500 VA high-low autotransformer winding. Speeds up servicing, eliminates slonck hazardand preverats damage complonents. size: $5^{\frac{1}{4}} \times 5 \times 4$ t, .
Shy. Wt. 12 Wh.
17.95


## TRIAD TRANSFORMERS \＆RCA TV COMPONENTS

## ＂AO A SH $-8$ $x \quad u$ $9 \sqrt{6}$回 M <br> $z$ <br> TRIAD ELECTRONIC TRANSFORMERS FOR ORIGINAL AND REPLACEMENT

SWINGING FILTER REACTORS－X

| $\begin{aligned} & \text { Type } \\ & \text { No. } \\ & \hline \end{aligned}$ | Inductancé Henries | Currant Ma． | Resist Ohms | Testy． RMS | Dim．Inches HEWnO | Wt． Lbs． | Ea． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C－31A | 25／5 | 20／200 | 150 | 2500 | $39 \times 3 \times 36$ | 4 | 4.26 |
| $C-33 A$ | 25／5 | 30.300 | 105 | 3000 | $41 / 0 \times 3 \times 6415$ | 74 | 6.61 |
| C－35A | $20 / 4$ $25 / 5$ | $40 / 400$ $50 / 500$ | 60 | 3000 3000 | 5 $1 / 1 \times 3 \times 241 / 2$ | 94 | 9.41 |
| C－39A | 25／5 | 50／300 | 65 | 3000 | 53／6x＋1／25 | 164 | 13.35 |


| SMOOTHING FILTER REACTORS－U |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | Inductanco Menties | Current Ma． | Reslst． <br> Dhms | $\begin{gathered} \text { Tegiv. } \\ \text { RMS } \end{gathered}$ | Dim．Inches HxWKD | $\begin{aligned} & \text { Wt. } \\ & \text { Lbi. } \end{aligned}$ | E． |
| C－1x | 15 | 20 | 1000 | 1500 | 13／6x21／81鿬 |  | ． 94 |
| C－3x | 10 | 50 | 500 | 1500 |  | 2 | 2.94 |
| C－5x | 12 | 75 | 400 | 1500 |  | 1 | 2.35 |
| C－7x | 10 | 9 | 270 | 1500 | $116 \times 31 /{ }^{1}$ | 114 | 1.59 |
| c－10x | 8 | 125 | 250 | 1500 | $24 \times 311 / 102$ | $11 / 2$ | 1.94 |
| $c-12 x$ | 8 | 160 | 165 | 1500 | $24 \times 311 / 4 \times 2$ |  | 2.08 |
| c－14x | 4 | 200 | 150 | 1500 | $2 \% \times 4 \times 21$ | 235 | 2.44 |
| c－15X | 10 | 250 200 | 100 | 1500 | $2 \%$ xt x2 | 21 | 2.38 |
| c－16A | 10 | 200 300 | 150 | 2500 |  |  | 4.26 |
| C－18A | 8.5 | 300 | ＋0 | 1500 2500 |  | 1 | 2.03 |
| C－29A | 10 | 300 | 105 | 3000 | $45 \times 3 \times 115$ | 7 | 5．38 |
| C－20A | 8 | 400 | 60 | 3000 |  | 9 | 9．61 |
| C－22A | 10 | 600 | 65 | 3000 | 5 格 $\times 13 / 8 \times 5$ | 16 y | 13.35 |

FILAMENT TRANSFORMERS－SINGLE SECONDARY－A

| $\begin{aligned} & \text { Typo } \\ & \text { No. } \end{aligned}$ | Secondary Volt | Amps | Test Volt： | Dim．－Inches HxW：D | Weight Lbs． | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| F－1X | ${ }_{2}^{2.5} \mathrm{C} . \mathrm{T}$ |  | 1500 | $1^{11,6 \times 213 / 6 x^{1 / 4}}$ | － | 1.59 |
| F－3x | 2.5 C．T | 10 | 3000 | $214 \times 311 / 4 \times 2$ | 118 | 2.32 |
| F－5U | 2.5 C．T． | 10 | 7500 | 3116 |  | 4.06 |
| F－7x | 5 C．T． | 3 | 1500 |  |  | 2.08 |
| F－9U | $5.2 \mathrm{C} . \mathrm{T}$ | 13 | 1500 | $34 \times 26 \times 3$ | 31 | 4.79 |
| F－114 | 5.2 C．T． | 24 | 1500 | $3 \% \times 316 \times 315$ | 515 | 6.38 |
| F－14X | 6.3 C．T． | $\frac{1}{3} 2$ | 1500 | $1110 \chi^{213} / 10 \times 14$ | ， | 1.59 |
| F－18A | 6.3 C．T． | 3 | 1500 1500 |  | 13 | 2.23 |
| F－21A | 6．3 C．T． | 10 | 1500 | 3 3，${ }^{3} 3 \times 3$ | 2 | 4.06 |
| F－23 ${ }^{\text {U }}$ | 10 C．T． | 7 | 1500 |  |  | 5.12 <br> 4.50 <br> 2.25 |
| F－40X | 24 C．T． | 1 | 1500 | $\left.{ }_{10}^{106} \times 3\right)$ | 11 | 2． 25 |

TRIAD TRANSFORMERS NOT LISTED ABOVE
Wecarry a complete line of triad translormers in stoch at all times recelve prompt sorvice．Write for literature．units．Your order will

RCA TELEVISION COMPONENTS
FILAMENT TRANSFORMERS，MULTIPLE SECONDARY－U

| $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | Secondary Volts and Amperes | Trest V. | $\operatorname{Dim}_{W \times w}-1 n_{0}$ | Wt． Lbs． | E．3． |
| :---: | :---: | :---: | :---: | :---: | :---: |
| F－27U |  | 1500 | $41 / 6 \times 31 / 1 \times 3$ | Los． | 6.38 |
| F－30A |  | 7500 1500 | 31／6x3 $\times 31 / 2$ | 3的 | 4.82 |
| $\begin{aligned} & F=32 A \\ & F=34 A \end{aligned}$ |  | 1500 2500 | $\begin{aligned} & 3_{4}^{4} \times 21 / x^{3} \\ & 31 / 4 x^{2} \times x^{3} \end{aligned}$ | $21 / 2$ | 4.82 |
| F－36A |  | 2500 | $4 \times 314 \times 3 \%$ | 4\％ | 6.82 |
| F－38A |  | 2500 | $4 \times 31 / \times 33 / 8$ | 51／4 | 7.76 |

STEPDOWN TRANSFORMERS－M

| $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | V．A． Output | $\begin{aligned} & \text { Input } \\ & \text { voltis } \end{aligned}$ | Output Volts | Dlm:- Inches | wi． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{N}-1 \mathrm{X}$ <br> $\mathrm{N}-3 \mathrm{M}$ | 50 | 230 | 115 | 2 29x ${ }^{311} \times 2 \times$ |  | 2.97 |
| $\mathrm{N}-3 \mathrm{M}$ |  | 230 | 115 |  |  | 5.76 |
| N－5M | 250 500 | 230 230 | 115 | $4 \times 3 \% \times 3$ 1／16 | $4 \%$ | 8.41 |
| $\mathrm{N}-9 \mathrm{M}$ | 1000 | 230 |  | 4303318 | 114 | 12.94 |
| $\mathrm{N}-11 \mathrm{M}$ | 2000 | 230 | 115 |  | 22 | 23.96 |


| ISOLATION TRANSFORMERS－X |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Typ. } \\ & \text { Ne. } \end{aligned}$ | $\begin{aligned} & \text { V. A. } \\ & \text { Dutpui } \end{aligned}$ | $\begin{aligned} & \text { Input } \\ & \text { volts } \end{aligned}$ | Outpu Volts | $\begin{gathered} \text { Dim: inches } \\ H: D \end{gathered}$ | we. | Ea． |
| N－51X | 35 | 115 | 115 | $24 \times 3$＂1处 2 |  | 3.50 |
| N－53M |  | 115 | 115 | $3{ }^{4} 10 \times 3 \times 3$ |  | 7.50 |
| $\begin{aligned} & \mathrm{N}-55 \mathrm{M} \\ & \mathrm{~N}=57 \mathrm{M} \end{aligned}$ | 250 500 | 115 115 | 115 | 4 $5 \times 334 \times 5$ |  | 14.88 |
| $\begin{aligned} & \mathrm{N}-57 \mathrm{M} \\ & \mathrm{~N}-59 \mathrm{M} \end{aligned}$ | 500 1000 | 115 | 115 115 | $5 \% \times 41$ <br> $5 \% \times 4$ <br> 15 | 22 | 23.96 |
| － N －60 | 2000 | 230－115 | 230－115 |  | 27 | 39.51 67.62 |

MODULATION TRANSFORMERS，TUBE TO R．F．LOAD－Z



## RCA TELEVISION COIL KIT $204 \times 1$


O． 11

Complete IF and Video coll kit．Contalna all necessary colls for bullding Hound and video sections of a complete TV recelver，as follown：2 201 K 1. 1－202K1，1－202K2，1 202K3．1－202K4．1－203K1，2 202L1，1－203L1．1－203． 12，2－203L．3，2－203L．4．Full desertptions of all colls Hsted below in the Labular listings．

| Type No． | Deseription | Eneh |
| :---: | :---: | :---: |
| 201 BI | 14．Mirror for $5^{\circ}$ Kinescone | 88.20 |
| $201 \mathrm{D}^{2}$ | Defiecting Yoke for 5TP4 |  |
| 201011 | Deflecting Yoke for 5WP1s | 10.29 |
| $201 D^{212}$ | 13eflecting Yoke for 10BP4 and 16AP4（50 degrees） | 4.41 |
| 201076 | Deffecting Yoke，1conoscopr |  |
| 201077 | Deffecting Yoke，Monoscope． | 80.36 |
| $\begin{aligned} & 201 K 1 \\ & 201 R 1 \end{aligned}$ | 1st and 2nd 8ound If Transformer（ 21.25 MC ） | 1.29 |
| $201 \mathrm{R}^{2}$ | Wldth Conerol | 1.29 |
| $201 \mathrm{R}^{3}$ | Frorizontal LDmearity Contro | 1．297 |
| ${ }_{201 R 5}$ | Width Control ．${ }_{\text {For }}$ | ． 59 |
| ${ }_{20176}$ | Horizontal Linearity Control | 11 |
| 20177 |  | 15.29 |
| $2017{ }^{8}$ | Power Transformer 21 tube） | 12.35 11.17 |
| 20179 | Power Transformer 27 Tube） | 12.35 |
| 201710 | Power Transformer（27 tuhe） |  |
| $202 \times 1$ | Yoke Mounting Hood for 7 DP | ． 76 |
| 20202 | Focusing eoll for 108 PP | 4.41 |
| 202075 | Focusing coll，tmage orti | 6.47 |
|  | Converter Transformer（21 | 1.29 |
| 202 K 2 | 19t Pleture IF Transformer（25．3） | 1.38 |
| $202 \times 3$ | 2nd Pleture IF Transformer（ 22.3 MC | 1.06 |
| $202 \times 4$ | Cathode Circuit Trap（ 21.5 MC | 1.29 |
| $\begin{aligned} & 202 \mathrm{~K} 5 \\ & 202 \mathrm{~K} \end{aligned}$ | Converter Transformer（24 M | ． 76 |
| $202 \mathrm{K7}$ | 2nd Pleture if Transformer（25．8 MC） | 1.23 |
| 20748 | 3 rd Pleture IF Transformer（ 21.9 MC ） | 1.08 |
| 202 | 4th Pleturelf Transformer（ 24.6 MC ） | ． 91 |
| 202K10 | 5 5th Pleture IF Transtormer（ 22.4 MC ） | 1.15 |
| $202 \mathrm{Kl1}$ | Cathode Circulr Trap（24．6．M |  |
|  | $3 \mathrm{rd}(25.2 \mathrm{MC})$ or 4 th（ 23.4 MC ）Pleture | 38 |
| 20301 | lon－trap magnet（firld－coll type） | 3.82 |
| 20303 | Ion－trap raagnet（fermanent－magnet ty |  |
| 203 K | Sound Discriminator Transformer（21．25 | 1.62 |



P20198 RCA COMPONENT DIRECTORY FOR TV RECEIVERS， Contalins major componenc replacements for over 200 televialon sets．made and marketed by nearly forty different manufacturers． Speeds servicing problems by instantly guliding
part． 11 pages．ND CHARGE WITH ORDER．
P20289 RCA TELEVISION CDMPDNENTS．Fuil information on ail of the components listed below and profusely illustrated．ND Typeno

| ypeno | Description |
| :---: | :---: |
| 203 L | Video Serles Peaking Coll（IMO M） |
| $203 L 2$ | Video Shunt Peaking Coll（250 Microhenries） |
|  | Viden Spries Peaking Coll（120 Microhenries） |
| 203 LS | Video Shunt Peaktig Coil（ 93 Microhenries） |
| 203 Fl | Hortzontal Osclinator and Sy |
| 204075 | Algnment Colt，1mage Orth |
| 20412 | Filament Choke（Etandard Package 5） |
| 20471 | Horlzontal Deflector Output |
| 204 T2 | Vert．Defl．Output Transformer fo |
| 20473 | Horiz．Defl．Output Transformer for 7GP4 and 108P4 |
| 204 T9 | Vert．Deft．Output Transformer for lobP4 and 16AP4 |
|  | Deflecting Yoke for 10BP4 and 12 LP4（60 |
|  | Hor．Osc．and Sync．Stab．Coll |
| 206 Kl | Sound IF Tra |
| $206 \mathrm{R1}$ | Whith Control（High－efthelency） |
| 20701 | Defl．Yoke for 10BP4，12LP4，and 16 |
| $207 \mathrm{K1}$ | Sound Discriminator Tranaformer（2 |
| 207 RL | Iforizontal Linearity Control（For Use |
| 208 R1 | Wldth Control for 16GP4（70 degrees） |
| 20871 | Horizontal Blocking Ozellator Transfor |
| 20852 | Vertical Blocking Oscllator Transforme |
| 20873 | Horizontal BlockIng Oscillator Transfor |
| $\begin{aligned} & 208 \mathrm{~T} \\ & 208 \mathrm{~T} \end{aligned}$ | Horizontal Sync，Dire．Transforme |
| 20901 | Deflecting Yoke for 16GP4（F |
| $209 \mathrm{R1}$ | Horizontal Linearity Control for 16GP4（70 desrees） |
| 21171 | Rorlzontal Deft．Output and High Voltage Transform |
| 21172 | Horizontal Den．Output and High Voltage Transf |
| 21173 | Morizontal Den．Output and Fixh Voltage Transformer |
| 21175 | Horizontal Def．Output and High Voltage Transformer |
| 21771 | Moriz．Defl．Output and HV Trans．for 1013 P 4 and 12LP4 |
| 2187 | Horiz Defl，Output and RV Trans，for 16 GP 4 （70 |
|  | Vertical Deal．Output Trans，for 16GP4 |
| 22451 | Horriz．Den．Output and HyV Trans． |
| 22511 | Hortz．Dent，Output and HV T |
| 226 T1 | Vertieal Outmut Transformer（Use wifh 209D1）．．．．．．． |



# COILS AND VARIABLE CONDEMSERS 

|  | MEISSNER COILS <br> "PLASTIC" IF TRANSFORMERS <br> Trimmer base and coll form are moutded in one plece Trimmers "Hoated" away from base with an air gap b <br>  |  |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  |  |  | 1.0 |

HI-Q IRON CORE "PPLASTIC" IFs
16-6662-IDput, peaked at $455 \mathrm{KC} \ldots . . . . . . . . .19$
Molss nor Type 16-6662-Ipput, peaked at 455 KC .
Melsanor Type 16.6663 -Output, peaked at 455 KC
1.49

## "TWEET" FILTER OUTPUT IF

Mefas ner Type 16-6670. 455 KC output trangformer with buill-In "tweet" Miter in secondary elreuit. For replacement use in latemodel recelvers that
 16.6670-Melssner "Tweet" Fliter Output IF

## FM IF AND DISCRIMINATOR TRANSFORMERS



Meissner type 10-6665 IF eransformer. For the new ulera-
 $\times 129 / 32^{\circ}$ with screw type mounting lugs.
2.10

Molsuner type 16-6665.
Transformer.
 Franke. Bame size as above.
2.76


## STANDARD ANTENNA AND RF COILS

Designed to cover the broadcast band from 545 to Designed to cover the broadcast bnnd from 345 to condener Hikb Impedance primaries wound with Litz
wire
Sheided colta are in black crackle inish, nod maRwire. Shueided colita are in black crackle Anish, non
netic can. $1 / /$ nches in diameter, $2 / / 3$ Inches hikh. UNSHIELDED
Antenna coll type ${ }^{14-1010}$.
RF coll eype $14-1019$.
684
RF coll \&ype $14-1019$.
shielded
Antenpa coll typp 14-1004
Antenpa coll typo $14-1$
RF coll ty be $14-1005$.

## "UNIVERSAL ADJUSTABLE" UNSHIELDED COILS

Replace Broadcast band colls in most recelvers, accurately track other colls when adjusted. Matches inductance of burned out coil with serewdriver adjustment. Oscllator coll adjustable
from 175 to 520 kilocyeles. For use with elther cut plate or padding condenser ctreutits.
Melssper type 14-1026 Ant.
1.24

Melssper type 14-1026 Ant.
Meissner type 14-1027 R.
Melssper type $14-1028$ Osc.

## osCillator coils

FOR 190-SSO METER BC BAND
Used with 365 mmid . cond. IF, RF, and Antenna colls. Bhicided type. $1 \%^{\circ} \times 1 \mathrm{~K}^{\prime}$. Without padders.


## PHONO OSCILLATOR COIL FOR WIRELESS RECORD PLAYERS

Knob adjustment for selection of elear frequency in BC band 17-9373-13/4 8q. $\times 3$ 3/2 hlgh

## bFOCOIL

50 Kc .
 Melss ner \&ype 17-6763..................

RF CHOKES
All-purpose RF chokes, stentive dowels. Impregnated agalnst humidity. Mounted on $6 / 32$ screw.

| Melasner No. | Ind. MH | Eaoh |
| :---: | :---: | :---: |
| 19.1994 | 2.5 | $46 c$ |
| 19.4551 | 5.5 | $46 c$ |
| 19.2078 | 8.0 | $49 c$ |
| 19.8770 | 10.0 | 546 |
| 19.2330 | 30.0 | $64 c$ |
| 19.3247 | 60.0 | $74 c$ |

MIDGET SINGLE GANG CONDENSERS
Firmly staked rotor and stator plates. Low-loss bakeifte insulation. Ball bearing, Counterciockise motion
 P10189: 15 mmid . 68 c P10195 150 mmPd . 68c

 Double spaced.

## FM GANG CONDENSERS

Each section contains a trimmer. aluminum Each section contains a trimmer, aluminum plate ball
3-Section: Each section $14.8-1.3 \mathrm{mmid}$ P9794-shpg. Wt, 1 1b. $14.8-1.3$ mmid
1.35 2-section: Each section
P9795-Shpg. Wt. 11b.

## GANG CONDENSERS

With aluminum plates, bati-bearing rotors, and
low-loss insulation. Two and three gang unita sup-low-luss insulation. Two and three gang units sup-
plled with trimmers on botcom. Shafts plied with trimmers on botiom. Shats $1 /$ dong. Three mounting holes. Tapped for $9 / 32$ 14, per section, except eut sections on 456 KC super per se.
types.

| TRF |  |  |  |  | 456 KC Super |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Each | Gang: | Length | Rotation | No. | Esch |
| P9780 | 684 | 1 | 17/16 | Counterclock |  |  |
| P9781 | ${ }^{98 c}$ | $\frac{2}{3}$ | - $23 / 16$ | Counterclock | $\begin{aligned} & \text { P9798 } \\ & \text { P9799 } \end{aligned}$ | $\begin{aligned} & 986 \\ & 1.39 \end{aligned}$ |
| P9783 | 68 c | 1 | $17 / 16$ | Clockwise |  |  |
| P9784 | 98 c | 2 | $23 / 16$ | Clockwise | P9796 | 98e 9 |
| P9785 | 1.39 | 3 | 3 3/16 | Clockwise | P9797 | 1.39 |

## 420-160 MMFD. GANG CONDENSERS

Two gang, 420 and 160 mmpla . condensers for use with 456 KC IF superbets, Counterclockwise rotation, with trimmers built onto frame. Total length $23 / 16$ tnehes. Shps. We. 11 tb . P9776-2 gang, 420-160 mmid
P9776-3 kadg, two 420 and one 160 mind
$1 / 4$ " PERMEABILITY TUNED IF COILS


5
Tuned top and bottom, powdered Iron cores. Allvered mica condensers, molded plastio bases etched sluminumi cans. with leads.

## Melasner type

## Function

16.6758 KC input and Output
$16.6770 \quad 455 \mathrm{KC}$ Output, with dlode niter conds.

| $16-6752$ | 262 KC Input for auto reeelvers. |
| :--- | :--- |
| 16.6754 | 262 KC Output for auto recelvers. diode conds. |


| $16-688$ |  |
| :--- | :--- |
| $16-3487$ | 10.7 MC FM 1 nput and Output........ |
| $16-6678$ | $455 \mathrm{KC} \mathrm{AC-DC}$ type Input or Output. |

## MINIATURE ADJUSTABLE BROADCAST OSCILLAIOR COIL

For Battery and 3-Way Portables Small shysical alie. $x$, and wide range or battery and 3-way portables. Induetance ranke allows use with gang condenser capaclites of 108 to 180 mmfd . Allows accurate adjustment of inductance for projer callbration and tracking. Melsener Type 14-1074.

## MINIATURE BROADCAST ANTENNA AND RF COILS

 The small phystcal size, 11 Inch by $1 /$ inch and the feature of having adjustable inductance makes these colls where mounting or orikinal coll is dimeult to duplicate. Designed to cover the browicast band with gang con densers having effective capaetiles of 280 to 420 mmfd Molsoner type 14-1071 Antepna.Melssner type 14-1072 RF.
Melssner type $14-1072 \mathrm{RF}$.................................................
MINIATURE ADJUSTABLE BROADCAST
With 100 Mmid . Capacity Interwinding,


For use with 6SA7, $129 \mathrm{~A}, 6 \mathrm{BE}, 12 \mathrm{BE} 6,797$, and 14 Q 7 tubes in recelvers having 455 KC Intermediate Frequency and with eftective kang condenser caparittes of 108 to 180 Mmpdd . in unpadded circuits, and 365 to 420 Mmid . in padded circuts. Adjustable iron core permits accurate adjust ment for proper tracking and caibrationculs.
its use in the most comp
Melssner Type 14.1073
884
MICA TRIMMER CONDENSERS
Base of low-loss ceramic with India Ruby mica.
Molsture resistant. Lugs bend easily.

| No. | Plates | Range | Each |
| :---: | :---: | :---: | :---: |
| P9537 | 13/3 | 2- 30 mmid . | 12 c |
| P9536 | 2 | 4-80 mmid. | 126 |
| P9535 | 3 | $9-180 \mathrm{mmid}$. | 166 |
| $\begin{aligned} & \text { P9534 } \\ & \text { P9533 } \end{aligned}$ | $\begin{aligned} & 4 \\ & 5 \end{aligned}$ | 25-280 mnifd. $45-380 \mathrm{mmfd}$. | $\begin{aligned} & 186 \\ & 206 \end{aligned}$ |
| P9532 | 6 | 70-480 mmid. | 226 |
| P9531 | 7 | $100-580 \mathrm{mmfd}$. | 246 |



BRASS SHAFT COUPLINGS AND BUSHINGS


## BINDING POSTS-PHONE TIPS-PLUGS-CLIPS

## ALLIGATOR CLIPS

Powerrul grif. $2^{\circ}$ cllp is $1^{\circ}$ wide, $23^{\circ}$ clip is 5/16 wide. Sieel non-rusting fintsh. Pi2965 end
takea banana plus.

| No. | Lenge $h$ | Eech | 10 For |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & \hline P 12955 \\ & P 12956 \end{aligned}$ | 23** | . 08 | $\begin{array}{r} .54 \\ 1.62 \end{array}$ |
| Copper with bronze epping. For RF work. screw 2 " long. P12947. <br> 10 for |  |  |  |
|  |  |  |  |

## INSULATED ALLIGATOR CLIPS

Plated metal grips with Insulated handlea that eake banana plugs. Handea in red or blact: sperify. Sicel non-rusting sprink. P1 2949 Coppes with bronze spring

| No. | Lenper | Each | 10For |
| :---: | :---: | :---: | :---: |
| P12911 | 23 | .13 | .88 |
| P12909 | $3 \%$ | .18 | 1.62 |
| P12949 | 24, | .15 | .98 |

Allaghor clip fitted with standard phone tip Jack. Fits test prods equipped with phone tip ends. ked or black-apeciry color.

Each 326
P12880
10 for.
. . . . . 2.88
 Plug is 13 "long. Jack is $\%$ " long and fits $44^{*}$
hole in panela to $K$. pole in panels to $K$



## INSULATED BANANA JACKS-PLUGS

Plug has a set screw for solderless wirc connection. Jack fits $3 /^{\text {" hole in panels up } t o ~ s h a c k . ~ t h e d ~}$





## COMBINATION JACK

New type, takea both phono tips and banana whas. Fully insulated, with
insulated washer. In red or biackinsulated washer. In red or blackP1 2925 10 for

Each 14

## STANDARD PHONE TIPS

Heavily plated. Takes up to No. 18 wire. $1 \%$
long.
$\qquad$ das. 100 for

126


PLAIN SOLDERLESS PHONE TIP PLUGS
All metal tip plug for tip Jack use. Bolderless connection. 15 long. P1 2943
10 for.

Each 9 d
...... 81


SOLDERLESS INSULATED PHONE TIP PLUGS

Solderless type: fit all standard tip Jacks. Used on test leads. In red or black. Specify color. P12973- $2^{\circ}$ long.
P12974- $14 y^{\prime}$ long
\}Ener 14¢ Elther type 10 for.
1.23


## TIP JACKS

Mounted on $3 / 32^{\circ}$ Bake Itte. Contact sjprintes grip cord tipe securely.
P13037 Each 14 10 for ........1.23


## AMPHENOL PHONE TIP JACKS

Type 78-IP. Bakelite body. Takea standard, plain or solderless phone tips. Mounts mecurely by means of or black. Requires hole. Red P12765.

Fach 5

## PLAIN TIP JACKS

Excellent for use with test equipment. Powerful spring holds cord tips wecurely. If mounting hole. P12918.

Ench 91

## INSULATED TIP JACKS

New type springs which provide sure krip contrict. Mounts $\ln 3 / 16$ hole
Red or black-spectiy Red or black-spectify P1 2879 10 for.

Each 114


SIngle prong shielded plug used extenalvely for mike or phono pickup ind other connections Phono jack mounts in rear of panel through is hole and is $11 / 18^{\circ}$ between centers. P11773-Plug. Fig A
P11774-Jack. Flk B ..... Each 76
Fla. C. Double phono jack mounted on $1 / 10$ bakelite Danel. $h$ centers.
P1 2964.
118

## EBY BINDING POSTS

## NON-REMOVABLE TOPS

| Spectally designed for use on metal chassls. Post hus hole for wire or phone tip. Junlor past has 6 m 32 stud, 1 K long. |
| :---: |
| P13082 . . . . . . . . . . . . . . Each 18e |
|  |
| P13083.... . . . . . . . . . . . . Each 236 |
| Commander Post has 8-32, $4 / /^{\circ}$ long. |
| P13084................... Each 29 |



10 for.
 For Glass Tubes
P14827............................ $2 ¢$
12 for .
105

## BATTERY CLIPS

Heavily plated stcel
body. Strone spring.
P16061-2 ${ }^{\circ}$ long... Each 4f
P16062-23 $3^{\circ}$ ' Iong. Each 56 P16063-3 K $^{\circ}$ long. Easch Be

## MUELLER AND FAHNESTOCK CLIPS



## MUELLER CLIPS AND RUBBER INSULATORS

Spring-actuated cllps. Type 27 and 270 are laboratory types with mesh teeth on three sides, others have teeth in front only. Insulators itsted opponite proper size elifis. Clips marked + and - ( 5 each, 10 to a box). Insulators ome 5 red and 5 black.

| CLIPS |  |  |  |  | INSULATOAS |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | IType | Stro | Emeh | 10 Forl | No. | Type | Each | 10 For |
| P16029* | 45 | 1\% | . 07 | . 49 | P16031 | 47 | . 09 | . 59 |
| P16030 ${ }^{\text {P }}$ | 45C | 14* | .11 | . 78 | P16031 | 47 | . 09 | . 69 |
| P16032* | 48 B | 2. | . 08 | . 54 | P16033 | 49 | .11 | . 73 |
| P16034 | 24 A | 3. | . 15 | 1.03 | P16035 | 26 | . 24 | 1.76 |
| P16026: | 27 | 26* | . 11 | . 78 | P16028 | 29 | .17 | 1.18 |
| P16027t | 27 C | $26^{\circ}$ | .19 | 1.27 | P16028 | 29 | . 17 | 1.18 |
| P16018 ${ }^{\text {c }}$ | 21 A | $4{ }^{4}$ | . 24 | 1.67 | P16019 | 23 | - 34 | 2.45 |

NO. 8ST CROCODILE TIP CLIP
For connecting Bridges, Volemeters, or anything havin
binding pusts with non-removable heads. Has phone tip
P16023-10 10 .
1.27 Earh

No. 85. As above less phone tip.
Pi6020.- 10 for................ 544 Each
18

No. ${ }^{87}$. Plastic insulator for ether of the above.
Pi 6021 - 10 for.................. 548 Each.... . 8

## MUELLER WEE-PEE-WEE CLIP

No. 88-98. Non-ferrous R. F. Clip. Will not heat In hikh frequency circules. Ideal for tupptag colls. Length $111 / 16^{\circ}$. Insulated with red or black jacketspectly color desired. P16022-10 for..... 1.62 Erach.

23¢


## FAHNESTOCK CLIPS

Grips wire with right pressure for good electrical contact without injury to

StockNo. Figure |Lengeh/Max. Wire Meg. Hole| 10 For |liono For

|  |  |  |  |  |  | 000 Fo |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P14824 P14828 | ${ }^{18}$ | 11/16* | No. 10 No. 10 | No. 8 | . 14 | 13.20 |
| P14826 | A | $1 \%$ | No. 10 | No. 8 | . 14 | 9.40 |
| P14823* | B |  | No. 14 | No. 6 | . 09 | 9.00 7.20 |
| ${ }^{\text {P1 } 148255^{\circ}}{ }^{\text {P14820 }}$ | A | 14 | No. 14 | No. 6 | . 30 | 24.80 |
| P14821 | W | 1 | No. 10 | Copper lug | 44 | 34.20 |
| W MUELLER "TWIN CLIP" |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Has Jaws on both ends. Makes a quick splice, reconnects a broken lead. ete. Can be used for racking or holding parts or holding articles for display. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| P16025-10 for 68c.................... Each $10 ¢$ |  |  |  |  |  |  |

## G-C AMO MINIATURE TUBE PULLER

Fig. A. Irrevent fube breakage Easily removes or laserts minfature tubes. Works on suction and P15594
16584 Shpg. wi. 2 oz.
P15594-For 9 pln
\} Elther tyve 97

## MINIATURE TUBE PIN STRAIGHTENER

Fig. B. Prectason constructed steel die. Quickly


## ICA CABINETS, RACKS AND PANELS



3/16" BLACK POLISHED BAKELITE PANELS
Sultable for teat instruments and radio applleations. Shipplag wt. 1 lb

| Stock No. | Slze | Each |
| :---: | :---: | :---: |
| P19600 | $7 \times 10$ | 1.69 |
| P19601 | $7 \times 12$ | 2.06 |
| P19602 | $7 \times 11 \%$ | 2.45 |
| P19603 | $7 \times 18$ | 2.91 |

## DELUXE STEEL CABINETS FOR RACK PANELS

Heavy duty cabinets bult of $1 / 16^{\circ}$ steel; black ripple fintsh. Welded construction, streamilined design. Standard mounting: bulitin louvres. Neatly rounded corners. Universally drilled to at all standard $19^{*}$ rack panels. All have hinged doors with snap looks. Atso uvallable in slate gray on special order.

| Stoek No. | $\begin{gathered} \text { Overall } \\ \text { Dimensions } \end{gathered}$ | $\begin{aligned} & \hline \text { Panel } \\ & \text { Space } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Door } \\ & \text { ocation } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Shpg. } \\ & \text { We., libs. } \end{aligned}$ | $\begin{aligned} & \text { Nar } \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| P22188 | $101 / 2 \times 21 \times 15$ | $83 \times 19^{\circ}$ | Top Only | 22 | 11.76 |
| P22071 | $14 \times 21 \times 15$ | 124819 | Top Only | 29 | 14.26 |
| P22191 | $1916 \times 21 \times 15$ | $17 \times 2 \times 10^{\circ}$ | Top \& Rear | 34 | 18.82 |
| P22198 <br> P22199 |  | $284 \times 19^{\circ}$ $35 \times 19^{\circ}$ | Rear Only Rear Only | 69 73 | 22.08 24.40 |



## HEAVY STEEL RACK PANELS

Heavy duty Th " $^{\text {bicel pannels, fully shoted }}$ to it any standard $19^{\circ}$ relay rack. Furnisine with amateur rack nothing. Avain-

| Black No. | $\begin{aligned} & \text { Gray } \\ & \text { No. } \\ & \hline \end{aligned}$ | Hge. | $\begin{aligned} & \text { Wt. } \\ & \text { Lbs. } \end{aligned}$ | $\begin{aligned} & \text { Net } \\ & \text { Each } \end{aligned}$ | $\begin{gathered} \text { Block } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \text { Gray } \\ & \text { No. } \end{aligned}$ | Hge. | $\begin{aligned} & \text { We. } \\ & \text { Wbs } \end{aligned}$ | $\begin{gathered} \text { Net } \\ \text { Emeh } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P22169 | P22118 |  |  | 67 | P22163 | P22124 |  | 12 | 1.84 |
| P22170 | P22119 | 吅 |  | 73 | P22164 | P22125 |  |  | 2.13 |
| P22171 | P22120 |  | 7 | 91 | P22165 | P22126 | 159. | 14 | 2.35 |
| P22160 | P22121 |  | 8 | 1.06 | P22166 | P22127 | 173. | 15 | 2.66 |
| P22161 | P22122 |  | 9 | 1.29 |  |  |  |  |  |
| P22162. | P22123 | 104 | 10 | 1.55 | P22168 | P22129 | 21 | 17 | 3.23 |



## STEEL MOUNTING BRACKETS

1/10" steel; black rignle fintsh. Panels must
the it teast $7^{2}$ hikn. Mountink holes drilled. Macle to it $17^{\circ}$ relay raek classis.
P15271-Basp wize 8 $^{\circ}$
Palr 83 $\phi$
P15272-Buse stze $11^{*}$
Patr 1.18
P15269-Base slze 13:
Puir 1.66

## CHASSIS SUPPORTING ANGLES

For heavy welights encountered in chassis constructlen. Dastibutes welight on mides of rack and rell. $3^{\circ}$ wide and int bo lomg. P22169-Per Patr
1.71

## CHROME HANDLES

For cabiluets amplitions, chaseis,
 P14662-4 1ong (hirome lianlles. Mita. Centers $2^{2}$

## CHROME VENTILATING LOUVRES

Arlds a diselnetive toueh to any reeciver. ump-


 1) lameror of lioles: $5 / 32^{\circ}$. 1, engeth of louvres: $413^{\circ}$. Size $57 / 16 \times 3^{\circ}$. Shipg Wt. K oz
P22234

66d


## STEEL CHASSIS

AND BOTTOM PLATES
Chassis have four solid sides, welded corners. Botiom edges finged in and drilled for plates. No 20 gage steel plated or black ripple tnish. Bottom plates have holes drilied to matel chassis. Pressed corner bumpers. Black ripple inlsh.

| $\begin{gathered} \text { Slze } \\ \text { DxLxH } \end{gathered}$ | Plated No. | Not <br> Each | Black Rlpplo No. | Not <br> Each | $\begin{aligned} & \text { Botzom } \\ & \text { Plaze. } \\ & \text { No. } \end{aligned}$ | Not Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $43 \times 8 \times 14$ | P22311 | . 75 | P22391 | 75 |  |  |
| 509 $6 \times 11 / 3$ | P22299 | . 76 | P22211 | . 76 | P22228 | . 53 |
| $7 \times 7 \times 2$ \% | P22301 <br> P2238 | r <br> 1.08 <br> 1.88 | P22212 | 1.88 | ${ }^{\text {P22 }} 22828$ | . 68 |
| $7 \times 11 \times 2$, | P22326 | 1.10 | P22214 | 1.10 | P22249 | . 63 |
| 7 $\times 13 \times 2$, | P22327 | 1.18 | P22215 | 1.18 | P22356 | . 67 |
| $7 \times 15 \times 3$, | P22339 | 1.40 | P22216 | 1.00 | P22368 | . 76 |
| $7 \times 17 \times 3{ }^{\circ}$ | P22303 | 1.84 | P22217 | 1.54 | P22260 | . 86 |
| 10x12 $10 \times 17 \times{ }^{\text {a }}$, | P22328 | 1.47 1.60 | P22226 P2227 | 1.47 1.60 | P22368 P22266 | . 88 |
| 10x17 $11 \times 17 \times{ }^{\text {a }}$ | P22329 P22312 | 1.60 2.16 | P22227 P22393 | 2.16 | P22397 | 98 |
| ${ }_{13 \times 17 \times 3}{ }^{\text {a }}$. | P22312 P22300 | 1.16 2.50 | P22394 | 2.50 | P22298 | 1.25 |

ALUMINUM CHASSIS
Four solld sides, welded corners. Botton edges flanged in and drilled for plates. $055^{\prime}$ thlek. Unanished.

| $\begin{gathered} \text { Size } \\ \text { DKLin } \end{gathered}$ | Stock No. | $\begin{aligned} & \text { Net } \\ & \text { Eaoh } \end{aligned}$ | $\begin{gathered} \text { Slxe } \\ \text { DxLyH } \end{gathered}$ | Stock No. | $\begin{aligned} & \text { Net } \\ & \text { Eseh } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 7×7x2 | P22238 | 1.08 | 7x17×3 | P22246 | 2.16 |
| $7 \times 9 \times 2{ }^{\prime \prime}$ | P22239 | 1.18 | 10x12x3* | P22247 | 2.06 |
| $7 \times 11 \times 2$ | P22243 | 1.30 | 10x17* | P22248 | 2.81 |
| $7 \times 13 \times 2$. | P22244 | 1.37 | 11×17x3* | P22396 | 2.94 |
| 7×15×3 ${ }^{\circ}$ | P22245 | 2.22 | $13 \times 17 \times 3$. | P22396 | 3.26 |



## MINIATURE ALUMINUM CHASSIS

Open end chassts of hard aluminum. Has a ${ }^{\prime}$ : nange on bottom to permit pastening down of chasels, or attaching it to a bottom plate. Ex-
tremely useful for snmall recelvers, outboard uses such as narrow band FM adaptors or where space ts ltrited. Etched alumlnum anish.

| Stook No. | $\begin{aligned} & \text { Sixe } \\ & \text { WaLix } \end{aligned}$ | $N \neq t$ Enah | Stoek No. | $\begin{gathered} \text { Sizo } \\ \text { W×LKH } \end{gathered}$ | $\begin{aligned} & \text { Not } \\ & \text { Each } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| P22436 | $2 \mathrm{~K} \times 2 \times \times 16^{\circ}$ | 32 | P22418 | $41 / 5 \times 8{ }^{81}$ | 98 |
| P22437 |  | 36 | P22237 |  | 1.08 |
| ${ }^{\text {P22438 }}$ | 3144 ${ }^{\circ}{ }^{\circ} 2^{\circ}$, | .39 .39 | P22442 | $5 \times \times 4.481$ | . 49 |
| $\begin{aligned} & \text { P22439 } \\ & \text { P } 22440 \end{aligned}$ | 23x44\%14. | . 39 | P22643 | $4{ }^{4} \times 10 \times 1$ \% | 43 |
| P22441 | $3 \times 64 \times 14{ }^{\circ}$ | 46 | P22446 P22446 | ${ }_{4}^{4} \times 50 \times 10$, | $\begin{array}{r}46 \\ .49 \\ \hline\end{array}$ |

## SLOPING FRONT CABINETS

All-purpose cabinets designed for use by atudios. labs.. amateurs, ete. Top corners are rounded and trimmed with ateractive chrome.
Front panel is removable. Rear openinks are provided for leads and ventilation. Slate gray ripple finish with redstriped trim. Less chassis.


| No. | Slze | For Chassls | We., lbs. | Not Eact |
| :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & 8 \times 8 \times 8^{*} \\ & 8 \times 10 \times 8^{\prime \prime} \\ & 8 \times 14 \times 8 \\ & 12 \times 18 \times 12^{\circ} \end{aligned}$ | ${ }_{7 \times 9 \times 2}{ }^{7 \times 7 \times 2}$ $10 \times 17 \times 3$ | $\begin{array}{r} 9 \\ 10 \\ 11 \\ \hline 17 \\ \hline \end{array}$ | $\begin{aligned} & 4.78 \\ & 5.63 \\ & 6.86 \\ & 9.22 \\ & \hline \end{aligned}$ |



SLOPING PANEL STEEL CABINETS
Fig. A. Serve as speaker cabinets, cocillator cases, monitors, cell-zalk sygcerns. etc. Rounded Corners. Marine gray finlah. P22097-Dimensions: 4 K $\times 43 \times 4$ K " Shyg. wt. 2 lbs

## DELUXE METER CASES

Fig. B. For $2^{\circ}$ and $3^{\prime \prime}$ meters. Marine gray ripple inlsh, chrome trim. 936


## METER CASES

Steel case with black erackle finlsh. Dimensions: $4 \times 4 \times 4$ / $^{\circ}$ high. Two deramic insulators. Dlameter of meter hole $23 / 10^{\circ}$. shpg. wt. 2 lbs. P10398.
1.10

As above but with $213 / 16^{\circ}$ dia. meter hole.
1.22

## BAKELITE METER BOX

Heavy molded plastle. Will withstund rugred use. Overal Dimenstons: $613 / 16 \times 55 / 10^{\circ}$. Inside Dimensions: $6 / / 2 \times 5 \times 2$ 1/ Panel mountini serew inserts ure moulded into case.
P21418 Lews Pabel. Shpe. We. 3 lhs.
P21419-Panel for ubove. Slugg, wt. I ib.


P10399


## verall

## UTILITY CABINETS AND PARTS DRAWERS

|  |  |  | Deluxe streamilined cabinets with full length plano hinged top and removable front panel. Sturdily construcsed of corners. Slate gray finish with chrome trim. Ventilators on side. Supplied less the deluxe model but without chrome trim. Without chass!s. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Delura | Ea. | Standard | E. | HaWED | Panol | For Chassie |
| P22087 | 4.07 | P22200 | 3.53 |  |  |  |
| P22088 | 4.58 | P22201 | 3.92 | $8 \times 12 \times 8{ }^{\prime \prime}$ | $8 \times 10$ " | 7x9x20 |
| P22089 |  |  | 4.49 |  | $8 \times 12$ * | 7×13x20 |
| P22091 | 10.45 | P22203 | 9.76 | $12 \times 20 \times 12^{\circ}$ | 12×18* | 10x17x3 ${ }^{\text {a }}$ |

## GENERAL UTILITY AND HINGED COVER CABINETS

Streamilned sturdlly made steel cabinets dealgned for use in radlo und other alled fields. All are made of sheet steel, constructed with spot welded sorners und have ${ }^{2}$ wide nanges. Fig. A. Utulty Cabinets. Fronts and bavka are easily removabie and held firmly in place by means of self-tapping serews included with cabinets. Black ripple finlsh. Flg. B, Hinged Cover Cabinets with plano hinged lids. Arranged so that bottom, front or back panel mas be re-
moved for clrcult wiring. Black rlpple fulsh.


| $\begin{aligned} & \text { Utility } \\ & \text { Stock No. } \end{aligned}$ | E. | Hinged Cover Stock No. | Ea. | Dimenslons HxWxD | $\begin{aligned} & \text { Shpg. } \\ & \text { Nt. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| P22209 | . 83 |  |  | $4 \times 4 \times 2{ }^{2}$ | 2 lbs |
| P22210 | . 93 |  | .... | $5 \times 4 \times 3{ }^{\text {\% }}$ | 31 bs |
| P22174 | 1.27 1.82 | P22385 | 3.21 | ${ }_{6 \times 6 \times 6} 8 \times$ | 31 lbs |
| P22173 | 2.25 | P22386 | 3.84 | $7 \times 10 \times 8$. | ${ }_{5} \mathrm{l} \mathrm{lss}$. |
| P22176 | 2.88 |  |  | 10x8x10. | 7 lbs . |
| P22177 | 3.58 | P22388 | 8.19 | $8 \times 12 \times 11^{\circ}$ | ${ }^{3} 1 \mathrm{bs}$. |
| P22181 | 2.41 4.02 | ....... | .... | 6×12×7* |  |
|  |  | P22387 | 4.35 | $7 \times 12 \times 8$ \% |  |
|  |  | P22389 | 5.19 | $7 \times 14 \times 8{ }^{\prime \prime}$ |  |
| . | .... | P22390 | 6.50 | $9 \times 18 \times 12$ - |  |



## MINIATURE UTILITY CABINETS

 WITH ATTACHED CHASSISIdeal for bullding electronle devices using miniature tubes. Front and rear panels are removesble and fasteved with self-tapping screws, permitting easy
accessibility. Useful for HF converters, T F ampliaccessibility. Useful for HF converters, TV ampli
fers, and power supplles. Black wrinkle finds.

| Stock No. | HxWxD | Chassis Stize | Each |
| :---: | :---: | :---: | :---: |
| P22430 | $4 \times 4{ }^{20}$ | $1 \times 3 \% \mathrm{x} 1^{7}$ | 1.83 |
| P22431 | $4 \times 5 \times 3{ }^{\circ}$ | $1 \times 410 \times 2 \%$ | 1.13 |
| P22432 | $5 \times 4 \times 3{ }^{\circ}$ | 14x3 $4 \times 2$ \% | 1.13 |
| P22433 | $6 \times 4 \times 5{ }^{\circ}$ | 13x4y发\%。 | 1.40 |
| P22434 | $4 \times 6 \times 5{ }^{\circ}$ |  | 1.40 |
| P22435 | $6 \times 6 \times 6^{\circ}$ | 1/1847/85\% | 1.47 |

## AMPLIFIER CHASSIS AND COVERS

|  |  | AMPLIFIER CHASSIS AND COVERS |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | The aturdy ehasisis is stamped from 1 piece cold rolled steel. Has blank ripple filish. Covers are $6^{*}$ deep with slate gray nalsh. $3^{*}$ high chassis are drilled for bottom plates (not supplted). Deluxe models include chrome molding and handles. Btandard molels less chrome trim and handles. |  |  |  |
| Standard Stock No. | E. | Deluxe Stoch No. | Es. | Slac | Shpg. Wt. Llos. |
| P22132 | 2.64 | P22183 | 3.82 | 5 5x10x9" | 9 |
| P22138 | 3.72 | P22139 | 4.90 | $8 \times 12 \times 9$ " | 11 |
| P22135 | 4.24 | P22185 | 5.39 | $7 \times 1789^{\circ}$ | 11 |
| P22136 | 4.57 | P22186 | 5.56 | 10x14x9* | 11 |
| P22137 | 4.90 | P22187 | 6.20 | 10x17x9 | 13 |



## PORTABLE STEEL CABIMETS

For oscllators, transcelvers, etc. Removable front and back panels. Leather han-P22273-12к7*57*

2.84

## 4-DRAWER ALL STEEL UTILITY CABINET

This bigger and better all-steel cablnet has 4 drawers $9^{\circ}$ wide, 11 /19" long, $2^{\circ}$ deep. Has removable dividers to make up to 12 compartments in each drawer. All drawers interchangeable; with card-holders and bar pull. Heavy gauge ateel congtruction, welded jolnts, one plece drawer supports. Easily stacked. Snfety drawer stop to prevent spilifig. $10^{\circ} \times 113 / 2^{\circ} \times 10^{\circ} \mathrm{hgh}$. Durable steel gray ripple finish. Wt. 10 lbs.
P22372.

## JIFFY METAL STORAGE UNITS

A convenlent place for small parta, supples etc. More units can be added if additiona space is required. Cabinets can be attached back to back, side by side or one on top of amel nish. Drawers are made of plastic with ribbed bottom for easier sllding. Plastic sliders quickly silip lato place to form extra compartments. Safety catch prevents spllilig. A slight lift removes drawer. Provision for name plate in each drawer



\begin{tabular}{|c|c|c|c|c|}
\hline Stock No. \& Mir' ${ }^{\text {No. }}$ \& Drawers \& Dimensions \& Esch <br>
\hline P22340 \& J8 \& 8 \& $8{ }^{\circ} \mathrm{Hx} 6^{\circ} \mathrm{Dx} \times 1{ }^{\circ} \mathrm{W}$ \& 3.98 <br>
\hline P22341 \& ${ }^{3} 12$ \& 12 \& $8^{\circ} \mathrm{Hx} 6^{\circ} \mathrm{DE} 09^{\circ} \mathrm{W}$ \& 3.98
5.30 <br>
\hline P22342 \& J16 \& 16 \& $$
8 \cdot H \times 6 . D \times 12
$$ \& 6.45 <br>
\hline P22343 \& J32

J 64 \& 32
64 \&  \& 11.71
22.90 <br>
\hline
\end{tabular}

## TRANSPARENT UTILITY BOXES

These attractive, crystal-clear plastle boxes make ldeal storage compartments for screws, nuts, parts. Bult-la parlilong small parts separated at all times. Tight snug of of hinged cover assures parts remalning in correct compartment even when carrled up-
partment even when carfied up-
side down.

| Stock No. | Mir's No. | Dimensions | Compart. | We. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| P22384 | P212 |  | 5 | ${ }^{5} \mathrm{Oz}$. | 50 |
| P22371 | P203 |  |  | 7 Oz | 63 |
| P22383 P2230 | ${ }_{\text {P201 }}$ |  | ${ }_{12}^{9}$ | 5 5 5 7 Oz Oz | . 50 |
| P22369 | P618 | $10{ }^{\circ} \times 6.4 \mathrm{xl}{ }^{\text {¢ }}$ | 18 | 17 Oz . | 1.59 |

## NEW UTILITY CABINET

An Ideal all steel cabinet for stocking and storing amall parts. Drawer partitions are removable, to make from two to elght compartments in each drawer. Identincation card holders are part of the drawer handles. Tod and bottom of cabinet are embosed so as to it securely when atacked. Bllver gray. quallty finlsh and strong construction make thls cablinet an ezcellent value. Dimenslons are $6^{\circ}$ wide $\times 6 \kappa^{\circ}{ }^{\circ}$ high $z^{\circ} 8^{\circ}$ deed slons are
Drawers measure $1 \%^{\circ}$ deep. Bhjpplng welght: 5 lbs.
P22374.
2.25


## ALL STEEL MULTI-DRAWER

Conventent and economical storage for fitings, and small parts. Each unlt conatructed with tongue and slot de-
signed to interlock with other units at top. bottom or side Units units at foped and securely locked around existing firtures for economy of apace. Each drawer has handy pull and holder for contents card. Alt steel constructlon: finlshed In attractive two-tone
green. Ample drawer dept permits green. Ample drawer depth permits
Btorage of reasonably large parts. Ov storage of reasonably large parts. Overall dimenslons: $2 \%^{\circ \prime} \geq 2 x^{\circ} \times 5^{\circ}$. hippig weight 10 oz.
P22381- 12 for.
2.95

## EQUIPTO PARTS CABINET

A handy unit of exceptional quallty for atoring your emall parts. Use Individually, stack or Insert under counters and In shelving. Frames are welded Into one strong. solld assembly
 that can be stacked with addi-
 tonal frames. Each of the elghteen arawers comen equipped with two adjustable and removeable cross dividers. This makes a total of 54 adjustable compartments. Dimenalons of drawer $113^{\circ} \times 54^{\circ} \times 3 \mathrm{~K}^{\circ} \mathrm{hgh}$. Dimensions of cablnet are: $34^{*}$ wide $\times 13 \%{ }^{\circ} \mathrm{h} / \mathrm{gh} \times 12^{*}$ deep. Olive green Inish. Shlpped set up and ready to use. P22373.-Shpg. Wt. 76 ths P2236s.-Additional drawer dividers

## SLIP COVER ALUMINUM BOXES

These all aluminum boxes are Ideally sulted for holding a varlety of electronic parts such as television IF strips. The long. Darrow shape ls excellent for low-level high-gain ampliflers, frequency multipllers and other equlp-
 sllde cover permits easy accessibility to mounted parts and provides dustproof protection. Cover ls secured to the ends by screws. Heavy aluminuma construction assures long life, easy driling and punching for any type of mounting. The set bullder and amateur will find thls item a handy housing for specla! equipment. Avallable in natural Halah or gray hammertone.

| Stock No. | $\begin{aligned} & \text { ICA } \\ & \text { Type } \end{aligned}$ | $\begin{array}{r} \text { Slzo } \\ \text { HxWxD } \end{array}$ | Shpg. Wt., Lbe. | $\begin{aligned} & \text { Net } \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| P2247 | 29130 | 2\%x3/5x13: | 17 | 3.55 |
| P22408 | 29135 | 2 $\times 1 \times 18 \times 13^{\prime}$ | 11/4 | 3.84 |
| P22409 | 29140 | 2\%83x17" | 2 | 3.67 |

## MALLORY \& CEMTRALAB SWITCHES

|  |  | MALLORY GANG SWITCHES <br> Contact members heavily sllver plated and glven a smooth hard onish. Contact shoe, of the self cleaning type, is of silver slloy. 8 witches provided wlth one permanent stop and one sdjustable stop. Bushlngs and extend also supplied. Switches marked with asterisk (i) have OFF position. Spicify Mallory Cat. Nn. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Mallory Cat. No. |  | angs | Total No. Ciraule: | Positions Por Cíc. | Each |
| Shorting | Non-Shorting |  |  |  |  |
| 1211L | 1311 L | 1 | ! |  | . 919 |
| $\begin{aligned} & 1215 \mathrm{~L} \\ & 1213 \mathrm{~L} \end{aligned}$ | 1316L: | $1$ | 23 |  |  |
|  | 1313L: |  |  | ${ }^{2}$ | 1.96 |
| 1212L | 1312L |  | $\frac{4}{2}$ |  | 1.361.621.75 |
| 1225 . | 1325 L | 2 | $\begin{aligned} & 4 \\ & 4 \end{aligned}$ | 11 |  |
| 1223L: | 1323L: | $\begin{aligned} & 2 \\ & 2 \\ & 2 \end{aligned}$ |  | $\begin{array}{r} 3 \\ 2 \end{array}$ | $1.65$ |
| ${ }_{12312}{ }^{122}$ | ${ }_{1322 \mathrm{~L}}{ }^{13}$ |  |  | $11^{2}$ | 1.73 1.82 1.94 |
| 1236 L 。 | 1336 L - | $\frac{2}{3}$ |  | $\begin{aligned} & 5 \\ & 11 \end{aligned}$ | 1.942.32 |
| 1241 L | 1341 L | 4 |  |  |  |
| $1245 L^{\circ}$ | 1345 L . |  | $5$ | $115$ | 2.72 |
| ${ }_{1}^{12612}$ | ${ }^{13612}$ | 56 |  | 11 | $\begin{aligned} & 2.88 \\ & 3.66 \end{aligned}$ |
| ${ }_{1261} 126$ | 13561 13612 |  | 12 | 11 | 3.414.35 |
| 1266 L | 1366 L | 6 |  |  |  |
|  | $55$ | MAL | ORY SINC | MALLORY SINGLE-GANC |  |
| Tap and circult selector switches with same festures as gang switchea above. For use In many types of teat circults. $2^{\circ}$ notched shafts, $4^{\circ}$ dia. bushlinga. "Indicatea ad). stop. |  |  |  |  |  |
| Mallory Cat. No. |  | No. of Circul | Pesition Per Cire | Bas* Diam. | Each |
| Shorting | Non-Shorting |  |  |  |  |
| 3116 J | 3215 J | 1 | 5 |  | .68 68 |
| 31112J 3122J | ${ }_{32112 \mathrm{~J}}$ | $\frac{1}{2}$ | 12 | 110. | . 68 |
| 3123 J | 3223 J | 2 | 3 | $1 \%$ : | . 68 |
| 3126 J | 3226 J | 2 | 6 | 1. | . 68 |
| 3134 J | 3234 J | 3 | 4 | 13 : | . 71 |
| 3142 J | 3242J | 4 | $\frac{2}{3}$ | 1\%. | . 71 |
| 3143 J 3117 。 | 3243J. | 1 | 17 | 1110: | 1.06 |
| 3129 J . | 3229J: | $\frac{1}{2}$ | 9 | 1110 | ${ }^{1.06}$ |
| $3136{ }^{\text {3 }}$. | $3236{ }^{\circ}$. | 3 |  | 1110: | 1.16 |
| 3163J* | 3263J. |  |  | $1^{11} 0^{\circ}$ | 1.15 |


\section*{MALLORY PU <br> Non-locking types with, black bakellte knob. For mounting in $7 /$ / $^{\prime}$ hole, panels up to $\frac{\mathrm{y}}{} \mathrm{M}$. . Normally open. <br> | Mallory | Coneacte | Each |
| :---: | :---: | :---: |
| 2001 | SPHT | .76 |
| 2002 | SP8T | .76 |
| 2003 | SPDT | .82 |
| 2004 | DP8T | .94 |
| 2006 | DPDT | 1.16 | <br> CENTRALAB PUSH SWITCHES <br> Momentary Action. For Ilght duty applicathons. 1 amp. at 110 v . a.c. Slivered contacts. insuiated tronds bushing of long. Button exwhith contacts normally closed or open. Coneralab Type 1471-Norm. open.... 244

Contralab Typa 1470 Norm. closed... 24 c}

## CENTRALAB LEVER SWITCHES

Poaitive and Spring Return Types. With knob. Plateas avallable for yertical mounting singy orting centers.

\section*{(2) <br> | Centralab $C_{\text {at. }}$ No. |
| :--- |
| Shorting |
| Shorting | <br> | Short | 5 hor | Po |  | Po |  | Action | Type |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1462 | 1454 |  |  |  |  | Positive |  |  |
| 1463 | 1456 | 2 |  |  | 3 | 8pring Ret. |  | 3 |
| 1466 1469 | 1457 1488 |  |  |  | 2 | ${ }_{\text {ppring ret. }}$ | Each | 83 |
| 1466 | 1467 | 2 |  |  | 3 | Pos. de 8.R. |  |  |

## CENTRALAB LEVER SWITCH MOUNTING PLATES

 Black crackle finlshed steel.Contratab|Gangs! Slzo [Eaoh] Contralab Gangal Slze |Eagh


CENTRALAB TONE SWITCHES
Have 1/. dia. bushing with $1 / 6^{\circ}$ insulated steel shaft,

 | $2 x$ long. No | Description | Each |
| :---: | :---: | :---: |
| Coneralab \| |  |  |

| BPDT or SPST Phono-ratio | .44 |  |
| :--- | :--- | :--- |
| 1460 | SP-3pos. selector |  |
| 1461 | .44 |  |
| 1462 | DPDT wave band switch | .44 |
| 1473 | DP-3pos, selector | .69 |
| 1463. | SPDT Spring return | .44 |
| 1464. | DPDT Spring return | .69 |

$\qquad$

- Non-shorting for intercoms

No. Non-shortIng for 1ntercoms. 465 . Single pole, four position selector switch with SPST AC Une switch attacbed. Three "ont". Pos. Index. ahorting contacts.
Coneralab No. $1465-$ Each

736

## CENTRALAB UNIVERSAL FLAT SWITCHES

Use many ways from single sole angle throw to 4 pole double throw. Bakellte insulation non-thorting con-
lacts. Requires and bar knob. No. 1460-Each. Centralab No. 1461-As above, with spring return 1.03

Numbers in white. Fit $\%^{\circ}$ bushings. Ty pes 372 to 390 for switches 1200 L . 1300 L and $1 \mathrm{Y}^{\circ}$ base 3100 J , and 3200 J . Others for $1110^{\circ}$ base 3100 s and 3200 J , 13 dis. Shpg.
Wt. $30^{\circ} \mathrm{SPACING}$
30. SPACING SASE SWITCMES $20^{\circ}$ SPACING
20. SPACING

ITCHES
Typel Marking |Typol Marking |Typel Marking IType| Marking

| 372 | 160\% | 382 | 1 to 12 | 453 | 1 to 3 | 467 | 1 to 17 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 373 | 1 to 3 | 383 | On 1 to 3 | 451 | 1 to 4 | 473 | Off 1 to 3 |
| 374 | 1 to 4 | 384 | Of 1 to 4 | 455 | 1 to 5 | 474 | On 1 to 4 |
| 375 | 1 to 5 | 385 | Of 1 to 5 | 4.56 | 1 to 6 | 475 | On 1 to 5 |
| 376 | 1206 | 386 | Ot 1108 | 457 | 1 to 7 | 478 | Of 126 |
| 377 | 1207 | 387 | On 1 to 7 | 458 | 1 to 8 | 477 | Of 1 to 7 |
| 378 | 1108 | 388 | Onf 1108 | 459 | 1209 | 478 | Of 1 to 8 |
| 379 | 1 tog | 389 | Of 1 tog | 460 | 1 to 10 | 479 | On 1 to 9 |
| 380 | 12010 | 390 | Onf 1 to 10 | 461 | 1 to 11 | 480 | Ofl 1 to 10 |

MALLORY 170C CERAMIC GANG SWITCHES
For radio recelvers and low power tranmitter clrcuits. "Snapp" Indexing. assembly with arljustable stop. Heavy silver plated contacts. With knob.


MALLORY 160C CERAMIC GANG SWITCHES
Low loas ceramic Insulation non-shorting, silver plated contacts. $90^{\circ}$ indexing,
For plate circuits up to $1000 \mathrm{~V} . \mathrm{D} . \mathrm{C}$ and up to 100 watts. 2 inch shaft with knob.
4 eoneacts per ciroult.

| Mallory | Cange | Cire. | Eaeh |
| :---: | :---: | :---: | :---: |
| 161 C | 1 | 1 | 1.32 |
| 162 C | 2 | 2 | 2.06 |
| 163 C | 3 | 3 | 2.94 |
| 164 C | 4 | 4 | 3.63 |
| 165 C | 5 | 5 | 4.41 |
| Mallory |  |  |  |



Mallory No. 488-Bpectal dlal plate for above, numberec Irom 1 to 4 Each.
CIRCUIT OPENING SWITCH


12 positions: opens one line at a time while maintain!ng circuit through ${ }_{2}$ gothersed shaft. Complete with Enob \& dial plate.
Mallory No. 1400 L -Each 3.47

24 POINT TAF SWITCH


Suitable for use in tesi circules, tube checkers. analyzers. Bpecial singlecircuit 24 polnt, non-shortingspolteh. plete with dial plate and bar-type
knob.
Mallory No. 13124 L -Each 2.06

## MALLORY PLUGS AND JACKS

## MALLORY JUNIOR JACKS

## compact.


panel. Hea
springs.
MALLORY PLUGS, JACKS

## 

No. 75. Two way. Bakelte shell. Tle Mallory No. 76-EAch . . . . 38 e No. 75N. As above, but nickel shell. With tie cord ancho
Mallory No. 76 N -Each.... 594 No. 75A. As above, with bullt in able chap inchuded
Mallory No. 76A-Each.... $97 \$$ No. 100. 2-Way Excension jack. Equipped with Hber shell.
Mallory No. 100-Each. . . 76 No. 100 N . As above, but comes with nickel shell.
Mollory No. 100 N -Fach... 971 No. 100 A . As above. but with nieket shell and cable clamp.
Mallory No. 100A-Each
1.36

## Microphone Plugs

No. 76. 3-Way mike plug. Bakelte shell.
Mullory No. 76 -Each..... 69 No. 76 A. Same, but with nickel shell. Mallory No. 76A-Each....... 1.15

## MALLORY SIGNAL CORPS



Extend $3 / /^{\circ}$ behind panel. have pure sllver contacts as well as bakeite separators.
No. 1. Open eircuit-
$38 \nmid$
No. 2. Circuit closing
No. 2A. Two Clrcuit long frame
Jack. Elther type-Each..... 47 \&

TYPE JACK5


Phone Jack: Type 8C1A. Like SLg. Corps type JK-34A. Dpen circuit Takes Mallory 75; W.E. 47A, 47 B
glg. Corps No. PI-47, PI -48 , PL-55 PL-148, PL-155.
Mallory SCIA-Eisch
326
Millory SciA-Eiselı SCA . The The elrcuit. Like sig. Corps No. JK-33A. Takes W.E. 109 Nia Corps No. PI-46, PL-68. PL-16S.

## SWITCHES FOR EVERY PURPOSE



Approved type with nickel-plated metal parts. Fast action-excellent for
 1 and $2,15 / z^{\circ} ; n g .3$ and 4. 1/2. ${ }^{\circ}$

| No. | $\begin{aligned} & \text { C.H } \\ & \text { Type } \end{aligned}$ | Fig. | Cireult | Amp:@ | Emoh | $\begin{gathered} \text { Lars/10 } \\ \text { Each } \end{gathered}$ | $\begin{gathered} \text { Lots/100 } \\ \text { Eaoh } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P12836 | 82K0K 18 | 1 | SPsi | 6 | .38 | . 32 | . 27 |
| P12834 | 8282K 14 | 1 | SPDT | 3 | . 46 | . 40 | . 34 |
| P12833 | 8363 K 7 | 1 | DPDT | 6 | . 75 | . 68 | . 58 |
| P12817 | 8360 K 7 | 1 | DPST | 6 | . 65 | . 69 | . 50 |
| P12813 | 7321 K 3 | 2 | SPST | 12 | . 81 | . 73 | . 62 |
| P12814 | 7320 K 3 | 2 | DPGT | 10 | . 81 | . 73 | . 62 |
| P12837 | 8097 K 3 | 3 | SPST | 3 . | . 32 | . 29 | . 28 |
| P12832 | 7140 K 6 | 4 | 8PDT |  | . 37 | . 33 | . 28 |

Fig. 5. On-On awitch plate for cogglew. With locating projection
10 for.
368
2.90

## CUTLER-HAMMER HEAVY DUTY SWITCHES

Fla. 2. Underwiters approved. Nlekel-plated metal parts. Fast action Handles motor rater 1 hp . at $\mathrm{ms} / 250 \mathrm{~N}$. stem


|  |  |  |  |  |  | Each |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \hline \text { P12815 } \\ & \text { P12816 } \end{aligned}$ | $\begin{aligned} & 7361 \mathrm{~K} 5 \\ & 7380 \mathrm{~K} 8 \end{aligned}$ | 8PST | $\begin{aligned} & 15 \\ & 15 \\ & \hline \end{aligned}$ | $\begin{aligned} & 10 \\ & 10 \\ & \hline \end{aligned}$ | $\begin{aligned} & 1.29 \\ & 1.29 \\ & \hline \end{aligned}$ | $9.16$ | $.99$ |
|  | 7380 K 8 |  | $15$ | 10 | $1.29$ | $1.16$ |  |

## HART \& HEGEMANN SWITCHES

H \& H TOGGLE SWITCHES
OL approved. All in moulded bakelte cases. Sitver plated terminais. All have $15 \%^{\circ}$ lons stems. Supplied with mountins handware.

| No. | $\begin{gathered} \mathrm{H} \mathrm{\& H} \\ \mathrm{No} \text {. } \end{gathered}$ | Fig. | Poles | $\begin{array}{\|c\|} \hline \text { Amps © } \\ 125 \vee . \end{array}$ | $\begin{aligned} & \text { Noi } \\ & \text { Each } \end{aligned}$ | $\begin{gathered} \text { Lors } 1 / 10 \\ \text { Eanh } \end{gathered}$ | $\begin{aligned} & \text { Lozs/100 } \\ & \hline \text { Exch } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P12740 | 80992 | 1 | 8Pst1 |  |  | . 32 |  |
| P12741 | 81021 | 1 | SPDT | 6 | . 50 | . 45 | 41 |
| P12742 | 81027 |  | DPDT | 6 | . 76 | . 68 | 62 |
| P12743 | 81024 | 1 | DPST | 6 | . 65 | . 69 | 53 |
| P12744 | 80607 | 2 | 8PST | 12 | . 81 | 73 | 62 |
| P12745 | 80000 | 2 | DPST | 12 | . 81 | 73 | 62 |
| P12746 | 80601 | 2 |  | 15 | 1.29 | 1.16 | 99 |
| P12747 | 80502 | 2 | DPST | 15 | 1.29 | 1.16 | 99 |

## H \& H ROTARY PANEL SWITCHES

$\dagger$ Reated 3 amps., 250 No. Tvoe IEa. 10 For volus; others 3 amps
125 volts. ADproved type. Wolts ADproved ghafi extend $1^{\circ}$ : bushing $x$ dta. Lug termfrals.

- 1 'bushlag.



## ROTARY SWITCH PLATES

Oflon": switch plate. Etched aluminum and black. Slze P9867-10 for 1.36 cut lettering. "O987-10 for 1.36
 Each 15
Each $12 \phi$

## BAKELITE KNIFE SWITCHES



|  | No. | Type | Each |
| :---: | :---: | :---: | :---: |
| parts, bakelite base. | P16830 | SPsi |  |
| annle pole typer 1 $1 /{ }^{\text {a }}$ | P16831 | SPDT | 69 |
| lonģ: double pole, | P16832 | DPST | 3 |
| 2 ys \%. Excellent for | P16833 | DPDT | 8 |
| use for switching high | P16834 |  | 1.20 |
| and low sections of | P16835 | 3PDT | 1.30 |
| television antennas. | P16836 |  | 1.64 |
|  | P16837 | 4 PDT | 1.96 |

1CANOPY SWITCH Rotary type, composlWire Peads. Rated 3 amp.at 125 v. 18 C 10 for.

## flat plug

Ulira-compact type for use where
space is 11 mitea . Bakelite body. $11 /{ }^{1}$ P19964...... 44q


SLIDE SWITCNES
Compact slide sllver Dlatea awitches in cadmalum steel housings. All rated 125 v. AC/DC. $111^{\circ} \mathrm{mtg}$ ctrs.

P14989................ Each 47 .
P14969................ Each 47 \&
10 ior. Midget Bakelite, Plug. Baikelite terminals.
P14960-Black........ Each 33
P14963-Red
10 for

Each
Each 334
 Incubstors, or wherever an aut maste electric hest control is desired. and $120^{\circ} \mathrm{F}$. Has double ether-filled wafer and adjusting screw. Rated
$15 \mathrm{gmpe} .125 \quad \mathrm{v}, 5 \mathrm{smps.250} \mathrm{v}$. AC ${ }_{\text {Platy }}^{\text {onit }} 163$ Non-Inductive loads. 1.65

\section*{FEDERAL ANTI-CAPACITY SWITCHES <br> Phosphor-bronze silver Diated springa, | setuated by a cam moller. $2 \mathrm{~K} \times 5 \mathrm{x} \times$ |
| :---: |
| No. |
| Typo | <br> P12852 <br> P12861

P12850 <br> }

## KON-NEC-TOR MERCURY SWITCHES



Designed for ong, dependable service. Hydrogen flled to quench the are and protect contacts. Attachod 8-Inch leads. Made o: Pyrex glass with
tungsten leat-ln wires. Temperature ranke-40 solder. May be operated under oll-if properly waterproofed, under water. Minimum tilt force required.
Typo 2-62KR1-Rated AC voltage, 8 y. (3) 5 amps., 125 (al) 2, 250 (a) 1.
 Type 4-21KR1 Rated AC voltage, i25v. (9) is amps, 250 @ 10,550 @ 8.
 Typ: 7-21KR1-Ratel AC voltage, 125 v, @ 25 amps, 250 @ 20.550 © ${ }^{2} 15$ $1^{17} \mathrm{I}^{\circ} \mathrm{H}, 2^{1} 0^{\circ} \mathrm{L}, 0.518^{\circ}$ diam. Requires i wo 1839 clips . 20.550 © 15. P12684-(Operates with $20^{\circ}$ tit). P12685-6601 clip
P12686-4838 clip

Esch 34

POPULAR PHONE PLUGS


For 1 or 2 Dhone or speaker cords. Molded bakelite shell $23^{\circ} \mathrm{L} \times \mathrm{H}^{\prime}$ dia. Screw terminals. P14974-Black. ....... Each $/ 33 \mathrm{C}$ P14971-Red. . . . . . . . . Es. Esh 9 ${ }^{10}$ for. sheil Type sbove. with nickeled brass shell. Dimensions $34 \times$

Fach 59 C
P14970.
10 for
Fach 59e
10 for "Stubby" Metal shell. As above;

WALSCO MINIATURE PLUG AND JACK
Two-conductor preclsion army type. Needs no screws: molded plastic case cements together. Ideal for hearing alds, speaker
P14961-Plug only (type PL-291).
P14962- Juck only
P14962-Jack only (type JK-48)
Fach - 35

## PLUGS-CONMECTORS-TERMINAL STRIPS



Fig. A. Shlelded ministure connectors. Molded cables up to K ". Shield can be soldered to shell where shlelded cable is used. "1 " " dia.: ${ }^{\circ}{ }^{\circ}{ }^{\circ}$ length. Fig. $B$. Shlelded miniature chassis receptaclen and plugs for uge with shlelded minlature
connectors. Mount in $\% /$ dia. hole on $1 / 4$ centers. $^{\text {con }}$. MALE MINIATURE CONNECTORS (A)

| Stock No. | TYPe No. | Cont. | Each |
| :---: | :---: | :---: | :---: |
| P13335 | $91-M P M-3 L$ | 3 | .21 |
| P13336 | $91-M P M-4 L$ | 4 | .24 |
| P13337 | $91-M P M-6 L$ | 8 | .26 |

FEMALE MINIATURE CONNECTORS

| P13337 | 91-MPF-3L | 3 | .21 |
| :---: | :---: | :---: | :---: |
| P13339 | 91-MPF-4L | 4 | .24 |
| FEMALE SHIELDED SOCKETS FIG. | (B) |  |  |
| Stock No. | TYPENO. | Cont. | Each |
| P12704 | 78-PCG-3F | 3 | .21 |
| P12705 | 78-PCG-4F | 4 | .21 |
| P12707 | 78-PCG-6F | 6 | .24 |

MINIATURE PLUGS \& SOCKETS
Interchangeable with miniature ty pe connectors. Sockets have push-on mounting rings. Excellent for speaker connec-


| Sockets | Type No. | Cons. | Each |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P11599 | $78-535$ | 3 | .10 |  |  |  |  |
| P12701 | $78-545$ | 4 | .09 |  |  |  |  |
| P12700 | $78-555$ | 5 | .12 |  |  |  |  |
| P11542 | $78-565$ | 6 | .12 |  |  |  |  |
| P12703 | $78-7 P$ | 7 | .12 |  |  |  |  |
| Plugs |  |  |  |  | TypeNo. | Cont. | Each |
| P12708 | $71-35$ | 3 | .09 |  |  |  |  |
| P12709 | $71-45$ | 4 | .09 |  |  |  |  |
| P12710 | $71-55$ | 5 | .12 |  |  |  |  |
| P12711 | $71-65$ | 6 | .12 |  |  |  |  |
| P12713 | $71-7$ | 7 | .08 |  |  |  |  |


| CABLE CONNECTORS |  |  |  |
| :---: | :---: | :---: | :---: |
| shlelded cap and rubber grommet-end opening. Conslist of "g'", type tube scokets and "CP" pluks. |  |  |  |
| Femalo No. | Type No. | Cont. | Eech |
| P11475 | 78-PF-4 | $\frac{1}{5}$ | -18 |
| P11476 | 78-PF-5 | 5 | . 18 |
| P1147 | 78-PF-6 | 6 | . 18 |
| P11478 | 78-PF-7S | 78 | . 18 |
| P11491 | 78-PF-8 | 8 | . 21 |
| P11508 | 78-PF-9 | 11 | . 28 |
| P11509 | 78-PF-14 | 11 |  |
| Male No. | Type No. | Cont. | Each |
| P11471 | 86-PM-4 | 4 | . 18 |
| P11472 | $8 \mathrm{~S}-\mathrm{P}$ M-5 |  | . 18 |
| P11473 | 85-PM-6 | 79 | . 18 |
| P11474 | 86-PM-75 | 78 | . 18 |
| P11490 | $86-P M-8$ $86-P M-9$ | 8 | . 21 |
| P11506 | $86-P M-9$ $86-P M-11$ | 11 | . 28 |

Amphenol Type 79-Cc4. Cable-clamp used with sbove connectors to relleve straln on sold-
ered connectlons.

AMPHENOL RECEPTACLES \& PLUGS


Molded black bakelite insuiation. 2 pole receptacles with one hole elongated. May be used with either standard or polarized plugs. (Y/L approved. Ratings $15 \mathrm{~A}-125$ volts; $10 \mathrm{~A}-250 \mathrm{v}$. R Recep-
tacle; PP-Polarlsed Plug: BP-Standard Plug. RETAINER RING TYPE (A)


WITH PLATE (B)

| P11500 | 61-F | 2 | R | 0 |
| :---: | :---: | :---: | :---: | :---: |
| P11501 | $61-\mathrm{M1}$ | 2 |  |  |
| P11627 | 61-MP1 | ${ }_{3}^{2}$ | ${ }^{\text {PP}}$ | . 20 |
| P11640 | $60-\mathrm{Fl}$ | 3 |  | . 27 |
| P11641 | 60-M1 | 3 | PP | . 27 |

FLUSH TYPE (C)

| $\begin{aligned} & \hline \text { P12504 } \\ & \text { P11505 } \\ & \text { P11635 } \end{aligned}$ | $\begin{aligned} & 61-F 10 \\ & 61-\mathrm{M} 10 \\ & 61-\mathrm{MP10} \\ & \hline \end{aligned}$ | 2 <br> 2 <br> 2 | $\begin{aligned} & \mathrm{R} \\ & \mathrm{BP} \\ & \mathrm{PP} \\ & \hline \end{aligned}$ | .28 <br> .28 <br> .28 |
| :---: | :---: | :---: | :---: | :---: |
| SHIELDED CABLE CONNECTORS (D) |  |  |  |  |
| $\begin{aligned} & \hline \text { P11546 } \\ & \text { P11545 } \\ & \text { P11647 } \\ & \text { P11648 } \\ & \text { P11649 } \end{aligned}$ | $\begin{aligned} & \hline 61-F 11 \\ & 611-M 11 \\ & 61-M P 11 \\ & 60-\mathrm{F} 11 \\ & 60-\mathrm{M} 11 \\ & \hline \end{aligned}$ | 2 2 2 3 3 | R RP PP R P P | .32 .32 .32 .39 .39 |

JONES "2000" TERMINAL STRIPS


Compact and sturdy junction terminal strip Useful in assembitng radio chassls. Wiring tec Terminals are 019 Brass, Tin Plated
Bakeltte. $C$ idmulum plated
steel
brackets.


| Jones mo. | Term. | Mig. Cirs. | Each |
| :---: | :---: | :---: | :---: |
| 2002 | 2 | $1{ }^{\circ}$ | . 05 |
| 2003 | 3 | $1{ }^{10}$ | . 05 |
| 2004 | 4 5 | 1\%* | . 05 |
| 2006 | 6 | $230^{\circ}$ | . 06 |
| 2008 | 8 | 2 y " | . 07 |
| 2010 | 10 | $31 \%$ | . 08 |
| 2012 | 12 | $4{ }^{\circ}$ |  |

TERMINAL STRIPS


Superior quality bakelite terminal strips. Solder luge mounted on $10^{\circ}$ thick Insulation. Avalable with 2, 3, 4 or 6 solder lugs and screw terminals. Mountige holes. For

| Stock No. | Torm | Each | 10 for |
| :---: | :---: | :---: | :---: |
| P13145 | 2 | 207 | .63 |
| P13123 | 3 | .10 | .90 |
| P13112 | 4 | .13 | 1.17 |
| P13113 | 6 | .18 | 1.62 |

JONES PLUGS \& SOCKETS


Multiple contart " 400 " serles heavy duty 25 ampere and " 300 " serles standard duty 5 amp slipes. Cable type have clamps. Chassls type have
brackets-heavy duty type at ends, standard type at sides.

PLUGS FIG. (A)

| Standard Duty |  |  | Heavy Duty |  |
| :---: | :---: | :---: | :---: | :---: |
| Cont | Jones No. | Es. | Jones No. | Ea |
| 2 | P-302-CCT | . 34 | P-402-CCT | . 58 |
| 3 | P-303-CCT | . 34 |  |  |
| 3 | P-304-CCT | . 40 | P-404-CCT | . 89 |
|  | P-306-CCT | . 44 | P-406-CCT | . 82 |
| 8 | P-308-CCT | . 49 | P-408-CCT | -. 98 |
| 10 | P-310-CCT | .54 .60 | P-410-CCT | 1.06 1.19 |
| SOCKETS FIG. (B) |  |  |  |  |
| 2 | 8-302-CCT | . 34 | 8-402-CCT | . 63 |
| 3 | S-303-CCT | . 37 |  |  |
| 4 | 8-304-CCT | . 46 | 8-404-CCT | .788 |
| 8 | 8-308-CCT | . 54 | 8-408-CCT | 1.11 |
| 10 | S-310-CCT | . 61 | 8-410-CCT | 1.27 |
| 12 | S-312-CCT | . 69 | S-412-CCT | 1.43 |
| CHASSIS TYPE PLUG (C) |  |  |  |  |
|  | P-302-AB | . 15 | P-402-AB | . 37 |
| 4 | P-303-AB <br> $\mathbf{P}-304 \mathrm{AB}$ | . 21 |  |  |
| 4 | P-304-AB P-306-AB | . 215 | P-406-AB | . 54 |
| 8 | P-308-AB | . 29 | P-408-AB | . 62 |
| 10 | P-310-AB | . 33 | P-410-AB | . 77 |
| 12 | P-312-AB | . 37 | P-412-AB | 7 |
| CHASSIS SOCKET (D) |  |  |  |  |
|  | 8-302-AB | . 17 | 8-402-AB | . 1 |
| 3 | S-303-AB | . 22 | S-404-AB | . 54 |
| 6 | S-306-AB | . 27 | S-406-AB | . 68 |
| 8 10 | (8-308-AB $\begin{gathered}\text { S-310-AB }\end{gathered}$ | . 33 | S-408-AB | . 97 |
| 12 | 8-312-AB | . 46 | 8-412-AB | 1.02 |

BAKELITE
MOUNTING STRIPS
Mounts parts on Chassts

| Stock No. | Lugs | Each | 10 for |
| :---: | :---: | :---: | :---: |
| P13124 | 1 | .02 | .14 |
| P13133 | 2 | .03 | .25 |
| P13134 | 3 | .03 | .25 |
| P13135 | 4 | .05 | .45 |
| P13138 | 5 | .05 | .45 |
| P13137 | 6 | .06 | .54 |

SCREW COLLAR TERMINALS

## 3. " wide

Stock No. | Terminals Each | 10 lor

| Stock No. | Terminals | Each | 10 or |
| :---: | :---: | :---: | :---: |
| P13140 | 2 | .13 | 1.17 |
| P13141 | 3 | .18 | 1.62 |
| P13142 | 4 | .23 | 2.07 |
| P13143 | 5 | .28 | 2.52 |
| P13144 | 6 | .34 | 3.06 |
| P13230 | 7 | .41 | 3.69 |
| P13231 | 8 | .46 | 4.14 |
| P13232 | 8 | .51 | 4.59 |
| P13233 | 10 | .56 | 5.13 |



TYPE "83" CONNECTORS FOR COAXIAL CABLES
Coaxlal type low-loss connectors and adapters for use with all RG type cables. For both small and large conxial cables. Rugged construction. Dle Cast zinc and machined brass shells are silver-plated, complete listing of Amphenol RG coaxdal cables can be found on page 76.


| $\begin{gathered} \hline \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \text { Mrise } \\ & \text { Typ } \end{aligned}$ | Flg. | $\begin{aligned} & \text { AW } \\ & \text { Type } \end{aligned}$ | Description | Net Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| F21550 | 118P | A | Pl-259 | Plug for RG-8U and 11/ | . 59 |
| P11551 | +1R | F | SO-239 | Receptacle, chassia |  |
| P11552 | ${ }^{1 / 4}$ | ${ }_{\text {B }}$ | M-359 | Angle plug alapter | 1.59 |
| P11553 | ${ }^{1 T}$ | C | M-358 | -Tuncton ${ }^{\text {connec }}$ | . 88 |
| P11554 | -15 | D | PL-258 | Feed thru connector | 1.47 |
| P11555 | ${ }_{1} 1 \mathrm{~F}$ | E | UG-106/U | Hood for 8 to 12U, 22U, 63 U | . 15 |
| P11559 | 765 | E | UG-177/U | Hood for 58 and | . 56 |
| P11560 | ${ }_{168}^{1 / 2 C}$ |  | UG-176/U | Cap and chan ${ }^{\text {Adupter for RG-58/U }}$ | . 15 |
| P115s5 | 188 |  | UG-175/U | Adapter for RG-58/U | . 15 |
| P11561 | 222SP | A | UG-102/U | Stralght Plug | 888 |


 high. Termlasis mounted on over centers with is metal to metal spacing high. Terminals mounted on "ficenters with cerminals mounted on tis" centers, $y=$ metal to metal spacing over bakelite.

| Term | Jones No. | Each | Jones No. | Each | Jones No. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2-140 | . 14 | 2-141 | . 19 | $2-142$ | . 22 |
| 3 | 3-140 | .19 | 3-141 | . 24 | 3-142 | . 38 |
| 4 | $4-140$ | . 24 | 4-141 | . 31 | 4-142 | . 38 |
| 5 | 5-140 | . 30 | 5-141 | . 38 | 5-142 | . 54 |
| 6 | 6-140 | .34 | 6-141 | . 52 | 6-142 | .63 |
| 7 | 7-140 | . 41 | 7-141 | . 58 | 7-142 | . 71 |
| 8 | 8-140 | . 45 | $8-141$ | . 68 | 9-142 | . 78 |
| 9 | 9-140 | . 53 | 9-1411 | . 72 | 10-142 | .87 |
| 10 | 10-140 | .56 .60 | 10-141 | . 78 | 11-142 | . 95 |
| 11 | $11-140$ $12-140$ | . 66 | 12-141 | . 84 | 12-142 | 1.04 |



## ALL-PURPOSE TUBE SOCKETS

| AMPHENOL "RS" SOCKETS |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  | Remova adaptor retainer socket $11 / 4$ to hlph die Mounts |  |
| Stock No. | Typ* | Pronge | Each |
| P13057 | 78R84 | 4 | . 08 |
| P13058 | 78RS5 | 5 | 8 |
| P13059 | 78R86 | 6 | . 08 |
| P13060 | 78R87S | 78 | . 08 |
| P13061 | 78R87L | 7 L | . 08 |
| P13056 | $78 \mathrm{RB7C}$ | 78-71. | . 10 |
| P13050 | 78RS8 | Octal | . 10 |
| ${ }_{\text {P1 }}{ }^{\text {P13040 }}$ | 78RS8L | Locktal | . 13 |
| P13041 | 78Rs9 | 9 | 12 |
| P13042 | $78 \mathrm{RS11}$ | 11 | 17 |

685
$8+6$

## AMPHENOL "S" SOCKETS

For new work. Single hole mounting which require $121 / 64^{\circ}$ Firmily held by tempered steel retainer ring. 9 and 11 prong soekets for Amphenol connectors 79-7L fis small and large base tubes. Molded high dielectic bakellte.

| Stock No. | Typo | Prongs | Each |
| :---: | :---: | :---: | :---: |
| P13207 | 7884 | 4 | 08 |
| P13208 | 7885 | 5 | 08 |
| P13209 | 7856 | ${ }^{6}$ | . 08 |
| ${ }^{\text {P13 }} 31310$ | 7887 | 7 Small | . 08 |
| P13211 | 78975 | 7 Large | . 08 |
| P13237 P13212 | 7887 C 7888 | 78-71 | . 10 |
| P13045 | 7888 L | Locktal | .13 |
| P13213 | 7889 | 9 | . 12 |
| P13214 | 78811 | 11 | . 17 |

## ACS SOCKET SHELL

Type 23-1L: For 7L and 7C
soekets of $8, R B$, and RSS ${ }^{\text {serfics. }}$
Type 23-15 ion 7 e
Type 23-1S: For all uther

serles $8, R S$, and R8S | sorkets. |
| :--- |
| pl3110. |

## AMPHENOL "MIP" SOCKETS

Molded hlgh delectric black bakelite, with molded-in plate for $14 /{ }^{4}$ " mounting centers. Firmly held-won't rattle or
 Stoch No

| Stock No. | Type | Prongs | Each |
| :---: | :---: | :---: | :---: |
| ${ }^{\text {P1 } 13164 ~}$ | 77 MIP 4 | 4 | . 07 |
| ${ }^{\text {P13165 }}$ | ${ }_{77}{ }^{\text {MIP }}$ | 6 | . 07 |
| P13167 | 77 MIP 78 | 78 | . 07 |
| P13168 | +77M1P7L | 7 L | . 08 |
| P13169 | .77MIP8 | Octal | . 08 |
| P13225 | ${ }_{*}^{* 88-8} 8$ | Octal | . 08 |
| P13243 | -88-8x ${ }^{\text {77 }}$ 9 | Locktal | . 12 |
| P13224 | 77M1P11 | 11 | . 14 |

## AMPHENOL POLYSTYRENE SOCKET


hery low loss at ultras high
Molded
irequencles.
polystyrene base requires $1 \%{ }^{\circ}$ nole. Mounting cenars mounting plate for perfect kround. 28 e P13170-Type 54-8. Octa
P13160-Type $54-8 \mathrm{BL}$. Locktal $28 \ell$

AMPHENOL "49-RSS" STEATITE SOCKET
For high temperatures Wont abserb moisture Low lons. Silver-plated, phosphor-bronze, lowreslatance contachs. Universul type with removable mis. plate, slotled holes. Mig. hole, 1 3/16


| Prongs | Eazh |
| :---: | :---: |
| 4 | .28 |
| 5 | .28 |
| 6 | .28 |
| $78 m a l]$ | .28 |
| 7 1.arge | .35 |
| Octal | .28 |

AMPHENOL INDUSTRIAL SOCKETS
Oetal type, 2000 W.v. Current rating for each contact, 8 ammps.
interclectrode capacitunce 2.6 Interclertrode capaciuince 8 .is. Insuinting barrless. Mounting centers $111 / 16^{\circ} .63 / 64 \times 118 / 100^{\circ}$
$2 \%{ }^{\circ}$. For above or below chassis mits.
P13119-Type 146-103. Less tle Inserts..... 934 As above, except bottom mounting. P13181-Type 146-203.
Complete socket with screw ierminais and four molded-In threaded inserts.
1.27
gimiliar to above, but for mintature 7 -pin tubes. Mounts above or below chassio.
P13182-Typo 146-111.

VECTOR SOCKET TURRETS
Mica Alled bakelite. Socket is bonded to phenolle cylinder form. Turret can be used to wind colls and iron corme inserted. Turret dia to wind colls and require ${ }^{10}$ hole for mounting: miniature units

21 Turrets. For octal sockets. Have 9 terml. nais in two rings $1 \mathrm{H}^{\circ}$ apart.

| No. | Type | Soeker | Each |
| :---: | :---: | :---: | :---: |
| P11517 $\mid 10-0$-0T | Oetal | .59 |  |

$2^{\text {2 }}$ Tupreis. For octal sockets. 9 verminals in 2rings $1^{\circ}$ apart; ininiature, $11 /$ / $^{\circ}$ apart

| P11518 | Q-O-9T | Octal | .56 |
| :--- | :--- | :--- | :--- |
| P11519 | 8-M-9T | 7-Pin miniature | .62 |
| P11520 | 8-N-9T | g-Pin noval | .68 |

$1 \mathrm{H}^{\prime \prime}$ Turrots. 6 terminals in one ring only at far end of turret

> | P11621 | $6-\mathrm{O}-6 \mathrm{~T}$ | Octal |
| :--- | :--- | :--- |
| P11522 | $6-\mathrm{M}-6 \mathrm{~T}$ | $7-\mathrm{Pin}$ minfature |
| P11523 | $6-\mathrm{N}-6 \mathrm{~T}$ | O-Pin noval |

## SHIELD BASES

For minlature sockets above. Fasten on socket mtg. ctrs. abouve chassis. For use with atandard bayonet type shield.
P11524-For 7 -pin sochets. P11524-For 7 -pin sockets
P11526-For 9-pin sockets

## NEW PLUG-IN TURRETS

Consists of standard tube socket, tubular terminal post, octal plug and shleld ean. Tube shield base with bay:
onet lock Included. Sizes: B10M onet lock Included. Sizes: B10M. ${ }^{1 \%}$


| Seock No | Type | Desepiptlon | Each |
| :---: | :---: | :---: | :---: |
| P11826 | 810 M | 7-pin minlature | 1.53 |
| P11527 | B10N | 月-pin noval | 1.56 |
| P11528 | C10N | G-pin noval | 1.85 |

We carry eomplete line of vector units and can supplyany vector lememot listed above.

## CINCN SOCKETS FOR

 SUB-MINIATURE TUBESFor hearing alds, radio controlled model planes, ate. Molded form inleaflled, low-loss bakellte with silver plated beryllum copper contacts. 5-prong oockets fi 4-prong tubes.

| StockNo. | Type | Conteets | Each |
| :---: | :---: | :---: | :---: |
| p13116 | $2 H 5$ | 5 | .24 |
| p13117 | 218 | 6 | .26 |
| P13118 | $2 H 7$ | 7 | .24 |

Enlicient, low-loss sockets for TV type CR socket has il allveroplated contacts subatantial barriers to reduce leakake lowses, prevent voltage breakdowns. Duodecal, Diheptal sockets have individual contact wells

| Stock No.l | Typo | SIx ${ }^{\text {a }}$ | Eaoh |
| :---: | :---: | :---: | :---: |
| P13185 | 49-3811L | Magnal TypeCR | . 71 |
| P13190 | 59-402 | Duodecal - <br> Dia. 1.083" | . 92 |
| P13191 | 59-415 | Diheptal |  |
|  |  | 2.05 Base | . 98 |
| P13192 | 3:2-417 | $2.25^{\circ}$ Base | . 98 |

\footnotetext{
FLOATING OCTAL SOCKETS
Amphenol 17-MiP-8FK. Live rubber grommets fit into mounting holes, cushlon socket for vi-
bration-free operation. Black bakelite dielectric. Mounts in $13 / 16^{\circ}$ hole above or below
chassis. Two $1 / 40$ sew holes on 14 etrs. Complete with 4 huts and washers, 2 mitk. serews, 13158 buts and washers.

716
Kit for making flosting connections using MIP sockets. Contains 4 grommets, 2 mounting screws, nuts and washers. P13159

146


## MIDGET WAFER

 TUBE SOCKETSLaminated bakelite. HeavIty plated, self-allinning contacts. $13 \mathrm{I}^{2} \mathrm{mitg}$. etrs.
cong

| Stock No.] | Pronge | Stock No. | Prongs |
| :---: | :---: | :---: | :---: |
|  | 4 <br> 5 <br> 6 <br> 7 -small | $\begin{aligned} & \hline \text { P13125 } \\ & \text { P13127 } \\ & \text { P13075 } \end{aligned}$ | 7-large 8-oetal 8-locktal |
| 10 for . . . . . . . . . 81 Esth... . . . . . . . . . . . . . . 9 Miniature Wafer for compact glasq tubes ( $1 /$ diameter), 7-pin type. Mounting centers are $/ 3$ |  |  |  |
| spart. P13097-10 |  |  |  |




MINIATURE 7 \& 9 PIN SOCKETS
Amphenol mockets for TV, FM, auto radtos, etc 147 sertes mounts on $1 /{ }^{\circ}$ chassls hole with $3 /$ mtg. etra. it screw holes. 50 serles mounts in Stentele. Black Bakelite thica-flicd bitholes

BOTTOM MOUNTING TYPE-FIG. B

| Stock No. | Type | \|No. Contacte| | Epeh |
| :---: | :---: | :---: | :---: |
| P12576 | $\$ 147-500$ | 7 | .14 |
| P12603 | 147501 | 7 | .30 |
| P12604 | $1147-505$ | 7 | .16 |
| P12677 | $59-409$ | 9 | .23 |
| P12691 | $59-410$ | 9 | .24 |

TOP MOUNTING TYPE-FIG. A
Tube shfeld base accormmodates tube ahtelds isted below.

| Stock No. | Type | No. Contegts\| Eseh |  |
| :---: | :---: | :---: | :---: |
| P12570 | $\$ 147$ !05 | 7 | .23 |
| P12571 | 147925 | 7 | .37 |
| P12578 | $1147-913$ | 7 | .34 |
| P12579 | $\uparrow 59-407$ | 9 | .34 |
| P12573 | $\$ 59406$ | 9 | .33 |

TUBE SHIELDS-FIG. C
For 7-Contact Buses

| Seock No. | Type | Helghe | Eaoh |
| :---: | :---: | :---: | :---: |
| P12580 | $5-401$ | $1 \% \%$ | .08 |
| P12581 | $5-402$ | $1 \%$ | .08 |


| For 9-Contact Bases |  |  |  |
| :---: | :---: | :---: | :---: |
| Stock No. | Typo | Length | Each |
| P12582 | $5-405$ | $11 y^{2}$ | .12 |
| P12583 | 5408 | $115 / 16^{*}$ | .14 |
| P12584 | $5-409$ | $2 \%$ | .14 |

## SADDLE TYPE OCTAL

Amphenol 74-8. Mounting plate has sharp nibs which make solid contact with chassls for rood ground. Long lugs: octal black bake ILe brse. Requires $1 K^{*}$ chassis hole. Saddle re-
quirt $25 / 32$ mtg. holes, $14^{\circ}$ etrs. P13179

MINIATURE SOCKETS AND SHIELDS 2685 120.


Fig. A. Johnson,120-267 steatite socket for use with all 7-pin miniature tubes. Plinspbor-bronze contacts, heavily aliver plated, self-aligning type. minimum canacitance and leakage between with acts. $1 /{ }^{\circ}$ mitg. hole. 29 P13186

29
Fig. B. Johnson 120-277B. As above but shlelded bise. Includes metal ring which extends upward - form shield bas.

P13219
44 e
p13220-Type 133-2778. Shleld base only 94 13 Shleld 133-278A for types $120-227 \mathrm{~B}$, P13221 12 P13222-As above but $1 x^{\circ}$ htgh

124
MINIATURE 7 \& 9 PIN SOCKETS Molded
Etbylon-A" Iow-lons materlat with high "o. factor. ${ }^{7-\text { pin }}$ sockets re


> With Tube Shield Base
SlockNo. Mir's. TypolNo. of PInal Eagh

| P13244 | $59-367$ | 7 | .16 |
| :--- | :--- | :--- | :--- |
| P13245 | $59-389$ | 9 | .36 |

## Without Tube Shield Base

| P13241 | $59-357$ | 7 | .12 |
| :--- | :--- | :--- | :--- |
| P13242 | $59-359$ | 9 | .30 |

## Amphenol Photo Tube Socket

For C7026A, 921. 922, ete.
High resistance between eltpas.
Angle bracket permits 10 dif
rerent mtgs.
P13229-Type 146-121.... $79 \boldsymbol{q}^{2}$

# DIAL, KHOBS, ELECTRICAL ACCESSORIES 



## NATIONAL TYPE "ACN" DIAL

Designed for E.C. oscillator or U.H.F. receiver. K-range scale for hand calibration, $0-100$ linear scale as guide. 2 extra scales, lucite dial and pointer. $5: 1$ vernier, $/{ }^{\prime \prime}$ " shafts. Frame: $5 " x 7 / 4$.
P14474 - Weight 1 lb .
3.80
"SCN" Dial - Same as above but smaller P14473 - Shpg, wt. 1 lb
3.45

## NATIONAL "MCN" SMALL SCALE DIAL

Ideal for mobile installations, small converters, tuners, and $3 \frac{1}{2}$ " raek panel mounting. Provides three calibrating seales and a 0.100 logging seale.
 P14478 - Shug. wt. 1 lb.

## PRECISION VERNIER DIALS

 8 hpw. wt. 1 lb .
P14236-4" Dis. 325• Rotation.
1.96

P14237 - $2 y^{\prime \prime \prime}$ Dia $326^{\circ}$ Rotation
.1 .47
P14238 - $4^{\prime \prime}$ Dia, $180^{\circ}$ Rotation. 1.96

## COP NATIONAL R AND O DIALS

Type 0-31/2" Dial. Nickel silver. Marked 0-100. $180^{\circ}$ counter-clockwise Large easy-to grip center knob. For $1 / 4 /$ shaft. 1.15

Type R Type R 180. Marked 0-10. Dial shaft P14568

## ETCHED METAL DIAL PLATES

Black dial plates, ealibrated $0-10$ in $300^{\circ} \cdot 2 \%^{\prime \prime} \times 1^{11} / A^{\prime \prime}$. Has 4 mounting holes. Specify marking: Piain, Tone, Record, Gain, Mike.
P9904 - Each
21 c



Molded and polished bakelite knobs for $1 / 4$ " shafts.

| No. | FIg. | Size | Mounting Type | Color | Each | 10 For |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P9656 | 1 | $1^{\prime \prime}$ dia. | Set screw | Walnut | 10 | . 90 |
| P9693 | 2 | \%/8" dis. | Knurled hole | Walnut | . 09 | . 81 |
| P9736 | 3 | \%"" dia. | Set serew | Wainut | . 11 | . 81 |
| P9692 | 4 | \%\% ${ }^{3}$ | Set screw | Walnut | . 09 | . 81 |
| P9694 | 5 | \%" ${ }^{\text {" dia. }}$ | Iush-button | Rrown | . 06 | . 54 |
| P9695 | 5. | Kh" dia. | Push-button | Brown | . 06 | . 54 |
| P9661 | 6 | 1294", dia. | 1 Pash-button | Brown | . 06 | . 54 |
| P9696 | $6^{\circ}$ | "\%o" dia. | 1'ush-button | Brown | . 06 | . 54 |
| P9676 | 12. | 110", dia. | Set screw | Walnut | . 09 | . 81 |
| P9680 | 12 ${ }^{\circ}$ * | ${ }^{11} \mathrm{l}^{\text {un" }}$ dia. | Set screw | Walnut | . 09 | . 81 |
| ${ }_{\text {P9683 }}$ | 12 | 1\%" dia. | Set screw | Black | . 08 | . 72 |
| P13027 | 8 | $2 \times \%$ "Ii | Set screw | Black | . 16 | 1.44 |
| P13028 | 3 | 13.0 \% ${ }^{1}$ | Set screw | Black | . 07 | ${ }^{63}$ |
| P13053 | 10 |  | Sct screw | Black | . 08 | . 72 |
| P13024 | 10 | 1\%x\% ${ }^{\prime \prime}{ }^{\prime \prime} 11$ | Set screw |  | . 18 | . 81.8 |
| P9650 | 11 |  | Set screw | Black | . 18 | 1.62 |
| P9651 | 11 |  | Set screw ${ }^{\text {Set screw ; white pointer }}$ | Black | . 18 | 1.892 |

- Recessed top. " Iess pointer.


## KIT OF 50 KNOBS

13. Assorted sizes and colors in new, modern designs as used on latest post-war gets. All standard shaft sire openings. Four each of 12 different designs, two each of one design. Kit consists of 12 set serew tspe, 18 knurled shaft type and 20 flatted shaft apring type. P9662 - Kit of 50.

TV KNOBS FOR RCA G3OTS CHASSIS
Exact replacements for the ILCA 630TS chassis.


BRASS \& FIBRE SHAFTINGS
For extensions. $1 /{ }^{\prime \prime}$
Fach
P15010 - ${ }^{\text {E }}$ " Brass
P15013 - 12 ${ }^{\text {n }}$ Fibre.
Fach.
P1501
70

PANEL BEARING ASSEMBLY Use with a rigid or flexible coupling when mounting. For up to \%se" panels. shaft. 29


## CRONAME TUNING DIALS

Tuners are flexible - may be adapted to any chassis. Condensers elock wise or counter clockwise - may be of 5 different knob locations. All with horizontal double channel calibrations, bruadcast hand 55 to 170 and short wave 6 to 18 . Models 234 and 238 have third scale reading reverse, arbitrary o to 100. have third schle reading reverse, arbitrary alasa dial Aliles. Smallest size has one lamp socket, all otherm have two. Hubs */" dia.; 4/4 adaptors.

| Stack No. | Oroname Model | Escutcheon Orepall | Panel Cutout | Polnter Tpayel | Cost <br> Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| P9818 | 231 | 21/4 $\times 1{ }^{\prime \prime}$ | 1\%x4\%" | $31 \mathrm{Fr}^{\prime \prime}$, | 4.63 |
| P9819 | 232 |  | 11\%65\%" | $41 \%{ }^{\prime \prime}$ | 4.70 |
| P9820 | 233 | 3\%2 $\times 6 \%{ }^{\prime \prime}$ | $21 / 4 \times 6^{\prime \prime}$ | 6\%" | 4.88 |
| P9821 | 234 | $31 / 3{ }^{\text {x }}$ 8 $81 / 2{ }^{\prime \prime}$ | $2 \% \times 7 \% 0^{\prime \prime}$ | $6 \%{ }^{\prime \prime}$ | 5.12 |
| P9800 | 236 | $4 \times 111 / s^{\prime \prime}$ | $3 \%^{10} \times 0^{11 / 40 "}$ | $0^{\prime \prime}$ | 7.97 |

## OTHER CRONAME DIAL SCALES

Available in four typers: AM Broadcast Short Wave, double channel; AM Broudcast only: which is only horizontal.
Scales for model 236 .
.73c all others.

## MAGIC EYE ASSEMBLY

f-proug type requires 6Ef or fG6 tube for 6.3 -rolt sets; 2 EA for 25 -rolt sets, 8-prong type takes all octai base mugic
eye tubes. All types are easily installed. Complete with escutcheon. Instructions included.
P11480-6.prong type. MEA-f.
P12645 - 8-pronk type. MEA.8. 89c

## DIAL DRIVE SPRING ASSORTMENT

 Handy kit for servicemen. Box containg 25 springs of six different sizes of hard-to-get tension springs. Offered to you now at an unusual low price 76 CP9892 - Shpg. wt. $1 \mathrm{lb} . . . . . . . . . . . . . . . . . . . . ~$


## DIAL DRIVE SPRINGS

Hith grade steel wire rust-proof springs. Kits offer eiul tumum 9 five gizes to take care of all requirements. $26 c$ P9890 - Kit of 10 Assorted. Shpe. wt. 2 oz.. 26 . 26 c
P9891 - Kit of 10 Small Sizes. Shpg. wt. 2 oz...2

## WALSCO UNIBELT

IReplacement for any dial belt. Cut to size - join end with simple zipper-like connector, Breaking strength over 00 bs 5 -foot spool with 10 connectors.
1.78

BLACK NYION DIAL CABLE
Diam: Special Thin, .025": Standard, .032"; Medium $.042^{\prime \prime}$

| Length | Spec. ThIn | Each | Standard | Each | Medum | Each |
| :--- | :---: | ---: | :---: | ---: | ---: | ---: |
| Envelope | P9930 | .26 | P9945 | .26 | P9981 | .26 |
| $25 \cdot$ fect | P9889 | .82 | P9943 | .82 | P9928 | .82 |
| 100 -feet | P9927 | 2.91 | P9944 | 2.91 | P9929 | 2.91 |

- Special Trin $10-\mathrm{ft}$. Medium and Stand. 8 ft .


## DRIVE RUBBERS

Kit of 24 contains eight different types of friction drive rubhers for replacement in popular receivers
P9400-Drive Rubber Kit. . .

## DIAL LIGHT COLORING KIT

Red, Green, Blue and Amber, and a bottle of solvent. Each in screw top, wide mouth bottle. Dries in 1 minute. Color permanent.


1. SINGLE SURFACE OUTLET Brown bakelite. Wood mounting ${ }^{\text {Bcrewit }}$ P13271-10 for 72c, Each... 8c 2. BAKELITE PLUG. Sturtly P13308- 10 for 54c, Esch.... 6c 3. CORD SWITCH. For celling fixtures and home appllances. 24c 4. 3-WAY SURFACE OUTLET. Brown. Pin type termingls. Wood gerew;
P13279- 10 for 1.35, Each.. 15 c 5. CUBE TAP. Brown. 3 outlets. P13282-10 for 99c, Each... 11 c 6. HANDLE PLUG. Soft rubber. P13301- 10 for 63c, Each.... 7c 7. 3-WAY SURFACE OUTLET Brown plastic. Wood mountin serew
P13280 $\mathbf{1 0}$ for 1.35, Each. . 15 c 8. CURRENT TAP. Bakelite. Straight socket with two plug out lets.
2. DUPLEX FLUSH RFCEP. P13329-10 for 1.17, Each.. 13 C 10. WALL PLATES, Dual outlet. Ripple desirn stainless ateel. 7c 11. MIDGET CORD CONNEC TOR. Flat two-piece. Dnderwriters P13276-10 for 2.16. Fiach. 24c 12. POWER CORD AND PLUG. 8 ft . rubber cord, brown bakelite plug.

Esch.. 22c 13. CUBE TAP EXTENSION rio kap, 8 ft rubber cord. Ac Plife 18 - 10 for 4.05, Each. . 45c 14. HEATER CORD SET. AO plug, 7 ft . heater cord and screv P13317-

Each...69c 15. PEARL POSH BUTTON. /4" diameter clip mount. Each. 20c 18. MDGET PUSH BUTTON. Brown, $1 \mathrm{H} \mathrm{n}^{\prime \prime}$ dinmeter.
P1331i-10 for 1.26 , Fach. . 4 C

## RELAYS - CRYSTALS - PHOTOELECTRIC UNITS

## POTTER-BRUMFIELD RELAYS TYPE "PR" HEAVY DUTY POWER RELAYS

Will start motors up to 1 H1 high heater londs, ete conlst take only 2 watts on DC and orerliond because the copper shaded pole piece prevents $A C$ chatter. Heary contact pressure, Sthrdy refum spring and screvw terminals. Metal parts lieavy plated; colls impreguated with rarnish Cono taets of double break types ruted at 20 amps and single break types at $1 \%$ amps. 110 volts AC non-inductive load. All ratings ure for con-

| Number | Typo | Contacts | Coll Volts | Each w |
| :---: | :---: | :---: | :---: | :---: |
| P14254 | PR3A | 8P8T-DB-NO* | 6V/60 cy AC | 3.60 |
| P14255 | PR3A | SPST-DB-NO. | $110 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | 3.60 |
| P14100 | PR3A | SPET-DB-NO* | $220 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | 4.25 |
| P14256 | PR4A | SPST-DB-NC* | $6 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | 3.63 |
| P14257 | PR4A | 8PST-DE-NC* | $110 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | 3.65 |
| P14258 | PR5A | 8PDT | 6V/60 cy AC | 3.80 |
| P14262 | PRJA | 8PDT | $110 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | 3.80 |
| P14102 | PR5A | 8PST | $220 \mathrm{~V} / 60$ ey AC | 4.45 |
| P14263 | PR7A | DPST-NO | 6V/60 cy AC | 4.25 |
| P14264 | PR7A | DPET-NO | $110 \mathrm{~V} / 60 \mathrm{cs} \mathrm{AC}$ | 4.25 |
| P14202 | Pr7A | DP8T- NO* | $220 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | 4.90 |
| P14244 | PR11A | DPDT | $6 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | 5.70 |
| P14245 | PRIlA | DPDT | $110 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | 5.70 |
| P14103 | PRIIA | DPDT | $220 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | 6.35 |

"MR" SERIES FOR LIGHTER LOADS
Double break contacts rated at 10 amps: Single break at 8 amps 110 . AC 60 cyele non-inductive 1\% watts. $11 /$ watts. Size: $1 \%$ "x 1 \%"x $2 \%$ 。

|  |  |
| :---: | :---: |
| oll Volts | Each |
| 60 cy AC | 2.25 |
| V/60 cy AC | 2.25 |
| V/60 cy AC | 2.90 |
| V/60 cy AC | 2.90 |
| V/60 cy AC | 2.40 |
| V/60 cy AC | 2.40 |
| V/60 cy AC | 3.20 |
| V/60 cy AC | 3.20 |
| $V / 60$ cy AC | 3.65 |
| V/60 cy AC | 3.65 |

## PLATE CIRCUIT RELAYS

Armature spring adjustable for spplications reguiring closing or opening on specified currents or voltages. Table below shows the standard factory
adjustments for current to energize, also minimum affer readjustment of spring. (A) LS Series. (I)
 P13855
SMC 100 dual frequenes erystal provides either 100
KC or 1000 KC pluas or minus. 05 pereent. 100 KO KC or 1000 KC plua or minus. 05 percent. 100 Ko
can be adjusted to zero beat. Useful for the nllyn. nient of receivers.
8.75


cirn

## TYPE AX2 CRYSTALS FOR AMATEUR USE

One of the most popular types for amateur usp. Plates are of acid-etchen quartz, mounted in a phenolic case. steel. Half-inch pin spacing. Accurately, calibrated to plus or minus 002 percent, with a difift of kexs than queney desired, when ordering. P13849- 100 Meter plus or milnus 1 KC of

| Number. | Type | Amps. | $\begin{aligned} & \text { Coll } \\ & \text { Ohms } \end{aligned}$ | Min. Cur. | std. Cur. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P94279 | Ls5* | 4 | 2.500 | 6.0 | 9.7 | 2.25 |
| ${ }^{\text {P14281 }}$ | ${ }_{\text {LM5 }}{ }^{\text {LS }}$ | 5 | 5.000 2.500 | 2.3 | 6.3 6.3 | 2.35 2.80 |
| P14210 | LM5* | 5 | 5,000 | 1.7 | 4.5 | 2.95 |
| P24218 | LM5* | 5 | 10,000 | 1.2 | 3.2 | 3.30 |
| P14212 | LM11 | 5 5 | ${ }^{2} 5.500$ | 5.3 | 9.0 | 4.20 4.35 |
| P14214 | LMili | 5 | 10.000 | 2.7 | 6.3 4.5 | $\begin{array}{r}4.75 \\ \hline 8\end{array}$ |

## AUTOMATIC LOCK RELAY ELECTRIC RELEASE

Tise two coils-one to operate relay and another to release the lock. lnelucles 3 in ${ }^{\circ}$ fine silver clomeshaped contacts rated conserratively from 4 to 20
amps. When circuit to onerating coil is closed momentarily, the normally closed contacts open and the nornatly open ones close with the relay in that position even when the current is removed. To return masitions to normal, current is applied to the P14142-ELITA -

ADVANCE TIME DELAY RELAY
Type 304B. For prehenting tube flaments and sinular uses. Lelay provides an adjustable delayed make $10-$ - 130 until the initial cireuit is broken. $1 /$ " pure siliser contacts: Amps at IL. AC (non-inductipe)
P14146-DPDT

## PHOTO-FLASH RELAYS

New alloy contacts discharge capacitatnr through lamp. landle hunclicels of amps during fash, 250 p . rolt insulation. \$fole of the finest materials available nnd specially designed for photo-ffash application
 and similar uste Arailable in the following voltage
and miztact smerifications.

| Stock No. | Mig. No. | Coll | Contacts | Each |
| :---: | :---: | :---: | :---: | :---: |
| P14150 | FRIA | 6 VAC | 8P8T NO | 3.30 |
| P14151 | FREA | 6 VAC | SPDT | 3.60 |
| P14152 | FRlla | 6VAC | DPDT | 4.70 |
| P24153 | FR1D | 2 VDC | SPBT, NO | 3.30 |
| P14154 | FR5D | 2VDC | SPDT | 3.60 |
| P14155 | FR11D | 2 VDC | DPDT | 4.70 |

## SELENIUM PHOTO CELL

Barrier layer, sclf.generating type light striking on cell generates current sufficient to operate relays directly with-
out the use of auxiliary power. Life of cell is unlmitet. 600 microampa output at 100 foot candles. Sfomuted in attractive plastic housing. $2^{\circ}$ in diameter.
11.03

# HEADPHONES, KEYS AMD ACCESSORIES 



TRUTEST DX TYPE SINGLE \& DOUBLE HEADPHONES 1. Powerful bl-polar magnets, featherwelght shells, adjustable cloth covered headband.
P13892-2000-Ohm Headset, Each
P13893-3000-Ohm Headset, Each.
2. Single Unit Readsets. With clock-steel band attached P13896- 1000 -Ohm single set. 43 -foot cord P13897-1500-Ohm single set. $41 / 4$-foot cord
Caps and diaphragms fit all above phones. P13894-Cap.
P13896-Dlaphragms, Each
.54

## ACME DELUXE LIGHTWEIGHT HEADPHONES

1. Chrome steel magnets. Extremely light-welghs only 6 ounces. Complete with two units, $44 / 2$-10ot cord, metal headband. 1.99 P13904-Double Headset. $2000-$ Ohms DC Resistance .1 .17 P13905-Slogle Fiendset. 1000 -Ohms DC Resistance
2. Powerful magnets, With five-foot cord, ad justable clips.
P13928-2000-Ohms
P13929- $3000-0 \mathrm{hmg}$
2.30
.2 .76

P13930v- 5000 -Ohms.

Similar to above but with exposed screw terminals
P13925-2000-Ohm Headset
186
.. .186
P1 3935-Bakelite cap, fits all models. Each.

P13936-Alumlnum cap fits all models. Each | 186 |
| :--- |
| -65 |

P13937-Dlaphragm only, fits all models. Each ..................................


## TELEX TWINSET

Model 3725. An entirely anw way to hear with a headset. Never before such comfort, lightness, all-day-tong ease of use Actual sound is plped directly Into ear through a slender tubular sound arm mounted on a locking ball-and-socket Jolnt. Fully adjustable
to fit any head size or shape. Plastic ear tips. 1000 to nt any head size or shape. Plastic ear tips. 1000 speaker coll.
P13868.
10.00

Model 3735. Same but 64-ohm impedance.
P13869
.10 .00


5


## HEARING AID FOR RADIO

New headphone type hearing device increases radio enjoyment for persons who find it dimeult to hear radio programs properly. Also for private listening without disturbing others. Qutckly and
easily attachea to any radio in a matter of mineasily suppled with switch permitting speaker utes. supplied with switch permitting speaker match loudspeaker coil.
P13865........ but with singie phone. .
4.12

P13867-3-way switch adapter only
$\begin{array}{r}3.37 \\ .1 .85 \\ \hline\end{array}$

## EXTENSION CORD CONNECTOR

Sturdy molded body with two openings, one at each end, designed for the insertion of two pin tlps. 10 \&
P13061..........................................

## HEADPMONE CUSHIONS FOR ALL PHONES

These headphone cushions fit all types of headphones. They are made of soft rubber and supply the utmost in comfort for are made or They are espechally important for ilistening for the is periods of time. In addition, they perform the function of acting as a shock absorber id case of accldental banging or droppide. P13943-Pair.

82 10 Pairs for.
7.38


## PHONE AND SPEAKER CORDS $41 / 2$ Feet Long

sturdily made, with cotton brald insulation. $41 / 5$ feet long.
P13956-Double type. 1 end spade tip, other stralght
344
P13956-Double type. Pin tips both ends.
336
-336
P13957-Sidgle type. Pin tips both ends.


## JOHNSON SPEED-X KEYS AND CODE SETS

## CODE PRACTICE SET MODEL $114-450$

Constant frequency adjustable buzzer and a standard hand key with obe-elghth inch sllver contacts. Mounted on a brown bakellte base inches by inches. plated. Code card included.
P14027-Johnson Type 114-450. Bhpg. Wt. 2 lbs
2.65

P14027-Johnson Type 114-45
P20622-1 $1 / 2$ volt cell for above. . 8 c


BUZZE'R WITH BAKELITE BASE AND CAP
Johngon Speed-X Modet 114-400. Operntes on $2-1 / / 3$ volt cells or "C" Battery. Has a tone frequency adjustment on the vibrator. Reslstance 2 ohms
1.18

P14021-i $13 /$ volt cell
P20622-1
$.8 c$

## JOHNSON SPEED-X <br> \section*{CODE PRACTICE KEYS}

Johnson Speed-X Model 114-300. Provided two adjustments. Equipped With a bakelite base, silver contacts, and With machined parts.
P14041-Shpr. Wt. 1 lb
1.03

Johmoon Speed-X Model 114-305. Same as above, but with a metal basp.

## KITS AMD SPECIALTIES

## TECH-MASTER TELEVISION KITS



## MODEL 5116 AC-DC

 "UNIVERSAL" KITHere is a really well designed 16 tube kit that is easy to buld - io speclal tools required. Gives per formance equal to more expensive commerclal sets. Complete step-by-tiep wiring and pictorial diagrams gulde every step of the way; rectangular pleture tube. IF Synchro-strip completely prewired factory allgned and teated-eliminates any further video or sound IF alignment Two knob, front panel control providea automatically synchronized pleture and sound; 12 -channel tuner. Video sensitivity, 20 milcrovolts, with 20 volts peak-to-peak at klaeacope grid. Lateat type hi-galn stagger-tuned IF system hlgh voltage transformers obtain full defecton and high voltage. New AGC system utilizes speclal delay network. Separate IF 8ynchro-Strip with tegt
points located at top of chassls. LIght welght, shock-proof chasals $17 \times 14 \times 4$, goints located at top of chassls. Light welght, shock-proof chassls $17 \times 14 \times 4^{\circ}$. tube brackets. Less picture tube. See ps. 35 for Picture Tubes.
105.75


## MODEL 630D19 AND 630519 KITS

## For 17" to 24" Tubes

 Precision engineered to produce the finest TV reception. Improved 830 RCA type cercuit. Uses only ponents. Step-by-sted wirpong inseructions and pletorial dlagrams simplify buildiag procedure. Has AFC horlzontal hold using syac discriminator reansformer; stablixed vertical hold: excellent interlace characteristics, 3 stage ayneampliner, separator and eltpper circuit: FM sound system employing discriminator type audio detector: nolse saturation circuits: ${ }^{3-s t a g e}$ audlo IF system; 4-stage stagger tuned video IF system:
full 4 Mo band width; adjacent channel traps; direct coupllin used for keyed AGC circuit assures stable contrast level regardless of varying transmission conditions. 12 -channel turret type tuner cogether with 4 stage video $1 F$ system produce a sensitivity of 20 microvolts for 1 volt DC at the detector $24^{\circ}$ and $18^{\circ}$ perating on normal AGC blas. $70^{\circ}$ deflectlon yoke for all $17^{\circ}$ to provided for each channel. Thls new 日yetem will produce from 12 to 14 KV with excellent voltage regulation and horizontal linearity. Supplled with all components, tubes, speaker, and pleture tube mouning brackets. 1 exs linescope tube, wire and solder. Chassis dimensions: 21 , wide x . $15 \%$ : deep. Bhpg. wt. 65 Ibs.
P24292-Model 630D19. All principal components mounted.... 159.50 P24293-Model 630S19. Same as above but unassembled.

## NEW TECH-MASTER $16^{\prime \prime}$ \& $19^{\prime \prime}$ CONVERSION KITS



Espectally designed for converting any 630- type $20^{\circ}$ tubes, round or rectangular. Complete with simple instructions for conversion and all neces sary components. May easily be adapted for use with many other chassis. Voltage multiplier circuit supplies up 1014 KV using one 183 GT .
 20 KV condenser as well as all other condensers,
resistors, hardware, etc. Shps. wt. 3 lbs.
 Do-Luxp "g" Kit-for 19AP4, 16RP4, 16GP4 kinescopes and others having detection anglo P24303-De-Luxe "B" Klt.
9.45

Standard KIt-for ALL kinescopes having up to $70^{\circ}$ detectlon angle. Includes only ayback, mountligg bracket, width coil.
P24369-Standard KIt.
5.95

## TECM-MASTER KEYED AGC KIT



Add keyed automatic gain control to your 630-type television chassis and enjoy all the advantages of this great engineering improvement to tele-viewing. Operates directly from the sync pulse; works Instantly to eltminate annoying airplane "flutter" and "breathlag" completely. Also provides exceptional nolse immunity with minimum signal input. Ersy to Install-clearly detalled instruction sheet supplled. No holes to drill. Kit includes a baU8 tube, mounting bracket with socket, special AGC coll, all resistors and condenser. Shpg. wt. 1 lb .
P24368-KIt AG-1.
4.45

AGC Kit for Use with "Ht-Sweep" Voluage Multipliter Kus-AGC kit above but with special circult and components for use with Voltage Mutipler Transiormer kit (at toD).
P24291-Kit AG-2.
6.00

## MEISSNER KITS

## FM TUNER KIT

Model 8 CK. Covers entire FM band. For use with any ampliner having ai input of 100,000 ohms or greater and producing full output with 3V. R.M.B audio Input. Flat response withla $\pm 2$ canas input. silde rule dial calibrated in MC and channel numbers Uses (2) 6AUB, (2 6BAB, (2) 6C4, 8AL5

and $6 \times 5 \mathrm{GT} / \mathrm{G}$. Front end and IF colls factory assembled and ailgned. Complete with pletorlal diagram and schematic, tubes, wire, hardware and solder. For $105-125 \mathrm{~V}$, AC operation. Shpg. wt. 6 lbs. P24355.
41.89

## MODEL 3BK AND 2BK KITS

Model 3BK. Regenerative grid leak detector with resistance coupled pentode sudio stage. 3 tubes-6BJ6 and (2) $50 \mathrm{B5}$. Uses any magnetic phones with Impedance of 2,000 ohma or more. With coll covering broadcast band
$520-1530 \mathrm{KC}$. tubes, hard ware $520-1530 \mathrm{KC}$. tubes, hardware and solder. Additlons! colls for other bands
 P24358-Shpg. wt. $21 / / \mathrm{lbs}$.
12.00

Model 2 AK . Battery trainer kit. Same as a bove but battery operated; uses only two tubes, 1 T 4 and 3 V 4 . Batterles required: $43 / \mathrm{V}$. " $\mathrm{A}^{\prime \prime}$ batery and 90 V . "B" battery. Complete with coll coverigg broadcast band, tubes, hardwure and solder. Other colls to cover additlonat bands listed below. Less phones
and batteries. Shpg. wt. 2 lbs. P24357.
10.44

## PLUG-IN COILS FOR ABOVE

P24359-Type 18-3500-175 to 540 KC .
1.49

P24360-Type $18-3602-1.35$ to 4.5 MC

.614
614
P24362-Type 18-3604-7.9 to 18 MC ...................................... 61 . 61 .


## MEISSNER "MOW TO BUILD" MANUAL

Contalns a wealth of information on basic theory, dealgn and construction of AM, FM and TV circults, phono plekups, Audio ampliners, speakers, disc recorders, etc. Fully lllustrated with charts, radlo formulae, schematic and P19679.

989

## PERCO FM BASIC TUNER KIT

Uthizes new FM clrcutt that does a way With limiters, discriminators, ratio detectors and the dimculty of peaking and tracking such circuits. Uses $14 F 8$ and
$35 W 4$ tubes for earphone volume-or connects 0 a mpliner or audlo circuit of radlo. 15 MMF tuning condenser IF assembly; mounting hardware and tle lugs: full inscructions.
P2447-Shpg. wt. 3 lbs
5.50

P24476-4* Perco Dlal Plate for above-Shpg. wt. 1 1b.
$.47 t$

## AC-DC RECEIVER KIT

 Easy-to-build. Compares favorably with much higher Mriced commerclal sets. net. Superhet circuit-uses 12 SA 7 . $128 \mathrm{K7}$, 12597 , 50 LB and 3525 rect. Auto Streamined airplane dial covers 550 airplane dial 1600 KCBullt Bult-in loop antenns and Alnico $V$ speaker. Complete with cabinet and tubes and Instructlons.
P24548-Shpg. wt. 9 lbs.

## EAGLE CRYSTAL KIT

Excellent for beginners. Provides basic radio theory. Not a toy. Kit includes a fully wound easy-touse slide-coll. crystal detector, and cats whiskers. No soldering necessary-the only tool needed is a screwdrlver. Shpg. Wt. 1 lb . P24465.
P13896-Single headphone for
above...............................


## MICROVOX MICROPHONE

No wires necessary. Talk through your radio speaker with this battery powered mike,
up to 75 ft . from set. Broadcasts from 1000$u p t o$
1700 kc . Merely tune radio to a non-interiering polnt on the dlal within this range. LightWelght, plastle unit includes 1 fashlight cell, "B" battery and tube. $6 \%{ }^{\circ}$ H. $51 / 3{ }^{\circ}$ D., $5^{\circ}$
P22620-shpg. wt. 3 lbs P22620-Shpp. wr. 3 lbs. Mike with sound effects kit listed below P22621.
5.97 Add a protesslonal touch to your next party
with a prepared radio program including geript with a prepared radio program including script
and sound effects. Designed for use with above and sound effects. Designed for use with above sound effects and three scripta keyed to sound effects.
effects.
P22622.
2.63

## FUSES - RADIO CHEMICALS



| Ne. | Oescription | Botcle Slue | Each |
| :---: | :---: | :---: | :---: |
| P15821 | Cement Solvent and Thinner for all cementa | 402. | 56 |
| P15822 | except bakelite and rubber cement | 802. | . 74 |
| P15827 | Scratch Remover Pollsh, dark shade | 208. | . 29 |
| P15828 | Scratch Remover Polish, dark shade | 800. | . 38 |
| P15829 | Seratch Remover Pollsh, IIght shade | ${ }_{8}{ }^{8} 02$. | . 29 |
| P15830 | Scratch Remover Pollsh, 14ght shade | 802. | . 38 |
| P15831 | Carbon Tetrachlorlde. | 802. | 1 |
| P15832 | Carbon Tetrachioride | 16 oz . | . 73 |
| P15833 | Carbon Tetrachloride | 32 oz | 1.11 |
| P15310 | Bakelite Cement | ${ }^{2} \mathrm{oz}$. | .41 |
| P15311 | Bakelite Cement | 802. | 1.39 |
| P15321 | Plastic Cement. | ${ }_{2} \mathrm{oz}$. | . 41 |
| P15377 | Contact Cleaning Fluid | 502. | . 32 |
| P15824 | Contact Cleaning Fluld | 402. | . 56 |
| P15825 | Contact Cleanling Fluid | 808. | . 65 |
| P15378 | Walscolub B Cleaner-Lubricant | Tube | . 38 |
| P15257 | Duco Cement | Tube | . 21 |
| P15396 | Thimmer for Bakelite and Rubber Cement | 202. | . 31 |
| P15398 | Rubber Cement . . . . . . . . . . . . . . | 402. | 65 |

## AIR ORYING FINISHES

For professlonal looking fnishes on metal or wood. In crygtal. wrinkle or smooth finish. Durable and lasting.

| Finish | Color | $12 \mathrm{oz}$. No. | Each | 8 oz . No. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Crystal. 1scquer | Black | P15259 | . 38 | P15309 | 1.25 |
| Cryaral, iscquer | Grey | P15319 | . 38 | P15387 | 126 |
| Wrinkle, vardish | Black | Pis381 | . 38 | P15390 | 1.12 |
| Wrinkle, varnish | Orey | P15383 | . 38 | P15392 | 1.12 |
| Telephone, smooth | Black | P15384 | . 38 | P15393 | 1.12 |
| Telephone, smooth | Grey | P15385 | . 38 | P15394 | 1.12 |

## 

## LUMINOUS

 LITE-KOAT KITGlowa in dark. Ideal ondials, knobs, switch plater, hallways. etc. of Powder, Top-Kant rinigh Protector and Thinner. With brushen and fnstructions.
P15834-Lite-Koat KIt . . 1.79
COIL OOPE KIT
Polystyrepe base; negllgive power factor loss cles molsture proot cements poly proof. parts. Kli contalis 2 oz. bottle thinner and 2 brush P15313.

CABINET REPAIR KIT
A complete, handy repair kit for radio Ahops, stores. trucks, etc. Contains radlo chemicals and material for repalring damaged cabinets. Ivory spirt enamel, light and dark dark brown tacquer enamel; Wainut spirtt stald; pollsh renewer; French
varnlsh: 3 sheets garnet nbikhing paper; pteel wool and cloth. All applicators in free wividual bottles. P15527-Shpg. wt. 3 lbs.
2.12


## CABINET TOUCH-UP KIT

For use on plastic bakelite or wood cabinet. 9 shades of shellac sticks, bottles of light and dari oil stain. bottle of metal shading lacquer. Magic Scratch R
steel wool.
P15521-Shig. wt. 3 lbs
3.53

## SCRATCH STICK

Handy pocket stlck tor servicemen. removes scratches from radlo cabibets in a jiny. Contains giller and ncratch polish.

## P15520.

26


## SCRATCH REMOVER KIT

Combloatlon kit of 6 colors, popular shade of wood Scratch-sth Inlers and 2 bottles serstch remover ilquld-Walnut and Clear. Works on all IIght and darl wood.

914


## SCOTCH TAPE BISPENSER

Useful plastic hand dispenser for standard 16 inch Width size rolls of scotch tape. Thousands of 29
for home, ompe, shop. P15033.


## KRYLON PLASTIC SPRAY

Just press the button on the can and it "wrapw" In corrosion and chemicals. Dries in minutes.
P15303-8hige. Wt. $14 / \mathrm{lbs}$
1.43

P15304-Aluminum Colored Kryion
1.27
1.66
1.47

## SMALL HARDWARE

DELUXE HARDWARE ASSORTMENT


Conventently boxed. Contains over 1000 pleces of most frequently used hardware; assorted machine serews, nuts, bolts, rivets, ete.
P14831-Shpg. wt. 4 lbs 1.07


RADIO HARDWARE IN JARS


Most convenlent why to keep glasg Jars with screw-oll eaps.

Any jar below
P14676-Jar only

| No. | Quentis | Size |
| :---: | :---: | :---: |
| P14650 | 100 |  |
| P14651 | 100 | $4-36 \times 1 / 5$ long |
| P14662 | 75 | $4-36 \times 3$ long |
| P14653 | 90 | 6-32x $\%$ long |
| P14654 | 80 |  |
| P14656 | 70 | $6-32 x y$ Long |
| P14656 | 75 | 8-32x, long |
| P14657 | 70 | $8-32 \times 4 \text { lonk }$ |
| P14658 | 65 | $8-32 x=10 \mathrm{ng}$ |
| P914659 | 60 | 10-32x 3 ", long |
| P14660 | 50 | $1032 \times \%$ long |


| No. | Quantity | Slzo |
| :---: | :---: | :---: |
| P14665 | 50 | No. $4 x^{1 / 5}$ |
| P14666 | 50 | No. $6 \times 1 /$ |
| P14667 | 45 | No. $6 \times 3$ \% |
| P14668 | 40 | No. $7 \times 1 / 2$ |
| P14669 | 35 | No. 10\% ${ }^{\text {\% }}$ |
| P14670 | 45 | No. 10x\% |
| Mexagon Nuis (B) |  |  |
| No. | Quantiy | SIze |
| P14661 | 110 | 4-36x\% |
| P14662 | 110 | 6-32x |
| P14663 | 00 | 6-32x5/16" |
| P14664 | 90 | $8-32 \times 5 / 16$ " |
| Washers (D) |  |  |
| P14611 | 150 | No. 6 Plain |
| P14672 | 150 | No. 8 Plain |
| P14673 | 100 | No. 6 Lockwasher |
| P14674 | 100 | No. 8 Lockwrather |

## ESCUTCHEON PINS

Fastens any type of escutcheon or name-plate. 5/16" long.
P14811-Per 100

## RIVET AND EYELET ASSORTMENT

Spectal asortment of 55 popular aize rivets and eyelots to fasten sockets, etc. P14840.

26


## BUMPER FEET

Felt, with No. 6 P-K serew for mounung. Feit is permanently $\mathrm{rng} / \mathrm{H}^{\circ}$ in clameter. 4
P14767
100 for

## CABLE CLAMPS

Heavy gauke steel. No, 6 mounking hole, plated.


## EXPANSION SPRINGS

Handy for radio, electrical shope. daboratories. Assortments contain varbous alzes for record changers and dlal drives. P15434-10 Asst. larse mirings
P15436-10

## FRICTION TAPE $1 / 4$ " WIDTH

High quality rriction tape rolis.
P14829-2 Oz. each 14


## DUTCH BRAND PLASTIX TAPE

3/black vinyl plastic electrical tape. $007^{*}$
intek; reasts 8000 volts. Tensile strength thick; reaists 8000 volts. Tensile strength P14844-Per Roll
In Lots of 5 Rolls, Each
1.05


ASSORTED BRACKETS
Package of 28 most used angles and brackets. P14838
$54 e$

1/4" METAL SPACERS
Raise component Raise components above
chassis, etc. Passes nos.
6.8 serews.

| Stock No. | Heloht | 10 For | Lote of 100 |
| :---: | :---: | :---: | :---: |
| P9868 P9869 P9870 P9871 | $\begin{aligned} & 3 / 1 \\ & \hline 16 \end{aligned}$ | .39 .66 .63 .82 | $\begin{aligned} & 3.60 \\ & 6.10 \\ & 5.70 \\ & 7.50 \end{aligned}$ |



ASSORTED SELF-TAPPING SCREWS


40 most often used sizeat
No nuts netded-start hole No nuts needed-start hole drive through. P14687.

53


## RUBBER GROMMET KITS

 Kit "A" contalus 12 asatErommets in 4 sizea: $3 / 16$ Kig. "B" has 30 in same sizes

## RUBBER GROMMETS

Insulate holes In $1 / 16^{\circ}$ metal panels, chassis, electrical

| Stock No. | $\begin{aligned} & \text { Flts } \\ & \text { Mole } \end{aligned}$ | Inside Did. | $\begin{aligned} & \text { Por } \\ & 10 \end{aligned}$ | Por |
| :---: | :---: | :---: | :---: | :---: |
| P14766 | 7. | $3^{\circ}$ |  |  |
| P14766 | 5/16: | 3) ${ }^{\circ} 6^{\circ}$ | . 20 | 1.08 |
| P14768 |  | $5 / 16^{\circ}$ | . 19 |  |
| P14769 | ${ }^{\prime \prime}$ | \% | . 16 | 1.00 |


|  | RIGHT ANGLE BRACKETS <br> Sturdily constructed of heavy metal. Width $\%$ " |  |  |
| :---: | :---: | :---: | :---: |
| Stock No. | Slee | 2 For | 105 |
| P14896 | 3x $5^{\circ}$ | . 03 |  |
| P14896 | \%x\%: |  | . 27 |
| P14897 | $1{ }^{1}$ | . 07 | . 30 |
| P14898 |  | . 08 | 36 |
| P14899 | 149314. | . 12 | 50 |



## HERMAN SMITH

 KEY WRENCHESThree assurtments of key wrenches to fit all atandard Hex and mpline socket screws used in radloo and electronic equipment. Asst. of 4 small Hex wreaches to fit set screws
No, to tho cad screws No. 2 to 8.
.264
Assurtmens of 3 medfum Hex wrenches to fit set
serews $K^{\circ}$ to $7 / 16^{\circ}$ and eap screws No. 8 to serews
$5 / 10^{\circ}$. to $^{\prime \prime} 7 / 16^{\circ}$ und cad screws P15411
Anst. of 4 small uplline wrenches to nt set serews

26

## KNOB SET SCREWS

Case hurdened headless bet Serews

P14787-4: $\times 8 / 32$
P14788- $1, \times 8 / 32$
$2 \cdot . . . . . . . . . ..\}_{50}^{10 \text { for } 22} 2$


Rack Serews \& Washers- $10 / 32 \times 1 / 4$ P14776-K K ${ }^{\prime}$. per dozen
P14777-Cup Washers-per dozen............... 1.0
/32 Round Hoad Screws



NUTS \& WASHERS-POPULAR SIZES
© 8
P14804-6/32x $1 /$ " hex nuts. Gross P14806- $8 / 32 \times 3$ hex nuts. Gross. P14807-8 $32 \times 5 / 16^{\circ}$ hex nuts. Groas P14803- $16 / 32 x$ hex nuts Gross P14808-6/32x11/32 knurled nuts Per 100.
P14809-No. 6 Washers 100 for 30 ¢ P14B10-No. 8 Washers 100 for $30 c$

## LOCKING WASNERS

P14758-No. 6 Lock washer
P14759-No. 8 lock washer
Pkg. of 100.

SOLDERING LUGS

## 26 01

 5696


In ave types to fit all your soldering reģuirements.

| $\begin{aligned} & \text { Sloenk } \\ & \text { No. } \end{aligned}$ | Typo | $\begin{aligned} & \text { Slock } \\ & \text { No. } \end{aligned}$ | Typ* |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & \hline \text { P14812 } \\ & \text { P14813 } \\ & \text { P14814 } \end{aligned}$ | No. 1 No. 2 No. 3, solderless | $\begin{aligned} & \hline \text { P14816 } \\ & \text { P14818 } \end{aligned}$ | $\begin{aligned} & \text { No. } 4, \% \text { long } \\ & \text { No. } 5,3 / 1 / \mathrm{long} \end{aligned}$ |

Any above, per 100.

## TAPERED LUGS

Fig. 6-Fits over all serews uv to No. 10; shank


## HEAVY DUTY SPADE LUGS

Fing. 7-Designed for battery terminals. ete. long No. 10 slot.
P14912-Per 10
Per 100..

## ENSULATED STAPLES

No. 5-hx\%'.
P16950-Box of 100.
156

## HERMAN SMITH

## TV ANTENNA LUGS

Solderless type For conmecting TV wio
enna, qulckly and casily. Double wire to an-

| Stock No. | Length | Hole | Per ${ }^{25}$ |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & \hline \text { P15464 } \\ & \text { P15465 } \\ & \text { P15466 } \end{aligned}$ | $\begin{aligned} & 9 / 16^{\circ} \\ & 13 / 16^{\circ} \\ & 15 / 16^{\circ} \\ & \hline \end{aligned}$ | No. ${ }_{\text {No. }}^{\text {No. }}$ | 44 .47 .50 |

## belden wire and cable

| EXTENSION SPEAKER CABLES |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| NO. 8209 |  |  |  |  |
| 2 -conductor No. 18 strnnded, tinned copper. Cotton wrap; low loss rubber insulation; culor coded. Paper wrap, tinned copper braid shield, weatherproofed cotton brald. $.235-0 . D$. <br> Belden 8209. <br> Per Ft. $61 / 24$ <br> 500 Ft. Spool. <br> . Per Ft. . . . . 25.62 |  |  |  |  |
|  |  |  |  |  |
| No. 8205 |  |  |  |  |
| 2 -conductor No. 22 tinned copper, stranded. Rubber insulation, color coded. Weatherproofed cotton braid. 165 - O.D. <br> Bolden No. 8205. $\qquad$ Per Ft. <br> 500 Ft. Spool. $\qquad$ ......... 8.82 |  |  |  |  |
| INTERCOM AND |  |  |  |  |
| SOUND SYSTEM CABL |  |  |  |  |
|  per, solid: enamel |  |  |  |  |
|  |  |  |  |  |
| wayed; color coded conductors cabled in pairs: brown vinyl plastic |  |  |  |  |
| 8743-45. As abore, tinned copper, vingl plastic insulation. |  |  |  |  |
| Typ | No. | Diam. | Per Ft. |  |
|  |  | . 130 | . 025 |  |
|  |  |  |  |  |
| 88743 |  | . 25.5 | 075 |  |
| 8744 8746 |  |  |  |  |
| SHIELDED INTERCOM AN |  |  |  |  |
| SOUND SYSTEM CABL |  |  |  |  |
| 3-conductors cabled one conductor tinned copper braid shield: wo conductors un |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| shlelded. Tinned copper, fexible stranding vinyl plantic ins. ; cotton braid; waxed; color coded. Brown plastic overall. <br> Bolden 8734 . . . . . . . . . . . . Per ft. $71 / 28$ <br> Per 100 ft... |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| PA CABLE - AMPLIFIER |  |  |  |  |
|  |  |  |  |  |
| 2-CONDUCTOR |  |  |  |  |
| 18 gauge bare copper bsked ensmel coat; cot |  |  |  |  |
| ton wrap; cotton braid: wazed; color coded; conductors eabled; tinned copper braid shield. |  |  |  |  |
| Bolden 8788- |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

 18 gauge solid bare ins.: color coded: conductors cabled. Bolden 8483

## VOICE COIL LEAD WIRE



AWG No. 25. Rare copper wire braided. Stranding $32 \times 40$.
Dis. $024^{\circ}$
10 a card. Beiden 8127

21

## SHIELDED GRID WIRE

No. 20 stranded, tinnce. Rubber ins, yarn $4000^{\circ} \mathrm{V}$. breakdown. $110^{\circ} 0 . \mathrm{D}$. $31 / 2$, Bolden 8885 ................Per ft. $31 / 2$ \& 25 ft. coil. 826
2.58

## GENERAL USE MOOK-UP WIRE

, Tinned copver conductor; cellulose acetate yarn wrap: acelate braid; lacuuer coating. 1000 V . breakd
yellow.

| $\begin{gathered} \hline \text { Belden } \\ \text { Type } \end{gathered}$ | Description | 25. | 100 Ft. | 1000 Ft. |
| :---: | :---: | :---: | :---: | :---: |
| 8941 | \#20 solid | . 32 | 1.11 | 8.97 |
| 8943 | \#20 stranded | . 32 | 1.14 | 9.3 |
| 88948 | \#\#18 sold | .37 .39 | 1.40 | 11.91 |

INDOOR AERIAL \& LEAD-IN WIRE


Belden 801425 ft . cord

.

## NO. 8200

No. 18 lead-in. Tinned copper; rubber ins.
flex. stranding 7 No. $27 . .126^{\circ} \delta \mathrm{D}$. Boldon $8200-100 \mathrm{ft}$. spool ...... 1.05 600 ft . spool.
1000 ft . spool. 4.26
7.94

## 

NO. 8206

Sanie as abore, but tinned copper braid shield Belden 8206 . Per ft. $31 / 2$ | Belden |
| :--- |
| 250 ft. |

. Per ft. . . . . 7.20
RUBBER JACKETED PORTABLE CORD


No. 18 multiple conductor cables of bare copper, flexible stranding. Cotion wrap; \%, rubber insulation, color coded. Conductors cabled with
tillers. Cotton wrap: $/ 1 / 3^{\circ}$ blict rubber jacket tilers.

| Type | Cond. | O.D. | Per Fl. | $1 \mathrm{Par}_{8}$ |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 8452 \\ & 8453 \\ & 8454 \end{aligned}$ | $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | $\begin{aligned} & .245^{\circ} \\ & .265^{\circ} \\ & .265^{\circ} \end{aligned}$ | $\begin{aligned} & .05 \\ & .06 \\ & .07 \end{aligned}$ | $\begin{aligned} & 3.97 \\ & 4.85 \\ & 5.73 \end{aligned}$ |

## LITZ WIRE FOR RF COILS

7 No. 41, 2 nylon wraps.
Bolden $8817-100 \mathrm{ft}$. spool.
26

## TEST PROD WIRE

No. 18 flexble and limp. 65 No. 36 tinned; cotton wrap, rubber overall; red or black. Specify color.
8898-5000 V. ins., $140^{\circ} \mathrm{OD}$
$14{ }^{1} \mathrm{pkg}$ ( 7 ' red \& black)
394
8898-10,000 V. Ins., $230^{\circ}$ OD.
$41 / 2$

| Bulk |
| :--- |
| 100 per ft. ft . |

.3 .48


SHIELDED MICROPHONE CABLES

|  | - |  | MULTIPLE |  |
| :---: | :---: | :---: | :---: | :---: |
|  | CONDUCTOR |  |  |  |
| Nos. $8423 \& 8424$. No. 20 flexible strander (26x34) tinned copper. Cotion wrap; rubber insulation, color coded. Rayon braid, tinned jacket. |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Type | Cond. | Por Fto | Per 50 Ft . | Pe |
| $8423{ }^{\circ}$$8424{ }^{\text {a }}$ | 3 | . 10 |  |  |
|  | 4 | . 115 | 4.70 | 23.6 |
| $80^{\circ} \mathrm{O}$ |  |  |  |  |

## CARBON MIKE CABLE

( $\quad \begin{aligned} & \text { 2-conductor, } \# 22 \\ & \text { stranded, tinned cop- }\end{aligned}$ ination per, polyethylene insulation. Cabled with cotton brafd. Tinned copper braid shield; ehrome vinyl plastic jacket. and remaining conductor connected to shield. Belden $8422 \ldots . .$. . . . . . . . . Per ft. 81 $25-\mathrm{ft}$. Coil
$100-$ Ft. oCL
SINGLE CONDUCTOR MIKE CABLES
No. 25 tinned copper and steel, fellulose yarm braid; polyethylcne insulation; tinned copper braid shield; chrome vinyl plustic jacket.

 | 84117 | 37 | 1440 | .05 | 1.27 | 2.17 | $\overline{2.26}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 8401 | 25 | $.200^{\circ}$ | .07 | 1.47 | 2.79 | 5.69 |
| $8410^{\circ}$ | 33 | .245 | .085 | 1.91 | 3.87 | 7.06 |

SHIELDED PHONO-PICKUP CABLE
No. $24(16 \times 36)$ stranded tinned flexible cable. Rubber ins. ; copper braid; cotton braid overuli. $095^{\circ}$ OD.
Belden 8431 -Bulk, Per ft.
100 ft .
spool
$31 / 24$
BELDEN TWIN LEAD

 Numan tinned, one bare. 28).

Belden 8225.
. . Perft. $21 / 2$ \& Belden 8224.150 ohm twin lead. Per tt. $21 / 2 \mathrm{f}$ Belden 8222.72 ohm receiver trpe. Per ft . 2 f

## CATHODE-RAY TUBE LEAD CABLE

 No. 20 tinned. Polyethylene ins.; cotton Flex. strand. 7 No. 28. $10,00 \mathrm{~d}^{\mathrm{V}}$. ins. . $136^{\circ}$ OD.Belden 8869 Per ft. ${ }^{36}$
100 ft . spool.

## NO. 8868

Same as abore but 20,000 volts ins., $198=01$. Belden 8868

Per ft. 3.86 100 ft . spool
...... 3.80
ANTENNA CONTROL CABLE
For use with tele vision antenna rotators. Tinned copper:

|  | Fision <br> tors. <br> flexi <br> tinyl <br> jecket <br> tor co <br> allel. | For use with television antenna rota- tors. Tinned copper. flexible stranding: sinyl plastic insula: tion: overall vinyl jacket. Each conductor color coded, parallel. |
| :---: | :---: | :---: |
| Type | No. Conductors | Perfi. |
| 8484 | 4 | . 036 |
| 8485 8488 |  |  |

## AMPHENOL \& FEDERAL TWIN LEAD AND COAXIAL CABLES

## IWIN 300 LEAD 300 OHM TWIN LEAD

Amphenol $14-358$ represents the latest design in RF transmission Hine. Provides proper mateh of antenns to all standard 300 ohm input FM and television receivers. 300 ohm recommended by RMA for use with television recelvers in broad and operation. For use indoors or outdoors. P17130-Amphenol 14-358 Twin Lead............. Per ft. $21 / 2 \$ ~$

## FEDERAL SHIELDED 300-OHM LINE



## WIRE-INSULATION-COIL FORMS

## HEAVY RUBBER CORD

Type SJ -The thlek belt of flexible rubler that ewpers the conductor acts as a sinouth oil-resisting, abrasion-juruof high' quality" "jneket.

| No. | Gauge | No. of Cond. | Par Ft | 100 Ft . |
| :---: | :---: | :---: | :---: | :---: |
| P20945 | 18 |  | . 05 |  |
| P20946 | 16 | 2 | . 06 | 5.40 |
| P20947 | 14 |  |  | 14.60 |
| P20948 | 18: | 3 | . $071 / 2$ | 6.75 |

## POSJ AND POT LAMP CORD

TYPE POSJ: IRubber covered 2 conductor 418 zip cond. Ideal for lamp cord or sueaker
 TYPE POT: Similar to ebove, but plastic


## PUSH BACK WIRE



A high grade, heavily insulated cable. Rubber jacket of each lead differently colored for casy demtifcation. 20 pauge, stranded tin| copper wire. Cotton braid overall. |
| :---: |
| No. Wires Perft. 100 Ft. |

 Excellent arade. No. P16051 - 25 ft roll …......296 296 P18338_
$1 / 216.8011 . .674$

## SPAGHETTI TUBING ON SPOOLS

A flexible tubing, hearlly varnished, in attractive colors. Average dielectric strength. 5000 volts. Wi11 acconmmodate from No. 10 to No. 18 wires. Supplied in 20 foot
lengths on handy gpools. Red. sellow, brown, green, lengths on handy gpools. Red. yellow, brown. green,
black- sperify color desired.
824

## ASSORTED SPAGHETTI $8^{\prime \prime}$ LENGTHS

Bundle of twenty-four piecrs. Made of strong, cambric tubing. Supplied of strong, cambric tubing. Supplied
in axsorted diameters and colors.
P1 5959 . P15859

18
Highest grade cambric tubing. In red. yellow. areen or black. No. 12 gause.
P16860 Specify color 104
30 -inch length $30-$ inch Jenuth
Round tinned copper bus bar. No. P15965-100 lgths. 3.6038 \& 10 krths.

## SPAGHETTI TUBING



## Per Bundle .

## INDOOR ANTENNA WIRE

Multi-strand flexible copper wire, corered by
a mercerized cotton braid, For incloor or AC-DC an-
tenima installations.
P16165 26 ft . hank. . . 178 P16155-26 ft . han P18167-100 ft. coil.

726
POLYSTYRENE RODS AND SHEETS


RODS: Expertly molded from pure lowlous polystyrene Arailable in 12and low-loss parts.
SHEETS: Made of low-loss nolystyrene.

| Stoch No. | Dlameter | Esech |
| :---: | :---: | :---: |
| $\begin{aligned} & \text { P8015 } \\ & \text { P8067 } \end{aligned}$ | \%: | 2\% 28 |
| P8068 | \% | . 178 |
| P8069 | 10: | . 30 |
| P88016 | 多: | . 488 |
| P8070 | $1{ }^{\circ}$ | $\begin{array}{r}.68 \\ \hline 1.26\end{array}$ |
| SHEETS |  |  |
| Stosk No. | Dimenitomi | Each |
| P8025 | $4 \times 8 \times 1 / 0^{\circ}$ |  |
| P8028 <br> P 8026 | $4 \times 8 \times 3$ \% | . 20 |
| P8027 |  | . 24 |

SINGLE CONDUCTOR CRYSTAL MIKE CABLE
Flexible stranded tinned copper with tinued men copper braid slield; cotton wrap and laceuered 20842 Dis 2Ra*. Per Foot su-Fout Roll..3.33 P 100-Font il 7

## CRYSTAL AND VELOCITY MIKE CABLE

 Low impedance, 2 conductors, color-coded. in abrusiou-proof tinued copper shieldingOuter copering rubber. P16079 Publing rubler. ...... Por Fi/2 50-Foot foli. .3.38 100-Fuot Itoll. .6,42 3-CONDUCTOR SHIELDED CABLE
Three color-coded stranded conductors in tightly Woven tinhed copper shield. $1 / h^{\prime \prime}$ thick outer
P16145

## -

100 -Fut Jer Ft. 8 , 80

## FINEST GRADE MAGNET WIRE

llighest quabity oopper wire. Excellent for rewinding power transforners and chokes, windling coils, or for any other radio and electrical purposes. In plain enameled aud double ention corered types.

| Stock No. | $\begin{aligned} & 8.5 \\ & 5120 \end{aligned}$ | Ft Your Cost stoch ens Fi Yaurcost |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 16. | Y | 1/2L5. | No. | S120 | Lb. | \% Lb | 1/2Lb |
| $\overline{\text { P20950 }}$ | 16 | 125 | . 31 | . 51 | P20956 | 28 | 2030 | . 15 | . 71 |
| P20951 | 18 | 202 | . 31 | . 55 | P20957 | 30 | 3220 | .49 | .79 |
| P20952 | 20 | 319 | -33 | . 58 | P20958 | 32 | 5100 | . 56 | . 85 |
| P20953 | 22 | 506 | . 33 | . 59 | P20959 | 34 | 8080 | . 62 | 1.04 |
| P20954 | 24 | 804 | . 36 | . 62 | P20960 | 36 | 12800 | . 79 | 1.26 |
| P20955 | 26 | 1280 | . 40 | . 68 | P20961 | 38 | 20300 | 1.04 | 1.54 |
| Double Cotton |  |  |  |  |  |  |  |  |  |
| P20973 | 16 | 122 | . 32 | . 62 | P20979 | 28 | 1630 | 74 | 1.34 |
| P20974 | 18 | 192 | . 36 | . 68 | P20980 | 30 | 2420 | . 33 | 1.54 |
| P20975 | 20 | 298 | . 40 | . 77 | P20981 | 32 | 3500 | 1.10 | 1.89 |
| P20976 | 22 | 464 | . 51 | . 88 | P20982 | 34 | 4920 | 1.34 | 2.44 |
| P20977 P20978 | 24 26 | 711 1080 | .58 .62 | 1.00 1.10 | P20983 | 36 | 6660 | 1.73 | 3.08 |

 tems. "ै-conductor NU. 10 gunge P $20895-$ Per Finot
$31 / 24$ 100-Fuot Roll P20896-3-conducior No. 19 Per Foot Moil . . . . . . . . . . . . . . $31 / 75$

10 -stranded (No, 18) wire, live ribber corered. Tinned shield. P16240 Per Fioot 100-Fuot Rol

## THERMOPLASTIC HOOK-UP WIRE

New thermonlastic insulation strips clean, is oil and acid resistant. Will withstand $180^{\circ} \mathrm{F}$. For use where rolt breakdown test. U.L. approved. Arailable in Black fed, Blue. Green, and Yellow-apecify color desired. Red, Blue, Green, and yellow-specify color desince.
Shper wt, per 25 feet: 4 ounceas
P18382- 25 ft so. 20 solid. . . . . . . . . 32 , P16383- 100 ft so. 20 Solld. P16384-105 ft. No. 20 Stranded
P1638E-100 ft. No. 20 Stranded
1.28


COPPER AERIAL WIRE
Made of the finest copper obtaimable. All rolls cuar. anteed to be full length and standard cauge as spectBare Stranded-75-Ft. Coils

| Stock No. |  |  |  |
| :---: | :---: | :---: | :---: |
| Slie | Por Coll | 10 Colls |  |
| P16041 | $7 / 26$ | .38 | 3.42 |
| P16042 | $7 / 24$ | .53 | 5.00 |
| P16043 | $7 / 22$ | .76 | 7.20 |


| Enameled Stranded - 100-Ft. Coils |  |  |  |
| :---: | :---: | :---: | :---: |
| Stoch No. | Size | Parcoll | 10 Colls |
| P16117 | 7/22 | 1.37 | 13.00 |
| Solid Enameled-100-Ft. Coils |  |  |  |
| $\begin{aligned} & \hline P 16128 \\ & P 16119 \end{aligned}$ | No. 14 No. 12 | 1.93 | 12.41 |

## AMPHENOL POLYWELD " 912 "

Colorless, transparent, readr to use. Polyweld joins, two sections of
nolystyrene. It containg wolvents that actually "weld" surfaces into single unit. Will not disturb elrecutt constants. Recommended for UHE and VHFP. Applied by dipping or with a brushi. Dries sufticiently in four ${ }^{10}$ P $15363-40$ mith
"01 $16-2$ " Thinner for 012
384
P15364-2 0 \%, bottle with brush

## SMOOTH COIL FORMS

Blank bakelite forms, for winding coils.
P10060 \& prong

| P10061 |
| :--- |
| P10062 |

## TRUTEST RIBBED COIL FORMS

High qualify low-loss bakelite. Ribbet for air spaced winding Knurled flanges: groored for ware band index. Eight ribs. Undrilled. Medium size, $1 \% \%^{\circ}$ diax3 $\%{ }^{*}$ : Small, $13 / /^{*}$ diax $2 \%^{*}=$

| Small Slize |  |  | Medium Size |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Prongs | Each II | No. | Prongis | Each |  |
| P9988 | 4 | .34 | P9630 | 4 | .4 |  |
| P9989 | 5 | .39 | P9632 | 5 | .44 |  |
| P9990 | 8 | .39 | P9632 | 6 | .44 |  |



## SOLDERING IRONS AND ACCESSORIES

## DRAKE INDUSTRIAL IRONS - UNDERWRITERS LISTED $\rightarrow 100$ WATT-No. 600-10 <br> For close quarter soldering of switchbosids, radios and other litht manu-

 facturing jobs. With ffif. cord, stand, \% "tip. P15164-Drake No. 600-10. Shps. we. 2 lb5.29

P15152-Heplaqument tip for aliore iron
60 WATT-No. 400
A compact iron for tight cormers and delicate instrunuent wiring. $9^{\prime \prime}$ long,
 P14835-Drake No. 400 -Shpg. wt. 1 lb . P15157-Replacement tip for above. 245

## DRAKE DELUXE SOLDERING IRON <br> $0.1-0$ O 100 WATT-No. 325

For general radio work. High guality nichrome wire on amber mica. Nickel plated. Complete with 6-5t. cord, "Maric Cup" stand and \%" tip. Shipping weirht $11 / 2 \mathrm{lbs}$ P15182-Drake NO 325
3.53

P15152-lReplacement tip for above

## DRAKE

SPECIAL IRON
60 WATT - NO. 315
An excellent iron for lisht work. Resistance wire on porcelain tubes. With 6 -ft. cord and plug and small stand.
1.47 15150 -Drako No. 316-Nhpe. wt. 1 lb 53c

UNGAR 776 ELECTRIC SOLDERING PENCIL


So small it can be handled as easily as pencil. Weighs only 3.6 oz. Over all lensth $7^{\prime \prime}$. 420 watt iron that heats in 00 seconds. Convenient for tight, hard-to-reach corners. Has heat-resistant plastic bandle Operates on 110 rolts, AC or DC. UL, approved. Dses any tip listed below P15575-Handle and Cord. 86 c In Lots of 10, Each Cord........ 710 In Lots of 10, Each

## UNGAR REPLACEMENT TIPS

| No. | Type | UNGAR REPLACEMENT TIP |  | Lots of 10, Each |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Description Flg. | Net Each |  |
| P15576 | 530 | Standard Copper, \%*"...... A | . 86 | 71 |
| P15577 | ${ }^{5} 39$ | Chisel Tip, \%/" extra hot ... B | . 80 | . 71 |
| P15578 | 538 | Chisel Tip, \%/ . . . . . . . . . ( | 88 | . 71 |
| P15579 | 537-S | Strajsht Pencil, 1/6 ....... D | . 86 | .71 |
| P15580 | 540 | Brass Marking . . . . . . . . . . . E | 88 | . 71 |
| P15640 | $837-C$ |  | 86 | . 71 |
| P15641 | 1286 | Pyramil Tip, Ri-Heat \%o" . A | 1.08 | . 86 |
| P15842 | 1230 | Chisel Tip, Hi-Heat, /4 ${ }^{\text {c. . . B }}$ | 1.06 | . 86 |

## UNGAR ELECTRIC PENCIL AND SOLDERING SET



New! One complete combination set of two former popular units for home craftsmen and hobbyints. Provides a practical means of creatlisted heating 4 interchangeable brass tips for forming, burning or embossing plastic, wood, leather, velvet. cork, foil, etc., plus two copper tips for soldering: five colors of metallic foil; emery cloth; wood catalos: instruction folder and soldering direction sheet.

1.79

## KESTER SOLDER AND FLUX



Uniform compound of tin and lead witb evenly distributed and free-flowing flux.

## \% \% " 17 P14878 17 Thin-Core

1b. Spool P14857 516. Spool P14859 5.60 P14879 5.60 P14852 5.15 P15278-Kester Paste Flux. Non-corrosive. 2-oz. 12 c

## KESTER "Resin-Five" SOLDER

Absolutely non-corrosive and non-ronductive. Easily solders zine, brass, nickel plate, copper and ferrous alloys.
P14741- $7 / 3$ ?", diameter- 1 lb . spool
1.16

P14742-\%2", diameter-5 ib. spoo 5.60

P14743-M1" diameter-1 ih. spool 1.19
5.75

## ERSIN MULTICORE SOLDER

Muxjumm flux action at correct solder melting point. Fast melting, noncorrosive, non-sticky, non-toxie. 3 -core construction insures constant flux liss excellent cleansing action. $40 \% \mathrm{tin}$, $60 \%$ lead. No. 16 gause. .48 P14801- 1 lb. spool
P14802-7 lb. spmol
10.08


## PETITE IRON

Compact, lightweight soldering iron designed for light wiring, tight corners and really remote spots. tip. Length $6^{* \prime}$. Complete with cord and plue cord and plue
P14836-Shpe


## WELLER SPEED SOLDERING IRONS <br> STANDARD MODELS

With Dual Spotlight

- No walting-Heats, Cools In 5 Seconos
- Easy to Handle-Gets Ints Tlght Corneps - New, Plstol-Type Grjp Is Easy to Hold - Tips Are Easy to Tin and Stay Tinned

These soldering tools operate on the reaistance welder prin ciple of ligh current at extremely low soltage. No more waitins for the iron to heat murcly pull the trigger when "feel" that's impossible to have with convantional tspe Irons.. No bulky tip... no working in dark. Spotlight lets you see where ou are working. Tips stay tinned, solder easily and can be bent by hand.
115 V., 60 cycles A.C.
P15183-Model WS-100. 100 Watt, Single Heat, Shipping weight
8.73
I. 3 bs of 8 , Each
7.89

P15186-Model WD-135. $100 / 135$ Watt. Dual Feat, Wt. 3 lbs. Net 10.7 Lots of 6, Each
P14880-No. 7135 Tlp. Pack of 2 for WS. 100 \& WD-135 Irons .... 250 P15188-No. 7325. Fasterting Stud for ALL. Weller Irons.
P14850-No. 7300 Ohisol Tip. For S107 \& D107 Irons (Pkg. of 2) 25c


## AMERICAN BEAUTY 100-WATT IRON

NO. 3138
An excellent fron lor industrial use. Hearils niekel plated and polished metal parts. With 6-ft. cord and stand. $12 \%$ L.
P15171-No. 3138. With \%/4 Tip. Wt. 2 lbs.
5.83


## AMERICAN BEAUTY THERMOSTAT STAND

 Merely set adjustable thermastat to desired heat. Stand automatically maintains soldering fron tempera-ture without heat variatior or overherting. Molded plastic body, Complete with cord and plug and receptecle for iron. Capacity up to 600 watts and 240 volts.
P15169-No. 475 . 3 lbs. 4.41


## ESICO SOLDERING IRONS

High grade elements, finest mica inaulation. With cord, stand and tip. or AC or DC. UL approred.

Soldering Irons


P14900- f0 watts, s" tip
1.91 Extratips 24 c
P14900- 60 watts, \% tip ...... 1.91
P14905-100 watts, \%" tip 2.56
3.20

## ESICO 200-WATT SOLDER POT

Jquipped with pilot light that indicates wheu pot is heating. Can be screwed
p15554-Shis. wt. $3 \% 1 \mathrm{hs} .4 .85$

## ESICO THERMOSTATIC STAND

The iron can be maintained at any desired temperature while in the stand. Thermostatic control makes it impossible to over. heat iron or burn ous its tin. When iron take rona having up to $1^{\prime \prime}$ diameter tips.
P14885-Shpg. wt. 3 lbg
4.20


## KWIKHEAT 225-WATT IRON

Heats up in 90 seconds. Has
builk-in thermostat. Handle
stays cool. Can be used with interchanceable tips shown below. For $100-12$ solts A.C. CL appored, 1-year guarantee.
p15121-Iron with No. 1 Tip

## KWIKHEAT INTERCHANGEABLE TIPS

No. 5 is aluminum, others are forged Tellurium.
$0 \longrightarrow 4-1 \sim \square$
P15122-No. 0 (Light) P15126-No. 4 (Heary) P15123-No. 1 (Medium) P15127-No. 5 (1.oz. Pot)
Any Tip, Each
1.13

## ELECTRIC DRILLS, TOOLS, ACCESSORIES



## BLACK \& DECKER $1 / 4^{\prime \prime}$ ELECTRIC DRILL



Powerful, high quality 2250 IRPM motor equipped with 3 -jaw Jacobs hex-key chuck. Drills holes in steel, cast-iron, tuminum, brass, sheet metal, wood, plastic, etc. 'Also drives countersinks, wood sulers, wire
bruskes and numerous sanding cleanins brushes and numerous sanding, cleaninis and polishing accessories. Instant relense cast 110 v a luminum housing. 3" long. For P15797-Shyg. wi. 5 the.
22.95


## GILBERT $1 / 4^{\prime \prime}$ ELECTRIC DRILL

An eronomy model suitable for medium home and shop jobs. Has self-tichtening chuck atta hed to precision-built 1400 RPM motor. Equippned with ON-OFF togrle switch. Easy to balance with the convenient pistal-grip handle. Enclosed in strong, die-cast zinc housing with etractive aluminum finish. Op erates on 110 voits. 10 eycles AC. Shlppine
weight 4 lbs. W15796 4
11.25

WMITTLE SAW ATYACHMENT FOR HAND DRILLS Instantly converts any $1 / 6^{\prime \prime}$ electric hand drill for sawing, flling, peening. riveting or embossing. Just insert shaft into drill chuck. Small and compact - rets into places where ordinary tool cannot reach easily. No special skill required to operate. Uses broken hack saw blaces. sade of case hardened parts with no gears or shafts
to wear out. With Allen head wrencl to wear out. With Allen head wrencli

11.05


## 5 TO 1 RATIO GEARED CHUCK

 Converts any $x^{\prime \prime}$ capacity electric drill to 1/1v" capacity. Reduction zears reduce RPM ratio five to one which increases power of $3 / 2^{\prime \prime}$ chuck knupled shank into the chuck on any $1 / 4$ ". \%o" P9 9698 - 8 hpg. wit. 4 lbs.
9.53

## G.M. CO. SMALL MOTOR CHUCK ARBORS

These arbors fit directly onto the shaft of any small motor in place of the pulley. Equipned with flange and locking nut to hold grinding whee's, circular saws, bufting wheels, etc. Also has 1/6" chuck with three hardened jaws. Each Motor shaft

Each
1.47
1.58
1.58


## ELECTRIC MOTO-SAW

Likhtning fast - makes 7200 strokes per minute and cuts 1 foot a minute through wood up to *" thick! The only electrically driven hand jig saw that saws the most intricate patterns, cuts at any angle and works on assembled projerts. Automatic awten in the handle instantly stops and hlete with cord and plut and cycles AC. Supplied complete with cord and plug and 3 blades. Shipping weisht P15352 5.85

P15353-Extra blades for abure
2 for . 60

## ALL-PURPOSE VIBROSPRAYER

Fiven amateurs can produce a professional looking paint job with this melf-contained spraying unit. Sprecially desisned to peermit one-hand operation. ounce conaplete toually adaptable for spraying other liquids sirch ns light oil, insecticides, DDT, ete well as paint. A well-made sprajer that will cive years of useful service. Operates on 110 volts, 60 cycles Weisht $\& \mathrm{lbs}$.
P15619
In Lots of 6
7.47

Each 6.72


## G.M. CO. ALL-STEEL HOBBY LATHE OUTFIT

Consists of $03 / 2$ " high lathe head with $1 / 2 \times 6 \%$ " shaft accuratels turned and threaried at both ends with two fingees and ults for grindstones, bufting wheels and scratch brushes. $/ z^{\prime \prime}$ capacity chuck with 3 spring controlled jaws hold drill in exact center. All steel unbreakable complete naval brass bearings for shaft. Complete outfit includes: 2 osseeed pulley; wire scrateh brush with securely held
 Wires; 4" laminated cotton buting wheel; oak tanned leather belt complete with coupling; one block of high grade polishing compound. Red enamel
P22399-Shlpulins weitht 6 ths.

## FAIRCHILD FLEXIBLE SHAFY TOOL

A versatile engraving, buftool krind ing and polishing $1 / 20$ IIP motor. Prencis is -size handptece motor. Pencil-size tools supplled permit fine work of professional quality. Flexible shaft is 3 feet lovig and corered with plas. tic. Takes any standari "/a" or 4 " shank tool.
Complete with nccessory tools, two wrenches, fiexible shaft, motor and brack et for motor all in sturdy wooden case. Operates on
$110-120$ volts, AC or DC.


P16645-Shipping weicht 7 lbs.
15.95

## GENERAL DRILL

## GRINDING ATTACHMENT

Precision-built tool designed for accurate repointing of twist drills. Adjuatable for all popular drill point ancles, including countersinks. Correctly resharpens Wist drills of the followink sizes: $1 / 3$ " to $z^{\prime \prime}$ frace 3.0 to 19.0 nillimeter size P15759-Shipping weisht 2 lbs
4.80


NEW! BURGESS ELECTRIC JIG SAW SANDER AND FILER - Built-In Automatio Blower
"Every Directlon" Saw Blade

- Rotary 3400 RPM Motor

Sanding Dlsc with Adjustable Table

- 45-Dogree Tili Saw Table
- Buils-In cooling Fan
- Portable - Use is Anywhere

Ule of the finest small power tools for the home workshop, Cuts throuch $1 /{ }^{\prime \prime}$ "wood and awing edge free from savdust and flings. 340 dearees revolvinu saw blade kuide ansembly for extra lonk cuts. Jarge saw table tilts 45 degrees risht or left for beveling. Replaceable karnet sanding disc. Sanding table ilts 4.5 dearees up or down for bevel sanding. Fast precision flling is accomplished by using
 a ${ }^{2 / 4}$ "shank, s/1" long standard bench machine fle. Saw table is $8 \times 5 y^{\prime \prime}$ and has $81 / /^{\prime \prime}$ throat capacfty. Overall size $8 \times 7 \% \times 11 y^{\prime \prime}$ hikh. 115-125-volt, B0-wycle motor "With UL approved push button switch and $6-\mathrm{ft}$. rord and plus.
P22400-Burgess Model J $\$ 900$. Shpg. wt. $5 \%$ lbs.
12.95

ADCESSORIES FOR BURGESS JIGSAW
P22401-l'ackage of 12 Sbw Hlades . ................................. 1.00
P22402-Package of 6 Sanding Dises
P22403-Half-Round File ....................................................... . . . . . . . 1.00
P22404-Triangular File

# PLIERS, SCREW DRIVERS, WRENCH SETS, NUT DRIVERS 



ALL-STEEL MULTI DRAWER
Convenient and economical storage for fittings and small parts. Each unit constructed with tongue and slot deshined to interlock "th other units at ton, bolton or side. Units may be hit ted and securely locked around exist Each drawer has handy pull and holder for contents card. Ample drawer depth permits storage of reasonably large parts. Two-tone green finish, all steel construction. Size: $2 \% \times 2 \% \times 5^{\prime \prime}$. Wt. 10 oz .
P22381-10 for 2.70 . Ks.
$30 c$

## KRAEUTER STANDARD PLIERS

From Kraeuter's extra quality "Standard" series-made to stand up under severe strain. Drop forged from extra-high grade steel with "blue temper" finish. These are not the lower-priced "K" tools.


## DIAGONAL CUTTING PLIERS

P14942-41/2" Length

## WIRE STRIPPING DIAGONAL CUTTER

Narrow head and notched cutters for stripping fine wire 062 in diameter. Spring in handle makes this a very fast cutting tool. Blue temper finish. Length $61 / 2$
P14947-Shipping weight 9 oz .
2.58


LONG NOSE PLIERS
Side-cutting blades with choice of jaws. P14946-5" Length, Short-Jaw P14945-6" Length, Lons-Jaw

## ELECTRICIAN'S CUTTER

Modified fatted lap joint cutters. P14935-61/2" Length
2.09 P14936-8" Length

## GENUINE KLEIN PLIERS

Made of the finest alloy steel, individually tempered for lons-life cut-


OBLIQUE 5" CUTTING PLIERS
Wire stripping notch. lap joint. P15223-Narrow Head
3.00

LONG NOSE SIDE CUTTERS
Pointed slender nose.
P15221-0" Length
(O NA LONGED NOSE PLIERS
For work in close quarters.
P16224-8" Length
3.25

## SCREW DRIVER SET

Consists of 5 tempered, ground blades and chuck with amber handle, s standard screw driver blades: $31 / 2 \times 1{ }^{\prime \prime}$ "tip.
 Pl, $3 \%$ "L., P2, 4" IL Slotted chuck accommodates specially designed blades
for positive fit. P14712-In L

## RECESSED HEAD SCREWDRIVERS

Made with sure-grip wooden handles and steel blades


## XCELITE SCREWDRIVERS

Polished chroine vanadium blades with accurately ground tips. Tough, shockproof amber handles. Weight so z.



## TOOL STEEL REAMERS

Hide of heat treated steel. Tapered shank has "T"" handle for easy hand operation. Enlarges 4/" " to $1 /$ " $^{\prime \prime}$ holes in wood; bakelite or soft
metal. Overall length $5 \% \%^{\prime \prime}$. D la. of point met
P15049
1.05

## AUTOMATIC PUNCH <br> Speedy, automatic and adjustable?. A singlehand operated punch that gives light or heary jupressions with merely the turn of a screw. Punch has replaceable points. Size: $4 / 1$ x 5 <br> P14981 <br> 2.85 <br> singlehand operated punch that P14981

No. Type Blade Size Each 16243 R-182 $2 \times 3 / 4$ tip 29 P15244 R-184 4 x 1//" tip . 32 $\begin{array}{lllll}\text { P15245 } & \text { R-180 } & 6 \times \text { xii tip } & .36 \\ \text { P15246 } & \text { R-188 } & 8 \times 1 /{ }^{1 / 2} & .39\end{array}$

## XCELITE SUPER NUT DRIVER SET

Contains most popular socket sizes from Hie" to *" in $1 / 12$ steps. Seven wrenches have plastic handles color coded for easy ilentiticaton. Made of polished hardened steel. Sockets are deep enough to hold two nuts at one time. Complete in metal holder that can be fastenid to wall or work bench b: screws which are
$71 / 2 \times 71 / 2 \times 21 / 0^{\prime \prime}$. IR ed wink is finish. P15247--Shpk. wt. $21 / 2 \mathrm{lbs}$.
4.24


XCELITE SHOCKPROOF NUT DRIVERS
Unbreakable, transparent umber handles insulated against 5000 V . Extra-deep sockets for legns studs. $6^{6 \prime \prime}$ long.
P15330-for $/{ }^{1 n^{\prime \prime}}$ hex nut P16328 for $\% / \mathrm{s}^{\prime \prime}$ hex nut P15331 - for $\}^{\prime \prime}$ " hex nut P15327-for $\% / 3^{\prime \prime}$ hex nut P15332 - for $\% / \mathrm{se}^{\prime \prime}$ hex nut P15333-for $11 / 2^{\prime \prime}$ hex nut P15334-for \%" hex nut Any Above, Each
P15338-for $7 / 10^{\prime \prime}$ hex nut P15336 - for $1 / 2^{\prime \prime}$ hex nut Wither Above, Each


## HOLLOW SHAFT

## TYPE

Permits removal of nuts from volume controls and other panel equipment with shafts up to $5^{\prime \prime}$. Ideal for nuts blocked by bolts or studs.
P15344-for $y^{\prime \prime}$ hex mut 79 C
73c P15329-for $\% \mathbf{c}^{\prime \prime}$ hex nut . . 82c

## STEVENS -WALDEN

"SPINTITE" WRENCH SET
Invaluable for radio and electrical servicemen. Well constructed of cadmium plated steel and hard wood handles. Designed to stand un under years of regular use. Set includes seven wrenches in a convenient holder. This set will burgle the following size nuts
 1/4". Weight 3 lbs.
P16570


## DELUXE CHUCK TYPE

 "SPINTITE" KITConsists of chuck type handle for use with wrench shanks, berew
 shanks: $1 / 6^{\prime \prime}$. Y' $4^{\prime \prime}$ and ${ }^{3 / 4}$ " by 4 screw drivers; 1/20 to $2 / 100^{\prime \prime}$ ream awl; 7 " long nose, $\mathrm{\sigma}^{\circ}$ diagonal cut ting pliers and neutralizing align rent wrench. In leutherette roll. P15572-Wt. 3 lbs. ..... 9.98 P15571-Less pliers and neutralizer.


## RADIO WRENCH SET



Made entirely of high grade steel and
28G品 finished in white nickel. Case hardened

P16593-Shpg. wt. is lb.

## TOMAHAWK SOCKET WRENCH SET



Handy, compuct little set. Excellent quality, Ideal for hard-to-reach Hade Consists of $31 "^{\prime \prime}$ long handle and six hexagon sockets: the"

P16580-Shipping weight 1 lb

## S-PIECE WRENCH SET

mon stull open-eld wrench sat with 10 different位 oriel tool steel treated and hardened for extra strength. Wing-nut fastened for ease in carrying.
P14887-Shippins weight 1 lb .

## NEW SYIVANIA SOCKET WRENCH KIT

Every serviceman, hobbyist and home owner will want this clever and efficient tool kit Eight, chrome plated steel interchangeable sockets from til to to l snap on to a precision-bulit ratchet handle. It turns both ways with the sion for hard-to-reach work. Also has offset and screwdriver with two-way ratchet action and $3 \%^{\prime \prime}$ handle. Supplied complete in a handsome plastic, pocket-size case. Shipping we fight \%
P15282
2.50


## PUNCHES, CUTTERS AND STRIPPERS, HAND DRILLS

PIONEER SCREW ACTION SQUARE HOLE PUNCH
New selfaligning chassis punch with die-shearing action Operates on screw principie for punching power. Takes several full cuts or niobies to eniarge frst aquare hole to size desired. Cuts square or angular holes. High grade tool steel Ar. shipe. wt. 10 oz.
P15076- $4 / 4$ " Square Hole Punch
2.89

P15077- \%" Square Hole Punch
 3.18 P15482-3/" Square Kole Punch
P15463-1" Square Hole ${ }^{\text {Pu }}$ 保ch

## PIONEER KEYED PUNCH

Keyed 11\%." punch for Amphenol type sockets.

## PIONEER ROUND CHASSIS PUNCHES



Quickly cuts accurate, round holes in chassis or front panel. An ordinary wrench serves as turning power for the punch Holes are smooth and perfect, giving a clean commercial look

Stock No.

| 8120 | Each |
| :---: | :---: |
| 1\%" | \$1.91 |
|  | 1.91 |
| $11 / 8$ | 1.91 |
| \%" | 1.91 |
| \%" | 1.91 |
| $1^{\prime \prime}$ | 2.11 |
| 11/8" | 2.25 |

Stock No.
P15807
P1588
P15809
P15810
P15811
P15882
P15813

|  |
| :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Each
2.25
2.25
2.25
2.25
2.25
2.25
2.55
2.88

GENERAL PURPOSE STEEL CIRCLE CUTTERS


Provides easy, accurate method for cutting clean circular holes in brass, aluminum, steel, wood, bakelite, etc. Use with hand brace or slow speed drill press. Heat-treated steel. Average shpg. wt. $1 / 2 \mathrm{lb}$
No. Type Cuts Hole Shank Type Work


## DELUXE COIL WINDER WITH ACCESSORIES

Easy-to-use set winds honeycomb, spiderweb and solenoid ameters - equal in aptearance to a fuetory job. Also suitable for winding chokes, transformers and filter inductors. Indicator counts number of turns on coll. Supplied with accessories including wood spools, metal pesholders and extension for mak. ing long solenoid coils. Instructions included, but less coll P14725 ................ 4.95


Three ${ }^{1 \prime \prime}$ diameter dies (4-30, 6.92, 8-32) with dle stock: three tans (4-36, 6-32, 8-82) and 3 matching rap drilka for these taps. With tap holder and mahagany case. P14904-Wt. 3 lbs. 2.70


REPLOGLE DRAFTING MACHINE Cuts drafting time by one-third! Combination 90 angle calibrated scale moves at any angle to any noint on the masonte board. Eliminates use of T square, protractor and triangles. Makes draw. ngss up to $16 \underset{\text { ras }}{ } \mathrm{X}^{22^{\prime \prime}}$. Includes steel arnis, fittings, rubber feet and $17 \%$ P15092-Wt. 8 lbs.
8.50

## ALL-PURPOSE HACK SAW

Fits where ordinary hack saws canno
be used. With $71 / 2$ " tapering blade. Shpg. wt. 10 oz P17278 P17279-Exitra blade

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## antenna rotators and mounts



## ALLIANCE "TENNA-ROTOR"

Rotates amateur beam and TV sntennas directly to signal path. Compact, low cost unit that's easy to install and operate. Provides $380^{\circ}$ rotation at 1 RPM. Instant Start-Stop or Reverse at any point. Auto. maticalis stope arter completion of 360 rotarion. Hear dur ac special clamp mechanism mounted in waterpi dimer suparts ${ }_{20} \mathrm{lbs}$. System includes Rotator, Remote Control Cnit and instructions. Less connecting cable.
and instrutions.
Slum. wt. 12 Ihs
ATR. List $\$ 3495$
. NET
20.55

Model DIR - Indicator "Tenns-Rotor". As above, but with Direction Indicator on control box to show in stantaneous antenne position.

NET 26.43 P16064- List \$44.95 Fianductor Cable for ail Alliance "TennaRotors"
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## ALLIANCE DE-LUXE "TENNA-ROTOR"

 Model HIR - Remote control, de-lure automatic antense rotator, which requires only the setting of pointer on the indieator dial. Antenne, turns and stops at exact point set. tion while antenna rotates. Heary duty AO tion while antenna rotates. ingtanty reversible, RPM, lifetime motor, ingantly reversible, ${ }^{2} \mathrm{Ran}^{\circ}$. Moisture waled rotator mechanism: stainleas steel bearing inset. Simple to instali - requires no orientation. Completely accessible connections on control box. Uses 4 -conductor cable. For 110 volts 00 cycles 40 only. Rotates 20 lbs - up to 200 lbs. with special thrust bearing describelsbove. 14 lbs. List $\$ 44.05$ P21912 - De-Luxe Modal HIR.
26.43

precision control of antenna direction. precision for greater power and higher torque than usually arailable in reversible motors by use of new uni-directional motor. To prevent snarled or twisted no-loss sigusl energy transferred tarougs wothin silver contacts and slip rings within action - no backlash or coasting. In-line mounting of both antenna and supporting mast ofsets any unbalanced weikn condition. All gears and bearings are of precontrol box featurea dual-pilot lisht. logking pad, compass points, and rubber feet to protect your fine furniture. Audible clicks announce each of the sixty, sir dearee steps as your antenna unakes ons complete rotation. 115 Y AO operation.


## DUMONT MODEL T3C1 INPUTUNER



Covers standard FM broadcast band $(88$ to 108 mc ) as well as all TV channels ( 2 to 13). Highly selective and sensitive. Ideal for modernization of dual-channel
television recelvers. For circuits using 21.25 television recelvers. For circuits using
$M \mathrm{CO}$ sound IF and 25.75 MC video IF (direct replacement for most switeh-type (direct replacement for most awiteh-type chassis). "Quick location" detent mechanism for TV gwitching. Incorporates antenna tuning plus the new, univue 3 -wang Mallory Inductuner, which reduces tuning motion to any channel from maximurn of six to four turns. No loas of bandispread on high frequency channels. Sound i.f sygtem of TV set is employed as the FM receiver. Mechanically interchangeable with all tuner types it is designed to replace. "Pusla-on" dial and tuning knob askemble provide true singe contration in me appears on rim of tuning knob ACBA or ABO ais mixer-oweillator for wide band-pass ano-ohm input for antenns. With

30.87

## P24654 - Dumont Model T3C1.................. MOUNTS

PENN CAST ALUMINUM MOUNTS Heary cast aluminum universal roof mount of special alloy any position with the turn of a bolt. Patented tonkue sives frm support for masts $\%$ " to $1 \%{ }^{\prime \prime}$. Shippink weight " pounds.
2.09

## UNIVERSAL PEAK MOUNTS



PRA-148 - Cast aluminum peak roof mount with a patented bearing to adjust and lock at any angle and to any pitch of roof peak. Patented tongue for firm support to S2pg. wit. 2 pounds. 3.09 PRA-150 - similar to above but larger and stronger to R229001 masts from $8 / 4$ " to $2^{\prime \prime}$. 4.09 floating guy wire ring and collar that will permit jermanent fantening of guy wires, yet permit complete orientation of the mast. Will fit masts up to 1 sin ". Shurg. Wt. 1 lh .
1.06 P22903 GRA. 14

## C-D TELE-ROTOR

Powerful - handles up to 150 ponnd loads and masts to 2 in diameter. Heary duty motor and precision steel gears - reverses instantly, positive stop at end of rotation, Moves on twelre heavy duty bull bearings in two bly" diameter races. Streamlined, completely weather-pronf housing, factory lubricated for life. Compass type control
indication of antenna position, shown on flluminated dia frce. All-purpose design for mast, tower or platform mourtince. All-purpose design for mithst, compass type control bcr. Shpz. wt. 15 lbs . List $\$ 49.05$
P21914 - Model TR2 TELE.ROTOR...NET 29.37 P16058 - ATX-8, 8 Conductor Cable for above. .Per ft. 3c

## C-D TELE-ROTOR CUB

The fastest, easiest rotator to install with finger-tip control of most arrays, including double-stacks. Takes as much as 20 lbs . Features true in-line thrust between antenna and mast-the
steel shaft rotates on a case hardened steel shaft rotates on a case hardened
steel bail. In-line reamed oiless beargtee bain. in-ine reamed oliess bearinss keep the shaft in periect alignment
and assure smooth, tronblefree rotaand assure smooth, trolible free rota-
tion. Control cabinet has conspass type indicating meter for "hairline" tuning. indicating mpter for hairline tuning: AO. Shpg. wt. 12 lbs .
Complete with indicator type control box. List $\$ 44.95$.
P21899-Model 5028.. . NET 26.43 5 conductor cable for above P16059


## C-D TELE-ROTOR SUPERSTRUCTURE

A vital accessory when above rotators are attached to multiple-stacks and abnormally heavy antennas Gureflilly ensineered to offer muximum support for stacked Ty ary instainations beyond no 9 a stacked TV antennas. Fits any mast up to 2 inches OD. Quickly installed with the Tele-Rotor, the top froating collar allows smooth rotation of the upper weatherproof, will not freeze up). P22780-model TA3. Shpg. wt. 10 lbs . NET 11.73

## ICA ALL-POSITION MAST MOUNY

Adjusts to any position on roof, wall or corner. Mant fastens to mount before installation. Heary gauce cadminm plated steel. Preassembled, except braces. For masts up to 1 Hi" $^{\prime \prime}$ dia. $8^{\prime \prime}$ of set.
P22794 - Shpg. wt. 5 lhs.
4.73


CHIMNEY
AND
WALL
MOUNTS


Adjustable mounting brackets to fit any chimney. Can be iustalled without tools in 5 to 10 minutes. Over 30,000 pounds tensile streakth. Complete tools in 6 to 10
with strapping.
(A) Made of corrosion-resistant alloy
(A) Made of corrosion-resist
P21940 - Shjg. Wt. 4 lhs.
3.30
(B) Made of heavy plated steel
P22046 - Shps. Wt. 3 lbs....

## STEEL WALL MOUNT

This wall mount holds poles from $1^{\prime \prime}$ to $11 / 2^{\prime \prime}$ in diameter. and provides a 6 -inch clearance between the mast and the wall. Heavily plated steel construction. The wall mount is gupplied complete with all necessury instructions and
the hardware required to mount it. Shipping weipht 3 the har
$98 c$


## LARGE STEEL MAST MOUNT

This is one of the finest antenna mast mounts made today. it is entirely constructed of heary galvanized steel and will provide a clearance of twelve and one-half inches from the mast to the wall. It will hold a mant ranging from one inch to one and one-half inches in diameter. This wall mount is supplied complete with all instructions or mounting and the necessary hardware. 3 1bs.
$\mathbf{p} 21943$
1.95


CHIMNEY MOUNT MT-408
Sincle strap chimney mount. Easily installed in a
matter of minutes by one man Sturdily constructed
of heavy mauge material. Provides 4 inch clearance forn chimney. Shpe. wt. 6 lbs.
P22781 - MT408 mount.
2.19

## MAST GUY CLAMP

The mast any clamp is practically a nust for all television installers and reparmen. Has 6 kuyins points. A handy thing to keep in the tool kit for emergencies. Will accommodate masts up to one
diameter. Shps. Wt. $1 / 21 \mathrm{lb}$

## FM AND AUTOMOBILE ANTENNAS



## RCA FOLDED DI-POLE

 ANTENNA AND REFLECTORMODEL 229A9. Specially dexigned for FM receivers with 300 -ohn inputs Built for high gain, resulting ith greater distant reception of FM stations. This antenna gives unusually flat sighal response, with the strouzest signals received from a direction broadside to the antenna-minimizing intereference from the opposite direction. Uni-directional. Covers the 88-108 megacyele wave ratio, Sturdy. lightweight a luminum construction resists wear and damage. Supplied less mast, List $\$ 7.50$. Wt. 5 lbs
P21816-RCA 228A1
4.41

## AMPHENOL FOLDED DIPOLE AND REFLECTOR

Ideal for suburban and lons distance, wide biand, trouble free rematched folded dipoles form Two cular radiation pattern. Quarterwave plasing stub. Special rigid low-foss insulators prevent loss of signal A swirel bracket pernits Instaliation on flat or peaked noofs. Supplied with 75 ft. 300 ohm win-lead line and complete instaiShpe. wi §
P21998 Amphenol
9.55

## AMPHENOL DOUBLE FOLDED DIPOLE

Iecefve FM from all directions. Does not require rolition and will give crystad Quarter phasing stub. Two folded dimpol are matehed to give a complete eircular rudiation pattern. Sturdy lightweicht alunimum construction resista wear und damage. Special swivel mounting permits roofs. Supnifed anterns on flat or sloping roofs. Supplied complete with 75 ft . of instructions. Slypy wine and installation P21998-Amphenol
9.55

## BELDEN FM POLLY-POINT ANTENNA

Double-folded dipole that provides an easentially circular radiation pattern. It receives signats from all directions withont turning. Carefully matehed quarter wave phasing stub provides hish efficiency over the entire FMM band vides high efficiency over the entire FM band. Strong lightweight aluminum construction with. stands severe ice loading and high winds. Easy to install. Special adjustable mounting base for flat or slopius surfaces. Factory assembled. ready for mounting. Complete with $65-\mathrm{fe}$ et of Belden 300 ohn Transmission line, 5 ft , mast and $t$ three-inch Standoff Imsulators. shpe. wt. 5 lbs.
P21818-Melden Model 8322
7.35


## FLEXIBLE FM DIPOLE

Two folded dipole elements ypiliced to 300 ohms win lead line. Flattened end ibsulators permit use indoors under carpet, on room molding, etc. Line oss only .85 db yer 100 ft . at 100 me .
$\$ \mathrm{hpg}$. wt . 1 lb .
P22038
1.64

## JFD FM "YAGI" ANTENNA

A selentifically designed and ensineered untenna with a five element array. Performs well in fringe areas and wherever poor reception ts encountered. Hishly directional and extrenely efticient. Sturdy uluminum construetion resists wear and damage.

P2277: JFW Model List Priee $\$ 22.00$


## TACO TRANSFORMER FOR FM ANTENNA

Permits use of FM antenna on either FM or AM without nwitching. Matchey either band wantenna.
P5968-Shpg. wt. $11 / / \mathrm{lbs}$.
1.85


SEE PAGE 59 FOR FM WAVETRAPS AND FILTERS

## AUTOMOBILE ANTENNAS



WINDSHIELD ANTENNA RODS
Fig. I. For liutcks, Fords and other cars usHng similar windahfeld type mount antenmasmandmome tripple chrome plate, durable Ad3 miraty brags for lasting nerrice liuipk type, sertion, extends to $\overline{6} 4$ inches.
Slup. Wit. 1 lb .
P21987.

67-For Fortis
1.50

## STANDARD SIDE COWL ANTENNA

Fig. 2. 4-sertion telexcopie side cowl antenna types. Extends strcamlined cars as well us older proof construction 30 to 100 inches. Latde with 36 -inch, high "Q" Insulated shielded loong. Ilequires two holes for mounting. \$hpg. P22009
3.23

3 -section yersion of the above Extends from
29 to 03 Inches. shpy. wit. 1 ib. P22000 ......................... 1.79

## EXTENSION LEADS

For miding needed length. shifeld leads. P22858-18-inch extension

60

P22850-24-inch extension
.834

## "AUTO-CON" AUTO AERIAL BOOSTER

Fig. 4. Miniature conienl-tyme auxiliary auto aerial. quickly attached to your present aerial. Perks up appearance of car and adds about $\ddagger 0$ inches of addifional antemna to sive you atudio clearnexs cren at great distances from broadcast clearmess cren at great distances from broadcast
ntutions. Polished ehrome-plated Aclmiralty mtations. Polished chrome-plated Aclmiralts brasy with red fluorexcent plastic ornaments. slopk. wt. 1 lb .
P22850
1.47


## DISAPPEARING AUTO ANTENNA

Fig. 5 Antenma collapsem until only $\%$ inches are expmast. Extemeds to $\delta 6$ inches. Swivel base permits ezsy arjustment in wide range of a bingle moutch or contour model car. Designed to P22851
3.45

## FENDER OR

 COWL MOUNT ANTENNAFig. of Variable ansle mounting fits fender or enwl of any car. Rapecially dexigned for newent merembined miciels. Fingy installation. Hi-Q. low-lern 313 -inch long cable; polyethylene insulation with vinylte jacket
shos. wt. 1\% lbs.
P22852-3 -secthon. Fixtends to 62"
2.97

## REPLACEMENT ANTENNA LEADS

Shieldet leads for all auto antennas. For single stanchion and all sifle numut cowl antemmas ex-
 P228E6- For No. 22001 side Gowi intema, P22857--For all fender \& comi Monit. . 754

## JFD TELEVISION ANTENNAS


(A) TA180. Fine biconical all band array for excellent broadband and hifh fain reapmae on all TV channels and FM, Features separate high frequency elements. Lightweight all alvminumi construction; non-corrosive. Sturdy y" dismeter tubing. besigned for $20^{\circ}$ broadside tuning angle and high ront-to-back ratio on all frequchcies. Low standing wave ratio permits energy transfer. Dlemient bracket securely arips 3 dipoles wind reflectors and comtes partially pre-assembled for speedy installation. Fiew cross-arn clamp gipes t-point support to cross-ann and mast permits easy counterbalancing for antenns rotors, Less mast. List $\$ 14.6 j^{\text {m }}$. permits easy counter P21828-JFD Model TA180. Shpg wt. $61 / 3 \mathrm{lbs} .$. C880-All-aluminum antenna simiflar to above less separate high-fre-

(日) TA181. Double stacking of TA 160 hich-freguency TV array for excentionally high db gain. Pspecially dealgued for fringe ares operation. Conical arrangement mininises noise interference. reduces multi-path reflections and prevents pleture fading. $20^{\circ}$ broadside reducing angle. In addition of TA 100 features described above, this unit includes a $1 / 6$ wavelength huminum Jumper bar. Flements are all is diameter. Separate bigh ryuency elements included. Lesa mast. List s30.70.
P21830_JFD Model TA161. Shpg. wt. $111 / 3 \mathrm{lbs} \ldots .$. NET 18.05 c881-All-uluminum sntenna similur to above, less fepsrate high-fre P22762 - JFD Modet C681..................................... 12.52

TA164. Double stacking of TA 161 arrays for ursurpassed do gain; pulls In Weakest signais at great distance from TV stations. \% wavelength stheked bays: warciensth stacked sections. All elements are $1 / \mathbf{y}^{\prime \prime}$ diam-
eter. Fquipment includes dipole nnd reflector brackets. crossam clamps, jumper harness and aluminum jumper bars. Separate high frequency elements. Less Mast. List $\$ 64.90$.
P21831 JFD Mode! TA164, Shpg wt. 25 lbs. . .......NET 38.15 $\frac{\text { P21831~JFD Model TA164, Slipg wt. } 20 \text { lbs........NET } 38 .}{}$


ODEL PL-5 PLUG-IN

## DUO-ORIENTING

 HIGH-LOW FOLDED DIPOLESHerc's a great new TV antenna that comes completely assembled elements into place and tighten, elementa into place and tighten,
for immediate assembly in a matfor immediate assembly in a matSturdy $1 / 2^{\prime \prime}$ sluminum tublig. Ali channel reception. Less Mast. Shpg.
$\mathbf{w t . ~} 10$ lbs. List $\$ 11.40$. wt. 10 lbs. List $\$ 11.40$.

"VEE-BEAM" ALL-BAND TV ARRAYS
Ilifh gain and shamp directivity-up to 10 db zain. Plug in elements for lightuing guick installations. Combincs all morfern TV antenns features tions. Sfugle stark gain to $10 \mathrm{db}, 7 \mathrm{db}$ on upper channels. double steck
 amsembly, no tools reauired. Hervy $V$-bolts for clamping to masts up to $14 /{ }^{\circ}$ diameter. Supplled leas mast. Shps. wt. 4 lbs.
P22755—JFD Singlo vee Beam. List $i 0.0$ in...
NET 5.65
P22756— JFD Double Vee Beam. List $\$ 23.70$. NET 13.94

## INDOOR TV-FM ANTENNA

MDDEL TA13E-This sturdy, absolutely tippronf indoor TV-FM antennu has a weighted buse of sathofinish mahosany plastic to match the fincst furniture. All-channel reception with 3 -xection triple-chrouse plated brass telescopic fijuoler. Complete with $300-0 / 1 m$ twin lead. Katcliet holds elements in pluce. Slipg. Wit. む 1os. Lint \$0.0J. P21833 $\longrightarrow$ JFD Model TA136. Slupg, wt. 1\% lbs. . .............NET 4.09

## YAGI ANTENNAS FOR FRINGE AND REMOTE AREAS

 A remarkably, effective TV simenal areas fringe snd poor nals impossible to get otherwisel These 5 -element Yagis, custom-ent for each individUal channel from 2 to 13,provide a forward gain of provide a $a$ aproximately 14 db on high
 bands, and 7 to 8 db on low bands. High front-to-back ratio rejects co-chanmel interference. Matches 300 olm hine. Kugged corrosion
 und tighten wing nuts for instant assembly, Jumper hamess avallable for
 B lbs: $8-13{ }^{2}{ }^{2} \mathrm{lbs}$.
IFY CHANNEL.
P22757—JFD E-Element Yagl. For channels 2, 3, 4. . . . . 10.35
P22763-JFD 5 .Element Yagl. For channel 5
.3 9.78 P22764 -JFD 5 -Element Yagl. For channel $6 . \ldots$. . . . . . 9.32
 P22768—JFD Jumper Harness. For channels 2 thru 6 (specify). 2.08
P22780 JFD Jumper Harness. For channels 7 thru 13 (specify).. 884

## NEWI TWO-CHANNEL YAGI ANTENNAS

Yes ONE 5-Element YAGI 7-9. or 12-13), specifcelly deaigned for the most important reception areas across the country. Delivers up to
10 db gain- the equal of 10 db gain the equal of any two individual Yagis.
element beam really pinelement beam really pin-
points distant stations. points distant stations. Matched, iwin-driven high assembled "Qulk-Rig" design. Durable sil aluminum
constinaction. Special coupconstmaction. Special coup-
ling between collectors for maxinum energy transfer. Correct 300 ohm impedance nastel. Can be stecked for extra gain. Less mast. Shpa. wis. : Channeln 4 \& $0,8 \mathrm{lbs}$ : 4 a. 4 lbs ; 12 \& $13,2 \mathrm{lbs}$.
 List $\$ 11.60$ © 2278 , olement Yagl. Chsnncls 7 and $\theta$. .... NET 8.76


## IN-LINE PLUG-IN

 TV ARRAYSPlug in the elemente, tighten the wing nuts. and this marvelous new In-Line TV antenns is sassembled. Ruggedly constructed of 6/uminum elements and crominum ams. No rivets, no cross arms. No rivets, no
holes, no screws to weaken holements. High front-toback end front-to-side gain ratio on all channels; TV and FM. Stacked In-Line Includes a tuminum jumpet bars. Less mast. Shps. wt. 12 bs. P22752 JFD PL-150.
List $\$ 12.35$ NET 7.28 P22753 JFD PL-154 P22753 LFD
Stacked. List $\$ 26.50$. NET

"QUIK-RIG" CONICAL
WINDOW ANTENNA


Idcal for locations where roof antemums are prolifited. 4 full-sized conlcal eletnents. plus 2 high irequency difpoles, deliver powerful simply and swiftly by plicing ends of base against whulow frame and tightenlige wing nuts. Fasily adjustable basc spaus up to 44 inches to fit most wood or casement window frames. Durably constructed of lightweight, weather-resistant seamless aluminum elements. Direct lead-in. Adjuatable in all directions for maximum sipnal pick-up. Shps. wt. 3 lbs. List
P22750
NFD No. 0118 NET
7.26
"QUIK-RIG" HI-LO WINDOW ANTENNA


A highly directire array for locationis where roof antenass cannot be installed. Uniquely entineered-straight-bigh folded-low dipole de-
sign for powerful reception on all 12 channeis. Designed to twist. fold, bend or turn in any direction for inaximum signs] plek-up. High band dipoles adjustable to $V$-cone shape for extra gain. Instantly installed, just set in plice and tighten wing nuts. Base extends to 44 Inches to fit most window frames.
Durable, corrosion-proof seamless Dursble, corrosion-proof seamless 72,150 or 300 ohri lead-in. Shpg. Wt. 3 lbs. List $\$ 12.35$
P227
NET
7.26

## FINE QUALITY TELEVISIOM ANTENNAS



## TRUTEST ALL-BAND CONICAL

A lor cost conical anteuna rith good front. to-back ratio on all TV channels. $20^{\circ}$ brondside tuning angle. Low atanding ware ratio permits direct cuupling to 72,150 or 300 -ohn transmission lines. Fast ria feature and raplat assembly design, assure
qutck. easy
installation. Rugredy con gutck, easy installation. Rugsediy ennment brackets with aluminum elements. Extra rigitity obtained with new crossarm clamp. Supplied less mast. P21880-Slipg. wt. ith lbs.
3.95


## TRUTEST STACKED CONICAL

Especially adaptable to fringe and weak airnal preas. Provides high do gain on low and hish path reflection and noise Has 20 ding, broudsidithining angle. Direct coupling to 72. 160 or 300 -ohn transmision lines made possible through low atanding wave rutio. Aluminum brackets, corrosion-resisiant crossarms and length Junper bar. Leas mast. Includes $\%$ wave-P21801-Shpg. wt. 13 lbs ..
8.45

## TRUTEST HIGH BAND ADAPTOR



Precision engineered himh frequency array con-
 be stacked with your present low band antenna to provide improved all-channel coverage, or used independently as a hinh band sutenna. Constructed of durable tenipered alum, Inumn alloy: resists corrosion. Supplied with a $15^{\circ}$ nast and clamp to attach to your present mast, P21894-
1.85

## TRUTEST INDOOR ANTENNA



Two, 3 section dipoles mounted in a freenowing swivel base for multi-channel recep. vertical plane to assure bust and pivots in channel, Sturdy construction. Has felt base pad to prevent marring of furniture. Supplled complete with a length of 300 -ohm transmission line for connection to the antenna terminals. Easily and quickly attached to
P21979—Shpg. wt. 2 lbs.
2.25

on attic walls. P21862—Shpg. wt. 2 lbs .

## TELREX TV WINDOW ANTENNA

Conlcal-V beam antenna easily mounted on any window sill. Designed for primary simal areas where roof antennas are prohibited. it easier to minimize rhosts due lo refiectione it easier to munimize ghosts due to reflections. Can also be mounted indoors. in closets or
 For superior indoor recention on all channels. Alununum bars nnodized in aleaming gold and mounted on a stable bakelite base. Tuned to hiah
and low TV channels. No switches and rods to adjust. High simnol gain.
 installation. Shpg. wt. 2 lbs. H1-Lo Model 101 Antenna.
5.85

## BRACH TA-452 "BOW-TIE" V ANTENNA



Closed circuit $\mathbf{\nabla}$ construction in electrical length are attached to same slide of a non-hyaroscople insulntor. The ends are joined by shorting bars. No directors or reffectors required. Shorting bars raise the cain of the antenns. Seamless tubing and a hish
impset insulator used. ACn withatnnd high winds and ice loading. The complete antenns can be assembled in less than one minute. Shipg. wt P22772-Brach TA-452 "Bow-Tle" V Antenna. 5.34 Name as nhore except stacked array. Shpr. Wt. $111 / 2 \mathrm{lbs}$.
P22773-Brach TA-453................

AMPHENOL BROADBAND TV ANTENNAS


Fig. A. Provide higher, more uniform gain and broader response on all chaniuls, Give excellent picturs brimhtress and assure the response on all Ment. Stigle direction radiation paitern thronghout entire TV spectrum a luminum conatruction except for heary, rust-reslsting niast winput, Al mounting plate, suy clamp, standoff ingulators. Less twin-lead. Shyg.
P21817—Amphenol 114.009, List $\$ 17.00$.
net 10.00

## AMPHENOL TWO-BAY ANTENNA

Fig. B. Prorides added hich forward directive gain and a single directional pattern orer both upper and lower TV channels. High front-to-back minum and aluming ion ent operation on all channeis. Sirong aluComplete with aminum alloy construction with rust-resistant steel mast. of $1 /$ mast. Without leadoin bay connecting rods and two 5 -ft lenathe P21818-Amphenol Model 114-302 Antenna.

NET 20.58

## AMPHENOL "TELESTAR" INDOOR TV ANTENNA

Díque. all-channel indoor TV antenna Lichtwedght aluminum rods are cut to pre tuned leugths. Long rode for low band, short rods for high band. Low-loss polystyrene base feet to protect furniture Suppling has rubber feet of protect furniture. Supplied with five twin lead. Shpg. wt. 416 se . List $\$ 4,05$. P21818-
2.91


NET

or inexpensive antenna that can be placed under carpet elcments convenient location. Polyethylene insulation. Shpg. wt. 4 forohin twin lead. P21984-ICA No. 6012 Antenna
2.03

## ICA "BI-CON" TELEVISION ANTENNAS

## TYPE 6481 STACKED "ABI-CON"

All channel, all meta! TV antenna array gires ereater overall gain and stable imped-
ance over entire rance fint ance over entire range. Minimizes ahosts and gives better, brighter pictures with less snow. ratio, Includes conilal bram array, ataeked low frequency dipole reflectors. Heary duts 1 *a a luminum tubling used for all antenna elements. Designed for use with either. 72 . I60 or 300 -ohm line. Pre-assembled for fami. easy installation: soldering eliminated. With instructions. Less mast and transmission line. P22774 P22774-64 stacked "Bl-Con", ..
21.23

TYPE 6472 SINGLE "BJ-CON" ANTENNA
Same as Model 6481 described above except single hish and low band elements. Less mast and transmission line. Shp. Wt. 6 ibs.
P22775-10A Type 6472 SIngle "BI-Con" Antenna...... $9.80 ~$

## TYPE 6550 PHASING SECTION

For stacking two Type 6481 "Bi.Con" antennas to make n quadruple array Includes four phasing rods, 2 spacing Insulators and a ceater har-
ness insulator. Shpg, wt. 2 lbs. P22776-1CA Type 6550 Phasing Section KIt.
5.88


## TRUTEST 300-OHM

 TRANSMISSION LINEFor connecting antenna to set. Polyethylene insulation. P17140 Per 100 Fi

Per Fi. 34
HEAVY DUTY 300-OHM LINE
Extra high quality. Heavier gauge wire and thicker insulation.
 $31 / 24$ 2,06

## JFD TV-FM AHTENNA ACCESSORIES

## "CLIP-ON" STANDOFF INSULATORS

These economical and effective stand-or Insulatora attach to the mast instantly. Clickl and they're on-for good, Eleayy gauge corrosion resistant teel with low-m times. $31 / 5^{\circ}$ long.


| Twin Leed Stock No. | Coazial Stock No. | $\begin{aligned} & \hline \text { Mant } \\ & \text { Size } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: |
| P16992 | P17041 | ${ }^{\circ}$ |
| P16996 | P17042 | $1{ }^{\circ}$ |
| P16993 | P17043 | 113. |
| P16997 | P17044 | 138 |
| P16989 | P17046 | 13 |
| P16988 | P17046 | 18 |
| P16987 | P17047 | 1 |
| P16985 | P17048 |  |
| P16984 | P17049 |  |
| $\cdot^{\prime \prime}$ EMT | ondult. |  |

DOUBLE CLIP-ON INSULATOR FOR DUAL TWIN-LEAD


## DOUBLE SCREW EYE STAND-OFFS <br> Weather resistant polyethylene inaerts keep lead-In lines $6^{\prime}$ apart. P2 $1850-3$ P21860 10 for P21852-7 7 Y $^{\prime \prime}$ <br> ADJUSTABLE STAND-OFFS <br> Fit any size mast. <br> 


 ${ }^{2} 10$ or

FOR COAXIAL CABLE
 ${ }^{216950}$ 10 orf
10

drive ring

Acts as dependable anchor for guy Wire when hammered in as an angle. Made of galvanized steel.

2a. 54
MAST CLAMP
Notched retalning clamp holds 2 masts frmiy together in sturdy U-bolt. Made
P21922


## U-8OLT

Made of galvanized steel.
suppled with nuts and Supplled with nuts and
 P21931.
10 for.

First choree for fast, secure anchor ng of tranamission lines. Single screw eye.
16967-34
10 for
P16990-5 $\mathrm{K}^{\circ}$

10 for

DRIVE-IN TYPE
Made of galvanized steel. For Twin Lead.


FOR COAXIAL CABLE
 10 for

## 

Firmly grip dual lead-Ins.
FOR DUAL TWIN LEADS

 10 for. FOR DUAL COAXIAL CABLES P16933-DUR360,3 K $^{\circ} \ldots$. FB. $21 \$$

 10 for


Anchors guy wire securely and permancntly. Made of galvanlzed stee!. p21923.
10 for.
 G" GUY RING $^{\prime \prime}$ GUY
Free-Flosting. Wil Galvanized 1. Mast.
P21919. For $1 K^{\circ}$ Mast. For $1 \not 2 \$^{\circ}$ Mast. P21920. Ea. $9 ¢$
10 for....... 814
10 for....... 1.08

## 10 for .......816 PIPE STRAP

 Fastens masts to walls, roofs. coralces, etc Quickly, securely. Made of galvanized

ALL-ANGLE MOUNT Permits aetting of 3. to $11 / \mathrm{m}_{\text {masts a }}$ most sultable angle for maximum orecep- Made of rusttlon. Made of rust-
realstant steel. With resintant steel. With
ware. ${ }^{\text {wozen...3.78 Fa } 354}$
P21842...


Solves almont all antenna mast mounting problems. Perforated fange permits getting of mast at any angle. Mounts anywhere -on Walis, Reavy gauge steel. For masts P21843-TyPe B R8. For masts
 masts up to 2 " diameter..... 6.00


## ENT PIPE

 MOUNT Fits snug on roundshaped objects. Firm ly grlpe $1 / h^{\prime}$ to 13 " masts. Rust resistantsteel. Supplied with steel. suppled
hardware.
p21841... PT. 2.12

## U-BOLT BRACKET

... 2.16 Free-Flosting, Will
not bind. Retains guy wire securely,
. Ea. 9 10 for . 4 . 81 steel.

## TELEVISION ACCESSORIES

## GENERAL ELECTRIC

## HORIZONTAL OUTPUT TRANSFORMERS

RTO-086-Ferrite core, with tertiary winding. Filamect windiag for 1X2. Tapped secondary for contubes as width control. For use with 66-70 degree mum hio vi, 6 gPr 18 apa and 24AP4. Maxi P7649-Shtpping Wt. 1 Ib. Net.
6.91
RTP-092-For gencral replacement use in TV bets employing kick-back high voltage wystems. Long leads eliminate splleing. Electricaliy exuct replace-P7648-Shipping Wt. 1 1b. Net
6.70

VERTICAL SWEEP OUTPUT TRANSFORMER RTO-06A-A vertlcal swcep output transformer spe
clally designed for use in magnetic defection circtits from 50 to 70 degrees. Matches the verical output tuhe to the defiection yoke. The turns ratio is $10: 1$. Open 116.
3.53
WIDTH AND LINEARITY CONTROL
RLD-014- Wide range, varlahle inductadjustment. Requires $415^{\circ}$ mounting nole. Shpr. Wt are with screwdiver P7641-Net
76

## WAVE TRAPS

RLW-005-FM Wave Trap. Reduces or eliminates interference from FM channels.
2.50
ALW-006 IF wave trap. Reduces or eliminates interference from external P7643-Net areq. 41-47MC.
2.35

RCA REPLACEMENT TV CONTROLS

| Stock No. | RCA No. | Seot. 1 | Seer. 2 | Each |
| :---: | :---: | :---: | :---: | :---: |
| P6883 | 71443 | 20 | 10* |  |
| P5884 | 71446 | 10,000 | 1 Meg . | 1.41 |
| P58885 | 71784 | 500,000 | 10,000 | 2.53 |
| P6886 | 71971 72758 |  | 50,000 50,000 | 1.47 |
| P5890 | 73193 | 10,000 | 500,000 | 1.82 |

DETENT SWITCH CONTROLS

Replacement detents complete with locating plate, except where specifed. sets orlutnally sets orisitaliy supplied with the RCA 201 El front end tuner

| $\begin{aligned} & \text { LESS } \\ & \text { Locser } \\ & \text { Plate } \end{aligned}$ | Each | WITH | Each | Roplaces |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { P10132 } \\ & \text { P10130 } \\ & \text { P10131 } \end{aligned}$ | $\begin{array}{r} 1.18 \\ \quad .89 \\ .89 \end{array}$ | $\begin{aligned} & \text { P10140 } \\ & \text { P10137 } \\ & \text { P10138 } \\ & \text { P10139 } \\ & \hline \end{aligned}$ | $\begin{aligned} & \mathbf{2 . 4 4} \\ & 1.65 \\ & 1.85 \\ & 2.79 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Admiral 76B14 } \\ & \text { RCA } 71633 \\ & \text { RCA } 7274 \\ & \text { RCA } 73440 \\ & \hline \end{aligned}$ |



High-voltage ceramicons especlally designed for TV power supply, Alter and hy-pass appllications. Thetr sjueclal body dealgn glves extra-lons creepase path
 $20 \mathrm{KV}, 500 \mathrm{mmid}$. Both ends lapped for $6 / 32^{\circ}$ serew. ${ }_{10}{ }^{2303-E A C h}$

## STANDARD COIL TURRET TUNER



Used in over 5 mimion Ty sets und chasest, ihis TV tuner is a marvel of precision engineering and eraftsmenship. User a pentode R.F. Bniplifer and a dual-
triode mixer-weclliutor. 25.75 PIX IF and 21.25 Mc triode mixer-wecillutor, 25.75 PIX IF and 21.25 Mc sound. May be used with elther "Split-Sound" or tatercarrier as desired. Covers all channels from 2 to 13 , and used easily nuterchangeable colls on strips which may
later be used for UHF work. Cleaning und mantenance are quick und simple. Euch channel has individual oscillator ad justment screw which may be reached from the tront of panel for alignment of pleture hrillance, deflmition and sound. Has halanced 300 -ohm Input. Conerol shaflus are concentric, for channel selection and hine tuning. size: $4 \%^{\circ} \times 3 \%^{\circ} \times 6 \%^{\circ}$. Supplied with 6 J 6 P2465s
22.95


## BARKHAUSEN OSCILLATION

## ELIMINATOR

Remove those vertieul black bars (Barkhausen OsellaKemove those vertieal blaek birs (Barkhausen Osella-
tion) from your TV seren with this Perfection B.O. ifiliminatur. Simpiy silp the $\mathbf{~ B . O}$. Elliminator over the horizontal aweep output tuhe und udjust ilke an lon trap maknet until the interference disappears. P7605-ships. Wt. $1 / 1 \mathrm{lb}$.

Net 736

## ION TRAP MAGNETS

High quality lon trap magners for kineseopes of all sizes atd typers. Cheek with a kincscopje type chart or
requent information on the proper type to use with your kineseope.
P6067-single Mugnct, 35 Gauss, each
P6066 :Hinkie Muknet, 53 Guแиs
P6056-Double Musnet Type.

## PERFECTION KINE-CENTER

Remarkable new ple-
ture centering device
designed for use with designed for use with the new electrostatic
tubes which use no focus which use no
coll. Muunts qulckiy, stays in place without wobmetal rings which otate independenely picture In the tuhe and adjust the Its design permits placing the rings closer to the denection yoke, the most effcctve operating area. 03

# TELEVISION ACCESSORIES 



## JFD AT 102

 LIGHTNING ARRESTER For regular $t$ win lead. Underwriters Laboratories approved; Grounds ligbtning and all stripping necessary. Strap furnished for mast or grounded pipe shounting; kround wire furnished for wall and window sill mounting. Made of high quality glazed porceluin. AT 1021.32 Lots of 12, Enc No. AT 103. For Tubular and Oral Jumbo Tw in Lead. Similar to above but for oral jumbo twin lead. Underwriters Lab a pproved.
1.32

Lots of 12. Each
. 1.19
JFD AT 104 4-WIRE 8-CONTACT
LIGHTNING ARRESTER Deslgned especially for anteuna rotator installations. Eight pre-cision-spaced teeth maintain perfect contact with lead-in wires. No gueaswork required.
Does not attect sigual surength or 300 -ohm line impedance. No wire cutting, stripping or spreading


88 \&

## JFD "LITTLE GIANT" TWIN LEAD

 LIGHTNING ARRESTERFor Resular or Oral Jumbo For Resular or dead. Onderwitiers Laboratories Approved. No wire stripping or spreading of line
necessary. Small size permits easy mounting anywbere - inside or outside. Complete with ground lug and screws for wall or window sill mounting. Spe cial hich dielectric, flame-retarding plastic conatruction does not vary line impedance. Insures maximum sisnal transfer.
243

## RCA LIGHTNING ARRESTER

Especially designed for the protection of TV and FM receivers. Attaches to the $300-$ Fhm twin lead Without cutting or stripping; to mast or pipe from $2^{\prime \prime}$ diameter.
Shipping weight 5 ounces.
P24443-TYPE $214 \times 1 \ldots .$.
RCA OUTDOOR LIGHTING ARPE
 Approved by Underwriters Laboratories for outdoor as well as
indoor installations. No special indoor installations. No special tools are needed for direct mount-
ing on wood. Weatherproof and ing on wood. Weatherproo and non-corrussive.
on rement
P24314- stone
surfaces. $\qquad$ $73 c$
VEE-D-X LIGHTNING ARRESTER
RW-300 For Twin Lead on CV and FM sets. High Frequency low-loss unit does not uffect impedance. No need to Low-loss plastic. Shipping


## 4-WIRE ARRESTER

Model RW204. Chisel point con tact eliminates stripping; ticht ening wing nut completes instal
lation. Low-loss lation. Low-loss polystyrene case.
Also usable with standard TV. Also usable wit
Shpg. wt. 1 lb

## VEE-D-X ANTENNA SWITCH



Here's the solution to using two or three an-
tennas for your set at the tick of a knob. Special design prevents. leakage. May also be used in showrooms to connect three sets to one antenna, with
instant switching. Leads instant switching. Leads
attach to the rear, out of view. Fumbished in attractive irory plastio ping wreight 2 pounds.
$\qquad$ 2.91

## JFD ANTENNA SWITCHES

A simple, effective was of getting the most signal in fringe areas. Ideal
where inditidual Yagi antennas are used for maximum rain. Simply conto terminals at back of switch and one lead from switch to the set and operate each answitch one antenna to sereral different sets, as in stores or service shops, or it can be used to switch one home antenna to two dirfereat sets in separate rooms in the home.
P22786-3 wny antenna switch.
2.91

## UNIVERSAL TV LEAD-IN SOCKET

An ultra-compact, truly universal constant impedance socket that servicemen for. Ideal for TV antenna lead-in, test
 bench, dealer display, etc. The new universal lead-in socket is so designed that standard 300 -ohm transmission may pass straight through. Thus the unit can serve as a line tap or terminal socket and the wiring may be hidden . Socket is molded of low logs polybaseboard. Socket or irory.
styrene in brown or P16900 - Brow:

## UNIVERSAL TWIN-LEAD PLUG

The plug of one thousand uses. Fits all transmission line sockets as wel sockets. Low-loss acrylic plastic. solderlcss
$28 c$
TWIN LEAD SOCKET
Mates with transmission line plug nbove for constant impedance solderless connection of 300 -ohm line. Designed for use where a monnted socket is not feasible.
P16902

| P16902 |
| :--- |

4 AND 5-CONDUCTOR
PLUGS AND SOCKETS
Sturdy polarized plugs and suckets for 3,4 , ur 5 wire rotator control cable or other low voltage installations. Large set screw.
hold cable wires firmly. 49c P16904-4-conductor plus.
. P16905 - 4-conductor socket
16906 - condurtor plus.
CINCH-JONES WALL PLATES
 These new Cinch-Jones wall plates provide a cunvenient function letween the autenna lead-m termiwal and
the recelver. Available for lead-in the recelver. Available for lead-in
alone or combined with socket for alone or combined
any antenna rotor. 411 wall plates are chromium finished. Can be used with any ritor installation, up to and
cluding an eisht vire sotor plus lead-
s302WPC - For antenna lead-in only. . 97 c S3024WPC - For lead-in i\& 4 -wire rut or . 1.18 S3028WPC -Lead-in \& up to 8 -wire rotor. 1.28

## CINCH-JONES WALL PLUGS

For use with abore wall sockets.
P302CCt
P3080ct
P304CCT

## PLASTIC INSULATOR

Low-loss polystyrene insulator for lise with 300 -ohm twin-lead. Holds line securely without pinching and
changinx impedance: Attaches with single wood or netal screw
4.50 P16958-100 for.


IITTELFUSE TV FUSE KIT 10 of the most popular assorted fuses for jour pocket.
p12340.

## UTTELFUSE TV FUSE CLIP

Snap-on Holder snapa on to blown | pigtail fuse; regular replacement fuse |
| :--- |
| goos on second side. |

## DRIVE-IN INSULATOR

 An unusual new natl with polgethelene or coaxial lead with a few hammer or coarial Cadmium plated hikh-carbon steel paill has patented "step-lock" teeth that hold tight in wood, mortar. iron, aluminum, etc. $2 \%$ " long. $31 / 2 \mathrm{C}$ 10 for. ...... 33 C . 10 io 0 for......... 2.95TV MAST COUPLER BRACKET Aluminum unit for adjusting antenns poles.
 P21946-Per mair

TV SECOND ANODE CONNECTOR For TV pieture tuhes. Bilver plated snap but nlied with $12^{\prime \prime}$ wire leans. | nlied |
| :--- |
| $\mathbf{P 2 4 4 1 2}$ |

ANODE EXTENSION CORD For connecting pheture tube while lons.
long
P22784
$88 c$

## TV \& CRT EXTENSION CORD

Permits tenting of picture tube outside of
chassis. Fits any
duodecal haselt tube. 5 color chasis. Fits any duodecal hased tube. ${ }^{5}$ color coded leads. $40^{\prime \prime}$ long. Male and female bake-
lite sections.
p227e3.

TWIN LEAD SPLICE Speeds splicing without ne
for twisting or soldering. for twis
P16954 12 10 for ............................................. 1.03
TWIN-LEAD
POLARIZED


CONNECTORS
Polystyrene blocks, keep leada properly polarized no matter how often disconnected. For standard
$1 / /^{\prime \prime} \times /^{\prime \prime} \times \%^{\prime \prime}$
$0^{\prime \prime}$

DIPOLE CONNECTOR
For center connecting of $300-$
tive connection without solder-
ing. Necessary hardware included Shipping weight 2 ounces. 34 c
P16053....................

MAST EXTENDER BRACKET The vise-type clamp on this mast ex tender bracket will hold any two masts
of equal or unequal diametes ranging from $\%$ inches to $2 \frac{1 / 2}{}$ inches. The height of the bracket arms permit a
bite of four inches in either direction on ench mast. Manufectured of longife solid steel with guying 21945.


## STEEL GUY WIRE

Six strands of number 20 hightensile strength galranized steel wire. Can be used for any guying problem. This is one of the highest quality guying wires your money can buy. In 50, 100 and 500 -foot rolls.

INTERLOCK IINE CORD - A


Replacement cord for ROA, Philco, GE, Admiral, and others. It has regulur molded plug on one end and special Underwriter's Laboratories approved. A very handy thing to bare in $_{\text {P13319 }}$ yertice kit or on the workbench 36 e

INTERLOCK TV LINE SOCKET - 8
Conventional male interlock sozket. Stanaara cype used on a telerision rop plated contact pins. $1 \%$ " mounting centers.

HOODS \& RINGS FOR

$$
16^{\prime \prime}-17^{\prime \prime}-19^{\prime \prime}-21^{\prime \prime}-24^{\prime \prime}
$$

Made of heary durable plastic for
use with all metal cone kinescopes.
Fliminate shock hazard, ald in
mounting, provide 2 ad anole conmounting, provide 2 nd anode con-
nube HOOD R R

| Tube | HOOD |  | RINa | Each |
| :---: | :---: | :---: | :---: | :---: |
| Type | No. | Each |  |  |
| 16 AP4 | P24410 | 1.87 | P24411 | 2.13 |
| 16GP4 | P24426 | 1.87 | P24411 | 2.13 |
| 17 CP 4 | P24320 | 1.95 | P24321 |  |
| $19 \mathrm{AP4}$ | P24408 | 1.98 | P24409 | 2.49 |
| 21 | P24284 | 1.97 | P24286 | 4.33 |

TELEVISION TUBE MASKS
Fighest quality masks of crystal
clear plastic. Gires you and your
picture tube protection. Gold
bronze border adds kreatly to the
tich appearance of your mbinet. No. $\qquad$

P24354 14 " Rect.
P24419 18
P24421 18
P24381 ${ }^{18}{ }^{\prime \prime \prime}$ " Rect.
$\begin{array}{ll}\text { P24325 } & \text { 17" } \\ \text { P24882 } & 19^{\prime \prime} \\ \text { Rect. } \\ \text { P24 }\end{array}$
P24326
P24332

| 24345 | $24^{\prime \prime}$ Rect. Round |
| :--- | :--- |
| 24 |  |

Each
3.68
4.15
4.17
5.45
5.45
5.23
5.72
7.85
7.85
7.95
13.25

steel turnbuckles

Takes up guy-wure slack. Rustproof galvanized steel. Size: $7 \% /{ }^{\prime \prime}$ open, $61 / 2^{\prime \prime}$ clowed. | P21939 |
| :--- |
| 10 for. |

13c
ALUMINUM GROUND WIRE Heary gauge, high tensile strength aluminum ground
wire for use with lightning arresters and similar pur-p21926-100 ft. coll. 1.65 P21935-500 't. coil. ... 7.50

## ANTENNA AND AUTO RADIO ACCESSORIES



## V CABLE GUN TACKER

Maker a cable and wire installation an almost ffortless job. Shoots a staple almost anywhere Feary duty double lever. All-steel, chrome finish Shipg. wt. 3 lbs
7.95


## ICA IS,000 VOLT TEST LEADS

Designed expecially for high voltage TV measurements. Thick walled bakelite handles with finger suards Will withatand 15,000 volts D.C. 48 * lieary cabl P15238-Per set.
2.94

## TV GRID CAP CLIPS

P14735-Envelope of for $1 \times 2$ and $6 B 06 G T$
P14736-Envelope of 5 , for $0 B G 0 G$ and $1 B 3 G T$
264 Ea.


## LOW-COST AERIAL KIT

Has 100 -ft. $7 / 2$ g aerial wire, 40 ft . insulated lead-in. 25 ft ground wires, arrester. ground clamp, lead-in strip. 2 insulators
 ECONOMY KIT: 100 ft . $1 / 2$ aerlal wire 25 ft . lead-in, lead-in strip, ground clamp 2 insulators, nail knobs.
P16478-Shps. wt. 2 lbs.

## ICA TENNA-SCOPE

New, built-in tuned radio antenna eliminates tbe use of an outside aerial and ground. Gives better selectivity and higher ilgnal-to-noise matio. May be conneeted to
any radio without the necessity of naking any circuit changes.

## ANTENNA LOOP

For battery and midget sets. Replaces antenna coil Migh inductance pernits removal of turns for adfustment. $4 \%{ }^{2} \times 8{ }^{\circ}$ p16450. Luts of 10

RELIANCE AUTO RADIO SUPPRESSORS


Quality black molded cases.

| No. | Type | Description |
| :---: | :---: | :---: |
| P5283 | A | Btandard Spark Pl |
| P5246 | A | 8pectal for Ford V |
| P5278 | 8 | Compact Spark Plug |
| P5247 |  | Compact spark Plux Type for Ford V8 |
| P5253 | C | Cable Type for Bulch |
|  | D | Elbow Cable TY |
| P5279 | E | Standard Distrib |
| P5293 | F | Distributor Type fo Ford 1938 and earlie |
| 277 | F | Dlstributor Ty |
|  |  | Ford 1937-38-39-14 |
| P5256 |  | Elbow Type for 193 Plymoutb |

- Like "Asported. Li, connect 1.62
WHEEL STATIC ELIMINATOR
Eliminates front
WIRE WOUND UNITS
Fh. G-Eflcient type; do not im. pair motor efticlency. Low dic. resistance, high inductance. Acta is r. P choke. Exira rugred. P5296-Spark Pluz Type
PE297-Distributor Type.
108
for $3.40 \ldots .$. Each


## MASTER DISTRIBUTOR

 UNITSHermetically sealed; impervious to moisture and healed; imperrious
ance is 10.000 ohms. D.C. resist P5284 10.000 ohms. anch 47 \% 5 for

## ANTENNA CONNECTOR

Wheel noise.
Place in encli
pub cap. Rust
P5294
Fanch
10 for
726
Two plece metal container with fibey insulation. . ..... Each 7 ( P18714
10 for Each 78


[^3]
## GENERATOR CONDENSERS



Standand auto radio condensers designed to eliminnte kenerator noike. Fully shieldecl. Dirt und
oll prowf.

| Stoch No. | Mid. | Each | 10 For |
| :---: | :---: | :---: | :---: |
|  | P14220 | .25 | .35 |
| P14215 | .5 | 37 | 3.15 |
| P14216 | 1.0 | .53 | 3.30 |

## WHEELER SOUND-POWEREb PHONE

Requires no battery or line voltage. A whisper can operate Uhis self-powered, self-contained telephone. Lxcellent sperelt fidelity. Cusurpassed for use in erecing TV antennas. Ideal for home or ottce roons inter-communication. Effective over distances to 25 miles with No. 16 twisted wire: up connected in parallel. Cisable with single wire and can be retum. Attractive black, molded phenolic bandset. Consplete, ready-to-operate. With $31 / 3 \mathrm{ft}$. 2 -conductor cable. test cllps and rubber insulatom. Less extension wire. Slipg. wt. $11 / 2$ the P14016-WHEELER SPT. 102 HANDSET, FET Pholle, NET 9.62

> WHEELER SPS205 PAIR SOUND-POWERED INTERCOM

Two wall-mounted sound-powered handsets, with bell! feature for ringing ered; roice pressure supplies all eneray needed for operation. Bell gives sharn. clear signal. Operates succesafulty over
a distance of 20 miles. 1mpact-resistant plastic with corrosion-proof metal parts. Retractile cord is neoprene sheathed. Double pallidium switch contacts. Installed iastantly no batterics reguired. Less 2 -conductor connecting cable. shpg. wt. 7 libs. P14016-WMEELER PAIRED INTERCOM Set of 2 NET 43.89 RC Twlsted Palr Cable. Rubber covered, $\# 18$ stranded wire for use with


## ICA 3-IN-I RADIO TUNER

Antenna tuner, wave trap, aerial eliminator all in one instrunient, depending on the
manner of its connections to the radio set manner of its connections to the radio set.
Operates on anj make or model set. and inn proves performance. 10 for

Each 59


## MINIATURE ANTENNA LOOP

Where space is at a premium. this ultra-compact an inductance of about 320 mitz-wire wound. has covers the broadcast band with midget fariable $51 / 433 / 4{ }^{\circ}$. with four-inch wire leads.


$$
\text { for } 3.50 \ldots . . . . \text { Each } 40 \text { \& }
$$



## FERRI-LOOPSTICK

The hottest antenna development in broadcast radio since ergital sets. Only 2 inchea long. yet
tmproves reception over the entire broadcast band. Cuta down noise. gives aloud clear sidnal on weak stations that normally can't be heard with ordinary loop antennas. Omni-directionall No P12680. List 75. ............................ 444

## $3 / \mathbf{B}^{\prime \prime}$ PLATED GROUND RODS

 For use where pipe ground is not apaflable. P17187-4 ${ }^{\text {Preel }}$ yoke for head.
## MUELLER TWIN LEAD ANTENNA CLAMP

SLandoff type insulator clamps on masts crossarms beams, etc. up to $1 \%$ thick. Ridxedly supports twin
lead $21 / \mathrm{m}^{2}$ from mast or pipe. Weatherprooled. Shpa.


## SINGLE LEAD-IN STRIP

Cly terminal each end.
. Eath 8

## "GRIP" GRQUND CLAMP

Makes vise-like grip on pipe. Sharp pointed P17105 ............................. . . 104 10 for

PIPE GROUND STRIPS
Rron 1 ground clamp adjustable to fit any size bipe up to $2^{\circ}$ in diameter. Provided with clip for attach ing ground lead. P1 7102

Each 84

## PORCELAIN ARRESTER

Housed in brown glazed porcelain: approved type.

Each 194
10 for
E. 1.70

## AERIAL INSULATORS

Dependable porcelain insulatora. "A" is screw in tupe for tolding lead-ins or proundg off walls: "B" is standard nail-


| No. | Type | 51 | Each | 10 | 100 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| P16972 | A | $3^{\circ}$ | . 06 | . 55 | 4.95 |
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 Smart. Tugkage style personal portsble rado hat plays nywher AC
nater
 cablnet, $5 / 4$ natcerles. Bpectal. 1 P 431 -Less-Battery
No. 2 Coll (2 requilred)


CAVITY RESONATOR DC or batter on front panel permite. over switction of destred power surpose superhet clrcuit features performance. tubes that glve super powerin Excellent tone
dynamic speak
leatherette covered
expertmenter wants at least one of thesel Every expertme reat oecillaw in the plated civily Deatgned as Ahe UBF bug. Ago uni one 955 Is. a naturatron the heart is modulator in the rese osclustor, is 234 to 258 (235 to 240 ). Heavy Trea range is 234 bandl (235 to Freddie of the ham divides case beautiful may be mluminum shires of sill te the, which may for batterles. Ase, with tand used as foundile stuminum on componentancelver, etc. 1.95 for wert instrumentice tubes.
iy wired-with tubes.
P21114

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the most severe conditions of temperature, hu-
midity and physical stresses. Tested at iwice
$\begin{aligned} & \text { voltage rating. Tinned leads, readlly soldered. } \\ & \text { ORDEA BY CAPACITY ANDVOLTAGE- }\end{aligned}$
$\begin{aligned} & \text { ORDER BYCAPACITY AND VOLTAGE- } \\ & \text { SPECIFY TYPE RSTC. Limled quaneley. }\end{aligned}$
$\begin{aligned} & \text { SPECIFY TYPE RSTC. Limleedquaneley. } \\ & \text { Mfd. Each MPd. Each; Mid. Each }\end{aligned}$
MOOVOLTS DC 400 VOLTS DC 600 VOLTS DC 10-WATT WIRE WOUND RESISTORS

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NC-183

Professional type comamunications receiver gives moximum reception ender all operatioy conditiens.


[^0]:    NOTE: See
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[^1]:    NOTE: Ohmite rhcortats are avaflable in addilonal values and sizes up to 1000 watts. Please write for prices.
    For TV controls not ilsted on these pages turn to TV Darte pages.

[^2]:    Stancer Type P-6i15-Shug. we. 17 Its....... 16.17

[^3]:    A. P16715-No. 2372 Lead-in Adapter. Converts Delco to $20<$ Motorola Fitelng

    204
    B. P18710-No. 2375 Motorola Pin Plug . C . P18717-No. 2378 Mor
    D. P18718-No. 2396 Adaptor. Converts Motorola Pin Plue to

