


# WMASCO＂AMPLIFIERS＝OUALITY AT LOW COST！ 

## 35 WATT AMPLIFIER－RECORD CHANGER

 MILIS A TWO－FULD NEED IN SOUND BYETEMS－A high claw medium power umplisier，AND $n$ d epeadable proord dhankligg mechaniwm－ALL IN ONE！ This fine amplifier is a NATURAL FOR HOMES，AUDITORIUMS，DANCE HALLS， etc．TRUE DEPENDABILITY is aseured by the rugged construction features of the MA35RC RECORD CHANGER－AMPLI－ deajgned to stand $55 \%$ OV＇ERLOAD with－ out damage！Two mirrophones and phono use of separate controls．ELECTRONIC BASS AND TREBLE EQUAL－ IZER for critical control of music frequencles between 50 and 10,000 ment．INYERSE FEEDBACK ment．INVERSE FEEDBACK reduces harmonic distortion，improves wave form on over－all response，RECORD CHANGER will play EITHER 10 or $12-i n c h$ records－pick－up with Astatic LP－E HIGH FIDELITY cartridge with PERMANENT SAPPHIRE Atylum．GAIN，Microphone，126db；Phono，g8db．TAPPED OUTPUT for $2-4-8-15-500$ ohms．Hum 126db；Phono，78db．TAPPED OUTPUT for 2－4－8－15－500 ohms．Hum level，below zero level，minus 20db．Controls，Phono， 2 for microphone， and 2 for tone control．Separate On－Off switch． 8 TCBES，2／7C7／： 1／7B4；1／7F7：1／6VGGT：2／GL6GA：1／5U4G．Power Output，FULL 35－ WATTS undistorted：Power consumption is 130 watte．Dimensions． stork No．
80 A 2
$\begin{array}{ll}\text {＂Manco＂Moiles MA3ERC．} & \text { YOCR } \\ \text { Complete wih Tobe \＆Instructions．} \\ \text { COST }\end{array} 988.93$


PORTABLE ELECTRIC PHONO OOMPLETE ELECTRIC PHONOGRAPH； PLAYS $10^{\prime \prime}$ OR ${ }^{12 \prime \prime}$ RECORDS WITH COVER CLOSED， 3 －tube ampllifier haM CONSTANT SPEED MOTOR and＂Asta－ tic＂Cryatil Pick－Up．Heavy duty 5 －inch PM speaker and acoustically built cabinet assure EXCELLEN＇T TONE QUALITY． Separate Volume and Tone controls；cov－ ered needle cup．Rugged，handsome car－ rying case， $141 / 4 " x 171 /{ }^{\prime \prime} \times 7$＂，airplane cloth covered：welghs obly 13 lbe．Complete with tuben and instructions，for


5O－WATTDE LUXE HH－POWER AMPLIFIER POWER ANT DEIPENDABILITE AT LOW COST－IPFIK IPOUER OUTPDT OF 64 WATTA：May be used with from 2 ts 12 нpeakers with HIGH QUALITY reproduction for most any ase from a gnall room and $a$ fow people to a large anditorium and undiences up to 8，000！QUALITY FEATURES IN－ CLUDE：FREQUENCY RESPONSE $80-10000$ cyelew，plus or minus 2 db ． 3－Inpats， 2 microphones and phono
 individual Bass and Treble aftenuators，4－6 LotiA tubes used in Iush－Pith parallel output，tapped to match any impedance；2－4－8－15－500 ohms GAIN，microphone 130 db ；phono 80db．Hum Level，below zero level， FR＇EE operation：Inverse feedback； $75 \%$ overload safety factor，fuse FREE operation：Inverse feedback： $76 \%$ overload safety factor，fuse protected，Separate＂Orf－On＂switch and fuse．Power consumption is finished in gray ripple enamel with black and red irim． Stock No．＂Masco＂NAE0 Ampllier

30.4 | zown |
| :---: |
| coms |
| coms． |
| $\$ 75.35$ |

## Complete Your＂MASCO＂Sound System With these CASES－SPEAKERS－TRUMPETS－MIKES




## BRUSH HUSHATONE

## The＂MOSICAL PILIOW＂CRIETAI

 SPEAKER！Fine for thowe who like to ligten to thelr radio after other members of thelr fimily hare relired！Has high gensitivity and GOOD TONE QUALITY equal to cone type speaker because of equal to cone type speaker because of
 dipped in disinfectant solutions；no parts to lose．Wt． $1 / 2 \mathrm{lb}$ ． Stock No．＂Brush＂Model BA－303＂HUSHATONE＂Speaker． 20.4848 $\qquad$ $\$ 6.37$ $\$ 2.08$

3－Inch Midget＂PM＂Dynamic Speaker Needed for REPLACEMENT in thousands of AC－DC compact recelvers；IN＇TERCOMM．SISTEMS，and ideal V．C．SIZE， 3 品＂square， $1 \%^{\prime \prime}$ deep；Mtg．holes on $2^{2 / 4}$ centers．W゙t． 80 oz ．
Stock No． 14 fiog： $\qquad$
Ultra－Midget 2－In．＂PM＂Dynamic Speaker Tinfest of all PM Speakers，yet has PLENTY OF
 LOW COST 12－INCH＂PM＂SPEAKERS：－＂B－A＂BARGAINS llsted above as Nos． $30 A 122$ and 30 Al23，are described in detafl on PAGE 27 PHoNifg and Stands，Complete disting Pages 8， 10 and 11．WAIJ．AND POK＇ABLE BAFFLES，Complete listing Pagen 5 and 17.

## SUPER－VALUE 17－WATT ALL－PURPOSE AMPLIFIER

 IDENTICAL TO ABOVE MODEL MAIIP EXcept doas not have phono top．to 1160 pernoneupock No．3048f；Model MA－17 Amplifier \＆Tubes，NET $\$ \mathbf{3 4 . 1 0}$

## ＂MASCO＂1\％－TATT PIONO TOP AMPIMFIER

De Jure 17－watt amplifier and A．C．OPERATED 78 r．p．in．constant mpeed tarn table whith＂Astatie＂ tangent heal crystal plek up mounted on top of amplifier cabinet．OVER－ALL ELECTIRONIC Mix－ ING for microphone and phono input．Frecuency minus 22 db make this an fdeal voice－music am－ plifier．Gain is 118 db on microphone and 74 db on Dhono．BEAM POWFER OUTPUT using 2－6L6GA tubes together with 1－7C7；1－iF：and 1－5Y3G．Individual controls for phono，microphone， and tone：separate AC switch．Tapped outputs of 2－4－8－15－500 ohms． Interchangeable for use with EITHER PM OR ELECTRO－DYNAMIC speakers．Power consumption， 90 watts at 115 volts 60 cycle．A．C．
size $12^{\prime \prime} \times 10^{\prime \prime} \times 8^{\prime \prime}$ Stock No．Phono－Amplifier
8043 ＂Mawo＂Model MA1\％P
sorp $\$ 46.30$
保


O－TWYOWGOWNT



## Model EX-328 De Luxe 32-Watt Moblle Amplifier

 DUAL PURPOSX AMPLIFTBER dosigned for use on HITMHER 110 volt A.O. OR ${ }^{6}$ vait battery current CONBTANT GPEED PHONO MOTOR, rim drive; NO "wowng or Waver on olther battery or AO our rent! AMPLIFIER AND PHONO AssEMBELY bullt as intogral units -ALL INSIDE THE CABINET with hinged cover closing over entire unit. Three Imput Channels ailows mixing of 2-Microphonel and Phono at the same time. TRIPLE RANGE ELRCTRONIC TONE CONTROL provides complete control of Bass, Treble. and Middle register; permits PERFECT adjustment of tone and volume, regardless of indoor or outdoor use: create ANY TONE RANGFI Battery saver awltch-cuta "B" pow: er but leaves tube pilaments "ON" for instant use. No outaide power pack required-FXS326 is completely elf-contained; 6-volt DC and 110 , AC power mapples are buit-in INATGD sloping panel with all controla grouped for fast, accurate amplifier control. Scientifically ventilated case for cool operation at sil times Technical Specifications: 8-TUBES; 3-7B4; 2-7F7; 2-6L6G: 1-5U4G. OUTPUT; 82 watts undistorted peak power; 40 whitn at less than $5 \%$ distortion: Gain. 120db on Microphone, 81ab on phono; High Impedance Input; Output, $4-8-15-250-500 \mathrm{ohm}$. Frequency Response, $30-12.000$ cycles, plus or minus 1db.; curvent drain, 6-volt DC battery, 23.6 amps., 120 -watts on 110 volt A.C. Shockproof "Astatic" cryatal pick-up. Heavy steel cabinet, ripple gray enamel slze $16^{\prime \prime} \times 16^{\prime \prime} \times 101 /{ }^{\prime \prime}$ high, Complete with all tube and instructions. stock No. 30A17; "BOGEN" MODEL EX-826 AMPLIFIER, NET HACH$\$ 149.35$

## Model E-1620 "Universal" Mobile Amplifier

 23-WATTS UNDISTORTED OUTPUTL For operation on EITHER 6volt battery (IDC), or ntandand LINPb VOLTAGE, 117 volt, 60 eycle AC.OUTSTANDING FEATUREG include hermetically sealed vibrator, 2-tube Vibrator circuit, resistor strip WirU. S. Army). CONSTANT SPEED. Im drive motor. TWO INPUTS, each 500,000 ohms, for Mike and Phono may be mixed and faded through ${ }^{f}$ independent grin controls, additional Base Troblo compensator provides excellent frequency response control. TAPPED OUTPUT ohm outpats at terminal strip and dual apeaker plug sockets. FREMcrophone, 109 db . Phono, 67db. PHONO AS8EMBLY bay buitt-in power supply. Astatic Crystal Pick-up: and operates on AC or Battery Without speed variation or waver. 6-TUBES with 6L6G outputs, provide 19 -WATTS on battery operation and 23-WATTS on AC operation so-wests $151 / 2^{\prime \prime} \times 10^{\prime \prime} \times 12 \%$ high: finish, ripple gray. Cpt. with tabes and instruo tions. "Bogen" Model E1620 is built throughont to meet the mont rigid . Army epecifications-the Identical unit enppided by the handreds es is now beins prodnced for YOUR NEGCDS $\begin{array}{ll}\text { Stock No. "BOGEN" MODEL E1620 MOBILR TOUR } \\ 30 A 99 & \text { G-V. DC; } 110-\mathrm{V} \text {. AC AMPLIFIKR... COST }\end{array}$

## 50-Watt Booster Amplifier_Model 9050

 ADDS 50-WATTS OF AUDIO POWER OUTPUT TO ANY SOUND INSTALLAATION by the simple method of connecting the output of any existing low or medlum power output ampliffer to the input of the NEW GO50! NEW FGATYRRG inclade ${ }^{2-80 \%}$ tranamitter type tubee in PashPoll outpnt, with tube regulated acreen voltage; multi-stage inverse feedback circult; oll filled laput stage condenser; safety interlock switoh. and built-in provision for stand-by ralay control Fithout change of power transformer! Inpat:-one 500,000 ohm with prom telephone fine. Ontput:- $4-8-16$ ohm tapped output, plve input stant voltage ( 63 and 125 V .) taps for use on modern, special hook-aps. GAIN :-48db; Freqnency Fesponse:- $20-20.000$ cps. Nus or minus 1db: GAIN CONTROL mounted on rear of chassis; power switch and pllot light on front panel. 6-TUBES, including 8-type 807'a; providing power output of 50 -watte at less than $5 \%$ distortionl Heavy giteel cabinet is 17 " $x 114 /{ }^{\prime \prime}$ " $x 9$ \%""; for operation on $110 / 125$ volt, 60 cyole A.C. power consumption, 200 watts Ripple gray finish.
MPL NO, 30A184; "G050" BOOSTER

## "Bogen" Model SRC-50 Remote Control Unit

Consists of remote control unit and 50 ft of special cable with plugs for quickly attaching to "Bogen" Amplifiers designed for its usefor all EX85: Permits "mixing" and "fading" of any two channels from remote location.
gtook No. 17A787; REMOTE CONTROL
MODEL SRC50: YOUR COST
97.70

## Model E75 Triple Input 70-Watt Amplifier

Inxclusive "BOGEN" DUAL CON-
STRUCTION-TWO 85-watt amplio fiers diviven by pre-amplifite $00 \mathrm{~nm} \mathrm{~m}^{\circ}$ n to bothl Delivers ${ }^{70}$
WATT8 at leas than $4 \%$ distortion with IXCETIONAL TONE QUALITY. Allowa one $85-$ watt eeom tion to be used iv emergencien as safoguard agalnst complete breakdown! Dependsble and adequate for HIGH POWER INSTALLA TIONS AT AIRPORTS, ATHLETIC FIELDS, STADIA, DANCE HALLS, otc. Triplo input ehannols, 2 mike and phono may be mixed simoltaneousy through three high Impedanoe inpute COMPLETE VARIA TION OF ONER-ALL TONE by bass and troble cone compensator GAIN is 124db on mike and 95db on phono. FREQUKNCE RESPONSE,
 amplifier tapped $4-8-15-500-1000$ ohms. TUBIRS (12): 2-7B4; 8-7F7; 4-6L6G; 8-6U4G; 2-8F6G. Dual protective fases. Current drain is 290 Watts at 117 volts, 50-60 cycle AC. CONTROLS ( 8 ): 2-Mike, 1-Phono, 2-Master Controls, 1-Bass-Treble compensator. Complete with tubes and instructions, sise $17 y^{\prime \prime} x 10 " x 12 y$

35-Watt Hi-Quality Amplifier_Model EX-35


INPUT CHANNELS- 3 mlk and 1 phono, with simaltaneoas mixing of ALL channels. Triple range TLEETRRNIC TO NE CORRECGL6 output; INPUTS: 500,000 ohm 6L6 output; INPUTS: 500,000 ohm
for 3 Mikes and Phono. OUTPUT IMPEDAKES and Phono, OUTPUT ohms at terminal etrip and apeaker plug sockets, GAIN: Mikes 130db: Phono 90db: Frequency Re-
eponse: 30/14000 cyclea + or 1 ldb . Tone Correoter Eange: -15 db to
+13 db at 30 cycles on Bass: -15 db to +8 db at 10000 cycles on Treble; 1 bass and 1 treble control. Illuminated Panel with 8 Mike controls, Phono contral, 2 Electronic Tone Corrector controls and master Unit listed at left, for remote control of ANY TWO CHANNELS from


Atock No. "BOGEN" EXS8 Do Luxe Amplifier Only.
SOA18

## Model E-30 "Trail Blazer" 30-Watt Amplifier



80-watt undistorted output; ELEECTRONIC MIXING on 2 Mike and Tone Compensator: Beam Power 6LS Ontpat, 7 TUBES; Gain: 129db on Mikes; 89db on Phono: Pre quencr response, $40 / 12000$ cycles + or - 1.5 db Output impedances 1/8/15/250/500 ohme tapoct minal merip and Two plug - In speaker sockets; speaker field mupply at sockets Iaput, 500,000 ohms at 117 volts, 60 cycle AC. Sise $16^{\prime \prime} \times 7 \%$ "x $9 \%^{\prime \prime}$
Na 80A19. "BOGEN" E-so Amplifior and Tubea only. NET ©66. 00
Model E-14 "Pacemaker" 14-Watt Amplifler
-TUBE, HIGH GAIN AMPLIFLHE WIth INPUTS for TWO MIKRS AND PHONO. Full range ElEECTRONIC Tone Control by Bass and Treble Tone Compensators. Outpu impedances of $\{-8-15-250-500$ ohms, avallablo at both terminal strip and speaker sockets, Frequenoy Response, $10-18000$ cycles, plus or minus 1.5 db ; GAIN is 125 db on Microphones and 85db on phono. FULL 14-WATTS OUT POWER OUTPUT, 25 -watto! Consumes 0 watts at 117 volts, 60 cycles, A.C. Complete with all tubes, instruc tons, in stell cabinet size $14 \times 7 \%{ }^{\prime \prime} \times 8$ ". Finished in gray ripple siop ing. lighted panel.
took No. 30A96; BOGEN MODEL E-14
PLMFIER, YOUR COST
$\$ 55.86$
Model E-10 De Luxe Economy 10-Watt Amplifier


A medium powre, 8 -speaker amplifier at : LOW PRICE! FULL 10-WATTS OUTPUT at less RESPONSE, 65-9000db, plus or minus 2 db TWO INPUTS ( 500,000 ohm); 1-Phono and 1-Microphone: Tapped OUTPUTS of 4-8-15250 and 500 ohms; 8-CONTROLS, one each Microphone, Phono, and Tone. DUAL PLUGIN EPEAKER SOCKETE; TC5 Beam Power push-pull output. GAIN:-114db on Mike and 76 db on Phono. Current drain 1888 inet in 117 volts, ${ }^{60}$ cycie A.C. Steel cab-
Stock No soA125; BOGBN MODHL E-10
AMPLIFIER: TOUR COST
$\$ 36.16$
BOGKN" AMPLIFIERS WITR LLLUMINATRD FRONT PANRLG Amplifiers

## Bagen Phona and Public Address Amplifiers

## MODEL PV-20A DE LUXE PHONO AMPLIFIER

 THE TRENH T MUAIO YOU ct Eapanders - Eselunice in the NETV PV-20A - maken this new Phouo Amplifier "TOPS" in fine Phouo Amplifier TOPS In ine munical amplifiens! 8 - TUREA andistorted power ontput; $4-8-16$ -125-500 ohm tapped ontput allown any typefine npeakers.
EXPANDER'"-
 nique new expansion unique new expansion control, provides maximum expansion at a constant average level, or, with Expansion Control at "minimum"* setting, expangion is eliminated, but constant average level is maintained: Further, expanmion is made independent of tevel at which record wast cut, the "conirolled expander" compensates automatically for all variations in original recording levels. Electronic Tone Corrector has separate controls for bass and treble "booat" or "cut". Frequency Reeponse Is $30-15,000 \mathrm{cps}$. plus or minus 2 db . MODEL PV-20A is not "tube criticul"-not a gingle critical type of tube is used, completely eliminating "michrophonism" and epecial tube selection. This marvelous amplifier has the shortest time constant ever-no more time lag-no "thumping"-nothing but pure music of the finest tone quality Jou ever heard! HUM LEVEU Is held to minus 64db. Input: 1-Phono, at impedances of HC-500M ohms-76db gain; LC-250M ohms-97db sain; M-10M ohma-84db gain. MODEL PV-20A fis conservatively rated 20 watto-ACTVAL power output if 30 watts at distortion of less hanges: Complete with 8 tubes in steel case with frock

Model "PV-10" High Fidelity Phono Amplifier
0-WATTS OE' HIGIT FIDFLITY ACDIO OCT PUT! Speclally dewigned for the amplification of FINF MUAIC in the Home, Clab, or Schooll Feithfully amplifien EVFRY TONE in the entire musical register-is equipped with excluslve Dtraight Line Volume Expander, instant and utomatic in operation, has absolutely no time lag or chopping effect; requires no adjustmente and reproduces ANY TYPE OF RECORD, Symphony, Dance, Orchestral or Vocal with a NEW realism of tone far beyond previous btandards of fine reproduction: Absolutely humleat in operatlon: Bass and Treble cone compensators assure complete variation at will of the over-all tone range. 4-8-15-250-500 ohm tapped output allows connection to ANY gpeaker. Mounting flanges at ends of steel cabinet, gize $11^{\prime \prime} \times 7^{\prime \prime} \times 7 \mathrm{f}^{\prime \prime}$ high. Fine cabinets, now equipped with out-of-date record playing equipment, may be TASILY converted to the FINEST RECORDED MUSIC REPRODUCER by Model PV-10 in conjunction with a good automatic changer or ointie record player, and a high grade PM speaker, preferably of 12 -inch elze. 4-toot remote control cable, allowing ingtablation of amplifier in base of cabinet, with controls mounted olsewhere as may be desired,


## MODEL E-G6 UNIVERSAL MOBILE AMPLIFIER

 Operatew on WTTHER 6-VOLT DC: OF 110 AC: Compact, inexpennive s-WAT ampli"BALLYHOO" purposen, or for POLICE, BMRE, or EMERGENCY CARS. May be mounted under dash of car-takes very little space, and is as easlly operated as any tie ppace, and is as easily operated as any put and Spealer Plog, together with On-Off svitch, are mounted on side of cablnet, with Gain controls on front for easy access. High impedance input is 600.000 ohms for "mike" impedance input is 600,000 ohms for mike 5 -prong ppeaker plug. Hum or phono; Output is selective $4-8-16$ ohm at $\delta$-prong mpeaker plag. Hum
level is minus 45 db on $A C$; minus 62 db on DC battery; GAIN is 110db on "mike" and 76 db on phono; power congumption on 6.3 volt battery, 7 amps. 0 on 117 volt AC, 50 watts. Complete with 4 tuber in sturdy

 16-INCII, DUAL SPEFD, PORTABLE RECORD PLAYER. MODEL $8016-\mathrm{L}$ provides facilities for the playing by "Wired" method, of ALL 10"; 12": or $16^{\prime \prime}$ commercial or regular recordingm. Heavy duty, $331 / 2-78$ RPM "Green Flyer" motor. Astatic type HP16 Crystal Pick-up has $12^{m}$ tone arm, is low presaure with permanent SAPPHIRE STYLUS -a unit thoroughly capable of playing the finest 16-inch COMMERCIAL RECORDINGS, an IDEAL record player for Schools, Broadcast Etatlons or Recording Studios. Heavy duty leatherette covered

Dual Speed Heavy Duty. Record Player Top quallis, hewvy duty record player for the "ppund" operator-for plaging AlL typed of $10{ }^{\circ}$ and 12" ntandard reworde, and up to $181 / 4^{\prime \prime}$ Proregetonal recordingt with the leant posnibls motor speed wativer or "wow". DE'AL SPEFD heavy duty "Green Flyer" motor handles either 33 or 78 RPM recordings. table. sturdy, luggage covered case, $15 \mathrm{~m} / \mathrm{m}^{\circ} \mathrm{inoh}$ turnFor use with ANY Gtandard amplifier or radio. Ftocl No. "HOGEN' Model 8007




NET...

"Bogen" Model G-50 New-Low Cost 50-WATT
"P.A." Amplifier
80-WATTS OF DISTORT1ONLESS ACDIO POW ER - MANY FEATURES USUALLY FOUND ONLX IN HIGH PRICED UNITS:

Tranemitter type 807 TUBFS, driven by low source impedance cathode follower, assure excellent output grid regulation and maximum power output with minjmum distortion. INPETS for TWO Microphones and Phono, all high impedance, and all may be used and mixed simultaneously by separate controls on each channel. Microphone inpat feedback cirenits provide automatic compensation for wide tube variations, banishes critical first stage tube selection; use of low output impedancen on input tubes ELIMINATES HIGH FREQUENCY LOESES in early gtages. PUSHPULL TYPE 807 OUTPUT TUBES provide REAL HIGH POWER with excellent regulation and DISTORTION FREE! New type DUAL OUT-PUT:-tapper impedances of $4-8-16$ ohma, PLUS TWO CONSTANT VOLTAGE TAPS of 125 V . and 63 V . permit ube of speaker matching trangformers which are tapped for power-ALL outputa available at Terminal Strip and TWO Speaker Sockets! Frequency Response:-30$20,000 \mathrm{cps}$. within plus or minus 2 db . GAIN:-120 db on Microphone Inputs; 70db on Phono Input. Illuminated sloping panel has Tone Compensator Control, two microphone controls, phono control and master power switch. Oh filled condenser in input section of filter: tube regulated gcreen power for output tubes; Multi-stage Inverse feedback; interlock gwitch-ALL make thig amplifier OUTSTANDING. Heavy,
 1-6SN7; 1-5R4GY; 1-6Y3; and 2-807 tubes, and full operating in atructiong.
8toek No. 80 A 226 ; MODEL G-50 AMPLIFIER; YOUR COST \&4 4.46

## Portable Speaker-Amplifier Cases-Wall Baffles



Muk. "A":-Modern STREAMLINED PORTABLE METAL SPEAKER CABINETE. Ample baffle area for good reproduction with average dynamic speaker. Rounded corners, metal grille and handles.

| Stock | Hole | For |  | Your |
| :---: | :---: | :---: | :---: | :---: |
| No. | Size | Speaker | Dimenitons | cont |
| 5A12\% | $4 \%{ }^{\prime \prime}$ | 6-INCH | $10^{\prime \prime} \times 10^{\prime \prime} \times 6^{\prime \prime}$ | \$3.00 |
| 8 A128 | $61 / 20$ | 8-INCH | 12 "x12"x7" | 3.68 |
| SA129 | 11 | 12-INCH | $16^{\prime \prime} \times 16^{\prime \prime} \times 8{ }^{\prime \prime}$ | 6.32 |

IIIA, "B":-WALNCT FINISH DESK OR WALL NOC'NT SPEAKER BAFFIES. Solidy constructed of veneered ply-wood; sclentific acousth design for best reproduction of voice and music when equipped with a GOO1 dynamic apeaker! Sloping front properly directs speaker output for BBET results. Pleasing WALNUT pinish.
Stock For Dimensions Your No. 34A103

Speaker

Cost
52.75
$84 A 102$
$6-1 \mathrm{NCH}$
3.35

34A101 $10-$ INCH 11 多" $11 \mathrm{~m} \quad 7 \% \%^{\prime \prime} \quad \mathbf{3 . 9 7}$
34 12-INCH 14 13 13 届 $8 \%$ 6.10
Mum, "C":-PORTABLF DEAL-SPEAKER, AMPLIFIER CASE. Designed for "Bogen" E-14; E-20; E-30 or other large amplifier fitting in space provided. BAFFLES 2-12 INCH SPEAKERS and is fitted with cable blocks for storing speaker cable. Blocks in amplifier space prevents amplifter sliding out when carried. Heavy, durable construction; solidly fastened carrying handles. AVAILABLE IN TWO SIZES AS LISTED BELOW
MODEL K - 20 has Amplifier space $14^{\prime \prime} \times 8^{\prime \prime} \times 8^{\prime \prime}$, over-all size is $16^{\prime \prime} \times 14^{2 / h^{\prime \prime} x}$ $20^{\prime \prime}$ high; gray leatherette covered.
Stock No. 30A127; MODEL K-20 CARRYING CASE; NET $\$ 14.99$ MODEL K-30; Amplifier epace is $15^{\prime \prime}$ long, $8^{\prime \prime}$ high, $9 y^{\prime \prime}$ deep; over-all Elze, ${ }^{16^{\prime \prime}}$ Wide ${ }^{143 / 2 " \text { deep, }}{ }^{20^{\prime \prime} \text { high. }}$ Stock No. 30A128; MODEL K-30 CARRYING CASE; NET 914.99

Mifs. "D":-AMPLIFIER CARRYING CASE, De Luxe type of heavy plywood, completely reinforced and covered with handsome gray leath-
erette. Cover, held with 4 heavy duty clasps, alips off quickly for access to amplifier, which may be used without taking off base of case. access to amplifier, which may be used without taking off base of case.
lieavy carrying handle, reinforced corners. FITS "Bogen" E-35 or any lieavy carrying handle, reinforced cornerso Fims ingese they deep, $10 \%{ }^{2}{ }^{\circ}$ high. dews than NBIDE dmencions of Htocl No. 30 A 129 ; MODEL 133X AMPLIFIER CASE. NET
$\$ 12.20$
"BB-A" ALWAYA HAS THE NEWEST IN "PPCBLIC ADDRERS" FRI'TP-MFNT-no matter what Your needs may be-cALL ON US. "IB-A" Without notice to those in effect on date of mhipment.

## Bagen "Communa-Phane" Inter-Camm Systems



## De Luxe Model "LC" All-Master System

## THE VERXBEST NN

 ELYOTRONIO INTER LUXEMESEDALO DETWO possible meths of widely separated locations - LOUD SPEAKERB reeeption, OR, "Trench" HAND SET standard tele PROM \& TO \&O STATIONA FROML MABTERT UNITS, may be Installed in an Integrated system, providing PRIVACY of conVRASATIONS between Masters, or GROUP CONVERSATIONS OR CONFERENCES among any sellected number of Masters in the gystem! INSTALLATION IS SIMPLE-requiring only that all miations in the system be connected from No. 1 to No. 2, to Na. 8, etc., to the last atation in the systern, using a cable with ONE more conductor than number of Master stations in the system-a 8-conductor cable for 2 QUIRED. Exclusive new "Bogen" DIBCREET BUSY SIGNAL BYSTREM provides complete AOTOMATIC "busy" slenals withont compliceted hook-up or aidiltional wires in cable. A distinctive signal is recelved the moment the selector button la depressed, a pulsating aignal in the apeaker or "phone" indicating the called gtation is NOT talking: or a PILOT LIGHT SIGNAL, Indicating that the called station is conVersing and cannot be interrupted. AMPLEE POWFA OUTPUT of "'LC"' Master Units is assured by use of 1-6SL7GT; 1-6V6GT, and 1-6XEGT
tubes-plenty of power for long interconnecting lines and noisy' tubes-plenty of power for long interconnecting lines and "noisg" locaCOMPONENTS are all mounted on terminal boards. HAND-RUBBED WALNUT CABINETS: PUSH BUTTON operation with ONE extra push button for "release" button. VOLUME CONTEOL allows adjustment of incoming volume to suit individual locations Arallable in TWO Modele-with "French" Phone as illustrated, or without this phone 10-STATION MASTERS accommodate from 2 to 10 locations $20-$ STATION MASTFiRS accommodate from 2 to 20 locaflons All units are $12 \%^{"}$ long, $8 \% /$ wide, and $6 \%^{\prime \prime}$ high. COMPLETE with all
tubes, detailed ingtructions and wing diagram. FOR USE ON 110 tubes, detaild
VOLT, 60 CYCLEAC. CURRENT ONLY.
MODEL LC10; $10-S t a t i o n ~ c a p a c i t y ~ A L L ~ M A S T R R, ~ W I T H O U T ~ P r i v a c y ~$ French Phone, complete with tubes, $\quad$ Stock No. s2A223 ............................... YOUR COST 955.86 HODEL LC10H: 10-Station capactty ALL, MASTER, WITH PRIVACY FRENCH HAND SET PHONE, complete with tubes. Stock No. 38AR24

PLEASE WRITE FOR PRICE
 French Phone, complete with tubes. Stock No. 32Az2s
MODEL LC20H: 20-Station capacity ALL MASTEDW W 0 FRENCH HAND SET PHONE, complete with tubes, WITH PRIVACY Stock No. 32A226 .............................PLEASE WRITE FOR PRICE LEC LEXE TYPE "'LA"': 10 and 20-STATION CAPACITT; MASTER trated and described above, EXCEPT, systems made up of ONE MASWER UNIT and up to 10 or 20 REMOTE UNITS as may be needed. and "LAR" Remotes: or two pairs of above cable cable between Master mote Units. MASTER UNITS MAY BR HAD with or without PRIVACY FRENCH PIIONE. All Masters operate on 110 volt, 60 cycle AC
MODEL LA10 MASTER UNIT, for up to 10 Remote Stations of elther stork No. 32A22\%: MODEL LAA10 MASTER
UNIT ONLY, NET EACH
$\$ 56.94$
MODER LAIOH MASTER UNIT, WITH PRIVACY FRENCH TXPE SHONE, for up to 10 Remote Units, complete with tubes.
SNITK NO. 32A228; MODEL LA10H MASTER
MODEL LA20 MASTER UNIT LAR OR LRS types: complete with tubes. 20 Remote Statlons of elther Stock No. 32A229; MODEL LA20 MASTER
UNIT ONLY, NET FACH
MODEL LA20 H MASTER UNIT COMPLETE WITH PRIVACT 1.74 TYPE PHONE for up to 20 of either LAR or LRS Remote Units. UNIT ONLY, NET MODEL LA.OH MASTER REMOTE UNITS FOR EITIRER 10 OR 20 STATION MASTTER UNITG out break-in switch to initiate calle to Master Unit.
Stock No. 32A231; MOD'LL LAAR REMOTE
STATION ONLY. NET FACH
MODEL
ODEL LRS REMOTE UNIT, with Volume Control has BREAT SWITCH for initiating calls to Master Unit. Stoer No. 32A232: MODEL LRS REMOTE
STATION ONLY, NET EACH
$\$ 11.02$


Stock
14A530
14 A 581
14 A 58
14A583
14A584
14A5B5
JUNCTION BOXES make EASY CABLE aplic-
JUNCTION BOXES make EASY CABLE apllc-ing-ellminate unsightly "Jolnts" and prevent noisy operation due to loose connectlons. Models below designed for Bogen Bystems but useful for many other purposes.
$\left\{\begin{array}{c}\text { Page } \\ 6\end{array}\right.$


"BOGEN" TYPE "A" COMNUNO-PHONE SYSTHMS, shown above, conslst of ONE "MASTER". UNIT from which calls may be originated to any number of REMOTE stations, up to the capacity of the Manter Unit, ae listed below. "Master" stations may solect ANY remote ata-
tion with which they wish to talk-REMOTE STATIONS can not call other Remote units in the system, but may call the "Master" unit when such remotes are equipped with "CALL SWITCH". Persons at Remote stations may answer calls from Master at distances of 2 n to 30 ft. with perfect clarity. SIMPLE TO INSTALL; "COMMUNO-PHONE" SY8TEMS require ONLY ordinary 2-conductor twisted telephone wlre for connecting Master units with Remotes WITHOUT CALL SWITCH; or 8-wlre talephone wire for connecting Manter Units to Remotes WITH CALL SWITCH. Separate "runs" must be made from Master to each ramote in system. REMOTE STATIONS may be several hundred feol from Master Unit. Note the following FEATURES:-ALL MASTER unit have Volume Control, Phot Light, and On-Off Switch; 8-tube amplifiers use 1 each $85 Z 5$, 50Lb and $128 J 7$ tubes High qually reslstors, condensers; positive contact selector switches and SILVER PLATED, wiping contact "Press-To-Talk" switch on Master unita S-INCH PM apeakers ued in BOTH Master and Remote unite, Cabinots are of RICH Walnut Plastic. MASTER UNITS are $10 \%$ \% lone $6^{\prime \prime}$ wide, $7^{\prime \prime}$ high; Wt. 7 lbs Remote units are $6 \%^{\prime \prime}$ wlde, $6^{\prime \prime} \mathrm{high}^{\prime \prime}$ " $^{\prime \prime}$ deep: wt. 1\% lbs, 5 -ft. Multicables eupplied Fith all Master Unith,
"Communo-Phone" MODER $4-A$ MABTER\& for up to FOUR romote Units Has EXTRA FEATURE of "ALL" and "BILENT" switoh poilthons which permits calling ALL Remotes at once, and obutting out background noise coming in from Remote Stations.
Stock No, S1A19; MOD'BL AA MASTER UNIT,
complete. NET EACH
$\$ 27.93$
Stock No. 81A20; MODEL 18-A MA8TER: for up to 11 remote unitn: complete with tubes and Instructions.
$\$ 29.99$
Stock No. 81A23; MODEL 210-A MASTER: for up to 18 remote unlts: complete with tubes and instructions
NET EACH
832.63
'COMMUNO-PHONE" MASTER UNITS WITR PRIVACY HEAR PHONR ALL the above Master Units may be had as follows, with Privacy Ear Phone which cuts out the speaker of the Master Unit and switches incoming conversation to a PRIVATE EAR PHOND,
Stock No. 32A217: MODEL 4-A With Privacy Phone. NET EA. S82.05 Stock No. 32A218; MODEL 12-A With Privacy Phone, NET RA. 81,
Stock No. 82A819; MODEL $210-A$ With Privacy Ph., NIGT EA, 38.75

BFMOTE STATIONS FOR "COMMUNO-PHONR" 4A; 12A; 210A


## CABLE FOR INSTALLATION OF ABOVI MASTER-REMOTE

No. 2A1s9: 2-WIRETR Twisted Cable, Indoor Type, Per Ft...
No. 2A141; 2-WIRT Twisted Cable, Outdoor Type, Per Ft.
No. 2A142; 3-WIRE Twisted Cable, Outdoor Type, Per Fit.

"Bogen" TYPE "C" Intercommunication Systems are expreasy de-日lsmed for LNETANT COMMUNICATION between several offloes or other loeationg, arfording each the famility of calling amd conversing and can call any other "Master" indepondently. Several palrs of "Marters" can converse at once without Interierence TYPE "C"' MASTRR UNITS are identical to Type "A" anitg described in detall at top of this page-wiring is SIMPLE as all that is required la the running of a cable having OND more conductor than there are Master units in syatem. PRIVACY EAR PIONE Master units permit continuous cone versation WITHOUT the necessity of using the "Press-to-Talk" ewitch.
No. s2A880; MODEL 6C; for up to 6 stations. . . . . NET EACHI S28se No. s2A821: MODEL 6CE; Same as Model 6C, except ls equipped with PRIVACY NOTE; 60 Units he... "Aili itation". mwitch position
 No, sRACT BAR PHONE ; Same as Model 12C, except is equipped vith


GUMPLETE, BARIC INTERCOMMTNICATION SYGTEM, CONSISTING OF DE LIXE B-ATATION MASTER ENIT AND ONE REMUTE, UNIT O-daltional "Remote" unita may be purchesed with system (as listed Bolow), or may be added to the original 2-station system at any later bolow), or mag be added to the origimal 2-station syitem at any PUBH BUTTON MABTER UNIT, and ONE Model SS-5 REMOTF UNIT-air ounhion packed in a damage-proot shlpping carton READY TO IN GTALL! THEAE FGATURES MAKE THE NEW "CONVERSA-FONE" - new "High" in QUALITY and a new "Low" in price for modern Atercomm ystems FOUR TUBE AMPLIFIER, 2-12SJ7; 1-50L6; I-35Z6 (NO BALLAST TUBES USED) provide full 2-WATTS OUTPUT ample power to overcome noisy sub-station locations with ADDITIONAL FEATURE of 4 th tube functioning an a mer-sensitive remote pick-up amplifier! "Mallory" PUBH BUTTON BELECTOR SWITCH provides facilities for up to b-REMOTE STATIONS (Type 88-6) in locations that may be several hundred feet from Master Unit! "LOOKIN" FEATURE on Push Butions enables Master Unit to call 2 or 8 Pemote Stations at once-REMOTES have eufficient power, eupplied by Taster, to answer and carry on a conversation at distances up to 50 PRET from Remote location! SELECTIVE MONITORING or "Listen-ing-In" by Master Unit may be had by merely pushing "in" locking pose push buttons on Master Unit for Remotes it in deaired to monitor. BIDENT FEATURE on Master Unit, shuts out ALL NOISE originating temote locationg-the ONLY ttme Remotes can be heard is when their push button is "IN" on the Naster Unit! f-INCH "PM" SPEAKHeg pith "AlnicoV" Magnete are uned in BOTH Master and Remote. Remote stations are equipped with "C-H" CALL SWITCHES-can Remate a call to "Mapter" unit at any time Master is "On". HEAVY initiate a call to raster itch on Muster Unit is designed to ELIMINATE dirty contacts and "mushy" communication-has "shorting" NATE dir prevent transformer burn-out in use! Ontput fmpedance is eature to prevent tranelormer buper Remote stations (such as "Uni16 ohm 10 . veraity" Mudel 1B8) for outloor iocations furnished-cable required tremely simple with full detalled instructions furniohed-cable required is any good 3-conductor, unshielded twisted cable: CABLE LENGTH fotal dibtance from haster Uni OABINETA are of TER UNIT is ${ }^{12^{\prime \prime}}$ long,
long, $6 \% /{ }^{\prime \prime}$ high. 4" deep.
MODEL MRS-8R5 Master-Remote Intercommunication nystem, Fith i-
tubes, MSE Manter Unit and SSJ Remote Unit, detaijed installation intrect No. 32 A 234 ; CONVERBA-FONE BASIC SYBTEM, YOER COST
$\$ 35.94$ MODEL SS5 REMOTF STATIONS (up to FOCR additional Remotes Block No. 32AR8E; CONVERSA-FONE REMOTE GTATION, YOUH COST
$\$ 8.97$ CONNECTING CABLE SOR ALI, "Mnster-Remote" Intercomm. Symtems. Etork No. \&A140; 3-CONDICTOR INDOOR CABLE, IPFR FT.......4c
"Dalmatron"
Low Cost All-Master Systems THE ONLY NON-COMPLICATED "ALL MARTER" INTEHCOMMUNICATION GXSTEM AVAIL-
ABLE! NEW GLECTHONIC PRINCIPILS and Patented cir-cuit-EAOH "DALMO" STATION hae only HALF an umplifiar-the calling staflon uses the amplifier in the "called" itation, in uddition to Itmown, to make a COMPLETE circuit per $x-$ WAI COnvernationm: FROM TO ${ }^{\circ} \mathrm{D}$ DI, MO" UNITS MAY BE - requiring only in erconnection with station! ANY TYPE OF WIRE may b used - even "bell' UME CONTHOL in each station in ret to suitable volume at installation, and thereafter
 Long distance ALI RTATION namber muy tall in conferwnee; THRFE converaminons may be condreted at one time on a t-stalioa syhtemi CABINETS are molded. moft-black, ligg, eloping speaker grille. Station Selector and Press-to-Talk switchen on lower front. EACH "DALMOTRON" STATION is complete with 1 each type $50 \mathrm{~L} G$ and ${ }^{3525}$ tubes, FOUR-INCH "FM" dymamic mpeaker,
s-ft. power cord, add complete instructions. FOK OPERATIGN UN 6-ft. power cord, add complete instructions. FOL OPERATION ON


## Talk-A-Phone

ter-Communication Systems and De Luxe in
Design and Operation
operate on EITHER 110 V. AO UR DC: LOW POWER COST: EASYTOIN. STALLL: HI-POW. ER OLTTYUT sufficient to operate trumpet type speakers much as on "Master - Remoter installa
 tions.
MODEL ER-40 "3LASTER' REMOTE SYKTEMS, 10-STA. CAPACITY
 Mamter Remote Systems consist of a single JasStations can call each Sub-station Individually or all Sub-Stations at once, and can listen In on or all sub-Stations at once, and can-sub-station at any time. Sub-Station may angwer or originate a call to the Master, but answer or originate amons themselves. Switch on Sub-stations is used when orisinating a call to the gaster but is uot used when answering to the Master, but is not used when answering a call. Person at Sub-Station may answer at distance of 20 to system may be built up starting with the Master Station and one SubStation, and Sub-Stations added as required. Master Stations have a full $81 / 4$ watt output, SILENT OPERATION, to eliminate nolses fron sub-Stations not in uee; variable volume control adjustable at each Master from a whisper to full room volume; PRIVACY EARPHONE (opilonal) which dieconnects speraker when lifted to insure absolute listening privacy. Master Stations are housed in beautifully finished choice walnut wood cabinets, finished both back and front, measuring 12 " $\times 6 \%$ " $\times 5 \%$ ". Sub-stations are in matching walnut wood cabinets
 $\qquad$
MODEL KR-40; DE LUXE 10-STATION MASTER UNIT,
tubes instructions, and wiring diagram. Wt. 10 lbs.
gtock No. 81 A ; Model KRi0 Master Unit Only; EACH.
3

MODEL KR-40C; DE LUXE 10-gTATION MASTER UN
VACY Kar Phone, complete with tubes and instr $\qquad$ 943.51

YOCR COST $\qquad$ dee 1
SUB-STATTON, MODEL RU-43 DE EUXE, from
1 to 10 $\$ 11.14$

## Model KS-60 De Luxe All-Master Systems


ter syitems consist entirely of Master station units. Any station may converse with any other station at will, and several separate two-why convernations may be held at the mame time with ubsolute privary and Without cromstalk. There can be absolutely no eavesdropping by other stations, Stations may call other Stations even though power is not turned on at may be adjusted at each station. In syatems using Privacy Earphone, Talk-Listen switch is not operated. "ALL MASTER SiNTEMS" may be built up starting with WO stations and meal © th tubes, instructions, wiring dlagram; wt. 10 lbs .
$\qquad$ $\$ 34.69$
MODEL KS-60C; "ALL MASTER" UNIT, same as Model xcept has PRIVACY EACH PHONE; wt. 11 lbs, 11 be нй $\$ 43.51$ Stock No. BIAIO; MOTVEL KS-6OC MASTEI UNIT: FACH © Connectins Cable for "All Manter" systems: one more conductor in cable han there are Master. [nits in symm 11-conductor cable listed from lat to lant Master linit in sy
$\qquad$ Stock No. 2A14: 11-CONDLCTOR TNSHIELDED CABLE, FT. 18 O NOTE:-AM "Tyalk-A-Phone" Manter Inite linted above are equipped wifli dNXCTIGN IBOXEA at ent of

Master Utiliphone 2-Station Inter-Call Set
Tup Qualliy-good looking RFall.
 BOTMX Master and Remote unites in Handsome NTFFFL cabinets, $41 / 2^{\prime \prime} \mathrm{I}$ Handsome NTFiFL cabinets, $41 / 2$, 51/2"x+1/2": Finlshed in gray baked namel with Cfiromes may be set on desk or mount ed on wall. 3-TUIBE POWWRFLL AMIPLIJIER for long distance collvematlonm. OIFERATES GN 110
VOLT AC or DC! EASY TO IN VOLT AC or DC: EASY TO IN
STALL - merely connect Mast and Remote units with $50-1 \mathrm{t}$. 3 . conductor cable iurnished. plugg Master in current outlet, and IT'\& READT TO WORK: PUSH-TO-TALK SWITCH ON BOTH MASTER AND TEMOTE UNIN. EMMIM SPEAKERS in Master and Remoto heard at other. 3-INCH PM SPEAK bruahed CHRONE inish Hemote units, \&peaker grine fs NEMAL with brushed Chroat inish. iere i - COMPLETE, 2-Sistation inter-comm fistem-IDEAL for HUNIBRED. of locatlons. Complete rystem in carton with tubes, 60 ft coll of 8 conductor cable, and complete instructions; wt. 7 lbs conductor cable, and completions "UTILIPHONE"INTERCOMM BYETEM: YOUR COST

HIGR HFEICIENCY REELEX 8PEAKERS

420\%102HIGE POWHE DRIVAT UNITS


HIGH ERFFICIRNCY REFFLRX TRUMPETS.
"Univeralty" all metal, weather-proof pro"University" all metal, weather-proof pro-
jector trumpets have stood the test of "batJector trumpets havie stood the test of "bat-
tlefront" conditions-their famous "RUBBER RIM ${ }^{\prime \prime}$ tends to eliminate all possible rattles and resonant vibration. Tirese trumpets when used with "University" Thermetically eenled DRIVER UNITS amuro a weatherproof, WATERPROOF outdoor loud speaker with assurance of continual, long ilfe operation, regardiess of climate or temperature. Noncorrosive finlsh limits possiblity of rust or deterioration. UNIVEREAL "U"' BRACKETB permit mounting of trumpets in any position. et; G-FOOT AIR COLUMN: $30^{\circ \prime}$ diameter bell, low frequency cut-off of 85 cycles; well suited finest music reproduction or for voice. Made of Alaminnm; $25^{\prime \prime}$ long (without driver): weight 22 lbs .900 dilspersion.
stock No. 30A181; MODEL "GH" TRUMPET ONLY: -OUR COST
$\$ 35.28$ MODEL "LH" REFFIEX TKUMPET-41/~FOOT AIR COLUNN; very
matisfactory for BOTH VOICE AND MUSIC; low frequency cut off matiafactory for BOTH VOICE AND MUSIC: low frequency cut off,
L20cps. Bell diameter, $251 / 2^{\prime \prime}$ : length $181 / 2 \mathrm{~m}$. Made of heavy steel finished in gray weather-proof cnamel. Wt. 5 ibs. $900^{\circ}$ dispersion. Stock No. SOABO; MODEL "LH" TRUMPET ONLY:
$\$ 26.16$
 tor voice, low frequency cut off, 150 eps. Hell dia. 20"; length, $15^{\prime \prime}$. Does a fine job on combination voice and music jobs. gray enamel finish; wt. 10 lbs $80^{\circ}$ dispersion, Stocl No. 30A28; MODEL "PH" TRUMPET ONLT;
YOUR COST ...................... YOUR COST
916.17 MODEL "SMH" RHFLAKX TRUMPET- V1/z-FOOT AIR COLUMN: made of aluminum with $151 /{ }^{2}$ dia. bell, $12^{\prime \prime}$ long: wt. © lbs. Low frequency Stork No. SOA28; MODEL "SMEH" YOUR COST
$\$ 12.05$


## "University" P-M Driver Units ALL UNIVEHSITY "PM" DRIVER UNITS are

 jower Impat. Justly doserving their roputation of "BREAKDOWN PROOF", the unlts listed heroin "stand up" under the mont cevere conditions of MODEL "PAH" HiFGR UNIT: Frequency range of $80-6.000$ DRIV-
 dia. ${ }^{5} \%^{\prime \prime}$ : wt. ${ }^{9}$ lbs. Thread size, $1 \%^{\prime \prime}-18$. Absopost terminals. Stock No. 34A135; MODEL PAH DRIVER UNIT ONLY:
831.16

MODEL "SAF" 25-WATT STANDARD "PM" DRIVER UNIT; Handles full 25 -watts power input at frequency range of $90-6,000$ cycles; $16-0 \mathrm{hm}$
 lbs. Absolutely WEATHERPROOF. $1 \%{ }^{\prime \prime}{ }^{\prime \prime}-18$ threads Stork No. 34A184; MODEL SAH DRIVER UNIT ONLY:
YOUR COST YOUR COST
921.76 MODEL, "MAI" 12-WATT MEDIUM POWFR "IM" DRIVER UNIT; faithfully reproduces voice or music in frequency range of $100-6.000$
cycles. Impedance, 8 -ohms; size, $3 \% / h^{\prime \prime}$ dia, $8 "$ high; wt. $2 \% / \mathrm{lbs}$. Thread size is $1 \%^{\circ}$ "18.
8tork No. 81ARS; MODEL "MAR" DRIVER UNIT;
$\$ 14.70$

## $360^{\circ}$ RADIAL CONE-SPEAKER PROJECTORS

"UNIVERSITY" MODEL RBP-12: RICH TONE QUALITY equal to large wall speaker rubber cushioned opening correctly loads rear of cone speaker for FULL RANGE reproduction of VOICE OR MUSIC! Frequency uniform down to 60 cycles. Dia. Frequency $27^{\prime \prime}$ : ht.
$11^{\prime \prime}$; wt. 19 lbs.
Stock No. 34A114; MODEL RBP-12 PROJECTOR ONLT FOR 12-INCH CONE SPEAKERS: YOUR COST. ....... 20.58 Mtock No. $34 \mathrm{Al15}$ : YOVR COST

Q11.52

## PARABOLIC BAFFLE <br>  <br> Vibration and WHATHERPROOF for most severe field service; NEW between sections. Mounting holes drilled fit any 12 -inch speakermtg. bolts supplied. Hangin loops suppplied. or may be mounted on BLUE-GRAY weather resistant enamel finish. Stock No. 30A10; Model SM-12; Yonr Cost 47.94 <br> ST-8 MTG. Yonr Cost

## 5

Complete High Efficioncy Announcing Speakers


Ideal for use indoorm or outdoors in connection with MITHiERR P.A. AmpliMier, or INTER-COMM syatom. Radial, these fine speakeral, or IBR Radial, these fine speakera are COMPLETE with hermotically sealed driv-
or units-have famous "Univernity" or units-have famous "Univeraity"
RUBBER RING to ollminate vibration and resonant sounde. For continuous operation under ALL CONDITIONS.
Model IBs Complet Directional Epeaker; $60^{\circ}$ dispersion; frequency 300 5000 cycles; 18-WATTS, 8 -ohm Foice coll. Projects to $1 / 5$ mille. Hormetically sealed BUILT-IN DRIVER UNIT, Complet with mounting bracket. heifht $9^{\prime \prime}$. dia. $9^{\prime \prime}$; wh. 6 lbs.
Stock No. 34A132; "UNIVERSITY" MODEL IB8. Your Cost © 7.64 Model IBR Complete RADIAL, Spesker; $860^{\circ}$ sound dispersion, projecte to $1 /$ mile! Power capacity 10 -WATTs; frequency response is $300-5000$ cycles; 8 -ohm voice coil. Hermetically sealed DRIVER UNIT bullt-in! Height 10"; dia. $0^{\prime \prime}$; ${ }^{\circ} \mathrm{ta} 5 \mathrm{lb}$
Stock No. S4A18s "UNIVEREITY" MODEL IBR, Your cont \$20.00 NEW Model. "MIE" Completo Directional Spealror-A NEW "UNIWATTS audio for matiafactory operation! Frequency range in $300-8,000$
 $81 / 2 \mathrm{lbs}$ SAME STYLE AS MODEL IB8 shown at right above except has special ball and focket joint, allowing an adjustment to ANY ANGLE NBCEB8ARY. POWER CAPACITY, G-WATTS.
Stook No, s4A108; YOUR CO8T
$\$ 14.70$
NOTE: GITHBR of the above work beautifuly as a sub-station on moot INTERCOMMUNICATIONS SYSTEMS, permit TALK-BACK a
tances up to 50 ft. mhould be used for ALL outdoor ingtallations.

## Microphone Boom-Pulpit 8tand-Trumpet Tripod

 PIT MICROPHONE STAND. PUL JUSTS QUICKLY TO ANY ANGLE or less INSTANTTY byect $2^{\prime \prime}$ thick with BALL and SOCKET JOINT to hold tight to irregular surfacel DOUBLE ADJUBTMENT BOOM attachment with $50^{\circ}-27$ thread hea control-UNIVERRSAL JOIND - scrow way adjustment of boom at for ${ }^{3-}$ of knob, Miko cable feed Folds into compact size for wayl
"A" "B"
Stock No. S1ASO; PUL- 88.20
PIT MIKE STAND; NET
"B'":-UNIVFMRAALEY ADJUSTABLE BOOM FLOOR MICROPROND STAND. A "MUST" FOR EVERY COMPLETE BOUND BYSTEM: allows advantageous placement of "mike" for orchestra pick-up, or for single selected instrument snch as Diano in RECORDING or "PA" installations. Has heavy 12-POUND TRIPOD BASE, rubber floor gripe and long sleeve for pipe upright to eliminate strain; lower stendard Lf heary $1^{\prime \prime}$ pipe which, with upper standard of $34^{\prime \prime} \%^{*}{ }^{\circ}$ POLIBHED FRingore pipe, allows upward adjustment of mike to feet from Moor. Finger-ifp controd sacke adjnitment for positioning of boom in $180^{\circ}$ aro from otraight up to straight fown. Boom extension controi has DUAL leather cushloned, positive locks. Boom threaded \%" 27 for ANE "Mike". FINISH:-UPDPer rod and fittings in POLISHED CHROM E, lower rod and base, satin black. Wt. 16 lbs.
Stod No. $30 A 88-2$; Model HB- FLLOOR BOOM BTAND; NET 4 "C" : "UNTVEBSITY" MODFZ TS-10 HEAVY DUTY RHFLEX TBUEOR HIGH POWER SPEAKER BECURE PLACEMENT OF TRUMPETR stands wind prestures of $50 \mathrm{~m} . \mathrm{p}$.h: FOLDDS to from 6 to 10 ft . Withhandling. A giant in strength with center co a length of 48 for enar upper collar bracket having holes dilled to column of $1 \%$ " dia. plpe and or guper-power speaker mounting Triled to fit ANY University trumpet or super-power mpeaker mounting. TRIPOD LEGS of $1^{\prime \prime}$ pipe are asfasten locking screw; ollowing outriggers and sliding collar with gurefasten locking screw: allowing 2-ft. adjustment in heisht of speaker, and positive locking at any height with a aingle leveri Tripod leg' have sharp points to securely grip any type of surface. Weather-proot Stock No. 30 W10s 25 ibs.
HECK NO. 30A108. "UNIVERSITY" MODEL TS-10
"University"
Trumpet
and Driver
Fittings

"A": - "UNIVEREITY" "PMA", ADAPTRE, Providea solid, rattle-proof mounting by means
of standard $1 /{ }^{\circ}$ pipe for ANY type of UNI. VERSITY TRUMPET or power speaker. Adapter bolts securely to "UU" bracket of trumpet. Slze,

"B":-"University" 2YC DUAL, ADAPTER. Permits the use of TWO DRIVER UNITS ON A BINGLE RPFLFX TRUMPET! Makes any of the trumpets listed on this pase a $50=$ WATr power speaker. Acousticaliy correct in construction, the $2 Y C$ adapter has male threads to fit ANY trumpet, and female threads for ANY of the driver units isted hereln.

net. No. SLA48; Teur Cost
$\$ 5.88$
$\$ 23.52$


- Non-wear actionl Wt. 15 ibs. TRIPLE CHEOME tems, gun - metal base: $5^{\prime \prime}-27$ thread.
No, $82 A 1 ;$ MS-20

STAND:
Net

## NEW COAXIAL SPEAKERS

Provlde a co-ordingted two-way reproducing gystetan in which saperato eproduction chunnels handle most effectively their particular partion of he total frequeney mage of incoming reception. The tull, rich valne of ow frequepgy repruduction avallable from thew fine mpeaserm If EEST WHEG USED WHTH JENSEN BASS RHELES ENCLOSUREN'!
-POSTTION HIGH FREQUENCY RANGE CONTROL as furnished with Sodels JAP-60 and JHP-62 lowers frequency cut-off in four steps to uit progrum quality: enables taking full advantage of the extended leh ereguency runge in high auality programs, yet instantly adjusts for ont accepiate resulis when sume distortion is present For biel (Ity the bent obtalnable for HOMF: HECEIVERS, RFCORD PLAYIN EOURPMEAT, OR RADIO STATION EPE:
JHP-52 (15-Inch) Coaxial Speaker With Range Control


Firevilent for high quality FN-AM radio recoivers, paonorrapa reproducern, moniforiet with prafesglonal applicatiens. Comes completo extensiun cable with escutcheon and knob When installed in Jensen Hass Reflex Encloge re rance extende amoothly from 50 to 12,000 with aubetental contribution in the 15,000 cy. PM deris Pow ratine 12 cycle region. P.M. deagn. Power rating.
to 14 watts. Input impedance, 500 ohms.

No. 30AZ1. Model JHP52 Cogxial Speaker an lumaribed.
lour
$\$ 34.81$
JAP-60 (15-Inch) Coaxial Speaker With Range Control filshly effirient. For the most. exantifs profesalonal applicutions. Over11 reaponse approximately 3 db . higher than JHP-52. Frequency range when installed in Jensen Bass Reflex Enclosure 50 to 12.000 cps. with controlled contribution in 15,000 eycle region. Fish irequency ranse control lowers cut-off in four stepes to suit program quality. While intended or moderate level operation, a power rating of 14 to 16 watts guards againgt overioad distortion. P.M. deaign. Furnlshed with special high requency range control on cable, control knob and escutcheon. Input impedance, 600 ohms.
No. 30A\%0. Model JAP-C0 Coaxial Speaker as described. YOER COST
$\$ 49.22$

## JCP-40 (12-Inch) COAXIAL SPEAKER

The JCP-40 malef avallable at low cont extended range performance never before pomible with $12-i n c h$ epeaker. An ideal replacement and modernizing unit. Samo physical dimensions as a cunventloual 12-inch peaker. Effective range of reproduction 50 to 10,000 cycles with some contribution up to 12,000 cycles. Terminals provided for sT-60 high requency control. Voice coll impedance 6 ohms, power rating 8 to 10 watte. P.M. deslgn
Steck No. 30A9\%. Model JCP-40 Coaxial Speaker.
$\$ 20.73$
HIMR FRFQTENCY HEVEI, CONTEOL FOR JCP-40 SPEAKER (ST606) Control, connecting cable, escutchoon and knob, permits instant accommodation to program qualtty; also for general purpose, $16-0 \mathrm{hm} 15-\mathrm{watt}$ level control. With \% "xy" long bushing.
Mtock No. 13.A193, HIGH FREQUENCY LEVEL
$\$ 2.97$ ONTROL KIT. YOCR CONT

HIGH QUALITT OITPUT TRANAFORMERS FOR JAP-60 and JHP-89. Match push-pull tubes to 500 ohms; without volce coll taps. Output is plus or minue 1 db . from 30 to $10,000 \mathrm{cps}$. In metal can, not mountable directly on njuakers
No. 13A190. Model 23155, 3,000 ct. to 500 ohme. Your Cont....... S8. 87 No. 19A181. Model Z3166, 5.000 ct . to 500 ohms. Fonr Cont.......S8.S7 No. 13A192. Model Z3167, 10,000 ct

## CONCERT SERIES <br> Jensen P.M. Dynamics

NFW "ALNIC'O-5" CONCERT SPEAK FRN, Fejulacing models below, will be mbipped on orders us available.
SUPEIRB TONF QUALITY and faithful highly efifcient repruduction make these CONCERT SPEAKPRS IDKAL FOR USE IN RADIO, PHONOGRAYH, ANU $P$. A. INSTAILATIONS where exseptionally fine reprotaction is desired! LESS TRANSFORMERS, bee listing at right for matching transiormers. Adaptable for ute in any good baffle or mpestker housing.

| Over-all | stords | Jensen | Voice Coll |  | Sour Cent |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Diamuter | No. | Model | Imped. | Watts |  |
| 8-inch | 34A130 | PM-8C | 6 | 8 | 38.20 |
| 10-18ch | 34A181 | PM-10C | 6 | 9 | 18.08 |
| 18-1nch | 30A 28 | PM-12C | 6 | 10 | 11.58 |
| 12-Inch | 30A 24 | PM-12H | 8 | 12 | 17.56 |
| 12-Inch | 30A25 | A12-PM | 8 | 15 | 28.81 |
| Metchins | former | bove PM | ncert D | amics | d be |

JENSEN "P..." oprnamics


4-Inch


8-Inch


8-Inch
 NHW "ALNNCO-5" PM SFPEAKFRG ARE (ONING to rPplace all the moxtors" on AIJ, Orders aw theme NEW SPPAKFRS berome available:

| Overall Diameter | Stock No. | Jensen No. | Voice Cod |  | Mounting Depth | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | I mped. | Watts |  |  |
| 4 inch | 144600 | PM4-FS | 4 | 2 | 23/8 | \$2.56 |
| 5 inch | 148801 | PM5-FS | 4 | 231 | 25 | 2.62 |
| 6 inch | 144602 | PMOESS | 4 | 312 | 31/ | 3.26 |
| 8 inch | 348107 | PM8-DS | 4 | 5 | 4 | 4.70 |
| 8 inch | 344108 | PM8-GiS | 6 | 7 | 4 | 5.73 |
| 10 inch | 349109 | PM10-TS | 6 | 8 | 5 | 6.56 |
| 12 inch | 344110 | PM12-GB | ${ }_{0}$ | 9 | 6\% | 8.20 |

(NOTE: The above LESS TRANSFORMER; see below for transformers.)
"Jensen" Electro-Dynamic Speakers

| Overall Diam. | $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | Jensen ModelNo. | Voice Coll |  | Field Coil Res. | Mounting Depth | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Imped. | Watts |  |  |  |
| $\stackrel{4}{1 \text { nch }}$ | 14A603 $14 A 604$ $14 A 606$ | $\begin{aligned} & \mathrm{H} 4 \mathrm{~S} \\ & \mathrm{H} 4 \mathrm{~S} \\ & \mathrm{H} 4 \mathrm{~S} \end{aligned}$ | $\begin{aligned} & 4 \\ & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \\ & 3 \end{aligned}$ | $\begin{array}{r} 3000 \\ 1000 \\ 450 \end{array}$ | $21 / 5$ 21 $21 \%$ | $\$ 2.38$ $\mathbf{2} .38$ 2.38 |
| $\stackrel{5}{\mathrm{I} \text { noh }}$ | $14 A 606$ 144607 <br> $14 A 608$ <br> $14 A 609$ | $\begin{aligned} & \mathrm{H} 5-\mathrm{S} \\ & \mathrm{HF} 5 \\ & \mathrm{HFS} \\ & \mathrm{H} 5-\mathrm{S} \\ & \hline \end{aligned}$ | $\begin{aligned} & 4 \\ & 4 \\ & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 3 \\ & \mathbf{3} \\ & \mathbf{3} \\ & \mathbf{3} \end{aligned}$ | 2750 <br> 1000 <br> 6 Volt |  | 2.44 2.44 2.44 2.44 |
| $\stackrel{6}{\text { luch }}$ | 14A610 14A611 <br> $14 A 612$ $14 A 613$ | $\begin{aligned} & \text { H6-8 } \\ & \text { H6 } \\ & \text { H6-S } \\ & \text { H6-S } \end{aligned}$ | $\begin{aligned} & 4 \\ & 4 \\ & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & \mathbf{3} \\ & \mathbf{3} \\ & \mathbf{3} \\ & 3 \end{aligned}$ | $\begin{aligned} & 2750 \\ & 1800 \\ & 1000 \\ & 8 \text { Volt } \end{aligned}$ | 23/6 | 2.68 2.68 2.68 2.68 |
| $\begin{gathered} 8 \\ \text { Inch } \end{gathered}$ | 34 A122 <br> $34 A 123$ <br> 34A124 | F8-RS <br> F8-RS F8-RS | 4 4 4 4 | $\begin{aligned} & 4 \\ & 4 \\ & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 2500 \\ & 1800 \\ & 1000 \\ & 6 \text { Volt } \end{aligned}$ |  | 3.50 3.50 3.50 3.50 |
| $\begin{aligned} & 10 \\ & 10 \end{aligned}$ | $34 A 126$ <br> $34 A 127$ | $\begin{aligned} & \text { G10-RS } \\ & \text { G10-RS } \end{aligned}$ | $\begin{aligned} & 6 \\ & 6 \end{aligned}$ | $8$ | $\begin{aligned} & 2500 \\ & 1250 \end{aligned}$ | $51 / 6$ | $\begin{aligned} & 6.14 \\ & 6.14 \end{aligned}$ |
| $\underset{12}{12}$ | $\begin{aligned} & 34 A 128 \\ & 34 A 129 \end{aligned}$ | $\begin{aligned} & \text { G12-MS } \\ & \text { G12-RS } \end{aligned}$ | $\begin{aligned} & 6 \\ & 6 \\ & \hline \end{aligned}$ | $\begin{aligned} & 8 \\ & 8 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2500 \\ & 1250 \end{aligned}$ | $\begin{aligned} & 63 / 1 \\ & 6 / 4 \end{aligned}$ | $\begin{aligned} & 7.62 \\ & 7.62 \\ & \hline \end{aligned}$ |

## Jensen Adjustable Impedance Speaker Transformers

## Hodel "x" Plate Matching Transiommers.

Adjustments are made with rlexible jead and pin tip jack. Impedance yalues are voice coil, $4,600,7,000,10.000$ and 14,000 ohms and all except oice coll may be center tapped for push pull tubes
sty No. Fact. No. Volce Coll For Use on Model
13 K182 ZX1004 6 PM8C, PM12C, G12RS, PM12GS \$2.30
13 ZNS 2K1005 8 \& 8 PM8C, PM12C,
18.4184 ZN1006 $\quad 8 \quad$ PM12H,

Nodel "Y" Liae Matching Transformers.
For matching "lline" impedance values; 500 , 1,000, 1500, 2000, and
Mo For Uee Mon

$13 A 186$ ZY2003 8 PM12H, A12PM, A12
13A187 ZY2007 4 EGRS, D8RE, PM8DS, PM6D8, PM5DS 1.68
13.188 ZYZ008 6 G10RS, PM10GS, PM8GS, PM6GS 1,68
$18 А 189$ ZY200 6 JCP-40

The above trangiormers have terminal boards with atijustable clips, for selection of desired matching characteristics. NO soldering.

Model "P" Law Cont Plate Matching Transformert.
Require soldered connections, but otherwise perfectly suited for use with peatkers specified below
th No. Fact. No. Voice Coll For I'se on Model Net Fa.
13 A 178 2P1020 4 H4S, H5S, H6S, F8RS, PM4FS Net Fa.
$13 A 1 \% 9$ 2P1021 4 F6RS D8HS PM8DS PM6IS, PN5DS \$1.66 134180 ZP1022 6 G10RS, PM10GS, PM8GS, PMGGS $\quad 1.47$
13.181 Modal "LD Low Cont Line Matching Tranniormers.



Bass Reflex Peri-Dynamic Enclosures suitahle for practically ANY environment in Suitahle for practicany ANP Anvironment in Stinilo, Home or InNticution; TYPE D CABINEM, reflect distinctive beanty of dewign and finish.
Built of beautifully grained WALNUT striped paneling, attractively styled; they incorporate the paneling, attractively styled; they incorporate the
Jensen BASS RFFLEX principle to "get" the Jensen BASS RFFLEX principle to "get" the
BEST out of any good speaker, but-PAR EXBEST out of any good speaker, but-PAR EX-
CELLENT REPRODUCTION IS OBTAINED only with Jensen CONCERT DYNAMICS; or the "last word" In speakers-Jensen CO-AXIAL SPEAKERS Models JAP-60: JHP-52, or JCP-40!

## stock No. Model

For Speaker Blze Dimensions

$\$ 36.46$

Electrozoice
NEWEST DEVELOPMENTS IM QUALTTY MICROPHONES

" A "
"A";-MODEL F-1 VRLOCITY; provides maximum pick-up front and back, subatantially slat frequency reaponse, $10-9,000 \mathrm{cps}$; high gensitivity specially rolled pure aluminum ribbon in steel reinforced frame with allow tit of $90^{\text {No }}$. OUTPUT Metal housing - all set in locking type cracie OFFw slide switch in housing base standard \%"-27 stand coupler With bullt-in shock absorber. Slze $2 \%{ }^{\prime \prime} \times 2 \% /{ }^{n} \times 6 \% \mathrm{~m}^{\prime \prime}$; wt. 2 lbs . With 20 ft . cablo. HIIIMP.
Btook No. 20A897: "ELECTRO-VOICE" Model V-1; , Your Cost 19.32 "B";-MODEL G30 DYNAMIC: Versatile HIOH FIDELITY all purpose microphone, ruggedly built for heavy duty eervice; unnsually HiGH OUTPUT for spech and music, indoors or outdoors; grill design minl-
mizes wind noise. Frequency response is $40-9,000 \mathrm{cps}$ with output level mizes wind noise. Frequency responso is $40-9.000$ cps with output level ranal pick-up; 'ON-OFF' slide switch. standard $\%^{\circ}=27$ thread; Satin Chromlum finish; gize 2 " $\times 4 \%^{\prime \prime} \times 4 \mathrm{~K}^{\prime \prime}$ "; wt, $11 / \mathrm{lbs}$. Cpt. with 20 ft . cable. HI-IMPEDANCE.
G1OCK NO 20A898; "ELECTRO-VOICE"
Model $630-\mathrm{C}$; Your Cost
$\$ 19.32$ "C":-MODKL 605 LOW COST DYNAMIC; specially recommended for Schools, Churches, Theatres, and general P. A. use where performance and abllity to "stand the gaff" count! Frequency responeo, $50-7500 \mathrm{cps}$. eubstantially flat: Output level 57 db ; non-directional at low frequencles becoming directional at higher frequencies; head is flaed tilted at
 $21 /{ }^{\prime \prime}$ : Wt. 12 oz.: Impedance, direct
shielded cable.
Stock No. 20ABo; "ELECTRO-VOICE'
Btock No. 20AB0; "ELEC
Model 605-20; Your Cost
$\$ 13.82$
"D": MODEL 950 CARDIOID Cryotal Cardnx: DUAL FREQURENCY RESPONSB for high fidelity sound or extra crisp epeech-belector on back adjusted with screw driver, "In" position for wide and rising re-sponse-"Out" position for wide and flat response with full, natural reproduction. An IDEAL "MIKE" for soloist or orchestra, single speakor or group work-INDOORS OR OUT! Ontput 57 db in OUT position,
48 db on IN position; wide range, wide angle pick-up at front-dead at

 Stock No, 20A100; "ELECTRO-VOICE"
Model 950; Your cost $\qquad$ . . . . . .
$\$ 2176$ "D": MODEL 726 CABDIOID DYNAMIC: designed for the most EX. acting Studio, Recording, remote Broadcast, Communications, P.A. work. Unidirective E-V Mechanophase gives wide angle front pick-up over wide frequency range, dead at rear-fine definition and fidelity at Increased working distance irom mike. Anico magnet mith Acoustalloy diaphragm withstands mechanical shockit, humidity and ex
tremes of temperature. Frequeney meapone $40-10,000 \mathrm{cpa}$, subatantially flat. at output level of 58db. Tliting head with built-in "ON" - "OFF" switch, rubber mounted on i月 $^{\prime \prime}-27$ thread fitting. Satin Chrome finish,
 Model 726: Your Cost $\qquad$ $\$ 32.34$
"E"0:-MODFL 606 Differential DFNAMIC: NEWEST DEVELOPMRNT of "E-V'; in a moving coil, ANTI-NOISE dynamic; specially designed Int: high-nolse INDU8TRIAI appilcations; close talling Publio Addrese -indoors snd outdoors: Hi-Z, 25,000 ohm impedance Fith output of 57 db at response of $100-6,000 \mathrm{cps}$. substantially flat to sounds of close origin. "Acoustalloy" diaphragm: head at fixed tlit of 22; Batin Chrome Iinish: $278 "=27$ thread; 8 It. shielded c
Stocl NO, $20 A 649$; "ELECTRO-VOICE"
Model 608-8: Your Cost
$\$ 19.11$

## AMPERITE <br> PGDYNAMIC

Brings tudio
quality to ordinary can Jobsthe difference! UNI DIREC-
TIONAL pick-up pattern HIGIR minus 60 db. RESPONSTE of
8000 cps.
80 8000 cps F FLAT and FREE of
peaks REDUCES FEFDBACK to peake REDUCBS FEFDBACK to lowest point of all diaphrasm microphones. IDEAL FOR EITEIER
SPSECH OR MUSIC! Case de. SPBECH OR MUSIC! Case deslgned for high efficiency in accordance with modern acoustic principlee. TILTING HEAD, ON OFF SWITCH! True dynamic ruggedness; not affected by temperature, aititude, or humidity. HIIMPEDANCE, 18 ft cord and cable connector. "PGAES" Dynamio. stook Noa 20apona...... \$14.70

## AMPERITE

KONTAK MIKE


Quiolily Attaches to Ans Btrint Instrument of Planol Reproduces vibrations of instrument through entire audio rance. Operates on Magnetic Induction minus sodb over \& PRHQUENCT RANGE of $40-9,000$ cycles! Unatfected by temperature pressure rected by temperature pressure,
molsture! 0 p to 5 "KONTAK" moisture! Up to 5 'KONTAK' Wikes may be connected in parallel. TROL as Hsted below. Model 8KH: Without Vol. Control.
Stock No, 20874:
Your Cont
'••••
$\$ 7.06$
Model KKE. WITEXVOLUM C Stock No 208\%s;
Your Cont
20875\%
$\$ 10.58$

GIUIT
DYHAMIC; CRYSTAL AND CARDIOID MICROPHONES A "MIKE" FOR EVERY USE!

शA" ${ }^{\prime \prime}$ MODEL SE8 SUPER CARDIODD BROADOAST DYNAMIC; HE ALL the essentials for HIGH QUALITY Broadcasting, Recording and Public Address work! Ideal for either gymphony or Vocal work pick. up pattern reduces pick-up of random noise by $78 \%$; minimises room reflection, reduces feedback and background noises, simplifies micro phone placement and provides freedom of movement for the performer -ALL with BETTER pick-up and reproduction! gMOOTH, peak-free responee $40 / 10,000$ cycles over a wide angle at front; rear response down 15 db by virtue of UNLPHASE unidirectional acoustic motworke DOUBLE WIND SCREEN permitg QUIET outdoor operation. Bprins suapended in live rubber eliminates stand vibrationg and shocksing unusually rugged "mike" practically immune to effecth of molsture temperature and mechanical vibration. Tilting head (to 90 ) : sis
 with adapters avallable at no extra charee for use with W.E. or RCA otanda.
MODFL $586-C$; Hish Impedance model for direct connection to ANI amplifier with Input impedance of over $\mathbf{3 0 , 0 0 0}$ ohms-has OUTPUT Stock No, 20A884: MODEL 556-C with 18 in. cable:
Stock No, 20 A
YOUR COST
$\$ 48.22$
MODR COST
ques internal
high quality high-permesbance Model (150-250 ohms) includes internal high duality high-permeability core, impregnated transformer and is recommended for use in ALL cases where long cable lengths are re
quired may be fed directiy into any standard low-impedance input quired-may be ied directiy into any standard low-impedance input
amplifier. Ontput lofel, Into 250 ohms is 56.8 db below 1 milliwatt for 10-bar sisnal. With $18^{\circ}$ cable.
8tock No. R0A898: MODEL $556-\mathrm{B}$ ( $150-250$ ohms)
YOUR COET
YOUR COST
$\$ 48.22$
"RB":-MODFL $5 S$ SUPERECARDIOLD ONIDYNK DINAMIC; for HIGF QUALITY Public Address, Recording, Broadcasting use-permits in creased loud speaker levels without feedback and brings out the fullest tone values in music or mpeech-without voice strain or dintortion! "UNIPHASE' acoustic network holds rear response down 15db. Pro vides smooth, peak-free response of $10-10.000$ cycles with OUTPUT of 55db below ${ }^{\frac{1}{2}}$ volt per bar. Head is same sise as Model 556 above 25 ft . cable and plug. FINISH of BOTH models 55 and 556 is BATIN CHROME.
Btock NO 20A892: MODEL 55-C Eity Impedance
YOUR COST
$\$ 31.87$
"C"":-MODEL 730-B "UNIPLEX" CARDIOII CBYSTAL; provides fre quency response of $40-10,000$ cycles over a WIDE RANGE ANGLE at front, and is practically unaffected by sounds at rearl Outpat lowel f 68 db below 1 volt per bar. Lont life CRYETAL is triple sealed geaingt mointure- "Cardioid" construction allows highly satisfactory operation Where conventional microphones would be useleas! PIVOTBD CABE allows polatine of "mike" at gound source, or polnted upward for mon directional, horisontal plane pick-up. SATIN CHROME case it sw, dia. and $3 \%{ }^{\circ} \mathrm{m}$ deep, with built-in cable connector for \%" $\% 27$ thread Complete with 25 ft . shielded cable and connecting plug. Btook No. 20A891; MODEL 780-B Cardioid Crystal YOUR COST
$\$ 21.87$
"D":-MODEL 508-C "STRATOLINEB"" DYNAMIO; (Hich Impedance) Rich and expenaive in appearance and englneered with response char acteristics to assure HIGH QUALITT REPRODUCTION for heavy duty below 1 volt per bar. Has moving conductor. affected by heat or humidity; die cast case with swivel head and built
 Finish is rich metallic Eray. Complete with 25 ft. shielded single conductor cable.
Stock No. $80 A 890$ : MODEL 508-C; YOLTR COST
$\$ 18.52$
"D":-MODEL 708-A "gTRATOLINER" CRYBTAI. Fith Impedance. Ideatical in sise and case construction to Model $508-\mathrm{C}$ above- a LOW COST but expensive looking "mike" with Flde range response, free from undeairable peaks, and providing GOOD reproduction of BOTH volce and music. Semi-directional but may be tilted up to horisontal poaition for non-directlonal use. HIGH OUTPUT level, 58.0db below 1 volt per bar. ${ }^{25^{\prime}}$ cable.
Stock No. 20A889: MODEL 708-A CRYETAL,
YOUR COST ..............................
$\$ 13.49$
"E":-MODEL 76B CRYSTAL LAPER MICROPRONE-1\%" in diam oterl Especially dealgned for hish quality reproduction of speech attaches to cost lapel, is inconspicuous, weighs ONLY $1 \frac{1}{2}$ om. Fia spe cially accentuated high frequency response for maximum intelligibility 6,000 cycles; OUTPUT level is $57 d b$ peaks. Frequeney reeponee is 40 6,000 cycies; With lapel clip and attached 25 It . shielded. eingle conductor cable. Stook No. $20 A 858:$ MODEL 76-B LAPEL MIKE.
YOUR COST
$\$ 15.88$
AOOESSORIES FOR USE WITE "KONTAE" INBTRUMENT MICBOPHONIES, MODEL KF FOOT PEDAL VOLUME CONTROL, connects to Model sKH to control and vaty volume by variable foot pressure On pedt No. 17A784: Model KF Foot Pedal Control, Not.
$\$ 7.06$ KONTAK STRAP for flat top Guitars. . . . . . . . . . . . . . No. 17A725; Not. 59


## TITRUR WITROPIIONES


"A":-MODFL L-98 VARIABLE IMPEDANCE DYNAMIC - ONE MICROPHONE FOR ALL NEEDS: Impedance of $50-200-500$ OHMS or HIGF IMPEDANCE avallable by the twist of a switch on the back! ADJUSTABLE for semi or non-directional use, Model U-9S is completely free from peake and holes over its irequency range of $\mathbf{4 0 - 9 , 0 0 0}$ cycles. Output level at high Impedance is minus 69 db . Professional In construction and appearance, tilting head, complete with 20 ft detachable cable: \&un metal Pinish.
Btock No. 20A888; MOLEL U-98 DYNAMIC: Yonr Cont... 42 "B:"-NODILL 33-D DYNAMIC; LOW IN COST and bullt to withstand hard usage and bad climatic conditions. Smooth, high level dynamic cartridge with FREQUENCY RANGE of $40-10.000$ cycles with OUTPUT hiflded cable set. Hish Lompedance.
 "B"':-MODEL $38-X$ CRISTAL; IDFAL LOW COST "MIKF" FOR
RECORDING, PUBLIC ADDRESS, OR COMMUNICATIONS USF, HIgh capacity crystal has response of $30-10.000$ cycles, free from peaks, output level of minus 52 db ; low feedback. Crystal impregnated against moisture; blastproofed. Ruggedly built, tilting head, satin chrome fin-
 "C"':MODEI, 9-D "HEn-D" MIKE DYNAMIC hand microphone. HANG IT-HOLD IT-OR FIT IT to any standard microphone stand-engineered for maximum voice response, and natural music pick-up; speclaily recommended for bad climatic conditions, intense heat and rough handling uses. "ON-OFF" SWITCH: response of $\mathbf{6 0 - 7 . 0 0 0}$ cycles with output level of minus 50db. Satin Chrome finish with 7 ft . detachable cable. High Impedance.
$\$ 15.88$ "DD":-MODEL 22X HIGII IMIPIDANCK CKYRTAL; TOPS in performance at very low cost-clear, clean, sharp reproduction with feedback held to absolute minimum, Built-in wind gag permits outdoor operabarometric compensator. High level minus 52db. RANGE $\mathbf{3 0 - 7 . 0 0 0}$ cycles. 90 tilting head permits any position from horizontal to vertical. With 7 ft cable set. YOER COST
$\$ 11.76$ "D":-MODEL 22-D HIGH IMPEIDANCE DYNAMTC; Identical in appearance and case construction to Model 22-X; has HIGH LEVEL dynamic cartridge for sMOOTH reproduction indoors or out at all freduencies. RANGE, $30-8,000$ cycles; Output minus 5idb. Complete with 7 ft. cable set. No. 20A88: MODEL 22-D DYNAMIC MIKE:
Ntock No. ${ }^{20}$
YOUR COST
$\$ 14.99$
"F" :-"CHALIENQER" NODEL CX IIGH IMPEDANCE CRTSTAL; dependable, neat in appearance, LOW COST! RANGE, $50-7,000$ cycles, OUTPUT minue 55db; SHOCKPROOF cryotal critridge-molature ealed; barometric valve: wind sag to prevent blasting. Chrome type finish, with 7 ft . removable cable set
Stock No, 20A879; MODEL "CX" CRYBTAL MIKE;
YOUE COST
$\$ 9.56$ "R":-"CHALLENGER" MOLEL BX LOW COST CRTSTAL MIKEIdeal for home recording, AMATEURS, and PUBLIC ADDRESB. HIGH IMPEDANCE with range of 50-6,000 cycles, OUTPUT minus 55db. Shock and molsture proof cartridge, wind gag. Bronze enamal finish, comgtorl No. 20ABy8; MODEL ''BX' CRYSTAL MIKE;
YOUR COST
"E":-NCRALLENGMR" MODEL CD HIGT IMPEDANCE DYNAMIC: rugged and dependable for all uses on voice or music-clear cut reproauction; RANGE, 50-7,000 cycles; OUTPUT, minus 52db. Chrome type inish; 7 ft. removable cable set.
gtoels No. 20A880; MODEL "CD" DYNAMIC MIKE;
YOUR COST
Turner "Colortone"-Microphones in Color!
 MICROPHOHICG QALITYE CRINNAL AND DINANIC PLAMTIC CAHF\&! MOIVIL EI) IDYNAMIC; a NEW high impedance "mike" with an unusually amooth, even reaponse over 1ts entire RANGE of $30-8,000$ cycles. BASE RESPONSE has been raised 2 to 4 db in extreme low and free from all sharp, resonant peaks! ALNICO $v$ and iree from all sharp, resonant peaks! ALNICO V core, pure aluminum voice coll-all enclosed in humcore, pure aluminum voice coll-all enciosed in humbucking shield! 90 titable head for directional or non-
directional operation. Coupling is standard $\%$ " 27 thread.
 Complete with 20 ft . shfelded cable. SIze, $41^{\prime \prime}$ long, $23^{\prime \prime}$
wide, $41 /{ }^{\prime \prime}$ high. YOUR CHOICE OF THESE RICH COLORS:-Dariz Green, Lemon Yeliow, Ivory, Orange, Red: PLEASF; STATE CHOICE OF COLOR IN YOUR ORDER.
 and available in SAME COLORS listed above for Dynamic Model. For and availabie in SAME COLORS listed above for Dynamic Model. For proofed; impregnated crystal. RANGE $30-8,000 \mathrm{cps}$; OUTPUT is minus proofed; impregnated crystal. RANGE 30-8,000cps; OUTPUT is minus
62db. 20 ft. cable set. CHOICE OF COLORS.

ASTATIC

## Crystal and Dynamle

 Quality Microphones "A":-MODEL, ET-30 CRTSTAL HOME RECORDING and PUB LIC ADDRFES mike! Reaponee CompletDRE8S mike! Response $\mathbf{3 0 - 1 0 , 0 0 0} \mathrm{cps}$; output level minus 52 db .
 Hish Impedance, wt. $21 / 4 \mathrm{lbs} .15 \mathrm{ft}$. cable. Gray with Chrome grille.
Stock No. 20A87\%; MODEL JT-30 With Stand; YOLR COST 98 "B": MODEL N-30 HIGH IMPEDANCE CRYSTAL, HIGH FIDELITY: WIDE RANGE. Response, $30-10,000$ cpa., substantially flat and free from peaks, OUTPUT minus 62dib. Tilting head is gray with chrome
 YOUR COST
\$11.26
"C"*-NODEL "DN" DINAMMC-NEW AND IMPROVED With advanced ideas. For varying temperatures and high humidity locationg-
rugged construction. Tilting head. Substantially flat response of $50-$ 7.000 cps . at output level of minus 55 db . High Impedance model illingtrated has type "g" "ON-OFF" switch. Gray with bright CHROME grille. Size $61 / \alpha^{\prime \prime} \mathrm{high}, 2 \%^{\prime \prime}$ dia.; $4 \% /$ deep. $^{2} 5 \mathrm{ft}$ cabl Stock No. 20A650; MOUEL DN-HZ-S; YOCR COST.
$\$ 16.08$
 MIKE: Identicat to Model DN-HZ in peatures, uses, and construction. except desifned for 500 OHM load impedance. Output is minus 66db. 16 ft. cable.
Stock No. 20.4651 ; MODEL DN LOW MPEDANCE; NeT.. $\$ 14.46$

## MICROPHONE ACCESSORIES



CAREFTHILY SELEFTED from the bewt the
market affords. earh floor stand and desk market affords. earh floor stand and desk
ntand linted below fills a definite P.A. need! thand linted below IIlls a definite P.A. need!
LEFFRY ITEM QCALITY TESTED so that yon may be nMAred of THE MOAT FOR TOT:R MONEI! "IF 1T"S 'P.A.'-B-A H.AS IT!"
 "A":-"Yelvet Action" 24-POUND, DE ICXE STTDIO FLOOR STAND. Adjnstable 48 to 72"-BRASS TRIPLE CHROME PLATED oversiz: tubes, $11 /{ }^{\prime \prime}$ outer and $z^{\prime \prime \prime}$ Inner. 4-INCH CLUTCH wirh bakelite collet defies wear. Semi-tripod base has $17^{\prime \prime}$ spread-is rubber cushioned to
rbsorb shocks. Cpt. with $\% \%^{\prime \prime}-27^{\prime \prime}$ and 3 adaptors.

"B": -Velvet Action" ALI. CHROMF ADJISTABLE FLOOR STAND. NON-TIP BABE has "anti-tip" points between rubber leveling pads! BRASS TUBES are TRIPLD CHROME plated, outer tube $7 /{ }^{\prime \prime}$ and inner tube \%" In diameter. Bakelite "collet" clutch mechanism-easily
 Stock No. 34A8; MODEL MS-11C FLOOR STAND: NET
$\$ 6.70$
"B":-"Felvet Action" LOW COST ADIESTABLE FLOOR STAND: Identical to Model MS-11C ciescribed inmediately above, EXCEPT has gun-metal finish base and SUPER CHROME tubes. \%" 27 thread. Stork No. 32A3; MS-12C FI,OOR STAND: NET
"C":-"GRIP-TO-TALK" DFSK बTAND; Grip Bar operates relay type ON-OFF switch, for remote control of amplifiers and transmitters. Over-all height, $81 / 4 \mathrm{~m}$ : CHROMF tube and switch bar with gray wrinkle base. Socket connector. spring cable connector and 8 ft . 2-conductor
shielded rubber cord. Wt. 3 lbs. Stock No. 31A58; Astatic MOUEL G Desk Stand: NET
"DD":-"Felvet Action" BANQIET STAND; Adjustable 18" to 32": same size BRASS tubes and type clutch as MS-12C; 5 lb. base is $8^{\prime \prime}$ in dia., has rubber bumpers. Super Chrome finish tubes with red lined gun-metal base. /6"-27 thread Stock No. 31AB6; MODEL TS-5 BANQUET STAND; "F"":-TRIPLE CFROME-BR.ASS TEHE DESK STAND; 7" high with

 STAND. Handle with $8 / 4-27$ thread lorks in felt padded base with hall turn for DUAL USE as hand or desk mike stand. ALL CHROME. Stock No. 20A104; MOIEL AG 2-PIECE DESK STAND;
$\$ 1.62$ NET
'F"'-MANDLE ONTF of above for hand mike. $\qquad$
 Btock No. 31AB7; MODEL GN.13 GOOSE NECK; NE

ANY lble goose neck has 8"-27 tbread; slips over neck.
Stock No. 32AR13; TURNER 3-H "THIRD HAND"; NET.... © 2.94.

# Phest RecordingEquipment 



A PORTABLE SOUND RECORDER, COMPLETE IT A CABRYING CASE

Hisht and compact, it is ideally suited for sales training and industrial schools, teachers of speech, music and dramatice or for eny need requiring a quality re corder that in portable and can be aet up in a few minuter.
Records 15 minutes continuonsly at $353 / 3$ RPM on slde of $181 /{ }^{\prime \prime}$ diec. May be connected to any house radio set to record complote radio programs. It also makes 6, 8, 10 or 12 -inch records and plays all makew phonokraph records, As a voico amplifylag system, it will serve audience of about 500 persons.
In spite of its low price, it contains many features or much more expensive outfits such as: Magnetic cutting head and pick-up of a design used in highent grade cquipment . . A full sised 6 -tube amplifier having push-pull triode in the power stage. . A frequency equalizer for $331 / 6$ RPM recording and a tone control for suppressing needle scratch when commercial records are played
saifoty cam lever for lowering the cutting head to prevent acoliontal damage to sapphire needles . . . A detachable dynamic loud speaker pounted in reinforced leatherette carrying case which may be operated at any distance from the recorder . . A cutter feed mechantem located beneath the turntable where it is
protected from dust or accidental damage Provislons for quick change from cutting outside-1u to inside-out . . . Rubber tired $12^{\prime \prime}$ dual apeed heavy cast metal turntable with heave constant speed motor. Turntable apeed can be changed in 5 seconds irom 78 to $831 / 6$ RPM by removing pulley on motor shaft. Amplifler control panel has volume indicator meter. combination high frequency equalizer and tone control, dual volume control selector witch for recording. playback and $\mathbf{P} \mathbf{A}$ operation and mike receptacle. Turntablo chasdis contains jack for loud-speaker connection, monitoring headphones, a radio set or external pick-up. Feed mechanism cuta 112 lines inside-out or outalde-in.
Frequencs response: Amplifiea, without equalization uniform within 2 db from 50 to 8000 cycles. Cutting head and pick-up remponse 80 to B 000 cycles. Amplifier gain measuted at 1000 cycles. 110 db . Ample for any crybtal or dynamic microphone. Housed in a dark gray leatherette carrying case size (closed) $191 / /^{\prime \prime} \times 151 /{ }^{\prime \prime} \times 14 "$, Weight 46 lbs, Complete for operation from 110 Volt 60 cycle AC. Microphone, discs or needles are not included so if needed should be ordered separately.

## 8tock

No. 30 A 117

## reirn corr 348.00

Aiso containg volume Indicator meter. telephone line input jack, monitor jack, two turntable receptacles, two milke receptacles, and power switch.
Frequency Rewponse: Amplifier adjusted for flat rosponse, 80 to 10,000 cyclea. Turned to right the treble control produces a max. peak of 17 db at 6.506 cycles Turned to left it acts as a scratch filter, giving a max, attenuation of 20 db at 5000 cycles. The bass control produce a.max peak of 20 db at 100 cyclos Cutting head response 50 to 8.000 cycles, Plck-ups, for checking purposes only. 70 to 7,500 cycles, Any high impedance crystal or dynamic microphone can be used with this equipment.
Outfit consists of two reinforced casen covered with gray aeroplane cloth. The turatable case (closed) lize $20 \% \times 11 \times 9$. weight 49 lbs, the other houses the amplifier and a 10-inch PM dynamic with enclosed baffle speaker. The amplifier and loud speaker it together in a single case $231 / 4 \leq 12 \pm 20^{\prime \prime}$. Welght 57 lbs

Complete except for microphone, needlen or dise ( 110 volt 60 catalos or such items.) For 110 volt 60 cycle AC operation.
sutume rom cor 741.00

## TYPE 10A $16^{\prime \prime}$ TURNTABLE

 turntable and bearing, motor and drive system are completely assem-

For broadcast tations and others who require continuous daily ope
eration over long periods without eration over long periods without free of mechanical vibration. $81 \mathrm{~m}=$ ple in denisn, a steel step puiley the rubber rim of the table gpeed is chanced ingtantly by moving the is changed inatantly by moving the motor carriage to engage either
section of the drive pulley. The bled on a cast metal base ready for operation. Can be mounted in mont of $4 \%$ is maintatned at both the pick-up or controls. A speed accuracy stations and transcription makers for playing both vertical and lateral recordinga. For 110 Volt, 60 eycle Ac. 8tock No. 30A120. FOUR COST, EACE
$\$ 218.00$

## Type 300A Re-Recording Equipment

Conaista of an auxiliary turntable, which mounts on top of the re-
cording turntable, and an external pick-up mounted on a pedestal. gor re-recording or dubblng, has several important advantages over a separate driven turntable. The rotation of the recording and playing turntables is locked together so that the playing time and pitch of the duplicate record are identical with the original. No wows or waves can be Introduced during the re-recording aince any veriation in speed will occur simultaneously on both tables. It is less expensive than a second complete turntable
8tool
TOTR COBT
$\$ 82.60$

## MODEL 75 A RECORDING TURNTABLE

A LIGFT WEIGFT, HIGH QUALITE PORTABLE $\mathbf{I V}^{*}$ dual speed unit adaptable to a variety of profesmional, indusrial and educational uses.
Consist of a prectaion cast aluminum turatable, rim driven by a heavy duty silent motor fully suspended on rub ber, and a cutting mechanibm with 8 pitch of 112 lines per inch, outside-in or inside-out, together with a high quality
blck-up.


The entire assembly is mounted in a gray leatherette
carrying case, $11 \times 19 \times 804 /{ }^{*}$ when Fryequency case, $11 \times 19 \times 20 \mathrm{y} \mathrm{K}^{\prime \prime}$ when clowed. Weight approx, 49 lbs
Frequency reeponse of the cutting head is 50 to 8000 cycles. impedance 8 ohma. The maximum power level required from any amplifier used with this recorder is plus 20 db. Frequency response of the plec-up is 70 to 7,500 cycles. The turntable motor requires 60 watto 110 volt: AC, 60 cycles.

## Stock

## No. 30 A 119

NO. SOA COST EACE
IOUR

## Recarding and Playing Needles \& Accessories

WALCO "400" Series LONG PLAY PHONO-NEEDLES


PACRAGFD Imlivitually in $s$ HEAETIFEL IPLASTIC CASE 12 needies in plastic cases to an attractive display box.
Every "Walco" neerlle is scientifically designed to reproduce with the highest fidelity, gereening out distortion, hiss and beratch noise and float, featherHight, along the groove-treating records gently

## Floating Jewel Sapphire

Rating: Ip to 10,000 Plays
Rating: Ap to 10,000
Each one puckased in individual plantic case with jeweler's screw ariver for easy user installation In tha new pick-ulis.
No. $18 A 3 z+$, Net Fan b No. $184329^{\prime}$

## No. 18, ${ }^{\text {Dinglsy of }}$

$\$ 15.00$

## RURY WR-40

Rating: Ip to 6000 Flas
Retails for $\$ 2.00$
Made of Ruby, slightly less dur able than sapphire. The Ruby is precision ground and highly polwhed. . . provides periect tracktns.
No. 18A496, Net Each .... 31.20 No. 18A497.
$\$ 12.00$ yutpane of 12

Walco wa-4N
ous Metal Needle
Precious Metal Need
Long Lasting to 4000 Ilays Retalls for $\$ 1.50$
For those preferring a legs expen wive needle, the Frecious Meta offers all the Walco features.
Nu. 18 A 498 , Net Wach... .80 . No. 18 A 490 . NO. 18 A 490.
1)lipulay of 18
$\$ 9.00$

## 1 gewser Royal Jewel Sapphire

shank is liat 10 in oure correct position Ehock aboorber gring action min! mlecs scratch bssures longer recmiz lie Flat conetruction create test ir citation reducet meedle eall alr sinimum talk phire Tip gives permanence, extre moothness, protects records. Re all at $\$ 2.60$ Each.
18A327, Net Ea. 81.50 , 5.01 $18 A 398$, Card of 12

## Service Men's Packet

Contatns $A$ JENSEN needlew, 3 each of the $\$ 1.00$ and $\$ 2.50$, in a handy carry along on service calls $\$ 10.50$ Retall Value
Retall Valu
$\$ 5.25$

## Audio Sapphire

Eapecially designed for playback use on Audio-disc and similar re cordlnge. Will pley from 6,000 to 10,000 coated dimes or commercial preasinge.
18A3s6. Net En. $\qquad$ .53 .80

## Presto Sapphire

A semi-permanent $p l a y b a c k$ needle for recordings and vinylite prestings. Average llfe 500 hours 18A337. Net Na. $\qquad$ ...
.31 .26

## MALCO "ARIDIUNP"

LONG PLAY PHONO-NEEDLEG Tipped with an amazingly durable precious metal alloy, provides matchless high-fidelity reproduc portant self-poliahing feature apares portant self-poliahing eature apares the deatructive
No. 18A362, Each \$1.00.
${ }^{\text {No. Lots Each }}$
Each \$1.00.
$90 c$

## Precious Metal Playing Needles <br> 

 itlon pofhock Aboorber apring action debign absorbs vibration and fhock, minimizes scratch, abaures longer life for recorda. Flat conatruction creates less air agitation, reduceeneedie talk to minimum. Precneedle talk to a minimum. Prectous Metal Tip of ppeclal alloy slves long llfe, full tonal range, Fet protects recorde.


## Phono

 Set Screws 18A343 10 AastFeplacements for Plck - upn and Recording Head.

## $t$ Miracle Point

 Eapecially reoommended for coin operated changern. Long wearing precious metal point, accurately tap ered, ground and pol iohed to lit record e, 2.000 or more playe. 18A3s4. Net Ean …….......40c 12 L0*
## Cerett "Victory"

An outatanding 50 c long life all purpose, playing needle. Up to 5,000 plays on light pick-ups. 18A335. Net La. 36012 Lota 300 Turntable Lubricant, the proper
oll for turntables. Made with graphofl for turntables. Made wing to surface of parta.
ite. cling
18A 320.2 oz. bottle........... 210 18A320. 2 oz. bottle ............. 210
Fele-0-Dope. Cleans. Jubricates, hardens, renew: old and preserves new records and recordings. 18A381. 40 on bottle



## Famous Makes <br> Recording Discs For Professional, Home, or Commercial Needs

Audjodisc Red and Fellow Label, as well as Preto Green and Red Label, are stocked in both glasp and aluminum when available. We will ship whichever is in stock, unless you specifically state one or the other is not acceptable. Iricen fiven are to nisers who can bay in case lote. (Cannot be assorted.) Sold in Cave Lots Only.


Finest for Home Recording Herordio Paper Disce
Give excellent reproduction Lieh and flexible they can be mailed ithout damage. Record on both sides.
18A307. $612^{\prime \prime}$ disc.
17kg, of
60 c
18 A309.
$\$ 1.00$
red Label-Aluminum Base Made on heavy .021 aluminum, the last word for recording and compare with those used by broadcast ing stations and etudios.
$\begin{array}{cccc}\text { All Sizes Preked } 5 \text { to Packase } \\ 61 / 2 & 18 A 388 & \$ 1.03 & .88 \\ 8 & \prime \prime & 18 A 860 & 1.87 \\ 10 & 18 A 361 & 2.08 & 1.78\end{array}$

## Frequency Record

A high grade $12^{\prime \prime}$ recording at 78
RPM for checking response characteriatics of amplifiers, pick-ups, speakers, etc. Range 50 to 10,000 cycles. Frequencies are voice announced
18A365. Not Each
.31 .78
Presto Green Label 18A808 Or Protessional Need
14. $10^{10}$. Ea. . . . S. 8030 in Case 4A8. $16^{n}$. Ea, ......... ${ }^{\circ} 50$ in in Case

## Presto Type "B"

For Audition, Reference or
Educational Needs
18.1306. 10 ${ }^{\circ \prime}$. Ea. ... S. 4830 in Case 4A9. 12 . Ea. ...... . 8080 in Case

## RecorDisc

Recording Discs
Coated with cellulose nitrate-proven best for high ifdelity, life-like reproduction, long wearing quallties, to withstand age and playback without cracking or peeling. All typen Ifted record hoth siden. Oratige Label_Bond Bese For home and practice use where low price is required. Thick compo Base. 6 to Pke. Frer 10 Plate

rding Needles

Sapphire


Bteel

Sapphires-Hardest point with lowest iriction make the finest cut ting points and are the longent wearing. Can be resharpened.

Stellites-A hard metal alloy is comparable in cuttins qualitioe to - sapphire, but do not last near as long.

Steel-A good needle for reneral uee, but must be changed often

## Sapphires

18A344. Presto Professional, short dural shank. Ea.
18A345. Presto Professiones. 80 dural shank. Ea. ............. 4.80 18A346. Presto-Semi-Prof. short dural shank. Ea. .............33.30 18A347. Freato - Semi-Prof., long duriul shank. Ea. ............88.80 18.4348. Audio Profemional, standard whort dural shank...... 34.35
$18 A 349$. Audio Profeesional 18A349. Audfo Profersional, long dural shank. Ea. ..........34.36
18A3s0. Walco Semi-Prot. shank. Net ea.


Brush Off Flts all Automatic and Manual Recorder 18A317Net Es

## Stellites

18A351. Presto. Each ..... $\$ 1.20$ 18A352. Audio, Short Dual shank. Each .......................... $\$ 1.00$
 18A376. Audio, Long Dual Shank 12 Fach
18А ${ }^{\text {for }}$ 35. Recöton. Ea.

## Steel

18A354. Preeto. Pkg. of $8 . .$. . $\$ 1.00$ 18A355. Audio. Pkg. of 3... $\mathbf{c}_{1} 101$ 18A356, "Walco. Pkg. of 18A357. Wilcox Gay. Ea.

Book on Fow to Make Good Rocordinter Tells all about it. 85 e

Fecord Lnbricant-Reduces sur face noise and wear on needlee and record. May also be uped as pre-recording lubricant to reduce -urface noife.

## 

"Master-Pro"
Overhead
Recording
Mechanism
— and -
Dual Speed 16-Inch
Recording Motor Assembly

"MASTER PRO" OVERHEAD HECORDING MECHANISMCAYSTAL OR MAGNETIC UNIVERSAL MODFE for use with ANX taratable with standard center Pin. NEW CUTTER MOUNT permits nse of most malses of Masnetio of Crystal Cuttors. DRIVE G'GARS totally closed. Wear-proof STAINLESS STEGL LEAD BCREW, turng on hardened steel ball bearings. NEVER needs oll. BRONZE "THALF NUT DRIVE", positive-will not "group". Micrometer depth of cut control assures positive uniform group"; Microment apring prevents damage to either stylus or "cut" while making ment spring prevents damage to either stylus or "cut" while making
adustmenta Patented $\operatorname{BND}$ SUPPORT Instantly levels mechaniam for rarying thlckness of blanks. EXCLUSIVE SPIRALING method for "steep" or "shallow" spiral at a aingle motion. CHIP COLLECTOR
keeps cutting stylus and armature FREE of cuttings. HEAVY DUTY keeps cuiting stylus and armature FREE of cuttings. HEAVY DUTY CONSTRUCTION-"MASTER PRO" is a $16-P O U N D$ PRECISION BUILT MASTERPIECE OF BTEEL AND BRONZT; built for long and trouble-
free recording aervice of the highest characternis the "andwer" to the free recording aervice of the highest character-is the "answer" to the
needs of the Broadcast and Recording Industry for a dependable, higheat quality recording mechanism. Easy and positive in operation; requires no complicated installation! Easy and positive in operation; requires no complicated installation! Both models Histed below cut 180
ilnes per
inch, outide to innide. SPECIAL FEED BCREWS cutting 105 lines per inch, outhde to inilie. SPECIAL FEED BCREWS cutting 105
line per inch, outaide-in. or 120 lines per inch, inside-out, are available line per inch, outside-in, or 12
at same prices on special order.
"MASTER PRO" MAGNETIO Overhead recording mechenism, COM. PLETE with Low impedance ( 8 ohm) Magnetic Cutting Head, uses
 "MASTER PRO" CRYSTAL Recorder, with "BRUSH" MODEL RC- 20 Crystal cutting head. REQUIRES Model T-45 Matching Transformer listed below. listed below.
Stock No. SOA65.
Stock No. SOA68.
"Master Pro" Crystal Recorier. MODEL "B-5"... Your 9175000
NEW MODEL "V", DUAL APEED RECORDING MOTOR ABSEMBLY -381/78 H. P. M.
Prectsion, dingle anit constraction LATHE TURNED, cast aluminum turntable has disappearing drive pin and rubber turntable pad- $1^{\infty}$ diameter POLISHED STEEL SHAFT has forced feed lubrication and rotates on ball bearing. $1 / 20 \mathrm{~h} . \mathrm{p}$. constant speed motor; dual and single apeed Neoprene idlers have adjustable atops for fder pressure regulatlon. 14-pound machined mounting base has lathe bored and lapped 3 -point bearing. Eanily installed in 15 minutos, permanently! Stork No. 30A6s; MODEL "V" Rerording Motor.
Your Cost
$\$ 165.44$
MODFL T-45 MATCIIING TRANRFORMER, for use with "Brush" RC-20 Crystal recording head. Has input taps of 8 and 500 ohms for tapping volce colt or $500-0 h m$ line of amplifier-required where no high impedance output is available.
Stock No. 18A200. T-45 Transformer. Your Cost
$\$ 9.50$
"RER-O-KCT" VM-A BECORDING LEVEL METER
A top-notch instrument in cast aluminum case with dial easily READArtist himself may record exactly as he delivers, assuring falthful reproduction of his own distinctive style. Operates from outputs of
$8 / 16 / 200 / 500$ ohms. $8 / 16 / 200 / 500$ ohms.
Stock No. 20A812. Becording Level Meter. Your Cost. .
829.50

## Newl "Rek-O-Kut" Transcription Turntable

Dual speed; 331/8 and 78 RPM: essentially FRE E FROM
"WOW" on elther VERTICAL or LATERAL transcriptions. cffic TURNTABLE for specific purpose of EASY CUE-1NG-allow record to overlap y" 80 operator can hold dise
by pressure on RIM rather by pressure on RIM rather than face! Speod regralation
 max. Rumble is 45 db below
maximum recorded level maximum recorded level MEETS ALL N.A.B. STAND-
ARDS: NOTE THESE EX: CLUBIVE FEATURES:-Machined cast iron base, 3-point mounting to sliminate twist; rubber motor suspension mounts dissipate vibration: heavy cast aluminum turntable with SELF-OILING shaft and bearing -long wearing liller and motor bearings. "Neoprone" idlers and formca motor brush assembly assure long and positive drive. 20 POUNDS JF EATISFACTORY SERVICE! Finish is gray. Complete with template and instructions.
3tock No. s0A115; MODEL "C-2"
TRANGCRIPTION
 HAVECRIPTION MOTOR; NET
$\$ 125.00$

## "ASTATIC" PICK-UP CARTRIDEES

C

| Stoole | Fact. | Illus. | Needle | Perm. | Output | Cut-Orf | Lest | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Model | Pig. | Presa | Stylue | Voltas* | Ereg. | Price | TACR |
| 14.518 | L-24A | "C" | 2\% 0z. | NO | 2.95 | 6.600 | \$6,65 | 8.28 |
| 14A521 | L-28A | ${ }^{*} \mathrm{C}^{\prime \prime}$ | 2\% 0x. | NO | 1.40 | 4,500 | 4.45 |  |
| 14A52S | L-4*A | "C" | 1\% 0\%. | NO | 2.00 | 5,000 | 4.45 |  |
| 14.525 | LP-6 | ${ }^{\circ} \mathrm{D}{ }^{\prime \prime}$ | 1 oz. | Y Fis | 0.86 | 4,500 | 8.80 |  |
| 14A526 | LP-21 | ${ }^{6} \mathrm{D}{ }^{\prime \prime}$ | 1 os. | YES | 0.85 | 7.000 | 8.90 |  |
| 14A528 | M-22 | " $\mathrm{F}^{\prime \prime}$ | 2\% 08. | NO | 2.90 | 6,600 | 5.65 |  |
| 14 A580 | B-2 | "H" | $8 \%$ 08. | NO | 2.60 | 4,000 | 5.65 |  |
| 14A5N\% | L-4\%A | "C" | 11/60. | NO | 8.60 | 4,000 | 6.86 |  |
| 14 A 662 | MLP-1J | "A" | 1 Os. | TiPS | 1.00 | 10,000 | 8.90 |  |


| 14 A 856 | L-70A | ' $\mathbf{B}^{\prime \prime}$ | 11/60\%. | NO | 1.00 | 4.000 | 6.56 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 14 ASE8 | L-71A | "B' | $1{ }^{1} 08$. | NO | 1.00 | 8.000 | 6.66 |  |
| 14 A 58 | L-72A | " $\mathbf{B}^{\prime \prime}$ | $1 \%$ os. | NO | 3.60 | 4,000 | 6.65 |  |
| 14A560 | L-76A | "B" | 1\% On. | NO | 0.75 | 8.000 | 5.55 |  |
| 14ABE1 | L-76A | ${ }^{*} B^{\prime \prime}$ | 1\% 08 | NO | 1.00 | 8.000 | 6.66 |  |
| 14AESS | I-J | "A" | $1 \%$ os. | TEP | 1.00 | 8.000 | 8. 90 |  |

BCA CBTETAL CABTRIDGE (Astatic \#401A)-REPLACES cartridse In RCA MODELS 81050, 31156, 82632, 88122, 38217. 84285, 34807. Stock No, 14A581. (Fig. "B".) CRYSTAL
CARTRIDGR for RCA.................................... $\qquad$ .TACE
$\$ 2.62$
The following NEW ABTATIC CARTRIDGES are exact replacoment for old model disoontinned cartridgee a follow:
NEW L-26A; replaces old models L-22A: L-27A; Li-82A.
NBW L-70A: replacea old model L-25A.
NEW L-72A: replaces old model L-50A.
NEW L-40A; replaces old model L-41A.
NEW LP-21: replaces old model LP-23.
NEW M-23; replaces old model M-22.

## SHURE <br> CRYSTAL <br> CARTRIDGES <br> A <br> B <br> 

NEW "SHURE" LEVER-TTPR CARTRRMGES identiffed by or ot in liating below will replaoe mont liochelle Balt flat-type cartridse of othor maken. ©ALUMINUM CABE CARTRIDGES welgh only . 48 of and when installed as replacement for older die-cant cartridgem will REDUCE needle force from $1 / 3$ to 1 or For most record changer replacements the W58A of W59A are recommended.
Stock Fact. HI. Noplacement for List Four No. No. Fig. Replacementior Price Cont
 $14 A B 85$ W-59A " "A" 99-181: 99-180; P888; W10A; $114 .$.
$14 A 586$ W-58A $14 A 586$ W-58A" "A" 99-182: P908; P92B; W42A Bhure.. $14 A 587$ W-57A "A" "Ahure "Olider": P87: P87B; 98A.. 14A589 W-27C $14 A 569$ W-56A* "A" Shure P89 14A570 W-S7AN* "A" (W57 with Perm....................... 4.4

NEEDLE FORCE AND OUTPUT W5\%A: WETAN: W58A, Needle Force \% os. Output Foltage 1.8 volte W59A: Nesdle force, 1 oz. : Output Voltase, 2,6 volts. W56A: Needle foroe, 1 \% os.; Output Voltage, 4.2 volta,

## "Astatic" Replacement Recording Heads



The models Ifsted below will replace the cutting heads in more than $90 \%$ of all home recorders. CRYSTAL and MAGNETIC cutting heade are NOT interchangeable electrically. "ABTATIC" recording heads ageure excellent power sensitivity, wide frequency range, and a hish order of needle atiffness-ALLi necessary and vital to high guslity tranacriptions.

Astatio Model T-26 CRYBTAT, Recording Head:-Driving voltage 75



Astatie Model X-29A CRYRTAL Recording Head:-Driving voltage, 120
 $3 \%$ ": Oridized finish. Mus. "C"e above.
Stocic No. 14AB8s; CRYBTAL RECORDING HEAD, Tom Ooot © ees
Artatio Model C-4 CRYETAT. Reonrdins Heed:-Driving voltage, 75

Stock No. 14A587; CRYSTAL RECORDING HEAD, Iour Coet 9
Astatic Model M-41-8, MAGNEMC Becordins Head:—Driving voltaze,



# Selected PHONO PICKUPS for BROADCAST; P.A. or HOME 

"astatic" Nylon Equipped crvstal pickups

"NFLON'"-as employed in the new "ASTATIC" NYLON 1-J Crystal Pick-Up Cartridge as used in PICK-UP MODELS 400 AND 508 as listed below, IMPROVES PEAFORMANCE in needle life, frequency response, nuppresses mechanical resonances, improves tracking at low needle pres-
sure, and reduces record wear-ALL OF THESE IMPROVEMENTS cure, and reduces record wear- ALL OF THEAE IMPROVGMENTS
made possible by using NYLON in the manufacture of BOTH the NEEDLE CHUCK and SAPPHIRE TIPPED NEEDLE! The Nyloul Nemple is punily raplacel by another of its kind, thus giving ALI the bevelite of the pernianemt or fixed stylns PLUS the udvantage of eany replacement when nevewnury!
"A":-ASTATIC BTUDIO MASTER " $400 "$ WITH NFLON CARTRIDGE. Modern, streamlined TRANSCRIPTION PICK-UP for use on lateral recordings of ALLA sizing. Low Pressure (11/2 oz.) with new swivel baee ADJUSTABLE to desired helght on mounting board. Offset head reAuces tracking error; low friction pivots for conatant needie pressure, and low vertical inertia for ideal tracking even on warped records.
 Stoek No. 14A5ss.
$\$ 14.70$ Btock No. 14AsSS;
BTUD1O MASTER $\qquad$ "B":-ASTATIC MODEL 508 CRYSTAL PICK-UP WITF NYLON OARTRIIGE. NEW and finest plck-up ior home record playert-employe NYLON $1-J$ cartridge with replaceable NYLON NEEDLE. Re-

 "C": ASTATIO HIGH OUTPIT CRY\&TAL PICK-UP conters, for all $10^{\prime \prime}$ and $12^{\prime \prime}$ records. OUTPUT VOLTAGE of 3.5 average ut 1000 cpa. acroas 5 meg. load! USES NEW L-72 cartridge, $11 / 4$ oz needle pressure. Flanged base. $13^{\prime \prime}$ cable lead; over-all length, $7 \%$ Wt. 1 lit 1 bs .
Etock No. I4A564; MODEL b10 HIGH OUTPUT P1CK-UP; NET \&S "D":-ASTATIC MODRI, 507-NEW LANW COAT, HIGH PERFORMANCE PICK-UP. Ideal for manual record players, original equipment or replacement of older, leas efficient pick-ups. Frequency range, $50-$ 4500 cps. 0.6 output voltage: $7^{\prime \prime} \mathrm{mtg}$, centers; over-all length $7 \%$. With deelgn with flange base. Wt. $11 / 4 \mathrm{los}$. Stock No. 14A663; MODEL 507 ECONOMY PICK-UP: NET... ©e
ASTATIC "NYLON 1-J" CRISTAL PICK-UP CARTRIDGE, conmplete with NYLON SAIPPIILE TIIPPED NFEDILE:-tapered shank of needle held in cartridge without needle screv, is easily pushed out by $2-64$ thread screw (supplied) when necespary to change needlea. Adjugtable
N'GEDLE GUARD PROTECTS NEEDLD AND CRTSTAL CARTRIDGE from damage by accident or rough handing. $14 / 20 z$. neede pressure 1.0 volt output at 1000 cps. frequency response. $50-8,000 \mathrm{cps}$. FOR 1.0 volt output at 1000 cDs. irequency responge. $50-8,000 \mathrm{cps}$. FOR Btock No. 14AK5S. "NYLON 1-J" CARTRIDGE,
$\$ 5.23$
 replacement neodle for Pick-Up Models "400" and "508" pick-ups.
Stock No. 18A374; "NYLON" SAPPHIRE NEFDLE ONLY; NET. $\$ 1.76$

## ATDAN


"MICRODYNF" magnetio PIOK = UPS; HIGH FIDELITY - EABY ON RECORDS: "AUDAX' MOVING INDUCTOR principle eliminates the buabboo of moving mase-vibratory monientum reduced to alniost vanlshing polnt. Needle-polnt preasure about is oz, ideal for high IIdelity! fperifientions: RESPONSE, FLAT within plua or minus 3 db. to about 6,500 cycles; rising bass curve reachee about 8db, at 50 cycles. Rtock No. 32A200. "Andar" Model L-17. FOR RECORDS 81929 TO 12". Over-all length, 11"; HIGH IMPEDANCE. Net Fa. 世 H ©


## BRUSH PL-20

## CRYSTAL PICKUP

FOR ALL RECORDS up to $17 Y^{\prime \prime}$
diameter. Low pressure $(1 \mathrm{oz}$.) re-
duces record wear and background
noise to minimum. Sapphire stylus used in teat showed little wesir after 250 hours! WIDE RANGE frequency response of $50-6000 \mathrm{cps}$. (flat within plus or minus $2.5 d b$; slight rise to 10,000 cps.). SUPPLIED
WITH High Impedance Equalizer for "Constant Velocity" recordinge WITH High Impedance Equalizer for "Constant Velocity" recordinge uked commercially. Quickly Installed on most record players: black molded plastic arm with SATIN CHROME metal parts.
 "TARUNI" CARTRIDGE ONI, FOR MODEL PL-20 PICR-UP above;
wtock No. 14AB40; HRUSH MODEL PL-2-Z CARTRIDGE, NET. S9.B2

ASTATIO PRODFESEIONAL


A favorite with all who KNOW pick-upsi Frequency, 50-4000 cps. $2 \%$ oz. neєdle pressure. B-2 bake
lite enclosed cartridge! Vibration insulated arm, ball bearing swivel base Distortion-free WiDE RAse. RANGE reproduction with high wrinkle finish.
Model $\$-8$, for $10{ }^{\prime \prime}$ and $12 "$ records has $8^{\prime \prime}$ moun
No. $3: A 211$.
Your Cost $\qquad$ $\$ 6.56$
Model S-19, for 16" reconls; 12 No. $32 A 21{ }^{\circ}$
Your Cost $\qquad$ $\$ 8.17$
ASTATTC LOW PRFESERE PICK-UP


FINFST FOR HONE OR PA. LSE Permanaut Sapphire Sitylus is
protected by "U" guand. I oz. presproterted by "U" guand. I oz. pres
 mtg. center. $13^{\prime \prime}$ cable. High fidel ity tone reproduction, lo
wear. Rich marcon finish.
No. 32A20\%
$\$ 10.79$

10.

MODELIZER MODEL E-4P COMICE TONE for ALL CRYET.AL PICK-UPS
Bass. Med. Hi Fi, a nad "Out". Easy Chrome and Black finish No. 14A565; E-4P: NFT

NFis \& 0.44

ASTATIO "TRU-TAN"
PROFESSIO


NODEL 18-16
Delaxa Off-set arm crretal plekups with BALL BEARING swivel buses and "Tru-Tan" heads that reduce Iracking error to 2.40 om a $16^{\prime \prime}$ FPCOTA! $50-4,000$ cps.
MODEL B-I6 is designed for latomal transcriptions up to $16^{\prime \prime}$ is free
from mechanical resonance through entire audio range. Responge characteristic may be altered to sult conditions by modification of input circuit. Over-all length is 14": needle pressure, $23 / 4 \mathrm{oz}$. With 24" S. C. shielded cable and arm rest. No. $32 A 20$.
$\$ 14.70$
MODEL B-10: DeLuxe pick-up for ultimate of fidelity in reproduction of $10^{\prime \prime}$ and $12^{\prime \prime}$ records! Has Typo " $B$ " selected cartridge with needie pressure of 24, oz. Ball bearing pressule of 24, oz. Ball bearing
swivel base and "Tru-Tan" head. 8" mtg. center. W'ith $z^{\prime}$ SO shieldedicable and arm rest. Finlsh black
ASTATIC B-10, EA.... \$11.46

## ASTATIC AB8M-MOBILE



Sperially desigued for ALI, mohlle usen - mechanically balanned to "trinck" on repordings even in o vertical position without zroore jumping! Hinged head thls up for quick needle change. Frequoncy 60-4000 cps.: Type B-2 Cartridye, 23 oz. needle pressure. $7^{\prime \prime} \mathrm{mtg}$, center: $13^{\prime \prime}$ Jead. Smooth black $12^{\prime \prime}$ records
$\$ 8.17$
ASTATIO MODEL AB-

Wide range, nurlistorted reproduction of ali $1 f^{\prime \prime}$ und $12^{\prime \prime}$ reconls Frequency, $50-4000 \mathrm{cps} ; \quad 2 \mathrm{c}_{4} \mathrm{Oz}$ mtg . center. B-2 cased bat: $8^{\circ}$ cartridge Cushioned, die cast tone arm; offset head. Black inish. Wt. 2 lbs. . NET QG 56

## New Shure delider

NEW LEVER - DRIEEN CARTRIDGE With needle force of only 1 to $11 / 4 \mathrm{ozi}$ light weipht curved arm of low mase ALUMINUM CASED CRYSTAL wrighe only 43 oz: FINER REPRODUCTION IN WIDE RANGE for all jateral cut recordings at speede of elther $381 / 6$ or 78 RPM. Output voltage 1.6 volts at 1,000 cps. Rt Groove amplitude of .84 mil . Designed for EITHER semi-permanent or permanent stylus; adjustment screw prevents damage to stylus due to accidentally touching turntable. Complete with Arm Rest and 1 ing $^{\prime \prime}$ leade. Single hole monnting! Kewponse, 80-6000 sinm
Etock No. "gHORE" GLIDER PICR-UP.
z0A886
For ALL Records up to $12^{\prime \prime}$.

"B-A" Red Hot BARGAIN! Brand New-Nationally Known Make
 CRYSTAL PHONO PICK-UP "Astatic" L40A Cartridge Exartly the SAME UNIT USFD IN THOUSANDA OF POST-WAR KECORI I L I YERS! T-40A CARTRIDGE is LO W PRES-
SURE- $11 / 4$ oz; output is 0.6 volt With frequency cut-off of 4500 With irequency cut-off of 4500 center. Die cast arm, $13^{\prime \prime}$ leads.
$B-A$ BARGAN PHONO PICK-UP.

# Selected Automatic Record Changers－Record Players 



## Garrard＂RC60＂

## D．Luxe

 Automatic Mixer－Changer Plays B OT H 100 AND $12{ }^{\circ}$ RECORDG －INTERMIXED IN ANY SEQUMNCE Bbsoltutely NO AD saty－Junt Elick of 8 switch starte R－60 and it stope automatically after antrooord 18pinted Changea records gWIFTLT－BILINTLT－GFNTLT－ danage the finest record，yet plays warped records perfectly！NFVFR NHEDS ADJUBTMENT－NO MOVING PARTS BETWFEN RBCORDS－ GXCLUSIVE WITH＂GARRARD＂：The finort getor that it＇poalble to bulld．rune quletiy．no vibration．wown er reped variation；excep by SPRED REGULATOR，LOW PRESSURE，HIGH FIDELITY PICK UP＊ith PERMANENT JWWELED GTYLUS，auperb tone quality－ eatiafactory，trouble free performance－a few drops of ou is ALL the atieution It requires．Minimum cabinet dimensions required are 18 unit plate．BUY THE BEST－BUY＂GARRARD＂plate and $41 /{ }^{\pi}{ }^{5}$ below unit plate．BUE THE BEST－BUY＂GARRARD＂！
$\$ 69.30$


Super－Valus Record Changer NGW，POST－WA．2－POST CHANGER different ohsting of blade poeltion for different size recerds！PLay This 18w or TWICLVE 10 recoris automatically but not intermired．A＂LOW COST＂ CHANGER THAT JUST CANT B BEAT．Eag non－resonant tone arm with low prossure crystal plots－up cartridge．SINGLE CONTROL＂Auto matic＂．＂Mannal＂and＂On－Off＂posl－ tions are controlled by a single knob－ merely press thit knob to reject any record．Dependable motor with $24^{\prime \prime}$ AC leads；18＂shlelded pick－up leads． Finish is new Autumn Gold stipple anamel．Over－all size of motor board，li＂x14＂：minimum mounting space mecessary due to curvature of chancer bese on risht and left hand
sides la $151 /{ }^{\prime \prime}$ wide $\mathrm{x} 141 /{ }^{\prime \prime}$ deep．Space reaired ABOVE top of cabinet sides is $15 y^{\prime \prime}$ wide m 14\％＂deop．Space required ABOVE top of cabinet mountling instructions and templata
Btock No．30A4s．＂SUPER VALUE＂CHANGER．．．．．FACH \＆2

## UTAH＂Complete Automatic Electric Phonograph

 COOMPIETE RIGCORD AMPLI－FIFR AND AUTO． MER AND AUTO MATIC CHANGER INIT；plays TEN $12^{*}$ or Tecords with no attention $\rightarrow$ repeata ast rocordon ＂stack＂untll turned Exp Expertly engineered and BUILTBY rleoma Corpora tion for Its＂UTAH＇ Diviston
WOOD CABINET． gturdily built，as－ TONE QUALITY 3－TUES AMPLII FIFE，including rectifier．with in－ dividual Tone and Volume controls．
 DYNAMIC BPEAKER．Friction drive GEARLESS motor and lieht weight pick－up arm with sengltive CRYSTAL pick－up cartridge，gise， $121 /{ }^{\prime \prime \prime} \times 11 / /^{\prime \prime} \times 8^{\prime \prime}$ high；complete with tubes and instructions． Stock No．80A85；＂UTAH＂LECORD PLAYRR．
＂Masco＂Model MRC－5 Portable Record Player COMPLETE AUTOMATIC RECORD CHANG－ MR POWTERFUL 8－TUBE， $21 /$ WATT AM－ PLIFIFR，and 5－INCH＂AAInico－V＊＊PM DY－ NAMIC SPEAEER，A REALLY PORTABLE MUSICAL INETRUMFNT－plays TW＇ELVE 10－inch，or TEN 12 －inch records，AUTO－ speaker system．Record changer is latest speaker system．Record changer is latest faulng in action！CONTROL PANRL has separate TONE and VOLUME controls．Eelf－ starting．high quality phono motor motor controls have＂Reject＂．＂Automatic＂and 12＂settings．Rugged wood carrying case of $12^{\prime \prime}$ settinga，Rugged wood carrying case of
correct acoustic design aliows machine to be correct acoustic design aliows machine to be ette covering．Size， $19 \%^{*} x 4 \%^{\prime \prime} \times 6^{\prime \prime}$ ；for operation on 115 volt， 60 cycle


Webster＂56＂ single Post Floating Spindle AUTOMATIC RECORD CHANGER
SIMPLIFIED DE－ SIGN．Play standard $10^{*}$ or $12^{* \prime}$ dilacs with ＂change＂cyole of $4 \mathrm{SECONDE!}$ NO NOISE！Assures MAXIMUM PROTRC TION to Fatuablereo ords yet will play and change warped or chipped edge records！AUTO－ MATICALLY BHUTS OFF APTER LAST RECORD HAS BHEN PLATED！PLIE THN $18^{\circ}$ or TWELDE $10^{*}$ records．Manually play ＂home recordings＂or＂ingide－out＂records up to $122^{*}$ ．CUSHION－ MOUNTRD，4－POLF HREAVT DUTY MOTOR＂Astatic＂MLPS－1 pick－up． fenther llght needje pressure．Handy PUSH BUTTON CONTROL 14 － fenther light needie pressure．Handy PUSH BUTTON CONTROL
fnch ${ }^{14}$－
 below motnting bere－ALL INSTALLATION DONE FROM TOP－IAst－ AC 116 volt motor lead and AC plug．brown trim：with template，

## UTAH MODEL 550C

 AUTOMATIC KRCOID CHANG ER－changes TWELVE 10 INOF reoorde，quiatly and mure－ U．In ohanse orole of 6 to 7 eoconds！NEVER REQUIRES OIL OR GREAETE－all bearlngs permanently lubricated at fac tory．TON A ARM is light welght and in adjustable in helght fer variens types of nee－ dles Needle pressure． $11 / 2$ or FREQUENCY range， $50=5000$ ycles＂U－L＂approved CON STANT SPEEP MOTOR WIth NEW GEARLESB DIRECT DRIVE to ball－bearing．9－inch turntable．CHANGER MECHANIGM DRIVE is by meang of spiral steel apring－type belt－no stretch，and no troubie a with old style rubber belts．Even speed of turntable at ALL timen aliminater objectionable＂WOW＂！Direct，rim drive has automatic tenston pring for poritive，even transfer of power to turntable－speed ss held to within CLOEE LIMITB of 78 RPM．over a reasonably wide voltage variation．Steel mounting base is in neutral Beige baked Ham－ merlin enamel，sizE $10 \alpha^{\prime \prime} x 12 \%$ ．Clearance below motor board is f＂： above mounting beard， $5 \%$ ．Including full stack of records and shock
 Small the ent olmple，fool－proof congtruction mako UTAF MODM． S500 deel for all replscements of origimal instaliations，or for mot rallo－phone and P．A．uso．Complete with template and all instructiong Wt， 12 lbs，
Btock No． $8047 \%$＂UTAR＂MODEL $550-C . . . . . . . . C O S T$

## New！＂Ballentine＂

## Quiet Phono－Motor

The Identical motor NOW USMD BY THIG THOUSANDS In Recoril Players prodinced by In Recoral Pingen prodicex by TIOULAR about the QUALITY sind rugrednes of the phono

moter need in their productest of power for ANY record player，is This ine phono－drive has plenty of power for ANY record player．la
GUPER－QUIET in operation．MOTOR is for $110 \mathrm{v}$.60 cy．AC：DOUBLK fan cooled；maled bearings QUFBT FRICTION DRIVE g－inch turn－ table，3－point suspension．RUBBER CUSHION MOUNTED on triangular table，3－point suspenslon，RUBBER CUSHION MOUNTED on triangular
mounting plate of hesvy teel．MOunts in $6 \%$ apee depth $21 /{ }^{m} .2{ }^{m}$ mounting plate of hesvy bteel．Mounts in 6 mpace：depth $2 \%{ }^{\circ}{ }^{\circ} 22$ AC motor leads．Wt $8 \frac{1}{2}$ ibs

## Red Hot Bargain RECORD PLAYER KIT


＂BALLENTINE＂＊QUIET D胃IV
PHONO MOTOR AND＂ASTA－ TIC＂CL－ 407 FEATMERWRIGPTT
PICK－UP PICK－EP with low preseure $11 /$ oc．Crystal cartidge．Pick－up arm is supplied with BAFETI ResT．Read features of＂Bal lentine motor above－NOTE THE COMBINATION PRIC and see WHAT A BAROAIN THIS IS！Comblnation MOTOL and PIOK－UP．
$\left.\left.\begin{array}{l}\text { SA185 } \\ \text { LACH }\end{array}\right\} .85 \begin{array}{l}\text { B－1．0t：} \\ \text { ISACF }\end{array}\right\} .70$
WIRELESS PHONO OSCILLATOR SMALI IN BIZ里－RABY TO INBTALL－ Makes a＂Wlreless＂Leoord Player when used In comjnicotlon with ANY tJpe of aingle or inntomatio necord changer！Operates by tun－ Ing radio set to any＂dead＂spot on dial be－ tween 800 and 1700 kc to enable set to recelve
STRONG SIGNAL from $24^{\prime \prime}$ antent
 STRONG SIGNAL from $24^{\prime \prime}$ antenna of this
osciliator．CONFORMB TO F．C．C．REGUL
 AC．ODC．WIRELESS PHONO OSCILLATOR：WITH TUBE QE R Btock No．17A421．I⿰氵⿰亻⿱丶⿻工二灬力灬
$\$ 5.95$

## 2uality CABINETS FOR PHONO MOTORS-RECORD GHANGERS



PORTABLI CABIEET HOR AUTOMATIC RECORD CHANGERS (LETA hove). Sturdy construction of glued ply-wood covered with durable leatherette-depth belos blank motor board is $4 \%$ ": inside helght of Id is $5 \%$ "
CHAfficient clearance for MOST Btandard makes of RECORD CHANGERS. Notor mounting panel is $15 \%$ "x15\%". Over-all outside handle and double salety catches, Motor board is blank with AC cord cut-outs. PORTABLE CABINET. No. 30A90
PORTABLE RECOEI PLAVEP CABINDT Conter DATES 10" and $10 \%$ HECORDE- ACCOMMOample room for 12 records-mountitg panel in blank in $121^{\prime \prime \prime} \times 15^{*}$ fols Wireless Phono Oscillator or even with room to spare for conrollt of heavy ply-wood with sar or andion set! Sturdily hinges with safety stop, wual covering of pleasing deatherette. Heavy Over-all size is $13^{\prime \prime}$ wide. $15^{\prime \prime}$ Jong, $7 \% \%$ deep. riveled carrying handie. Stork No. 30A107: PORTABLECABIN deep
Stock No. 30A107: PORTABLE CABINET........NET EA.
$\$ 9.38$ DE IUTE PORTAHIE RECORI PLAYER-AMPLIFTER CABINET (Right Above). HEAUTIFUL ALLIGATOR LEATHERETTE covered with step-cut hinged lid, large motor blank motor board, and front srill for $5^{\prime \prime \prime}$ or $6^{\prime \prime}$ speakers: Accommodates $10^{\prime \prime}$ or $12^{\prime \prime \prime}$ records with lid closed. Rich, matching hardware includes METAL CORNERS, dual afety clasps, and heavy carrying handle, MOTOR BOARD is 13 "x $14^{* \prime}$, speaker grille is 7 sm high. Over-all outalde dimensiong are $144^{4 \prime \prime}$



NEW: 12-TNCH WATL BAFTLE-WFLDED STEEL! Correctly designed for ALL Public Address applications. Whitd WFLADED construction throughout - no edgef or loose grille to rattle. Louvre type grille is part of bafle body-providen HIGH FIDELITY reproduction with GOOD $12^{\prime \prime}$ speaker. Bullt-in CELOTEX baffle, Hrown and Tan or Gray wrinkle enamel. No. 30.1134 ; HROWN \& TAN BAFFLE
NO. 30.135 ; GRAY BAEFLE
Na.

##  <br>  <br> EVEREADY Batteries

N上W' "Mlnl-Max" A-B PACR; No. $358,1 \not / 2-90$ Folt: standard 3-prons plug. SLZE $10^{3}$ "x41/4"x7"; wt. 15 1bs. List $\$ 7,50$.

85.51 NEW: "MinjoMax" PORTABLE A-P PACK:-71/a and 9-volt "A": 90-
 "Mini-Max" and Ntumdarll "IB" BATTEPIEM FOR PORTABLE SFTS



| $\begin{aligned} & \text { Cat. } \\ & \text { No. } \end{aligned}$ | Eveready No. | Volts | Connections | Size Leth. | gt. | lbs. |  | Net Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21410 | 718 | 6 | Plug-in | $3 \mathrm{~Hz}^{2}$ |  |  | 81. | \$1.17 |
| $21 \mathrm{A11}$ | 741 | 116 | Plug-in | $31 x^{2}$ |  |  | 1.6 | 1.10 |
| 21 112 | 742 | 112 | Plug-in | 2112 |  |  | . 9 | . 68 |
| 21413 | 743 | 1112 | Plug-in | 334x2 |  |  | 1.2 | . 94 |
| 21 114 | 745 | $11 / 2$ | Plug-in | 103 $\times 3$ |  |  | 1.7 | 1.28 |
| 21 A16 | 746 | 43 | Plug-in | 33 xl |  |  | . 7 | . 56 |
| 21 A16 | 747 | 6 | Plug-in | 101/4 $\times 3$ |  |  | 1.8 | 1.36 |
| DRY CHLIS, HTAMHI.JiHT and LANTEGRN HATTERJEX |  |  |  |  |  |  |  |  |
| Cat. <br> No. | $\begin{gathered} \text { Factory } \\ \text { No. } \end{gathered}$ | Degcription |  | $\begin{aligned} & \text { Unit } \\ & \text { Prg. } \end{aligned}$ | List Each | Net Each |  | Unit Pkg. |
| 21A1 | 950 | Large Unit Cell |  | 48 | 80.10 | 50.08 |  | \$3.06 |
| 2142 | 935 | Small Unit Cell |  | 12 | . 10 |  | 08 | . 76 |
| 2143 | 918 |  |  | 12 | . 075 |  | 06 | . 59 |
| 2144 | 409 |  |  | 1 | . 70 |  | 47 | .47 |
| 2145 | No. 6 | Iantern Battery |  | 12 | .49 |  | 35 | 3.82 |



TABLE MODEL RECORD PLATER OR RADIO-PHONO COMRINATION CABINET (Illus, at left above). Grennlme WALNUT veneor $\frac{1}{}$ pleadins Waterfall deslen, Sturay construction with walnut veneer ovir heavy ply-wood. Speaker grill at left takes $5^{\prime \prime}$ or $6^{\prime \prime}$ speaker-ample
 TYPE OF PHONO MOTOR with ample room for either complete radio set chassis, phono oncillator, or phono record amplifier and speaker.
 Stock No, 30A180; NET E.L.
POLISHED VENTER RECORD CFANGER BASE CABINET (RIght above). QUICK-LOW COST MOUNTING BASE FOH ANY RECORD CHANGER-heavy plywood construction with highly polished venear finish. Ample room for a "wireless" phono oscillator in base. Over-all fize, $17^{\prime \prime}=14^{1 / 2} \times 4^{\prime \prime} \mathrm{h} / \mathrm{gh}$
stock No. 80A183: RECORD CHANGER
$\$ 5.93$
POLISFED VENEER PLOYO MOTOR BASE CABINET (BAOW \& Strong, irim, good looking mounting base for ANY PHONO MOTOR! Ample room for "Wireless' Phono Oscillator in base if wanted. Over-

Stork No. S0A182; RECORD PLAYER
BASE CABINET: NE'T FA,
$\$ 3.08$
Radio Cabinets for Experimental and Replacement Uso


Left above:-Waterfall front, fine looking blank eabinet for radio chassis With 7 to 10 tubes. Reinforced dovetail construction with glued corner Draces. INSIDE DIMENSIONS, $13^{* \prime \prime}$ long, $6^{\prime \prime}$ deep, $7^{1 / 2 \prime \prime}$ high; over-al 3tock No, 3A21: LARGE SIZE RADIO CABINET:
$\$ 3.65$
Center above:-Blank, WALNUT finish radlo cabinet for 5 to G-tube chassia. INGIDE DIMENSIONS, $10 \%$ long, $4 \% "$ deep, $6 \% " h i g h ;$ OLTGIDE, $10 \%$ long, 5 Wh wide, ${ }^{\prime \prime}$ high.
NET LA.
Right sbove:-WALNUT finish blank front radlo cabinet for $4-t u b e$ chasais. INBIDE DIMFNSION8, 8\%" long; 3 " " deep; 5 将" high. OUT SIDE, $9^{\prime \prime}$ long, $4^{\circ}$ wide, $6^{\prime \prime} \mathrm{h}$ hgh.
Stocl No. 3A19: SMALL GIZE RADIO CABINET; NET IEA. © $2 \rightarrow 80$


PORTMBI.F SINGLE SPEAKER-AMPLIFIER CASE (IIHs. at LEFT above). Vesigned for the smaller P.A. or Phono amplifiers and mounting balfle for ONE $10^{\prime \prime}$ or $12^{\prime \prime}$ gpeaker. Outside dimensiong are, $18 y^{\prime \prime}$ "BOGIFN" PORTABLE SPEAKER RAFFLAE (IllUN. CENTER above) Strong, \%" plywood DUAL 12-INEH SPEAKER B.AFFI.E, divided diag-onally-each section serving as a baffle assuring GOOD TONE QUAL. ITY. Grills protected by strong screen; rattle-proof snap locks; strong leather handle-metal corners and bunzper feet. Size, over all, 24 high, $16^{\prime \prime}$ wide, $10^{\prime \prime}$ deep.
Stark No. 30.A137; BOGEN MODEL 134 X
$\$ 12.79$
"ROGEN" DE LCXE DCAL 12-INCH SPEIRFR BAFFLE (IHRS. RIGHT ahove), COMPLETELY ENCLOSFD, lesigned Iol HEAVY DUTY SPEAKERS and will contribute considerable to the quality of re-
production of ANY sound system! Acting as "Infinite" baffles, they have a special GRILL VENT above speaker grill to eliminate 'boom iness" or cavity resonance. Built of heavy \%" plywood with reinforced corners, rubber bumper feet, and NON-RATTLE safety catches. 2-TONE leatherette covering. Outside dimensions, closed, $22 \mathrm{k}^{\prime \prime}$ high, $18^{\prime \prime}$ wide, $121 / /^{\prime \prime}$ deep.
Stock No. 30A138; BOGEN MODEL 140
8PEAKER BAFFLE; NET TEA.
$\$ 18.67$

## "PRECISION" HIGH QUALITY TEST INSTRUMENTS

## TUBE-BATTERY-8ET TEBTERS SERIES 954

## 20,000

OHMS PHE VOLTI 37 Rance Multimeter PLU8 Dymamic Mntual Oon ductance ty $\mathrm{P} \cdot$ tabe tenting of ALL tabes 1.4 to 120 volt?

TESTS BATTEBIES under proper 10 ad. BIG 4\% M METHR!
TCBE TESTS: Antomatic Push Button Systern for dual free point tube terminal selection; eliminates obsolescence! Au tubes tented under spe elfic and correct loads and voltages, Varying AC signal applied to control grids, meter in plate circuit. Tests for EACH SECTION of multhelement types; provides HOT CATHODE leak-
ase and shorta teats; Phone jack for NOISE TEST: Tests ballasts and pilot lighte Roller Tube Chart, Micro-Line AC line voltage control. FET ANALYZER FEATURES:-
EEVEN AC AND GEVEN DC VOLTAGT EANGES of $0-3-12-60-300-600-1200-6000$ volta et 20,000 OHMS PER VOLT on DC and 1000 ehms per volt on AC.
DC CURRENT RANGES of 0-60-300 MICRO Amps., $0-3-30-120-600$ M.A.: 0-12 Amperes. RESISTANCE RANGES of $0-6000-600,000$ and 60 MEGOHMS, center low ohms scale of 35; all - ${ }^{\text {self }}$ contained battery! DECIBEL RANGFB of Minus 12 to Plus 70db; OUTPUT RANGES, same as AC voits. ACCURACI is s\% ON DC $18^{\circ} \times 13^{\prime \prime} \times 6^{\prime \prime}$. with tool compartment, test leads and baturien.

## 920-P SET AND TUBE TESTER

Hag ALL, the TUBE AND BATTREX TRSTING HEATURES deurribed above for Berles 964 PLUS 83-RANGE AC-DC MULTI-RANGE BET TESTER, SIX AO and DO VOLTAGE BANGES of 0-12-60-200-600-1200-3000 at 1000 ohms per 600 MA and $0-12$ Ampt Four Resintamce Ransee of $0-400-100,000-1$ Meg. 10 Meg.; all on self-con tained power supply! Six Deatbel Tiasises of - 10 to +64 db . Slx Output Banges same as AC volts. Has BIG $4 \%$ METER. Pllot light, double fured line plug. Portable case $12^{\prime \prime} \times 18^{\prime \prime} \times 6^{\prime \prime}$, complete with batteries and tent leads. No. 35A\%. "PRECISION Series 820-P. Your Cowt
$\$ 84.22$
SERIES SIS TUEE MERCMANDISER
 stēel cabinet, black ripplattery teats. In heavy TRIM, size $23^{\prime \prime}$ high $x 16^{\prime \prime}$ wide, Bottom deme
 TESTER


Inspires CUSTOMER CONFIDENCE - Will
 8ALEAB MOMCE HHETMINATED by chinomium a TED by chromium reflector. ROLL
CHART
directly
beCHART directly beneath meter. TLESTB BATTHRIES with BATTERIFS Fith
DIRECT READING test on 3-COLOR scals. "WLECTRONAMIC" teat circuit insures accurate results. Has ALL features of model 954P as pertain to tube and
battery teats. In heavy wide. Bottom depth.

## SERIES 912-P TUBE AND BATTERY

Identleal in TUBE and BATTERY testing reatures to series 954 described above: does NOT have Multi-
Meter iunctiong
 CHART: BIG $4 \%{ }^{\circ}$ ENGLISH READING METE LR. Portable case, size $12^{\prime \prime} \times 13^{\prime \prime} \times 6^{\prime \prime}$. No, 35A3. "PR'ECISION" Serios 912-P. $\underset{\text { Cost..... }}{\substack{\text { Your } \\ \text { Con }}}$


## POPULAR "f-200" SIRNAL RENERATOR

- DIANCT BRADING BANDS: Noto to 4mo double to
 with tuin hairilne milicatorg; 6 FISET OF FASY-TO-BIAAD BOALEB! SILVER PLATED CONTACT, ceramic speced, boALms SILVER PLATED CONTACT, ceramic spiced, band switch. ZERO DRIFT, SILVER MICA LOADING CONDENSERS. HAND CALIBRATRD TO BET'AER THAN oonstruction. Check theso OUTETANDING FRATUEES OF 90ntruction. Che
FOUZ TYPRG OF GIGNALS, relected at wil. Unmodnlated RF: $400-c y c l e$ modulated RF; $400=c y c l e$ Audio Outpat and RF: $400-c y c l e$ modulated RF: 400 cycle Audio Outpat and Owellatos, Independentiy controlled, provides test signal from Oad lator, Independentiy controlled, providen test signal from
sero to over 60 volts. Dual Callbrated RE Attenalors, sepsero to over 60 volts. Dual Callbrated RF Attonamors, sep-
arately shielded for smooth control of RF signal. Fariable modalation control, $0-100 \%$. AVC © Snbstitntion Syetom-D- 300 supplies ita own AVC VOLTAGE, controllable at front of panel from 0-60 volts. "Servicing by Signal Subatitation"
book operating inatructions. In metal cabinet $101 / 2 " x 12 " x 8 "$ :
$\$ 64.15$
"EV-10" V. T. MOLTMETER AND 39-RANGE


GUPBIMM AOCURACY-voltege regulated bridge trpe alrcult Full virion, 7-INCH, 400 microampere rugsed meter!
zLRO CENTRR SCALES on mil FLECTRONIO VOLTSOHMS RANGESI Independent zero adjustment of both onds of ohms scaleg BINGLE OHMSM BCALE ROF all gix ohms ranses! SINGLE MABTRA RANGL SELABCTMR for Eero denier voits! Imaicates votase polarity wichour Lons: OVERLAPPING RANGES for ALL normal insulation Lons i OVERLAPPING RA
resistance, or cond. teats.
Vecunm Tube Foitmeter Ranges: 0-3-6-12-60-800-600-1200. Vactum Tube Voltmet er fanges: 0-3-6-12-60-300-600-1200.
6000 DC volts. Input Resistance: $181 / \mathrm{Meg} 3$ to $600 ; 26 \%$ Meg. on 1200 volt range, and $133 / / \mathrm{Meg}$. on 6000 volt rangel SIX Clrcuit Probing, Zero Center, Vacuam Tube Voltmeter Ranges of 0-3-6-12-300-600 D. C. Duo-balanced Eleatronic
Bridge Ohmmeter. RANGES: 0-2000-200,000 Ohma: 0-2-20Rridse Ohmmeter. RANGES: 0-2000-200,000 Ohms: 0-2-30-$200-2000$ Megohms, WITH ZERO CENTERS of 20-2000-20,000-200,000-2 MeE. and 20 Meg.
AC-DO 1000 OHMS PEH VOLT
AC-DO 1000 OHMS PER VOLT RANGKS: 0-3-6-12-80-800-
$600-1200-6000$ AC Or DC volts DC Curreat 000-1200-6000 AC or DC Volts DC Current Rangen of $0-600$
Microampe; $0-8-12-60-300-1200$ M. A.i $0-12$ Amperem. AO Output Ranses with bullt-in condenger, tame aa above AC-DC volta ranges Decibel Renses. Minus 28 to Plus 70 db.
No. $85 A 4$. PR IRCISION $\qquad$ $\$ 71.81$ GERILG RF-10 VACUUM TUBE PROBT
An accesmory item to Beries EV-10, the $R F-10$ provides direct measurement of mper-sonic, R.F. and U.H.F. voltages. Consists of flexible, rubber covered, shielded cable connecting directiy to EV-10 panel; bakelite probe tube housing with attached low capacity problng tip: and type 5002 tube. All operating voltage applied through connecting cable. Complete with instructions; weight 3 ibs.

# Bteck No. 85A74: 

YOUE
$\$ 13.31$

## Series 856 Super-Sensitive Multl-Tester

 44 Ranges; 20,000-1000 Ohms Per V. Sensitivity gERIES tivity for acoureto voltare, current and resirtamoe measurements in Television and FM networks, AFC and AVC circuits, rembence in Television and FM networks, AFC and A conpled smplifier channels, Erid blas and Erid carrent in AF coupled amplifier channels, Erid blas and ETd carrent in AFand RF metworks. DUAL RANGE SENSITIVITY provides 1000
 mensitivity. D.C. VOLTS RANGES are: 0-3-12-60-800-600-1200 6000 at EITTHER SENSITTVITX OF 20,000 or 1000 ohm per volt A. C. VOLTB; $0-8-12-60-300-600-1200-6000$ at 1000 ohms per rolt. D. C. CURRENT RANGES: $0-60-300$ Microamperes, $0-3-30-120-166$ M.A. and 0-12 Amperes RESISTANCE RANGES: 0-6000-600,00060 Meg, with center indications of $35-8600-850.000$ ohms. DFCIBRL RANGES, -12 to +70 db . OUTPUT RANGFB; Same as for AC volts above. HIG 4g* SQUARM MFTRR, double jeweled D'Arsonval type; 60 microampere full scale sensitivity. High Voltase oircuits heavily insulated for maximum aaroty. Bliver plated selector wwitch contacts. Portable walnut finished cabinet, $9^{\prime \prime} 5^{\prime \prime} x 10^{\prime \prime}$ : with Hish Voltase Test Leade and instructions. Stock No. 85A6. "PREGISION" MODEL 856-P. YOUR COST.
$\$ 49.94$


SERIES 8325 81 Range AC, DO MULTIMETEB

DO 1000 O.P.V. O-6-30-150-300-6001200 Valts.
AO 600 O.P.V. 0 12-60-300-600-1200 2400 volts.
AO Ontpat, same as for AC volts. 12-120-600 M. A. DC Reslatance: 0-5000-500,000; 0-5 Meg. with exter nal batt
Db: -10 to +82 . Accuracy $2 \%$ o DC: $3 \%$ on AC.
B-Inch Meter. Only 7"x41/4"天き"

Complete with Batteries and Test Leads.


34 Range 6000 Volt AC-DC V.O.MA
 \%8 SQUARI METER with RANGES: $0 / 12 / 60 / 800 /$ $600 / 1200 / 6000$
AC - Do AC-DO and at 1000 ohma Per voit
High voitage circulta proCected. DO
CURRIMN: $0 / 1.2 / 12 / 80 /$ 300/1200 MA.; $0 / 12$
R A M P
B ANCE: $0 / 400 / 100,000$ Ohms $1 / 10$ Megohms. Pro viston for all batteries lnside case. DhCiBmin: Minus 12 to plus 70 in 6 ranges. RANGG SELECTOR has double wiping diver plated contacts with ceramic spacers between sections. In WALNUT finished case with removable cover, dize $9^{\prime \prime} \times 10^{\prime \prime} \times 6^{n}$; wt. 8 lbs With batterles and test leads.
Stocl No. 35A8. "PRECISION"
Model 844-P. YOUR COST.

## Madern ELECTRONIC TEST INSTRUMENTS

## "HICKOK" " moa.e.

## TUBE AND SET TESTER

DYNAMIC MUTUAL CONDUCTANCE
TUBE TESTER
20,000 OHMS-PVR-VOLT
SET TESTER:
POST-WAR MODEL 534 IS THE ANSWER to YOUR need for the VERY BEST tube and set tester money can buy! NOTE THESE TUBE TESTER tests ALL tubes by true DYNAMIC MUTUAL CONDUCTANCE METHOD-exactly the methTESTS ALL SIZES AND TYPES OF TUBES including new miniatures, 10117 volts. Combination indicating moter showe test results in MCKO-OIIMS and standard "Replace" Donbtrul" and "Good" on $41 / 2$-inch scate. GAS TEST provision elimTEST detects RF disturbances. LOCATES SHORTS-hot or cold. TESTS DIODES separately with LOW VOLTAGE to prevent paralysis of elemente. LINE VOLTAG'E INDICATOR. DUAL RECTIFIERS are used to energize BOTH plates and grids of tubes under test. Makes accurate tents of GRID CONTROLLED RECTIFIER TUBES. SPECIAL FEATURE allows continuty checks, plus a wide range of voltage Checks OBSOLESCENSE ELIMINATED BY EXCLUSIVE NEW ALL THE BAD TUBES! SET TESTING FUNCTIONS:-20,0NO OHMSPENTOLS and at 1000 ohms per volt on the same ranges for A.C. VOLTS: REXEXTERNAL BATTERY! CAPACITANCE from 0.0001 to 100 MFD overlapping ranget; checks LEAKAGE of electrolytic and paper con-
densers! INDUCTANCE to 100 HENRIES, with or without D.C. comdensers! INDUCTANCE to 100 HENRIES, With or Without D.C. com10 to plas sodb; higher ranges by simple calculations. CHECKS HUM IN ANY STAGE OF RECEIVERS. MODEL 634 USES 4 TUBES, 1/83: 1/573GT: $2 / 6 \mathrm{H} 6^{\prime} \mathrm{s}$ SATIN CHROME PANEL in black imitation leather covered HARD
 MODEL 632-P IBYAMIC MUTUAL CONDLCTANCE PORTABLE TUBE TFATER. Identical to Molel 534 described above as to TUBE TEST ING functions-TESTS ALL RECEIVING TUBES including Octal, Loktal, Miniature, Ballast, Magic Eye, Acorn types-provision made
for NEW TYPES-Model $532-\mathrm{P}$ won't become obsolete for a long tine to come! Has Line Voltage test, DUAL INDICATING METER with 41/2" scale callbrated in MICRO-OHMS and standard English reading markings-as easy to use as a dial telephone! Appearance is same as Model $534-\mathrm{P}$ illustrated above EXCEPT does not have jacks in upper left hand of panel for multimeter functions. Legible, modern SATIN CHROME PANEL in carrying case, size $17^{\prime \prime} x$
Ntowk No. 35A34. "HICKOK" MODEL $832-1$.
YOUR COST
$\$ 118.78$
MODEL B32-C DYNAMIC METUAL CONDUCTANCE COUNTER TUBE TFBTEFR. Here is the tube teater that will SELL PLENTY OF TULES qube test functions as Models $534-\mathrm{P}$ and $532-\mathrm{p}$ deseribed has same panel lay-out 18 jdentical to illustration for Model $534-\mathrm{p}$ except does Dot have multimeter jacks, or functions. SLOPING PANEI CHROME in beautiful rounded corner cablnet.

## "HICKOK" MODEL 203 ELECTRONIC MULTIMETER


-TUBE GI EACTRON IC universal test in-Etrument-PROVIDES
BOTH A.r. AND D.C. Boltage measurements with extremely Hirgir WNPUT IMPED MCE: INPUT IMPEDANCL!
$B I G$ 5-INCH METER $\begin{array}{ll}\text { BIG } & \text { 5-INCH METER } \\ \text { has } 17 \text { INCHES OF }\end{array}$ SCALE L ENGTH.
Electronie DC Ranges Electronic DC IRanges 0-2.5-10-60 - $250-1,000$
D.C. VOH.TS with input impedance of 14 MEGOHMS! FIECtronie A. $0.5-2.5-10-80-250-$ 1,000 A.C. vOL, TS with input impedance ELECTRONTC TER PROTECTION against possible damage by overloads. ELIECTRONIC OHMNETER for resistance measurements FROM $1 / 10$ th OHM TO 1.000 MEGOHMS! Conventjonal MILLIAMPERE METER measures to 1-AMPERE IN 5 RANGES, Six-position RANGE CONTROL and
four-position SELECTOR SWITCH have clean, clear-cut numerals for easy reading. Zero Balance Control adjusts electronic circults to meter xero: Ohms Adjust Control for Ohmmeter balance. CAIBLE SET includes shlelded cable for AC volts: shielded cable for DC volts with 5
MEGOHM ISOLATING RESISTOR in test probe; TWO unshielded cables for use in ohmmeter and milliampere measurements. VOLTAGE RGGULATED POWER SUPPLY for operation on 110 volts, 60 cycles at FULL ACCURACY with wide line fluctuation. In baked erackle
 Etock No. "IIICKOK" MODEL 203
ESAS8
"HICKOK" mode
Wide Range sIGNAL GENERATOR
7 R. F. RANGES 100 KC to 110 MC
A NEW" ANI FINFR UNIVERAAL, CRYSA NEW ANI FINFR UNIVEIRGAL, CRYS-
TAL CONTROLI, QUENCY MOIULATION mPeting ILL. RFQUIREMENTS far servicing Frequency of Amplitude mmalulated recrivers siml TeleTision equipment F FUNlBAMENTAL OUT-
PUTS: FREQ. MODULATED RF 760ke sweep, of 100 ke to 133 mc : on 150 kc sweep
from 1000 ke to 133 mc . Internally modulated at 400 eycles or can be modulated
 cycles. Frequency modulated output at 30 kc sweep, 100 ke to 110 me Or visual alignment of amplitude modulated recelvers. Amplftude
Modulated 400 cycle RF output from 100 kc to 110 mic . ternally modulated front 50-15.000 cycles. Unmodulated RF output of 100 kc to 110 mc . CRI*TAL CONTROLI. HP OUTHUTNAACCURACY OF $.01 \%$ - $100 \mathrm{kc}-15,000 \mathrm{ke} ; 1.06 \mathrm{kc}-100 \mathrm{mw}$, MODULATEI) AT 400 CVCLES:
 controlled by output attenuator. Synchronized fixed with all ranges oscillograph use whith RF voltage of OVER l-VOLT avaliable below 3 mc ! FUNDAMENTAL, contimuounly variable R.T. IRANGES OF: 100-300-850kc; $850 \mathrm{kc}-2.6 \mathrm{mc}$; $2.6-8-24-60-110 \mathrm{mc}$; with overall ACCURACE LATORS- 400 cycle voltage continuously varlable from zero to 1 volt: accuracy of $5 \%$ ! 6-RINGE DH/VOLTMETHIR with ranges of Minus 10 to Plus 38 db in 3 Ranges; and ranges of $0-3.5-20-140$ volts. Supplled with 6 TUBES, and socket for VR150-30 voltage regulator if voltage regulation is desired to combat line voltage fluctuation. For use on 110 volt, $60-65$
cy struction book, and set of cables. Siz
Stock No. "IIICKOK" MOIDEL 288X
Stock No
35 A 37
"IllKKOK" MODEL 288X
Cryntal Controlled Slgmal Generator. Cour
MODEL $277 X$ SIGNAL GENERATOR
$\$ 141.71$

## fill the bill" HAS ALL FEATURES OF MODEL $288 \times 277 X$ will

 above, INCLUDING CRYSTAL CONTROL. Appearance and size same as Model 288 X except band scale dial is centered at top of instrumentpanel. Complete with instructions.
Stock No. 35A66; "HICKOK" MODEL 27 MODEL 277 SIGNAL GENERATOR

HE FEATURE deseribed in detafl at top of this colunin EXCEPT it DOES NOT have crystal furnished.
crystad Curnished
Stopl Ne. 35A6\%
$\$ 116.13$

## "HICKOK" MODEL 156 TRACEOMETER

FITE IREECISIONTAETERS MONITOK NIPEAKER AL LOWS $\%$ SIMCLTANEOUN MEANURE-
 OET INTERFISING WITH NORMNE, OIPERATION AND COMPLETE INSTRU゙MENT FOR SIGNAL TRACING AND RAPID SVRVICItECEIVERS! Isullt-in, voltage regnlated pawer sumply


Vafor: Tube Voltmeter circuits protect meters from damage diue to sicidental overiomis. -Measures Oscillator voltage owr ebtire Jange,
600 KC to 15 MC . - Measures ALL D.C. VOLTAGES. -Measures 600 KC to 15 MC. -Measures ALL D.C. VOLTAGES. ©-Measures
ANY A.F, or A.C. voltage. - Measures wattage to 300 watts. F Five
 KC in 3 ranges over $23^{\prime \prime}$ scale length and with accuracy of $1 \%$; RF-IF
voltage rangen, $0.5 / 2.5 / 15 / 25$; nicrovolts, $5,000 / 25,000 / 100,000$. (I3) ONIILIATOR SECTION, $600 \mathrm{KC/15} \mathrm{MC}$ in 3 ranges on 23 " scale with
 () DC ELECTRONIC VOLTMETER SECTION, OF VOLTMETER SEC TION, $0.1 / 1 / 5 / 10 / 50 / 100 / 600$ at $2 \%$ accuracy with frequency response of $20 / 200.000$ cycles, plus or minus 1 DB. (E) W.ITTMEI'ER SECTION,
 VF-IF: 1.2 mmid. on Oscillator. Impit Impertances 18 Meg. on DC phone use direct from panel; nonitar speaker baffled obcillograph cabinet. With instructions, four unlversal low capacity shielded cables, chassis connector lead, and all tubes,
steel cabinet size $13^{\prime \prime} \times 16^{\prime \prime} \times 10^{\prime \prime}$; wt. 22 lbs.
Stork No. 35A39. "IIICKOK" Truceomete
$\$ 141.12$

"HICKOK" 305 OSCILLOGRAPH Specifirally desikned for "FM"; "AM"; Cund TELEVINION servicing - provides by wince fram ant pibis pout to sisenker by Niage from antenna pont to speaker! The only 3-INCH SCOPE HITH SELFCONTAINED MIXER CIRCUIT- allows
use of ANY R.F OSCILLATOR-ntoduse of ANY R.F. oscing itg output within its frequency ranges? Has self-contained Wide nnd Nurrow band F.Bt oscillator: Demodu-
lator, Video Amplifiers; Signal Tracer; lator, Video Amplifiers; Signal Tracer;
and visual A.C.V.T.V.M. 11 tubes, $11^{\prime \prime} \times$ and Visual A.C. V.T.V.M. 11 tubes. $11^{\prime \prime} x$


# ＂Supreme＂MODERN TEST INSTRUMENTS 

## Model 561 COMBINATION AF－RF SIGNAL GENERATOR



FOUR LNDISPENSARLT HIGFEST QUAL
TY INGTR NITINTX IN ONE！
＊－S－BAND B．F．OBCLLLATOE；Aske to some －AUDIO FRTVOUENCT GENEMRATOR； 15 18000 cy
－FIFETBONIO FREQUENCT MODULA
＊CAR
＊－aLI，FTINCTIONG PUKI RUTTON OP GH．1TRD：
AF and RF GENERATORS MAY BE USED TOGETHEH or separately as desired－pro－
vide ANS type of aignal required for tasting and alignment of radio receivers or other electronic equipment．ELec－ tronlo Frequency llodulutor produces double lmage pattern with auto－ matle synchronization：has TWO VACUUM TUBE VOLTMETERS to monitor RF voltage and percentage of modulation！METERED RF
OLTPUT registered from 0 to $89 \%$ modulation－OSCILLOSCOPES will be a＂muat＂in future radio servicing：MODELL 546 ＂Supreme＂＂Scope，or other GOOD＇Scope is ALL YOU NE゙ED with this fine instrument for ADDLTIONAL FEATUHEN OF MODPL 581：RF GENERATOR Ape－ ciully designed to insure high ritubility and good wave form；FIVE RF BANDS ON ONLY TWO SCALES！LAst band coverg to 60 mc on har－ monics．Culibration aecuracy LNes then $1 / 2$ of $1 \%$ through uge of ad－ TUBE AS BUFFER AMPLIFIFR provides smooth carrier control and linear modulation．Fully shielded output attenuator for signal control o？ $1 / / 100,000$ microvolts．Audio frequency generator produces excellent wonee is virtually FLAT 30 to 10.000 cycles and down 2db at 15,000 sponse $i s$ virtually FLAT 30 to 10.000 cycles and down 2db at 16,000
cycles． 160 Milliwatta power output with open circuit voltage of 85 coles．COMPLIGTE with all cables，tubes and instructions．OAK CAB－



MODEL 576 SIGNAL GENERATOR
－COMPLETELY NEW INSTBUMDENT－THK UL TTMATHE IN SLMPLIOITT of oporatioal E－BAND， －DLAL SCALIES On LLLUMINATED HAIR－LINI DIAL！Double calibration for ACCURACY．DUAl TRON COUPLED CIRCUIT desismed and buitt MAXIMUM frequency stablity，protected agains shifts via line voltage，semperature，aglag and er er muitiplior 5 20．5mo：harmonics to 82me！R．F．CARRIKR 50\％ modulated at 400 cycies，may be cut off for un modalated signal， 400 cycle A．F．with continuously rariable voltage output min．co max．jack provied por external audio modulatio
Complete．
53A14．


Model 599－A Tube and Set Tester ＊TH8TY ATL BECFIVING TYPE TUBFG， ＊TRET8 ALL POBTABLE SET BATTHRIP安 －TESTG BETG－27 Multlmeter Hanze －THASTB ALL PORTARLIS SFT BATTPRIPA GOLLER TUEF CHART
－BIG 3－ENCH ENGLISII READLNG METER
Accuracy－All tubes tested at correct loads． Neon lamp visual filament continuity．Neat Tostr for meparate wertions in multi－purposa tubea，Checks ballast tubes and pilot lamps． Dooble Floatine Fllament Return Circuit，Head Phone Noine Testo． Rattery Teatios under operating loade Batters conditlon indicated on Gngtish readin＂iReplace－Gooil scals．Braws Geared Rolter Tube Chait野ting for all tubes 20 got tentins rances and functions： 0.2 to 1500 D．C．Folf in 5 carefully selected renges： $0 / 6 / 15 / 150 / 600 / 1500$ ，with 0 ， volts first scale divteion A．C．Volts， 4 ringes： $0 / 6 / 15 / 150 / 600$ 0．2 voite lirat ache divian to cover all potentials normally encountered in radio servica．D．C．Mhs 0／8／60／600；0．2 M．A．First scale divialons．Outpert Volts 0.2 ． 600 ．No button to hold down－no external condenser neces－ sary．Resintunce 0.1 Ohm to 20 Msgohmi in 4 rangea： $0 / 200 / 20,000 / 2$ mes．$/ 20$ nieg．with $\$ .6$ ohma renter seale．Leakase teats of paper and eleotrolytic condensera．English remiling $3^{\prime \prime}$ square meter．Ribbed Blark


## MODEL 589－A ROLLER CHART TUBE TESTER

dentical In size and appearance to Model 599－A described above except
DOKS NOT HAVE SET TESTING FUNCTIONS．Tests all types of OKS NOT HAVE SET TKSTING FUNCTIONS．Tests all types of functlons for Model 599－A above．

Model 504－B TUBE－BATTERY and SET TESTER The very newest wrsion of radio＇s finest
complete portable laborntory．TESTS ALL complete portable iaboratory．TESTS ALL
TUBES．including $n$ ewest Bantam and Miniatures at correct anode voltages and Miniatures at correct anode voltages and rated loads，with provision for NOISE TEST． Gon in－built properly rated loads for testing all standard＂A＂and＂B＂batteries． CONDENETER LEAKAGE TESTS，for high oltage filters，and low voltage high ca pacity by－pass un
working voltages，
39－RANGE VOLT－OHM－MILLIAMFTER－ 0.1 to 5.500 voltg $D$ ．C．es ranges． 0.1 to DIRECT CURRENT RANGES of 10 micro

0.1 to 1.000 OCTPLT VOLTS，no external condenser necessary． 0．1 TO 20 MFGOHMR RFAINTANCF RANOES，in 5 overlapping ranges with LOW OHMS CENTER SCALE OF 3.5 OHAS！SPELDWAY OP－ EH．ITION－Used for BOTH tube teating and multimeter ranges ONE require oniy one button in left hand row and one in right hand row TION includes $2 \%$ accuracy on $D$ ．C．and $3 \%$ on A．C．：heat treated and aged ceramic resistors for all voltmeter functions；wire wound re－
aistors for all current measuring ranges；SILVER PLATED PUSH BUTTON CONTACTS．Size． $14 \%$＂x $12 \%$ \％＂ 5 $\$ 87.71$
Model 542－B AC－DC MULTIMETER 24 Ranges－5000 Ohms－Per－Volt DC BIG $3^{\prime \prime \prime}$ SQUARE METER with knite－edge polnter and rangeq of：A．C．Voltm／Output Volts D．f．Vulto $0 / 6 / / 150 / 300 / 1500$（first scale di－ vision 0.1 volt）；D．C．Mils： $0 / 0.3 / 6 / 30 / 150$（first scale division 5 Microamps．）：OMMS： $0 / 2,000 /-$

 DECIBEL HANQES from Minus to Plug 50 Declbelg．SELF－CON
 Stork No，\＄5．118．＂SUPHEME＂MODEL 542－B．5，q00 OHMS
$\$ 23.65$

# New ELECTRONIC TEST INSTRUMENTS 

## POPULAR McMURDd- $\overline{\text { IILVAR}}$ INETRUMENTS

## Model 900 "VOMAX"



A TRUE Vacuum Tube Voltmeter im EVERY valtase, resintance, db function! Complete VISUAL DYNAMIC signal tracing from 20 cycles to over 100 mc by withdrawable r.f. probe. CIRCUIT eliminates errors by grid and gas current effects by a NEW
INVENTION - its DC input resist ance may be made as high as dedifferent voltage ranges. Halanced circuite of three dual tubes wipe out usual tube and voltage variations, Bis 4H"IINCH MHTFR covers 81 RANGF On color-difrerentiated ance. DO VOLTB: $7.5 / 30 / 75 / 300 / 750 / 3000$ at 126 megohms input. Polar ance. reversing gwitch DOUBLES number of DC ranges! AC and RF: VOLTS: $3 / 12 / 30 / 120 / 300 / 1200$ with EFFECTIVE circuit loading of 6.6 molis: $3 / 12 / 30 / 120 / 300 / 1200$ with EFFECTIVE circuit loading of 6.6 megonme 8 mid. 6 RESBISTANGE RANGLS 0.2 throngh 2000 MEE-
 In 600 ohma), in 3 RANGES. ABBOLUTELY STABLE: 1 ZRRO AD JUSTMENT SET's ALL RANGES no probe shorting to get a meaning dess zero which shifts the moment probes are separated. Honest, factual tecuracy-plus or minus $3 \%$ on D.C.: $5 \%$ on A.C.: 20 ohms through 100 megacycles!-plus or minus $2 \%$ of iull scale, $1 \%$ of indicated resistance value. Meter is $100 \%$ protected against burn-ont on Volte/Ohms/db. In wteel cabinet with leather handle, $12 \% \%^{" \times 7 \% / " x 5 "}$; wt. 11 lbs. Complete
with all tubes; 48 test leads and permanently cabled removable r.f. wilode probe: full instructions. Stock No. 35A18; Model 900 "gILVER" TOMAX: lour cost 458

## Model 905 "SPARX"

AURAL-VISUAI, DYNAMIC NIGNAL TRACPR. saving tool-a detector, audto ampliller, and test speaker for EASY dynamic testing of ALL receiver ciro cults, phono pick-ups; speakers: microphones, etc. Traces, and indicates GAIN OR LOSS of signal by TWO METHODS-"SPARX" speaker ually indicates presence of grid and plate voltages "SPARX" tests SIGNAL QiJALITY at every point in a
 will pick up near-by broadcast stations by merely contacting its prod to loop of small AC-DC sets! "SPARX" consists of a 4-TVBE THREF STAGE, 65db GAIN A.F. AMPLIFIER AND SPEAKER with two 48" test prods. ONE of which contains NEW RADAR TUBE, isolating capacitor and resistor-loads circuit under test with only 3 mmid and . 6 megohm-will not disturb usual l.f. rif. or a.f. circuits Panel
bwitches permit $6 E 5$ tube to indicate signal input, superhet osc, or owitches permit 6E5 tube to indicate signal input, superhet osc. or
other voltages; or connect amplifier to "SPARX" speaker or output jacks; or connects test speaker djrectly to output jacks. COMPLETE with tubes, test prods, ingt
$105 / 125$ volts $50 / 60$ eycle AC
Stock No. 36A62; McMurdo Silver "SPARX": Your Cont... © 89
 R ranges have expanding circuitt
mid. with
nopen", dial scales for TENTIAL 0/500 VOLTS measures R ranges have expanding circuits to accurately reach
mid. with "open" dial scales for easy realing! INTERNAL D.C. PO-
TENTIAL $0 / 500$ vOLTS measures ALL types of capacitors with CORRECT voltage applied during meanurement - -is appicators with RECT voltage applied during meanarement:-is appitcable to electroly-
tics and to insulation resistance testing: Direct calibrated $0-50 \mathrm{o}$
Pown Power Factor Controi for $.1 / 1000 \mathrm{mPd}$. and $0.6 \%$ sor $.001 / 0.1 \mathrm{mfd}$. a accuracy of $5 \%$. Electron Ray Tube controlled by 3 -position lever switch for bridge balance or into any $0-10$ or $0-100$ milliameter for direct in dication of capacitor leakage. Complete with $3^{3}$ tubes, $30{ }^{\prime \prime}$ test lead. instructions. Size, $12 \% \times 7$ 多 $\times 5$, wt. 11 lbs. Draws 36 watts on $105 / 126$ Stock No. 35A61; "SILVER" MODEL 904 BRIDGE,
Your cost
$\$ 49.90$

## COMINGI "Silver" 906 AM-FM Signal Cenerator

 NOW in "the works" and PROMISED for early 1947 dilivery! 8 Rected by ROTARY TURRET MOUNTED INDUCTORS wound on :Steatite". forms! Wein Bridge 400 cycle R-C osclllator of variable amplitude, may be cut out, used to modulate the signal generator, or to pro-attenuators-directly M'ETERED OUTPUT variable 0 to 1 volt! Same sise as "Vomax"; wt. 18 lbs: Cpt. With tubes, instructions and $50=0 \mathrm{hm}$ ghielded output cable, We whil accept your ADVANCE ORDER for Model 000. when accompanied by remittance, for GHIPMENT whem mvallable ALL ADKANCE ORDERS WILL BE SHIPPED IN EXACT KOTATION RECEIVED BY US, and at prices in effect on date of shipment No sbabs; "sIlNew "Silver" Model 904

## CAPACITANCE-RESISTANCE

 BHIDGEDIRECT READING 5-INCH DIAL with 8 100:1 ranges to indicate capacities of 10 mmid . through 1000 mid. AND resistance of 10 OHMS through 1000 MEGOHMS - READS LOW CAPACITY TO $1 / 6 \mathrm{mmfd}$ and LOW RESISTANCE to $1 /$ OH ACCCURACY of low values is held 100 meg . Two speclal HIGH $C$ and to accurately reach 1000 megohms/
easy rearling! INTERNAL D.C. PO-

SULATION Roifages O-55 voltn indicates leakage on meter scale. IN SULATION RESISTANCE. $3-10,000$ meg. Indicated on meter. Wheat stone bridge resistor testa, 100 ohms to 7.5 megohms, on 2 iong scale ranges; reads high values to 10.000 megohms. AC-IBC Varuum Tube Voltmeter; SCALES, $0-550$ DC volts in 3 ranges; meter can NOT be damaged by excess voltage on any scale. AC SCALEA, 10-50 volts for
 BRIDGE SCALES, scratch proof. In gray wrinkle metal case, 19.
 Your Cost

"SOLAR" CBB Capacitor Tester Improved, up-to-the-minnte verston of the popular prewar CH model with ADDED 3rd capacitance range to per-
mit servicing of 3 -way portable sets and mit servicing of 3-way portabe starting capacitors. "Magic Eye", 6 E 5 tube gives direct panel indication of Capacitance, Power Pactor, Leakage and Texistance. ALL on, color coded scales that match range switch settings, electrolytic, paper, mica and air cond. Díndicates indlcates Power factor of electrolytics. ocates leaky shorted, or intermittent capsci-
$\$ 38.22$

## Triplety RADIO TEST EQUIPMENT FOR MODERN SERVICING NEEDS

NEW！＂Webster＂Model 70 Mixer－Changer


Faultlessly chancas and
 or full stacks of either PICK－UP CARTRIDGE and NYLON SAPPRIF゙F TIPPED memi－permanent needie pro－ Tide a new conception of
FINE MUSIC－Flbre chang－ er gear and FAST CHANGE CYCLE with automatic drive mechanism release as a uTe
QUIET changing AT ALL TIMFS：
Notor and entire assembly－ rubber and sprink CUSH ION MOUNTED－hand－ somely styled with brown Hammerloid enamel finish． Size， $14^{\prime \prime}$ square， $24^{4 \prime}$ below

## Stork

Yourt $\$ 42.34$
MOIEI 2432－IIDFR RINGF STGNAL GEN ping from 75kC to 5usc！Strous and and 3rd harmanics provide for extended coverage to the positlve land mwitchimes，rotates inside a copper phated nteet ohield！Alumingumatian dial with ETCHED MARKINGS．directly geared for fast sattings has total of 66 1NiCHES scale length． taeability adjuated colls，and electron coupled circuit．voltage regulated power supyly inter－ raly shinded power transtormer，inne idtered． od；flne and coarse comtrols to zero for all prac－ minis $15 \%$ ．RMA standard． $4 \theta 0$ c＇ycle AUDIO SIGNAL from pane shields．CO－AXIAL CABLE OUTPUT LEAD for AF＂and RF．＂Square Line＂steel cabinet 10
 Compl
$\$ 86.73$
AODF゙L，240．WIDFFRINGF：： 5.000 OHMLSPRR－SOLT
 Plug－ln rectifier．molled case．impregnated belector jack manel conitch Insure trouble and heary duts tact resistance connections tnol－proof operation On ALL ranser NOTE THENE RANGFS：0－10－ DC AMPS．at 250 M．V． $0-1-10-50-250$ DC．M．A． Ohma－Megohms： ACGOHMS，all with self－rontuined batterie
 1000 ohme per volt．Condenser in series with PUT VOLTS．AC Amperme $0-0.5-1-5-10$ at AC volts ranges for OUT－ 10 to Plus $15-29-43-49-55$ db．CAPACITY CHECK OF PAPER CON WENSERS possible by following data in instruction book，Complete morable hinged cover：finimhed in 2 －tone tan／br


w5 7.33

## 625N Dual Sensitivity Multimeter


 OAt of way：DUAL SENBITIVITY DC VOLTS：
$0 / 1.25 / 5$
$25 / 125 / 500 / 2500$ at 20,000 opv： $0 / 9.5 / 10 /$ $0 / 1.25 / 5 / 25 / 125 / 500 / 2500$ at 20，000 opt： $0 / 2.5 / 10 \%$
$50 / 250 / 1000 / 5000$ IDO volte nt 10，000 opv！AC Volts：0／2．5／10：60／250／1000／5000 at 10，000 ohme per volt！IJ．C．Mils． $0 / 1 / 10 / 100 / 1000$ DC Micro－ ands： $0 / 50.000$（center 300 ）： $0 / 10$ M Mce：（ceater 60,000 olims，D．C．Amps： $1 / 10$ ：DB Binnges（dit 60,000 olims．D．C．Amps．1／10：DB Binnges（dit
rect reading output level）Minus 30 to plus $3 / 15$／ 29／43／55／69ab．Output AC valts by condenser in serfes with AC volts．Cpte，with Model 6.5 N ：NHT HA
$\$ 44.10$
GRAIN LEATIER CARRYING CASE FOR MODEL 6：2 arryln hamale carrying handle．
Gtork No．35 I？s；Modal 699 Leatier Came；YOUR COST． $\$ 5.15$ MOIFL 6GB－II IIANIS MOCKIGT VOIT－OHM－MILLIAM－ MOLDED CASE－3－inch nueter has Peolor，elearly legi－ MOLDED CASE－3－inch nueter has B－mlor，elearly legi－
ble Nealew for thove HANGER；A．C and D．C VOLTS $0 / 10 / 50 / 250 / 1000 / 5000$ volts，BOTH at 1000 ohms per V．
D．C．M．A．： $0 / 10 / 100 / 500$ ；Kesintince： $0 / 300$ ohms，shunt cuit 700 ohms center scale．SELECTOR SWPTCH Por all readiugs： $50-1$ neh tewt leads，with battery and inst，
Stook So． 36.439 ；MODEL $666-\mathrm{H}$ ；
 GRAIN LEATHER CARRYING CASE FOR ABOVR IN－
STRUMENT． STRUMENT．
Stock No． 35 A79．Ty＇pe 659 Case，Tour Cost．． 93.92


MODFI， 2425 TRANBCONDUCTANOR TUBK ITY readiggs in MICROMOHS $\rightarrow$ truls COM－ OUALTTTE OAg gEOOPTS and OPEN TRE
 Mind of ALE RENHING NO NABINS and FASTEST OPFRATING of ALA，Transcon－ tube bage pronp inctading MINTATURE AND SUB－MINTATURE TYPICS Broup．inciuding MINLATURE AND provided for future new types．FUILE RANGK provided for futare new types．FULL RANGK FILAMENT VOLTAGFS－0． $56 / 110$ volts COL OR－CODED METER BCALF－ 3 広＂long，resds in Bicromohr $0 / 2500 / 5000 / 10,000$ PLUS English reading＂Good＂－？＂－＂Bad＂；42／2－INCH MHTHR Line voltage indleation in iC FOLTX：Wisle angle NEON Indicator for ＂shorts＂and leakage．3－POSITION LEVER SWITCHES，settings for all tubes clearly shown on book type tube chart printed in large type
on beavy book．stoeko．Metal cape $10^{\circ \prime} \times 10^{\circ \prime} \times 5{ }^{\circ}$ ．detachable hinged on beary book＂stock＂．Metal care $10 " \times 10 " \times 5$ s＂：detachable hinged cover；rubber feet for vertical or horlzontal
tan and broven finish and panel．Wh 12 lbs． tan and broven tinish and panel．WL 12 Ibs．
Stock No． $55 A 77$ ；＂TRIPT，WTT＂MODFL 2425
MODEL 2413 POPULAR PRICED TUBE TEST KR．Tests ALL receiving tuben kanoly lamps and electriced apparatus and upplianiot lampu and electricel apparatus and applanixe METBR has English reading tube scule PLUS METER has English reading tube scale PLUS line voltage indication directis in AC volts．Only
ONE socket for WACH type of tube base，includ－ ONE socket for EACH type of tube base，includ－
ing newest sub－miniature types．wide angle ing newest sub－miniature types，wide angle
NEON ment short or leakage bs hot cathode method． 4－INCH METER with 3 is－inch long scale． position lever switching for speed and maximum
operating simplicity．FULL RANGE fllament
 for possible puture New tube types．Book type tube chart printed in LAIGE TYPE on heavy duty paper is carried in detachable cover o instrument．Steel case is $10^{\prime \prime} \times 10^{\prime \prime} \times 5 y^{\circ \prime}$ ．Sinished enamel．Kit 12 lbs．
your $\$ 48.51$
3FMz6 Portable Tube Tester ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．4． 4.5 ． 1


MOLEL 3？12 HOLIER CUART COUNTNE TUBE
 SALICS COENTKER doublen as a＂bungrup＂trbe texter for shop nue！SLELL MORE TUJEFS by liay－ ing this bubinesw－like inntrament on SOUR COUN－ TER．ItN IBIC 6－INCR MFTHR tella Inmtantly
 the Finglinh reading meale．Pattorned after atodet 2413 deacribed above this NEW MODEL 3212 ha ALL the tube testing FEATLIRES described above Is bullt for heavy duty service，and has the＂pro－ fessional＂appearance necessary to instill confldence PANEL is set in 2 －TONE hammered enamel finish cabinet with rouuded corners．Size 15 t／＂x 11 为＂x6＂；wt． 13 米 lbs
Stonk
35 Aン
sour $\mathbf{\text { rater }}$

## ＂TRIPLETT＂＇RADIO－MOTOR－APPLIANCE TESTER

 Tewty power consamption of R．illios，small motor and household mppliances usider oqvernting conditions． TWIN METERS indicate power consumption in WATTS and line voltage in A．C．VOLTS；24＂scales clearly marked．RANGES：WATTS， $0 / 750 / 1500$ at 6
anps．rated at 10 amps．maximum－＂Off－On＂swith protects watt－meter against motor starting losde A．C．VOLTS TWO RANGES． $0 / 130 / 260$ ．Fith toggle selector switch for
 Btock No 35AZ1．
 phone Jack for checking signul quality with LINE CURHENT CHANNEL：current range of $0.3 / 3$ Amperes with selector switch and AC plug for received cord：MAGIC RIE indicator：tests recelvers for proper current
drain．ELECTRONIC VOLTMETER： 10 Meg indut regither drain ELECTRONIC VOLTMETER： 10 Meg．indut resistance－
ZERO CENTEA SCALES OF $0 / 5 / 25 / 125 / 500$ DC FOLTS－MEAS－ UHES RECEIVER VOLTAGES at tube elements whlle get is in operation KiITHOLT affectlng normal functions COMPLETE with
aill input and output cables $12-T U B E S$ indtruotions：Steel cablnet wil input and output cables $12-T U B E S$, intruotions；Steel cablnet with leather carrying handle，slze $94 \psi^{*} \times 11 y_{2} \times 13 \%^{*}$ blgh．
prox． 35 bibs．Deep etched Siver and Black panel with prox 35 lbs．Deep etched Silver and Black panel with bright red control knobs．
Stock No． 35 A
\＄111．57

# Special Selected TEST INSTRUMENIS FOR EVERY NEED 

## "SPRAGUE DE LUXE" MODEL TO-2 "TEL-OMIKE"

 TELTR AND ANAJYZLS ALIL TYPES OF' CONDENSERA, with rewulta shown on diremt reqding mealem, Iron2,000 Mfd! Built in POWER SUPPL to and high quallty built-in VOLTMETER and bigh quality built-in dakes all the guess out of testing con-densers-variable controls and selector ewitches make it easy to apply the condenser under test. MAGIC EYE tube condenser under test. all tests and the sndicates results of all testg and the
THLCOMIKE CONDENSER CHARACTERISTIC MANCAL tells at a glance just what actual readings on the instrument should be for "GOOD" and "BAD" condensers of all types. TELOMIKE ALSO measures renlatance from $1 / 2$ ohm to 5 Mes, on direct reading ecales. Inmulation rewiatiance to 10,000 Mrg.; and POWER FACTOR up to $50 \%$ on direct reading acales. Voltmeter Ranges arre $0 / 15 /$
$180 / 500 / 1500 \mathrm{D}$. C. Volts, and CURRENT RANGES of $0 / 1.5 / 15 / 50 \mathrm{M}$. A. 180/500/1500 D. C. Volts, and CURRENT RANGES of $0 / 1.5 / 15 / 50$ M. A.
TEL-OMIKE wil detect opens, ghorts, grounds, INTERMITTEN'T TEL-OMIKE wlll detect opens, shorts, grounds, INTERMTTTENT
SHORTS, in ANY radio component or circuit. Size $171 /{ }^{\prime \prime} \times 9^{\prime \prime} \times 6^{\prime \prime}$; wt. 14 jbs. Stock No. s6A19. SPRAGUE "TO-2" TEL-OMIKE. Cour \&St \& 4.4

## The New "RCA-RIDER" 162-C CHANALYST



THE MOST USEFUL AND FAR-REACHING SINGLE TEST INSTR MON: ALIOWS MONEY CAN BUY: Allows application of the kame syeto ALI, RECNIVERS reto ALab RINCRIERA re sardlew of age or type. DER SUSPICION without interfering with operation of recelver under test, or belng limited by ANY "special" circuit design! solves "Inpresences. checke the pronence character or ab INT in thenal, inciuding operatins and control voltages AT ANY POINE in the rereiver; check: filter circuite at I.F., Intermediate, or A.F. for mources of hum oe interaction between circuita; provide ponitlve identification of onclllatory conditions and ('ONSTANT MONITORING of the various clrcuites in the neceiver! LOCATES NOISE NOIRC'ES within the receiver and other hard-to-find troubles in A FRACTION OF THE TIME required by any othere method!
HERE IS WHAT YOU GET IN THE "CHANALYST":-5-TUBE IF-RF CHANNEL covering frequency bands of $600-1700 \mathrm{kc}$; $240-630 \mathrm{kc}$; and $95-260 k c$. Pick-up chantrel is through shieided cable with 1 mmfd. capacitance. Input attenuation of 10000 to 1 by i-step capacitive at-$600-1700 \mathrm{kc}$; $1650-4900 \mathrm{kc}$; and $4800-15000 \mathrm{kc}$. Checks oscillator operation output, frequency and drift. 3-TUBE AUDIO CHANNEL; resistancecapacity coupled and flat over a range of 50-50.000 cycles. Amplifier eensitivity $f s 1 / 10 t h$ volt full indication and operative over input voltages of $1 / 101 \mathrm{~h}$ to 1000 volts. Has jack for hi-impearace phones. Atienuation ratio 10000 to 1. ELECTHONIC VOLTMETER employs one tube, CENTER ZERO METER with ranges of -5 to 7 ; and same Plus-Minus
voltage readings in ranges of 25,100 and 500 volts. Has INPUT REvoltage readings in ranges of 25,100 and 500 volte. Has iNPUT RE.
gIBTANCE OF 10 MEG. on ALL acales and has eposition gelector gigTANCE OF 10 MEG. on ALL gcales and has 4-position gelector
owitch. Has over-all accuracy of $6 \%$ at full scale with gingle probe lead for contact between volimeter and point under check. 2-TVBF WATTAGE INDICATOR; indicates power consumption of receiver under test from 25 to 250 watts. INTERMITYFNTS may be located within 8 or 6 MINCTES after the firnt "fade" when recelver has been turned "on" for 10 minutem preceding artual teat! Complete with 12 TUBES.
including 4 electron eye Indicators; all probea and connecting cables including 4 electron eye indicators; all
in ateel cabinet $9^{\prime \prime} \times 10^{\circ \prime} x 10 \%^{\prime \prime}$; wt. 28 lbs.
 war! ALIGNMENT INDICATOR cycle A.C.
stock No.
Stock
""RCA" Model 195-A Voltohmyst THE IDFAL INSTREMENT FOK GIGNAL TRACING ANI DYNAMIC TESTING-Incorporating basio innovations and improvement maknown In such an instrument pre-
ELECTRONIC A.C. VOI,TG-D.C. VOLTgVOITMANER - OUTPLT METER - "FM" GHIGH REAISTANCE VOLTAGE RANGES, D.C. at 10 Merohm constant mput of $0 / B$ 10/50/100/500/1000 D.C. VOLTS.
RESISTANCE, 1 Ohm to 1000 Ohms: OND SETTING ONLY FOR ALL RANGES-20 cycle to l00kc flat irequency response up
to 100 volts with input impedance of 200,000 ohme and 170 volts! A.C. VOLTTS/ DIECIBFIS: 0/5/10/b0/100/ $500 / 1000$ by a linear diode rectifler reading directly on D.C. gcale, and with a flat response of 20 to 100.000 cycles! Big square
 NEW DEMIGN; has "Alnico" mantrol if of NEW DEAIGN; has "Alnico" maenet with cale printed on BRARS for Clean. ciear and well spared numerals. Anti-stath terated PIASTIC CASE has non-breaksble iront. Complete with ground lead, fsolating
 wide $x$ "\%" deep. grey wrinkle finish with panel of BRUSH CHROME, reverse etched. Power required is 14 watts at $105-125$ volts, $50-60$

Complete with Tubes and Instructions.... Cost ebdes

## Simpion fine service instruments



MODPL 380 MCTUAL CONDUCTANCE TEBE TENTER-tents tuber in percentase of rated IDYNAMIC MCTEAL CONDUC TANCE REVOLUTIONARY in testing REAL tube merit-AND-Model 330 1S FAST-very few switch settings to make to test ANY tube with AUTOMATIC•RE SET which, at the pugh of a button HETURNS ALL PUSH-BUTTON AND ROTATING SWITCHES TO NORMAL for the next tube test! 41/8-INCE METERR has "English" reading scale. PLUS calltube worth! Tests EVERY type and base of tube at filament voltages from 1.1 to 117 volts; with ONE socket for each base type-IN. CLUDING all the newest miniature, sub-miniature and "Acorn" types. NEON glow tube for "shorts": tests. All tubes tested with voltage applied automatically, under conditions approximate to radio set operation. In heavy fabricoid covered case, leather corners, removable

NEW WTDE RANGE SIGNAIL GEN-
WEA WIDE RANGE SIGNAL GEN 130 mc : DIRECT READING DIAL, in bakelite case is callbrated for these RANGES: 75-200; 200-600; 600-1750 KC, 130 MC ! Controlled RF output over en 130 MC ! Controlled RF output over entire range: no separate connection for high, uncontrolled output needed as on MOST other signal generators; output practically conatant over ENTIRE ire-
quency range! FIgh fidelity modulation up to $100 \%$ from below 60 opes to over 10 KC per second. $0-100 \%$ modulation ternal source; with yoltage range from


0 to 20 volta avallable for external use; no unwanted frequency modulation present. Low loss RF coils, individually calibrated by variable inductance and variable minimum capacitance, provide ACCURACT in callbration-coils are mounted on rotating turret coil awembly for QUICK range change and shortest wiring. Coils and tuning condeneer are individually shielded with an additional common ghield over BOTH assemblies. Cabinet is COPPER PLATED steel for maximum shleld effect. exterior black wrinkle enamel, leather strap; size 5 \% "xil $^{\prime \prime}{ }^{*} x$
 MODEL

MODEL 315 SIGNAL GFNERATOR 3-tube electron coupled circuit assures atability and uniformity on all bands: attenuated RF output $1 / 2$ microvolt to -I Whit meter cycle output 0.6 volta. pointer hus VERNIER control. Switch eliminates "dead spot a". TRIPLE SHIELDED, line filter and shielded cord no leakage! Steel case, wrinkle enamel pinish. size $16^{\prime \prime} \times 10^{\prime \prime} \times 6^{\prime \prime}$; Stork No, 35481 ;


## FAMOUS MODEL 260 SET TESTER

 Preciaion accuracy- 20,000 OPV on DC and 1000 OPV on AC volts-41/2-INCF METRER has long, easy reading scales for these 26RANGES: 7 FUNCTIONS:-DC VOLTS, $0-21 / 2 /$ RANGES; $10 / 50 / 250 / 1000 / 5000$; AC and Ol'TPUT VOLTS $0-2.5 / 10 / 50 / 250 / 1000 / 5000 ;$ DC 31 .A. $0-10 / 100 /$ 500; DC Microamps 0-100; OHME, 0-2000 (12 ohms center): $0-200.000$ ohms ctr.) 12 DB minus
$0-20 \mathrm{MEGOH} \mathrm{M}$
( 120.000 ohms 10 to plus 52 on 5 RANGES. Molded case with eather handle, size $51 / 2 " \times 7^{\prime \prime} \times 3^{\prime \prime}$; wt. $31 / 4$ lbs.
Complete with test leads and instructions Complete with tes
Stock No. 35.160 ; Stock No. 35:160;
MODEL 260 ;
$\$ 38.17$ Grain leather carrying case for above, SE. 55
Stock No. 35A83; NET EACH.........

"ALL APPLIANCE" VOLT-AMP-WATTMETER BRAND NEW:-FOR ALL TYPES OF ELECTRICAL APPLIANCES-USEFUL FOR AIR CONDITIONING AND REFRIGERATION SERVICING - ANYWHERE A MOTOR IS USED! Indexer
panel clearly shows volta amperes watts functions - insures QUICK and CORRECT meter readings. Break-in "speed cable" furnished with instrument is 4-conductor and color coded-leads
are first connected to binding posts on
 are first connected to binding posts on pliance to be tested is plugged into itaced in electrical outlet-and apthe circuit! s-inch meter with large scale has connecting meter into CURRENT, 60 CYCLES; $0-150 ; 0-300$. VOLTS; $0-3 ; 0.15$ AMPERES; $0-300 ; 0-600 \quad 0-1500 ; 0-3000$ WATTS Binding post arrangement allowf use for checsing line voltages, or as wattmeter or ammeter. SLZE,

plug: instructions.
Dtocic No. 35A82; "gIMPEON" MODEL 390; Yonr Cont
$\$ 38.71$

## Test Instruments for the Madern Serwice Shop


＂JACKSON＂MODEL 637
AFPNTM，PUSB－BUTTON OPFRAT－ PD：DTNAMIC OUTPUT；COMBINA TROA TUBE TESTHR WITL COM－
 Ravares．TRESTB ALL TUB\％in cluclieg latent sub－miniatures；caots BALLLABTS；tool CONDENERERS for ＂sherty＂and＂leakc＂．Has new hish veltage power supply to enable maro eccturabe tests of tubes requirtise hlyh plate voltages Has NOIBE TESTT jactir on panel for phone use．LaARCHE， －INGH case METKR．ILLUMINAT ED．Universal Mieter ranges，PUAH－ BUTIVN ORERATMD are：0－10－100 250－500－1000－2500 AC－DC VOLTS． 3．001－840．000 OFMS； $0-30 \mathrm{MECO}$ ．-1 － 10－100－250 DC M．A．；0－10 Anperes，DC；DB RANGES．Minus 1020 plus
 TOLR COST

＂JACKSON＂MODEL 636 ROTARY TUBE CHART；PUSH BET MON OPERATEID：DINAMIC OUT PET TUBE TESTER．UP－TO－THE TYPUTE TESTS FOR HVERT TUBE TYPE from oldeat 4－pla base to now－
est，war－developed sub－miniatere typen！Spare socket position for any new tubes that may appear in the Pature－as near OBSOLESCGNCE modern tabe tester．High voltage pewer mupply：NEON shorts and leak afe testy；phone facks for NOISE TRET．Gray leatherette covered case ts $14^{m 17} \times 5 \frac{18}{2}$ ：Wt． 11 Ibs ． 536 P ． Yonr Coot
$\$ 53.90$

## ＂JACKSON＂MODEL 640

MSH－BUTMON OPERATED CILLATOK 100ke－30me：6－LANGHE NG On Pundonentals！DIRRCT READ ING＊PULC RANGE DIAL ts glass on cloned，／\＄of $1 \%$ ACCURACY on al rences Powerful slenal output of pure oltage ter external use．Heavily shield with CAST ALUMMNUM PANEL in uit－wolded＂case $84 \%^{\prime \prime} \times 8 y^{\prime \prime} \times 6^{\prime \prime}$ finiehed Eray ripple morocco，＂Snap＂leather arryiag handle．Complete with all tuben， shielded ousput cable，and instructions． stod No．S5A18；＂J ACK K ON Mode
Your Coust
848.02

＂JACKSON＂MODEL 650－A
 Simple to operate sPrevili－capecity rending elmost instantsneous：lealcuge beete hy morely presulng a button！ RANGIS：$\rightarrow 00001 / 1$ mid．； $001 / .1$ mid． mariced on LARGE，GLASS ENCLOSKD SCALD with new＂Jackson＂SCALE EXPANDRR indicating polnter－doubles affective scale length！Teat voltages． कD／B0 volte；me assures POWFR FAC＝ TOR， $0-60 \%$ on direct reading scale． Eiectron Rey tabe shows exact balance or indicates presence of leekage $8 夕^{\prime \prime} x$
 Oher＂JACKgON＂DFE＇ENBABIG INSTRUMTNTS in Btocl at＂B－A＂ No．SEABA：MODEL
OSCILISTOR：NET OSCILLATOR：NET
Ne．SSA5O；MOPEL
3114.8
 35A5s：MODEL $642, ~ 20.000$ aP．V．Mulumeter：NET
35A5\％：MODFL 543
Std UnIF． $-78.50$
 ＂FEDLER＂SIDNAL TRACINO ANALMZER． Wil quickly pay for tself in theae gaved in HAPBD TEST太 of anj recelver or amplifier Nithmut complicated and buthersome edjnst－ ments！Quicing locatios Noine，Higma，Poor Sonditivity，Spenker IDefoets，Opon Cenpline chopensers faulty rexinturs．lowas，tranuformers， TENTS：SMALL SIZFi，only $6 \%^{\circ} x x^{\circ}$ IS $\% \%^{\circ}$ Whtch houses NEW，wer defeloped MINIA． UFIE tube and circuit componemte HREE IS PECUIRES NO SPECIAL SKILI TO OPRR－ ATR yet is a real tine surer in any mop！Complete with neormenry


# ＂Robson－Burgess＂High Quality－Low Cost－ 

## ALL PURPOSE AC－DC Multitesters

 and have th UNUEOAL FRATURE of a SLOYING PANEL，providís In choice elther fí or $65^{\circ}$ angle of meter：rubber feet on came for grretima engle of une，ind handy carrying hande．Finkh is gray crystaline eptamel，with panels of Etched Aluminnm in beautifal now AABminite＂flafilh．TOU CANT GO WRONG ON A＂ROMSON BURGRGB＂！BUY THESE FINE INBTBUMENTA FHOA＂B－A＂AT A BAYINA IN TRICES

 MODEL MT－200； $31 / 4{ }^{\prime \prime}$ SQUARE， 400 micro－amp． movernent meter with rectifler compensation ln－ teed $2 \%$ over－all meter ranges．Guarana FOLT8：0－5－15－50－150－500－1500．DC Milliam－ peres：0－10－100－500．Rexhtance：0－10 Merohma in four ranten with center mcale readings of RATOMEN and 86000 hmo－NO FMTERNAI BtaTK Ni required
 ＂SUPREME＂POCKET MULTIMETER MOINEI，54 with full mise s－inch one mil meter SERVICR BHOP L a litto dand for aFAM＂ use！2－color pane with speclal HIGH VOITS JACKS and EINGLE BELECTOR SWITCH for firat scalo division） $0-16-150-600-3000$ volts volt MLA．：OBMS：（1－ohm readuble on scmle）：－0－ $200-200000$ ．Bakelite case $5 \% \times 3$ ． Pocket Multimeter．
$\$ 18.57$


NEWI＂SUPREME＂MINIMETERS
＂Fent Pocket＂individual function teat metern only Mrghty larger than on orlimary meter movement alone：
 PENDABLF，the meters of these fine little instrument are made by＂gUPREME＂and have solid＂A Intro＂Stni tered Pole Pleces，the finest meter constraction pons ble！Ah instrumenta have ONLI ONE SCATE possi ranges．Ideal for Sehools．＂Hums＂．Ishoratoriear and Servicernem．INDIVIDUAL：＂MINIMETERS＂IN THE FOLLOWING RANGES AND FUNCTIONS：
 No．17A7B4；Model 410：DC Milhamaps：0－25－250－8500；EA．．．．．．． 8.48

NEWI＂APPROVED＂LOW COST SIGNAL GENERATOR Packed with FRATEREAS that mate MODFL A－200 OLTATAND－ ING IN THE EIGNAL GENERA－ TOR FTKLD！NEW POBT－WAR CURACY AND \＆TABILITI： B－RF BANIDS： 100 ko to 75 me ！ HUGF，DIAI is 9 ＊＂wide at bese，has Lucite hair line pointer and large direct drlve knob．
MULTL－COLOR SCALES for each band have widely separated call－ hration marics and large figures Tor accurate readings．S－FUN－
DAMENTAL BANLS． 100 kc 25me：－ $100 / 250 \mathrm{kc}$ ； $190 / 500 \mathrm{ke}$ ： $420 / 1000 \mathrm{ke}$ ； $1009 / 3000 \mathrm{kc}$ ； 2.8 to Imc and 8.9 to 25 mc ；7th Fiend covers $18-50 \mathrm{mc}$ on second har－ monic：8th Band．27－75me on powerful third harmonic Inter－ 30,000 cpe．EXTERNAL modula－ ciom possible：Phane Ahift Audio Oscillator and internal modulator Contimonaly Farlable RF－AF Fine Attenuator Control：speclally de－ Thed Altentator mottings have mo effect whatever ou frequencer Godulation percentase continuonaly variable at front panel from to 10\％Extremely LOU LEAKAGE on ALLi bands electrostatically minded transformer．Co－Axial Ontyen Lead！REAL QUALITY BUILT ＂＂Hammerbund＂INFAR double spaced，ceramic insulated variablea agsure NO copacity change or sweatigg in humid climates or in radicel temperatare changeef Oil filled condonsers，4－atandard tubes：in 16－5
 2 Iba．：Batileabip cray cracicle enamel．A EEAK HIGH OUSI．ITM SIGNAK GKNIARATOF IN LGVISI BISPECT！

## stock No．85AB4：＂APPROVRD＂MODELL A－200．

 FAMOUS＂HEWLETT－PACKARD＂LABORATORY TEST INSTRE－ M保T8 for Iatoraterles and Ingatifal Plants are avallable from ＂B－A＂for PROMPT SHIPMENT－SPLCIAL CATALOG avallable－ Fenpent civins somplete devertitw information and latent prioen

## TRIPLET PRECISION METERS


$\mathbf{3}^{\prime \prime}$ Square Case PANEL METERS
In square flush moanting bakelite cases, completely dust-prooied. D.C. instruments are the repulajon type, air damped. All incorporate jeweled bearings, aluminum pointer, white dial with eled bearings, aluminum pointer, white dial with easy-to-read scale, andin $2 \%$. All listed below mount in $2 \%{ }^{*}$ hole, extend $1 \%{ }^{\prime \prime}$ behind panel.

## D.C. MILLIAMMETERS

| MODEL 32\%-T |  |  |
| :---: | :---: | :---: |
| Range | Stock No. | Net Ea, |
| 0-1 | 20A813 | 58.63 |
| 0-15 | 20A814 | 5.38 |
| 0-60 | 20A815 | 5.38 |
| 0-100 | 204816 | 5.38 |
| 0-200 | 20A817 | 5.38 |
| 0-800 | 204818 | 5.39 |
| 0-600 | 20A819 | 6.38 |

D.C. AMMETERS

MODEL 327-T

| Range |  |  |
| :--- | :---: | ---: |
| Ampe | Stock No. | Net EA. |
| $0-1$ | 204820 | 56.38 |
| $0-10$ | $20 A 821$ | 5.38 |
| $0-26$ | $20 A 822$ | 5.38 |

## D.C. VOLTMETERS

MODEL 327-T, 125 OHMS/VOLT

A.C. VOLTMETERS MODEL 337 -T

| Range |  |  |
| :--- | :---: | ---: |
| Volts | Stork No. | Net Fa. |
| $0-5$ | $20 \mathrm{AB28}$ | $\mathbf{\$ 5 . 3 8}$ |
| $0-10$ | $20 \mathrm{AB29}$ | $\mathbf{5 . 3 8}$ |
| $0-160$ | $20 \mathrm{AB30}$ | $\mathbf{8 . 5 3}$ |
| $0-300$ | $20 \mathrm{AB31}$ | $\mathbf{7 . 5 1}$ |

A.C. AMMETERS MODEL 337-T

| Range |  |  |
| :--- | :---: | :---: |
| Amps. | Stock No. | Net Ea. |
| $0-3$ | 20A832 | S5.38 |
| $0-10$ | $20 A 833$ | 5.38 |
| 0.25 | $20 A 834$ | $\mathbf{6 . 5 3}$ |

D.C. MICROAMMETERS MODEL 32\%-T

| Hange |  |  |
| :--- | :---: | :---: |
| Micro Amps. | Stock No, | Net Fa. |
| $0-100$ | 20A823 | 18.72 |
| $0-200$ | $20 A 824$ | 11.11 |

## THERMO AMMETERS

Model 347-T with Internal Couplo

| Range |  |  |
| :--- | :---: | :---: |
| R.F.Amps | Stock No. | Net Ea, |
| $0-1$ | 20A825 | $\mathbf{8 8 . 3 4}$ |
| $0-2.6$ | 20A826 | 8.34 |
| $0-5$ | $20 A 827$ | $\mathbf{8 . 3 4}$ |



Designed, engineered and manulactured in their entirety in the new, modern plant of Supreme in-
strumente Corporation; "SUPREME" METERS etrumente Corporation: "SUPREME"' METERS have thoroughly PROVED their dependabifty and accuracy in thousands of "SUPREME" Test Instruments used by our Armed Forces in the War. Long lasting, HAIRLINE ACCURACY is assured by these QUALITY FEATLRES: - extremely rugged assembly using double bridge construction and "Alnico" bar magnets; selected pivots and jewele and high torque movements reduce iric-
tion. FOR LONG LIFE ACCURACY - USE tion. FOR
"BUPREME' 3" SQUAK㖶 METTERS Meter case dia. $2 \%$ ". Mounting - 32 studs moulded in pront flange on $2 \%^{\prime \prime}$ centers.

"SU1'REME" 2-INCH SQUARE
Meter Case dia. $23_{3}$ ". Mounting: $6-32$ atuds moulded in front flange on 1 \%" centers.


cty
=
CONANT" INRTRE
For applications requiring DC output current for meters, relays or
other apparatus where other apparatus were extends into audio range. Type M - Serles 500; Full Wave
Bridge Rectifier Output 10 vु Bridge Rectifier Output 10 V. 30
MA. MA.
No. No. 14A629. Net Each Hi.S2.08
Type H- Heriew 500 : Halp Type II - Neriew 500 ; Half
IRectifier Output $5 \mathrm{~V}, 30 \mathrm{MA}$.
 Tyme B-Serfes 160; For applications reguiring good frequency response over entire commercial and audio range. Full Wave Bridge type.
Output 10 V. 5 MA . Output 10 V. 5 MA.
.52 .06

Centralab"RADIOHM" VOLUME CONTROLSS For All Service Needs
BTANDARD and MIDGET BADIOBAES a listed below all havo atcached 21a-inch shaft, ilatted, and with universal mill iull lensth. BTANDARD RADIOHMS are $1 \%^{\prime \prime}$ in diameter, R" deep overall: MIDGET RADIOHMS are 1 3/84" in diameter. SWITCH COVERS for Btandard or Midget Radiohme are avallable, as listed.

Beeletance

Usual Circuit
Midget
Fact. No
Stock


2,000 Voltage Divider
2,000 Voltage Divider
8,000 Voltage Divider
8,000 Voltage Divider
8,000 Voltage Divider
7,000 Antenna Shunt
10,000 Voltage Divider
10,000 Antenna, C-Bias
10,000 Antenna, C-Bias
10,000 Antenna Shunt
15,000 Antenna Com
25,000 Antenna, C-Biag
25,000 C-Biag
25,000 C-Bias
80,000 Voltage Divider
$\mathbf{8 0 , 0 0 0}$ Tone Control
100,000 Voltage Divider
100,000 AF Grid or Tone
$200,000 \mathrm{AF}$ Grid or Tona
$\mathbf{2 8 0 , 0 0 0} \mathrm{AF}$ Grid or Tone
$\mathbf{8 0 0 , 0 0 0}$ Voltage Divider
$\mathbf{6 0 0 . 0 0 0}$ Beries in RF Plata
$\mathbf{5 0 0 , 0 0 0}$ Bertes in RF Plata
750,000 AF Grid or Tone
1 Mes. AF Grid or Tone
8 Mese. AF Grid or Tone
FOI'R CHOICE of the abore un-tapped STANDARD or MIDGET HADIOHMS, Net Euch

N-157 No.
$\mathrm{N}-167$ 14A214 N-158 14A215 N-159 14A215 $\mathrm{N}-160$ 14A21\% $\mathrm{N}-161$ 14A218 $\begin{array}{ll}\mathrm{N}-162 & 14 \mathrm{~A} 219\end{array}$ NF-163 14A220 NF-107 14A221 NF-108 14A222 N-109 14A2t $\begin{array}{ll}\mathrm{NF}-110 & 14 \mathrm{~A} 224 \\ \mathrm{NF}-113 & \text { I4A225 }\end{array}$ $\begin{array}{ll}\mathrm{NF}-113 & \text { THA225 } \\ \mathrm{NF}-164 & 14 \mathrm{~A} 228\end{array}$ $\begin{array}{ll}\mathrm{N}-114 & 14 \mathrm{~A} 228 \\ \mathrm{~N} & 1428\end{array}$ N-115 14A228 $\begin{array}{ll}\mathrm{NF}-166 & 14 \mathrm{~A} 229 \\ \mathrm{~N}-116 & 14 \mathrm{~A} 230\end{array}$ $\mathrm{N}-116$ 14A230 $\mathrm{N}-117 \quad 14 \mathrm{~A} 231$ N-168 14A232 $\begin{array}{ll}\mathrm{NF}-169 & \text { 14A233 } \\ \mathrm{N}-102 & 14 \mathrm{~A} 234\end{array}$ $\begin{array}{ll}\mathrm{N}-102 & 144234 \\ \mathrm{~N}-118 & 14 \mathrm{~A} 235\end{array}$ $\begin{array}{ll}\mathrm{N}-118 & 14 \mathrm{~A} 235 \\ \mathrm{~N}-170 & 14 \mathrm{~A} 236\end{array}$ $\begin{array}{ll}\mathrm{N}-170 & 14 \mathrm{~A} 236 \\ \mathrm{~N}-103 & 14 \mathrm{~A} 287\end{array}$ $\begin{array}{ll}\mathrm{N}-103 & 14 \wedge 287 \\ \mathrm{~N}-171 & 14 \wedge 288\end{array}$ $\begin{array}{ll}\mathrm{N}-171 & 14 \wedge 288 \\ \mathrm{~N}-104 & 14 \mathrm{~A} 259\end{array}$ $\begin{array}{ll}\mathrm{N}-104 & 14 \mathrm{~A} 259 \\ \mathrm{~N}-155 & 24 \mathrm{~A} 40\end{array}$ $\begin{array}{ll}\mathrm{N}=156 \\ \mathrm{~N}=156 & 14 \mathrm{~A} 241\end{array}$

73c

## TAPPED MIDGET RADIOHMS



## SPLIT KNURL MIDGET RADIOHMS

Required on many late model radio sets equipped with knobs that will not fit standard flatted shaft. Split knurled shaft, 2 " $"$ long, can be cut to desired length. Lwe midset type switch covers linted below. cut to desired length. Cwe midset tspe switch covers linted below.
Remiatance

| Remistance |  | Trpe |  | Factory | Stock | Nat |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ohme | Curve |  |  | Number | No. | Sach |
| 25M | 4 | Plain |  | NK-137 | 14.4248 | \$0.78 |
| 60M | 5 | Plain |  | NK-138 | 14A247 | . 78 |
| 260M | 6 | Plain |  | NK-139 | 14A248 | . 73 |
| 500M | 6 | Plain |  | NK-140 | 14.1249 | . 78 |
| 1 Meg . | E | Plain |  | NK-141 | 14A250 | . 73 |
| 2 Meg . | 6 | Plain |  | NK-142 | 14A251 | . 73 |
| 500M |  | Tapped | (1) 50 M | NK-143 | 14A252 | 1.09 |
| 1 Mes. |  | - Tapped | (10) 300M | NK-144 | 14A283 | 1,09 |

ATTACHABLE SWITCH COVERS
FOR STANDARD CONTROLS
FOR MIDGET CONTROLS


## "RADIOMN" EXTENSION SMAFTS AND COUPLERS

14A270. Type K-181 (1040089)-Extension Shaft
 14A271, Type K-161-For coupling two $1 / 4{ }^{\prime \prime}$ shafts or one $1 /{ }^{\prime \prime}$ and one $H$

## CRL ECONOMY AMPLIFIER CONTROLS

 Designed primarily for inexpensive sound equipinent, fading and mixing aystems. Non-rubbing contact for smooth, quiet operation. Will and $\%{ }^{\prime \prime}$ bushing. Ail units $1 \%$ dameter. 26 deep, With $\%{ }^{\circ}$ and \% busResistance

| Resistance |  | CRL | Stock | NET |
| :---: | :---: | :---: | :---: | :---: |
| Ohma | Description | Number | Number | EACH |
| 500 M | Gain Control | M-141 | 144288 | 61.0 |
| 1 Meg . | Gain Control | M-142 | 144289 | 1.0 |
| 600M | Straight Fader | MT-144 | 14 A 290 | 1.18 |
| 1 Meg . | Stralght Fader | MT-145 | 14 A 291 | 1.18 |
| 200 | "Delta-T" Pad | MX-147 | 14 A292 | 2.0 |
| 600 | "Delta-T" Pad | MX-148 | 144298 | 2.0 |

FREE-CENTRALAB VOLUME CONTROL OUIDE 8el. No. 14a2ge Requent with order for CRL controle.

# MAl"LORY Replacement Volume Controls <br> Taper Number A I Itnear taper. Duet wierever a control shonld be 

Taper Number 1 is a modified losarithyic left hand taper used in antenna and a
Tipper Number is a richt hated togarithmic taper. Used as in cathode roltage control, or where center end right hand terminals are used. Taper Numbor $s$ is a combination ioft and right hand taper. Fior nse in circnits Where
eircuit control.
such that voltase is propertional to the desree of rotation.
Taper Number in fa modiflcation of the resuler Inear taper Nember 4. Tuper Number 7 th made only in the wire wound trpe of control and is a form of left hand taper. Thim taper is desirable for the antenne ghunt plug bies contrah wherela greater attenuation in oblained by increaming the bian voltage.


| Standard Controis |  |  |  |
| :---: | :---: | :---: | :---: |
| -External Adj. Res. Included. |  |  |  |
| 8tock | Mallory | Ohms | Taper |
| No. | Type | Res. | No. |
| 14 Al | - E12 | 5 M | 1 |
| 14.A\% | Y5MP | 5 M | 4 |
| 14 A 3 | -G12 | 10.3 | 1 |
| 14.44 | *UC501 | 10 M | 2 |
| 14.45 | Y10MP | 113 ${ }^{\text {M }}$ | 4 |
| 14.10 | *112 | 15 M | 1 |
| 14.17 | *Y | 219 | 1 |
| 14 A 8 | *J | 25. | 2 |
| 14.9 | Y 25 MP | 25.1 | 4 |
| 14.10 | K12 | 50M | 1 |
| 14.111 | * | 5119 | $\sim$ |
| 14 Al 1 | Y50MP | 50M | 4 |
| 14 Als | Z12 | \%5M | 2 |
| 14 A 14 | * | 75 M | 1 |
| 14 A15 | 1 | 1uuM | 1 |
| $14{ }^{16}$ | - UC510 | 1009 | , |
| 14.117 | Y100MP | 100M | 4 |
| 14.118 | UC50: | 150M | 1 |
| 14A19 | Y200MP | 200M | 4 |
| 14.120 | M | 250 M | 1 |
| 14.421 | * UC509 | 250M | 2 |
| 14A22 | Y 250 MP | 250 M | 4 |
| 14 A23 | N | 500 M | 1 |
| 14.24 | UC513 | 500 M | 2 |
| 14.125 | Y500MP | 500 M | 4 |
| 14A28 | UC508 | TiJ0M | 1 |
| 14 A 27 | 0 | 1 M Mg | . 1 |
| 14.428 | Y10003P | $1 \mathrm{M} \cdot \mathrm{g}$ | . 4 |
| 14 A 20 | P | - Meg | . 1 |
| 14.130 | UC504 | 3 Meg | . 1 |
| Any of the ahove, |  |  |  |
| O Pom |  |  |  |
| Wire |  |  |  |
|  |  |  |  |
| 10 |  |  |  |
| ¢ 2 Controls |  |  |  |

Nominal rating. 4-watts. Fixed
channel shaft $2 \%$ lons with inset to fit all types of knobs. 1\% BLa.: 2 to 20M Ohms.

| Stocl | Mallory | Ohms | Tapar |
| :---: | :---: | :---: | :---: |
| No. | Type | Res. | No. |
| 14.451 | Q | 2 | 1 |
| 14.432 | 12 | 6 | 1 |
| 14.438 | 9 | 10 | 1 |
| 14.134 | T | 20 | 1 |
| 14.335 | U | 30 | 1 |
| 14.136 | V | 60 | 1 |
| 14.437 | W | 100 | 4 |
| 14:38 | X | 200 | 4 |
| 14.139 | A 400 P | 400 | 4 |
| 14140 | A. | 500 | 1 |
| 14.41 | A550P | 550 | 1 |
| 1+A42 | 3 | 1000 | 1 |
| 14.143 | UC500 | 1000 | 2 |
| 14.4.4 | AlMP | 1000 | 4 |
| 14.145 | * Cl 2 | 2000 | 1 |
| 14A46 | * C | 2000 | 8 |
| 14.A47 | A2MP | 2000 | 4 |
| 14A48 | *1)12 | 3000 | 1 |
| 14.449 | - D | 3004 | 2 |
| 14.450 | - A3MP | 3006 | 1 |
| 14.51 | - D7 | 3000 | 7 |
| 14.452 | * E | 5000 | 2 |
| 14.153 | * A 5 MP | 5000 | 4 |
| 14.54 | * 1 n 7 | 5000 | 7 |
| 14A55 | * F | 7504 | 2 |
| 14.156 | * 19 | 7500 | 7 |
| 14A37 | ${ }^{*} \mathbf{G}$ | 10000 | 2 |
| 14.58 | * ${ }^{\text {A10MP }}$ | 10000 | 4 |
| 14A59 | *G7 | 10000 | 7 |
| 14.460 | * H | 15000 | 2 |
| 14.461 | * H 7 | 15000 | 7 |
| 14.462 | * 20 MP | $\cong 0000$ | 4 |
| Any of the above, |  |  |  |
|  |  |  |  |
| NOTE | Please s | $y$ our | Stuck | Numbers on

inate errors.
14.
14.
14.
14.



$14 A$

""MR" Midget Controls
$\begin{array}{|ccc|}\text { External adjustable resistor Inc. } \\ \text { Stock Mallory } & \text { Ohme Taper } \\ \text { No. } & \text { Type } & \text { Rea } \\ \text { No. }\end{array}$

| Stoel | Mallory | Ohme | Taper |
| :---: | :---: | :---: | :---: |
| No. | Type | Rea. | No. |
| 14A63 | *MR14 | 5 M | 4A |
| 14.164 | - MR18 | 10M | 1 |
| 14.165 | -MR19 | 109 | 2 |
| 14.166 | * MR80 | 10M | 4 |
| 14.167 | * MR21 | 151 | 1 |
| 14.48 | * MR 22 | 15M | 2 |
| $14 \mathrm{A69}$ | * ${ }^{1} \mathrm{R} 24$ | 20M | 1 |
| 14.170 | * M188 | 25M | 2 |
| 14.171 | - Mri9 | 25 M | , |
| 14A7* | Mr33 | 50M | 1 |
| 14.173 | -MR34 | 50 M | 2 |
| 14.174 | MR35 | 50 M | 4 |
| 14.175 | MR36 | 75 M | 1 |
| 14.176 | MR39 | 100 M | 1 |
| 14.177 | MR40 | 100M | 2 |
| 14 A 78 | MR41 | 100M | 4 |
| 14.179 | MR42 | 150 M | 1 |
| 14 A80 | MR44 | 250 M | 1 |
| 14.181 | MR45 | 250 M | 2 |
| 14A89 | M1248 | 500 M | 1 |
| 14.88 | M R 50 | 500 M | - |
| 14.184 | M1251 | 750 M | 1 |
| 14.185 | MR53 | 1 Mes | 1 |
| 14.186 | M1255 | 2 Meg | 1 |
| 14.88 | MIR5 7 | 3 Mos | 1 |
| Any of | e nbow |  |  |

## Supplied With SS-1 Univerwal Nhaft Sioct Mallory Ohms Tape No. Type

|  |  |  |  |
| :---: | :---: | :---: | :---: |
| 14AB8 | UM135 | 50 M | 4 |
| 14AD9 | 19M140 | 100 M | 1 |
| 14N100 | UM141 | 100M | 2 |
| 14.1101 | UM142 | 100M | 4 |
| 14 A 102 | UM144 | 150 M | 1 |
| 14A103 | UM147 | 250 M | 1 |
| 14A104 | UM149 | 250 M | 4 |
| 14A106 | UM154 | 500 M | 1 |
| 14A108 | UM156 | 500M | 4 |
| 14.1107 | UM158 | 750M | 1 |
| 14A108 | UM161 | 1 Meg . | 1 |
| Amy of | ubove, |  |  |



Heavy Duty
Type ${ }^{\text {cum" }}$
Whire Wound
Rheostats and
Potentiometers

Dimipate 4 wate insmiated on-
trot mrm. $281^{\circ}$ erfeotivn electrion rotation. Use type 395 dial plate. TYEE "cniv RHEORTATY


 | $\begin{array}{l}\text { Stodk } \\ \text { No. }\end{array}$ | $\begin{array}{c}\text { Mnllory } \\ \text { Type }\end{array}$ | $\begin{array}{c}\text { Ohms } \\ \text { Res. }\end{array}$ | $\begin{array}{c}\text { M.A. } \\ \text { Cap. }\end{array}$ |
| :--- | :---: | :---: | ---: |
| $14 A 186$ | M15P | 15 | 580 |
| $14 A 137$ | M80P | 20 | 150 |



## 

Universal Tapped Controls

$112^{\prime \prime}$ Inla. "TRP" ('ONTHOLA

| Eteck | Mallory | Total | Tap |
| :---: | :---: | :---: | :---: |
| No. | No. | Res. | Res. |
| 14A16 | TRP623 | 250M | 50M |
| 14A165 | TRP608 | 250 M | 110 M |
| 14A168 | TIRP606 | 500 M | 100M |
| 14A167 | TRP610 | 1 Meg | 30 M |
| $14 \mathrm{A168}$ | -TIPP608 | 1 Meg | 8001 |
| 14A169* | TRP609 | 1 Meg . | 5001 |
| 14A17 | TR P612 | 2 Mog | 15 M |
| 14A171 | TRP618 | 2 Meg | 55 |
| 14A172 | TIP818 | 2 Meg | 400 N |
| * Special taper for fader serv. |  |  |  |
| Any of the nhove, Less, Swltuh, Hach ..... 4108 |  |  |  |
| 11/0" Dia "TTM" controng |  |  |  |
| Sraplied | With s*-1 |  | Shat |
| Stook | Mallory | Total | Tap |
| No. | No. | les. | 1rea. |
| 14.178 | TM220 | 250M | 50M |
| 14 A 174 | TM227 | 500 M | 1003 |
| 14175 | TM240 | 1 Meg. | 8003 |
| 14A176 | TM248 | 2 Meg . | 50 |
| Any of | + ubove |  |  | Lny of the wbove,

$\$ 1.08$

## UNTVERAAI, R WPIACGRMAKNT

PLUG-IN SHAFTS (TM-UM)
Ne. 14AI77, type SS1, replaces any
$\mathrm{K} \%$ round, for smatted H"round, th" or sh" flatted
ahafts to f" long. No. 14A178, type 8816, replaces any
$\mathrm{K}^{\prime \prime}$ shaft to $101 / \mathrm{m}^{\prime \prime}$ long, has $\mathrm{g}^{\prime \prime}$ M" shaft to $101 /{ }^{\prime \prime}$
Mattod murface at ond.
fattod murface at end.
Na 14A179, type BS25, replaces any standard knurled shaft from *" to $4^{\prime \prime}$ long
No. 14A180, type SS2, roplaces any


No. 14A181: type sss, replaces any No. slotted shaft to ${ }^{\prime \prime}$ nong.
No. 14A182: typo SS11. replaces any 疗" slotted shaft s" to $4^{\circ}$ long.
No. 14.1183; typo 8815 , repiacea any s3" alotied shaft $4^{\prime \prime}$ to $6^{\prime \prime}$
long. YOUR CIIOICR OF THD
ABOVH, VAUH
26 c

## Volume Control Fittings



No. 14A184: Mallory 178, wrench for hex nils and bushhigs.
No. 14A185: Mallory RB248, $1 \%{ }^{2}$ centers mounting bracket.
No. 14.1186: Mallory R13249: 2H* conters inounting bricket.
ANT OF THW: AIBOVE,
NET HACH
No. 14A187: Mallory A11260/2, hex shoulder nut for thick panels, ${ }^{*}{ }^{*}$
long. long.
NET K.ICH
18c

UNIVERQAL EXTFASION
Ne. 14.188 ; Mallory RSe42, $114^{\prime \prime} \times 4^{*}$ No. 14.1190 ; Mallory RS243: $1 / 4{ }^{*} \mathrm{~K} 4^{\circ}$ No. $14 \mathrm{Al91;}$ Mallory R8844. **×4" with 1/64" flat.
any op time abote,

24 e

## IRC REPLACEMENT VOLUME CONTROLS IDC

NEWI－THE＂CENTURY＂LINE； $11 / 8$ DIA．CONTROLS FILLS EVERY sprivICE NEHD－ no longer need the Service Man look for an＂exact duplicate＂control among hundreds of listinge；the now RIGH＇T ONE Cotalized reefutance element，smooth FRATURES GHOWN HERE：Metalized reserance element，smooth， noibelest molsture proof and permanent；Kingeraction contactor，gositive uniform contact；Spiral Conmeetor，eliminates most frequent source of noise by positive connection between contactor and terminal：Coll sprim thruyt was
0
UNIVERSAL


TAP－IN SMAFT Complete with dou hle flatted shaft for push－on or set acrew knobs．Additional
special ohatt as


| TYPE＂D＂TAPPED CONTROLS |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| HrorlNo． | $\begin{aligned} & \text { IRC } \\ & \text { Type } \end{aligned}$ | Ohms Res． | Taper |  |
|  |  |  | TAP | No． |
| 14 A 46 | D13－130X | 250 M | 125 |  |
| 14 A448 | 1018－130X | 250 M | 60 |  |
| 14.450 | D18－132X | 350 Mf | 75 M |  |
| 14A453 | D13－133X | 500 M | 125 M |  |
| 14A458 | D18－133X | 500 M | 50 M | Sp． |
| 14A458 | D13－137X | 1 Mg | 250 N |  |
| 14A469 | D17－137X | 1 Mg | 35 M | Sp． |
| 144460 | D18－137X | 1 Mg | 100 M |  |
| 14A461 | D19－137X | 1 Mg | 100 M | Sp． |
| 14A462 | DVC－539X | 1 Mg | 500 M | Sp． |
| 14A464 | D13－139X | 2 M | 600 |  |
| 14 A 465 | D17－139X | 2 Mg ． | 156 M | Sp． |
| 144466 | D18－139X | 2 Mg | 1 Mg |  |
| 14.467 | D18－139X | 2 M | 250 M |  |
|  | 2－Taps |  | 150 M | Sp． |
| $14 \mathrm{~A} 468 \mathrm{D} 19-139 \mathrm{X} 2 \mathrm{Mg}$ 60M Sp． Your Choice of above， <br> Net Each <br> $\$ 1.09$ |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Tap-In <br> Shafts for All Above Controls |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Atock No． | Type |  |  | vet |
|  |  |  |  |  |
| 14A500 | 8－piece slotted Knurled slotted |  |  |  |
| 14 A50s |  |  |  |  |
| 14A504 | Solid 4＂ | round |  |  |
| 14A606 | Auto Radio |  |  | c |



UNIVERSAL TYPE＂DS＂ FIXED SHAFT
CONTROLS
（All are $1 \%^{\prime \prime} \times{ }^{17}{ }^{\prime \prime}$ thick．）

| Stock No． | IRC <br> Type | Ohme T Res． | Taper No． |
| :---: | :---: | :---: | :---: |
| 14A400 | DS11－116 | 10M | A |
| 14A401 | DS14－116 | 10M＊ | －D |
| 14 A402 | DS14－120 | 25 M ＊ | －D |
| 14 A408 | DS11－123 | 50 M | A |
| 14A404 | DS11－128 | 100 M | A |
| 144405 | DS13－128 | 100M | C |
| 14A406 | DE11－130 | 250 M | A |
| 14A407 | DS13－130 | 250 M | C |
| 14A410 | D813－133 | 500M | C |
| 14 A 112 | DS13－137 | 1 Mg ． | C |
| 14A414 | DS13－139 | 2 Mg ． | C |
| 年270－0hm，1／2 Watt Res．Included． |  |  |  |
| Type＂Ds＂Controls． Net Fach ．．．．．．．．．．．．．．．．．．．． 78 |  |  |  |
| TYPE＂DS＂TAPPED CONTROLS |  |  |  |
| Ntoel No． | IKC Ohms Taper |  |  |
| 14A408 |  |  |  |
|  | D813－190X | M 125 M | M Sp． |
| $\begin{aligned} & 14 A 409 \\ & 14 A 411 \end{aligned}$ | DS18－130X | M 60M | M H |
|  | DS13－133X | M 125 M | M H |
| 14 A 413 | DS13－137X | g． 250 M | M H |
| 14 A 418 | D813－189X | g．500M | M H |
| ＂DS＇Tapped Controls．©Not Fanh ．．．．．．．．．．．．．．．． 0 de |  |  |  |
| 8WITCHES FOR＂D＂AND＂D8＂ |  |  |  |
| StockNo. | IRC Typ |  | NET |
|  | No．Swi |  | EACH |
| 14 A506 | 41 S．P． |  | \＄．35 |
| 14.4507 | 42 D．P． |  |  |
| 14A508 | 43．S．P． |  |  |
| 14A809 | 45 Four | oint |  |
| 14 A 510 | 47 B．P． |  |  |
| （＊At clo | ockwise positl |  |  |

$\frac{\text {（At clockwise positlon．）}}{\text { Clutch－Type }}$


tachable switches as listed below．

## Stoel No．

14482 Type Unit Ohms Taper 35－1620
14A483 61－1623
14A484 33－2828
14A485 33－3030
14A488 33－3833
14 A487 33－3737 Panel
14A488－33－3939
Cholen of ebove
Net Fikach
．．．．．．．．．．．
$\$ 1.82$
14A511．No． 21 S．P．B．T．
8w．Net $\ldots . . . . . . . . . . . .35($

EXPLANATION OF IRC VOLUME CONTROL TAPERS rapor＂A＂．Uniform resistance change over entire range
Taper＂C＂：Has logarithmic curve for audio or antenna shun
Taper＂E＂：Tapered at both ends for control of grid blad and antenna circuit，must not be used with heavy currents．
Taper＂H＂：A tapped logarithmic curve used an audio level control fo


#### Abstract

automatic bass compensation


## MASTER REPAIRMAN＇S

## CONTROL CABINET

## ATANDARDIZED REPLACE－

 MENT STOCK Of a－m ous IRC ES AND SHAFTS consinting of 1 mont often needed controln， 6 witches and 5 whafts of needed ypes－NO＂DEAD＂STOCK EVERY CONTROL A＂FAST MOV－ ER EASILT REPLACED FROM OUR REGTULAR STOCK FROM NEEDED！COVERS $87 \%$ OF ALL VOLUME CONTHOL REQUIRE－ YOLUME CONTHOL RFQUUIRE MENTS IN THE SERVICING OF OVER 10.860 MODELS AND MAKES OF RADIO SETS！The all metal，removable hinged front， 23 compert ment cabinet，hize $141 / 2^{\prime \prime} x 73 / 3^{\prime \prime} x 43 / 2^{\prime \prime}$ is FREN－Comes to Fou parked at a total＂list＂value of \＄24．95．Witches and shaite listed above havice Hock No．20AB76．＂＇IRC＇V4．85．

## MOST NEEDED＂EXACT DUPLICATE＂CONTROLS

## 

 IRC Type $\mathrm{J}-210-13 \mathrm{M}$ ohms（tap 3 M ohms）．General Electric：J－80，J－85． JZ－835，K－62．KZ－62P，K－82．S－132．Graybar：GT－8，GB－9．GC－14． GB－989．RCA：R8，R10，R11．R12．RE18，RE18A，RE19，R21，RO23， RAE26．Westinghouse Elec．\＆Mfg：WR－15．Westinghouse Interna－ RAE26．Westinghouse Elec．\＆MPE：WR－16．Westinghouse Interna－tional WR15A，Wik．Stock No． $14.484 . . . . . . .$. List $\$ 1.85$ ．Net $\$ 1.09$ IRC Type J－296－225M／5M ohms．Philco： 70.70 MA below B22000， 80 ， 90 A （Two 45＇s），270，270A，370． $470,470 \mathrm{~A}, 670$ ．
 F゙1440．F1442．Graham：G1418，G1436．Lincoln：L1420，L1424，L1425， L1427．L1429，L1460．Nash：T12－NT 12X，NT 12 X2，T15 NT 16，NT15X． N1418，N1433 H，N1434 H，N1514．Packard：P1417，P1517．Philco：
811 PA，PB，PV，816，817，818，821P，821PV，826，827，827K，828，828K． Reo：R1415．Studebaker：T12－ST12．T15－8T15，S1431，Si437，Sis16．Willys Overland：W1419．Stork No． $14.1496 \ldots . . . . . . . .$. IRC Type J－823－ $150 \mathrm{M} / 250 \mathrm{M}$ ohms（Tap 125 M ohms）．General Elec．：
 CT11．C1450，C1452．DeSoto：T10－C＇T10．T11－CT11．Dodge：T11－CT11． Hupmobile：HT11X，Lincoln：LT 14X3．Packard：T14－PT14，P1422． P1430，P1432 H．P1439．Plerce－Arrow：T14－MT14X4．Reo：T11－CT11，
 IRC Type J－1002－2．0 meg．（tap 6M ohms）．General Elec．：F70，F76， F80（Note 4），F81，F86（Note 4），F86，F88（Note 4），FE82，FE87（Note


## $\rightarrow$ special <br> 12－INCH＂PM＂＇SPEAKERS TWO GREAT VALUES！

 ＂STAR VALUE＂12－INCH＂PN＂DTNAM－ IC：－Ulira－conwervative rating of 10 － WATTS－TESTS in＂H－A＂Laboratory in－ dicate FINE REPRODUCTION OF VOICE AND MUSIC under AUDIO LOAD UP TO 13－WATTS！1－inch Volice Coil；6－8 ohms impedance．Heavy ateel trame with bracket for transformer．DUSTPROOF construction，

＂STAR SPECIAL＂13＂TM DINAMIC：－ CONSERVATIVE RATING－ 8 －WATTS： Will＂＇Take＂ 10 －watts satislactorily，Has $\mathbf{1}^{\prime \prime}$ Volce Coil；6－8 ohms impedance．Wt．


## тhinlurai

A Red Hot＂B－A＂Bargain Speciall ＂SUPREME＂PRECISNONL ASCURATE AC－DC POCKET MULTIMETER
＂MQUARF：MFTHR：BAKELITE CASE！ AC－DC VOI．TA： $0-150-300$ ：
DC OHM世，0－1000－100．000
Wire－woand resistors， $1 / 2$ of $1 \%$ accuracy！
SIZE ONLY $3^{\prime \prime} \times 3^{\prime \prime} \times 6^{\prime \prime}$ ；wt． 2 lbs．
Eperlal Moxel－NXCLURFVICLY at B－At
$\begin{array}{lll}\text { No．} & \text { B－A＂BARGAIN } & \text { YOUR } \\ \text { 35A72 MODEL } 543-3 & O O S T\end{array}$


# HIORDRSON 

## Transfarmer

## 

 UNTVERSAL REPLACEMENT POWER TRANSFORMERS

Shielded，Upright Mounting，Heavy Duty Powers For Amplifiers，Transmitters，or heavy doty replacements．Upright （2G）mtk．：plate and filampent windings center tapped．

| Stack No． | Thord． No． | v. Plate. |  | $\begin{aligned} & \text { Rect. Fil. } \\ & \text { V. A. } \end{aligned}$ |  | Filament |  | Dimensions |  |  | $\begin{aligned} & \text { Your } \\ & \text { Cost } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | W． | I． |  |  | H． |  |
| 13A218 | T70R78 | 680 | 55 |  |  | 5.0 | 2.0 | 6.3 | 1.5 | 3 L | 29／4 | 449 | 34.15 |
| 13A117 | T701261 | 770 | 70 | 5.0 | 2.0 | 6.3 | 2.5 | 3 ＂ | 315 | 46 | 4.64 |
| 13 A219 | T17R37 | 700 | 90 | 5.0 | 3.0 | 6.3 | 3.5 | $3{ }^{3}$ | 31 | 44 | 4.57 |
| 13 A118 | T701262 | 700 | 145 | 5.0 | 3.0 | 6.3 | 4.5 | 3.5 | 31 | 44 | 6.10 |
| 13 A220 | T17R38 | 700 | 120 | 5.0 | 4.0 | 6.3 | 4.7 | 3 年 | 43 | 5\％ | 5.13 |
| 13 A119 | T92R21 | 778 | 200 | 5.0 | 3.0 | 6.3 | 5.0 | 3） | $4!5$ | $4 \frac{7}{18}$ | 7.32 |
| Note：＊Has 80 volt BIAS TAP |  |  |  | 5.0 | 3.0 | （6．3 | 1.5 |  |  |  |  |
|  |  |  |  |  |  | 2．5 | 10.0 | 3） | 416 | 414 | 7.66 |
| 13A122 | T89R28† | $1 \begin{aligned} & 1100 \\ & 650 \end{aligned}$ | 275 75 | $5.0$ | 3.0 2.0 | 6.3 | 6.0 | 39／4 | 81／4 | 4\％ | 11.22 |

Yote：THus 75 volt lBIAS TAP．
G－VOLT VIBRATOR POWER TRANHENRMERS

| Stock No． | Thord． No． | $\text { D.C. Volts } \begin{gathered} \text { Secondary M.A. } \\ \text { Vols. } \end{gathered}$ | $\begin{aligned} & \text { Type } \\ & \text { Mtg. } \end{aligned}$ |  | D． |  | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13A221 | T14R33 | 22540 | 3 C | 21. | 23／1 | 315 | \＄2．93 |
| 134222 | T141234 | 250 | 3 C | $21 / 2$ | $2{ }^{2}$ | 811 | 3.41 |
| 13A223 | T14R35 | 260 60 | 3C | 21／2 | 21／8 | 31／6 | 3.66 |

## FILAMENT TRANSFORMERS

| Stock No． | Thord． No． | Scerondary |  | Volts Insul． | $\begin{aligned} & \text { Ntg. } \\ & \text { Typpe } \end{aligned}$ | Dimeusions |  |  | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Volts | Amp． |  |  | W． |  | H． |  |
| 13 A123 | T19F88 | 2.5 | 2.5 | 1800 | 2 B | 276 | $21 /$ | 21／8 | \＄1．95 |
| 13A224 | T19F75 | 2.5 | 5.0 | 1600 | 28 | 378 | 21 | 8 | 2.19 |
| 13 A124 | T19F90 | 2.5 | 10.0 | 7500 | 3 C | 2 \％ | 21 | $31 / 6$ | 2.93 |
| 13A225 | T19F83 | 5.0 | 5.0 | 1600 | 28 | 35 | $21 /$ | 3 | 2.19 |
| 13 A226 | T19FS | 5.0 | 13.0 | 1600 | 3 C | $3{ }^{3}$ | $2{ }^{3}$ | 4 | 3.90 |
| 13 A125 | T19F80 | 6.3 | 1.0 | 1600 | 2 B | 21 | 18 | 1 1鼻 | 1.30 |
| 13A126 | T19F97 | 6.3 | 3.0 | 160 | 2 B | $2 \%$ | 21 | 2\％ | 1.71 |
| 13A127 | T19F98 | 6.3 | 6.0 | 160 | 3 C | 2 \％ | 2\％ | $31 /$ | 2.68 |
| 13A128 | T19F89 | 6.3 | 10.0 | 160 | 3 C | 34 | 27 |  | 3.41 |
| 13 2227 | T61F85 | 6.3 ； | 0；2．5 | 1600 | 3E | 35 | 2\％ | 246 | 2.19 |

＂C．II．T．＂NERIEN－SIN（ILESECONID．IRY FII．AMFNT TRANGIORMERN Superior voltage regulation，continuous duty．low temperature operation


## REPLACEMENT FILTER AND INPUT CHOKES

| Stock No． | $\begin{aligned} & \text { Thord. } \\ & \text { No. } \end{aligned}$ | Men． | M．A． | $\begin{aligned} & \text { 1).C. } \\ & \text { Kee. } \end{aligned}$ | Volts Ins． | Mtg． Fig． |  | I) | II. | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13A231 | T－13C26 | 8 | 40 | 530 | 1600 | 3 B | 2\％ | 18 | 1\％ | \＄．89 |
| 13A141 | T－13C28 | 10 | 65 | 460 | 1600 | 38 | 238 | 131 | 2 | 1.18 |
| 13 A232 | T－47C07 | 12 | 75 | 410 | 1600 | 313 | 3 10 |  | 216 | 1.62 |
| 13 A142 | T－44C02 | 12 | 80 | 40.5 | 1600 | 313 | $11 \%$ | 23\％ | 2 | 1.46 |

## FILTER CHOKES FOR AC－DC RECEIVERS



## REPLACEMENT OUTPUT TRANSFORMERS

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | Thord． No． | Output Tubes | Impedenoe | $\begin{aligned} & \text { Max. } \\ & \text { Watts } \end{aligned}$ | Mtg． Ctr． | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13 A234 | T14s81 | 1／2A5．6F6：PP45 | $7 \mathrm{MIct} 3-$. | 5 | $2{ }^{\circ}$ | \＄1．22 |
| 13 A235 | T14882 | 1－251．6 | 1．5M．3－6 | 5 | $2^{\circ}$ | 1.22 |
| 13 A236 | T14883 | 1E5G；1E7C | 25Mct．3－6 | 5 | $2^{*}$ | 1.22 |
| 132737 | T14884 | 1－1C5G；195G | 8M 3－6 | 5 | $2^{\circ}$ | 1.22 |
| 13－238 | T13837 | 1－6F6； $2 \mathrm{~A} 5 ; 47 ; 42$ | 7 M 1／2／4 | 5 | $2{ }^{\circ}$ | 1.22 |
| 19530 | T13s39 | 1－45；12A5；43；71A | 4M 1／2／4｜ | 5 | $2{ }^{*}$ | 1.22 |

Amplifier and 8 mall Transmitter Filter Chokes AMATEUR－EXPERIMENTAI－AMPLIFIER TRANSFORMERA

| $\begin{aligned} & \text { Stook } \\ & \text { No. } \end{aligned}$ | Thord． No． | $\begin{aligned} & \text { Ind. } \\ & \mathrm{Hy} . \end{aligned}$ | M．A． | $\begin{aligned} & \text { D.C. } \\ & \text { Ré. } \end{aligned}$ | Volts Insul． | Mts． Fig． | W．Dimensions ${ }_{\text {W．}}$ |  |  | Your |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |
| 134148 | T－17C008 | 12 | 180 | 231 | 1600 | 2F | 27／6 | 3 | $31 / 6$ | 52.68 |
| 134150 | T－67C49 | 5 | ＇200 | 80 | 1600 | 2 F | 3 | $2 \%$ | 336 | 2. |
| $13 A 151$ | T－75C51 | 13 | 250 | 121 | 1800 | 2 G | 3\％ | 3\％／8 | 5 |  |

## Matched Transmitter Input and Filter Chokes

For amateur．AMPLIFIER，or EXPERTMENTAIL USE． TRANRMITTER INPUT CHOKER

| Stock No． | Thord． No． | Ind． Hys． | $\begin{aligned} & \text { M.C. } \\ & \text { M.A. } \end{aligned}$ | $\begin{aligned} & \text { D.C. } \\ & \text { Res. } \end{aligned}$ | Volta Ins． | Mtg． Fig． |  | 1) |  | $\begin{aligned} & \text { Your } \\ & \text { Coet } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13A171 | T－19C35 | 5－20 | 200 | 130 | 3000 | 2D | 316 | 3\％8 | 414 | 33. |
| 13 A172 | T－19C36 | 5－20 | 300 | 105 | 3000 | 2 D | 378 | 31／1 | 4\％ |  |
| 31 A32 | T－19C37 | 5－20 | 400 | 90 | 5000 | 2 J | 4 | 51.2 |  | 12.2 |
| 13 A173 | T－19C38 | 5－20 | 500 | 75 | 4000 | 2 J | 5\％ | 6 | 71／2 | 14.64 |


| Stock No． | Phord． No． | ANSS Ind． Hye． | 1TTE． M．A． | SNO D．C． | Volts Ins． | M ${ }_{\text {M }}^{\text {Mig．}}$ | KiS Di W． | $\begin{gathered} \text { ens } \\ \mathrm{D} . \end{gathered}$ | $\stackrel{19}{\mathrm{H}}$ | Yous Cont |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13A175 | T－19C42 | 12 | 200 | 130 | 3000 | 2 D | 31／2 | 38 | $41 /$ | 83.80 |
| 13A176 | T－19C43 | 12 | 300 | 105 | 3000 | 2 D | 31／7 | 31 | 45／5 | 6.8 |
| 31 A33 | T－19C44 | 12 | 400 | 90 | 5000 | 2 J | 411 | 5112 | 6 | 12．23 |
| 13 A177 | T－19C45 | 12 | 500 | 76 | 4000 | 2 J | 51／8 | 6 | 71／2 | 14.64 |

## PLATE SUPPLY TRANSFORMERS

These plate tranmformers are rated in D．C．voltage from a two section filter，including voltage drop through rectifier tubes．Fiertrontatic shiel between primary and eccondary．PRIMARY 116 Volt $\mathbf{5 0 - 6 0}$ Cycles．

| Stoek No． | Thord． No． | D．C．Volts | D. C. | $\begin{aligned} & \text { Mtg. } \\ & \text { Fig. } \end{aligned}$ |  | $\mathbf{D}$ | It. | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13 A131 | T－19P55 | 400 or $500 \dagger$ | 250 | 2 l | 37\％ | 316 | 47／8 | \＄6．34 |
| 31 A34 | T－19P58 | 750 and 1000 | 150／200＊＊ | 2 F | $41 / 2$ | $51 / 2$ | 611 | 14.64 |
| 31 A35 | T－19P61 | 1500 or 1750 | 150300 | 2K | $6 \frac{17}{1 /}$ | 7\％ | 6\％ | 21.85 |
| 31 A36 | T－19P65 | 2000 or 2500 | 300 | 2K | 6 楼 | 91／ | 6 | 30.25 |
| 31437 | T－19P63 | 1000 or 1250 | 500 | 2K | 6 㬵 | 85 | 63／4 | 26.13 |
| 31 A38 | T－19P64 | 1250 or 1500 | 500 | 2K | 63 | 6 | 7 | 29.05 |
| 31439 | T－19P66 | 1500 or 1750 | 500 | 2K | 612 | $71 /$ | 911 | 40.5 |
| 31 A40 | T－19P67 | 1750 or 2000 | 500 | 2K | $6 \frac{1}{17}$ | 712 | 94 | 48.7 |
| 31441 | T－19P68 | 2000 or 2500 | 500 | 2K | 6 楼 | 81／2 | 94 | 67.05 |

$\dagger$ Hias tap at $80-\mathrm{v}$ ．© deslgned for double rectifiers and vill deliver both secondary ratings simultaneously．

DRIVER TRANEFORNERS FOR SPECIEIC APPI．ICATIONB
Designed with CORRECT primary to secondary ratios for tubes spect－ fied：assuring good regulation and minimum driver distortion on the pomitive grid leaks．The first s listed below are Nitg．style 313 and the bulance style 2F．

| Stock No． | rhord． No． | Driver Tubes | Output Tubes | Cl． | Pri． <br> M．A． | Mtg． Ctre． | Your Coss |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13A240 | T－78D46 | 1－30 | 1－1J6G；19；2－30 | 13 | 7 | 21面＂ | \＄1．46 |
| 13A241 | T－17D01 | 1－6F6 Tri；${ }_{1-49 \text { Tri－l－2 } 5 \text { Tri }}$ |  | AB | 31 | 2イ＂ | 1.96 |
| 134243 | T－19D06 | 1－42Tri； $1-2 A 5 T$ ¢i． | $2-6 F 6 ; 61.6$ etc． 1－6A6；6N7 | ${ }_{\text {A }}{ }^{\text {B }}$ | 10 | 23／8＂ | 2.08 |
| 134246 | T－74D32 | 2－6С5；56； 76. | $\begin{aligned} & 2-6 F 6 ; 42 ; 2 A 5 ; \\ & 4-2 A 3 ; 6 B 4 G \end{aligned}$ | AB | 10 | こ1建 | 3.17 |
| 13 A253 | T－171204 | 2－6F6 Tri． | 4－61．6 | A 132 | 32 | $3{ }^{2 \%}$ | 4.33 |

HEAVY DUTY OUTPUT TRANSFORMERS

| Stock No． | Thord． No． | Output Tubes | Pri. | dence Sec． | Max． Watts | Mtg． Ctr． | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13A157 | T67S51 | PP Cl．A | 14000 | 4，8，15， 500 | 20 | 215＂ | \＄3．41 |
| 13 A158 | T67S54 | PPCl．A，AB | 5000 | 4，8，15，500 | 30 | $3{ }^{\prime \prime}$ | 3.90 |
| 13 A244 | T17810 | Sxl．Cl．A | 2500 | 2，4，8， 500 | 8 | 2 豢＂ | 2.93 |
| 13A160 | T17S11 | PPCl．ABI | 8000＊ | 4，8，15， | 1.5 |  | 4.30 |
| $13 \mathrm{A161}$ | T17S12 | PPCl．AB1 | 4300＊ | 4，8，15， |  |  |  |
|  |  |  |  | 250， 500 | 25 | $3{ }^{\frac{1}{2}}{ }^{\prime \prime}$ | 4.30 |
| 13 A162 | T17S13 | PP Cl．AB1 | 6600 | 4，8， 250 | 34 | 214＊ | 6．06 |
| 134248 | T17815 | PP Par．ABI | 3300＊ | 4，8， 15. | 60 | ＊ | 6.34 |
| 13 A163 | T75S75 | $\underset{\mathrm{AB2}}{\mathrm{PP} \mathrm{Cl} . \mathrm{A}}$ | 10000 | 4，8，15，500 | 40 | $3 \frac{1}{2}{ }^{\prime \prime}$ | 3.90 |

Note：＊indicates $10 \%$ feed back windling．

| UNIVFRGAL LINT TO VOICF COIL OUTPLT TRANSFORMPRS |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No． | Thord． No． | $\begin{aligned} & \text { Ohrns Impedance } \\ & \text { Pri. } \quad \text { Sec. } \end{aligned}$ | $\begin{aligned} & \text { Max. } \\ & \text { Watts } \end{aligned}$ | Mtg． Fig． |  | $\begin{aligned} & \text { ens } \\ & \text { D. } \end{aligned}$ |  | Your |
| 13A164 | T60®48＊ | $500 / 1000$ Pri．as <br> $1500 / 2000$ 500 ohm， <br> $2500 / 3000$ .06 to 8 ctc． | $\begin{aligned} & 10 \\ & 10 \end{aligned}$ | 2E | $33 / 5$ | 2才台 | 3 | 52.93 |

UNIVFRSAL TUBE TO VOICE COTL．OUTPCT TRAN\＆FORMERS
 \(\left.\begin{array}{l|l|l}13 A 166 <br>

13 A 167\end{array}\right\}\)| T＇57S |
| :---: |

$.1 / 29$
Note：車＊iniv．Sele．or P．P．

 | $13 \mathrm{A168}$ | T61825 | $2500-4000$ |
| :--- | :--- | :--- |
|  | B | Cl | BEl．Cl．A $5000-6000$

## STANCOR REPLACEMENT TRANSFORMERS

## 

## UNIVERSAL POWER TRANSFORMERS

All Are Type "M" Mounting, Supplled With Univernal Bracketg.


## TUBE CHECKER NODERNIZATTON TRANSFORMER

105-115-125 V. 60 cy. Pri. With 19 TAP SEC.: 1.1/1.4/1.5/2.0/2.5/3.0/8.5/E.0/6.3/7. $5 / 12 / 25 / 30 / 35 / 60 / 70 / 85 / 110 / 177 \mathrm{Sec}$. volts.

6-VOLT D. C. OR 115 VOLT A. C. VIBRATOR TRANSFORMER


$\$ 6.64$ - VOLT UNIVERSAL VIBRATOR TRANSFORMERS

| Stock Ne. | $\begin{aligned} & \text { Stancor } \\ & \text { No. } \end{aligned}$ | DC VecondaryS. A. |  | Type Mitg. |  | W | D. | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13^67 | P4061 | 250 | 50 | N | 31/0 | $21 / 4$ | 3 | \$2.97 |
| 13^68 | P4062 | 260 | 65 | N | 317 | 21. | 3 | 3.44 |
| 13469 | P4063 | 285 | 75 | N | 315 | $21 /$ | $31 /$ | 3.91 |
| 134206 | P6131 | 330 | 100 | N | $31 / 2$ | $27 \%$ | 27\% | 4.26 |

INPUT TRANSFORMERS
Single Button Microphone IPush-Full Grids.

| +0.k | $\begin{aligned} & \text { Stancor } \\ & \text { No. } \end{aligned}$ | $\begin{array}{\|c} \hline \text { Impedance (Ohms) } \\ \text { Pri. } \end{array}$ | Ratio Overall | Mts. Type | Dimensions |  |  | $\begin{aligned} & \text { Your } \\ & \text { Cost } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ro. |  |  |  |  |  |  | D |  |
| 13A | A4742 | 200 | 1:64 | 8 | 21 | 27 | 23 |  |

I2AX DYNAMIO MICROPHONE OL PICK-UP TO GINGLF GRID
$\begin{array}{llllllllll}1340 & A 409 & 4,8,15,30 & 106,000 & 1: 60 & E & 21 / 8 & 2 \% & 21 / 4 & 2.76\end{array}$ Bingle or Double Button MICROPHONE OR LINE TO SINGLE GRID 13A4 A4351 $50,125,200, \quad 89,000 \quad 1: 13.3 \quad$ E $\quad 2 \quad 3 \% 15 / 3.41$ 333, 500
QINGLE OR DOUBLE BUTTON MICROIPHONE, OR LINE TO LINE
 $\begin{array}{cc}333,500 & 133,500\end{array}$

## INTERCOMMUNICATION INPUT TRANSFORMER

Stancor No. A4744: V. C. to Sgl. Grid: Pri. 4; Sec. 25,000 ohms. Mtg. Stock No. 13A1. Net EACH
$\$ 1.20$

## TRANSCEIVER INPUT MIKE AND PLATE TO GRID

Stancor A4413; PRI: 200/10.000 ohms; SEC: 90.000 ohms; 10 watt Max. Audio; STATIC SHIELD between Pri. and Sec. windings; aize

Stock No. 13A207. "TRANSCEIVER TRANSFORMER."
Your Cont. Each
$\$ 2.41$
INTERSTAGF TRANSFORMERS
EGL. PL. ( 7,000 to 15,000 ohmus) TO IP.P. CL. "A" GRIDS


REPLACEMENT DRIVER TRANSFORMERS
SINGLE DRIVFRS-Single Plate to Push-Pull Grids.
$\left.\begin{array}{c|c|c|c|c|c|cc|c}\hline \begin{array}{c}\text { Stock } \\ \text { No. }\end{array} & \begin{array}{c}\text { Stancor } \\ \text { No. }\end{array} & \begin{array}{c}\text { Primary } \\ \text { Imped. }\end{array} & \text { Pri.-1/5 Sec. } \\ \text { Ratio }\end{array}\right)$

PISSH-PILLL DRIVERS-Push-Pull Plates to Purh-Pull Grids
 NOTE: \#A4208 has split secondary for inverse feedback.

UNIVERSAL OUTPUT TRANSFORMERS
 TCRE-TO-LINE OETPCT TRANSFORMERS
13 A28 A-3841 Univ. $\mid 2500,4000$

 PLATE TO VOICE COLL OUTPUT TRANSFOKMERS




CRYSTAL RECORIER OUTPUT TRANGFORMERG

| Stock No. | Stancur No. | Application | Audio Watts | Mtg. Fig. | DimensionsH. W. D. |  |  | $\begin{aligned} & \text { Your } \\ & \text { Cost } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 134211 | A38i4 | Sal. 7 m ohm Pl. TO |  |  |  |  |  |  |
|  |  | 70 m onm Crys. cutter AND 4-ohm voice coil | 10 | A | 21/4 | $38 / 6$ | 214 | \$2.69 |
| 13 A212 | A3860 | P.P. 10 m ohm pl. TO |  |  |  |  |  |  |
|  |  | 70ni ohm crys. cutter AND 4-ohni voice coil | 10 | A | 216 | 38/4 | 23/4 | 2.59 |

PLATE TO VOICE COIL FFAVY DETY OUTPUTS—HIGH LEVEL

| 13 A36 | A-3851* | P.P. Cl. | 4400 | $\begin{aligned} & 4,8,15 \\ & 250,500 \end{aligned}$ | 30 | C | 31/2 | 218 | 316 | 54.70 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13A36 | A-3800 | P.P. Cl. | 5000 | 4.8,15, |  |  |  |  |  |  |
| 13 A37 | A-3303 | A or AB | 4 | 250,500 | 35 | C | 37/8 | 31/6 | 3\% | 4.41 |
|  |  | A.P. Cl. |  | 500 | 20 | C | 31/ | 2\% | 258 | 3.44 |
| 13438 | A-3304 | Single or P.P. | 7000 | 4, 8, 15 |  |  |  |  |  |  |
|  |  | ${ }_{\text {Pl, }}$ A or B | 10000 | 500 | 25 | C | 33/8 | 2\% | 2\% | 3.76 |
| 13A39 | A-5528 | $\stackrel{\text { Pl. P. }}{\text { Cl }}$ | 4000 |  | 8 | C | 33/6 |  | 2\% | 3.29 |

FLLIER CHOKFS-Smoothing Chokes for DC Power Supplies.

| Stock Nó. | Stancor No. | RatingInd. at M.A. DC |  | D.C. Ohma | - Volts Insulat. | Mtg. Type |  | $\mathbf{w}$ |  | $\begin{aligned} & \text { Your } \\ & \text { Cost } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13A41 | C-1706 | 4.5 | 50 | 300 | 1500 | A | 1 H | 21/6 | 12 | \$0.88 |
| 13142 | C-1707 | 5 | 50 | 500 | 1500 | A | 18 | 2\% | $1 \frac{1}{16}$ | . 88 |
| .13451 | C-1515 | 20 | 15 | 900 | 1500 | A | 16 | 24 | $11 / 2$ | . 94 |
| 13A43 | C-1003 | 16 | 50 | 550 | 1500 | A | 17 | 3 | $15 / 8$ | 1.18 |
| 13A44 | C-1708 | 13 | 65 | 460 | 1500 | A | $17 / 8$ | $31 /$ | 211 | 1.18 |
| 13 A 2 | C-2303 | 2.5 | 139 | 100 | 2000 | A | 2 | 3\% | 15 | 1.44 |
| 13A46 | C-1002 | 15 | 75 | 400 | 1500 | A | 21 | 31 | 17\% | 1.65 |
| 13M46 | C-1709 | - 8 | 85 | 250 | 1500 | A | 17 | 31/4. | . 212 | 1.66 |
| 13A17. | C-1710 | , 7 | 150 | 200 | 1500 | A | $21 \%$ | 4 | 21 | 1.94 |
| 13 A50 | C-2305 | 5 | 100 | 275 | 1500 | TB | 2\% | 2\% | $21 / 8$ | 1.94 |
| 13 A48 | C-1001 | 10.5 | 110 | 200 | 3000 | A | $21 /$ | 4 | 2 | 2.06 |
| 13A49 | C-1421 | 7. | 140 | 160 | 3000 | C | 317 | 213 | 213 | 2.87 |
| 13A53 | C-1410 | 4 | 175 | 100 | 3000 | C | 313 | $21 / 2$ | 231 | 2.82 |
| 13A54 | C-1411 | 4:8 | 200 | 80 | 3000 | C | 35 | 23 : | $31 /$ | 3.67 |
| 13A55 | C-1412 | 5 | 250 | 80 | 3000 | C | 35 | 2 | 31 | 4.32 |
| 13A66 | C-2308 | 8 | 300 | - 80 | 3600 | . C. | $4{ }^{6}$ | $3 \%$ | 37 | 6.38 |


| 13A60 | C-1080 | 9.5 | 50 | 200 | 1500 | A | $18 \%$ | $2 \frac{11}{19}$ | $13 / 8$ | 50.94 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13 A61 | C-1278 | 8.6 | 50 | 400 | 1500 | - A | 18 | 28 | 188 | . 94 |
| 13 A62 | C-1215 | 9 | 50 | 50 | 1500 | - A | 18 | 2 | 136 | 94 |



## Papular MALLIORY - AEROYOX - SPBRGUE Candensers

## Aerovox 'Dandee' Mallory 'TC' 8prague 'Atoms' Tubular <br> Electrolytics

Aonovol-Mallory-Sprague. Finest quality avallable, standard compact dry electrolytic tubulars. Ideal for all applications. Fully rated and clearly marked for capacity, voltage and polarity. specify make wanted, mding to the hock number A=Aerovox, M=Millory, S=Bprague.

40 Working Volte 150 Working Volte $\quad 80$ Worklng Voltm

|  |  | olte Price | Cap | Stock | Price |  | rhing |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | La. | Cap. Mfd. | tock | Price Ea | Cap. Mfd. | $\begin{aligned} & \text { Stoel } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Pric } \\ & \text { Ea. } \end{aligned}$ |
| 4 | 16A201 | 3.62 | c | 16 A221 |  | 5 | 16 A 236 | 5.37 |
| 8 | 16A202 | .55 | 8 | 16A222 | 3.38 | 10 | 15 A 237 | 4 |
| 10 | 15 A 203 | 83 | 12 | 15A223 |  | 28 | 15A238 | 5 |
| 18 | 16A204 | . 88 | 16 | 16A224 |  | 50 | 16A239 |  |
| 10 | 15 A 205 | 2 | 20 | 15A225 |  | 100 | 15 A 240 | . 89 |
| 20 | 16 A206 | 89 | 80 | 16A226 |  | 25 | Working | Folta |
| 40 | 16 A207 | 30 | 40 | 15A227 |  | 10 | 16A241 | 37 |
| 8-8 | 16A208 | 98 | 50 | 16A228 |  | 28 | 16 A 248 | 4 |
| -8-8 | 16 A 209 | . 22 | 8-8 | 16A229 |  | 50 | 164248 |  |
| 10-10 | 16 A 210 | 1.04 | 20-20 | 15A230 | 8 | 100 | 15 A 244 | 8 |
| - 4 L | de. |  |  |  |  | 10-10 | 16A246 | 83 |

## SPRAGUE R W Wet Electrolytic Replacements

## NOT SUBSTITUTES, but

 dry electrolyifes of very high voltage formation specifically designed for use wherever wet electrolytics were used berorem high peak coltagen and $h a n d$ - A-C ripplen that might cause ordinary 600 volls drys to break down. 800 Map. StookMrd. No. | 16 |
| :--- |
| 26 |



## Can Type Dry Electrolytics

 Extremely compact trolytice in dramon metal cans. May be mounted in any posi-tion-above or below etandard threaded bushing, lock nut and Insulated wire leads.Can is completely ineulated from eections.



475 V.D.C. Wkg. 600 V. Peak For extra tough aervice 8
PA., dower amplifiers, etc.
$\begin{array}{cc}\text { PA. } & \text { Dower amplifiers, } \\ 8 & 16 A 257 \\ 10 & 15 A 268 \\ 1 \% & 1 \% 3\end{array}$

| 16 | $15 A 268$ | $1 \% \pm 3$ | 2.33 |
| :---: | :---: | :---: | :---: |
| 8 | $16 A 259$ | $1 \% \times 4$ | 2.18 |



## Compact Can Type Dry <br> Electrolytics

Light, compact, easy to mount. Connections are made to lug terminals. Cans are in the majority
of sizes $1^{\prime \prime}$ dla. and $2^{\prime \prime}$ to of sizes
8" long.

| Cap. | Folte | Stock | Tonr |
| :---: | :---: | :---: | :---: |
| Mrd. | D.C. | No. | Cost |
| 10 | 480 | 15A270 | \$.88 |
| 15 | 450 | 15A271 | . 89 |
| 20 | 450 | 15A272 | 1.00 |
| 40 | 460 | 15 A 273 | 1.45 |
| 10-10 | 450 | 16A274 | 1.08 |
| 20-20 | 480 | 16A275 | 1.49 |
| 10-10-10 | 450 | 15A276 | 1.41 |
| 20-20 | 150 | 15A279 | 89 |
| 80.30 | 150 | 15A278 | .00 |
| 10-50 | 150 | 16A 279 | 19 |
| 40-40 | 25 | 15 A 280 | .89 |
| \{10.10-20 \} |  |  |  |
| $450 \times 450 \times 25$ 16A281 1.19 |  |  |  |
| $\left\{\begin{array}{l}20-10 \\ 550 \mathrm{E}\end{array}\right.$ | -20 25 | 15A283 | 1.19 |


| HIGH CAPACITY Low Voltage Tubulars |  |  |  |
| :---: | :---: | :---: | :---: |
| Compact like |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Cap. | D.c. Whe. |  |  |
| Mral. | Volts |  |  |
| 1000 |  | 15 A 1619 |  |
| 500 | 16 | 15A1520 |  |

## High Voltage Can

 Types. 600 V. Wkg. 800 V. PeakSpecially popular for P.A. theater and other applica tions where voltage is high
and surges run over 600 V . Cap. Stock Mfd. No. Size Cost

 8 mfd., 800 volts DC working, in with leads from bottom. SJRAGUE No RC 8R.
RC 88.
No. 15.4289 , Net Each .. 424.45


MALLORY Universal Mtg. Tubular
Electrolytics
supplied in waxed cardboard tubes with mitg. feet so they can be mounted vertically. An
adjustable strap is included for hori zontal mtg. If desired. All are 450
V. D.C. working

C. working. Net



Aerovoz-Mallory-Sprague, compact. non-inductive wound, sealed in wax impregnated paper tubes with waz illed ends and bare wire leads. Standard quality throughout. Spectiy make wanted. adding to the stock number A for Aerovoz-M for Mallory-S for Sprague.
MPd.
.0001
.000025
$0025-15$ A306
0015 1306
008
.008
.006
.01
.015
.0
.02
.028
.08
. 0
.06
.1
.2

## Save

## ve

## Kit of 15 Condensers

Contalns 2-.01; 2-.06; 4-1: 2-.26; 1-. 5 Mid. 600 volt and 2-.1; 1-.25; 1-. 6 MId. 400 volt Paper Tubulars.
$\$ 2.58$

## Kit of 25 Condensers

Contains $3-.01$; 3-.02; 3-.06; 8-1: 1~. 26 Mid. 600 volts and $4-5$ Mid. 400 volt Paper

Tubulars. | Tubulars. |
| :--- |
| $18.1202-Y O T R ~ C O S T, ~ P e r ~ K i t . . . . . .44 . ~$ |

|  | 164.20 | .02 | 16 A 366 |
| :--- | :--- | :--- | :--- | 1600 Volt Oil Fulled Hermetlcally ealed metal tubes Exterplled with removable mounting etrap. Ideal cor vibrator and high


| . 002 | $15 \text { A } 356$ | 5. |
| :---: | :---: | :---: |
| . 003 | 15 A 367 |  |
| . 0005 | 16 A368 |  |
| . 0008 | 15 A359 |  |
| . 01 | 15 A 360 | 52 |
| . 018 | 15 A 361 |  |
| . 02 | 15 A 362 | 51 |
| 2000 | Volt Oll | 1-41 |
| . 0100 | 15 A 363 | 9 |
| . 0075 | 16 A364 | 83 |
| . 01 | 15A366 |  |
| . 02 | 15 A 366 | 4 |



## Uncased Paper Condensers

 Non-inductively wound, neatly shaped andwrapped in black var$\underset{\text { sealed }}{\text { nish }}$ perith Ends sented with pitch, and
provided wid long insulated 1 eads.

-600 v. Test, 300 Working


Aerovoz Type 1450 (left), bakelite casen $1 / \frac{1}{4}$ " equare, lug terminals 1 (tho V. Test, 600 V. working.
Type 1456 (right). bakeltte cases
 Crp. No. Price No. Price

 | .0001 | $16 A 27$ | .28 | $15 A 41$ | $\$ .50$ |
| :--- | ---: | ---: | ---: | ---: |
| .00028 | 1542 | .60 |  |  |

AEROVOX SII, VER MICAS


${ }^{-} 600$ V. Test, 300 Wkg

# ( A C INEDLATE BHESOR5 The Standard QP Quality. The World Ground! 

## Type BTS, BTA, BT2

## Insulated Motalized

Newly-designed compact size general parpose realators with a metenlised element heathed in an over-all coverimy of moteture proof phewelic compownd. Meet risid JAN - BP specification Non-inductive. Have pig-tall wire leads. Tolerance plus or minns $10 \%$
STANDARD RMA CODE - Specify Values

| Ohms | Ohms | Ohme | Ohme | Ohmw | Ohme | Ohmis | Mes | Mese |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.47 | 3.6 | 24 | 180 | 1.300 | 10.000 | 75,000 | 0.47 | 3.6 |
| 0.51 | 8.9 | 27 | 200 | 1,800 | 11.008 | 82,000 | -. 51 | 3.9 |
| 0.56 | 4.8 | 30 | 280 | 1.500 | 12.000 | 91.000 | -.5E | 4.3 |
| 0.62 | 4.7 | 33 | 240 | 1.800 | 18.000 | 100.000 | 0.62 | 4.7 |
| 0.68 | 6.1 | 86 | 270 | 2.000 | 15,000 | 110.00 | 0.68 | 5.1 |
| 0.75 | 5.6 | 39 | 300 | 2,200 | 16.000 | 120.000 | 0.75 | 5.6 |
| 0.82 | 6.2 | 48 | 330 | 2.400 | 18.000 | 138.080 | 0.82 | 6.2 |
| 0.21 | 6.8 | 47 | 350 | 2.700 | 20.000 | 150,000 | 0.91 | 6.8 |
| 1.0 | 7.5 | 51 | 390 | 3,000 | 22,000 | 160.000 | 1.0 | 7.5 |
| 1.1 | 8.2 | 56 | 430 | 3.300 | 24.000 | 180.000 | 1.1 | 8.2 |
| 1.2 | 9.1 | 62 | 470 | 3.800 | 27,000 | 200,000 | 1.2 | 9.1 |
| 1.3 | 10 | 88 | 510 | 3.900 | 30.000 | 220.000 | 1.3 | 10 |
| 1.5 | 11 | 75 | 580 | 4.300 | 33,009 | 240,000 | 1.5 | 11 |
| 1.6 | 12 | 82 | 680 | 4.700 | 36.000 | 270,000 | 1.6 | 12 |
| 1.8 | 18 | 91 | 680 | 5.100 | 39.000 | 300.000 | 1.8 | 13 |
| $\because .0$ | 15 | 100 | 750 | 5.600 | 43,004 | 330,000 | 2.0 | 15 |
| 8.2 | 16 | 110 | $8 \pm 6$ | 6, 400 | 47.000 | 363.000 | 2.2 | 18 |
| 2.4 | 18 | 120 | 910 | 6.804 | 51.000 | 390.000 | 2.4 | 18 |
| 2.7 | 20 | 130 | 1,000 | 7.500 | 59.000 | 430.000 | 2.7 | 20 |
| 3.0 | 2\% | 150 | 1.100 | 8.200 | © 2.000 |  | 3.0 | $\pm 2$ |
| 3.3 | 24 | 160 | 1.200 | 9.100 | 68,000 |  | 3.3 |  |

$1 / 2$ Watt- ${ }^{100}$ Lot price apples to purcibaw of one Value only
 or RC20. Range 470 ohms to 22 megohms. liminoz. 100
Fach.. Be Lots 4 $10 \%$. Order mizes desired from tabulatod linting above. Specify Realatmae Size HxT: Range 15.11001 Ohme Rish .ac ${ }_{\text {Lots }}^{100} 5 \mathrm{C}$

## "BW" Insulated Wire-Wound Resistors

Similar to the BT units listed above. but contain a wire wound ele-
 Sise 1 K X Kin Met
Spec. JAN-Ril Sper. JAN-R11 RC41. Range 470 ohms to 22 merohms
$15 A 1006$.
$1008 C$
 0.47 to 4700 ohms. 1.0 to 6800 ohms.
$15 A 1003$.



Sturdy 4 drawer ( 7 compartments in asch) cabinete, $11 \times 51 / 3 \times 51 /{ }^{\prime \prime}$. Blue and silver finish. shipped with resistor se Kortments as listed below.
AB10. ABA. Total of 59 BTA. 10
AB10. ABA. Total of 69 Resistors.
38A19. List value $\$ 15.08$.
Fit Na. 2: $6^{\circ}$ TYpe BWy and 94 BTS Total of 100 1/8 watt Resictors 38A20. List value $\$ 18.12$.
Your Cont $\$ 7.71$ Kit Ne 3: 6 Type BWI, and 77 BTA. Total of 83 1-vatt Resistors. 38A21. List value $\$ 14.11$.
Your Cont


Precision Wire-Wound Resistors
 inultipliers and chunts. Guaranteed accuracy $1 \%$. Nom-inductively wound. Winding is specia,lly imprognated, which insurea constant re-
metance at all frequencies to 50,000 cycles. WW-1-2\%x $\quad W-W W=2-$
 eype terminalg. Typs WW.



## IRC POWER WIRE-WOUND RESISTORS

These famous IRC realators have a durable cement coating, non-hyeroscopic coramio core, osernl winding and highest quality reatetanoe wira Built to stand overlonds, intense heat, dampness, humfily, and sven salt Vrater immerilon. Tou'll find these by far the coolest. longestilived power reefotors for every eervice replecement, amateur, experimental and broad cesting need.
Type AB, 10 WATHE in values to 80,000 ohms. Over 80.000 ohm are 5
 Eesistance Ohm Ohm Ohme Ohme Ohme Ohma

| mearamace | Ohmo | Ohms | Ohme | Ohme | Ohme | Ohan |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 50 | 300 | 1,250 | 4,000 | 15.000 |
| 1 1YPE AB.10W | 5 | 75 | 350 | 1,500 | 5,000 | 20.040 |
|  | 7.5 | 100 | 400 | 2.004 | 6,000 | 25,040 |
|  | 10 | 150 | 500 | 2,500 | 7.500 |  |
| \% | 15 | 204 | 750 | 8.000 | 10,000 | 5,000 |
| Accartay 5\% | 25 | 250 | 1.000 | 3.500 | 12.500 |  | 15A1007. 1 to 10,000 ohms, Fg, 35c 15A1008. Over 10,000 ohms, Fa, Bie



Available in all values as chovrn above.
16A1008. 1 to 15,000 ohms.... Net Fia, 54c 16A1010. 20,000 to 50.000 ohms. Net Er. 8 .

Adjustable Types. Furnished With One Pressure Band
 dation and corrosion at point of contacteliminates wire damage and breakage-Cannot be adjusted too tightly - Designed for


Type DHA- 25 Watts. Size $21 / 2 \times 9 / 16^{\prime \prime}$. With 1 Band



| Ohms | Ohmms |  |
| :---: | :---: | :---: |
| 100 | 1.500 |  |
| 250 | 2.500 |  |
| 500 | 3,000 | 16A1604 |
| 1.000 | 5.000 | Net Ea |
| 15.11014 | Extra Bands |  |


| Ohms] | 16A150\% |  | 18A15 |
| :---: | :---: | :---: | :---: |
| 10.000 | Net Ea. | 50,000 | ? |
| 15.000 | Net Ea. |  | 4) 4.4 |
| 20,000 | \$-28 | 75.000 | 16A1607 |
| 25.000 |  | 100,000 |  |

## Type HAA-Adjustable

sige syxy" in ranges shown be low. Price include mounting brack eta. Specify valuee wanted. Each complete vith mounting brackets and one new type bend.

$\left.5.000 \begin{array}{c}75.000 \\ 100.000\end{array}\right\}=12.28$

15:1015. Fxtra Bande for
$19 c^{\prime}$

## Center Tap Insulated <br> Wire Wound RESISTORS



Bakelite encased and capable standing high temperature. Ideal in balancing circuite in aets and transmitters Will carry up
No, 15A1081. 10, 20, 80, 100 or 880 ohnil Sperlify ohmet monted

Eweh

## 200 Watts <br> Type HOA-Adjustable

Size $101 / 4 \times 1 \%$ in ranges shown bo low. Prices include mountins brack ets. Specify valuem wanted. Esel complete with mounting brecket and one new type band.


COLOR CODE GUIDE For Resistors


One of the most handy reminter Color Code Guides yet devised The stanelard RMA range is automatically and accurately indiested Everyone chould have evveral on hand.

## Euses:Noon und Piett Lamps.Indicators

Type 8AG Littelfuses for Test Instruments
Designed especially for the protection of delicate test equipment, Ealvanometers, microameters, milliameters, volt meters, etc. Glass enclooed; $\mathrm{I}^{\mathrm{n}} \mathrm{x}$ 1/" dia, accurately ratea, high peed action, short For higher voltages use fuses in aerles.

| Ampp Current Rating | Max. <br> Load <br> M.A. | Aver. 5 M.A. Load | StockNo. | Net Each | Voltmeters to Protect |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Ohms <br> Per Volt | All Magnetio Types | Thermo Couples Types |
| 1/200 | 5 | 500 | 12A1100 | 22c | over 1000 | Galv. | $0-$ |
| $\begin{gathered} 1 / 100 \\ 1 / 32 \\ 1 / 16 \\ 1 / 6 \end{gathered}$ | 10 25 60 100 | $\begin{aligned} & \quad 110 \\ & 5.0^{10} \\ & 3.0 \end{aligned}$ | $\begin{aligned} & \text { 12A1101 } \\ & 12 A 1102 \\ & 12 A 1103 \\ & 12 A 1105 \end{aligned}$ | 16 c 16 c 11 c 10 c | $\begin{gathered} 1000 \\ 500-1000 \\ 100-500 \end{gathered}$ | Up to $\begin{array}{r}0- \\ 0-1 \\ 0-1 \\ 0- \\ 0-15 \\ 0\end{array}$ | $\begin{array}{rr} 0-10 \\ 0- & 10 \\ 0- & 60 \\ 0- & 115 \end{array}$ |
| 3/1/8 | $\begin{aligned} & 200 \\ & 300 \\ & 400 \\ & 600 \end{aligned}$ | 6.2 3.0 2.5 .40 | $\begin{aligned} & \text { 12A1106 } \\ & \text { 12A1107 } \\ & \text { 12A1108 } \\ & \text { 12A1109 } \end{aligned}$ | 9 | $10-20$ $8-10$ $3-5$ | $\begin{aligned} & 0-150 \\ & 0-250 \\ & 0-350 \\ & 0-800 \end{aligned}$ | $\begin{aligned} & 0-200 \\ & 0-300 \\ & 0-400 \\ & 0-600 \end{aligned}$ |
| $11 / 2$ 2 | $\begin{array}{r} 1000 \\ 1500 \\ 2000 \\ \hline \end{array}$ | .24 <br> .18 | $\begin{aligned} & \text { 12A1110 } \\ & \text { 12A1111 } \\ & \hline \end{aligned}$ | 76 |  | $\begin{aligned} & 0-750 \\ & 0-1000 \\ & 0-1500 \\ & \hline \end{aligned}$ | $\begin{aligned} & 0-1000 \\ & 0-1500 \\ & 0-2000 \\ & \hline \end{aligned}$ |

## Auto and Radio Fuses

Type 3AG
$11 /$ " $^{\prime \prime}$ lons, $1 / /^{\prime \prime \prime}$ diam. Btock

| No. |  | Rating | cac | Ot |
| :---: | :---: | :---: | :---: | :---: |
| $12 \mathrm{A1119}$ ] |  | 14 | 10c | 47c |
| 12A1114 |  | 1/2 | 8 C | 44 c |
| 12A1118 | Volts | \% | 8 C | 44 c |
| 12 A 1118 | to | 1 | 5 c | 22 c |
| 12A1117 | 250 | 11/2 | 5 c | 22c |
| 12A1118 |  | 2 | 56 | 226 |
| $12 \mathrm{Al119}$ |  | $21 / 2$ | 6 c | 22 c |
| 12 A 1120 |  | 3 | 6 c | 22 c |
| 12 A 1121 |  | 5 | 4 c | 19c |
| $12 \mathrm{Al122}$ |  | 6 | 4 c | 18 c |
| 12A1123 | Volts | 10 | 4 c | 18c |
| 12A1124 | to | 15 | 4 C | 8 c |
| 12A112S | 32 | 20 | 4 c | 18 c |
| 12A1120 |  | 25 | 46 | 18 c |
| $12 \mathrm{Al127}$ |  | 30 | 4 c | 18 c |

12A1128-8FE, 14 amp., for Philco Auto Radio and others using shorter fube.
Eacb

## G-E Neon Lamps



Have many applications on teet equipment, as ignal indicatora, for night lights, otc. Averege ife
3000 hourn. For $105-12 \mathrm{EV}$. AC-DC 3000 hourn. For $105-126$.inc- are except those marked Which are
for AC only. All are clear glass. for ACh only. All aro clear siag Serow Base



1 V. Cell Mountin
2A1141

## Fuse Mountings


(1) Use where connections are above chassla or panel.
12A1129. For 8AG, $1^{*}$ fus. Ea. $13 c$ 12A1130. For $3 \mathrm{AG} 11 /{ }^{\prime \prime} \mathrm{f}$. Ea. 13 c (2) For below panel connection. 12A1139. For $3 A G 11 / \mathrm{m}^{\mathrm{m}} \mathrm{fu}$. Ea. 130 (3) Mounts directiy on meter (3) Mounts will not touch other posts.
12A1133. For 8AG $1^{\prime \prime}$ ruges only.
(4) diameter fuse.
12A1134. 12 to pkg. Per plg. 1 Be

## Handy Fuse Retainers

## $F$ USE

2 plece metal outer shell with fibre ard for $3 \mathrm{AG}, \mathrm{SFE} 14, \mathrm{SFE}$, $\mathrm{SF}^{2}$ and oimilar tubular fuses.
12A1135. Ea. 9c; 10 . 10 . 8 c $21 /{ }^{\prime \prime} \times 1 /{ }^{1 / 2}$ jumbo for 3 AG , 4 AG . 12A11s6. Ea. . 17 c : 10 (i)


## Porcelain Sockets

 16.1176. Standard 14c 12.A1168. Candel'bra 8c
onet Sockets
Double contact, bayonet metal shell socket for lamps at left.
12.A1170. Each. 4

Mallory Grid


Blas Cells and Mountings
Enpecially for blasing first audio 1 volt plus or minus $10 \%$. Circuit Identical to "C" battery. Adjust able, where current does not exceed one microampere.
12A1139-18A1140-


## 56 Candelabra Base

110-180 V. Bulb
6 watts, clear glass, candelabra brse. For indica16A168. $\mathrm{He}^{10}$

13c Type Tisi/z Bulb, identicail co above except straight side instead of pear ghape $1 / \mathrm{h}^{\prime \prime}$ dia. 11 h high. 120 olt 6 wit cand screw base 16A170.

39 c ser
10
Lot 35 c

## Victor Pilot Builib

110 Volt. Type S11. 10 Watt Coated White with intermediate base for Victor R32 and many other uses.
16A169. Net Ea. ................ 6 e

## PMLOT LAMP SOCKETS



Up clips or brackets
are as most inustraare as most inustra-
tions show. Down types are in reverse brackets extends below recpt. (3) Clip Brackets 12A1142. Clip up. $G C$
12A1143. Clip down (4) Adjustable bracket.
12A1144. Up Type 12A1145. Down type 6 (5) Unmounted. Use
rubber grommet as holder.
12A1146. Min. Scw. $6 C$
12A114\%. Min. bay. 17) Squeeze and cllp in dial slots.
12A1148. Min. Scw. $8 P$ Min. Bayonet Fase (8) 12 A.

Brack down
$6 c$ (9) 12A115\%. Clip UP
12A183. Clip down ........
For Candelabra 110 V. S6 Screw 13ase livulbs (10) 12A1154. Bracket 12Ap.155. Hracket down Choice Ea. ........ 10 ASSORTMENT 10 asmorted varjou types pilot sockets. some as above and sulated types. 18A1.

45 c

## Dial Light Coloring Kit



Contains on e bottle each of solvent, red. green, amber and purple coloring. To coat clear bulbs to be used as colored dial lights.
$11 A 65$.
11A65.
Per Kit
$35 C$


## Jeweled Pilot Brackets

## Well made with $1 /{ }^{\prime \prime}$

 faceted glass jewele faceted glass jewels Mount in it" hole Red Green, Amber. 12A1150. Min. Screw Socket .. 180 12A115\%. Min. Bay. Socket ... 180 For 110 V., Type $\$ 6$ Lamp \%" jewel in bracket like above.Mounts in $1 f^{\prime \prime}$ hole. Candelabra socket for S6 bulb. Specify Red, Green, Amber.

Pilot Lighi Jewei
420
1/2" jewel on threaded shank with mounting nut. Requires ? ${ }^{\prime \prime \prime}$ holes 12A1189. Choice, Ea. ........ 130
 Front
Remov sble Jewel Bracket Mounts in if" hole. $1 /{ }^{\prime \prime}$ " faceted ewlaced from front Rei, Green Amber.
12. 1160 . Min. Screw Socket. . 298


Horizontal dressed up desight. Can be adjusted for a variance of panel thickness up to $1 /{ }^{\prime \prime}$. Extends only $11 / \mathbf{m}^{\prime \prime}$ back of panel. Bulbs remov-
able from front. Mounts in th" hole. Sp
12A1162, 12A1162, Min. Screw Socket . . 410 12A1163. Min. Bay. Socket ...41


All purpose light With $1^{\text {m }}$ frosted pearl glass jewel. Chrome finished
"slip fit" bezel holds color disc behind jewel. Color shows when light ts on. Mounts in panel up to $1 /{ }^{1 / 2}$
thick. Available in Red, (ireen and Amber. STATE COLOR DESIRED. 12 A1164. Uges s6 base bulb....78e

Underwriters' npprosed, single unit socket assembly unaffected by heat. tion. Requires single $1^{\prime \prime}$ hole for mounting. Faceted jewel in choice of Red or Green. Useg S6 candelabra base bulb.
12A1165. Net Ea


Rubber tool for renoving practically every type pilot bulb irom
places a whward to your fingers.
No. 12A309. Each ................


110 Yoit
inclosed
pilot
Light


## RADIO DIALS, KNOBS AND INDICATORS

## shaft FITTINES



To Increase or reduce shaft diameters of volume controls, condeneers, te., for sanging units, or to extend shaft lengths even of different diameters.

## COUPLINGS



EXTENDERS (Shaft 5" Lons) Hole Shaft Stocl No.
Size Dia. Ins. Brase



EXTENDERS (Shaft $11 /{ }^{\omega}$ Lons) $\left.\begin{array}{lll}1 / y^{\prime \prime} & 12 A 1193 & 18 A 1196 \\ y^{\prime \prime} & 12 A 1194 & 12 A 1197\end{array}\right\}$ F1c $\left.\begin{array}{llll}\prime \prime & y^{\prime \prime} & 12 A 1194 & 12 A 1197 \\ y^{\prime \prime} & 12 A 1195 & 12 A 1188\end{array}\right\} 10$ for PRASS OR INSULATED SHAPTE $\begin{array}{ll}\text { No. Kind Dia, Leth. Jim. } \\ 12 A 4 \text { Brass } & 1 / 4^{\prime \prime} \\ 6^{\circ} & 13 \mathrm{c}\end{array}$ 12.A5 Brass $12 A 8$ Insulated 12.A7 losulated $\begin{array}{ccc}1 / 4 \prime \prime & 6^{\prime \prime} & 13 \mathrm{c} \\ 1 / 4 \prime \prime & 12^{\prime \prime} & 25 \mathrm{c} \\ 1 / 4 \prime \prime & 6^{\prime \prime} & 13 \mathrm{c} \\ 1 / 4 \prime \prime & 12^{\prime \prime} & 20 \mathrm{c} \\ 7 /{ }^{\prime \prime} & 12^{\prime \prime} & 36 \mathrm{c}\end{array}$

## SPLIT BUSHING



To reduce dial holes from \%" to $1 /{ }^{\prime \prime}$ or to increese \%" shafts to \%" dia. K" long
12AB. 1200. Fai.
10 for ......
$70 c$

## PANEL

Cadmlum plated brass for panela up to \%" thick. Furnished epparAtely or with ${ }^{3 \prime \prime}$ or $8^{\prime \prime}$ cadmium plated brass shatto. 12A1358-Bearing Only 12.19-With $3^{\prime \prime}$ shart
12A10-With ${ }^{\prime \prime}$ shart
30.10

## FLEXIBLE SHAFTS

Phosphor bronze. When used with suitable couplings, control of unite at anglee up to 90 degreed with the panel to permitted.
No. Hub Dis. Lensth COET


FLEXIBLE COUPLINGS All Fit $1 / 4$ " Shatts

National TX10, very compact ${ }^{1} \mathrm{~m}^{\prime \prime}$ dia.,
canvas Bakelite incanvas Bakelite in-
sulated coupllas
\&ree from backlash.
12A1361, Eh....38c
National TX9, 1\%" dia., Steatle insulation.
$75 c$
Johnson No. 250, $1 \%{ }^{2}$
dia. Steatite with phosp
epring.
12A1360, Ea ...47e Johns
dia.
like above 24
12A1408, Ea.
$.82 c$


Johnson Steatite solid Coupling. Foatures long curate ally and achubs.
2A1402, Ea.
68c
(1) Johngon Compromion Coupling. Ideal for coupling together not be intulated. Whi not bur Rhafta

POPULAR DIALS All Fit $1 / 4^{\prime \prime}$ Sharte


Miniature Type-1选 Diameter (A) NATIONAL TYPR B - Neat etched sllver dial as used on HRO clock wise.


#### Abstract




Net Dach
51
12A13. Net bech ........... e
BAR KNOB-HRP-P, as used on HRO dial. $1 \% \times 4 /{ }^{\prime \prime}$ with pointer. 12A14.
24.
rome silver dial with black etched numersle. With finter srip black knob. Marked 10-0-180 Erip
Net Fenh
$50 c$

$31 / 3^{n}$ Diameter for $1 / 4^{\prime \prime}$ Shaft (A) NATIONAL THPE O. Attractive circular-grained Nickel Ellver. Reads $0-100$ over $180^{\circ}$ cc. Large fluted ringer grip knob.

918 (B) MILLIEN Heavy Gauge NickelSilver 0 to 100 cc . Large bakelite hub insulatea metal acale from shaft.
$91=00$


1CA $24 / 4$ and 4 Vormier Dials (A) Beautiful chrome silver, EtchoEngraved with black numeral and calibrationa. With inger grip. flanged knob. marker and hardware. 0 to $100-180^{\circ}$.
12A18-2*".Net No
${ }^{51.23}$
12A19-4". Net Es.
ier 248 B) Satin gilver finish Veraler $2 \%^{\mathrm{m}}$ a to with marker and tuning knob
$000-180^{\circ}$. 18A2O. Net Ri

NATIOKAI.
TYPN AON An Ideal instrument díel for tet and lab needs. Upes Velvet Vernier drive unlt, with blank removable scales Holea in pofnter for making calibration pointa sizo
 NATTONAT HRE KNOB ह\%" diameter bleck bakelite full grip turning knob. Non-tiring. For recelvers or X-mitters.
1\&Az2. Net Es............ 5 (C

## 



12A27-1 K" wheel and pointor with $270^{\circ}$ scale for Gain control 828
Net Eaph ..................... 82
Hand Wheel With Pointer Only
18A28-1\%". Ieen scele ........ S? 12A88-1\%", leas meale $18481-8 \%$. 1080 seal

FLUTED KNOBS
Qualtce bite bakerlia,
Attractive profomional in appearance Fluted rim tor good grip. All for K* shafts Brame bushed.
$12 A 9$ Lees Pointer
12A84-1 $1 \%{ }^{\omega}$. Net . . 220 12As5-1\%". Net . . 836 With Pointer 18Asz-11\%\%. Net . .38c 12A38-1\%". Net ..45c 12ASM-2\%. Net . . 626
$18 \mathrm{~A} 40-$ isw $^{2}$. Net
18A41-3". Net ....52c
Fit BAR KNOB8
set screwt.



Supplied Lese Knobs. For choice of knobs to use with these. see
(A) BLACK SATIN FMNIAH Platos Lade of brass, black finish with etched allver lines and Nos. Callorated 0-100.
Stock Dlam- De- YOUR

| No. |  |  |  |
| :--- | :--- | :--- | :--- |
| 12 A 1201 | 2 | 180 | COST |

$\begin{array}{lllr}12 A 1202 & 2 & 325 & .27 \\ 12 A 1203 & 34{ }^{N} & 180 & .28\end{array}$
12A1804 31/ 326 -88
(B) CILROME FINISF PLATEB Grain satin linish with black etchoround Calibrated 0 suver back $12 A 1 \% \omega_{0} \quad 2 \quad 180$.

## 12A1805

12A1206
$12 A 1897$
18A120
12A1209
.82
bakin cive PlanTES 2A121-2 dite, to 100-180.

(C) RECTANGULAR TYPES Made of brase, biack lintsh wit etched allver markings Bise $1 \%^{\prime \prime} x$ $2 \%^{\prime \prime}$. callbrated for $300^{\circ}$ rotation. Marked 1 to 10 . \%" hole.

## 2A1218 Record

2A1214 Microphone (Eholec 12A1816 Tone $\} 24$ C -plain, callbrated but

1-Inch Name Plates 12 A 1218 "Microphone" 12 A 1810 Phono 12A1820 On-Off 15c

## SNTENNA TUNING NAME PLATRE

Made of brasa-charactera and border chrome; bacheround etched dark black. Avalleble in all commonly used markinss-tate on order your needs. gtocked with 125 Miferent letteringen No. 21A1007.
Cleter, Heh
$\theta 8$

BAKELITE KNOBE


| Typo | 8th. No. | Dian | Color |
| :---: | :---: | :---: | :---: |
| 1 | 12A1281 | 1" | Wal. |
| 2 | 18A1882 | \%" | Wal. |
| 3 | 18A1223 | $1 \%$ " | Blk, |
| 4 | 12A1224 | 倳" | Fol. |
| 4 | 12A1228 | $1^{\prime \prime}$ | Wal. |
| 5 | $12 \mathrm{Al226}$ | \%" | Wal. |
| 6 | 12A1227 | $1 / 2^{\prime \prime}$ | Blk |
| 6 | 12A1228 | $1 / 2^{\prime \prime}$ | Whi. |
| 6 | 12A1220 | ${ }^{1} /{ }^{\prime \prime}$ | B\%n. |
| 7 | 12A1230 | $1{ }^{\prime \prime}$ | Blk. |
| 7 | 12A183I | $1^{\prime \prime}$ | Wal. |
| 8 | 12^1232 | $1{ }^{\prime \prime}$ | Wal. |
| 9 | 12A1938 | 4" | Wal. |
| 9 | 12A18s4 | " | Iv. |
| 9 | 12A1285 | 18" | Red |
| 9 | 12 A 1286 | 41** | Blk. |

RNOBS FOR FLAT SHAFTY


12A1240 Walnut $3 /{ }^{\text {m }}$ Dia 12A1241 Ivory $\}$ Chaice. 11e 12A1244 Walnut Ivory) ${ }^{\text {"n }}$ Choice Ea. 11 E KNOBS FOR KNURLED ERAMME 12A1846 Walnut ? "Dla. $10 e$

Push-On Knob Springs Assortment of 85 mont popular 18A4.


Bakelite Knob Assortment


Bakelit low, Brown, Black. ivory standard $\psi^{\prime \prime}$ knuria-on type to nt on most makes of setg.
12A286. Per Asst. of $10 \ldots . . .4 C$ 25 amorted includes types as above and others.
$\frac{\text { No. 18A850. Per Asst. of } 25}{\overline{\text { DIAL }} \text { POINTERS }}$


# Dial Belts－Ballast Tubes．Resistor Cords 



## Woven Fabric Made－Up

 Dial Beltsgract duplicated of orisinaie．Fin est quality，$h$ eat and moisture proof．Treated to prevent elipping． State male and model of ect for Which devired．

Dial Cable Clips
Envelope of 50 for use on all types of Dial Drive Cord assemblies． uake up your own special cords with these clips．

## Phosphor Bronze Cable <br> Phosphor Bronzedable

 phor bronze wire，braided on a linely gpun glass core． 11 Per 25 Fbot spool．．．74C Linen Dial CableMade of black woven linen as used originally by maker of set． 11A67．Extra Thln．
25 Ft．Spool
11月68．Mralum
11169．Héavz
11A69．Heavz

## Cable Assortment

Contains 12 ten－foot lengths most often needed types bronze，linen and metal cables． 11 ．Per Assortinent．． 4.80 MIt of （a）dilitilill 25
Assorted Dial Springs

Contains sizes that will take of any dial job． 11A77．Klt of 25 65 c 11A78．Pkg．of 10 asmorted springs of various sizes．． 11A79．Pkg．of 10 assorted． mall dial aprings
$24 c$

## Kit of 25 Dial Belts



Woven Pabric made－up dial belts In handy kit with chart．©
16Az0zs．Per Kit ．．．．．．． 97


Speaker Shims Kit of 16 swedish Stoel Shims assort－ ed in hand case．
No．
114158 ．．．．． 38 e Kit of 20 Fibreloid ©hime in assorted sizes． 35c

## Cable Eyelet Tool

Consista of base and clincher，Handy for rivet ing or turning eyelets on dial cables．
114875.

Por Set
59 c
48c $74 c$ 83c

## Assorted Cable Spool

## A sectioned apool containing

 feet each of the 3 most popular 11 ay dial cable．
## Cable Clamps，Eyelets

 same as used on all dial cables． Aksortment of 60 in handy jar． 11 A72，Per Ja
Non－Slip Compound A special powder compound for ap－ plication to slipping dial cables． friction drives，belta，cords，etc． Makee them hold instantly． 18 C
11A73． 2 oz．bottle Dial Cord Dressing In sticks to apply to slipping dial cords and drives．
11A74．Per stick
12c

## Dial Oil

A mpectal oll for radio dials and fine mechanisms．Treated with graphite．Long lasting．Will not
gum．Handy \＆oz．apout can． $15 e$

To cement rubber dial drives metal shafts，rubber mountings
chasais．or any rubber to metal． 11A76．

## （6，xP2 RADIO and PHONO Drives

No．17A1004－Envelope of 2 No． 16 Phono Drives for General Indus－ Prien RX－LX Motors，etc． Per Enr．

24 c No． $17 \mathrm{Ali005}$－Envelope of 2 No．${ }^{17}$
Thono Drives for Alliance Model 80 and Motorola Motors．
Per Env．©．．．．．．．．．．．
No． 17 A1006－Envelope
Phono Drives for ficA． 1’ar Env．
No．17．100－Envolope of 3 ． 24 c Phono Motor Drives for Philco． RCA and etc．Per Env．．．．．．． 24 c No． 1 TA1008－＇Envelope of 1 No， 20 A Kit of 25 assorted popular rub－ Aer friction drives for all popular ber frict
models． models．
No．18ATO，Per Kít
88c


## With Cord Rack FREE

With this unit，you can replace dial cord on practically any set made since 1934．Keeps your stock geve over $\$ 1.00$ on the 300 feet． save sal

Assortment Inclndew－
100 Ft．pre－stretched Special Thin Cord，libreglas core，Juat right for most small sets． 100 Ft．of pre stretched Standard Cord，pibregla core，dia．．031＂． 100 Ft．of Medium Cord，for larger table models and consoles．
11 A27\％．
300 Ft．Cable With Rack $\$ 5.22$


JFD Adjustable AC－DC Ballasts New Improved Type 3 Types Take Care of Most Ballasts Used

An you know，we have been unable to supply the popu－ lar adjustable ballasts as listed in our catalog．JFD now and in a new improved tspe．They now come in an air cooled，per－ forated shell with larger ingulating surface and longer and heavier resistance wire，insuring more ac－ rearate cition－longer life Some－ curt birher in price than the old type but worth the difference． 15．A2000－Type A． 8 Prong Choice 15A2010－Type B， 8 Prong 00 15A2011－Type C， 4 Prong $88($

## SERVICEMEN＇S KIT

Contains 5 Ballasts． 2 Type A．${ }^{2}$ ype B， 1 Type C，together with listing for over 26 replacemente plete inatructions． 15Az012．Per Kit ．．．．．．．\＆4，4

## RESISTOR CORDS

For AC－DC sets


## 15A2013

 15A2014 184201515 A2016 15 Az016
$18 A 2017$ $15 A 2018$ $15 A 2018$ 1542019
$18 A 2020$ 18．A2020 CHOICE

FOR S－WAY PORTABLES High 3－way AC－DC Battery Portables． 15A2022．

290 ohms 25.0 to 31.5 160 ohms 62.0 to 68.9 v 185 ohme 69.0 to 75.2 v． $\mathbf{8 3 0}$ ohms 18.0 to 24.0 v ． $\$ 50 \mathrm{ohms} \quad 12.0$ to 17.0 v 250 ohms 32.0 to 44.5 v 220 ohm 45.0 to 52.0 v $\begin{array}{ll}220 \text { ohm } & 56.0 \text { to } 52.0 \text { v．} \\ 180 \text { ohms } & 53.0 \text { to } 61.0 \mathrm{v} .\end{array}$ Net Wach 92 c No． $13 \mathrm{~A} 2025,960$ ohms reaiatasice． tube is wherever 920

## Universal AC－DC

 Line CordAdjusta
$15 A 2021$ ．．．

62 c tube is employed．


## mperite

Amperite
Type
No．
KL． 46
KL． 75
KL． 50 H
KL． 75 H
KL． 50 S

| te Sallast Tubes fol |  |
| :---: | :---: |
| Stock | last Tubes |
| No． | Starilas |
|  | W＇lh Letter |
| 15A2000 | K，L，M，or BK |
| 15.52001 | J3L or BM |
| 15.42002 | K．L．M．or BK |
| 1542008 | K．L，M，or BK |
| 15：3004 | K or L |
| 咗 |  |

Replaces Bal
Iast Tubes With Iotter
KL． 46
KL． 50 H
KL． 75 H
$15 A 2008 \mathrm{~K}, \mathrm{~L}, \mathrm{M}$ ．or BK
for AC－DC Sets


For HK49B，order Stock No． 15.2005 ，and for L55B order No．15A2006．
4P－45，4－prong base．Stock No． 15.12024 replaces any of the foll

| 140R4 | 50X3T | 40 A 2 | 185 L 8 | KX42C | KX49C | X55B |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 140 R 8 |  | 40 B 2 | 185 L 4 | KX42D |  |  |
|  |  |  | 1854＊ | Kス4 | KX49D | KX56C |
| 140 R 44 | 165 R 44 | 185 R 4 | 50 D 2 | LX42B | LX49B | KX55D |
| 140 L 4 | 165 L 4 | 185 R 8 | 300R4 | LX42C | LX49C | LX55日 |
| 140L8 | 165 L 8 | 185R44 | 320R4 | LX42D | LX49D | LX55C |
| 140 L 44 | 165 L 44 | 185 L 4 | KX42B | KX49B | KX55A | LX56D |
| 200R，St | No． 1 | 007． 25 | Stock | 15A800 |  |  | All Typen Net Einch



Will replace Tungar or Rectigon bulb of like rating and type Pro duce more rectified current．cost less to operate．last longer and less less．

| Stocly |  |  | Net |
| :---: | :---: | :---: | :---: |
| No． | Fis． | Ampa | Ea． |
| 16.1137 | D | 2 | $\$ 2.35$ |
| 16.138 | A | 2 | 2.35 |
| $16 A 139$ | D | 6 | 2.84 |
| $2 A 81$ | D | 15 | 5.88 |

## Cy Battery

 Hydrom－ etarLarge size with beaded ploat
54 c 11A157


> Handy Touch-Up Sprayer Uses Spare Tire for Air

Operates on low preseure from spare tire or any other air con－ tainer．Air－tight valve，adjustable spray tip，rubber hose and two t－ oz．jars．Handy for touching up cabinets，panels，etc．
 Here is just what Jou hare been looklng for，An adjustable stand making repairs and adjugmente making repairs and adjuatments It raises the turntable about $15^{\prime \prime}$ above the bench 60 you can ersily look under the mechanism to check it while in operation．Can be easily pivoted on the swivel joints so that repairs can be made without re－ moving turntable Irom stand．ExG－ ily adjusted to all mizes and types of phono－turntables．Sturdily made of steel．Every service shop need several．


Phono Needle Cup Nickel－plated with snap spring cover．Hole in ing down to motor boit－ Dia． $11 \mathrm{~m}^{\prime \prime}$ ．can be set into $1 \frac{1}{6}$ Nole．18As75，Net Each．

## RADIO MULTIGANG, SELECTOR and ALL WAVE SWITCHES



Supplied with knob as shown. Cholce Ea. Shortine Type Non-Shorting TYpe Sth.


## Spring Return Switches

Beplacemente for intercommunicator talk-back switchen. All are two-position. Shaft returns to origRotation against spring in clockWige position. Normal position is counter-clockwise. All have long shaft that can be cut to Jength. 12A710-1 Pole, 2 Position.... 88 c 12A712-4 Pole, 2 Position..... 68 e

## FEDERAL Anti-Capacity Switches



## Centralab Momentary Push Switches



For many light duty applications. meter
insertion test insertion tuipment, etc. Ratipment, etc.
Rate 1 amp. at 110
tacts. Insulated \%" bushing. $\%$ on long. Button extends $1 / 2$ " from end of bushing
1EA718. Momentary open
H \& H Two-Circuit
Push Switches


In normal position. with plunger out, one circuit is "on" and the other "off". When plunger is de-
pressed, circuits are reversed. Slow pressed, circuits are reversed. Slow
make, quick break momentary con make, quick break momentary con-
tacts. Rated 6 amps at 125 V . A. C. Bushing ${ }^{6}{ }^{\prime \prime}$ dia. diat 125 V. (A) Metal Plnnger. Used on Su-
preme instruments and also other preme instrum
popular makes.
popular makes.
12A720. Ea. 41 c 10 (1) ....38c (A) Bakelite Tip
 (B) Rakellte Bntton. $\begin{array}{ll}\text { 12A783. } & \text { Red } \\ \text { 12A784. Black }\end{array}$
F. Fa.
$.50 c$

## Rotary Switches



## MALLORY GANG SWITCHES

 Types 120eL and 1800L BoriesUsed in a very wide range of applications. Have 1 fixed and 1 adjustable stop. leminated bakelite insulition and phosphor-bronze
 It easily shortened. Require fotched ${ }^{2}$ abaf necesaary can be disasiembled, the spacers if down to required length of twitch and specing of sectlons. With bar knob brt less difl plate See plates for $11 /{ }^{*}$ switches listed belovis plate


| Shortins |  | Non-Shorting |  | Ganes | Poles | Pod. tiont | $\begin{gathered} \text { NET } \\ \text { HACH } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cat No. | Trpe | Cat. No. | Type |  |  |  |  |
| 124454 | 1216 L | 12 A 45 | 1316 L | 1 | 1 | 1-3 | 30.77 |
| $12 A 456$ | 1211L* | 12A457 | 1811 L . | 1 | 1 | 1-11 | . 6.80 |
| 12.458 | 1216 L | 12.459 | 1315 L | 1 | 2 | 1-5 | -88 |
| 12 A 460 | 1213 L | 124461 | 1318L | 1 | 8 | 1-8 | -18 |
| 12A46\% | 1212L | 12A463 | 1312L | 1 | 4 | 1-2 | 1.12 |
| 12A464 | 1226 L | 12 A 465 | 1826 L | 2 | 2 | 1-6 | 1.25 |
| 12 A 488 | 1221 L * | 12 A 67 | 1321L* | 2 | 2 | 1-11 | 1.55 |
| $12 A 468$ | 1225 L | 12A469 | 1325L | 2 | 4 | 1-5 | 1.54 |
| 12A470 | 1223 L | 12.471 | 1823L | 2 | 6 | 1-8 | 1.84 |
| 12A472 | 1222L | 124.478 | 1322L | 2 | 8 | 1-2 | 1.78 |
| 124474 | 1236 L | 12As75 | 1336 L | 3 | 3 | 1-6 | 1.71 |
| 12.476 | 1231 L | 12.477 | 1331L | 3 | 3 | 1-11 |  |
| 12 A 478 | 1235 L | $12 A 478$ | 1335 L | 3 | 6 | 1-5 |  |
| 12 4 80 | 1246 L | 12 A 481 | 1346 L | 4 | 4 | 1-6 |  |
| 12.488 |  | 124483 | 1341L* | 4 | 4 | 1-11 | 2.12 |
| 12 A 484 | 1245 L | 12A485 | 1345 L | 4 | 8 | 1-5 | 2.70 |
| 124.486 | 1251 L | 12 A 487 | $1351 \mathrm{L*}$ | 5 | 5 | 1-11 |  |
| 12 A 488 | 1256L* | 12A489 | 1356 L * | 5 | 10 | 1-6 | $2.88$ |
| 124480 | 1261 L | 124491 | 1361L* | 6 | 6 | 1-11 | 3.41 |
| 124408 | 1266L* | 124498 | 1866 L \| | 6 | 12 | 1-11 | 8.485 |

Types marked with have no third or "off" position with all circuite


## MALLORY SINGLE-GANG

## CIRCUIT SELECTOR SWITCHES

 8100 J and 3200 J SeriegVery sturdy and have a wide application in tap switch needs. Have $2^{\prime \prime}$ notched shafts: milver contacts: \% threaded bushing. Low resistance wiping contacts. All $1+f^{\prime \prime}$ base dia.
types have adjustable stops. All are with bar types have adjustable stops. All are with bar
knob and mounting nut.


| Shorting |  |
| :---: | :---: |
| Cat. No. | Type |
| 12A495 | 3115 J |
| 12A497 | 31112 J |
| 12A499 | 3122 J |
| 12A501 | 3123 J |
| 12A503 | 3126 J |
| 12A505 | 3134 J |
| 12 A 507 | 3142 J |
| 12A509 | 3143 J |
| 12 A 511 | 31117 J |
| 12 A 18 | 3129 J |
| 12 A 15 | 3136 J |
| 12A517 | 3163 J |



| Posi- |
| :--- | :--- |
| tions |$|$


| Bane <br> Dla. | Net |
| :---: | :---: |
| 114" | 5.68 |
|  | .688 |
| 1\%" | 68 |
| 1\%** | - ${ }^{88}$ |
| 1\%" | . 71 |
| ${ }^{11 / 4}$ | . 71 |
| 1\%* | 1.06 |
| 1+7" | 1.16 |
| 1 姑" | 1.16 |

## MALLORY SWITCH PLATES FOR ABOVE

For switch. tone, or volume control. Easy to read figures on black. ${ }^{7^{7} 8^{\prime \prime}}$ hole.

For $11 / 4$ " BASE SWITCHES- $30^{\circ}$ SPACING

| No. | Type | Marked | No. | Type | Marked | No. | Type | Marked |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $12 A 726$ | 372 | 1 to 2 | 12A733 | 379 | 1 to 9 | 18A740 | 386 | Off 1 to 6 |
| $12 \mathrm{A727}$ | 373 | 1103 | 12 A 734 | 380 | 1 to 10 | 12A741 | 387 | Off 1 to 7 |
| 12A728 | 374 | 1 to 4 | 12A785 | 381 | 1 to 11 | 12A742 | 388 | Off 1 to 8 |
| 12A729 | 375 | 1 to 5 | 12A786 | 382 | 1 to 12 | 12.4748 | 389 | Off 1 to 9 |
| $12 A 730$ $12 A 731$ | 376 377 | 1 to 6 | $12 A 787$ $12 A 788$ | 383 384 | Off 1 to 3 | 124744 | 390 | Off 1 to 10 |
| 12A\%32 | 378 | 1 to 8 | 124738 $12 A 739$ | 384 385 | ORf 1 to 4 |  |  |  |

For 1 11/16" BASE SWITCHES-20 $20^{\circ}$ SPACING

| 12A745 | 453 | 1 to 3 | 12.1782 | 460 | 1 to 10 | 12A769 | 477 | Off 1 to 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12.4746 | 454 | 1204 | 124753 | 461 | 1 to 11 | 124760 | 478 | Off 1 to 8 |
| 18.747 | 455 | 1 to 5 | 12A754 | 462 | 1 to 12 | 124761 | 479 | Off 1 to 9 |
| $12 A 748$ | 456 | 1 to 6 | 12A755 | 478 | Off 1 to 3 | 12A76\% | 480 | Off 1 to 10 |
| 12.1749 | 457 | 1 to 7 | 12A756 | 474 | Off 1 to 4 | 12A763 | 481 | Off 1 to 11 |
| 12.1750 | 458 | 1 to 8 | 12A757 | 475 | Off 1 to 5 | 12A764 | 482 | Off 1 to 12 |
| 12A751 | 459 | 1 to 9 | 12 A 758 | 476 | Off 1 to 6 | 12A76S | 483 | Oore 1 to 13 |

## MALLORY JR. JACK SWITCHES

Mount in $\mathbf{t}^{\prime \prime}$ hole on panels to $\frac{14}{}{ }^{*}$ thick. Ex-
tend 1 th" back of panel. With black pointe knob. "On"-"off" plate with 2 pos. switches.
8 position have center off position.



24-Point Tap Switch
Spectal single circult 24 point nonahorting ewitch. *" bushing. $2^{\prime \prime}$ grooved shaft. Complete with die plate and bar-type knob. 12A5\%7. Each ….............s2.00 YAXLEY Ceramic Switch

Low loss ceramic Insulation, wide contact apacing. improved heavy silver plated contacts. For transmitters with power up to 100 wattig 4 contacts per circult. With knob as shown.

$\begin{array}{ll}\text { Uae as } & \text { SPST, } \\ \text { SPDT. } & \text { DPST. }\end{array}$
DPDT, 3 PST. 3 P D T,
4 P D T.
shorting
月 deep. $23 \%^{\circ}$
snart.


Tap 8 witch
Poaltive snap action. Strong wiping contact grounded to shaft and bushtion, contact breake between makes Bushing length $\%{ }^{\prime \prime}$. Shaft In $^{\prime \prime}$ from end of bushing. $\begin{array}{cc}\text { No. } & \text { Pooitions } \\ 12 A 534 & 2 \text { Polnts }\end{array}$ $\begin{array}{ll}12 A 534 & 2 \text { Points } \\ 12 A 535 & 3 \text { Points } \\ 12 A 536 & 4 \text { Points }\end{array}$ $12 A 536$ Points $12 A 541$ Pointe $12 A 537 \quad 5$ Points $12 A 643 \quad 11$ Pointe $\left.\begin{array}{ll}12 A 538 & 6 \text { Points } \\ 12 A 539 & 7 \text { Points }\end{array}\right)$ Cholce, any of Choice, any


## YaxLey Push Button

## switches

hole mtg. for
ing type release
manually. reatoring.
12 Asis S. P. Make Contact
12A546. Type 2001L Locking 76
12A547. Type 2003. Non-lock, . SBe \& Pole Make 2 Contacts


## Midget Jack Swlteh

Type 10. $\quad$ MPST
Compact. Mounts
In ${ }^{5} 6^{\circ}$ hole in $1 / 4^{\prime \prime}$
panels. Has black
knob pointer and 'off - on" name plate.


## Slider Switches

For any need where ${ }^{4}$ small switch is wanted - mike current tone control. low power supplies, etc. Comes complete with mounting plate.
1RAr68. SPDT ..28e 18A780, DPDT ..280

## Suritches and Relays for most ANTY need



Toggle or Bat Mandle
Underwritern＇approved； 3 amp．， 125v．： 1 amp． 250 v ．For controlling redlo eeta，minall motorn，lamps， meters，otc．Hounting sleeven all M＂díneter and it ${ }^{\prime \prime}$ lemgth．Two
loespute included．Vers rugsed． loeknute included．Very rugsed． Beat quality．Laminated bakelite eotions．Nickel finish on mountins ents and corerg．

Bingle Pole－gingle Throw， 2 Luga Makes and breaks a single circuit， tandard＂on＂and＂off＂switch． | $12 A 770$ Toggle |
| :--- |
| $12 A 771$ Bat Hand．$\} 10$ Che．Ea． 356 |
| .. $.28 c$ | Dingle Pole－Double Throw， 8 Luge

 18 A 773 Bat Hand． 10 © 3.420 Donble Pole－Sinsle Throw，\＆uge Cuts two circuits in and out or ＂on＂and＂off＂for two circuite．
12A774 Togele Che．Ea，87e $12 A 774$ Togele
$18 A 75$ Bat Hand． 10 ．© $\because .676$ Double Pole Douhio Throw， 6 Luge Feeds two circuits into either one or two pairs circuits．
$12 A 776$ Togele $\}$ Uhe．Ea． 776


Double Pole－gincle Throw
Rated 18 Amps at 125 Volts pheh Button Type．When used in racks，it will break primary cir－ cuit when door is opened．${ }^{\frac{7}{f "}}$ ghank． long． Troste Type，Same as push button owitch above except togele handle． 12A779．Net Ea．．．．．．．．．．．．．．．．．．．95c

Fxtra Feavy Duty Power Type
D．P．D．T．with Nentral Center An extra large heavy duty Double Pole，Double Throw Switch with meutral position in the center for uas
in heavy current circuite such as In heavy current circuits such as irannmitters，amplifiers，motors，otc．
Contact are＂fast－break＂type． Contacts are＂fast－break＂type． Reted 10 ampa，$t^{125} 12$ volto．Size ${ }^{\prime \prime}$ long， $1^{\prime \prime}$ high，${ }^{1}$
mleeve dimm． neove diam．$/ 8$ ．
12A780．Net Ea．
53.33

## H \＆H Rotary 5 witches

 For knob operation． 8 －amps．， 250 volts．
Mounting sleeve－$\% /^{*}$ diam．sleeve length $y^{\prime \prime}$ ．Knob shafts ex－
tend $1 "$ beyond threaded sleeve． stingle Polemgingle Throw，\＆Lnge 18А781．Each 89c：10 $2.38 c$ Bincle Pole－Deuble Throw， 8 Lugs 12A782．Sach 62c：10 © ．． 60 ©
Double Pole－Slngle Throw， 4 Luge
 Doable Pale Double Throw， 6 Luge DiA784．Fach 56c； 10 ＠

## Porcelain Switches

## $\underset{\text { Type }}{\text { Knife }}$

Porcelain base compact knife －witches．Screw terminals．
18A580．SPRT SIse $1^{\prime \prime} \times 1 \%{ }^{\prime \prime}$ ．
18A551．DPDT Sise $1 \%{ }^{\prime \prime} \times 2 \%^{\prime \prime} .18 c^{\circ}$


Carling Toggle 8 witches

$\begin{array}{ll}\text { Cat．No．Type } \\ 12 A .386 & \text { SPST }\end{array}$ 19A787 12A788 12A．88 SPDT 12A．89 IDPST as bhank SPGT Forgeneral
purpose uge． purpose use． fleeves．Rated
Bounting 3 amps．at 125 2 mig．nuts． as 12 A 786. 12A780．Fa．25c： 10 （10）．29e Off Position in Centor，gPDT． otherwise same as 12 A787．
12A701．EA． $316: 10$＠.. .27 c 12A791．Lu． 31 c ： 10 （3）．．．27c


Carling Momentary Plunger Type 8witches Handy for Countlees Needs
Double－Pole，Double Throw 6 lug switch sultable for testers， meter panels，otc． 1 amp． 125 volts AC only． $15 / 32^{\prime \prime}$ shank，is＂long． 12A792．Ea．50e；10 © ．．47e Stinsle－Pole．Two Circuit
lug switch． 1 amp． 125 volts
only． $15 / 32^{\prime \prime}$ ghank，患＂long．



## Carling

．
Toscle 8witch 20 amp． 125 volts： 10 amp． 250 volts． tiondia．shank \％＂ bakelite base 8PST．
12 A784

|  | ＂On－Off＂Plate |
| :---: | :---: |
|  | For Standard Toggle Switches |
|  | 785．N．P．Steel． |



Slide Switch ＂Off－On＂ 12A799．Ea． 29 c
Nut Type Acro 8wlith Pumh button type．very
 $11 / w^{\prime \prime}$ over－all hetght．
Fitted for panel mig． Actuation is by bake－ Acto plunger．Rating 19 A．
ideal for D．C．load
double break feature
12A812．Type 3NO5－5P－N．O． 1.62
12A813．Type 3NC5－5P－N．C．1：82


The Acro Miniac

## 8witch

A truly small．tully enclooed and only only trifle over $幺^{\prime \prime}$ thick and only a trifle over＂da．Un－ Has mig．holes well adapted for stacking in muitiple assemblies．All parts in multiple asiemblies．Ail parts actuator and tine silver contacte．
 movement differential vated at 15 amps． 115 volts A ．C． Rated at 15 amps． 116 volts A．C． 12A810．Type 2MC1－1A－N．C． 1.82
12A811．Type 2MD1－1A－D．T． 1.82

## The New RELAY with INTERCHANGEABLE COIL



Select the relay of your choice，elther S．P．D．T．or D．P．D．T．and coil of any Stand－ ard voltage as listen．Takes only a few sec－ onds to assemble and requires no adjust ment．The Interchangeabllity of the calle makes it possible for you to change from one voltage to another by just buying the re quired coil instead of the complete relay． giving sou a wide range of flexibility．Contuct pointa are of fine siver
 No．19．At0，Type 200－1 S．P．D．T．Contact Assembly，Each … ．．．．．．$\$ 1.32$
No．19A41，Type $200-2$ D．P．D．T．Contact Assembly，Each

16.134115 Violts

BCILD COLR OW＇N CONTACT COARINATION
$\$ 1.18$
$\$ 1.47$
A complete contact parts kit to make up any contact coinbination up to 4 P．D．T．for above ty＇pe 200 relays also for dozens of other applica－ tions requiring blade switches．Shipped with complete wirlng informa tion and all necessary hardware
No．19A42，COMPLETE KIT，at nuly
96 c


## GUARDIAN Standard Relays

No．19．14\％－Model K100 Keylng Relny S．P．S．T． norm．open．Pure silver contacts break clean． Operates from gource．Siz
$\$ 4.13$
 1 KW and 28 MC．Alsimas 196 insulated． Size $214 \times 1 \times 2$ ，Net Euchi．．．．．．．．．．．．Relay insu
No． $19 \AA 49-$ Moder A100，Antenia Relay lated with alsimag 196．Also for heavy duty primary keying or control．Heavy silver contacts handie up to
in RF circuits up to 28 MC ．D．P．D．T．for 115 V ．AC． in RF circuits up to 28 MC ．
Size $2 \frac{1}{4} \times 2 \times 2 \%$ ．Net Each $\qquad$

## POTTER BRUMFIELD



## Standard

 Relays Type 1＇R Relays 60 CyclesFor motor starting up to 1 H．I＇． heater load to 20 amps．or any con－ trol circuit requiring iast switch－ ing．Coil operates on approx． 3
waits．Won＇t heat in continuous duty．A＂s ilver contact pointa rated in double break at 20 amps． non－inductive load at 110 V．，A．C．． H．P．or 2i0 V．single phase motor． H．P．or 2：0
gingle break types carry non－in． Single break types carry non－in－ ductive loads of 15 amps． 110
A．C． 8 amps． 110 V．D．C．，or 220
 and $2^{\text {n }} \mathrm{high}$ N．O．Normally Open． N．C．Normally Closed． No．Type Sontact 16 P181 PR3A SPGTD－NO 82.80 $\begin{array}{lll}16 A 182 & \text { PR4A SPSTDB－NC } & 2.80 \\ 16 A 183 & \text { PRSA } \operatorname{SPDT} & 3.10 \\ 16 A 184 & \text { PR7A DPST－NO } & 3.80\end{array}$


TYPE 1A TYPE EL TYPE IP

＂MR＂Type
Compact，for light loads．Han－ die 8 amps A．C． non ampe D．C． able spring．No current carried thru spring． $2 \%^{\prime \prime}$ L．， $1 \%$＂W．， $1 \%$＂ H．A．C．coils require approz． 2 Watts：D．C．， $11 / 2$ watts． No，Type Contacts Coil－F．Em，
18 A 18 M MRA SPDT 6 AC ． 1.88 ． $16 A 185$ MR5A SPDT 6AC
$16 A 186$ MR5A SPDT 110AC $16 A 187 \mathrm{MR11A}$ DPDT 6AC $16 A 188$ MR11A DPDT 110 AC $16 A 189 \mathrm{MRGD}$ SPDT 6DC $18 A 100 \mathrm{MR11D}$ DPDT 6DC 2.8 B Hate Circuit Type；Simllar to above．Handle 6 amps 110 V ． 16A191．LM5－2500 ohms .82 .05 16A191，LM5－2500 ohm Non－adjustable spring only 1 \％ high．SPDT．
high．SA，L85－2500 ohms ．．．s 1.88 6A194，LS5－5000 ohms ．．． switch is familiar to most all who use switches．Case is of plas－ who use 1 switches．Case ic of plas mounting two 6／32 acrews on 1＂ centers．Type $1 P$ mounts through X－Position X－Position R－Position at 15 volts； 5 amps．at 230 V ．AC． Movement Differential：Type 1A－．005＂；Type 5L－．030＂：Type 1P－．003＂
 1A－Pin Type
Mirt． $\begin{array}{ccc}\text { Mirte } & \text { Stock } & \text { Net } \\ \text { Code } & \text { No．} & \text { Fat }\end{array}$ NO．XO－1A $12 A 800$ FA N．C．XC－1A $12 A 801$ ． 8


# mikeConnectors:Phome Plugs.Jachs 



MCIF Female. MCiM Male single contact made by pressing together and tightening coupling ring. Spring cord protectora accommodate cables 12A311. MC1F Brasi chro
Nel
12As12. MC1M Male.
For Chassis Mounting
PC1M, mounta in $.385^{\prime \prime}$ hole to ground to chassia or $1 / /^{\prime \prime}$ hole when two circuits are desired independent of chassis. Furnished with Insulating washers, solder lug and look nut. Use MCiF or MC1FA a the cable connector. $.19 C$ brit has heavy coll abring phich pushes center contact forward. 18 A 314.
Net
$26 c$
CL-PC1M Closed Clircult Type. Same as PCiM but circuit closes when cable connector if removed, ellim12As15. Net ..................26C

Handy Fittings for Use With Above Connectors.

MCIS


MC1S Microphone switch Attaches botween male and female Push-to talk or alide connectors. permanent connection. permanent conne

MC1F-A Angle Connector Right angle female cable connector for use with any above male typea. 12.1317.

MC1P Phone Plus Adaptor Makes a standard phone plug out of MC1F or MCIFA connectors. 12 A 818.

CCC-1 Cap and Chaln To eeal chassis units when not in use. Keep dust out. Fit either
lypes 75 or 80 . 12As19. Net Em.

32c

## (3) <br> 8witch For Phonos, <br> Record Players, Etc.

Used to quickly connect Record Players, F. M. Attachments. Rocord and similar devices into the audio Provides changeover from radio sets. record player. Enables the suppresston of the radio on the "phono" position.
position.
12A654. Net Fab. . . ..... $\$ 1.32$ $\begin{array}{r}2 \\ 2 \\ 3 \\ 4 \\ 6 \\ 8 \\ 10 \\ 12 \\ \hline\end{array}$


For Attachins to Cable
tact of the sleeve and prong type, with ecrew type coupling ring type, with ecrew type coupling has
to prevent accidental disconnection. Spring cord connector takes cables Spring cord connector takes 12 A 320 , 2 Con. Male MC2M. 12A320, 2 Con. Male MC2M...62e 12A321, 2 Con. Female MC2F. 62c For Chasals Mounting
A shielded chassis connector for $\mathrm{sf}^{\prime \prime}$ hole. With lock nut and washer. 12A322. 2 Con. Male PC2M ...28e 12A32S. 2 Con. Female PC2F.. 28 e

Type 91
8 and 4 CONTACT CONNECTORS For Cable or Choula


## 91-mC3M

## 91-MC3F

## For Attaching to Cable

Can also be ncrewed into micro-
 connector and cap. sheming cord polarized. 3 contact connectors take cables up to $\psi^{\prime \prime}$ dia.: 4 contact to K/n $^{\prime \prime}$ dia.
12As24. 3 Con. Male MC3M . 65 c 12A326. 3 Con. Female MC3F. 86 C 12A326. 4 Con. Male MC4M... 71 C 12As27. 4 Con. Female MC4F. 71 c For Chassis Mounting Mounts in 18 " hole in panels or chassis up to 3 thick.
12A331. 4 Con. Female PC3F.-32c 12A831. 4 Con. Femalo. PC4F. 36 c chassis units ....................32c


## CONNECTORS

Chrome plated, \%"
27 threads.
A-Screwe on top on stand to permit easy removal o
12A3s3, s Con. 850 A B 12A3s4. 4 Con. $71 c$ B-For use between mike and stand, providing cable outlet at side, so it is not necessary to run cable thru stand.
12As3s. Net Fa.


## JONES

 Plugs and socketsType "300 serieg" polarized plue and sockets pluge shells and cable clamp. Small size with heavy tight grip contacta, yet easy separation.

| Con- | Plug | Bockets |
| :---: | :---: | :---: |
| tractes | No. Ea. | No. ${ }^{\text {I }}$ |



## PANEL TYPE <br> Plugs and Sockets



Same as above except with angle brackets for panel mounting.


 like 75 N abov
cable clamp.



2 way phone plug. bakelto mhol. 12A861. Type 75 ...........Net 380 2 way plug, shielded metal shell. 12As62. Type $75 N$.........Net 580 8 way Mlerophone pluy, bakelite. 19A368. Type 76 ..........Net 58 c 2 way plug, shielded metal shell 2 way plug, shielded metal thell
like 75 N above, except has bullt-in
 Extenslot Jack, 2 way, tibre shell. 12A365. Type 100 .........Net 7Be

## Long Frame Jacks

See dlagram below A1. A2, and A2A. 12As66, No. 1. Open Circuit.. 38 . 12A367. No. 2. Circuit Closing. 47 c
18is68. No. 2A, Closed Circuit 47 c


Diagram helow list types available in each; Midget and Junior Jacks. JINIOK IACKA. Neat. small mounting in ${ }^{3}$ " panel hole. Extends $12 / 4$ back of panel.
MIDGFT JACKS. Extremely compact. Mount in ${ }^{3}{ }^{N}$ hole. Special

#  

(A) Two-Way Etandisrd Models. Bakelite barrel slze $8 \mathrm{kN} \mathrm{M}^{\circ} \mathrm{m}$

 (B) Set Ea. 58 Be: 10 Metal Rerral Two way type. barrel $1 f^{\prime \prime} \times 1^{\prime \prime}$. 12A388. Net Ea. 47c: 10 (42 Bakelite, barrel aize io"x1". Bolde ug connections.
12A389. Net La 36 c 10 (atal 3acrel size Metal, barrel aize m"x1". Solder ug connections.
12A390. Net Wa. 41c; 10 (3) 37 c Bakellte, f1" dia., \%" thick. Stay. cord anchor.
12As91. Net Ea. 55 c : 10 © 60 (E) § Was MIle Mine Eareint $55 c$ $12,3822^{2} 55 \mathrm{c}$ 71c

## Portable Type Jacks

## 

Single Opon Circait. Will it all standard plugs. Ideal to make up extension cords for phones, speaters, etc. Barrel t1"x214".


## Midget Short Jacks

metal assures finest spring action.

## $\begin{array}{lll}\text { Minget A2A } & 12 A 383 & -32 \\ \text { Junior 702A } & 124871 & 82\end{array}$

## 

## 1

D

## 182

 12A398, 3 way for mike pluse. 298


Bakelitte
Bakelite ba 0 contacts and anel N. P. For mounting.



Mallory
Beries 5000
Avallable in six different circuit combinations, all with positive indexing, two, three and four posilions 20 apart. with either ghorting or non-shorting contacts. Mts. holes $1 \% "$ between centers. Ha. push-button type knob

SHORTING TIPE
18, 422, 4 Pole 2 Position, Ea. 8 ? 12A42s, 4 Pole 3 Position, Ea. B8 12A484, 4 Pole 2 Posit TMPI

| $12 A 425,4$ Pole 2 Position, Ea. 3 Position. Ea. 0 |
| :--- |

Jones Terminal Strips
 base: \%"term. centerg, 141 Is $11 / 4 \times 1 /{ }^{\prime \prime} \mathrm{ha日}$ conterl. Junlor 702B - 3 circuit Micro. 12A879, Each 44c Junior $703-$ Single cir12Asy2, Each …..60 versing.
12.338. Each .......60c Micro one Circuit Close ing. 12As80, Each.. 60 Junior 703 C -Double Cir
12A374, Each ......6Be
Junior 701-Interstage.
12ABro, Each .......bsc
cuit Fllament Control 2.s36, wach . . . . . 58 Junlor 704 B - Two Cir 19A306, Each .......68e Junior 705-Twंo Circult 12Asz7, Each ...... Bec

Junior $706 \rightarrow$ Interstace Filament Control.
.740



Type 140
NO.
rye 141

14404222 14AB43 - 14A54 $14 A B 45$ 510 14AB6 14A54S 000 14A551

18
28
488
686

## AMPHENOOSockets*PLUGS* Pittings


"CP" PLEGS
" TYPE SOCKETS AN
Exiremely compact high di-electric bakelite bodies. Quick, easy to mount to chassis or panel with retainer ring supplied. No need of ccrews or rivets. Fit chassis or panels from ${ }^{1}{ }^{1}$

|  |  |  | Plags |  |
| :---: | :---: | :---: | :---: | :---: |
| Btic. |  |  | Stk. |  |
| No. | 1Fa. | Confacts | No. | Ea. |
| 12 A 48 | 80.08 | 4 | 12.458 | \$0.08 |
| 12A49 | . 08 | 5 | 12 A 59 | . 08 |
| 12A50 | . 08 | 6 | 12 A 60 | .08 |
| 12AbI | . 08 | 7 small | 12.A61 | . 08 |
| 12A52 | . 08 | 7 large | 12.82 | . 08 |
| 12As3 | . 10 | 7 comb. |  |  |
| $12 \mathrm{A54}$ | . 10 | 8 octal. | 12A63 | . 10 |
| 12 A 55 | . 12 | 8 loctal |  |  |
| 12 A 56 | .12 | 9 | 12.464 | . 12 |
| 12A5\% | .17 | 11 | 12.16\% | .1\% |

Note: The above sockets and plugs and also the AC receptacles and

MOUNTINGS FOR "S" SOCKE

\section*{AC Ploge

\section*{14 ADA

## 14 ADA <br> 3-14 ADAPTOR SHELL

To Make Up Adaptors as Needed. 'S" type sockets or "CP'" plugs a left (except 12 A 52 and 12A62) snap
into either end and hold securely. into either end and hold securely.
yet may be removed easily. Any combination possible from 4 prong or contact to 11 prong or contact Avallable rith blank side or with
rubber grommet at side for bring rubber grommet at side for hring ng out leads.
12A119. Less side hole ......... 114
12 A 120 . With side hole ....... 14
AO RECEPTACLES and PLUGS
Handy, compact and can be mounted directly to panel or chassia same as plugs or sockets at left at is holaers for 110 V ., 10 amps a 250 V. Receptacle has both solder lugs and binding scremes; plug has binding screw .
12.A121. Plug, Net Ea, ....... 18 c
12.1122. Recpt., Net Ea.…..18c


For use with "S" sockets, "CP" 3-30A-For extending any of the plugt, AC receptacles and plugs above sockets, plugs or receptacles (A) Steximounting plate with alot- $12 \Delta 68$ a cabinet or wall. E................... Ea. 4 ( ted mig. centers to fit centers from
 (2s-19) "For Above Surface units valng above "S" sockets, "CP" Ralees the unit ${ }^{\text {pl }}$ " above or below surface. Has 4 knockouts in side Lor wire entrance. Ideal for use on bench breadboard layouts, $12 A 68$

Net Fa. 7 (
BHIELDED CABLE CONNECTOKS


Type PF-PN, made of "g'" sockets and "CP" pluge snugly covered by srommet protects cable from abrafon. Small sturdy, casy to take elon. Small, sturdy, easy to take cables up to ${ }^{\text {an }}$ diameter. Black japanned. Famale Net Fif. Contacts

3-38A-To side monnt on wall or work bench any of above sockets, satile outlet for radio or electrical work. Net En 4 C 61-61-For below surface on al ypes radlo and electrical appara tus. Use with above sockets, plugs


Type 16 CAB Cad, plated steel to blip over above cable or AC connectors. Locks them firmly together in spots where accidentul pull-apart is to be guarded against. Suppited in sets of one male and one female. 12 .................er set 18 (

## SHIELDED AC CONNECTORS <br> Most practlcal of all sor use on <br> IELDED AC CONNECTOR <br> 

 AC. Assembled from the same molded bakelite unitg as listed shells, making them unbreakable and fully shielded. Rubber gromand fully shielded. Rubber grom-met protects cable. Acconmodates met protects cable. Ach diameter cable. Easy up toke apart
 CABLE CLAMP
 For use with cable or AC connectors listed in place of grommet in place of grommet.
Relieves strain a $n$ d can also be used on panels and chassis to anchor cables firmly in place.
into any shape hole $\mathrm{i}^{\prime \prime}$ to $\mathrm{F} /{ }^{\prime \prime}$


3-RPH Rubber


Handie
above AC Cable Plugs Into Easy
GA88 Units.


## (A) "MIP" SOCKETS

The MIP is a sturdy bakelite socket molded together with a steel mounting plate so it cannot vibrate Prons Stly. No.

$\left.\begin{array}{ll}7 \text { mmall } & \text { 12A96 } \\ 7 \mathrm{large} & \text { 12A97 } \\ \text { Octal } & \text { 12.198 }\end{array}\right\} \begin{aligned} & \text { Cholce Ea. .. } 8 C\end{aligned}$ Octal 12.A98\} Net Ea. Ocial 28 c 12.1102. Polystyrene UHF Octal 28C
12.A103. Polystyrene CHF Loctal MIDGET "MIP" SOCKETS cept smaller. For compact needs. ${ }^{1}{ }^{3}{ }^{4 \prime}$ mounting centers.
letal-Mounts in 1 is" hole. 8 E
$12 A 100$............. Net Ea. Lortal-iounts in ir hole. 12 C

##  <br> 4



## 78-7P and 54-7P pit

 type 1R5, 1 S4, 185,1 T4, 9001,9002 a n a 9003 tron Bantam, Jr.. HY 113, HY I15 and HY 125 tubes. 78-5P fits Ray. serics. 78-s3S fits RCA Pee Wee and Cetron CE-5BB and CE20 photocells. Mount in a s" $^{\text {" }}$ hole with snap=on cept 54-7P, which is polystyrene. Stle. No. 12A123 $12 A 125$$12 A 124$ 12 A 124
$12 . \mathrm{A} 126$ $12 . A 12$
12.112
12A1\% $\quad 78-635$ $\left.\begin{array}{l}\text { Type } \\ 8-7 P \\ 8-511 \\ 8-5 P\end{array}\right\} \begin{array}{r}\text { Net Ea, } \\ 12 C\end{array}$

 Speaker Plugs Or Cable Connectors One-piece molded securely rlveted. Deep molded holes for wire
No. Irongs Ee

12.1132

## BULE TESTER SOCKETS

 Combination 7 con large or small 7 -prong tubes. with large con ing dial or flashligh
bayonet base. bul ulbs with
1? i136. With Nig. Plate, Ea. 32 C compact socket for acrew
 bulbs. Mounts in $5 / 8^{\prime \prime}$ rurnished. furnished. 12.113\%


## (B) Type "RS" Bakellte <br> (C) Type "RSS" Steatite

Type RS, a popular socket for re placement needs. Bakelite body assembled with retainer ring to re movable steel plate with slotied mounting holes to fit $11 \mathrm{~h}^{\prime \prime}$ to 1 is mtg. centers. Socket body, less plate can be used directly to chassis or panels and held in place with the retainer ring.
Type RSS is identical except for Steatite body.
"RS" BaLelite

| 'R8 ${ }^{\text {B }}$ | elf |  | 'RSS'st | steat |
| :---: | :---: | :---: | :---: | :---: |
| Stl. | Net |  | St1. | N |
| No. | Ea. | Prong | No. | E |
| 12A104 | . 08 | 1 | 12.111\% |  |
| 12A105 | . 08 | 5 | 12.113 |  |
| 12.1106 | . 08 | 6 | 12. 114 |  |
| 1:A10\% | . 08 | Esmall | 12. 1115 |  |
| 12A168 | . 08 | 7 large | 17. 1116 |  |
| 12A100 | . 11 | 7 comb. |  |  |
| 12 A 110 | . 11 | 8 octal | 12.A117 |  |

## TMINIATURE PLUGS

## Extremely compact, Ideal

 for all plug-in connections where space is limited. Sockets mount in 5/8 dia. needed.


Eocicets
 HHELDED TYPF,


For use where shielded pluge ere desired. Male may also be used with sockets above. Cad. plated brass shells, $17^{\prime \prime}$ long $x$ "沼" dia For cables up to \&"O. D. Cat. No. Con-
Male Female tacts Net $12 \Lambda 142 \quad 12.144 \quad 3 \quad 216$

## Miniature Connectors



Only $1^{1 / 6 " x} x^{6 / \prime} \mathrm{m}$ etfl bhell ovar bakelite elements. Male plug hap 2 screw holes 80 prongs can be recessed as in illustration. sake
cable to ${ }^{\text {F" }}$ dia. $\begin{array}{cccc}\text { cable } & \text { Male } & \text { Female } & \text { Net } \\ \text { Con- } & \text { No. } & \text { Ra. } \\ \text { tacts } & \text { No. } & \text { No. } & \text { 216 }\end{array}$
 for use male plugs. Mtg. Centers $11 /{ }^{\prime \prime}$. 12A150-3 contact $12 a 151-1$ contact
Choire Ea. 21 c
 16-C'C11. Chawns Type. Consists of one threaded shell to be used with "S" type sockets or the AC receptacles above and
a shell that slips over the "CP" plugs or AC plugs.


## Base Mounting Sockets

One - plece solid bakelite socketa for
surface mounting uriface mounting
1 mtg. centers. 1

## .

12.A15\%-4 Prong
12. $153-5$ Prong
$12 . A 153-5$ Prong
$12.4154-6$ Prong
$12 A 155-7$ Prong
12A186-Octal.

270
286
326
356
.386

#  

## SOLDERING LUG ETRIPS




## BAKELITE TERM．STRIPS

Note the type Ius used on this strip． Made of 고N＂high grade black bakellte With terminal lugs mounted into place． Terminals have non－removable collara and equipped with 8／32 ecrews and have mounting holes．

| No． | Term． | Par |  | No． | Termin | Fan | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 18 A 1276 | 2 | 30．14 | S0．18 | 12A1z81 | 7 | 50.48 | 80.42 |
| 12A1277 | 8 | ． 21 | ． 20 | 12 A1282 |  | ． 63 | － 6.42 |
| 12A1278 | 4 | .30 | .28 | 12A1288 | 9 | O | 8 |
| 12 A 1279 | 5 | ． 88 | $\cdot 32$ | 12A1284 | 10 | － | 8 |
| 12A1280 | 6 | ．38 | .35 | 12A128\％ | Lugs Ont | 05 |  |



No．TJpe Leth，Hato of Pio of 100
にに年 $12 A 1288$
$12 A 1290$ $18 \mathrm{A1290}$ 12A1291 H

$\begin{array}{lll}\text { Fr G I I Pkg．Pkg．} \\ \text { No．Type Inth Hole of } 20 & \text { of } 100\end{array}$ No．Type Lesth．Hole of 20 Of 100


 －Heavy duty type as used on auto－ motive cables，etc．

## Lug Assortment

100 assorted lugs，cable clamps， small clips，etc．，in varied types and sizes．Always handy．
18ab－Per asmortment ．．．．．．．．． 860

## Terminal Assortment

25 assortod terminal strips with lugs attached．A BARGAIN． MTM SPADF TYPR


Cad．plated．6－32 screw end 12A1802．Pkg．of 20．11c 10043 c
Angle Mounting Brackets



Snap－In
Trimounts A handy lastener wide－ Iy used in radio．Illus－ trations a re epproxi－ mate actual size． （B）－12A1806 per ples． （C）$-12 A 1307$ of 10 （D）－12A1808 11 c
Per Aggortment of 40 Per Aggortment of 40 Nickel 11 ）BIVGis Nickel plated． $1 /{ }^{\text {＂}}$ diam


Choice 25 1or ．．． 16 c
（2）EYRHES （2）EYRL．Eiss
kel plated，fong．

$[$
 12A1312－7－64＂diam． Choice 25 for diam． tment of 60 Freiste Per＂Absortment of 50 Fzelets 18ing ．．．．．．．．．．．．．．．Rivets





 With Tapped Moles Designed for assembly of metal cabinets，chassis， cover plates，otc． $8-32$
tapped hole and plain hole．Heavily plated． 12．11310－1／2＂x $1 / 2^{\prime \prime}$ ．Da． 40100 3c
 12凡18\％0－4＂x\％＂．Ea．60 10 （2） 40 2s Amorted Brackete．Includine mome of above and other useful

Per Aest．．．．．．．．．．．．．． 2
（A）Insulated，solderlese，side Bcrew connection．Bed or Black． 12A1012－Net Ea． 14 c 10 （2）13 （B）Insulated，prong split in center for spring action．Red or Black． 12A1043－Net Ea． 160100140 （C）Nickeled brams，spring section tinned．1＂，6－32 thread．
12A104t－Net Ea．Bc 10 （a）8c （D）Metal，split prong．Hex shank．
18＂．6－32 thread．
18A1045－Net Ea． 8010 （ 80 （E）Phonphor brome spring．Hex shank．Removable 6－32 Ecrew．
12A1046－Not Ea．Bo 10 © （ P ）Insulated，perfect solderless connection by tightening knurled collar．Over all $1 \%$ long．
12A10s0－Hed or Black
116
$.10 c$

BANANA PLUGS


F G E I （G）Insulated，midget，sloeve \％m long．Ideal where space Is limited． 12A1051－Red or HRack ．．．．．．． 110 10 ．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 10 e （H）Nickeled brass，solderiess con－ all length 18 m
12A1068－Net Ea．8c 10 ．．．． 80 （I）Nickeled brass，shank itif bos nana plag，tip fits all phone tip jacks．1\％＂over al
12A1053－Net Fa．8c 10 （1）．．．．70 （J）Threaded shank for attachin to instruments or for replacement in test prods．
12A1054－Net Ea．So 10 （9）．．． 8 e （K）Insulated，easy grip type．Nut and bolt assembly．Red or Blacis． 12A1055－Net Fa， 28 e 10 （1） 270
（L）Insulated，tip unscrew for sol． derless connection 12A1056－Net Ea．．．．．．．．．．．．．．．27e

（A）Nickeled，fits up to 7 I＂panel． 12A1047－Net Ea．So 10 （9） 80 （B）Insulated head．Mounts in $1 / 6$＂ hole，up to \％＂panel．Red or Rhack． 12A1048－Net Ea． 11010 （100 （C）Takes elther phone or banana tips．Insulafed heed．Mounts in $1 / \mathbf{K}^{\prime \prime}$ hole in up to $1 / \mathbf{N a}^{\prime \prime}$ panels．
12A1019－Niet Fa． 14 c 10 （5） 18 c

| PMONE TIPS | $\begin{gathered} \text { Standerd } \\ \text { Type. } \\ 12 A 1085- \end{gathered}$ |
| :---: | :---: |
|  | Dos． 180 |
|  | for st． 20 <br> Dany to |
|  | Solder Type． 12A1086－ |
| OTDER FIOU 4 | 5oz．26c |
| SOLDER FLOWS IM MOUE | 100 |



For recording units，recelvers and many makes Auto Radios．
No．12A1087－Pin Plug．Ea．． 80
No． 12 A 1088 －Socket ghield 150


Irandle 1，000 Folts at 10 Amps． glant size insulated for U．H．F．，dia－ chermy，otc．
Plug．3\％＂over all．
18A1060－Ea．．．．．．．．．．．．．．．．．．．．．．．． 88 ．
12A1070－Ta．．．．．．．．．．．．．．．．．．．．．． 5 Be
PHONE TIP JACKS

（A）AL Motal，phosphor bronse contacts．Mounts in $1 / /^{\prime \prime}$ hole in up to \＃＂panels．Brass N．P． 12A1057－Net Ea．Be 10 ．．．．． （B）Insulated $\mathbf{I s}^{\prime \prime}$ head，phosphor bronze contacts．Red or Biadk． 12A1058－Net Ea． 11 c 10 © 100 （C）Ingulated over nif． $1 /{ }^{\prime \prime}$ head countersunk for enug ilt．\％over thick．Red or Black．
12A1089－Net Ea． 11 c 10 （10） 10 （D）Motal，rlush type．Mounts ia $1 /{ }^{\prime \prime}$ hole，panols up to $\% "$ thick． 12A1060－Net Ea．9c 10 O 80 Phone Tip
Twin Jacks

（A）Sure contact．Flush mounting Nickel tip jacka mounted in bake lite strip． $2^{\prime \prime}$ long， $1^{\prime \prime \prime}$ wide，mount－ ing hole $1 \mathrm{I}^{\mathrm{c}}$ centers．
12A1061－Net Ea．8c 10 ．．．．． 7 e （B）Insulated head jacks mounted on a bakelite otrip， $1 \mathrm{k"} \mathrm{wide}$. long，\％＂apart．


12A1062－Net Ea．．．．．．．．．．．．．．200 Mailory
Bakelite Head
Tip Jacks Roand head type 418，mounts in fe hole In panels up lating washerg．Red or Blacla． 12A106s－Ea． 16 c 10 ．．．．． 13 © Heracon head type 420 ．Mount ia \％＂hole．With insulating washera Red or Black． 12A1064－FA

1410 （1）．120
999－Piece Hardware Asst
Assorted machine ocrema，nuts woes and sizes All Quality Stuff and useful time and time again． 8486.

Per Anst．
99 c

# Clips－Connectors：Test Leads and Prods＊ 

A type for every need．Btandard packages of 10 clips； 5 maried + and plain．Typem marked With anterisks（ ${ }^{\circ}$ ）are olid copper．others are fieel with bright fininh；the batcifteriocking necks prevent jaw offset．FINEST made＂MUELLER＂Cniversal Clips．


BATTERY CLIPB WITH GRIP TEETH－FIG． 1

| $\begin{aligned} & \text { Mrre. } \\ & \text { Trpob } \\ & 24 \mathrm{~A} \\ & 21 \mathrm{~A} \end{aligned}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Ampa． | slico Length | Jaw Spread | Atz． No． | $\begin{aligned} & \text { Net } \\ & \mathrm{Br} \end{aligned}$ | Hox of 10 |
|  | 25 | $27 /{ }^{\text {\％}}$ | $1{ }^{\text {a }}$ ．．． | ．11A162 | 8 c | \＄0．68 |
|  | 60 | 1 | $1 \%$＂。 | ．11A163 | 18 c | 1.18 |
|  | TEST CLIPG WITH MESH TEETHEFIG． 2 |  |  |  |  |  |
| 46 | b | 12／4＂ | \％＂．． | ． 12 A 1000 | 5 c | \＄ 0.36 |
| ${ }^{65} \mathrm{C}^{*}$ | 10 | 13／2＂ | \％＂。 | ．12A 1001 | 86 | ． 66 |
| 488 | 10 | 2 ＂ | \％＂． | ．12A1002 | 50 | ． 36 |
| 27 | 10 | 2780 | \％＂。 | －12A1003 | 100 | ． 70 |
| 27C＊ | 40 | $2{ }^{\text {7\％}}$ | \％＂． | ．12A1004 | 160 | 1.40 |
| 12 | 10 |  | 3／2＂． | 12A1005 | 116 | 90 |

Type 82 has needle between jawn for plercing insulated wires．Ideal for telephone work．Types 27 and 27 c have meshing teeth on 3 sides．
ALLIGATOR CLIPM－FIGS．3， 4 CROCODILE CLIPS－FIGS．B． 6
Fig．is all metal．length ${ }^{2 \prime}$ ．Fig．Either Fig． 5 or 6 ift banana 4 ham insulated red or black shank pluga．Type 85．Fig．B，length 2\％＂${ }^{4}$ over－all length
nana pluge．Asterluk（ ${ }^{\circ}$ ）Indicates Type 85T．Fig．6．6，has standard Type Fig．No．Es． 10 phone tip on one jaw，otherwise



1．20 1ealo11．Ea．．．． 14010 1or．．．84c WEE－PEE－TEEE CLIP－FIG． 8 For Clip 8 tk．No．Net Ea． 10 For Type 88 Non－Ferrous R．F．Clip 45，45C 12A1014 9c \＄0．75 Whl not heat in high frequency cir 48B， 82 12A1015 10 C .60 culte．Ideal for close places，for



HeAVY DUTY ALhigator clips


## FAHENSTOCK CONNECTORS


（1）Type 2 Brase． $1^{\prime \prime}$ long．\％＂Wide．＂「akes up to No． 10 Wire．Has No． 8 ecrew hole，No．12A1089．Net per doz．29e I＇er 100 No． 14 wire Has No 6 crew hole．No．12A1000．Net per doz． 296 Per $100 \ldots . . . . .$. （2）Type 5 Brass．Has projecting lug to which can be soldered a wire． 1，＂long（not including lug），\％＂wide．Has No． 8 screw hole．Takes to No． 10 wire．No．12A1091．Net，doz．416 Per $100 . . . . . . . . . \operatorname{Ha}_{3} 1.41$
 mole．Takes to No． 16 wire．No， 12 sicaz．Net，to No． 10 wire．Has No． 8
 berew hole．No．12A1003．Net （4）Tצpe 45 Brass． $3 / 4$ high，${ }^{\prime \prime}$＂wide．Takes to No． 12 wire．Has No． （5）Typo 9 Brase， $2 \mathrm{c}^{\prime \prime}$ long，t／s＂wide．Takes to No． 10 wire．Has No． 8 ecrew hole．No． $12 . A 1095$ ．Net per doz． 44 C Per 100. 33.08 （5）Type 18 Brasw． $11 /{ }^{\prime \prime}$ long， $\mathrm{S}_{6 \prime \prime}$ wide．Takes to No． 14 wire．Has No． （6）Type 38 Bronze． 14 ＂long，\％＂wide．Takes to No． 10 wire． lug riveted to clip for various sizt wire or cable．
No．12A1097．Net per doz． 59 c Per 100
Spectal Pricen on Fahenstork Clipe to Quantity Buyers．
Write for quotation，otating types and quantitiee wanted．


Made up of best quality flexible，kinkless wire $48^{\prime \prime}$ to $50^{\circ}$ long

LABORATORY TYPE－FIG．
With removable phono needle chucks and $6^{\prime \prime}$ alim red and black handles knurled at end for finger rip ease．Heavy duty kinkless wire with knurled grip handle，insulated solderless plugs．
$11 A 166$, ICA Type 400 ．Each $97($ 11A166，$P$ CA TONO NEEDLE TYPE－FIG． 2 With chucks in which phono nee－ des can be replaced at will．Slim handea and extra hexible kinkim $4^{\text {＂}}$ red and black hendles．FO I1A167，ICA Type 382. Lnche $C$ UNBREAKABLE TEPF－FIG． 3
Long，narrow brass handles cov－ ered with shockproor live rubher sleeves．Necdle Doint tip prots and insulated solderless plugs． 688
$11 A 188$ ．ICA Type 331．Each

ALI PIRPOSE TIPE－FIG． 4 Sturdy slim $6^{\prime \prime}$ Fenoline handied with sharp point tips．Equipped with banana plugs allowing for in－ terchange of spsde lugs，phone tipe or alligator clips all supplied． 11A169，ICA Type 312．
（＇omplete Kit ．．．．．．．．．． ． 47

## HIGE TOLTAGF TTPE－FIG． 6

 Safety up to 10,000 volta．For use wherever high voltage prevails．Has low voltage drop due to heavg cop－ per leads．Large diameter $6^{\prime \prime}$ prode Fith guards to prevent finger sllps． Leads are of 18 gauge $67 / 36$ copper with beavy wall．Handlea and prode of bakelite with very little metalexpoged．
exposed．
－ 2.35

## TEST LEAD PRODS，WIRE AND CHUCKS


（1）With screw in chuck to hold phono needles．Red or Black Feno－ lite hanतle．
11A173．5＂long
280
（2）With threaded in a a $v$ y duty phone ins． 5 Fed or Black Feno－ phone tips．

## lite handie．Each

（3）Each ．．．．．．．．．．．．．．．．．． 290 （1）Fith threaded Eolderless plug． （4）Solderless split banana pluc． （4）Solderless and covered by in－ Set scrow on Black 12A1093． 2 为＂long ．．．．．．．．．．．．．．27c 11A177． $4^{\prime \prime}$ long ．．．．．．．．．．．．．．．．．．．．． $366^{\circ}$

##  $B$ meorisectind TIONCLIPS

（A）With Phone Mp Jack In Shank Clip has insulated oh a $n k$ will phone tip jack in barrel．Connects
clip to anything equipped with clip to anything equipped with Red or Black．
 （B）With Combination Jack in Shank－For Phone Tip or Banana Plut．Red or Black．
12A1u21．Net，Each ．．．．．．．$\$ 4$（

## Neutralizing Tool <br> 

BARGAIN．
30c
Sturdy，unbreakable．Has metal collars each end with $4 \%^{\prime \prime}$ and f＂ hex sockets．

NE－O－LITE
ELECTRIC TROUBLE Handy for radio men and electricians for test－ ing AC lines，polarity of AC or DC for blown luses，tracing ground line in AC circuits．as an RF indicator，spark plug and cable tester． etc．Can be used on voltases of 60 AC to 500 volta AC or DC． 358
LA84．Ench ．．．

To make Jour own，and replace－ ments for all typen tent leads． （b）Heavy duty bakellte prod for high voltage needs．Has innger guard ring，minimum of metal ex posed．Length $6^{\prime \prime}$ over all．
11A178．Black Bakelite．．．．．．．B7a （6）Heavy duty bakedite with threaded midget sharp polnt ex－
posed only \％＂．Measures $2^{\prime \prime}$ over all．
12A1034．Black Bakelite．Ea 320 （7）Push－on type Dhono needle chuck．Forces into prod handles． 12A1035．Fnch ．．．．．．．．．．．．．．．．． 0
（8）Sharp point threaded phone tip screws into prod handles．
12A1036．Fach ．．．．．．．．．．
（9）Phono needle chuck that screws into prod handles．
2A1037．Earli
10）Non－kirik，llexible test lead wire．Consists of very line tinned stranded copper wire with heavy vall of live rubber insulation． 25 Ft．Coil，Red or Black．S？ 100 Ft．Coil，Red or Black．\＄1． 52
No．22A1f．En．．．．．．．．．．．．


Ideal for use with tept leads，etc． Which have banana pluge．
（1）Insulated shank ilts banana plug to convert it to phone up plug or sharp point prod．
12．A1038．Red or Black．Net En． 100 （2）Insulated shank fits banana plugs to convert to spade terminal 12A103\％．Red or Black．Net Ea． 120 （3）Metal shank fits banana pluga $r$ an be soldered direct to wire leads．
12A1040．Per Doz．
$\begin{array}{r}448 \\ \hline 3.28\end{array}$
（4）Insulated shank fite banana olugs．Chuck takes phono needlee．
Easy to remove for replacing．
12A1041．Red or Black．En． 130
WESTON TYPE TEST LEADS

grip tipa
$\mathbf{\$ 1 . 0 3}$

# WASHERS ：SCREWS－NUTS，and other RADIO HARDWARE 



MACMINE SCREMS
BEI designates Binder Head；RE，Round Head，and BF，Flat Head．Top quality
plated brass and steel machine screws at prices that represent a nice ating over uaual quotations for olmilar quality．

SIZE 2－56 MACHINE BCREWS Lgth．RHE Stl．HH StE．FH 8 th



 Ligth．RII St\＆．

## 14＂ 19.1988



SIZE 自－18 MACHINE BCREWS 19A894
184895
Choice above，
100 for $51.25 \quad 500$ for 42,25

##  <br> Mexagon Nuts <br> A Size for Every Need． All have plated flalish on ．D．8toct

| For | O．D． | Stocl | Per | Per |
| :---: | :---: | :---: | :---: | :---: |
| Screve | Size | No． | 100 | 800 |
| 2－56 | 覓＂ | $19 \mathrm{~A} 10 \% 6$ | ． 31 | S 1.25 |
| 4－40 | $8^{7 \prime} \times$ | 191789 | ． 31 | 1.25 |
| 4－40 | \％＂ | 18A105\％ | 31 |  |
| 4－32 | \％＂ | 19 A790 |  |  |
| 6－32 | 1 | 19．A79\％ |  |  |
| 6－32 | 考＂ | 19A896 | 31 |  |
| 8－32 |  | 19A798 |  |  |
| 8－32 |  | $19 \mathrm{ATP4}$ | 35 |  |
| 10－32 |  | 198897 |  |  |
| 10－32 | t＂ | 19．4795 | 35 |  |
| 10－24 |  | 19A796 |  |  |
| 10－24 | \％ | 19A797 | 6 | ． 50 |
| 19－24 | 7 | 18A888 |  |  |
| 1／4－20 | \％＂ | 18A798 | 8 | 2.75 |
| 1／4－20 |  | 18 A795 | 85 | 2.75 |
| 1／6－28 | I | $18 \mathrm{A80}$ |  |  |
| ${ }^{18} 8$－18 | T | 18 A 801 | 85 | 3.96 |
| $\mathrm{IB}_{6}-24$ | 1／2＂ | 18.1898 | .85 | .86 |
|  | LAS | C STO | NU |  |


| $\begin{aligned} & \text { 4-36 } \\ & 6-32 \end{aligned}$ | 4＂ 19.11083 |  | 25 for | 100 for |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | －25 | 80 |
|  | ＊＂ | 19.1811 | ． 25 | 80 |
| 10－24 | \％＂ | 19.4848 | .26 |  |
| 1／4－28 | I＇${ }^{\prime \prime}$ | 19.1844 | ． 26 |  |
|  | KN | TRIWED | NUTS |  |
| 10－32 | \％＂ | 184840 | .25 | .80 |

RACK SCREMS and WASHERS


| Steel－Bright Nickel Finish |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Atock | Sime and |  | Plog． | Plaf． |
| No． | Thread | Legth． | 25 | 100 |
| 19 A 930 | 6－32 | ${ }_{1 / \prime \prime}$ | .11 | 39 |
| 198831 | 8－32 | 1／2＂ |  | 50 |
| 19．483\％ | 10－32 | $1 / 2{ }^{*}$ | 7 | 50 |
| 19A985 | 10－32 |  |  | 55 |
| Cup Type |  |  |  |  |
| 19A93E | Size |  | .15 | 53 |
| 19A985 | Slae | 8 | －15 | .53 |
| 18A98 | Slze | 10 | ． 15 | $\cdot 53$ |




## METAL WASHERS <br> （8） $0 \sin _{\mathrm{G}}^{2} \mathrm{~S}_{\mathrm{H}}^{2}$ <br> Plated on brass，steal or bronze

Stoo FT．AT TYPVEIG．E


Self Tapplng METAL SCREWS
Cadmium Platod


Tap Screw Assortment 100 Assorted，including some of above special self tap styles and other regular tap screws in pop ular sizes．
19ass．Per Assortment ．．． 600


Phillips Type Self Tapping Screws
The acrew that goes in faster a $n d$ stralghter with less effort．Perfect
fit of Phillips drivers fit of Phillips drivers
prevents burred hed and marred work



Cholce，
Per Doz．
27c


Ideal for insulating needs on metal panels．The flat bakelite types are especially slzed for mates as fol－ lows：For 12A1s77 and 12 A 1378 use 12A1383．For 12A1379 use
12A1385．For 12 A 1880 use 12 A 1884 12A1385．For 12A1880 use 12A1884 fxtruded thickness

> FIBRE EXTRUDED TYPE



BRASS－NICKEL PLATED


 | $10-32$ | $19 A 9: 6.29$ | $10-32$ |
| :--- | :--- | :--- | etrvicing volume controla，

etciges．
lital Por Anst．

## WASHER ASSORTMENTS

 100 Asgorted Flat and Extruded 19A986．Per Washers． 101986．Per Asst． 45 c 100 Asborted Hlat BAKELIT FIBRE Washers．19Ag7．Per Asst．

45c

$\rightarrow$
＂C＂WASHER ASST．
$\qquad$

26

[^0]01074


Ornamental Head Screws 6-32 statuary bronze with rosette head.
18A980. Assortment of $25 \ldots 24 C$


Stock
NO. 19A1014 $19 A 1016$
$19 A 1016$ 10A1017

Brass Nickel Plated Mexagon Nuts $\begin{array}{lll}\text { Size Pkg. Pkg. } \\ \text { Ins. } & \text { of } 20 & \text { of } 100 \\ -36-14 & 3.88 & 3 .\end{array}$

Nickel Plated FLAT ivit $10-32$ - 10.


## Cat.

 prk. pke. MOUNTING NUTS For twitches.
controls, etc.
19A979. PkE. of 15 24 C
Low Prices on StandOff Insulators-Bushings 1nlu for standard machine serew sizes No. $1-\% \%^{*}$ SQUARE INSULATOR Etook

## 19A1092

$18 A 1363$
$12 A 1364$
High

10A1001. 1 Ing. lapicol, $\frac{3}{}{ }^{\prime \prime}$ NO. $2-3^{*}$ BQUARE INSULLATOR $19 A 1060$
$19 A 1365$ $12 A 1365$
$12 A 1366$ No. 8- \&" $^{1}$ ROUND INSULATOR 19A1054 6-32 ${ }^{1 / 4} 106$ NO. 4-1/8" ROUND INSULATOR $12 A 1369$
12A1388

## 19 A1086

$18 A 1067$
$12 A 1367$

$1 \%{ }^{\circ}{ }^{\prime \prime}{ }^{6-32} 107$ up to $1 /{ }^{1}$ "thick, Bushing ${ }^{12}$ dian 12.1870 . Pkg. of 12 ( NO, $6-9{ }^{\prime \prime}$ ROUND LNSULLATOK 1\&A1372


 inreaded for $4=20$
...........



## 999-Piece Hardware Assortment

Machine screws, nuts-many typea and sizes - washers, lock, shake proot, flat, fibre, bakelite- rivets, screws, etc., etc. -at least 999 pleces-it's all mixed in a fibre can but is Quality Stuff and usefut time and time again in any walk New
 New. Per Asst.

99 c

## Handy Assortments_Bargain Priced



WOOD SCREWE
Brass. $1 / \mathrm{lb}$. pkg. approx. 200 pieces. Assortment of most popular diame 19A969. $45^{\circ}$
Per. Plag.

## METAL PACFRS AND

 BUSHINGS If andy for countless needs. Some tapped for $6 / 32$ and $8 / 32$.25 topl.
18 A20.... 39 C


## PITOT

80CEETS
 diel light sockets low price.
18 A 1.
Per Asat. 45 E

## MACHIDE

## SCREWS

100 ansorted of many types and bisas. A most handy pac 19A97s. $29^{\circ}$ Por Asst.

MOUNTING
BRACKETS
25 Aesorted of many types and alses. Very handy have around. 18A7.
Parst. 35

MEEAT
WABHERS
100 assorted

Insulating
WASEIERS
100 assorted 18 A2


BAKEITTMU AND FIBRE WASEFBRS
100 ansorted bakellte and il. shoulder wamers. pacors. etc Many variod 1208 and types. 19A975. $\quad \overbrace{}^{\circ}$ HBAAGON NUTR 100 sssorted /36, 6/32, 8/32 and other slses. 19A974. $19^{\circ}$ SNAP
BUTTON
IOLEFPLUGS Buy.
18A10. 29
Per Ast.


COIT FORNS 26 assorted paper coil forms from $14 / 1{ }^{\prime \prime}$ to $31 / 4^{\circ \prime}$ long
and $T^{\prime \prime}$ to $3 / 0^{\prime \prime}$ diam. Ideal to wind your o win needed itweye colls, chokes, etc. work.
$17 A 289$.
Per Asst. 25 Wlre

## TERMINAL

 10 Assorted 20 Assorted ofRUBBER
CROMAIFTE, CHAS8I8 MOUNTB ANH BUMPRES
60 storted rubber items bo


## Most Popular

 MARDWARE Mandy to Get at in These Glass Jars
## MACEMNE GOREWS

100, cadmium and miokel piatel steel and brass screws in most popularly used sises in round, flat. oval and binder heads. An assortment that io handy for all purpose needs in handy glame, ecrow 19A961. Per Aest. $35 e$ 100, 6-32 machine screws, assortea hoads iongth and finiohes, in handy elass jar. $\qquad$ 40 19A1005. Per Abet all 8-48 machine screws

45 machine screws

11 10-8 Per Asst. of 10b................ machine screws. machine screwn of 100 50

> HExAGON NOTB

100, steel and brass nickel and cadmium plated to fit serews cose tained In above ecrow absortmonk All in handy glass jar. 19A962. Per Asst.

250
100, metal, cadmium and nickel plated plain, various typen ohake proof, tibra bakelite and lock type In sizes that go with above acrewn All in handy glass jars
19A968. Por Asst. ........ $25 C$ 19a968. Per AREt. .........
SOLDERING LUGS
100, assorted various tjpes and sizes, handy for anyone who doed any soldering with wire.

30 c

## Escutcheon and

Name Plate Screws
60 Asported small esctitcheo screws in envelope.
18A19. Per Assortme
24 e

## FAHENSTOCR SPRING CLIPS



Handy Assortment


25 Assorted Brackets, cable clampe and fuse clips.
19A1065, Per Asst.
25c
most useful most useful sizes thicknoss For 12 Assorted of Metal button uso any plaoovarious atyles, With spring cushioning is do shapes and fin llanges. A Real sired against vi- ishes, All very oft needed in radio and electricas -ork: Included are eponge rub. washera tor lloating condensers, otc. A most of hard to get items.
19A日 76
Per Asst. 60

19A1086. S5C
Per A訳.
 ration. good valu


ANSASCIK

## Bushings. Spacers - Grommets•Etco

## Ti Eushings, <br>  Spacers <br> 

Avaifable in Insulated or Brase Quite the thing for ralsing con©ensers, transformers, sub-panels,
 1:A14-19 14 19 SI459 EAch For $12 M 1450 \quad$ \%" 1841480 .03 "23

 $12 A 1454 \quad 1 / 412 A 1464.03$. 28 $\begin{array}{lllll}12.114 .55 & \% " 1241464 & .03 & .28 \\ 12.41456 & 1.2 " 12.11466 & 04 & .31 \\ 12.4148 & 08\end{array}$ $\begin{array}{lllll}12.41456 & 1.2 & 12.11466 & .04 & .36 \\ 12.4145 \% & 3^{\prime \prime} & 13.146 \% & .05 & .41\end{array}$ TIRFADED TVPE BRANS 4 $6-32$ scren, Au are $1 / 4^{\prime \prime}$ dia. take a
 $\begin{array}{llrr}1241470 & \% & 00.03 & 30.28 \\ 1 \% A 1471 & 1 / 2 & .04 & .35 \\ 12 A 14 \% & 34 & .05 & .48 \\ 12 A 1473 & 1 " & .08 & .48\end{array}$ Hushing and Spacer Ammortment 25 Assorted threaded and plain,
variuus lengthy and din.
18A?O. 1'er Asut. of sj..... 39 . TMREADED BRASS RODS


Ideal for making your own long length. Snpplied in $12 n^{\prime \prime}$ lenethesed length. Snpplied tu 12 " lengthe. | $12 A 14: 4$ | $6-32$ | $\$ 0.22$ | 20 c |
| ---: | ---: | ---: | ---: |
| $18 A 1473$ | $8-52$ | .22 | 20 c |
| $10 A 14 \% 6$ | $10-32$ | -28 | 26 c |



Insulated Panel and Chassis Bushings
(A) Auay In tspe, forces into metal or any type panel or chassis hole. any need where a grommet or and dressier than rubber types.
(A) Insulated Smap-In Type

| 6tw. | Hole |  |  | Net |
| :---: | :---: | :---: | :---: | :---: |
| No. | Size | I.D. | Lons | Ea. |
| 12.114\% | \%" | ${ }^{13}$ | "¢" | 8 B |
| 12.114:8 | Is | ${ }_{1}^{4} G^{\prime \prime}$ | \% | 106 |
| (13) | Insulated | Kna | ed No |  |
| 1241470 | \% ${ }^{\prime \prime}$ | $13^{3}$ | \%\% | 8 c |
| 18A1480 | '\%" | $\mathrm{r}^{3} 6$ | \%" | 10 |
| 12.1481 | 1/20 | 1/4" | 7\%" | 12 c |
| 12A1489 | $16^{\prime \prime}$ | $\mathrm{f}^{\circ}$ | 12" | 13 c |

> Pipin and Gum PLAIN RIBBER

| MtE. | 1.D. | Stk. | Per | Assort- |
| :---: | :---: | :---: | :---: | :---: |
| Folo | Iole | No. | Doz. | ment |
|  | 寿" | 12.1483 | .23 | of 15 |
|  | 3 " | 12.11484 | . 23 | 18.421 |
|  | \%" | 12.11485 | . 26 | 4 |
| $18{ }^{17}$ | j"* | 1211486 | . 26 |  |
|  |  | M RLD |  | Assort |
| 会" | $\mathrm{I}^{\prime \prime}$ | 12A148\% | .32 | of 15 |
| 31 | 1/6" | 12A1488 | . 32 | 18 A22 |
| ? 3 " | \%" | 12.11489 | .34 |  |
| 8 | $12^{2 \prime}$ | 12,11440 | .32 | 32 |

## Rubber Mounts

For chassis or any place where cushioning is deaired against vibration or Dia. Thlel Ea. 10 Iat
ounts, grommets etc. Asot. . 3 Be

Feit and Rubber Bumpers

(A) Felt attached to metal base in which is embedded a 6-32" screw lor attaching where degired. 1\%.11443. Nu. 3c Her Inz. 23 c (H) Rubber with recessed cavity for No. 6 or 8 screws.

12A1444. "\% dia., *" high, Dz. $25 c$ ((') Felt covered tack bumper, 긍" dia. Can be tacked or pushed in. 12.A1446. Pkg, of 25. Per 1'kf. 28 c | 12A144\%. Pkg. of $100 \ldots \ldots . .35 c$ |
| :--- |



For Cushioning Condensers and transformers to give them floating effect. Usually 3 sets are mounted on 12.11448. Ea. 5c 10 Lots, Ea. 4 c

## Snap Button Hole Plugs

A round, flat head, metal button right into the fanges which snap right into the hole. Holds securely, adjustments, cuver unused to sea etc. Will fit in any material up to to" thick.
Stock
12A1835
$12 A 1336$
$12 A 1337$
$12 A 188$
12A1337
$12 A 1888$
12A1339
12A1340
1
Hole
Diam.
Nom

Askortment of 10 hole pluge
$18 A 10$.
Special, Per Asst. .......... 290


Snap Fastener Battery Terminals Same as used on many midget type batterles. 12A1341. Per set male \& female 12 c

## Auto Body Plug

 Attractively covers aerial holes in auto tops, cowls etc. Large flat-headed machine screw with lock washer rubber spacer and nut. Chrome plated brass

## ANTENNA HARDWARE

 For Auto Aerials
A. handy litt of hardware, etc., for use with all makes of aerials having $21 / 64^{\prime \prime}$ diameter rods. Kit consists of two each, bakelite insula washers shoulder bushing, spider each shield cap and eet of ow lat washers and pour nuts 11A160. Per Kit ............ 7 ?


Aluminum Shield Can

(A) Shield can of drawn aluminum. $4^{\prime \prime} \times 1.3$ " with "8" dia hole No. 3i\%0, Six for.
( B ) For 1 F colls,

Glass or Metal Tube Grid Caps and Shields


Cat. No. Type Description TOCB COST
12.1842 A for standard type glass receiving tubes ........... 1 . $12 A 1348$ G Metal tube Grid Shield. with alot for lead......... 10 © 12.11349 D Positive grip grld clip for glass tubes................ 4 C $\begin{array}{llll}12 A 1350 & \text { D Positive grip grid clip for metal tubes .................. } 4 \mathrm{c} \\ 12 A 1351 & \mathrm{E} & \text { Transmitting tube slze, goft rubber insulated...... }\end{array}$
 12 A1353 C Grid cap for standard glass tubes..................... 1 .
 12A1356 I Isolantite Insulated transmitting cap ................... 210
12A1357


(A) 12A1028. Double Post, Ea. 12c (C) 12A1027. Single.
(D) 12A1028. Heavy Duty, Ea. 18 c

(E) Has banana jack In top and takes wire or phone tip inside knurled insulated top.
12A1029. Ea.
$7 c$
(F) Fby Enaign, non-removable tol.

Black composition.
12.11030, Ea.
(G) Eby Junio
....
stud ip has hole for wre or phone tip. Black composition top.
12A1031. Ca.
(H) Red or Blincls composition 18 c 12A1032. Specify color. Ea.... 11c

Spring Type With 8/32 Stem,


## Tube Shield

Close
type
55, 57. 58. 6A7 shaped tubes dia., dome $112^{\prime \prime}$ slotted for Cap helght Shell slotted for grid lead. body $3^{\prime \prime}$. Chimney exten sion s/g. Over-all helgh assembled 4 tt"
17A285.
12c


Glove-Tite Bantam
Tube Shield
For dip Tspe Tubes
30c
MILLEN Flexible Coupling
Jias univernal joint Designed for appll-
cationg where

18A652.
36 c
BARGAINS IN EBY
All Metal - Non-Removable Top Binding Posts

Features. 10 which clamp moves up and down by turning cap. Provides vibration-procf contact for pin terminets or any type wire. Cap dia.. $1 / \mathrm{m}^{\prime \prime}$.
lielght open $/ \mathrm{s}^{\prime \prime}$. closed ${ }^{2} \mathrm{~m}$. 8/32 stem is " long. Tumble nickel inish.
$12 A 1375 . S p e c i n l ~ E a . ~ H e ~$ Type 95v-IIrs nerule contact for piercing cable without removing insulation. Cap
 long. All brass, nickel fin12A1376. Special Ea. $25 C$ 10.11085 , Identical to ribuve except
$1_{2}$ long stem. (t) Insulated Spring Type

## Binding Post

is dia. black bakelite top, pushes down on spring to
provide hole for standard tip. Has 6.32 standard

18A85s, with marking that can be Easily removed.
18A858, Plain Top, Ea, ......70
Eby Admiral
Type
Binding Post
Knob \%" dia. of molded bakelite, ${ }^{\prime \prime}$ high, base 3) $x^{1 / 4}$ " thick with $8-32 x$ No. 18A85\% No. 18A85\%
Special Each 15c
15 Terminal Barrier Strip \&
Bakelite, $61 / 4 \times 3 \times 1 / 4032 \times 1 /$
binder head garews.
18A8:
Fneh.
Double Binding Post


Double connector type.
No. 18 A 49 , Special
Each. . . . . . . . .
Each. .
$\theta$ OTA
CO
(2)

Por th"Q-Dope" P.A. Test equipment, i.F. transform ers, chassig, panels, racks, etc. Easy to apply. Can be brushed or
11448-1/2-pt. Black
$11449-2$-oz. Sllver Gray
11 AsO
11 As 1 - 2 - 2 -pt. St. Sot. Ber Gray
11A52-2/2-pt. Brown
Black Crystalizing Lacquer fect on metal panels or parts. Can also be used for wood or other materiats. Easy to apply. qulck drying.
 Popular "Telephone Black" Satin rinish lacquer enamel of rich professional looking appearance. Not
glossy. it is a lasting, fast drying, glossy. it is a
one-coat finish.

${ }_{31 / 2 \mathrm{sec}}^{1 / 2 . \ldots .62}$ Chrome Paint
Fast drying ready mixed aluminum painc leares chrome - 1 like finish. ${ }_{4} 11$ oz......35C 8 oz...... 65 C

5R MA
Color Coding Kit
11A57. 88c
Use for sockets, colls, Jacks. parts, otc. Kit contains jar each of red, pray, white, black, brown orange.
purpie, blue, green and yellow hish purpli, biue. green and yellow high
Quality fast drying tacquer enamel. Quality fast drying hacquer enamel.
 Scratch

## Remover Kit

Handy combination kit containing 6 Stain Crayon flllers and 2 bottles of scratch
fluid. For light and luid. por light and 11A58-Per Kit
Scratch Remover Polish Contains proper stains to elimi nate surface $11 A 60-8$
0 $\xrightarrow{1270}$

## Chassis Cleaner

 Removes dirt, Barease,scum from radio chassib, etc. Non-explosive. Will not ins.

The Original "LLiquidope" For holding all wave coll windings firmly in place. Antomatically timhtens winding sund gives tough, protective film, assurlag firmness and preventing characteristlc changes preventing characteristlc changes
due to moisture or weather. Non-lndue to moisture or weather. N
ductive, fast and clear drying.
11 A26.
2-oz. bottle ............... Vipping Varnish
Insulating Dip
21c varnish. Produces smooth, tough fllm, waterproof, ollproof. non-corrosive. For field colls, buzzing or noisy transtormers and choke coils.
Dip or apply with brush. Regnires no bailing, dilies in air. Protects, insuljten.
11A27-1/4 PInt
11A?8-Full Pint


Insulating Cambric
Breakdown voltase 10,000 volts. Handiest item in any service shop
for insulating. Prevents grounds and shorts on field coils, transformers, resistors, con-
densers, wires, otc. Dry, Iellow densers, wires. itc.

11429
35 c


Paper"
High grade fibre sheot parat-
fined for insulation purposes. Fíne for field colls, transformers, etc. .010 thick, shoet of 240 sq . in. 29 C
$11 \mathrm{~A} 30-\mathrm{Per}$ Sheet....... .2


Radio Tape Special 3/8" Width High quality friction tape specially mado for radlo work, whers practical. It ellminates tearing and


## 32c <br> Radio

 Chemical Kit8 radio chem ical necesslties Including Service Cement Rubber Drive Cement. Carbon $X$, Gratoline, Scratch Polish, Non-Sllp Dial Compound, Dial Oil
$\$ 1.32$ 11 A33 $29 c$

11435
$20 z$
21c and sol on Job.
11A37-Pe
or Kit

## Radio

## Fabrics

For Con*tructio

## Radio and Refrigerator Cabinet Repair Kits

 For Refrlgerator, Store, Washing Machine or otier gorcenin cabinets. kit contains lacsolvent, spatula, steel wool. sand paper, mixins tira, bruates ita everythns Sintert ou-
$\$ 1.56$
11A1-Your Cost. Complete Kit.... neta. A complete Professional Kit in a handy black leatherette finish case. Contains sirades of shellac sticks, bottles of light and dark oil
staln. metal shading dacquer, polish. scratech staln, metal shading dacquer, polish, brushes, steel remover, alcohol lanip, epatula, brushes, steel
wool, sandpaper, etc. everything to do a professional job on any type or color cabinet.

$\$ 2.06$ 11A2-Complete Kit
Plastic Cabinet Touch-Up Kits
 of contang stx shades
 touch up scratches and necks in plastic cabinets.
${ }_{\text {Por }}^{1110 \mathrm{Kin}^{3}}$
59c

## KITSHO <br> Radio Service <br> Cement and Solverrt

For Radio and Speaker Repairs. Fast drylng. water proof, vibration proof, Will not crack or shrink. Ideal for speaker
cones and can also be used on glass, metal or bake. venly and dries tough and pliable to a hard finish. With Brushes.
$11134-$
$73 c$ SOIVEXT (Thimner) FOR ABOVE Also ideal for loosening old cement. eloaning switch points, vol-
$11 A 36$
38c

## Cement-Solvent Kit

Consists of a bottle each of cement
29 c
Service Cement in Tubes
Same cement as above except in handy tube for direct application. 11A38-Per Tube ............25c

## Bakelite Cement

 Made especlally for Bakelite and Plastics. Cements bakelite to bakeProduces bond as strong as material itself. Ideal for cablnets, knobs,11A39-2 Oz. Bottle

32 c

## Dial Drive Cement

In handy tube. Cements rubber dial drives to mer Tube ...............25c

Cabinet Repair Glue
Finest quallty fast drying. Whll not cut cabinet. Holds fast.
11A41-4 Oz. Bottle .......... 26 c

Film Splicing Cement
For Splicing Motion Pleture fllms or similar matrial itsolf.

 11A44-117/月" dam. La..... 420 0 apoly turntable relta aboye

> r Repair AEROPLANE CLOTHI

Like used on nowest portables and luggage. Ideal for repairing torn or damaged portable cases. Beautiful appearance.
plain finest quality. (Apply with Fabric Cement

## LEATHERETTE FABRIC

For Instrument cases, portables etc. Same as used by most manufacturers on orlginal cases. Ideal or repalring or new work. (Apply with Fabric Cement

## SPEAKFR GRTLLE CLOTH

Finest quality with beautiful tapes-
try offect pattern. Harmonizes With any high grade cabinet.
l1Ati-Large, slze $18 \times 20^{\prime \prime}$. 11A46-Small, size $9 \times 18{ }^{\prime \prime}$.
$.69 c$
$8 m a l l$

## Fabric Cement

Dries quickly-does not ataln does not become brittle. For all fabrics listed above.
$11 A 11-1 / 2$ pt. can. EACMI.....i4.

These Chemlcals Speed Contact \& Control Repairs


Specla11y made to eliminate noise on controls and contacts with out taking them apart.
GRAFOLINE. To ellminate noise -wound controis, switches and contacts on tube prongs.
11.181-2 Oz. Bottle.
$21 c$
CARBON-X. For noisy carbon montrols. Apply on the worn and nolsy spots and the job is done.
11.23-2 Oz. Bottie .......... 440

CONTACT DOPE. To prevent cor rosion and ellminate noise on Elec rical or Radio switches, contacte relays, etc. Put up in handy, tong
neck tubes
11A\$2-Per Tube
180
LUBE-REX. M oisture repellent rust and corrosion preventive and leaner for all types contacts switches, attenuators, locks, reels guns, dial mechanisms. phone equipment, etc. Clings to metal.
$11.21-\mathrm{Per} 2-\mathrm{Oz}$, Bottle ....29 c CONTACT AND ATTENUATOR SEKVICE KIT. Conslsts of special contact cleaner and corrosion lubricant for noisy attenuators, tuners. all wave switches. variable contacts, etc. A handy kit. 590 CONTACT AND CRISTAL CLEAN ER. To clean crystal and delicat contacts without injury.
11.419-Per 2-Oz. Bottle.

## Varnishes, Stains, Etc., For Cabinet Repairs

FRENCH VARNIGH. Biends the repaired part with the original.
 FRENCH VARNISH KIT. Contains French Varnlsh, Emulsion, Polishing Pad with directions to blend Cabinet repairs with oid finish. 11A10-Per Kit ................ 59 PENETRATING $\mathcal{T}$ AIN. Splrit or scratches and nicks on cabinets. purniture, pianos, etc Penetrates, d arkens the corners 11A9-per 1/2-Pt. Can .........3sc SPIRIT VARNISI $\mathcal{A T A I N}$ TASt drying, durable varnish with the linishing stain in
RUBBING OIT For rubbing 40 RUBBING OIL. For rubbing down newly finished cabinets or furni-
ture. Takes off the high gloss and produces satin-like finish
1118-Per Quart ...............44c PORCELATN GLAZE. 'Easily filla in those nicks on porcelain. Use on refrigerators, washers or any and smooth over top.
11416-Per Bottle ............29c
SKRATCII STIK. Contains both fller and scratch poltsh in one. 11A1\%-Each ................21c TOUCI-UP IKIT. Includes light and dark stain. brushes. wiping cloth and scratch filler. Handy to service scratches and dents on the job.
11A18-Per Kit ...................35c
LEMON OH. POLISH. Polish those sets after repair for customer good-
will. Fast working. Low cost
11A7-16-Oz. Bottle ...........27c
FLOCK FINISH KIT. To apply relt-like flock on turntables, etc. Produces heavy, soft velvet-like coat. Kit contains Flock. Applica 11A6-Per Fitas
11A6-Per Kit
$.97 c$
RUBBER CEMENT. Best quailty for general use on paper, cloth. rubber, etc. A necess
shop. Brush included.
shop. Brush included,
11A1z-Per $4-\mathrm{Oz}$. Can

# Genuine BELDEN CABLES <br> ESPECIALLY DESIGNED FOR PUBLIC ADDRESS MICROPHONE, INTERCOM, and AUTO RADID USES 

Flexible Crystal Microphone Cable

301 for ribbon or crystal and sinsle button carbon mikes-or jow mpedance transmision lines. 841 for lapel mikes. Low capacity subber core and opecial stranding sive extreme flexibility plus un= osual tensile strength. $84 s i$ for phono

| No. | TYpe | Per Ft, | 100 Ft. |
| :---: | :---: | :---: | :---: |
| 2A101 | 8401 | 7 C | $\mathbf{5 . 2 4}$ |
| $2 A 1102$ | 8411 | 5 C | 3.72 |
| $2 \mathrm{Al03}$ | 8431 | 3 c | 1.84 |

## Shlelded With Rubber Jacket Overall Cable

for mikes, transmission lines, amplifiers, analyzers, etc. Each conluctor of size 20 stranded tinned ed cabled together over which is ed, cabled together over which is a woven shield, eher cotton served, then overall covering of rugged rubber facket. Number of conductore does not include shield, Which
may also be used as a conductor.

Cat. Num. Per 100

| Cat. |  | Num. | Per | 100 |
| :---: | :---: | :---: | :---: | ---: |
| No. | Type | Cond. | Ft. | Feet |
| 2A104 | 8422 | 2 | .07 | $\mathbf{5 5 . 4 8}$ |

$2 A 105$
$\begin{array}{llll}8425 & 5 & .12 & 10.07 \\ 8426 & 6 & .14 & 11.7\end{array}$

## Unshielded Rubber

Like abore, bit no chield. For antdoor or indoor speaker llnes, end where cable is subject to wear aize 18 wire except the 4 conductor type which has 2 size 18 and 2 fise 20.

| Cat. |  | Num. | P | 0 |
| :---: | :---: | :---: | :---: | :---: |
| No. | Trpe | Cond. | Ft. | Feet |
| $2 \mathrm{Al10}$ | 84 じ2 | 2 | . 04 | \$3.08 |
| $2 \mathrm{Al11}$ | 8453 | 3 | .08 | 4.60 |
| $2 \mathrm{A112}$ | 8454 | 4 | .07 | 6.68 |

[^1]
## 72-Ohm Twisted Pair



For Broadcaat and Bhort Fave For the majority of all wave re entenna- 18 stranded tinned, cotton rrap 18 stranded rubber, color coded, twisted pair, overall white cotton braid, weather proofed. 2A12\&. Belden 8204.

## Por ti ...30: 100 it ... $\mathbf{\$ 2 . 4 0}$

## Shielded Twisted Palr



Recommended for lead-ing where interference ls great. 18 stranded Inned, cotton wirap, rubber covered, color coded, twisted pair, paper
vrap and tinned copper shield over twisted pair. Overall white cotton braid: weather proofed."
2A1:5. Belden 8209.
A125. Belden 8209.
$\$ 4.57$
Commercial Twisted Pair

22 Etranded tinned, paper wrap rubber covered, color coded, iwisted pair overall black cotton braid weather proofed.


## Shlelded Twisted Pair With solid Conductors

Ideal for P.A. and Inter-Coms. 2 conductors of size 19 solld, enamoled, wrap cotton, color coded cotoverall bare copper shleld pair with 2A12\%. Belden 8799.
$\$ 2.58$

## Intercom and PA Cable

snlid conductors of size 22 tinned copper, pIastic insulation Color over-all brown cotcon brald, pairs;
Cat.
Num. Per

## Solid or Stranded Push Back Mre

## cellollose acetate basker weave rayon braid

Excellent general purpose wire consisting of tinned condnctor, heavy wrap of cellulose acetate, "basket weave" abrasion proof rayon braid, heavisy lacquered. No. 20 recommended for all general wiring of circulta under 800 volts; No. 18 for home and auto radio filament circuits, and No. 14 for heave ints uses as in transmitters and amplifiers. Puncturing volt age of all sizes, 1550 volts. D. C. insulation resistance, 325 mes. State colors wanted-Black, Fed, Green, Blue. Yellow.

## Bise 20 Solid Type 8941 43

22A1- $25=\mathrm{Fr}$. Coll
2.A2-100-Ft. Coll
.8 .31
.80
$22.43-1$
$2244-1$
$2.4+10$ 25-Ft. Coil

Coil
2A3-1000-Ft. Spool
Slee 18 Solid Type 89 is
22.A5- ${ }^{25-F t .}$ Coil …...... \$.38

Size 18 Stranded Type 8os
1.00

2Ab-1000-Ft. Spool …....8.28 2.16-1000-Ft. Spool ...........8.83
22Ag-Type 8938. 2B-Ft. Coll ....39e 22A10-100 Feet...... 81.87 RUBBER BAREET WTEAVM BATON BEAIM
RUBBER BABKET WLCAVE RAION BRAII
blic addrese amplifiers. Consista of No. 20 tinned conductor (stranded or solid), cotton wrap . $010^{\prime \prime}$ rubber, "Banket Weave" abrasion-proof rayon braid, heavily lacState colors wanted-Black, Red, Green Blue. Yellow. Insulation restange. 1000 mege. State colore wanted-Black, Red, Green, Blue, Yellow.



## Replacement Mire Tor Test Prods

Size 18, extra flexible, $65 \times 36$ tinned, $3 / 64^{\prime \prime}$ rubber covered.

ohielding is required to reduce stray coupling and where the Size 20 ( $10 \times 30$ tinned), $1 / 64^{\prime \prime}$ rubber, over all tinned copper bifid



For auto antenna lead-in and other high impedance circults where a low loss cable is beat for good perCormance. Consiats of slze 20 etranded inned cotton wrap, low capacity rubber rayon braid, tinned copper ohield overall. Max tinned copper tween conductor and shield 33 mm ?.1132-F". 5 Fc 100 Ft... S3.17 as above with molisture proof rubber jacket over all. Trpe 8664.

## Shielded Lead-in

Forms perfect electrostatic and Interierence shield for wires. Very lits original dind to length about $25 \%$. Fxtensively used in auto radio installations.
2A134-13/64" dia. flat-Per Ft. 2c
 2.1136-31" dia. Plat-1Per Ft.. 8 c



## NOW! Solderless Wiring

 With This "AMP" Repair KitNO SOLDER NECESSARY $\$ 5.95$
11 az82 Complote
Tool and 100
Assorted
Terminals
For any need where terminals attached to wire are wanted, THIS ONE TOOL DOFS ALL THE WORK, without any solder-or any spectal skimps it to the terminal in a profeg strips the wire and crimps it co low directions are given. The tool is also plenty useful for your wire stripping and cutting needs. 100 most popularly used terminals for wire sizes 22 to 10 come with tool 3n hand

## 

 11A282.Your Cost Coniplete... 4e. 5

## Telephone <br> Wire

Fine sor Inter-Com, and Public Address Hool-up, elther indoors or outside. No. 19 solid; and con-

Size 16, stranded, tinned single conductor. Tinned copper mesb hicld. For all shielded lead-in.
Per Ft. .... 2140: 100 IT. 82. 10
Rubber Lead-In Wire Size 18 with 7 strands tinned cop per wire and thick rubber sheath. casy to strip and solder


2

# ANTENNA WIRE- INSULATORS - ACCESSORIES 



Stranded or Solid Copper Wire
For Aerials, Etc. Enameled or Tinned

## GTRANDED COPPEE

Mada of exceptionally fine coppor free from impurities. No. 14 (7x22), 14 lbs. per 1000 ft., No. 16 (7x24). $8 \frac{1}{\mathrm{l}} \mathrm{lbs}$ per 1000 ft .

14 Gauge $7 \times 22$ Stranded


## Stranded EnameIed Copper

18 GAUGE 7x20 STRANDED
Ideal for short wave and all wave antennas. standard equipment in many of the popular kits.
2.116-100 Ft. Coil
. $\$ 1.88$

## BELDEN Quality Magnet Wire

Exact B-S gauge, best quality, uniform insulation. Continuous length Boldon for any need.
 of feet per pound to mandiard masenet wire.

## Turbo-spaghetti-Flexible

Extremely Lasting
Ideal All-Purpone Insulation
$\leftarrow \quad 21 \mathrm{~A} 1000 \rightarrow 1 \mathrm{MM}$, Black or Yollow. Per Length .....10c
10 for...... $.900 ~$ 21A1001-2MM, Black or Ye 10 Per Lenth si 12 $\leftarrow$ giA100s-sinm, Black or Yellow. Per Length 10 for …..31.35 $\leftarrow$ Elack or $21008-5 M M$, Per Length 10 for , ….. $\$ 2.25$ $\leftarrow 81 \mathrm{~A} 1004-10 \mathrm{NM}$, Per Longth .....s.s 10 for …...84.85

Illustrations ar 42-inch lengths.

## Spaghetti, Assorted



A neat bundle of 20 pleces, each - lons. varnished high grade tubing in assorted popular sises. 18A69.


SOLID HRIGHT TINNHD Note - Minstrations are approze mastely oxact sizes.
Presents a nice appearance when used as hook-up wire, or for colls in Transmitters, Receivers, etc. Excellent for permanent aerials. bx tremels low toss when used in RadWava Receiverg and pransmittere Ch 25 Ft. Colls 100 Ft. Colla No. No. Na, No. Ft. Coila $\begin{array}{lcccc}\text { No. } & \text { No. } & \text { Fi, } & \text { No. } & \text { Ne } \\ 18 & 18.136 & .20 & 18.137 & .45 \\ 16 & 18.138 & .27 & 18 A 39 & .71 \\ 14 & 18.18 & .24 & 18.41 & \end{array}$ 16
14
12
10 $\begin{array}{ll}10 & 18 \\ \text { Ga. }\end{array}$ Ga. 25 Ft Colls $\quad 100 \mathrm{Ft}$. Colls $\begin{array}{ccccr}\text { No. No. } & \text { Na } & \text { No. } & \text { Na } \\ 19 & 18 A 44 & .30 & 18 A 45 & .71 \\ 12 & 18: 41 & 2 A 14 & .78\end{array}$ $\begin{array}{llll}10 & 18.147 & .41 & 2 A 12 \\ \text { Above either } & 1.09 & 213 & 1.77\end{array}$ contlinous i type may be had in Please so state in ordering. Use No. and figure prices us shown above for 100 ft . coils, adding "C" to the stork number of whatever stze you order.

Saturated Sleeving Resistor Size

Slow-burning type to fit over carbon resistors to insulate them from the chassis. parts, etc. \%" dia. Black, 30 -inch lengths.
$21 A 1005$.
HEYK COST, Eech .
19c
Saturated Sleeving Mit
$26-71 /{ }^{\prime \prime}$ lengths of assorted sizes from 17 wire to ${ }^{\prime \prime \prime}$ I.D. An ideal sizo for most any need. nize for most any need.
19A65s-Per Kit .....

38c

## 20-Ft. Spools Varnished Tubing

For poaitlve Insula tion of wire sizes 10 to 18. Average dielectric 5000 volts.
Feavily varnished yet flexible. Supplied on spools in 20 foot lengths. 19A651-Fellow.
19A65*-Btack.
$19 A 65$ - Biack.
Cholce per 20
85c

## AERIAL KITS

Contents: 100 feet tinned aerial wire, 25 feet lead-in wire, an approved lightntng arrestor, 2 approved insulators, 1 ground clamp and 1 lead-in strip with clip on each end.
8A16, Special
Paic, Special
98c


## Turn-Euckles



Filminste Sastinc Aitennas. Air cratt quality, brass barrels, high tenslle strength steed forks and eyeg, A surplus parchase permits prices below market.
19A654-800-1b. tension .. Ee 15 c 19A655-1600-1b. tension ...En 20c 19A656-2100-1b. tension ... N 250 19.1657-4600-1b. tenston ...EA 35c

"Grip Tite" Ground Clamp.
Fits pipe up to $1 \%{ }^{*}$ 。
18A53-Fa...8c 10 Lotm, Ea,.. 7 c "Nail-It" Knobs" Standard Type. $18.154-\mathcal{L a . . . 4 c}$ Per 100...33.00 Aerial Insulator. Brown Porcelain. 21/2"Long, $1^{\prime \prime \prime}$ Dia.
18A65-Eian. 4c Per 100...33.00

Screw ky Insulatoris $18.156-3$-inch, Bat. 8 c 10 for 50 c 8A5\%-i-inch. Ka. Tc 10 for 80 c


Airplane Type Insulator Low Loss, Over-All Length $11 \mathbf{2}^{\prime \prime}$. $18,59-$ Ea..... 7 c 10 for..... 8 ©
Type 500 Inswiator Type 500 Insulator
Will Take Heavy Strai
 Lead-Im Stripw, Inwulated 12
Clip Terminal Each End. 18164-Fia. . Bc 25 for ... 81.00


## Antenna

 LoopReplaces antenna coll on most any ype net. Good pick-up and selectivity.
No. 16A246. Spectal. Ea
45 c

EMAMELED COPPERWELD Antenna Wire
JOFINBON Enameled Copperweld Antenna Wire is the ldeal materia cor any system where the wire must not stretch nor mas. The stee the provides almoat thre dimed the strensth of ordinary copper Wire, the copper coating provided Low RF resistance, and the enamel prevents corroslon. Prices are por fto Carried in bulk, It is availablo In any mpecified length.

| Cat, | Be8 | Poot | Price |
| :---: | :---: | :---: | :---: |
| No, | Ganse | Por Lb. | Por Fth |
| $2 A 160$ | 10 | $84 \%$ | 8 |
| $2 A 161$ | 12 | 54 | $2 y / c$ |
| $8 A 16 \%$ | 14 | 85 | 2 |



Low-loss Isolantite strain Insulator. $1 \%{ }^{\prime \prime} \mathrm{I}_{4}$ x \%" dia. 18A68. Each $\qquad$ 30 c

## ANTENNA HANKS

Boft, Ilexible, Insulated wire
for Indoor antenna, aerial hanks for small sets, etc.
17.A990, 25-Foot Hank. . $17 c$
2A1, 1.000-Foot Spool... $\mathrm{B}_{2.84}^{2.85}$


A new highly efficlent, low-lose tranemisslon line, weather resistant and rugsed in service. Twin-Lead carrle aignals from antenna to FM and Television recoivers with minimum losis. $\mathbf{3 0 0}$ ohms, providee best match of impedance to FM recelvers, also recommended by RMA ror televiaion belng most efficient over broadcat operation. This ts the type so commonly used antennas.
2A15\%, Por Ft. 30100 Ft.
92,85
150 ohms. For those who desire it for particular applications and experimentic work. 2A188, Per F't. 21/4e
$\$ 2.37$
75 ohms. For amateurs who are golng to operate in very narrow bands of frequency or one particular frequency. Sultable for 2 ohms at the frequency for which they are cut. 100 Fit. ........ 97 A150, Per Ft. 2720 Per 100 F4.


## THESE MALLORY VIBRATORS MEET 95\% OF YOUR REPLACEMENT NEEDS

Listed here are the most popular of the new simplified line of Mallory replacement vibrators. Of these 12 basic types (marked ") will cover $90 \%$ of your replacement needs. Most popular base diagrams at left others, together with complete data in Mallory Vibrator Guide FREE.

| No. | Type | Diac. | Each | No. | Type | Diag. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 19A1 | 222 | 20 | \$4.50 | 19.14 | -716 | 30 | 4.06 |
| 19 A 2 | -245 | 21 | 4.06 | 19A15 | 725 C | 32 |  |
| 19 A 3 | 245 A | 21 | 4.06 | 19A64 | 742 | 32 | 6 |
| 19A4 | 245 C | 28 | 4.06 | 19 A65 | 743 | 38 |  |
| 19A5 | - 246 | 38 | 4.06 | 19A66 | 748 | 44 | 4.08 |
| 19A5S | 246A | 38 | 4.06 | $19 \mathrm{A16}$ | 825 C | 8 | 8.6 |
| $19 \mathrm{As6}$ | 247 | 46 | 4.06 | 19A67 | 826 C | 8 | 3 |
| 19A7 | - 248 | 44 | 4.06 | 19A17 | 839 | 8 | 2.82 |
| $19 \mathrm{A8}$ | -249 | 49 | 4.08 | $19 \mathrm{Al8}$ | ${ }^{852}$ | 14 | 2.41 |
| $19 \mathrm{A57}$ | 271 | 24 | 4.88 | 19A19 | 853 | 10 | . 41 |
| 1049 | -273C | 29 | 4.60 | 18 ARO | ${ }^{864}$ | 11 | 2.4 |
| 19A58 | 273 D | 31 | 4.50 | 19 A 21 | -859 | 8 |  |
| 19A59 | 292 | 3 | 2.82 | 19 A 68 | 860 | 14 | 2.41 |
| $19 \mathrm{Al0}$ | -294 | 8 | 2.41 | 19 A22 | -870 | 14 | 2.41 |
| 18 A 60 | 298 | 51 | 3.28 | 19 A2S | 901 M | 8 | 2.08 |
| 18 Al 18 | 505 P | 8 | 2.08 | 19 A69 | 952 W | 16 | . 08 |
| 18A61 | 506 P | 36 | 3.23 | 19.770 | 953W | 39 | . 08 |
| 19 A 62 | 507 P | 10 | 2.08 | 19.71 | 954 | 39 |  |
| $19 \mathrm{A63}$ | 514 | 30 | 4.06 | 19.224 | -1100 |  | 2.41 |

BATTERY CHARGERS, CONVERTERS and VIBRAPACKS

## Mallory 6 and 12 Volt

## Taper Type Battery Charger

with trouble - free dry disc rectifiers and thermal bimetalilo circuit brealer to protect the charger from improper connection to battery: and from criotus overloadm. Designed matcaily provide taperig charger charsior taxinum tery or other applications besides charging bat erfes, such as: electroplating, toy and model rain operation, loud opeaker fields, coln machines and other applications requiring low oltage DC.
Come equipped with line cord, battery cablea and clipa and universal clamp-on dash receptacle for easy connection to battery in car without its removal.
免 2 A26. Type 3C for 6 -volt batteries. Maximum barging rate, 1 ampa, tapera to 2 amps. TOIT COST
EACH, COMPLETE
$\$ 6.24$
38A2\%. Type 5635 B for 6-volt batteries. Max. charging rate, 6 amps, tapers to 4 amps, FOUR COST,
$\$ 9.03$
ACH, COMPLETE $\qquad$ 3A28. Type 125 for 12 -volt batteries, Max charging rate, 5 amps, taperi to $31 / 2$ amps. TODR COST,
RAC1 , COMPLETE
$\$ 17.65$

Mallory "Yibrapack" Portable Power


Dependable and inexpenive plate voltage for port able and mobile equipment The ldeal piate voltage where electric power is not avallable. Dellvers up to 300 volts at 100 M .A. of eanily illtered rectifted DC. Output variable in steps of 25 volts each, controlled by switch connected to various transformer taps. Maximum efficiency is obtained for all load conditions. Small in size - Nomily mounted

## Stock Input

Nominal

## No. Type Volts

Olts OntputVoltage Cost 38ASo-VP5 6.3 125-150-175-200 S10.88 $\begin{array}{llll}33 A 30-V P 552 & 6.3 & 225-250-275-300 & 13.23 \\ 38 A 31-V P 55 & 6.3 & 125-150-175-200 & 18\end{array}$ 38А82-VP5Б4 $\quad 6.3$ 225-250-275-300 83A33-VP555* 6.3 33A34-VP5Б7* $6.3 \quad 300$ 38A85-VPG556 $12.6 \quad 225-250-275-300$ $\begin{array}{lrr}38 A 36-V P F 558 & 32 & 225-250-275-300\end{array}$ 33A3y-VF223 Single Unit Filter


Electronic "DC" to 110 Volt "AC" Converters
All types listed are supplied with filter to prevent radio interPerence. Conservative ly rated - bullt ly rated $\rightarrow$ bullt for




5 Volt DC "A" Battery Eliminator
For demonstrating Anto and $\mathrm{F} \boldsymbol{\mathrm { Fm }}$ Ruto and Farm Radio 110 on roge ofrcuit Elimiolfe mex nates mesey and tions of etorace battery topkeep. Employ: full-wave dry-disc rectifier. Nolselens interference iree operation. Fully automatic rool-proof, and built for long service. Equipped with ON-OFF switch, PILOT LIGHT Indicator 10 ampere fuse, rubber teet, 6 ft. cord and plug. Black wrinkle finish metal cabinet meas ures $7 \% \times 7$ \% $x \mathrm{~F}^{3} \mathrm{~s}^{* *}$. Output 6.3 V. at 6.5 Amps. 33.444.

YOUR COST
\$22.34

PORTO-POWERS CONVERT BATTERY SETS to ELECTRIC POWER in a few MINUTES

## Model "H" Converts 4, 5 or 6 Tube <br> $11 / 2$ Volt Set to HUM FREE 110 V. AC Operation



NOTE THESE OUTSTANDING FEATURES

-Two-section illter, composed of three very high capacity condensers and two oversized iron core chokes in the "A" eupply: and two high capacity condensers and an oversized choke in the "B" mupply positively blocks out hum.
Universal socket for battery plugs. - Fits $99 \%$ of portables.
-Booster tap. When the " $A$ " power - Ciss down on 4 or b-tube mets, shifting the tap adds rectifier life. provides-"A" 1.5 V. at 200 M . A., 1.35 V . at 250 M . A.- 1.55 V at 200 M. A., 135 V . at 350 M . A.-"B", 90 V. at 13 M . A., 101 V . at 8.6 M . A. Stock No. S3Az2. Size 23 " $\times 41 / z^{\prime \prime} \times 8 \%$ "
$\$ 8.82$


## MALLORY Ultra-Compact Rectifiers

Only f" dia., and "p" over-all height including terminals. Type 1B4R. Replacement in Porta-Power, Electro and similar $1 \frac{1}{2}$, Volt unite.
No. $14 A 634$, Net Fach
.81 .03
Type 1B8R. Like above, except has \& junctions instead o Volts (115 line or equivalent) 7.2 at no load, 6.44 operating. mittent DC ampra, $\quad$.

M1.41


PORTO POWER Model "Ap"

## For 98\% of ALL 6-Volt

 BATTERY RADIOSSolves problem of electrifying $98 \%$ of all 6 Volt Battery Sets! Separate Sonrce of Power to both Vibrator and tube filuments, eliminating vibrator disturbance and assuring peak per formance at all times. Economical to operato-much cheaper than batteries. Quickly and easily installed by anyone tamiliar with radio. Crackle finish metal case measures $6 \% \times 3 \% \times 5 \%{ }^{\prime \prime}$ Provides two separate sources of b voita pure DC at $11 / 2$ amps each or

## VIBRATOR POWER SUPPLY

Input: 6 V. DC at 8 amps, Output 300 V. DC at 100 MA and power output up to 80 watts. Size only $\& 4 x 47 \% \times 5 \%{ }^{\prime \prime}$, weighs 5 lbs. Ideal for mupplying plate and grid voltages, in receivers, trunsmitters, etc., and has many applications for P A and etest equipment as woll. ComModel 2806 is ideal for atationary mobile or Model 2606 is ideal for stationary, mobile or
portable communications applications,


## * Would "HI-Q" AERIALS FLUD TMPE AVII-RATILE CONSTAUCTION *** SILYER TO SILYER UONTACTS * *



AIr Klng Model sce, 3 SECTION 66 Inch Side Cowi Type. Stanchions of Ceramic with Chrome trim. Tubing of lustrous Chrome over Admiralty brass. Features "E-Z" installation and includes bayonet adaptor and conversion kit for torpedo bodies. New positive shielding eliminates use of prew'ar shield cans. Comes with now "Poly' 36 in Hi-c Low Losa detachable lead.
$\$ 2.91$
No. 38.431. List Price $\$ 4.95$. Net Each. Lon: Ranger Arodel SC8, 4 Section, 100 inch like above except for extra bection and extra length for better pick-up, cspecially for those driving No. 38 A 3 , List Price $\$ 6.95$. Net Each
$\$ 4.09$ No. 38 Ass, List Price $\$ 6.95$. Net Nach
Flex Angle CFB, 3 Section, 68 inch

Cnlremsin Fonder or Beautifully designed single stanchion with ceranzic insulation and Chrome trim, otherwise like above side cowl types. No. 38, 27, List Price \$5.45. Net Each
$\$ 3.21$
Fender Flex F6. 3 Section, 56 Inch Univerwal Fender Monnt. Fits all car fenders resardless of contour. Comes with 48-inch detachable "Poly" Lead, E-7. on Feature and Brace Brackets. No. 38.434. List Price \$8.75. Net Fach
$\$ 5.15$ Cowl Flex, TCG, C゚olversnl Top Cowl Mount, 8 Sectlon, 56-inch aingle stanchion mounts in top of cowl. Comes with $36=$ inch detachabl lead and E-Z on Feature and Brace Bracket.
No. 38A35, List Price \$5.95. Net Hieh
DISPI.AY BOARD with Popular Modela
$\$ 3.50$
SCB, SC8. CFB, and TC6 mounted on attractive display board. which is


Auto Radio Suppressors


Wire spring permita mounting in any position and makes a connection that won't shake loose. Cable ends mount by cutting ignition wire for a secure acre w connection.
Standard 10,000 ohm resiatance for Standard 10,000
all around use.

### 17.124\%. For Sparis Plne

 Euch17A248. For Dletributor 15c Each 17c

## GENERATOR FILTER For Auto Radio



Metal encased condensers for auto radio, etc. 5 mfd . No. 17A246. Each
ed in cable by means of screw threads. For either Distributor or Spark Plug.
No. 12A401, Net Fach ..... 10 C

## ar AERIALS

8ide Cowl (Left)


Gighly efficient, marty deconform with body lines of Istent care. Improved antirattle slide construction prevents electrical noises. Lowloss lead-in. Gleamingly chromed on Admiralty brase. Lons Distance, 4 Section 100 Kxtenston.
$38 A 32 P$. Net 15n. Stremmilined, 3 Seetlon $60^{*}$ Extenslon.
88 sinP . Net Ra Fender (Right)
Weather-proof, noiseless mounting on fender of any car wlth large wheel wells. Anti-rattio construction. Extends from 28 MW to $5 \mathrm{Em}^{\circ}$ Low-lose lead-in, electrically matched to radio circuit Gleamingly chromed on brass.
No. 38As4P.
Your Cost, Ra,


## DUOFLEX

Two-way adjustable feature per mits change of position to blend with streamlining of car. Adaptable to any car, regardless of body contour. Anti-rattle sllde construction, 3 sections, extends to $66 \%$. Single stanchion mount. easy to install. Low-loss lead-in
matches radi
No. $38 A 27 P$.

$\$ 3.50$
$\$ 5.15$


## TOP COWL

Weatherproof, noiseless mounting on top of cowl of any car. Antirattle slide construction, ${ }^{3}$ sections: $56^{\prime \prime}$ extended, $22^{\circ}$ colto radio circuit Gleaming chrome plating on Admiralty brass. A very popular model.

No. 38AS5P

Type A solld steel rod. joined see curely and permanently Into a sin* gle sraduated length which provilles high fexibilty, minimum wind resistance and inderinite life. .001" cadmium plate linish gives adequate protection asainst corrosion in all ordinary atmosphere. Will withstand stress of most any obstruction. Where ordinary antennas bend or break, these merely flex and return to original position. Rod is priced separately. Order base preferred from Illustrations ohown. Type $A$ rod is supplied in $96^{\prime \prime}$ lengtheand can be cut for desired Irequency. A rod. © 260 88.182. $96^{\prime \prime}$ Тype A rod.. 4 L1 20 Type T Mounting, attaches to trunk or car body. Lower support is solid brass rod securely jolped


K
to 12 brass tube carrying antenna
Upper bupport is $4^{\prime \prime}$ bras antenna. has adjustable 10 ck permitting Insulators are high tension. white Insuzed ceramic $1 \%$ high. Antenna slaz covide max $10^{\prime \prime}$ adjugtment a pron metal parts $n$ antena metal parta heavily cad lum plated
Type T. Net
\$12.16 Type K Mountling. Mount on bumper. Has $14 \%^{\circ}$ high tension insulator and socket tube to permit $10^{\prime \prime}$ adjustment in antenna height. 38424.

Net Ea.
$\$ 5.17$
Type L Mountine. Is similar to type $K$ in adjusting feature. Has $6^{\circ}$ pacing botween inculators, giving extra base support. .... 88.211
38A25. Not Ea


1/64" diameter rods. Kit consists of two makes of atiais havine rubber pads, eyebofs, spider washers, shoulder bushings and one each ahleld cap and get of two flat washers and four nuts.
$\triangle$ Very Useful Kit. No. 11A100, Per Eit
$73 C$

## Screw DriversoSocket Wrenches，etc．

＂Amberyl＂Shock and Breakproof Screwdrivers Square Blades $1 / 3^{\prime \prime}, 1 / 4^{\prime \prime}$ or $3 / 16^{\prime \prime}$ ．Dia．
 Amberyl is a tough plastic that will neither chip， break or crack．It is non－absorbent and a non conductor of electricity．The blades are of high throughout．Here is real quality all around and not to be confused with cheap tools．Handles on $1 /{ }^{\prime \prime}$ blades are $2 \%^{\prime \prime}$ long $x$ \％dia．，on fo＂ blades，handles are $31 /{ }^{\mathrm{N}}$ long x \％${ }^{\mathrm{m}}$ dia．，on $\mathrm{K}^{\mathrm{m}}$ blades handles are $31 \mathbf{n}^{\prime \prime}$ long $\mathrm{I} \mathrm{I}^{\prime \prime}$ dia．Add
handle lengths to blade lengths for over－all length of acrewdriver．
Blade

|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| L．sth． | Blade |  | N DisBlade |  |  |  |
|  | No． | Ea． | No． | Eas | NO． | Ea． |
| $3^{\prime \prime}$ | 11 A 86 | 39 c | 11.88 | 50 c |  |  |
| 4＂ | 11.486 | 42c | 11489 | 53 c | 11 182 |  |
| $6^{\prime \prime}$ | 11.87 | 53 c | 11490 | 80 | 11.183 | 79 |
| 8＂ |  |  | 11A91 | 856 | 11．484 | \％ |
| 11 A95－Stubby type，$\%$＂dia．x $1^{\prime \prime}$ long |  |  |  |  |  |  |
| blade． | Phillips Type Screwdrivers |  |  |  |  |  |
| With | h Round | Rlade | a | mber | Han |  |
| Etock | Size | O＇al | Point |  |  | Net |
| No． | Bade | Leth | No． | Ser | ws | Ea |
| 11A96 | 18x3＂ | 5 ＂ | 1 | Up | 04 |  |
| 11A97 | \％$\times 4$ \％＂ | $71 / 80$ | 2 |  | － 9 |  |
| 11 A98 | $\frac{1}{46} \times 6$ | $10^{\prime \prime}$ | 8 | 10 t | 16 |  |
| 11.998 | \％$\times 8$ | $12^{\prime \prime}$ | 4 | 18 \％ | Up | 1 |

## Set of 5 8crowdrivers



Bhock－proof，break－proof amberyl antides． 8000 volt insulation．Sises FX8 Ba．bit， $1 / 4 \boldsymbol{x}^{\prime \prime}$ round， $\boldsymbol{H}^{\prime \prime} \times 6$
 screwdrivera，
11A100．
Per Ret of 6
$\$ 2.63$
Set of 3 Thin Blade


Long，slim，narrow bite．Amberyl 6，000 volt insulating break－proof
 ed steel．Sizes， $1 / x^{2}$
11 A101－Your Cont．
11 Alol I Iour Cont．
Per Set of 3 in Case
$\$ 1.52$


Stools Hez．
Orerall YOUR




Little Shorty
Chrome Vanadlum hand forged blade，Amberyl sure－grip，shock and It天＂blade．Just right for accur－ ate adjustments in close quarters． $11 A 113$.
YOUB COST，Each

53c

 recessed head cross slot screws from the smallest to the largeat． $1 / 4$ mound blade in amberyl handle． over－all length $8 \%$＂．
llA102－Net Ea．．．．．．．
Thin Blade for Set Screws

## BrF

Emall bizes－ideal for set merews In knob and other hard to reach places．Tempered tool steel blades． Amberyl handles．
Stock

| Stock | Rlade | Leth． | Net |
| :---: | :---: | :---: | :---: |
| No． | Size | Orerall | Each |
| 114103 |  | 4\％＂ | 2 |
| 114104 | 513 $\times 10$ | $5 \% /{ }^{\prime \prime}$ |  |
| 114105 | 校×4＂ | 6 \％＂ | 24 |

## Small Pocket Sizes



For Phillps Type Screws Amberyl handle with pocket clip． Blade itx 1 名＂with No． 1 point for Phillips type screws No． 4 or small－ 11A107－Niet Ea．．．．．．．．．． 49 （

## Phillips Offset

 ScrewdriverHandy for Tight Place
Finest alloy steel，carefully fine ished points．
11A108，with Nos， 1 and 2 points
for up to No． for up to No． 9 screws．．．．．．42c 11A109，with Nos． 2 and 3 pointa Neutralizing Tool Kit

 Socket Wrenches
 case．Siz
odd sizes．

## Insulated Spin Hex Nut Driver



## $\Rightarrow 5$

No metal parts．Extension screw－ Tough bone－fibre．shock proof．Long Lideal for crowded spaces．
Extends $6^{\circ}$ to $11^{\prime \prime}$ ．

## Duplex Alignment Metal

 Tip Screw DriverLow Inductance metal tip on both ends，made of＂Gentlex＂material． One end is $1 / 4 "$ and other is turned holes．Strong，durable，completely insulated．
No，11．A312，Each
44 c No． $11 A 318$, as above，except metal
tip on one end only． $\operatorname{tip}_{1 / 4}$ on one end only．$x$ ow long．


For easy removal and tightening of these Iragile nuts without dam age．Drawn steel socket，${ }^{\text {m }}$ overall Metal part，nickel tinlah．
11．141．For $1^{\prime \prime}$ nuts．
11A142．For $11 /{ }^{\prime \prime}$ nute．
Choiee Ea．．．．．．．．．．．
Hollow Shaft Nut Driver


Full length hollow shaft．Tool steel． 5,000 volts shock－proot han dle．Fits right over volume control shaft or other protruding bolts and atubs．
Stock Depth Nut Lgth．Cost


5 Tools in Ono
When closed．Is fountain pen oise With pocket clip．Has $1 / a^{\prime \prime}$ and it nut wrenches，small blade ecrew driver，and n full size ecrewdriver Made of finest bone－1ibre． 88 e
11A150－YOUR COST．．． 4 Tools in One，identical to above except lesis full size screwdriver tachment．
11A151－Each $\qquad$ 59 c With metal tips．Same as above but with metal ends for longet wear．
11．1156－Per $\qquad$ $80 c$
Pocket Alignment Kit


Contains $6^{\text {th }}$ long metal tip insulated low induc insulated no－metal insulat ed no－meta
alignment alignment screwdriver combination screw nib and driver for use on
RCA Sets and a com－ RCA sets and a com－ bination alligator and all in leatherette case A most handy，all－pur pose alignment kit． No．11A231． Per Com．
$\$ 1.76$
U．H．F．Aligning Tool

Made from pure Polystyrene－no capacity，effect upon critical cir－ cuits．
11A188－Each
15c

# Soldewing Irons'Solder ₹other handy tools 



## 

Speoial 125 Watt "EXTRA HOT" Type 326. Special heavy eervice element, haflle fins keop handle cool. A favorite with service mon.
With sitand
$\$ 3.23$

## "AMERICAN BEAUTY" IRONS



100-WATT MODEL, 8138 This iron needs no deecription. it being an old stand-by in the industry for years. \% tip. with lif24l. Cowt, LSach 11A242. Filement
$\$ 5.88$ 11A243. Tip 60 WATT. Monled s76 A smaller "Anuerican Beauty" Por uebter work and tight jlaces. In" tip. 0968 11.3244 . Complote with stand.... 3.68
11.1245. Extra Tips

THERMOSTATic To regulate heat of irons used a mostat. Made of durable mastic
Complete ready to use on 110 V

## SOLDERING PENCIL



For those dellcate jobs and hard-to-reach places. Weighe only 3.6 watts. Note the wide choice of ucrew in haadle like a lamp.


Put Rosin

## KESTER

Rosin or Acid Core solder
Put np in 1 1b. or 5 lb. spools and $11 / 2$ oz. pkgs. Core Coro CHOLCE

| $11 A 267$ | Core EACII |
| :--- | :--- |
| $11 A 258$ |  |

$\begin{array}{lll}11 A 258 \\ 11 A 259 & 114268 & 3.78\end{array}$
11A259
KFSTER Thin Core Solder rosin Core, Dlameter 11A2B8. 1 lb .83 c 1A284. 5 lbs
$\$ 3.95$
MBENLEY Soldering Pagto. 100
KESTFR PIain Wire Bolder
10-60" Fineat Grade.
11.1268 .4 oz .21 c

11 A265. 1 lb.
75c

Baldwin
Handy Rule

Handy 6 -foot rolling rule with push


The Popalar "chee" for Tiehts Spote and Dolicate Work. 60 watt. with u" tip-only s" long, welght only 8 oz., yet will stand the "galf" for stand packed with iron. \$2,91 11Az37. Net, kach ……4. 52


HEAT CONTROL Controla heat of Iron to $k$ eep it reay for instant use.
$\$ 2.94$


## NOC (at Right)

11A246. Hach
$\$ 4.41$
Boldoring Penell, leas tip. 789 11A247. Yonr Coat, Each 1) \%"Standard Copper tip only. 11 AP48. Fach (2) $1 /{ }^{\prime \prime}$ Chisel tip made of Elkaloy A. 11A249. Euch (3) $1 / \mathrm{m}$ dia. pencil tip mad of Enkaloy A. 11A\&SO (4) Brase tip for plestics or marking. 11A2El
(5) Rextra hot tip made of Glkadoy A 11A\&5\%

Iv it us Impocion Lavas Regular 86 candelabra 110 V . lamp Bereme in place of tip and you hare neat service light. 86 Lemp for light in

## -

 <br> \section*{DRAKE Type "316" <br> \section*{DRAKE Type "316" <br> <br> 10n Walts-W" Tip. Low Frice! <br> <br> 10n Walts-W" Tip. Low Frice! Highest quality nichrome wire in Highest quality nichrome wire in porcelain alement. With 6 t. cord porcelain alement. With 6 t. cord rubber plug and atand. © 7 rubber plug and atand. © 7 <br> <br> DRAKE Type "315' <br> <br> DRAKE Type "315' <br> <br>  <br> <br>  <br> <br> } <br> <br> }

60 Watto-iks Tip. A Valua! Excellent for light work Highest quality michrome wire in porcelain Ilug and stand.
MAR14. Only......... Non-Stick Iron Tip Componnd. prevente Prevente tips from borning int $11 A 288$. Yer 2 oz. bottle......21c


Hox Key
Wrenches
set. 24 C
An emential itern for every repalr man. Made of special alloy steel
properly hardened. 1 each for
Km Nos 4. 6, 8 and 10 screws.

15c

## Solder Fast With This TRIGGER CONTROLLED

 "Flash" Soldering Qun Natnral Cen Crifo
Heats to soldering temperature in a rew pecon trigger. Heat is kept on trigger. Heat is kept on and controlled (High or Low as desirad by trigger presaure. Idenl to
work with in cramped
 work with in cramped or amall spaces. Supplied with transformer lor 110 V. A. C operation or by diaconnecting transformer can be used where there is no electric
current by connecting the soldering current by connecting the soldering
gun to an ordinary f-Volt storase gun to an ordinary
battery. Comes with mos standerd copper tip. shipped ready to ene Net Each. Complete .... $\% 8$.
$11 A 224$. Exa 11Ag24. Extra tip with
carbon element ............ 420
Pull the Trigger, Start to Solder Within 5 Seconds


100 watt, 115 Volts 60 cycle Weller Irunsformer type Njeed Iron. Release trigger and circuit breakn auplaces, around cornere -inerpensive wire tip can be bent to shape desired-you see what you solder-desired-you see what yoursolderfectly balanced. easy to Jandle rectly balanced, easy
plastic caso-staya cool.
No. \&oA102,
With 2 tipe. E
FItra
$\$ 12.69$
No. 20A103, Extrat thus, Na. . . . 5 .


Vernier Caliper


For accurately tranaferring anglea getting of bevels, etc. Graduated from 0 ta 180 in opposite direc tions. Made to atd. protractor dimenslons. Fead $3 \% \times 2{ }^{*}$. arm ${ }^{\prime \prime}$ lont. $11 \mathrm{Al97}$. Net Ea. .............. 98 ?

## KEY HOLE SAW



1001 Itaen Every Day Made of cold rolldeeply otchod of itee, and if per per mit close reading eet and may be used for acribing Circles or dividera, 5 -inch capacity. 11A195. reading sind depth gauge. YOUR COST. Rech

98 c

Mandy §pin-Tite set


Contains Chuck-Type Handle with Ream-awl. 3 Screw Drivera, 7 Splntites, \%" to $1 / 3^{*}$. Insulated neutralizing Alignment Wrench, a pair of diagonal pllerg and a palr of aldecutting long nose pliers. all in a Leatherette Roll.
11A228, Complete, onls.. \&8. No. 11A140. Set as above except leas the 2 palr pliers and alisnment wrencli. Comes in
Leatherette Roll .88
XCELITE SET OF


## 7 NUT DRIVERS

## 

 handle 2 nuts at once 6000 -Volt shock-proof bandles. Set of 7 with

Colored Handle Set
Bet $n$ a above, except each surench has different color Iardle, to make for easy selection.
$\$ 3.77$ 11A229. Per get

## Electric

 Drill Arbor FOR ATTAC1MENTS NOT OVEB 4 DIAM.Enablen using cutting wheels, wire hrushes, bufferg, etc. with regular Electric drill. Fita un chuch or Inrger.
11:12\%3. $\qquad$ 44 C
 Grind Wheel. Twch ........
11A288 $4^{\circ}$ diam. Scratch
 Whoel-rach ........... 39e


Drill 3-jawed (A) (B)
case hardened gteel chuck holds up case hardened steel chuck holds up ateel frame.
83A17. Net rsach
$\$ 3.44$
UNIVEREAL HACK SAW
G.M.Co 500
${ }_{\text {Net Fen }}^{16 A g e} 49 \mathrm{C}$ Katra Bladee 110 C

## Htach 4 The for Serrico orall purpore ned

CIRCLE CUTTERIS-A Type for Every Need

(A)

(B)

(0)

For cintins round holes In sheet steel, brata, aluminum, bakelite, hard rubber, wood, plastics, and other materials, Drill acts as center pilot, reopins cutter in constant alisnment, Croen bar and cutting bite are espily adjuited. May be used in slow speed drill press or hand brace Cutting bits are of high speed steel with exception of C.
"A" HEAVY DUTY Type B. Cuts "B" Type 1. Cute holee 1 " to 4 " holes 1" to 5 1/2" $^{\prime \prime}$ diameter.
11A181. Bound Shank Choice Fa, 11A18\%. Aquare Shank. S1.85 Treo \& (not Hllus) like "A" but combller. cat holes or comb. ra. or Bq. shank. 11A1息, Net Ex. .................. 1.30 18.1501. Mrta Cotter Lor types and beads edse at enme tima Has comb, ehank. For modium work. 11A188. Net Ea. .............. 1 . 96 11A186. Like type 1 except Lens beadins cutter .......
$12 A 1500$. Ertra cutters for any above. Ea. ................. 30 "C" JUNIOR. Cuts holes ${ }^{\circ}$ " to 21/2" for light work. $\qquad$ 80



## Drill Gauges



Adjustable
Circle Cutter

Cp to 8 Inch Role. Hex ehank fits elther hand or elec ric drill press. Removable center ing drill for using any aize pllot, \%" aquare cutting bar holds Iह speed bit.
No. 11A184. Irach
$\$ 3.88$
Greenlee Chassis Punches
Drivea by Sarev Action.


Quick and eimple Cutting done by driven by som diam. oquare hóe dimp serew, supported by accurate die. 18" guide hole required at deaired location. Merely turm morew with wrench antil metal fis cat through. No. Size Ele No Size Ea. $11 A 299$ \%"/ 1.84 11A215 1 H" 2.25
 $\begin{array}{llllll}11 A 198 \\ 11 A 201 & 1 \% & \text { 2.81 } & 11 A 208 & 1 \% " & 2.26 \\ 11 A 204 & 1 \% * & 2.57\end{array}$ $\begin{array}{lllll}11 A 201 & 1 \\ 11 A 800 & 1+\infty & 2.25 & 11 A 200 & 1 \% \\ 11 \% & 2.88\end{array}$



## Square Hole

 PunchPermite the cuttins of any odd ohape hole (square, rect., hex., obong, etc.) on any size panel or chasels. Will cut up to 14 gatuge hickness of any metal. ther a mor the only 11A208. YOUR COST 9892 Rivet and Eyelet Punch Set For rivets or eyelets of most used sizes. Tools of hardened steel, base cast iron, hex. sides to hold in vise. Price Includes assortment of eyelets and rivets.

## 114207.

Net Each
$\$ 2.35$
11A208. Rivet and
Eyelet Setting Tool. Only... $8 ?(C$


## Speedex Wire Stripper

Strips atranded or solid wire, all types, easy and last Merely press the handles and the Job is done, Clean working without dam* age to Wire. Works on ends or any place along wire. Pocket size.
11Az12. For sizes
10 to 18 wire...
$\$ 3.53$ 11A218. For sizes
$\$ 3.53$

## WT WALSCO <br> Staple Driver <br> Makes wire, cable and other installations e asy and last even in out-otway places inaccessible to hammer, single stroke of hand drivea staple home even to brick, etc Holds 24 staples. <br> 11A216, Driver and box <br> $\begin{array}{lll}\text { of } 250 \\ \text { staples }\end{array} \ldots . . . \$ \mathbf{4}$ <br> 11A217. <br> 32c

andy Test Lite
Handy for countlesm needs. Na 11A84.
Opocial. En


Kracuter Pliers 11A218. ${ }^{\circ \prime}$ Diagopala.
1.80

11A219. Elender noee side cuttins milled $1 \times \mathrm{a}$ mami - flat polnt.
 11A81, as above "over s. 2.12


Thls Acro Chassls Cradle Speeds Work

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| :---: | :---: | :---: | :---: | :---: |
| No. | Type | Mmp. | Mmi. |  |
| 17AB8 | MC-20-8 | 20 | 6.6 | 1.53 |
| 17A5包 | MC-35-8 | 35 | 8.0 | 1.68 |
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| 17A68 | MC-75-M | 80 | 7.3 |  |
| 17A8s象 | MC-100-8 | 100 | 8.3 | - |
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| 17 A66 | MC-140-M | 140 | 9.0 | 2.10 |
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| :---: | :---: | :---: | :---: | :---: |
| No. | Type | Mmp. | Mmf. | EACTI |
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Winding of enameled copper wire, mounting and plug bars of steatita Colls are self sup. porting but rigldly held in place by fire-resistant lockjng wtript. All units are center tapped. Variable link type is so arranged it may be controlled from the parel by means of an extension shaft if required. Capaclty glven fis quency emal of band. NOTE: Fixed link types have link complete With coll. Variable link types are listed with link and base complete and separate from in ductance coll. Distance between outaide plug


 $\begin{array}{lllllll}17 A 295 & 36 & 2.82 & 40 & 17 A 300 & 38 & 2.29 \\ 17 A 296 & 27 & 2.44 & 20 & 17 A 301 & 30 & 2.00 \\ 17 A 705 & 27 & 2.44 & 15 & 17.706 & 30 & 2.00\end{array}$




Trimmer Condensers IUAL CERAMIC, mica comimpregnated with a sllicon flufa and heat treated to protect Phoingt moisture. Bronze and Spring Brasa, tin plated. Standard 1 if" square. 15A1516, $185-120$ mmpr. 3 Pr.................................44c 15A1516, $200-170 \mathrm{mmf} .3 \mathrm{Pt} . . . . . . . . . . . . . . . .44 \mathbf{m}^{\circ} \mathrm{C}$

## MILLEN

## Neutralizing Condenser

Caparity fange $0.7-4.3$, very compact.
Use ultra low loss quariz $Q$ as a dielecNo. 17aj03, your Cost Each.....90C

6 L6 Neutralizing Condenser For use with beam type tubes In trans*
mitters. Has two $1^{\prime \prime}$ disc plates. Ceramic stand-off insulator, crow foot base. Shpg.
17.496
$\$ 1.06$

## National NC800 Neut. Condenser

 Disc type for high voltage. Micrometer adjust meat with lock nut. Low-loss Isolantite insulation. Three-hole mtg. bracket. For type809 and similar tubes.
$\$ 1.92$

BUD Transmitting Condensers Ideally multed for low and

## NATIONAL



TYPE TMC MODERATE POWER


For use in power atagea of transmitters where peak voltage does not exceed 3000 V. Extremely rigid irame. Full Ito-
lantite insulation. Platen have buffed edges: airEap 18.077". "Dual atator.

| Stort No. | Mirie. Type | Max. <br> Mmi. | Mn. Mmi. | $\begin{gathered} \text { Not } \\ \text { EACE } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| 17A110 | TMC-50 | 50 | 10 | 2.81 |
| 174111 | TMC-100 | 100 | 18 | 3.20 |
| 17 A112 | TMC-150 | 150 | 17 | 7 |
| 17A113 | TMC-280 | 250 | 28 | 2 |
| 17A114 | TMC-300 | 300 | 26 | 3 |
| $17 \mathrm{A115}$ | TMC-50D | -50-50 | $0-9$ | 83 |
| 178116 | TMC-100D | -100-100 | 11-11 | 7 |
| 17 A 117 | TMC-200D | -200-200 | 181/2-184/2 | .13 |

## National "UMC" Ultra Midget <br>  <br> For every ultra H.F. uee. Isolantite insulation. Rear ehaft extension. <br> $\begin{array}{lll}17 A 118 & 15 & \mathrm{mmf} \text {. } \\ 17 \mathrm{~A} 119 & 36 & \mathrm{~mm} \text {. }\end{array}$ <br> $17 A 12050 \mathrm{mmp}$. <br> 3.88 1.18 1.21

NC600 Neutralizing Condenser






medium power transmit ters. Feature electro - solclered plate assemblies, aswiring correct plate spac ing, over-all rigldity and light weight. Panel space only $2 \%$ "x $2 \%$ ". Plates are of brass, rounded edges. and assemblies are cad mium plated. For panel or nuitubla for multi - band apllentlons.

| Stock | Mir's. | Max. | Min. | Air | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type | Smf. | Mmf. | Gap | EACE |
| 17A127 | 1525 | 50 | 4 | .051" | *2.16 |
| 17A128 | 1526 | 100 | 6 | .OB1" | 2.32 |
| 17A129 | 1529 | 340 | 16 | . 0517 | 4.26 |
| 17A130 | 1630 | 25 | 4 | .078" | 2.12 |
| 17 A131 | 1531 | 35 | 4 | .078" | 2.20 |
| 17A132 | 1582 | 55 | 6 | .078" | 2.47 |
| 17A133 | 1833 | 80 | 7 | .078' | 2.82 |
| 17A134 | 1534 | 110 | 9 | . 0788 | 8.00 |
| 17A135 | 1535 | 150 | 12 | .078" | 3.82 |
| $17 \mathrm{A136}$ | 1640 | 55 | 9 | .144" | 3.00 |
| 17A137 | 1541 | 80 | 12 | .144" |  |
| 17A188 | 1842 | 105 | 15 | .144" |  |
| 17A189 | 1546 | 55 | 10 | .178" | 3.86 |
| 17A140 | 1847 | 100 | 17 | .176" | 1. 1 |

Dnal Section X'mitting Conclensers
Tie rods are insulated at both ends with steatite, otherwise like above single section con-
denserg. Cupacities are per wection densers. Capacities are per section.

| $17 A 308$ | $1551 A$ | 50 | 5 | $.05 w^{\prime \prime}$ | -4.78 |
| ---: | ---: | ---: | ---: | ---: | ---: |
| $17 A 309$ | $1553 A$ | 100 | 7 | $.051^{\prime \prime}$ | 6.78 |
| $17 A 310$ | $1668 A$ | 200 | 10 | $.051^{\prime \prime}$ | 7.08 |
| $17 A 811$ | $1671 A$ | 35 | 6 | $.078^{\prime \prime}$ | 5.88 |
| $17 A 812$ | $1561 A$ | 110 | 10 | $.078{ }^{\prime \prime}$ | 7.08 |
| $17 A 318$ | $1668 A$ | 18 | 16 | $.175^{\prime \prime}$ | 6.88 |
| $17 A 314$ | $1567 A$ | 40 | 11 | $.175^{\prime \prime}$ | 7.08 |

# Coils adCrystals forYourNewHamRig 




MILLEN IF Transformers De Lase type st faotery buill faotery buile equipment. Feature heavy moldboards, eteatite coll forms, risid-
 lesadr". etc. The large aise hesvy wall excans, high $Q$ condensers and colls result in the over-an $Q$ of all tranaformers being extremely hish Units contsin the grid condenser and grid leak iostie the shield.

ARE TRIMMED TROX CORT

34.50 17 A $684 \quad 1600$ BFO A IR CORF 4.50 IPLEMEABILITY TUNHD $\begin{array}{lll}17 \text { A } 685 & 456 \text { Interstase } & 32.25 \\ 17 A 696 & 456 \text { Dlnde } & 2.25 \\ 17 A 697 & \text { i56 BFO } & 2.25\end{array}$
MILLEN Tunable Coil Form Handard ootal hase of low-loas
mice - fllled Halvalte, pols coll form alum form, heavy aluminum shield. of high frequen cy type, sultaile for use up to 36 me. Adjustive screw protrudes thre center hole of standerd octal socket.
17A69. With Iron Core
$31-85$
MILLEN QUARTZ "q"'
 Sheot si
$17 \mathrm{A700}$

MLLKNN IUurtz 9 Coil Dope low-lose eren thigh frequency 17A704. 2 or bottle


Crystal Holder Socket

lose Amphenol giza" ipolswtyrene
with phospho
toronse bilver phen with phosphor
fronse ellver plated
contacts, may be removed and the body usid 12. 1 sese. $4^{m}$ centerm ............ 210 pithout any chanses. Body of low-loss piastic
b. 17A788, Adaptor for any $1 /{ }^{\prime \prime}$ No. 17A788, Adaptor for any

## bliley <br> QUARTZ CRYSTAL8


(A) AXg, Manallectured mpecifiently for Amateur use. All important features developed through production of countless cryutws for military use are methectad in this maw model. Acld-etchod to lretent electrodes plates springs and coutnct pins. Accaracy to $002 \%$ : temperature stability to . $08 \%$ Holder pln spaciag. H/3", \$pecify frem

 $17 \mathrm{Al002}$ suc-109. Dug frequency Frach .................... 83.85 (K) Typo sive fource for ase in trequeney standards The 1000 ki . frefiupmey is correct within $5 \%$ and the 100 KC . can be adjusted to sero baat. Ideal for alignanent of radio receivers. Slze $1 \% \times 1 \% \times 3$ m. 17A100s, Jour Cont Bneh
38.75
(C) Crystaly for broadenat. marime, police and hircraft bervice can be supplied on Epecial arder to the incto finmediaticly. Write us for literature and price quotatlons atative your requirements

Thirty-five pare hatmbook explaimin completaly frequency contrel with quarts crytall as to thoery, une application and care

# Stand OPf INSULATORS and fittings 



Typea 65, 86. 67 have Cadmium steel basee.
 Of white glazed porcelain. bish mechanical strength and Bave learase path. Flat mounting sure faces, cushion washers. "J" indl-
ole tew fack type ineulator.



Each of the above furnished with hardware for isrger types are shown below

## ULTRA-STEATITE CONES



## JOHNSON PLUGS AND JACKS <br> 

BANANA BPRING TYPH. Nickel Bilver springs and nickel-plated brass ecrew machine parts with accurate thresds and milled nuts. Studs exrend full length for added mupport: Types 7. ${ }^{\prime \prime}$ pluge are .300 dia.iond fit jacks 76, 76A. 75, 75C plugs are .170" dia., and fit
 NGULATED BANANA PLUGS
12A1078-1\%" long. flts type 74 jack. Ea. 18 c 12.41079-1\%" long, fits 76. 76A jack. Ea, 276 Have mar. current-carrying capacity. minimum fit. Wiping action of spring on insertion in bures good electrical contact. Tension is maintained by phosphor bronge mearion lo mainType 71 plug $16{ }^{\prime}$ dla pite type 70 jack Typon 3 . 11 保 are nickel plated. dia., fit type 72 jack. All $\begin{array}{cccccc}\text { Type Sti. No. Price Type Str. No. } & \text { PHee } \\ 70 & 12.1080 & 27 c & 73 & 12.1083 & 7 c\end{array}$ $\begin{array}{lllll}12 A 1081 & 18 C & 73 A & 12 A 1084 & 76 \\ 2.11082 & 116 & & & \end{array}$

## AMPHENOL STAND-OFFS


rmed from Amphenol "912-A" pure polyetyrene. For indoor or outdoor Will not breals when dropped or subjected to hard blows aw do ceramice or insulation t" in diameter Type " $\mathbf{B}^{\prime \prime}$ has Insulation $1 / 4$ " In diameter. Wire is held in place by screw or molder-lug. Brame insert in top of insulator has "V' shaped blots so that Fas can be securely clamped in


## 4LUCITET Triensparent Insulatore


radl requencies, are water clear with highly pollahed surfaces.

FEDED THRC TYP
Ideal for bringing high freq. leads hru chassis, panel or shield. The A" have 6-32 hdwe., the $\mathrm{y}^{\prime \prime}, 10-32$.

 STAND-OFF TYPE


Pillar type. Single-hole base mounting with n.p. brass hdwe. for attaching wire or parts. The ideal for HF and $R F$

"LUCITE" FEEDDRR SPREADEPS Furnished with locking screws to clamp wire in place. All are $\%^{m}$ dia drilled for No, 12 to 18 pire 12A296-2" spacing
12A297-4" spacing
12A298-5" spacing
LUCITE $12^{*}$ RODS
216
276

To make ur-own buehings, Eupporte, coll forme,


## Amphenol "912" Polystyrene

 Sheets, Rods, Tubing, strips912 " $\mathbf{A}$ " and 912 " $B^{\prime \prime}$ are vater-clear trans parent insulating materials mado famous fo radio use by amphenol in parts malded to shape and in rod sheet and tubing for custom built parts, especially for UHF work.


Actually fuses parts together instead of merely sluing them
12A236-2 oz. bottle. Four Cont .......s 28
12A206- 4 oz. botlle. Four cont
5A192-Quart Bottle. Your Cowt
12A237-2 oz. Thinner. Four Cost
17A730-4 oz. Thinner. Your Cont
BA143-Quart Thinner, your Cont $\qquad$

## Ceramic Stand-Off Insulators

## 0 ) each end. ideal for

 densers etc
long plug-in forms.
12.A201-4 prong..38c 12Az02-5 prong..88c 12Az03-6 prong..43c
 012 A" Polystyrene, ${ }^{2}$ - \% dia. miniatur the losses are pract!- plug-in type. Easy to cally zero. Colls arill hole where wanted wound on these forms for end of winding are superior to air 12A204-5 prong.. 28 c wound coils because 12A20s-6 prong..28c dirt cannot get be- "C"- Miniature form tween windings and for mig. directly on lower "q". of coll. wave band awitch, tunTo impregnate wound ing condenser or chas colls, etc. center of base for gelf 12A206- bot tle.. $38 C^{\text {tapping acrew. }} \underset{\text { 12Az00. Each... }}{ } 1^{\circ}$

## TUNING EYE ASSEMBLY



Ma adapting Magic $E y e^{\prime}$
tubes to sets $t$ obt equipment and apparatus. Includes tube Bocket. $22^{\prime \prime}$ cable, adjustable mounting brackel, bronze ed 17A758. Assembly for 6 -prong tube ........ 88 C 17A760. Assembly for Octal tube 88 C MAG1C EYE ESCUTCHEONS
Hood type, large size for mounting over panel or cabinet hole. Bronze finished
No. 17A761. For Single Eye Tube. Ea. ... 180 tubes. Bronze Finished. tubes. Bronze Finlshed. No. 17A782. Net Each

21c

# Racks．Chassis－CPdiutets．Panels－Accessories 

## Amplifier Foundation Cabinets

 pleasing rounded top corners－raised sorepo opesinss in tope．Jetimpo
 striped chrome moldirgs and handles io match．Marlne Cirey Eivith Trinish on all mutts．


UNIT＂A＂－De Luxe UNPT＊B＂－De Lure UNIT＂CN—LOW COST Amplifier Foundation Sloging Chasela Amplr－jtandand Ampifite Chasels；all unite are $8^{\prime \prime}$ fler Unit．Chassis bot－foandation Unit：Ident hth ；chassis， $3^{\prime \prime \prime}$ hlgh．tome are $10 \times 17^{\prime \prime}: 13 \times 14^{\prime \prime}$ ，ical to Delsure units er Glves De Luxe＂Com－amd LIx17＂，in ordericept chrome trimminge
 custors bull equlpmeat frent．Units all gyghigh． No．KIse Nist，Ka，high．DeLux through－\｛ Ke．size Net．Ra


 $\begin{array}{cc}7 \times 17^{\circ} & 3-24 \\ 10 \times 14^{\prime \prime} & 3.51\end{array}$ ＂Hi－Qually＂Metal Chassis Bases

Sollily opnsfructed 1 －pleoe nteel onassin banas for receivers，transmitters，araplitiers，te，folded over on the bottorit（except the $=$ smallest gises）for ad ditional strength．All sisem from $544^{\prime \prime} \times 10^{\prime \prime}$ drilled for aftaching bottom plates．

| ©ize．Inches | $\frac{\text { CHASSIS }}{\text { Crinulam No. }}$ | BASES | Net敖解h | Bottom Fiates No． | Net Fach |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5A50 | ． 5.151 | － 58 |  |  |
| $5 \times 91 / 8 \times 14{ }^{1 / 2}$ | \＄SAES | 6.83 | ． 68 |  |  |
|  | SAB4 | 8 A5S | ． 8 | 5．101 | 830 |
| 618x10x3＂ | 6＾86 | 8． 8.5 | d5 | 5 A102 | 450 |
| 5 513 $5^{\prime \prime}$ | 5458 | 6．150 | 1.06 | 6.1103 | 480 |
| 7x7x2＂ | 5 A 90 | 5A61 | ． 84 | 5.104 | 480 |
| 7x9x20 | 5A8\％ | 6．483 | .80 | －5．4105 | 480 |
| 7x11x2＂ | 5404 | 6．65 | 8 | 5.4100 | 540 |
| 7x12×3＂ | 6A86 | 6.467 | 117 | 51107 | 870 |
| 7x13x ${ }^{\text {\％}}$ | 5A88 | EA69 | Lot | SA108 | 670 |
| $7 \times 15 \times 30$ | 6.170 | SA71 | 1.35 | 6.4108 | 630 |
| $7 \times 17 \times 3^{\circ}$ | 5.172 | 8173 | 1.8 | 5 A 110 | 660 |
| $8 \times 12 \times{ }^{\text {¢ }}$ | 4．74 | \＄．175 | 1.89 | 6A111 | 680 |
| $8 \times 17 \times 3^{\prime \prime}$ | $8 \times 176$ | 5．177 | 1.4 | 6A112 | 690 |
| 10工12x ${ }^{\prime \prime}$ | 6 AB0 | 5481 | 1.41 | 6.1111 | 88． |
| 10x．14x ${ }^{\prime \prime}$ | 6A88 | Si483 | 1.47 | 51116 | 760 |
| 10817× ${ }^{\circ}$ | 5184 | 5485 | 1.38 | 58116 | 840 |
| 10x23x ${ }^{7 \%}$－ | 6 A ${ }^{6}$ | 8．287 | 1.98 | SA117 | \＄1．08 |
|  | \＄488 | $55_{3} \times 89$ | 1.88 | 5.1118 | 840 |
| 12x17x3＂－0 | 5.490 | 5．4P1 | 1.98 | 6 A119 | 800 |
| 13517880 | 6.192 | 5.493 | 2.49 | 5．180 | 1.08 |
| 10517x ${ }^{\text {＂}}$－ | 8AS4 | 5.185 | 2.10 | 5.1118 | 840 |
| $18 \times 17 \times 4$－ | BAE6 | 5AP\％ | 2.85 | EA190 | 1．03 |

HEAVY STEEL CABINET

$\qquad$ Remove able Spot back． cornere Finighed In
black wrige black wria
kle enamel

| Cat． | 8150 |  |  | YOTR |
| :---: | :---: | :---: | :---: | :---: |
| Tia | 1. | D． | IR． | COST |
| SA180 | 4 ＂ | 2＊ | 4＂ | 30.78 |
| $5 \times 181$ | 4 ＂ | 2＂ | $6^{\prime \prime}$ | ． 88 |
| －${ }^{\text {c／y }}$ | $6^{\prime \prime}$ | $6^{\prime \prime}$ | 6＂ | 3 |
| 6A8 | $9^{\prime \prime}$ | $5{ }^{\prime \prime}$ | $6^{* *}$ | 1.60 |
| 5A9 | $10^{\circ}$ | ${ }^{\prime \prime}$ | $7{ }^{\prime \prime}$ | 1.89 |
| EA10 | 20＂ | 8＂ | 10＂ | 2.31 |
| ＊11 | 12＂ | 11＂ | ${ }^{\text {\％}}$ | 2.48 |

## PORTABLE STEEL CABLNET

Weldell weed cabinet Wh leather handle．Re moyable front and back tapplng Ecrew if Black ripple enamel finith．Fo Oscillatare transedivera

HINGE LID CABINET


## Portable Metal Speaker Cabinet

Mofarn streanline degisn wlth arnpla bafte area －provide esceptional reproduction with the av rage dsmane megicer．hounded corners wich ath tractire metal srille and convenient hande arryiaz Very cobirable for portable peblic ac
 farten ex piaygreatids．Supplied lees opeaker．



For commerclal or amateur trams－ mitters．P．A．Systems and other Etectronic equipment．
lve modern desken teataring rounded tertertime red－striped，chrome trim top and boit om．Ruggedly con－ Lop and bot o m．Ruggediy con－ structed froin 16 gauge（roticald
rolled stecl．all foints electrically colled stecl，all joints electricaly welded．I＇anel mounting supporta are recessad so mo edger are ex posed und are securately punched for Plther Wing．
Notehed Pnnels．
liloor Model．liave rear doors hums on loose－joint linges，held securely in place by suiap catches．An in terlocking switch brarket is in－ eluded with e ch cabinet．Fur－
nithed in Erey creckle finish and shipped K．D．with all necrusenry bardware for sssembls，inaide depth $16^{\prime \prime}$ ，width orerull 22

| 8tory | Overall | Pramel | Not |
| :---: | :---: | :---: | :---: |
| No． | Hexight | Space | Hach |
| 88A1 | 42180 | $36 \%$＂ | S88．40 |
| 3842 | $47{ }^{15}$ |  |  |
| 8848 | 6616 | $61^{\prime \prime}$ | 43.81 |
| S8A4 | 82 \％ | 77 | 50.72 |
| Table | Models hav | reces | ed hinse |
| door of | on top．with | amal | cth．The |
| larg | e sizes ha | hin | ed reas |
| doors | In additio | ．Fur | inhed |
| srey | crackle ena | aed fin | ch com－ |
| pletely | set up． | we ex | tended |
| metal | feet to avo | serat | ng table |
| or des | sk top． |  |  |
| Stock | Overall | Panel | Net |
| No． | Height | Spuee | lech |
| 38．15 | 10 足 | $8 \%^{\prime \prime}$ | \＄10．14 |
| 3846 | $14{ }^{1}$ | 1214＊ | 12.35 |
| 88.7 | 1618 |  |  |
| 8888 | $17^{6 / 6}$ | 1．4＂ |  |
| 389 | $28{ }^{\frac{3}{18}}$ | $264{ }^{\circ}$ |  |
| 88.10 | 36 71 $^{\text {m }}$ | 35 | 1．14 |



Rack Panels For cablnets and raoks luving stand－
ard amateur Rpacings of yles，Made of
 ting and linish．Black or Grey wrinkle
GHKY BLACK Size Shper NET
Cat．No Cat．No．Sizo Wt LACH





5A87G

BA PM： OAZ9G 5AN $15 \%{ }^{\circ} 12$ 2．1電 CHASSIS MOINTMN（ BR．ACKETS Fit on ${ }^{17 \mathrm{~m}}$ relay rack chasmis for panes．For $11 \%$ bage Pair 8A98．For $1^{\circ \prime \prime}$ bage．Pair


## 8 mall Rack

 An Inexpents ${ }^{\text {a }}$ rack handy for a varlety of uses． Made to accom－ modate two pan－ els．one $101 / 2$＂and one $18{ }^{8 \%}$ high and plied with cab－ inet．Wil take chaseiv up to $8 \mu$ deep $x$ 15＂wide．Rear has hinged door with locking device．Overall slse $211^{\prime \prime}$ high， $18^{\prime \prime}$ wide and $10^{\prime \prime}$
$\$ 13.82$


8 treamilined Muiti－Purpose
Cabinets For the many neen in making up va rlous Electronic equipment． Orey $^{\text {rey }}$ crackle enn me feet on hot rubb 4y＂high x $3 \psi^{\prime \prime}$ overah depth．



## DeLuxe

 Meter Cases Steel，finkered in Martne Gray Rip ple Enamel Rounded top．Red striped chrome band．S1se 1 deep， $4 \frac{1}{1 / 2}$ wide． $4 y^{\prime \prime}$ high． $\$ 1$ $\$ 1.35$$\$ 1.35$



Midget
Speaker Cases Ideal for $2^{\prime \prime}$ and $3^{\prime \prime}$ speakers Sise 4＂天部＂ black erackle．
5A196．For 2＂Speakers
31.12


Panels 1／16 Thick
black ripple fintsh

| Cat． |  | Not |
| :---: | :---: | :---: |
| Ne． | Stre | Tarli |
| 5．118 | $7{ }^{\prime \prime} \times 10^{\prime \prime}$ | $4{ }^{4} \mathrm{c}$ |
| 5.116 | 7＂x14＂ | 83 |
| 5A17 | $7{ }^{\prime \prime} \times 18^{\prime \prime}$ |  |
| BA18 | 8＂x14＂ |  |
| 5A18 | $8^{\prime \prime} \times 18^{\prime \prime}$ |  |

## ALUMINUM PANELS

－548T．Hard Aldminvan，easy to work，drills clean．machine and with Grey Wirnkle Fininh． Nisa Grey ifrinkle Wtehe ix10＂ $17 A 47$ BOC 17446 कBe zan Plain Aluninnm．
35 C
MCARTA Plastic，Panels Fine quality linen base，color tan punels handy for many meeds It thick，easy to work．Irregular Pricas They are otherwise perfect


miveral wound ples on Isolanm.b., D. C. resistance 35 ohms, rated at 125 ma . 12A180. HEach
Typo CH500. For high power rigs working in $10,20,40,80,160$ meter bands. SII pies on Isolantite core earry 800 ma . continuous. Inductance 2.5 mh . D. C. remiatance 8 ohma. For parallel feed. Effective 12A18s. Each

## Melsener

## De Luxe

R.F. Chokes

AIR CORE (UNSHRELDED)

| 12A184 | 5.5 MH | Ea. 37 c |
| :---: | :---: | :---: |
| 12A185 | 10.0 MH | Ea. 45 c |
| 12A180 | 16.0 MH | Ea. 49 c |
| 12A187 | $\mathbf{3 0 . 0} \mathrm{MH}$ | Ea. 54 c |
| 12A188 | 80.0 MH | Ea. 65 c |

Hammarlund Coil Forms


ICA 8 mall Ribbed Coll

## Forms



Amber calor bakelite,
$1 \%$ dia. $2 \%{ }^{2} \mathrm{~h} / \mathrm{g} \mathrm{h}$, with molded ribs for low-lose winding and Bpecial rim on top. Rerting labels. for in$\left.\begin{array}{l}12 A 197-1 \\ 12 A 198-5 \\ 12 A 199-6 \\ \mathbf{P} .\end{array}\right\} \begin{aligned} & \text { Cholce } \\ & 24 \mathrm{C}\end{aligned}$ Morris Coil Winder
 colenoids, etc., in various widths, diameters and gauges of wire. Reterns. Net Fs . . ...... 44.45


2et of Four 4-prong coils covering color bakelite coil forms. Space windings, Wave range printed on
each coil. Tune with 140 mmf . condenger. Windings include tickler and grid input Four pronks. two windings.
17A291.
Yoar Cost Per Sot
$\$ 1.71$ Fxtra colls for bove KI
 winding


Famous National Chokes
high R100 RF Cholke Ideal for receivers and low power stages of tranamitters. Has continuous section universal winding on 180lantite form. Dlatrlbuted capacity 50 ohm . D. C. inductance. 125 ma. 12.1189. Fach small M100. As above but on cal mounting: has intor for vertiminals. minals.
I2A190.
12A190. 2ach
42 c
Type R300. similar to in 100. mh., 300 ma., 10 ohm D Alstance
12A181. 35 c $21 / 2$ and 5
Meter Midget
R.F. Chokes


An officient choke for U.H.E. recelvers and transmitterm Rated 5.4 Micro-hy and 1000 MA DC 12.198.
$\qquad$ 29 c

## Johnson Sockets

 Porcelain base, positive spring contacts with screw and solder - lug
erminals.
12.174. Type 209 with spacing between shell and contact for high voltage rectifier虏, otc. For 4 -prong UX base
12A175, $\because$........................ © dual phosphor bronze 94


JOHNSON Miniature
Sockets and shialds Dealgned for use neries and miniatura series tubes. including 1S4, 185, 1T4, etc, Conhilver plated and are gelf-aligning. Deaigned to permit a minimum amount of capacity between contacts. Exceptionally low-lom con struction. Type 267.

277B - Steatite base with
metal mig. ring extending bay upward to form a shield.
No. 12A50. Net Each...... 44 ( 2778 - Miniature socket
shleld base only.
No. 12A568, Net Each.. ${ }^{\text {E }}$,
No. 12A568, Net Each.
Shleld for $277 B$ or 2778.
No. 12.4569, $1 \% "$ Shield.
No. 12A570, $1 \%$ " Shleld.
choIck, lour cost, Ea. . 12 C
JOHNSON 275 Socket
 Fir Eimat type 4-
$125 A$ and $4-250 A$ 125A and $4-250 \mathrm{~A}$
tube. gteatite ingulation, Contacts
cad d um plated reinforced with All metal parts counter sunk and mig. holes
bossed to permit panel mig. with. out shorting. 5 prong. $2^{\prime} 27 / 32^{\prime \prime}$
square.


Type CIR
National sockets Low - loss Isolantite offs and six position $m$ et al flange for universal mounting.

| No. | Pronge | No. | Prongs |
| :---: | :---: | :---: | :---: |
| 12A168 | 4 | 12 Al 169 | 7 L |
| 12A167 | 5 | 12A170 | 78 |
| 12A168 | 6 | 12.171 | 3 oct |
| Net Ea, |  |  | , |

## Magnal Steatite socket

Heven Contact socket of steatite. Has 1 Is" pen circle to accept magnal 11 -prong bases as on many cathode
riy and televislon tubes.


## MEISSNER COILS


"Plastic" Replacement

## l. F. Coils

Air Core Type-MInimum space with maximum performancel Only 1y" equare and molded plastle trimmer bane and coll Findinge of type WIRE. Wide, stable, requency range-dou ble tuned-immune to temperature ibration, or humidity offect

Input Interstase Ontpu FREQ. NO, NO. No, $\begin{array}{llll}175 \text { kc. } & 16 A 201 & 16 A 202 & 16 A 20 S \\ & 16 A 204 & 16 A 205 & 16 A 200\end{array}$ Any of the abore, $82 C$ IOER NET COST, EACE

Ferrocart "plastic -ow
SME SMALI 8IZF as air above with unueually HIGH GAIN and mperior selectivity curves for improving performance of compact and auto sets having only a single -F gtage. Not recommended for 2 tage byatems.
FREO. Input Outpnt NET
$56 \mathrm{kc} \quad 16 A 20 \%$ 16A208 31.22

## Standard I.F. Coils

Popuiar ror seneral replacemen needs. All are double-tuned with mers. Winding of high grade Litz wire are fully impregnated. Black crackle finlsh can $1 \%{ }^{\prime \prime}$ square, $31 /{ }^{1 /}$ FREQ. Input Interstage Ontpnt
No. No. No. 175 kc 16A200 ..... 16 A210 456 kc 16A211 16A212 16A218 Cholce,
Replacement I-F Windings


For repalrins "midset" recelvers. \%" dimmeter x 1\%" lons; wound on wood dowels-coupling adjusted by alidint primary coll. "Standard" put: center-tapped for full or Out diode circuite
Ciod. circuito.
ET
No. FREQ. Type
16A280-175 180 gtand. 16A237-456 Lo Stand. 16A238-176 Ko C.T.
 A289-456 4о. с.T. \} GEC

## Slip-Over Primaries



## "ferracart"



## :F.O. COIL

For use with standard I.F.'s in supers. Supply the "beat" note necessary to reception of CW., ald in tuning and locating weak otations. Mica trimmed. Freq. Range 290-650 KC. Peaked at 460 KC. In pitch control.
16A218. Each
41.4:7

DISCRIMINATOR TRANAFORMER Specially designed for operation at 4.3 mc., between the limiter and diacriminator tubes in the FM. circult. Color coded lemds; mica 16A220. Each
1-plece
i.F.
 ca. drimmer unit
 high. Out put or Inpu
H 16A233
Dowel Type Primary
 To replace burned out primaries in high impedance wound on $1 / 2$ dia. $x{ }^{14 \prime \prime}$ long dowels, moisture pro-
tected. Inductance 1700 uh . 16A234:

25c

## Majestic Replacement

Exact duplicate of original. Coll only, no can or trimmer. Used in
2nd I.F. No. 10253 or 11014 of 2nd I.F. No. 10253 or 11014 of
Maj. Mod. 460.
16A2S5. Each . . . . . . . . . . . 88
Standard Ant. 8 R. F. Colls Air-core, designed to cover broadcast band with a 365 mmtd . tuning condenser. Have high impedance primaries wound with Litz wire, Impregnated against molsture. Shielded type in non-magnetic cans Shielded type in non-m
$1 \%$ dia. $x 21 /{ }^{\prime \prime}$ hlgh.
ringhielded high. shlelded $16 A 221$ 67C ANT. 16A222 73 B 16 A 223 bTc RF. 16A224 7 ? 486 KC OSCILLATOR COLLS For une with above colls.
16A226. Shielded
16A215. Tapped, ungielded... . TR

## MEISSNER Manual

ual giving instructional a a d on building $M$ eissner kits-from 1 tube through FM and Television, including amateur sets and adaptor Hts. Also FM theory.
ieA7, Yeur Coot, Each
48 c

## Electrical Supplies for Househohd and Repair. Needs

## Motor Repair Erush Mt Outdoor Floodlight Bracket <br>  <br> Repairs All Small Motors Orer 100 Heces. Carbon brashes springs. wicks: for most houswhold ractional horsepower motora miser <br>  <br> Kit. NTE TACH <br> $\$ 3.45$

## Approved Appliance-Extension-Repair Cords

 00010000"A": No. 20.11: DE LUXE 10,000 CYCLE CORD EET for ALL atandard

 "IB": No, sOAs; COPFEE MAKER CORD BET: also Tits Waprle Irons.
 "C": No. 20A4; 6 ft. Cord Set for "SCHICK" and "KNAPP-MONARCH" "C": No. 2eAK; 6 fl . Cond Set tor "RFMINGTON". "PACKARD".
 "D": No. 20A112: Lrown Rubber parailel completo extension cond set:
 "D: Na 20A178: Brown Bubber waralled oomplet oxtemmion mord set;
 "E": No, EDA9: "BELDEN" ALL RUBBER HOUSEFOLD EKTENSION CORD SET. 10 FT. LONG; Eoft rubber TWIN OUTLET PLUG
 "T": Na s0A6! SET. Z.000 CYCLE IRON REPAIR CORD: "Belden'
 " $G$ ": No. 20A10; "BELDEN" $71 / 2$ FT. BROWN RUBBER PARALLEL PEEPAIR CORD whth antreakable
 tUBBERE PING CAP "Ge": No. 20A 220 ; \#18 Approved rubber parallel repalr enm with bake.
 "R': No ReA11; ELECTRIC REFRIGFRATOR, WABHER, BMALI MOTOR REPAIR CORD. \#16 "\$d" wire, 10 F'T. LONG

Ea. 73c; 5 @ Ea. 67 c vク": No. z0.112; VACTUM CLEANFR JEPAIR CORD; made of 20 FT


## APPROVED ELECTRICAL CORDS IN BULK <br>  <br>  Wuther <br> $\qquad$ <br> " ${ }^{-}$-

"A": U/L APPRONRD HEATER CORD; 10.000 CYCLE \# 18 condactotm With abrasion resintant. close woven outer braid, very flexible! for $\$ 7.95$ "TB": U/L APPBOVED $\# 16$ HEAVY DUTY. ALL RUBEEER, SUPERgervice Cord; for Refrigerators, Washers, Motors, Extension Cords No. 2A27............35 FT. for \$1.45: 100 FT. for 84.75: 250 FT. for $\$ 10.78$ "B": U/L APPROVED \# \#8 S. J. RUBBER COVERED SUPER-SERVICF CORD.
H0. 2AL6.............25 FT. for \$1.15; 100 FTT. sor \$8.75: 260 FTT. for $\$ 7.75$ "': "POSJ" \#18 Rubber parallel U/L APPROVED LAMP CORD; RROWN. "D': NHEW PLABTIC COVERED PARALLELL LAMP CORD IN COLORS


Switches-Cord Connectors-Push Buttons-_Staples

"A": No 20A32: S. P. TOGGLE SURFACE SWITCH: Bakelite cover -1th elotted porcelaip base ................. Net Ra. 2:c; 10 Ea. 200 "B": No. ROA81: d'EED-THRU CORD SWITCH, tmdicating tosele type "push-thru" action: bnewn bakelite
"C": No. 20A90; R-PIECE CORD CONNECTOR.
${ }^{-D "}$ : No. 20A123; $1 \%$ " Square Pesh Button...
"E": No, 20A3s: "" Dla DEEP PEAZL PLETH 11c: 10 (1) LB. 9c tye for degke door befla or chimes...............ta ses: io heavy duty "FF": No. 20A95; INSULATED STAPLES; 100 to Box....... Per Box 180

## HFIX-ALI* BO-PIECE APPLIANCE REPAIR KIT <br> Profit-makine MUSST" for <br> EVERY REPALB SHOP <br> Terminal ports ior most ANT MAKE of electric tron; no "dead" iterns! In-A-x o compartment box <br> for QUICK location of needed parto-ALL PARTS may be replenished  <br> TERMINAL PLUQE FOR IRONE AND APPLIANCES <br> 

"A":-SWITCH TYPE BAKELITE PLUG; for Appllances and Irone Stock No seages Switch Plug.
Net Theh 29c; 10 Whth ...................................................
 Net Rach 140; 10 (i) Fach .................................................
"D":-COFPEEMMEER and BMALE APPLIANCE PLOG, FIts Irons.


## Iron and Heator Elements-Approved Fuses and Tape <br> 

"A":-"Buss" Clear I'bulos Pluer Fugos: packed 5 to handy cartom No, 20A54/6-Amp.: No. 20A5\%/10-Amp.: Nb. 20A56/15-Amp.
No. 20AS7/20-Amu: No. 20A58/25-Amp: N. 20A50/80-Amp. 4,45


 CHOICE OF ABOVE.............Net Re. 10e; Oarton of 10 Fraes for bec

 "D":-RUBBER TAPE, $1 / 2$ lb, roll: So. 20.166..... SET PFR ROLL 45

 G-1b. irons using mica trpo element.
 "G":-000-Watt Nickel-Chrome Wire Roplacement Element; Is" dla coided wire type for TOASTFRS and mmall appliances. 17 c; 10 E. Ea. LE "G":-600-Watt Nickel-('hrome Wire Replacenent Element, \$/" dia olled wire type for HOT PLATMSK.
Stock No. 20A119; FOT PLATE ELEMENT.......Ea. 2sc; 10 Fi Fa. 110

## Attachment Plug Caps--Bases--Multiple Current Tape <br> 

"A":-No. 20A28: Bakelite Handle Cap.
"B":-No. 20A91: Rabber Handle Cap.
"C':-No. soA29; FIAT Bakelle Handle Ca
"D":-No. 30A27; Brown Bakelite Pony Cap..
"E":-No, Se.187; Attachment Plug Base

"A"

[^2]
## 2uality Gluarescent Lighting Equipment



New 1947 Royal DeLuxe Fluorescent Lighting Units The nitimate in fluor eacent lighting bearty PRICES! Top light ontpint with NEW BEAUTY
CAST GLASS END PIECES sciutillate with parkie from uores ULL EFFICIENCY U8․ WHEREVIRR BEAUTIFUL AND EFFICTENT LIGHTING IS DE GIRABLE-STORES of all kinds-OFFICES-SCHOOLS-AUTO DIS PLAY ROOMS. Reflector surfaces of baked white enamel have $88 \%$ roflecting factor. CAST GLASS ENDS with high-lighted rosettes and design drop pendant or close-up ceiling types for 40 -watt, 48 -inch lampa or 20-watt, 24 -inch lamps, 40 -watt type $1849^{\prime \prime}$ long; $20^{\circ}$-watt, $25^{\circ}$ long Poudant type hlustrated. Top quality throughout, Underwriter's Approved components. All 40-watt fixtures are power factor corrected. Completely wired, ready and EASY TO HANG. Complete with Lampen

| Stors | Lamps | ype of fixture | Net E\% | 6 © Ea |
| :---: | :---: | :---: | :---: | :---: |
| S0ABS | 4-20 Watt | Ceiling Type | 517.82 | \$16.6 |
| 80 A66 | 4-20 Watt | 36" Pendant | 18.82 | 17 |
| 814205 | 2-40 Watt | Celling Type | 2 | 16.52 |
| 81 A204 | 2-40 Watt | $36^{\prime \prime}$ Pendant | 2 | 17.52 |
| B1A20S | 4-40 Watt | Celling Type |  |  |
| 11A202 | -40 Watt | 36" Pendant | . 5 |  |

## HI-EFFICIENCY "PLUG-IN" FLUORESCENT UNITS

 The "Double Forty" * HangS in any position * "PLUGS-IN" ANY OUTLET - UNDFRWRITER'SPquale 200 to 300 watte of old style incandeecent lighting. NEW DE: 8IGN ALL STEEL unit; reflector is engineered for rugged durability and high efficiency lighting; is finished in hard-baked white enamel: complies with E. T. L. reflectivity requirements. Starter switches on 8TANT-LATCH releases reflector from chassla by quarter turn of hatch; permita access to ballasts and wiring if necessary, Rigidly reinforced socket mountings hold lamps and sockets always "in line" HIGXI POWER FACTOR ballasts, stroboscopic corrected. Exterior of unit finfohed in pleasing gray enamel. Size, $7^{\prime \prime \prime}$ high, $13 \mathrm{~s}^{\mathrm{m}}$ wide, $50^{\mathrm{pm}}$
long. Shlpping weight, with lamps, 38 lbs . COMPLETE with 6 ft. cord long. Shlpping weight,


## "Double-Twenty" Plug-In Unit <br> Hang Anywhere in a "Jiffy"

Gives MORE LIGHT than 100 -watt incan deecent. Approved com ponents throughout. White synthetic enam-- finished reflector ohaped to apread light ord. wide area. Easy to hang with chains, wire, or cord-connecting 14 lbs ge into any outlet Size 25 km long $94 / \mathrm{wide}$. 5 kn high Wt vo. 10 A Complete Double Twenty Industrial Un


## New "Strip-Lite" Units

 15-20-30 OR 40 WATT TYPESIdeal Por modernizing lighting In almost ANX loration. LASY TO INSTAI.L, either singly, or end-co-end "In-Line" etyle. 15 and 30 -watt typer uwe hampe 1 " In dia.; 20 for 40 -watt typeg use lampw $11 / 2^{\prime \prime}$ in diameter, allowing combinations for any length of "In-Line" lightlng! MAY BE USED AS WALL BRACKETS by turning fixture "on end". WIDELY USED in STORES
and SHOWROOMS. over WORK BENCHES. And and SHOWROOMS, over WORK BENCHES; and for WINDOW and
gHOW CASE lighting, or in basements AHP GHOW CASE lighting, or in basements. AH sizes are made of HEAVY GAUGE STEEL with reflecting surfaces of hard-bake, high reflectivity,
WHITE ENAMEL. Cord and plug listed below may be qulekly wired to these raita to convert ANY of them to "ILLUG-IN" types that may Do ased INSTANTIX Wherever an electrio outlet is available! UNDERWRITER'S APPROVED ballasts and wiring components used throughfor 15 watt, wt. 5 ibs. $251 / 4{ }^{\prime \prime}$ for long $x 2^{\prime \prime}$ high; LENGTHS are $19 \%{ }^{\prime \prime}$ wit. \& lbs.; and $49 \%$ for 40 watt, wt. 10 lbs. ALL UNITS LISTED are gired complete roady to install. Complete with Lampa. P1A15 No. "Strip-Lite" Type 81A16 For 15-watt. 18" lamp F1A806 For 30-watt, $36^{\prime \prime}$ lamp 1A807 For 40 -watt 48 m lamp PRICFS FOL FI.I'ORENCENT FIXTLRES listed on this page LESE LAMEM, DEDUCT from prices shown, the following amounts PER LAMP:- 480 for each 15 -waft lamp; 880 for each 20 -watt lamp; 88 c
for each 30 -watt lamp; 780 for each 40 -watt lamp.


For comfortable and safe "reading in bed." HAS NO EQUAL for REAL reading comfor -conl, eye-saving FLUORESCENT light ray are directed at exactly the RIGHT angle and concentrated to give ABUNDANT LIGHT on reading surface, without shining throughout the entire room. Fluorescent light is GLARELESS LIGHT-far cooler than ordinary light -Rhadowiess and restiul! Pleasing STREAM L.INE design with body of lamp in EITHER rich Walnut Grain or Ivory plastic - blends perfectly into the contours of ANY bedrubber covered book-over brackets won't scrafch the finest finish. 8-WATT type T-6 fluorescent lamp ts only 12" long and " $/{ }^{\prime \prime}$ diameter-yet EQUALS old style incandescent lamps of 40 or more watts. Sturdy metal back prevents breakage and prohigh mounting for hancy pow wit. 2 lbs. Complete with gy' cord, plug, AND 8-WATT LAMI
Walnut Ivory List
No. 32A215 No. $32.4216 \quad \$ 8.8$



## DE LCXE 'DOCBLE-TWENTY

"Fitter Alapter" type - Instantly inatalled to ANY foinch standard shade holder; no wiring of any kind - termanent mounting type-for easy Installation DIRECT to outlet box or whres in celling of room; canopy
of fixture coverg wire connections and outlet box. "isorv-GLOW" CAST of fixture covers wire connections and outlet box. "sor"-GLOW" CAST GLASB END PIECEN "aress up" ilxture-give off subdued light when Bedroom, Lien, Hall, Dining Room, or OFFICE! Quality conntructlow hroughout-V, APPROVED components, heavy steel body betom snow-white enamel for maximum light output. TWO zo-vATT LAMPS will FLOOD the average kitchen or other room with shadowless light Size, $241 / 2 "$ long, $6^{\prime \prime}$ wide, $41 厶^{\prime \prime}$ high. COMPLETE WITH LAMPS, List Price, \$14.37. DELTXE IDAPTER TIPE TNTT

DE LIXE CEILING TKPE CNIT
No. 30.A116; for permanent With
installation to ANY outlet.... Net Ea

"STRFA dapterminER" - Hinged End Lapter unit for two 20-WATT to NY INSTALLS INSTANTLY ly plug into old iampolier; mereit's ready to old lamp socket and eature prevents fixture "turning" in shade holder; HINGED MEING ENDS turn "up" to allow re-lamping without removing end pieces: tarter switch sockets in ends of unit. U/L APPROVED component parts, heavy metal body finjshed in "Liquid Plastic" white enamel. List Price, WITH LAMPS, \$9.91.

Super Value 2-20 Watt "Plug-In" ADAPTER UNIT
 A new unit in a degign engineered Fans to Inmtall to any $4^{\prime \prime}$ whade hohler, no wiring required, Anchored lampholders maintain gpacing so lamps can't fall out! U/L approved components; heavy steel baked enamel inish: $61 / 2^{\prime \prime}$ - ConHITE
ing cord and plug. Wit. T lbs. List, WITH LAMPS, \$9.91.
No. $30 A 59$;

## No. 30A69: Two $20-\mathrm{w}$ <br> Two 20-W

With Lampa, SUPER LIGHT DAYLIGHT DESK LAMP

$\$ 6.85^{\circ \cdot 1} \mathbf{~ R e d . 4 1}$

COOL, NO-GLARE, DESKWIDE "DAYLIGHT"' concentrated forward by the parabolic reflector directa the major portion of the light output of the LAMP to the "working area" of desk; especially desirable to those whose work of eye strain in such cases. Specially trapel parabolic reflector has white synthetic enamel Weighted pencil groove base, hervy reflection. slector and stem, all finlshed in moroceo brown ripple enamel. Handy OnOIf कwitch. Approved components. Base is $10^{\prime \prime} \times 5^{\prime \prime 1} / 4$, shade $18^{\prime \prime}$ long: over-all height, $1 \uparrow 1 / 2^{\prime \prime}$. With Lamp.


# Syluania 

Fluorescent-Germicidal Incandescent Lamps

\author{

"Daylight" and "33500 White" Fluorescent Lamps DAX- 35000 LIGHT ${ }^{35000}$ CIGHT WHITY 3tk. No. Stk. No. 20A676 20A677 204690 904 04689 90A 88 0 0A684 20A68 20 A686 20A 687 $4 A 1$ S4A? $\begin{array}{ll}346 & 34.47\end{array}$ All prices Include Federal Exchat Taz <br> | Lemp | I-mpp | List | Net | 68 | $2{ }^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Watts | Type | Price | Hach | Eeh | Erech |
| 6 | $T-5$ | 10.81 | 38.78 | 50.3 | 0.58 |
| 8 | T-6 | . 91 |  | - 7 |  |
| 14 | T-12 | . 81 | .73 | 2 |  |
| 16 | T-8 | . 67 | .81 | 2 |  |
| 15 | T-12 | .81 |  |  |  |
| 20 | T-12 | . 81 | 3 | $8 \%$ |  |
| 80 | T-8 | . 81 | 1 | - | - |
| 40 | T-12 | 1.08 | \% | 83 |  |
| 100 | T-17 | 2.47 | 2.24 | 1.88 | . 7 |

## "SYLVANIA" GERMICIDAL LAMPS

NOT designed or suitable for Hshting, these lamps emit ULTRA-VIOLET RAIS for killing airborne or surface sermis; the BEST for use and replacement in ANY type or make of Germicidal Fixture; or will oporate in ANT fluorescent fixture designed for 15 or $30-w a t t$ lamps. CARE must be taken to protect eye and skin from continuous direct exposure to these lamps! Average lifo is 2500 houra on-off use, or 1000 hours continuous use. Type "A" Germicldal Lampsemit ONLY Ultra-Violet rays. Type "Ri" Germieidal Lampa emit MAXIMUM UltraViolet rays, PLUS small amounts of Ozone Gas developed from oxyeen in the air; to clear air of smoke or foul odors.


| No. | Typo | Watts | 8ize | Price | Wa. | \% | Es. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4.48 | "A" | 15 | 18"-T8 | \$4.50 | \%8.82 | \% ${ }^{\text {ct. }} 8$ | 事8.15 |
| 1410 | "A" | 80 | 36"-T8 | 6.75 | 5.74 | 5.06 | 4.78 |
| 34.111 | " $\mathbf{R}^{\prime \prime}$ | 15 | 18"-T8 | 4.50 | 8.82 | 8.48 | 8.15 |


| 4112 | "1" 30 | $30^{\prime \prime}-\mathrm{T8}$ | 6.75 | 5.74 | 8.06 | 4.73 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |


"Sylvania" Infra-Red "Heat Lamps" NEW, General purpowe, INFRA EBED HEAT .a providers into ANY ordinary lamp sockettreatment of sprains. aches end pains: heat fmall rooms, dry paint, thaw frosen pipes, warm cold motors, heat brooders, dry films, clothes, etc. Type $\mathbf{R}-40$; 250 Watte, 120 volts




"Sylvania" HOUSE LAMPS New "Handy-5" Package 6 LAMPS OF A SIZE IN "EGG CRATE' PACKAGE Tevolutionises lamp ales. eliminatea break ase, each lamp in individual
"best": "KANDY $5^{\circ}$ keops lampa
gafe until used? gafe untll used!
No. 20A 689; 25-Watt, 180-Volt.
No. 20A690; 40-Wrtt, 120-Volt.
No. 20A691; 60-Watt. 180-Volt,
Per
49c

"SYLV.INLA" 10-15-76-100-150-200 WATT LAMPS; Packed 6 to carton. Stock LAMP List 8 Lampe 60 Lampe 120 Lampe Stock LiAMP Fist 8 Lampe $\quad$ Go Lampe 180 Lampe FOR

201692
20.1693
20.116
20.1116
20 A 694

20 A 694
204696
201696
"Sylvania" "COP-4" and "Mirastat" Starter Switches
 all ${ }^{2}-4$ starter switen whTR out dead lamps-saves ballasts
20 A 67
59 c
$52 c$

45 c
"MIBASTAT" Starter gwitches" cecce "MIBASTAT" Starter 8witches; re-start lamps on cur rent interruption by exclusive, bullt-in TIMING DE
VICE. Will operate on DC carrent. $\begin{array}{rr}\text { Typer } & \text { For Lamp } \\ 2 & 16 \text { or 20 watt } \\ 4 & 30 \text { or } 40 \text { watt } \\ 6 & 100 \text { Watt T-17 }\end{array}$ $\begin{array}{rr}\text { Typer } & \text { For Lamp } \\ 2 & 16 \text { or 20 watt } \\ 4 & 30 \text { or } 40 \text { watt } \\ 6 & 100 \text { Watt T-17 }\end{array}$ $\begin{array}{rr}2 & \text { For Lamp } \\ 2 & 16 \text { or } 20 \text { watt } \\ 4 & 30 \text { or } 40 \text { watt } \\ 6 & 100 \text { Watt T-17 }\end{array}$

## Sessions Electric clocks


"SESSIONS" SELLF-STARTING ELECTRIC CLOCKB are the "last word" n modern styling, accuracy and lasting periormance. Foderam and uUgT be WE DO NOT COLLECT THE TAX!
WE DO NOT COLLECT TEE TAX! Wall olock has 5 " square dial and convenient bottom set knob. Sise, 7 " 7 7/1". List \$4.70.
 P":-Model 889K: White Plastic case "TEAPOT" Kitchen Wall Clock; " banded dlal: bottom set knob. Slzo, sta" Fide, f" high. List \$4.95,
 "C":-Model 451D: Ivory Plastic Denk or Bedroom Clock, Mas $81 / 2$
 Stock No. 33.1215; MODEL 451D ...FA. 4 © and gilt lacquered numerals. Time set knob. BLACK PLASTIC CASB 17 " in diameter. A fine clock for Office or Businees. List Price, 13.65 Stock No. 38Ag24; MODEL 438 F . .Na, 48.88


## Electric Desk Clock

New and popular "Marine" design case with SELF STARTING electrio time movement. Large, seinch METAL DIAL with outline. easy-to-read numerals: sweep gecond hand. Polished BRASS spindles and rich MAHOGANY finlah case - a FINE DNY IInish case and popular for many other locations in homes. Size $6 \%$ " wide. $7 \%{ }^{\circ}$ high.

Door Chime Transformer


For Belle ot Ohlmes-Built-in thermal cut-out prevente burn. out. Reduces 110 V AC to 10 volta.
DON"T MISA A SINGLE "B-A" CATELOG OR FLIERR-IP JOa have CRANGTI. YOUR ADDREEN -RLEAgR "drop us a Hme", Eiving ns BOTH yonr ALL "B-A" CATALOGS AND BARGAIN TLYERS. Thank Yoa:

No. 20A71.
$\$ 1.50$

## Sensational MMIE BABEAMEE

## (:) $\square$

For load-in wire it canat be aixcolled, Also ideal for telephone, intercom, otc., needs, single conductor, consint of 7 tinned wires 16 , rubber covered with orer-all coveffor of weatherproof saturated sotton braid. Hy O. D., flexible mont rigid apecs for Army Field Wire, the cont was many timee the filiculous price wo show. A huge B-A Surplus Purchase brings it to B-A
you.
No. 4 As01.
Per 550 Ft .
$\$ 1.95$
No. 2 AD02,
$\$ 3.45$ All BRAND-NEW in Oritinal Fuce cory put up coil and tates. 3 Condnctor
An above except 3 twisted conduc tors like standard telephone wire. phone and intercom wire needs. No. tasos. Per 855 Fi . Coil
$\$ 5.95$
2 MFD. 1000 V. D.C.
Oil Filled Condenser OD Type Tla


In hermetically sealed round aluminum can mize 114"x44/s": Standard inverted mtg. with threadOne neck thru z" hole. sulated, the other being the can itself. Often ansed to replace up to 8 mid . electrolytics in amplifiers, etc. Regular List Price Value $\$ 4.00$.
No. 18A890, Limited Speclal

95c

## 4 MFD. 600 V. D.C.

Oil Filled Condenser
In round aluminum can like above. olandard quality make. Often used to replace up to 16 mfd. electro-


## 5 MFD. 600 Volt

 Oll Filled Condenser

Hermetlcally sealed rectangular metal cans with stand-off insulators for flash protection, Met-

No. 18As66.
No. 18A866.
95 c

## 6 or 12 VOLT <br> G. E. DYNAMOTOR



Degigned for 12 V. D.C. Input 560 volts D.C. output at 85 ma. Continuons dinty. Converts to 6 volt inpont, quickly and simply, The output is then 250 inciuded. 85 ma-can be loaded up to 100 ma with only 10 volt drop. Will operate a recelver as large as the Hallicrafters $\mathrm{S}-49$ or any mobine sear within these rat ings. A G.E. product, well enElmeered, runs quietly ith little vibration $\mathrm{BR} A \mathrm{ND} \mathrm{NEW}$, in Original Factory Cartons. No. 3A88. Regularly $\$ 7$ ?

## Teature Values, in B-A Selected Surplus

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 3ATEERYAT RIDICULOUS LOW PRICE Finest quality, long life storage battery oncased in attractive Clear Plastic Spill-Proof Case. Much in demand as exact replacement for Model \#530 "G'E" Portable Radio. Has ball loat charge indicator and well marked terminals with screw type connections. Rating 20 AH . Gangs nicely for other voltages in multiples of $2^{\circ}$ volts. Shipped dry. Uses standard battery electrolyte. avail able everywhere. Size $331 \times 33$ "x in individual factory cartons. Large aurplus purchase makes possible our CRAZY LOW PRICE.
No. 5A14\%. Model 20-2.
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$61 / 3^{\prime \prime} \times 9^{\prime \prime} \times 4^{\prime \prime}$ deep. exact replace ment for a number of General Mo tors Auto Radios as well as otherf. Vo. 14A640. Special Each
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Shur DIAL CABLES
Shur srip, 25 ft . hank, medium 18A889, Bpocial Ea....... 29 C

OUTPUT TRANSFORMER $\longrightarrow \begin{aligned} & 2000 \text { oh } \mathrm{m} \text { pri to } \\ & \text { couple one tube of } \\ & \text { following types to }\end{aligned}$ lollowing types to
3 or 4 ohm volce $\begin{array}{lll}3 \text { or } 4 & \text { ohm } \\ \text { coll: } & 25 \mathrm{~L} 6, & 35 \mathrm{~L} 6,\end{array}$ $50 \mathrm{~L} 6,50 \mathrm{~A}, \mathrm{y}, ~ 70 \mathrm{~L} 7$. 2" mounting cen-
.68
18 A888.
Special Each
ter $x$

WESTON O-500 D.C. Milliammeter
Model 301 tandard 3-inch round panel type. Every ohe Brand New, of course, and packed in Original Moisture 17A418. IAm. Onan. Spectal Each
$\$ 3.95$
0-150 AC VOLTMETER Made by Hickock to Army-Navy \%"c. Mounts in $2 \%^{\prime \prime}$ hole, han 17" ilange.
$\$ 300$ Dynamotor Power Supply for $\$ 13.95$ Continuous Duty Rating 500 Volts at 160 Mils DC From Any 6 or 12 Voit Battery
Assembled on shock mounted base which houses solenold relayb, 1 high and 2 low voltage circuit breakers, DC and RF filters, and many other high quality parts. Can be safely loaded beyond 160 MA on intermittent bervice. Ideally suited for operation of portable mobile transmitters, public address systems and marine trandmitters, Inpat 6 Volta at 21 umpo. or 12 V. at 11 amps.
Comes complete with battery ca-
bles. BRAND-NEW in ORIGI-
NAL CRATH8. Wt. approx. 88 Ibs.


Made by A Leading Dynamotor Manviacturer at a Government cost of $\$ 80.00$.
Stock No, 1A50. Type Pre 108.
NOW WHILE THEY LAAGT, BPRCTAT GACB.
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 FINEST GRADE INSULATED RESISTORSStandard RMA Color Coded, well known quality brands. In ohmage ONLY as liste
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1 Watt mize.
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Give Eesintance and Stock Nombere
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Dosigned for commercial continaous service. Fully enclosed, with ceramic terminals. Over-all aize No. 1251. Wt. 312 1bs.
NO. 1AB1.
A Bargaln
$\$ 10.95$

## JOHNSON Type F

 Dual Variable

270 Minid. Max., 18 Min., 33 platec per section $.045^{\prime \prime}$ spacing. Feature .032" heavy alumtnum plates rounded and buffed, $1 / 4^{\prime \prime}$ aluminum the rods, ultre steatite insulation, in tor modnted above to reduce capacity to rround, heavy phosphor bronze contact springs, center contact. chassis or penil moun con $\%$ " shaft extends panel mounting. in rear for ganging or rear ation Panel or ganging or rear arive. Wide $\times 2^{n}$ high $x 7^{7 n}$ long


## Momentary Type C H Toggle Switches BARGAIN PRICED



Flush mounting plates attached. Rated at 5 amps, 125 volt AC., 85 ampe at 24 volte. (.A) Normaily off, In "ON" position to "OFF" held down, spring return No. 18A26. Special Each. $25 c$ (18) Normally on, In "OFic position With lever held down, spring return to "ON" when released. 25

# Yowo Moneq Can doTriplen Dity 



Bakelite Knob 1\%" black bakelite knob with \& 1 " $^{\prime \prime}$ dia flange, brase bushed tor $1 /{ }^{\prime \prime}$ shat
No. 18A52s. $20 C$ No. 18A520. Identical to above elcept $1^{\prime \prime}$ dian knob and 23 dia flange. 15c Each

Tapered Knob
13180k bakelite, $1 \%$ dia at top. 2\%" at base Brasa bubhed for $1 / 6^{*}$ shaft, with eot screw.


At Ridiculously Low Prices
Bulbs accoasble rrom rront on all models shown. Fis. 1 uses 110 Volt type 86 lamp (Fig. 8), all other use any regular Ts $1 / 6$ miniature bayonet base single contact bulb.
1-110 V., fully enclosed, porce- 6-Am especially attractive ng laln and brass nickel plated. sembly fully enclosing the bulb. Undervitter eDproved. For Vevy compact yet suitable for single. 1" hole mounting, any panels up to $1 /{ }^{\prime \prime}$ thick. Has $1 / 2$ " thickneas panel. Over-ail length red jewel. Hocier on swivel to
$2 \%^{\prime \prime}$. Lens $1^{\prime \prime}$ dia. Uses Fir. sliow variation of Gisht inten.

15c

## Pointer Knob

Moulded black, fite $x$ * ghaft Metal bushea with two A110n set screws, A aturdy, good looking knob.

## No. 18A*s1. $1 \%{ }^{\prime \prime}$ Dla. Ea.

No. 18A288. $2 \%^{\prime \prime}$ Dta Ram
100

## PoInter Knobs

 Black bakelite, $1 /{ }^{* \prime}$ long. For wilh plates linted below. 184175. Bpeo. Tan8c


## Diai Plates

0-100, 2700 : made of heavy etched brass with real satin chromium highlighte and background. Dia $1 \%^{\circ}$.
Each
10c

## 10,000 Ohm, 10 Watt OHMITE "Brown Devil" RESISTORE

Thls popular resistor needs no introduction and will be recognised by all who use resistors as ONE OUTETANDING VAL UE
No. 18A884.
Por Pkg. of THREE.... 49 C

9 Lamp Llustrated.
18A180. Red Lent
18A181. Clear Lens.
Choice. Ha (lesm bulb) $50 C$ 2-Variable ifishtintenulty is possible by menns of swivel in jewel liolder. Adurstabio to 8 rariets of parel thicisneas, ertends $1 \%$ " behind panel. Has
 8-A very popular
sec plied with two fibre washerg to adjust to various panel thickness up to $1 / /^{* \prime}$. Extends $11 \mathrm{~m}^{\prime \prime}$ behind panel. Has $1 / 2^{\prime \prime}$ plain red jawel.
18A528. Special ve.... 25 C 4-Requires only $\%$ " panel hole
Fxtends back $14{ }^{\prime \prime}$. Lens as eembly removable at front and no arranged that brillance of varied.
18A182, Green Lens
18A185. Red Lens. 18A886, Amber Lent

17AR81, Real Buy. Oniy 25 C

7-Made of bakellte, mounts on front of panel with acrews and extends back $2^{\prime \prime}$. Faceted red lens pulls forward on springs inont removal of bulb. $2 \boldsymbol{F}$ 18A193. Special, Net Ea. 35

8-Mounts on front of panel with screve. Nxtends back thru panel $1 \%^{\prime \prime \prime}$. Bulb removable from front under opal giass F. $\mathrm{G}_{\mathrm{t}} 1488$ bulb in which place eny ministure 80. Whach place bulb can be nsed. bayonet bace 18A198. Special Each

25 c
O-Bulb, 110 V., 8 watt 86 cand. base for (FIg. 1) and any other similar indicators, etc Your Choice, Ka...

35c ह-Full vlew type. Plastlc hood 10 Lots. Bach ..............C Suitable for Neon NB51 bulb or standard T3 4 miniature bayonet base 8. C. lamp. For various panel thicknese up to \%". Very compact, fully enclosed bulb. Stock No. 18Asz9, Yonr Cost Only
$75 c$

(1) Bor miniature bayonet S.C. bulbs, Bakelite socket with bracket for mounting in any position. 18A186,
Cach
(2) For miniature acrow beat Has 1K" bracket sith clip mounting in any position. mounting in any position. 10.18


13.84 uh D.O. ohme 1.64. Size $1 \mathrm{~K}^{\prime \prime}$ x \% ${ }^{1 / 2}$ ". Wound with 110 turns 33 SSE on stoatite form. 18as61, Speclal Fa

20 c CLNTHE TAPPRD CHOKE 4.8 MTR, 15 ohms D.O. Wound with 68 turn of No. 35 P Fire on steatite $\mathrm{form} 1 \mathrm{~K}^{\prime \prime} \times \mathrm{y} \mathrm{K}^{\prime \prime}$ 。 conter tapped.
18A562. Special rian .
25 C


## Midget RF Chokes



A, 2.5 mh : 50 ohme D. C. resiat ance, 12 ma capacity. Mount off, upplled with choke. 25 C 18A188. Special, Te B, 1 mh. 35 ohms $D$ C. Bice 185 ma enpeolty Univerael inalme ully Improsmated Isolan winding, full limpreg pootion bs wn cora Moun own lead. 18A189. Special, En.

15c


For hi-power rifs working in 80 40,80 and 160 meter bands. Biz pies on Isolantite core carry 600 ma., continuous. Inductance 2.6 mh., D. C. res 8 ohms For paraltol feed. Difectife from 1.500 to 80,000 kc. Priced et a deep cal from mbeni
18A180. Bpectal. IV
65 c


Wound on 1-plece ceramic dowed and base. Over-all size $1^{\omega 1}$ dia., \% high.
18A5ES, Special Each
$25 c$

1.5 MH RF Choke 21 Ohms, 1 社 MA. Wound on impregnated wood dowel fastened to $1^{\prime \prime}$ dia. bakelite termlnal plate, with solder sugs. Mounts with 6-32 screws, Very compact. Over-all slze 5/8" high, $1 \%{ }^{\circ}$ dia
 18ASE4, SPECIAL EA.

## Midget

## RF Chokes

(t) bakelite core, thread-
 dia. Thorotyshly tm molstare. Ideal for High Frequen-

(9) 10 MM RF on a quallty RF choke 18 F 60 , While They Lat, Ed. $30 C$

## War ScerpleespritcedwititoutregandtoregularValue



## U. S. ARMY SIGNAL CORPS HEAD PMONES

Highly sensitive- 8000 ohms impedance. Bl-polar magnets with finest quality bakelite shell and cap. Head band ered spring steel. Cord connects from one ide com. pletely out of the way, Rubpletely out of the way. Rubber removable ear cushlons Supplled complete with de. Supplied complete with de tachahos ruble cover cord 51/2 feet long. Comparable to finest quality Professional Phones seling up to
$\$ 12.50$. BRAND NEW, in $\$ 12.50$. BRAN
original carton.

No. 17.33\%, Special, $\$ 2.48$
While They Last..

## 6 Foot DOUBLE HEAD PHONE CORD

Top quallty standard double head phone cord 6 feet long. Has tips to quickly insert into above and similar type phones with standard phone inp at 1008 end.
No. 18A88s, EACH

## Type NS 30 HEADSET

Sensitivity of these phones is comparable to commercial Head Phones of Low Impedance type. Constructed sinillar to commerclal hearing aid metal band, easily shaped to fit the light metal band, easily shaped to fit the contour of the head. 120 ohms impedance eletance 80 ohms. Ear-fitting rubber cushions eletance 80 ohms. Ear-fitting rubber cushions fit on the recelver buttons proper. Cord is $Y$ chaped 2 conductor fiexible rubber with a pair of ear cushions are jncluded. Offered at No. very matif, EAC'II


## HIGH IMPEDANCE Type H8 30 HEADSET

 anone of woon matching tranaformer that maxea it high imperiance No. 1\%A420. GPECIAL LAAH
## U. S. ARMY SIGNAL CORPS THROAT MICROPMONE



To bo worn around neck. Consiat of two carbon mike buttons in molded rubber up speech and exclude outside noise. Can be used with any low gain amplifier. Requires 50 to 100 ohm mike transformer and uny $4!$-volt battery. Current drain 100 ma . Has many bombibilitiew for PA, Amateur and Experimental applications.
PRICED AT A MERE FRACTION OF ITS PRODUCTION COST. Supplled complete as
own.
17A39. SPECIAL EACH
$95 c$


CARBON MIKE BUTTON As used in above hroat mike. Picks $\operatorname{lup}_{\text {from an }}$ noise or apeech from any vibrating get for those interested in experimenting with detectophones, contact mikes and similar applications. 17A40, AT THE RHIICEULOUS
PRICE OF

## 25c each



THROAT MIKE CORD
and switch Assembly Foruse with
throat mike listed above. 18.4885,
Farh... $95 C$


SVEREY ONE HRANiD NEGW


A top quality ( 8.00 Liat Value) Code practice key, pricerl at a fruction of original cost. Nounted thick, triple long and $3^{\prime \prime}$ wide. Binding post and contacts insulated with bakelite washers. Fully adjustable, well balanced operating lever. All tension and adjusting contact shorting spring. Contacts are of high grade tungaten secureiy fastened to eliminate any chance iy fastened to eliminate any chance Ideal for keying amateur trangmo. 17a88. Every One BRAND NEW in Original Factory 95 C
Cartons Speclal Each ....

## TRANSFORMERS and Chokes BARGAIN PRICED

Gecored from A\&N contract termination, ALL BRAND NEW and bullt. for service under most adverse conditions.


Filament Tranaformer. Primary input 110 Volta 60 cycle. Secondary 5 Volt C.T. at 10 amps or primary input 220-240 Volts, secondary 10 Volts C.T, at 10 amps, 2000 Volt insulation with heavy duty older terminals. Fully encased in grey
 3A72,

Fliament Transformer. Primary Input 200, 220 or 240 Volts, 60 cycles. Secondarles 5 Volts at 3 or 240 Volts, 60 cycles. Secondarles 5 Volts at 3
ampe, 2.5 Volts at 10 anps. Secondary terminals on insulated bushings for high Voltage usef. Funy encased in grey enameled heavy metal case
 standard machine acrewh.
3A78, SPECLAL EACH
95
Flament Tranotormer for 866's, Primary Input 115 Volta, 80 cycles. Secondary 2.5 Volts at 10 ulated bush volt insulation. Terminals on inased bushings for high Voltage. Fully on.
 Filament Tranaformer. Primary 115 Volts, 60 cycles. Secondaries 6.3 .olts at $31 / 3$ amps, Volts at ampe C.T., 5 Volts at $10 \frac{1 / 2}{}$ amps C.T. Hermetically sealed terminale. Fully enclosed in black enameled heavy metal case 3 静" $x^{5 " \times 5} y^{\prime \prime}$ with threaded mounting studs. A75, SPECLAL EACH
$\$ 3.95$ Power Traniformer. Frequency 400 to 2600 C.P.s. Primary 80 or 115 Volts. Secondaries; 916 Volts C. at 500 M.A., 5 Volts at 4 amps, 8 Volts at 2 amps. Fully encased in black enameled heavy d mounting otuds.
3.176, SPECLAL EACH
$\$ 1.95$
Power Trantormer. Frequency 50-70 cycles. Prl. mary 115 or 230 Volts, Secondarjes 6.8 Volts at 766 Volts C.T, at 155 M.A. Als 5 Volte at 3 ampe, Voltage bushings. Fully enclosed in bleck onam
 Real hogly fob and BCY 3A7\%, BPECIAL EACH
 D.C. rensatance 82 ohms. 2000 Voit insulation. Fully enclosed grey enamel heavy metal case 87" $34 \%$ "xb" with mounting holes tapped for standard ecrews. Has third terminal with mich to ground core. ............... $\mathbf{\$ 2 . 9 5}$ Filter Choke. 10 Hy at $100 \mathrm{M} . \mathrm{A}$. D.C. resistance 225 ohms. 2000 Folt Insulation. Fully enclosed grey enamiel metal case $8^{\prime \prime} \times 3^{n \prime} \times 3$ ? with three terminalg, the sPECMA EACH 95 c Filer Choke. 8 Hy at $380 \mathrm{M} . \mathrm{A} . \mathrm{D}$, C. reaiatance 40 ohms. Fully
 Line Input Transformer. Balenced 500 ohm primary to single grid Has 8 terminais with split primary and single eecondary. Diagram included with each unit. Fully enclosed grey enamel metal case $21 /{ }^{\prime \prime} \times 21 / 2^{\prime \prime} \times 3^{\prime \prime}$ with mounting holes tapped for standard ecrews. No, SA81,
SPECIAL, EACH secondary at $20 \mathrm{M} . \mathrm{A}$. Ideal for driver iransformer. Fully enclosed for standard screws.

Clane B Input. Primary 3200 ohm C.T. at 160 M.A. to Clase B gride Designea for Class B 810's, etc. Has 10 terminals for which diagran is included. Fully enclosed in grey enameled metal case $3 \%^{\prime \prime} \times 3{ }^{\prime \prime}{ }^{\prime \prime} x$ SABS,

## AMATEUR CRYSTAL KIT

 Kit contains 3 Crystad Khanks of approx. 60 to 10 KC . below fundamental irequency of 7,000 KC, but can be ground to $7,000 \mathrm{KC}$. or over With abrasive included) to any de bund. The fundamental frequency can be doubled and redoubled to become operative at 14 MC . or 28 MC . or up. Also included are \& Holdere complete with both regular electrodes and springs and 2 Additional Sets of oleotrodes and Bas of abracive for grindins cristals to desired frequen. cy. Ingtructions are included in zitRtock No. 17 As 06
APLECLAL EACE
$-1.01$


## HAM S！！

TELEPHONE MIKE Consint of a mingle button． 200 ohm carbon mike mount－ ed in a telephone deak stand with a handy＂Push to talk＂button mount－ ed in the stand for thumb control．The nike require自 a 200 ohm impedance mike tranaformer． Compiete with 6 ft ． of rubber－covered flexible cord and a wo－circuit plug．Finished in black baked enamel．Extremely rugged construction throughout．Ideal for police radio otations，industrial cal Notema and＂Hams＂． 4 4499．Special Ra．．． 59.55
No． U．S．ARMM SICNAL CORPS CARBON MIKE


Bingle Buttor Carbon Mike，Has press to talk switch in rubber－cov－ ered tlexible cord $4 / 3 \mathrm{ft}$ long，com－ plete with standard 3 －circuit plug． Has separable plug－in cord between switch and mike．Can be used with any low gain amplitler．Requires 50 to 100 ohm mike transformer and any sy V．battery．Current arain 100 MA．Ideal for mobile transmitters，also has mans posi－ billtes for PA，Amateur and Eix－ perimental applications． No，17A419，SPECIAL FA．＊－ 5 Every One Brand Now．．． Heavy Duty MIca
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$\$ 295$ 4 MFD－ 1000 VOLTS，（i－E＊PY－ RANOL＂．Sise $13^{3}$＂x2y＂mount ing area．Over－all heisht 5 y NO，17A269．
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From sovermment contract terminations，every one BRAND Nai in ORIGINAL CARTONS and JAN inapected．
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EPECIAL BACH ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． TYRE 878A．Half Wave Mercury Va
7.5 amps．Average current 1.85 ampa，
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TYPE P 88，THE CHOICE OF THE AIR CORPS，Re－ celvers＂Bolld－Built＇for permanent precision ad－ justment Beat quality Al－ nico magnets．Colls im－ pregnated to remlat mole ture Extremely seneltive Molded black bakelite case． Has 2000 ohm resistance． 8000 ohms impediance at 800 orcles，light weight reo movable 8 ponge ar by air holeg－extremely com－ fortable to wear for long hours．Concealed terminala Headband of stainlean ateel wire covered with genuine leather．Adjustable pat－ ented check control ear－ phone movement about phore movernent stainless steel yokem Cord is 6 feet beeng，outer covering cot yong outer covering cot－
PIS5 plog Welshe complete only 10 0\％Made to sell for $\$ 12.50$ ，but a Cortunate surplus purchase enables us to make the ridiculous price named below．
FVVERY ONE BRAND NRW－PERFHCT．
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## NETER，PANEL and

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Conalat of Gruen hish quadity $81 / 4$ inch moter with 0 to 10 scale and 125 ohms per volt movernent，which with proper shunte can be comvort ed to an M．A．moter of any de－ edred range．In addition，assembly ci－oxcs congist of two 110 －Vols casariaben earew os bairelite encosed condenaer， Parte are mot wired，and can be easily disaesembled trom the $61 / 2 \mathrm{x} 11 \frac{1}{2}$ parta are wrinkie finished metal panel on which they are mounted．EVEBY ITEM BRAND NEW．
Stook No．17As00，A Truly hot bargain for the entire assembly，At Onl

## 1 mid． 600 Volt Oll Filled <br> Bathtub Type Condenser

Hermotically sealed in metal

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Well kuonn make Freq．re－ sponse $80-604$ CPE：sood bens
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Wre Wound Reslstors
Accurate vithin $1 \%$
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49c 2 MFD， 600 VOLT Hermetically sealed in rectangular motal oes
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 JOHNSON 4-SECTION VARIABLE

Type D (50-150DQ 48) Capacity 180-80-50-150 MMFD. . 125 ppacing. 4800 volts, plates .051 thick. . Ultra Steatite insulation. . Large used as a split stator of either 150 mmpd. or 50 mmfd. per section Panel space 4$\}^{\prime \prime}$ wide $x 4^{\prime \prime}$ high and $15^{\prime \prime}$ deep. $1 / 6^{\prime \prime}$ shaft extends $11 /{ }^{\prime \prime}$ in front and No. 3 in rear. SPECIAL EACH


JOHNSON DUAL 30 . OHNSON DUAL 304 MMFD. Type 1 (300 ED 20) Capacity 304 mimpl. max., 15 mmid. min., each 29 plate meetion. $040^{\prime \prime}$ spacing - 2000 Volts, . $032^{\prime \prime}$ plates rounded and buffed -heavy $3 / 4$ "frame rods-Ultra Steatite insulation-phosphor bronze contact springs - and stators mounted above to reduce capacity to ground. $1 / 2 "$ shaft extends $14{ }^{\prime \prime}$ in in front lint Price Value over $\$ 10.00$. Wide $x 2^{\prime \prime}$ high x $\mathrm{I}^{\prime \prime}{ }^{\prime \prime}$ deep. Stocl No. 18A500. Special Each

## JOMNSON DUAL 207 Mivijp.

$\$ 3.45$
Type $F$ (200FD20) Capacity 207 mmid. max., 13 mmid. min. ench 33 plate spetion, $045^{\prime \prime}$ spacing- 2000 volt. Type $F$ with the same features LIST PRICE OVER $\$ 10.00$.
Stork No. $18 \mathrm{Ab10}$. SPFCIAL EACR
$\$ 2.95$

## JOHNSON 150 MMFD. <br> 

TYpe II (1501116) 150 mmid. max very rugged. plates, compact yet very rugged. Panel space $11 /{ }^{\prime \prime}$
 UHAR LIST PRICE \$s.00. Stork No. 18.4s04. Stock No. 18.4
Special Each pecial Fach
inex Ticat to AHOYE exeen
 tor mountug thru panels is to to $0^{\prime \prime}$ thick.
stocik Xo. 18.8.805. Special, En. 65C
JOHNSON 250 MMFD.
${ }^{T} 1$

 No. 18, AGoo. Speclal ea. $\$ 1.45$
440 MMFD. VARIABLE Panel.space ${ }^{\text {s. }}$
 DUAL 170 MMFD.

CERAMIE INSULATED, 170 mmid. each section. $2^{\prime \prime}$ square $x 5^{\prime \prime}$ long. | NTANDING VALEE. |
| :--- |
| NO. 18ABOB, SPEC. EA... |

## Dual 75 Mmfd. Cardwell



Type ELJ万AD Cardwell "Trim-Air" -Capacity 75 mmid. max., 2.7 min . per section. Isolantite end plates. .020" aluminum plates, other hardware and shaft of nickel brass. Has y" ehaft with rear extension for coupling, Has removable intersec. lion shield on 020 air gap size $1 \%{ }^{\prime \prime}$ square, 3 s.s long. Lint Irice Over 18.00. 03 , Epecial Each ... \&ies

MILLEN 150 MMFD.
High Quality Transmitting


Single spetion 180 mmid. Air gap if ". Heavy gause rounded and polWhed jlation. Adjustable teneion contact on rotor. Ridged frame design permits single hole mig. or it niay be supported by insulators at each corner. Insulation is an iso condenser for medium power at a price you can afford to pay. Size is. 1 ing it ong ....... \$2.45

## MIDGET VARIABLE



ORRAMIC INEUTATMD AIR PAD-
DFR condensers adaptable for a wide varlety of uses. Fig. A has screw driver slot adjustment and Fig. $B$ has $x^{" \prime}$ ohaft, various lengths. All are of finest quality, well known brands and priced at a fraction of their original value.


## flexible Condenser Couplings



All of the finest quality. well known makes with eset screws in each hub. ALL ARE FOB $1 / /^{\prime \prime}$ SHAFTs.
 Shafts. Peak 13500 voltt. 95 C " 1/aza, Epecial Each. 17. Steatite 1\% Dia.

95 c 17A289, Special Ea. $30 c$ 18A004, Special Ea. 30 c


Finest Makes Midgets

Low Prices
Insulated With Isolantite.
11 plate, max, 100, min. 20 mmid ;" shaft, $1 / 2{ }^{\prime \prime}$ long 95 c 17A189. Special, Ench ..... Ghate, max. 70
shaft, 4 " long 17A190. Special. Erch $75 c$ 4 piate. max. $40 . \mathrm{min} .17 \mathrm{mmp}$ shaft. 4 作" long. Each


## COMPLETELY INSULATED

 Variable

5 plates 15 mmfd.

## char

1:" end
plates
made of
Bakelite.
Can be
mounted In any



Johnson TN750 Neutralizing Condenser Plates are aluminum cups supported on an with cast aluminum mig. bracketm. For plate voltage up to 23, ovo V., plate modulat ed. 12.3 mmin. niat. 3.0 min. $8 \mathrm{~s}^{\prime \prime}$ air gap. 17 A201.
special...... ©

## LOOK! TEN 100 Mmid.

 AIR PADDERS FOR ONLY$\$ 2.45$

## You get an assembly of TMN

 100 mmid. Ceramic Insulated and silver plated finest quality, brand-new paddercondensers. They are wired together, but it is a simple matter to dismount them and you get TFN BRAND-NEW 100 MMFI). CONDENEERS, No. 18A511.Complete Asembly . 024.5


## NATIONAL

 Trelvet Ternler" Illal Mechanimm Identical to thatused on the pop. used on the pop.
ular A C Dial. No. 18.A525. special Each

95c


Precision Vernier Dials ${ }^{233}$ "Dia. Binct etched callbratlons
$m$ and
and
nos chrome back ground. Large
flanged baike nite knob, bras burhed for $4 /{ }^{\prime \prime}$ shaft. With mi crometer Indicators allow loggine $18.4816,0$ to 100 one dial division. 18.A517, 0 to 100, over $270^{\circ}$

Cholee Enath
85c
VERNIER

## DIAL MARKERS

Allows logging to one
tenth of one dial dj. vision. Easy to mount on any type 184818 For $180^{\circ}$ Dlals
18 A 519 For $270^{\circ}$ dlals.
CHOICE EACH
10 C


## SHAFT LOCK

Instantly converts any plain $4^{\prime \prime}$ shaft Volume Control, Con "plafin" to "ehaft locked ty $p e^{\prime \prime}$. Easy to mount in piace of Brabs NP.
No. 12.41496, SPEC. E.4.... $] ? C$

## DIAL LOCK

Easy to mount in Angle hole. Positive action, does not s. No. 18A888, 25
Gpectal Ea... 28
ter dial settlig.


T

# GRAEY SOW DRIGES ON Vol amo Controds 

SOLAR－＂Domino＂ Bakelite Molded Paper Capacitors


Molded in Bakelite．Meet Under－ writers＇renuirements for units in a line by－pass－in instruments， aline fic fuel pumps and many in－ dustrial applications．

|  | ry On | Bargain Priced． |  |
| :---: | :---: | :---: | :---: |
| Cap． |  | Stock | Special |
| M1fd． | Volts | No． | Lach |
| ． 2 | 200 | 18A880 | 16 c |
| ． 05 | 400 | 18 A 621 | 120 |
| ． 1 | 400 | 18A688 | 80 |
| ． 25 | 400 | 18A625 | 180 |
| ． 5 | 200 | 18A624 | 260 |
| ． 01 | 1000 | 18A628 | 18 c |
|  | mold | 6 Mid． 400 | Volts |
| 18， 6 | Ench |  | 9 |



Every one factory marked for rate 1ng．Most celebrated makes，many speclally prepared with salt spray test，hagh capacity atabllity with respect to temperature change。 Bus Them Now for Fature Neelis． 1200 D．C．Test Volte $10 \%$ Tol．



Every One of Recognized make and quality in standard size with lactory marked ratings．
 Vitreous enamel，wire wound，sige 18，1144．With glider．＇Ea．．．．． 5


A BARGAIN FEST in Volume Controls Standard quality makes，shafts are exclusive of the threaded bushings．

＊Are WIre Wound Controls


> 18 A635
> 17A8889 18A69 $18 A 637$
$18 A 638$ 18 A 639
18 A 640



Control Shaft Yonr
Dinm．Lgth．Cost
Diam．Lgth．Cost
1 n ＂

 18A843 20，000 $1 \times 3^{1 / 4}{ }^{25} \mathbf{2 5}$

| tock | Control Shaft Your |  |  |
| :---: | :---: | :---: | :---: |
| No． |  |  |  |
| 18A644 | 20，000 | 1 ＂ |  |
| 18 A648 | 25，000 |  |  |
| 17A245 | 50,000 ＊ | 11／2＂ | slot |
| 18A646 | 50，000 | $13 / 1$＂ |  |
| 18A647 | 50，000 |  | 1／2＂ 23 c |
| 184648 | 50，000 |  |  |
| 18A649 | 50，000 |  |  |
| 18A650 | 60，000 | 1\％＂ | 12＂23c |
| 18A651 | 60，000 |  | slot 15 |
| 18A661 | 100，000 | 1\％＂ | 11／＂ 25 |
| 18A853 | 200，000 |  |  |
| 18A654 | 200,000 | 1 |  |
| 18A655 | 200，000 | 1 | $21 /{ }^{\prime \prime}$ |
| 18A 656 | 250，000 |  | 19 c |
| $18 \mathrm{A657}$ | 250,000 | 1 ＂＇ | \％＂23c |
| $18 \mathrm{A658}$ | 250，000 | 1 | 25 c |
| 18A659 | 250,000 |  | c |
| 18A660 | 250，000 | 11／2＂ | 18＂ 25 c |
| 17A241 | 250，000 | 1 | 24 c |
| 18A66\％ | 500，000 | 1 ＂ | 19 c |
| 184668 | 700，000 | 1 |  |
| 18A665 | 1 meg ． | 1 | 15 c |

$18 \mathrm{~A} 669500.0001 \mathrm{\prime} \mathrm{\prime} 5{ }^{5 / 3} 8 \mathrm{c}$ $18 \mathrm{AF70} 500,000 \quad 1 \mathrm{\prime} \mathrm{\prime} \quad 1 / 2^{\prime \prime} 85 \mathrm{c}$ 18A771 1 Meg． 1 \％＂\％／3＂ 40 c

## ASSORTMENT of

 18 Controls Only S2．85 Assorted from those listed above and others．Your Money＇s WorthSURE TENUFF．
No．18A772，
$\$ 2.95$

## Ohmite 500 Ohm， 25 Watt RHEOSTAT－POTENTIOMETER <br> Rated at ． 222 Amps．

Wire wound on porcelain with vitreous enamel coat－ ing．Dissipatea heat rapilly．Copper graphite con－ thick，with $x^{\prime \prime}$ shaft Is $^{7}{ }^{\prime \prime}$ long． 95 C No．18A774，SPECIAL EACH

## Power Rheostat 25 Ohm

40 Watt Wire Wound．1．25－0．48 Max．Ampe． encased． $1 \%$＂dia．x $1 \%^{\prime \prime}$ deep．Single hole mtg．for
 panown make，offored at far below regular price No．18A170． SPECIAL EACH


## IRC． 5 Ohm

## 25 Watt

POWER

## RHEOSTAT

cy An all metal unit人 num case．Feat is nalformly distribated thronghoat the element，regardless of percent age of element actually used．Dls－ slpates heat rapldy．Bcrewdriver type adjustment．Bingle hole mtg． for panels up to $7^{\circ}$ thick．List Price Value Fib0．
18A773，
95 c


Moatly 10 Watt，a few 5 watt fired and adjustable wire wound realst－ ore handy for service and other uasble capaoities
18AB01，Asst of THN ．．．．． 85


8 Mfd．＂ 450 Volt－$x_{4} \times 2$
31c
33c 10 Mid．os 450 Volt－$\% / 4$ 17A231，Special Each 16 Mid．， 450 Volt－ $1 / 425 /$ 17A23\％，

49c 17A238．
Special Each ．．．．．．．．．．．．．． 57 ？ 8－8 Mid．， 450 ＂Volt＂－ixa＂with 4 insulated wire leads $8-8 \mathrm{mfd}$ ．
$15 \times 15$ Mfd．at 450 Volts Plus 40 Mfd． 25 Volt MALLORY F P Dry Electrolytic Condenser
Vory compact $1 \times 3^{\prime \prime}$ with lug terminals，16x15 Mid at 450 volts plus 40 Mid at zo F．
18A630，Special Fach

Bargain Assortment Paper Tubulars


A handy asaortment of 25 paper tubular Condengers， 400 and 00 － voit in good uaesble capacities． All first quallty atandard makea Usual price up to 20 c each．
18A808．
25 Assorted only
$\$ 2.84$


Mica Condenser Asst．
TEN，assorted top quality makeo． including high voltege transmittles types，One or two in the assort－ ment at regular prices would cont or much es the assortment of Ton No．18A A633，$\quad 95 \mathrm{c}$

（ Plectrolytio Rectangular cardboard containe $13 \times 4 y \times 1$ ．with lugg．
17A829，Special Each ．．．．． 25 （
Cornell Dubilier ． 1 Mfd． CONDENSEER


SIZZLING VALUES in DRY ELECTROLYTIC
Tubular Condensers Popilar Capacities Standard quality fully
guarantced，cardboard en－
 cased and waxed dry eler trolytics，tinned
lated wire leads，
NOTE OUR LOW PRICES
separate sections．
17 A 284 Special
17A8st Special＇Each ．．．． 49 C 20－20
17 A 235, Special Hach ．．．．．．．．．．．．． 4 而e 40－20 Mid．， 150 Volt－$\% \times 3^{m}$ 18A632，
Special Each
59c
20 Mfd．， 150 Volt－\％x2\％＂
18A634．
Special Each
31c


In metal $13 / 621 / 6^{\prime \prime}$ can，with lug
terminals．
No．18A6si，spectal sach． 55 C

#  



Advanee Type 975－B－3B， 3 Pole， center contact S．P．D．T．－outer con acts S．T．Normally open． 40 volt， D．C．Res．， 1000 ohms coll， 10 amp． 115 volt contacts．Area required 10 r mounting $2 \%^{\prime \prime} \times 1 \%{ }^{\prime \prime}$ ．Id e a 1 for wice the price esked． $\frac{\text { 18A157．Special，Ea．．．．}}{6.3 \text { Volt DC Relay }}$

D．P．D．T．，heavy duty bilver contacts，mi－ carta insulation，re carta insulation，re
igtance 18 oh me Over all size
 Apecial Euch

95c


Confosed of standard Jack leaves With ailver contacts．Triple Pole Dipuble Throw，over all length $2 \%{ }^{\circ}$ atack thickness $1^{\prime \prime}$.
No $18 A 545$ ，speclal Ea．．．．． 5 ． No，18A545，Speclal Ra．．．．．Co
Hreale Two，Make One Contact Stack \％＂thick． No，18A546，Special Ea．．．．COC Hreak One，Male One Contact
Stack yöthick．
No． $18 \mathrm{~A} 54 \%$ ，Special Ea．．．．100 Relay Coils


40 volt D．C． 1000 ohms． 25 115 Volt． 60 cycle．
$18 A 549 . ~ S P E C L A L ~ E A C H, . .25 P$

\section*{Eicor Motor Only $\$ 1.95$} 24 volte D．C．at ． 35 continuous．Has RM， bhaft \％＂long irom which extends a $1 \%^{* x}$ The shaft slightly ec－ centric．Motor hous－ ing size $2 \%$ dia．$x$ $2 *$＂long．Offered at | original cost． |
| :--- |
| 17AR27．Specla | $\$ 1.95$



W＇EHSTER Input 27.9 $\begin{array}{ll}\text { amps } & 1.28 . \\ \text { Output } \\ \text { 224V }\end{array}$ Output 224 ．
at 070 amps． 4400 R．P．M． Has mounting holes but no mtg．bracket，over all
 FICOR：－Input 18.5 at 18.2 gmpw Jutput 800 V．at $200 \mathrm{ma} .7^{\prime \prime} \mathrm{long}$ ． $4^{4 \prime}$ dia． 8000 RPM． No．3AS\＆，
Fpectar Fa．．．．．．．．．．．．．．．9． 9
415：Designed for 12 V．DC Input， 580 F．ontput at 85 ma continuous dute．Concerte to 6 ．input quick and simply with instructions in－

cluded，output is then 950 ．st 85 | cluded，output is then 950 ．at 86 |
| :--- |
| $m a n$ |




12 Volt Heavy Duty Soleneid Relays $\$ 6.00$ Value onls 45c
Originally made for air craft start ors，in army planes and designed ers，in army planeg and designed
for high current 200 amps and lor high current 200 ampi and
over．S．P．S．T．Normally open，dou－ over．S．P．S
ble break．
ble break．
Coil can be easily removed on which is nearly $1 / 2 \mathrm{lb}$ ．of No． 26 bare enameled wire－worth almost the price we ask for the entire as－ Nombly．
BPECIAL EACH
45 c


## Sensitive

 plate relay foronls 50CAdjuatable S．P．D．T．Contacts， 6800 ohm coll．Army surplus gives you Pinest
price．
18A543，Special Ea．
50c
800 Dhm．P．D．T． 24 Folt Relay
fical to above its appearance iden－ fical to above，offered at a small 18A191． While

35 c


A product of G．E．S．P．S．T．Nor mally open Double Break 24 V ． DC．Compact，handy to mount any－



No．18．1538，
Special Erch
6．3 Folt AC Relas
45 c
8．P．D．T．Can be converted to D．P．－ D．T．by removal of one wire．Ex－ tremely compact，over all size $2^{\prime \prime} x$ tacts and handy mounting brackets． 18．4539，

95 c
Special Ea
24 V．
DC Relay D．P．D．T．

230 ohm coil． Very compact． $18{ }^{*} \times 1 \%{ }^{*} \times 1 \%$

## SAVE ON

Wire Wound Resistors


Well known makes－50 With wire leade or Jugs．
Ohms Watts Size Cat．No．Price
15＊ 10 如玉 1 \％＂18A10R 15 C

8,00010 Mx2＂ 18 M216 15c


25＊ 50 \％x4 18 A782 30 c

－Vitreou enameled－others are ce－ ment coated．All mbject to Prior ment
Eale．

32 V．D．C．Relay


## 456 KC＝IF TRANSFORMER

Square aluminum can $14 \times 11 / 4 \times 21 / 2{ }^{\circ}$ 。
Universal input． 18A878． Spec．Ea $\qquad$ 50 c Cniversal Outpet 18A879． 50 c

456 KC Iron Core
Mica Tuned Midget IF
fdeal for underload or remote con trol applications．Mounted on mi carta base
$\$ 1.45$

## $\frac{18 \text { aste A Real Buy }}{\text { Selinium Full Wave }}$

 RECTIFIER

##  <br> A Bargain In Semi Midget <br> Variables <br> 65c <br> ulated．Over－all gize $1 \% " x 1 \% "$

1／4＂shaft．


Semi－Circular－Donble Bearing Steatite insulated 100 mmfd．max． 7 min．，air gap ．024＂． 14 plates． Can be single hole or chassis mid． Can be single hole or chassis mitd
Has $1 / 4$ shaft 1 ＂long，over all size of condenser behinal panel 2＂ $15^{\circ}$

95c

## 165 mmfd CARDWELL

 Type $X$ Variable

165 mmid．max．． 22 min．， 19 plate 084＂air gap．＂Extenils 4＂drep be
 aluminum rounded platen：
and tie roda nickeled brass：ball thrust type rotor bearing．phos． phor bronze rotor contact and GF
Mycalex imsulation．
No． 18.1858.
CARDMELL Type NP26CS 35 mmid．，$\overline{0}$ plate 070 air gap．Ex Has $1 /$＂̈ shaft s＂long．©
wre leads at bottom in stead of lugs as on illus ration above．Designed for output to diade load． d for any standard IF circuit．
18.4846.

18.1846.
IHr Set

95 c

## 1.7 to 30 MC at 150 MA

R F CHOKE

coll of enameled silk covered wire impregnated with RF lacquer and cound on steatite

25 c
Spectal Each
．．．．．．．．．．
＇A＇Battery Choke

（B）


FINEST QUALITY，Mica
Condensers at


## 2－Conductor Connectors



Consists of 2 －hole receptacle and 2－prong plug．Widely used on rec－ ord changers，phono motors or any－ where where a separable 2－contact connection is desired．Made of moulded bakelite．female part with Wire leads already attached．
No．18A108．
25c


#  

## Wire at Give Away Prices 8ize 14 Cable

Single conductor. For une on motors and other power needs.
For mp to 000 polts, Blae 14. Conarer mp of 41 strands of, 010 tinned alsts of 41 strands of, 010 tinned vire with cotton wrap and $8 / 64$ varnish cambric wrap. Black cotton
braid overall. O.D., 250 . brald overall. O.D., 250 . QQ
2A24. 800 Ft. Coll, Bpec... \& For ap to 8000 volte. Beme as above except with $7 / 64$ varnith cambric wrap. O.D. K".
2A25. Per 600 Ft. Coll \&4.

## 7MM-IGNITION Cable

 Standard as used for ignition cables Has over-all varnimhed cam bric covering.
## No. 4 Shielded Wire

ANJC48 specs, strended tinned conductor ingulated with vinglite and cotton with over-all tinned copper ahleld. Ideal for high amporese such as aircraft, etc.
$2 A 156$, Special Per 100 Ft . 88.01

## Shielded Mook-Up Mire

 Size 20 stranded tinned conductors, Size 20 Btranded tinned conductors,rubber and cotton covered with rubber and cot ton covered with
tinged copper shield and cover-all tinged copper shield and cover-all
cotton braid.
No. $8 A 94$, Per 50 \%t. coll..... $5 S($

## Rotor Lead Wire

Consiste of very fine strande of copper wire bralded together to make for extreme flexiblilty. 5 , 50
$18 A 97$. Por 25 Foot Coll......

## Tinned <br> Copper 8hield

inxpende to nearly double its original width, reduc ins lemeth about $25 \%$. 184100. \%" dia. 65 C
50 Ft Coil ......


## 2-Way Wire Connector To pplice aize 22, 20 or 18

 vire.12A1828, Per, 100 95c

## Stranded Wire <br> Plaln Rubber Covered

The Popalar Flexible Kind You Can't Buy Too Much Every one who uses wlre always needs lots of this type. Handy for ground, lead - in, hook - up and many other needs. In these days of wire scarcity and high prices this is a real opportunity to eave.
Slze 22

Sine 20
$3.0101 .60 c$

Bize 18
${ }^{3,092} 700^{2000}$

Bize 16

TW1STED PAIR
Two conductors of size 22 stranded, rubber covered, tinned. Ideal for bell wire, intercoma, etc. ©
No. 8AOS, Per 100 Ft.... \&
plastic Insulating TUBING at CRAZY LOW PRICES

A high srede writhetic tubing for a Wide varlety of tmalating needs. bix tremely flexible and rasistant to abraslotant to cold and hemt.




The Biscest Buy En Wre we have ever offered. Conalst of sises 82 to 16, both solld and stranded. Fith various types of insulation. Ideal for hook-up, lead-in and all-purpose needs. Supplied in bundien of $10-100$ foot coils.
No. sAs7.
Per Lot of 1000 Freet.... 95 ?
500 Foot Assortment contrins some of above and other popular typen of abo
zA28. 2A28.
Per 500

0 Foot Lot.
$\$ 3.25$
$t 00$ Foot Accortment, contaline bhort lengths as vell as. 25 foot colls varlous typo wire nultable 10 all all
purpose needs. purpose needs.
$\$ 1.25$

## HICH YOLTAGE Hook-Up Wire

Blze 20 stranded tinned conductor with extre heavr vinyllte and fibre glass insulation to make it miltable for mee in
3A63, Per 100 Ft, Coll...... © No. 22, like above except with sise 22 stranded tinned conducto 8A64.
Per 100 Ft. Coll
65 c
Slze 18, extra flezible with heavy rubber wall. Voltage break down $\begin{array}{ll}\text { at } 60 \text { cycles, } 10.000 \text { volte. Red or } \\ \text { black. } & 2 C\end{array}$

## No. 2APs. Per Foot

Lugs and Terminal Asst.


Assorted Assorted terminals astrated. Handyfor all-purpome needis. 10 A1069
por Aat

65 c

A HOT VALUE on
No. 14 Two Conductor
shielded Wiro.


## 

Impedanoe 68 ohme, Capacitance per It. 20 mmid. Consist of 7 btrands No. 21 bare copper wire encased in . 885 OD Polyethylene dielectric, with Vinyl outer cover in 405 OD over breided coppe greid. Made to Jan-C=17 A. eA1et
100 FL Por Ft. 10 A ........................ 2A170, 68 ohm cable ilke sbove except without the. Vinyl outer cov ering. Conslyte of 7 strande No. 22 bare copper wire encesed In Copa. lene with over-all copper bralded mileld.
Per Ft. 80
100 Ft. Öid Lencths Ro8
$\$ 6.00$ Lengthe vary from 85 ft . to 100 ft Order within this range, quantity you deaire and we will tupply the lengthe cloeest to the rootaze you specify-It' A Boal Bergrin. SC
4Ab00, Per Feot, Only........ ©

## Coax Cable Connectors



For aingle conductor solid type. Low loas. mica filled bakelite and polystyrene insulation. Ail surfaces silver plated:
18A806, Chasels Type,
Choice Rach
95
Heavy Duty Terminal 8trip


Te Terminals on Bakellte base $71 / 2$ $1 \%^{* \prime} x \%$, with 10-32 brase ecrews and nut and heavy luse
No. 18A8es.
Dpeotel Enet
65c

## Cable Connectors



Receptacle mounte diroctiy to equipment or thru panel. Isa er equipment or thru panel. Hes orternat thread rins of male portion threade an provides locked connection Priced is eeta, male and iemele -wire type requires $\%{ }^{\prime \prime}$ hole and 2-wire required \%" hole when used thru panel.
18A178. Wire.
Per Eet, Male and Female. 45 18A179. Wira, 5た! Per Bet, Male and Fomale.. 4 (
18A820, 4 Wire.
Per Set. Male and Female. 60 e

## CABLE CLAMPS

D
Heavy cauge eteel, oad. plated.
ita cable Dia ae Lited. Oat. Cable Ail Plcs. Pa No. DLa Lenth 20 180
 12A1071 Batolite Cable Camps
 Cable Clamp Aseortment
60 mesorted cable clampa, Includ ing some of above and other use ful sises.
19A1078, Per Aswortment... $45(5)$
$\frac{\text { 19A1078, Per Aseortment... }}{\text { Barrier }}$ Type Terminal on Bakelite Bize $2 \% " x 1 / 4^{\prime \prime} x \%^{6 \prime}$ with $8-82$ Bind


Bakelite Strip Asst.


25 Plecen odds and ende of bake lite. So handy in any thop ier making your own terminals or ve. rious insulating need. No. 18A825, Per Aset.

## Terminal Strip Asst.

25 assorted terminal trips with lugs attached. Alvays needed in radio work.
No. 18A9, Per Asst.
35 e


## STOPL゚ookREAD.Thints qulouanin iut



## TYPE 400 JONES PLUGS and 8OCKETS For Voltages Up to 110 V. at 10 Amps

 12 contarta Pius and Eocket. Type P!13CCT plug with cable St128B socket with shallow bracls et for flush mounting.

$$
\begin{aligned}
& \text { et for } \\
& 18 A 810 \text {, }
\end{aligned}
$$

Complete Asarmbly, Each
 bracket for flush mounting 18A811, Speclal Each

Type si12sB 10 Contaet tueket only, Type siiosis with bracket for flush mounting.
$18: 481 \%$, sperig! Fach ......

6 CONTACT Plug and 8ocket


Type su0bcce socket with cable clamp in end COMPLETE with P406SB Plug with shallow brackot for flush mounting. 18A818,
Connplete Ansembly. Ea... BSC 6 Prons Plug only, Type P406SB with shallow bracket for flush mounting. 18 A814, Special Each
10 Prous Plus 10 Prous
 mounting 18ABl6. Special Each


Type 500 JONES
plugs and Sockets


No. 184817
 For 5000 Volte Contact. 6 contact, Type S506CE Socket with cap COMPLETE with type
PG06SB plug and fhallow bracket $\$ 3.45$ 6 Contact. Type 8506SB Socket bracket. 18A818,
Spec. Fa. 95 Contact 6 Contact. Type shallow bracket. 18A819. Spec
Earh
Type 101 JONES
Sockets and Plugs
A low lous plug for high irequencs connections. Brase, chrome ilnjeh, ceramic contacts.
Plag type P101- \%" sleeve No. 18A807, Spect
Socket type S101 No. 18A808, Special 'Each

$25 c$ 25 c



Ceramic
Acorn
Socket 18A830, Epech 25 e

## Steatite Sockets



With slotted mounting plate to mount on $11 /)^{\prime \prime}$ to $18 / 0^{\circ \prime}$ centers 18A832, 8 Prong JEach..... $19 C$ $184833,8 \mathrm{Prg}$. less mitg. plate 14 c 18A864, 8 Prong mounted in steel nickel shell for below surface mounting. Can be easily disassembled. Special Each

226


Han convenient mounting bracket
$13 \mathrm{~m}^{\prime \prime}$ mig. center. 18A834, ypechal Each

Bakelite Loctal socket With mig. ring $11 / 2 "$ centers. $7 C$
$18 A 885$, Spectal Kach ........
$1 /{ }^{\prime \prime}$ rub
18 A 174 .
9pocial, Each
248, 2 " cquare, *"o "hols, slde of thick each lide of plate
lifzso, 1 is"
ber 18A8s6, of plate
 centers. Has ilat holes on lif top $1 \%$ " dis
ber cushion ber cuehjoz
Cad. Plate
 gpoolal Facl Jack Mole Covers Keeps out dust and dirt. 18A851,

## Rubber

 Shock Mounts$1 \%$ " equare, for mounting u againat vibration. 15 c 18c 20 c Ceramic Crystal Socket $y^{\prime \prime}$ pin spacing. Well known brand.

## 15c

 5Big Savings on Sockets


60 Watt, Type 211. For all prong base, 18А826. 59 Type 209, For tandard base tube such an 866 and etc. wincing than usual between shell and contact for high voltage rectifiers. REAL VALUE.
18A828. Sperial Each
45 c
7 Prong Ceramic Wafer Socket

Type 247, For 829. 832. etc tubes.



## Signal Corps Microphone Jack

Type JK3sA degigned for the fol Wowing plugs,

## PLA6, PL68 and PL168.

 18A8s9, Sperial Each $\qquad$ 12c Midget Phone告Open circuit. Mounta In \%" hole in panel uDto $1 /{ }^{\prime \prime}$ thick. Ground connection third lue
Fits standard plugs. Each

12c

## Western Electric Jacks <br> 

Type 246E, welded frame, 3 way nickeled shiver sleeve to fit W. E No. 109 plug or Signal Corpb PL46 PL68 and PL168 plugs.
18A171.
Give Away Price, Each.
15c

## Type PL 55 Phone Plug Csonvorntren

Fits All Btandard Jacks
Designed for war needs. so you get a phone plug that can take int at tion is molded, outer shell tenite with ample accommodation for cordage. Withatands breakdown of 1000 V. Over all length 218 No. 17A262,
Special Kach
25 c

## PL 55 Plug and Cord esenfucwill

PL55 phone glug with 10 -inch rubber, spiral wound long - wearing cord attached.
17A26s. Special, Each ..... 45 S
Meevy Duty Phone Cords
Spiral wound, tlexible, rubber eovered as used by army.
17 a264. Her 6 -foot length... 25 (
PLS8 Mike Plug and Cord PL68, $\$$ contact jlug with 6 it. 3 conductor rubber covered mike cord attached. Used on many types of Army mikes.
18A841, special liach
PL68 M1KE ILLU,
18.466 , Plos Uny, Fan...... 25 e
45c

## 6 Foot Mike Cords

3 Conductor spiral wound rubber assembly
18.484\%, Special Each

25 c

## JK26 Jack With Corl

JK26 Jack. tity PL54 plus as used on army aircraft head phones, etc Supplied with $48^{\prime \prime}$ rubber covered cord already attached, making chem ideal to extend cord length most aircraft phones or other



17A258. S.P.D.T. Locking Type 350 18A84\%. D.P.D.T. NOn-Lorking. 350
M(9.


Single Cir., Fll. Control. 25 17A260. Special, Each
3-way microphone jack plus 8.P.S.T. switching action, norm. open. 5 ©
17.12g1. Spucial, Each......
Popular Flat Phone Plug

S.P.S.T. Norm. Open Push button switcil. mounts in panel up to ${ }^{7}{ }^{7 / 4}$ thick. Fineat

Bargains in SMALL MICA8

.003 mpid. No. 18 A 618 . Choice 15 C

## Sensational Values in Wire Wound Resistors

Watt,
6000 at, ferrule type, $18 \times 5 \frac{18}{6 \omega}$.
10000 ohmw, No. 18.55is, $\boldsymbol{T} 0$ Mounting clips ior above. .... 5 C
18.1773. sperial Each $1 . . . . .$.

## BULE REMOVER <br> \section*{For 8 m}

1 (1) $\Rightarrow$ Panel Lanips, No. 18A878, Sperlal Farli... DC O CTAND OFF JNSULATOK Ceramic insulator with y"
hole for wire or for nits. hole for wire or for nutis.
colls, condensers, etc. Other colls, condensers, etc. Other
end is taphed for $8 / 32$ ma. end is tapled for $8 / 32 \mathrm{ma}$ $18 A 1 \theta 88,1 \mathrm{~K}^{\prime \prime}$ ligh. Che. 5e
$19 \mathrm{~A} 1089,10 \mathrm{high}$. La.
Vibrator BARGAIN! Well kuown quality make Fe-



Non-8yne.
4 Contacte. 4 Pronge (Standard) Pits Many
Popular
Anto Raditoe

## （Oll Filled High Voltage Condensers AT A FRAGTION of REGULAR VALUE

 Every ome Brand－Now．Known Brende with Cormale pillar terminder in hormetically cealed rectangular metal cases，Ratings and voltages are exact an marked on each unit by the maker．Built to rigid A in N Speci．Buy Now，for Future Neede－they can＇t epoll－ you will pay up to 5 timea these prices when present surplus atocik are gone． Dimenglon fiven above are can dee and do not inclute the addi－ tlonal heirht of the pillar terminals．

## 8 Mfd． 600 Volt D．C．Wkg．



## Condensers <br> In Round Can

 4／4＂hish x $2^{\prime \prime}$ dis．．her－ metically sealed $m$ etal minals．ATh Tiat lusicio BARGATN． No，18A584 At Only$\$ 1.45$



No，18A882， At On 2 Mid． 600 V．
D．C．Oil Filled Condenser
In round Aluminum can $1 \% \overline{\%} \%{ }^{\prime \prime}$ stande ard blze for invert od mountins．Ideal for amplifiers，etc． A REAL BARGANN． Order today． No． 18.4694 © 24
EACH．．．．

8 Mfd． 1000 Volt DC Wkg Oil Filled Condenser
4\％xswx1\％＂her－ metically sealed can with What A BuY！

（C）18A580，for
13Mn dis．tubular wide ．$\because$ ．．．．．100 units ．．．．．．． 50 wide ．．．．．．．．．．100


Locking Clamps
Pisted gteel Bond Fith integras lock mounting bracket．For holding tubes and other cyilndrical corn－ pomenta becurely in place The abiveraal bracket makes able for many appilca
tubes or componente．Ka ITC No．18As91，for $2 \%^{\circ}$ dia．devices． Epecial Each ．．．．．．．．．．．．．．．ES


Hermetioally enied in metal tainers．With solder Inge and mes． bkts．Top quality，Fell known brande．Priced at Fractions of Cowt ins mid．， 100 volidouble nection．
 No．184112，Epecial，Ba． 1 mid．， 100 velt， 2 ＂x $1 \%$＂x\％ No．18A800．Special．Fa． 1 mfd．， 600 rolt． $2^{\prime \prime} \times 1$ \％＂$\times 1$ No．18A20\％．Epectal，ER． 2 mifd．， 400 volt， $8^{\prime \prime} x 8^{\prime \prime} x 1 \times{ }^{\circ}{ }^{\circ}$ No．18A zen．Bpecisl．Ea． 2 mid． 600 volt， 2 ＂x2＂x1苂＂ No． 18 A118．Bpedal．Ra．
 18A288．Special．Ra

## Rectangular Can Oll Filled

Hermotically soiliod motal containers，seslod ter－ minals．Very compact． .5 x 5 mpl ． 100 volt．due section 25 18A20


35 c 18A664． 1 mid． 1000 V ．．．．．．．． 45 c



30 18A884．． $25 \mathrm{mid} ., 400$ 豆．

40 18A218， 1 mfd．， 400 V ． 18A881．mid．．
18A218． $.025 \mathrm{med} ., 100$


3X． 1 Mfd． 600 Volts Oll Fllied Condenser Only tach 10c

Hermetically sealed metal case．Helgh over all $2 \% x 8 \%$ vide at mis brackel $x$ ，bections D．C． No． 18 A592， Crazy Low Price，Each．．．．IDC



Quallty make oil imprestated paper tubular，completely insulat－ od．Sise 1\％＂x1＂चith tinned चire leade A condencer that Fill tre punithment－yet offored at lome than the price of orilinary paper tubularts．
18A505
Ean 29c
 .25 Mid 350 Volt OII Filled Tubular Condenser 18A110，soated In motal contalner and with tinned wire leads and luga as

20 c

． 2 Mfd．2，000 Volt a．E．Pyranol 95e Capacitator In cylindrical motal caso
 poroelsin btand off in－ Bulator．A quality can pacitor for high voltage needs．

95 c

cen volt DC voridns．Hermet－ lonlly sealed in tin costed metas oholl．Vegctable oll and cereat
wax filled．Sise $1 \% x 1 \mathrm{~m} \%$ ．Liot value．$\$ 1.80$.

$\xrightarrow{-1 \mathrm{mfd.}}$


1 med． 000 volte DC mortins． （1500 volt flash teat．DC．）TH． ned Fire lead are Internally im＝ oulated from motal oose．Oll im－ prepnated wex filled．Bise 1KT \％＂．Lat Falee．80c．
$18 A 107$ णF 10
20 c
．s MPd．，so V．D．C．，metal encasod，
 ．5 Mif．， 100 V．D．O．，Identical to above except with $\mathrm{b}^{\prime \prime}$ vire lead． 18A146．
special．Ea，．．．．．．．．．．．．．．．． 1 亿
SOLAR Type X B 1000 Volt MICA


Rectangular low lobn Bakelite vith timned wire leads．
Oat．Cep．Conel
18A827
$18 A 688$
18 A 612


8
Sangamo ．005 NIca． 1000 V


Type a 1 8ANGAMO Mica Capacitors AT CRAEY LOW PRICES


Anyone who has need for this type of condenser knows what they are Up to 51.90 list value units ari prioed as low as \＆s．0s． Ther woa＇t last lons so HURRY Cop．Cat．LIst Specia NO VAlte Bhech

| 0006 | $18 A 697$ | 29.70 | $5-8$ |
| :--- | :--- | :--- | :--- |
| 001 | $18 A 598$ | 29.70 | 5.8 |

$\begin{array}{llll}.001 & 18 A 598 & 29.70 & 8.85 \\ .004 & 184690 & 31.90 & 8.85\end{array}$
．00en，10，000 Volt Faraios Tice
No．18A810，Special Each．．$\$ 4.95$

## SANGAMO MICAS Bakelite Encased

E1－3000 Volt F2－6000 Volt Fr8－8000 Volt

LOW！IOW！ PRICES
Cap．Tym Cat．
Mrd Type No．

| ． 00017 | 71 | 18A188 |  |
| :---: | :---: | :---: | :---: |
| ． 0002 | 8000 | 18A188 | Choles |
| ． 0003 | Volta | 18A124 | Ench |
| ． 005 | List | 184837 |  |
| ． 001 | Price | 18A186 | 45 |
| ． 002 | 89.80 | 184880 |  |
| ． 0008 | F\％ | 18A800 |  |
| ． 0004 | 6000 | 18A601 |  |
| ． 0006 | Volts | 18460\％ | ㅇ．th |
| ． 0008 | Idst | 18 A60s |  |
| ． 001 | Price | 18A604 | 43 |
| ． 004 J | \＄14．30 | 18A606 |  |
| ． 0013 | F3 | 184608 | Cholce |
| ．004 | 8000 V ． | 18A607 | 88.85 |
| T | ype F3 | Hist Up | －$\$ 36.85$ |
| $.001=$ $18 \wedge 608$ | $133,6000$ |  | $06$ |



In porcelain case，sise $81 / 8 \times 2$ \％ 2 5 18A60． Speclal Eac
$\$ 2.95$
Cornell－Dubllier
.002
5000 Volts
To．18A61
Spectal 45
Each．．
SANGAMO ．005


18A689，
Special Each
35 c
Ceramic Capacitors


18A141，Frie 15 mmpd．－plus－minue 1.5 mmfd ．

18A142，Firie 10 mmifd．－plus－minus 1 mmid．

5 Centralab， 500 ．mmid．． $2 \ddot{\%} \%$ tol． 18A143，
Special
10c

## ReSistors at PRICES YOUCAN STOCK UD

Ceramic Insulated CARBON RESISTORS
 2 MaTM size $3 / 8^{\prime \prime} \times 13 / 8^{\prime \prime}$ Tolerance within $20 \%$ ．RNA color coded．In al popuiar cate ise wanted．

$12 A 6502100100$ Lote 80
FRREE＝Hand


BARGAIN Assortment
Contains all most popuiar ca－ pacitlem．
100 asported． 50 each $1 / 2$ and 1 watt．
18A74．Per Asst．．．．．tit 95 100 aseorted， 50 － $1 / 2$ watt． 25 － 1 watt， $26-2$ watt． 82025 18A75．Per Aygt．io estact 200 assorted， $100-1 / 2$ watt， $75-$ 1 watt， $25-2$ watt
$\$ 3.95$

WIRE WOUND RESISTORS，Ferrule Type PRICED FOR QUICK SALEI


Top quality makea，vitreous enam eled．These prement no problem in moxntins with the wide meleotion of holder⿻ listed below－and a dis－ inct advantage when a repiace－
ment if neceasary－merely pull out the old and slip in the new as you Would a cartridge fuse．Lengths given are over－all．Including fer－

| rule． |
| :--- |
| BAR |
| Fe |
| Include |
| or othe |
| for oxp |
| 18Ags， |
| Per As |


| Ohme | 3 Watt | Cats No， | Price |
| :---: | :---: | :---: | :---: |
|  | \％ 20 | 18176 | 10c |
|  | 10 Watt |  |  |
| 125 |  | 18 A78 | 12 c |
| 1600 | 動工914＊ | 18 A78 | 120 |
| 3000 | 109 ${ }^{\prime \prime}$ | $18 A B 76$ | 12 c |
| 8160 | Ity ${ }^{\text {\％}}$ | 18 A79 | 12 c |
| 7.6 | \％${ }^{\text {¢ }} 3 \%$＂ | $18 \wedge 80$ | 15 c |
| 15 |  | 18 A81 | 156 |
| 16000 | 25x $1 \times$ | 18A88 | 186 |
|  | 25 Watt |  |  |
| 815 |  | 18A571 | 806 |
| 400 |  | 18A572 | 30 c |
| 100 | 掅 $\times 5 \%$ \％ | 18 A86 | 310 |
| 1000 |  | $18 \wedge 87$ | 21 c |
| 1000 |  | 18 A688 | 390 |
| 8000 | 誩玉5 $6^{\prime \prime}$ | 18AE78 | 310 |
| 8000 |  | 18.488 | 306 |
| 10，000 | 19 $\times 1 /{ }^{\text {＂}}$ | 18AD74 | $3{ }^{10}$ |
| 16，000 | 㹉工 $41 /{ }^{\prime \prime}$ | 18 A88 | 30 c |
| 56，000 | 誩土4\％＊ | 18AB82 | 300 |
|  | 100 Watt |  |  |
| 800 | 13／857\％ | 18AB77 | 85 c |
| 2000 | 114573＂ | 18 A578 | 36 c |
| 10.000 | 11／3 $\times 7{ }^{1 / 1}$ | 18 A679 | 360 |
|  | 200 Watt |  |  |
| 25 | 13098100 | 18A90 | 30 c |
| 160 | 146994 ${ }^{\prime \prime}$ | 18 A581 | 30 |
| 40.000 | 1 14 E 9 ¢ ${ }^{\prime \prime}$ | 18 A91 | $60^{\circ}$ |
| \＄0，000 | 1\％工9 ${ }^{\text {\％}}$＂ | 18492 | 506 |
| Buy Now for Future Noede．Such |  |  |  |
| Values Can＇t Lat Lons，at These |  |  |  |
| LOW， | OW BAR | AIN PRI | ES． |

Low，LOW＇t Band Lons，at These
LOW，LOW BARGAIN PRICES．
Clips for Ferrule Resistors or Cartridge Type Fuses 12A1324－Cad．plated for ik＇da． ferrules or tusen．
 12A132s－Bronze for g dia
ferrules or tuses． 18A778－Cad，plated for ion in dia． ferrules or fuses．．．．．．．．．．．．．．．．．．． 18A776－Bronse
 ferrules or fuges Resistor Clip With insulator
Cad．glated clip for $4{ }^{\prime \prime}$ dia．ferrule reststors or fuses mounted to $11 /{ }^{\prime \prime}$ high F ＂square．Ceramic ing
Htocla No．18A798，Special Each


Fuse or Resistor Mounting

No．18A94．Black bakelite base， $3 \%$＂Il ${ }^{3}{ }^{\prime \prime}$ ，helght 1 \％＂．with bery lium copper clips for 品＂dia $x$ $21 / 0^{\circ \prime}$ long iuces or
rerrule resistors．Ea．．．．．． 25 No． $18 \mathrm{~A} U S_{0}$ Bakelite base $31^{\prime \prime}$ \＆\％＂ height $1 \%{ }^{\prime \prime}$ with spring bronze
clipg for $\% n^{\prime \prime}$ dia．$\times 2 \% "$ long fuses or realstors．

## 1 HIGH VOLTAGE

Flbre encloged with bright dipped brast end caps is＂dia．I $41 厶^{\prime \prime}$ long．Fuge elements are phomphor hronze ribbons risidly eupported in－ side the flbre tabe．
Resistance 1.1 ohms．
18A77\％．Special Erach
10 c 18A668， $3 / 4$ Amp 1000 Volt，like above． $3^{\prime \prime}$ long．

Type 4 AG Fuses

## Buss

Glase enclosed， en $^{\prime \prime}$ dia． $116^{\prime \prime}$ long．Destgned for nae where there is considerable vibration auch as in aircrait，otc．Being only so larg－ er in dia．than the 3 AG type，they can usually be used to replace the 3 AG．
$\left.\begin{array}{ll}18 A 778 & 2 \mathrm{Amp} \\ 18 \mathrm{~A} 779 & 3 \mathrm{Amp}\end{array}\right\} \begin{aligned} & \text { Choice Per } \\ & \text { Hox }\end{aligned}$
$\left.\begin{array}{lll}18 A 779 & 3 & A m p \\ 18 A 780 & 5 & \text { Amp }\end{array}\right\}$
$18 A 781$ 10 Amp 18 Amph 5 c
18 A 78215 Amp Fish $\begin{array}{ll}18 A 788 \\ 18.4784 & 30 \mathrm{Amp} \\ \text { Each } & \text { Each } \\ \end{array}$
Aesortment of 1004 AG Fusen． A mixed lot of above sizen． 18A785．
Per Abst．of $100 \ldots . . .+4]$ deb 18A787，$\%$ Amp，Type 9 AG Fuseg． Special Per Box $\qquad$ $\$ 1.95$

## 20 Amp． 250 Volt FUSES

 250 volt，standard cartridge fues， $2^{\prime \prime} \operatorname{long} \mathrm{x}$ 设＂dia．．Chase－Shawmut No．2008．Per Box of 10．．．．． 5 （17\％18A17．Pe

Fuse Extractor Post For 3 or 4 AG 5 ube Mounts on panely up to extends behind panel $1 \%$＂． Fuse easily replaced from front of panel by merew type fing 18A788，

15c

## 

Vitreous enameled wire wound with 2 separate sections， 100 ohme at 7 tapped at 550 ohms． 50 17A875．Special，Each ．．．． 3 C No．18A808，Tapped at 28，28，7600 and 3000 ohms． 3000 ohm tap rated at ${ }^{100}$ watts．Over－all size $1 \%{ }^{\prime \prime}{ }^{\prime \prime}$ high．A Real Bny． Special Exach

65 c


Big SAVINGS on Famous CLAROSTAT＂Greenohm＂ WIRE WOUND RESISTORS


Due to the exclusive clarontat fir－ urganic Cement Coating，these re gistors can be given the toushent assignmentr．Many are in use br the finest of assemblies． 100，000 Ohm， 50 Wat Size 34＂xイ1／2＂ 18A7母象，Special Ea． $45 e$ 200，000 Ohm， 200 Wiatt

Adjustable WIRE WOUND CLAROSTAT＂Greenohm＂


Like the tixed types above，exceyt cor bared sections of the windins contacted at any ohmage by tho adjumtable slider band，which can be locked at the required resistanc
by merely tightening with a screw－ by merely tightening with
driver．
Bize＂x＂x41，
18A 796 ，gpecial Ea． 50c 10，000 Olim， 200 Wat
 95c 18A797．Special Ea．．．．．．．．． 200，000 Ohm． 200 Wat

$\$ 1.45$


Witreons enameled，gize $\% / \%^{\circ \prime} \times 2^{*}$
With lugs．
$\rightarrow$（

Size
eade．
（ tinged

Wire Wound Resistors at Fractions of Regular Value
Well is nown quality makee Vitreous enameled，with luge \＆s 100,000
Size $7 /{ }^{\prime \prime} \times 4$＂．
iv．18A－91 35 c $\mathbf{3 0 0} 0 \mathrm{Om}, 50$ Watt

40 c No． 18.1219 Special＇Each Ohm， 80 WVatt

30c


Slze $14 /$＂$^{2 \times 10 \% " .}$
No． 18 A 780 ，Special Ea．．．© $C$


10，000 Ohm， 200 Wat


ACTCAI BIZE
Tolerance within $20 \%$ ．ENA Color Coded．In all popalar ce－ macities．State mires wanted． No．Watt Fis． 100 Lets Fis． 12 A 651 \％ 30100 Lote $21 / 20$ 18 A 658 y 4e 100 Lote $31 / 20$ 2A6SS 1 Ee 100 Lote $41 / 20$


Burgain Assortmente． 100 annorted．（25－1 watt， $28-1 / 2$ watt and $50-1 / 4$ watt．）© 45 18A71，Box of $100 \ldots .$. 1 and 2 watt． 18A73，Box of $200 \ldots$ ．．．． 4 ce FRELE Fandy Color Code Chart with each of the nesortment Histed．


FUSE
Clips No．12A13\＆2－Phowphor bronze N．P．clipe Nor $33^{\prime \prime}$ dia．rumes such as
 dia，iuses auch as
high voltage，otc．
．Da． 3 C

# STOPLookREAD．Thimsquiloie in our low pioice QuALITY items 

Vitreous Enameled Wire Wound Resistors


Rugged－dependable－accurate．Wire wound over a special ceramic tube， then covered with superlor vitreous enamel． finer．

## 10 WATT

10 watt，存解 $\times 1 \%$＂．Pig tall leads anchored to lug ends．
In popular ohmages $\delta$ to 40,000 ohms．Speclify kizet． 12A057．Each

33 c

## 5 WATT


In popolar ohmages 8 to 8,000 ohms．Apecify sizes．
12 A658．＇Earch
29 c

## Stand－0ff <br> Insulators

Coramio ingulatore Tapped each end for standard machine screws．
19A1064，\％＂die
5c
19A1027，si ${ }^{*}$ dla，
$8^{8 \prime}$ long．Ea．
$13 c$
dia．$x 11 /{ }^{\prime \prime}$＂long．
15c
25 Insulator Assortment

lieal for mitg．coils，condenams， etc．Finest grade Steatite，Alsimas and Porcelain．A variety of Bizes equare and round，tapped for vari ous size machine screwt，also in cluded are several elzes of Steatite buehings． 19A978． 19A978，Per Amst．of 2


## Ceramic

 Squares por varlable end plates and other 19A10\％ 55

Look！at This Bargain


500 PIECES 95 c Contains quite a wide variety of screws，nuts，washers，grommets and miscellaneous radio and geteral very handy collection to have around for any＇one who does tinker ing or repalring of any natur NO．8A66．
Per Asst．of 500 pleces．．．．． $\boldsymbol{C}$ Handy Brackets


18A104．Bracket．18A10S．Bracket Slze $2 \% \pi$ 4 K，Handy for many Mtg．llange
 clange 1 y wide wandy for itw extension obcillators or Mo unt as mounting for ghown or ro various needs，verse．
Epeci
Each 5c Specia


An odd lot conglomeration of con－ denserts resistors and milacellaneous odd parts as used in factory pro－ duction line．The stuff looks a lit able ruif but all of it is use will get your money；worth．AD ${ }^{\text {Prot }}$

## Shock Mounts

at Give．
Away Prices


2\％＂s．s． 257 center hole，mtg．surface hose，mig．in＂dia． $.196^{\circ}$ corner holes $01414{ }^{\circ}$
$18 A 836$. 18A836．
8peo．Ea．


15 asported pioces． cabinet bacin，baf－ fles，grilles，and mis－ cellaneous $h$ indy items．
8 A18． Per abs


Furniahed complete with mtg ．hdwe
（1）Plastic Handle．
19． 1084.
Each ．．．．．．．．．．．．．．
（2）Antlque finiah．5（e
（3）Antlque finish．
18A17．Each ．．．．

## KIT OF 10 MOLDED PAPER CONDENSERS



Bakellte molded wax impregnated paper condensers with pig tall leads．Standard $R$ M A Color Coded． Excellent dependable substitutes for mica or paper TLES AND VOLTANYE．
NO，18A82\％，PER KIT，ONLY
95c

## Heavy Steel Cabinets

Heavy teel，rotinded corners． hinged Ifd and louvre aides．Black Cradkle Enamel finish．For trans－ mitters，$P$ A systems and other electronic equipment．Takes stand－ and rolay rack panel tise $8 \% \times 19^{\prime \prime}$ Over all sise $15^{\circ}$ deep， $10^{\circ} \mathrm{h}$ hsh and
 As above oxcept square corners． Sides and back louvre．Takes pane size 10 K＂x19＂．Over all size 13\％＂ deep． $103 /{ }^{\prime \prime}$ high and $191 / 2^{\prime \prime}$ wide．A REAL VALUE．
Metal Speaker Cabinet


Portable metal speaker cablimet with Biack Crackle Enamel Pinish．Very desirable for permanent or portable public addrest epeakers and exten－ sion opeakers．For $8^{\prime \prime}$ speaker， 11 mize $61 / 4 \%$
No． 5140 ，At Only ．．．43et

## Tuning slug

## 

18A1078， $1^{\prime \prime}$ Iron core tuning sius with 6－82 threaded shaft $11 /{ }^{\prime \prime}$ long Has screwdriver slot for tuning． Aperial

10
BRASS TERMINAL LUGS

（8）
（4）
（1）
（ity
lugs avallable for au types of radio and repalr work．
No．Typo Loth．Hole Each Per 100 19 A1079 1 1 1 E $8-10 \quad 20 \quad 1.25$
 19 A1081
$10812-8-1010$－ 10

## Cable－Condenser Clamp

Handy Clamp for cables or condenser up to
dia． 12A．

## DIAL LOCK

Rotation of knob depresses finger which firmly clamps dial without imparting any rotary motion．
18A526，Spec．Ea，．． 25

Air Padder Condensers Coramic ingulated screw drive $18 A 518,16$
plate， 50 mmid． $40 C$ plate， 80 minid． plate 7 mmid .25 C

\％＂silver contacta，frame of solld bakelite，phosphor bronse key lever，a pring steel lever pring，brass hardware． 17A414，A Terrifio Value

$\$ 3.50$

## （4＂P M SPEAKER <br> Army 8ig－ nal Corps speaker com－ plete with transformor and 4 ft ．cord plus attached Heavy metal

 clamp clamp tJpe mts．bracket．Ideai an an extersion $\operatorname{D}$（eaker．
No．5A4
$\$ 3.45$

## Lead－In Bushings


$1 \%$ d！a．$x$
all length all length
with 1＂hole． 8A88．
20c
$21 / 2^{\prime \prime}$ dia．$\Sigma 3^{\prime \prime}$ over all length with
$1 / 2{ }^{\prime \prime}$ hole． 1／4＂hole．
8A8\％，Eisch

35 c


## Lead－In Bowl

 1\％＂hole．For lead－ in purpovoltages． voltages．
18A175． Each． 5 C Steatite Stand－Off Insulator
Has nickel plated cap and base with $4 \times 1 \%{ }^{*}$ insulation．


No．19A1074．
15c

## BUD



Type MC 1855 Midget Variable
Semi－Clrcular－Do able Bearins． Steatite ineuiated 100 mmfd ．mak． 7 milh，alr gap ．024． 14 piald．Can ${ }^{6}{ }_{n}$ singlo holo or chassis nate． shart s＂long，over all sizo or condenser beaind panel $2^{\prime \prime} \times 1$ き No．18AB04，
Spoclal Each ．．．．．．．．．．．．
95c
BARGAINS in SIDE COWL Auto Aerials


Popalar cowl type，as illustrated， Gection telescopic，extends to 6 inches．Supplied With Low Sold Lead．List Price Da，84．96． 8016 only in
$88 A 90$
88A30，
Per Ples．of FIVE ．．．©itued
88A29，ts above except extends te 96 Inches．
Per Plef．of MVE ．．．

# SWITCHEES die always astaple can qo aliont at theopprices 



0 \%" fong, $2 \%$ " square, $\mathrm{K}^{\prime \prime}$ " shaft. Bilver contacta
No. 18A162, special Ea. 41.95

11 Contact Ceramic


Wafer trpe with silver contacts and silver multileat contact arm. 3" haft "\%" long with bubling for panele up to ${ }^{\text {? }} 8 \mathrm{Al}$ thick. 95 C
No, 18A530, Speclal Each.. 2 Gang, 8 Pole, 3 Position


Band change rotary switch, short ing type. Mig. depth behind panel ehank. 2 Gang, 5 Pole, 3 Position (x)

Band change rotary avitch, shorting type. Mig, depth behind panel 3 inch. $2^{\prime \prime}$ aplit knurled ehaft, fis threaded shank. No. 18A164, speclal Each... 35 C - 0 SECTION c POSITION

CIRCUITS
Mtg. depth behind panel $2^{\prime \prime}$. Has \%" long threaded shank plus $1 /{ }^{\prime \prime}$ long $33^{\prime \prime}$ ghaft.

## Ceramic Cang Switch

8 Cir., z Pos., 4 Sect. The two center sects, are 2 cir., 2 pos. Front ${ }_{1}$ cect. if ${ }^{3}$ cir., 2 pos. Rear sect. is are individually shielded. Over-all length 10" Can be easily disassembled and converted to a variety of combinations.
No. 17 A 428 Spe

(1) Compact. S.P.D.T. wafer type, With "h" threaded shank $\psi^{\prime \prime}$ long plus ${ }^{16}$ "1 long $\%^{\prime \prime}$ shaft. 18 Cl (2) S.P.11.T. With off position, mhortine type. $2 \%$ " split inurled


3 Circult Normally Open, Locking Type


Quality Lever Switch. Extends $3 \frac{1}{2 \prime \prime \prime}$ behind Panel. Mtg. plate $1^{\prime \prime} x^{2}$ Bakelite handle. 18A532, Special Each
.95 e S.P.D.T. Spring Return with lever in one positlon, S.P.D.T. Locking with lever in other position. 18Abs3,
Special Each
$\$ 1.25$
 Completes 1 isolated circuits in each of two positions. Double break contacts. Thumb screw locks it either position. Has bakelite insulation throughout. A high grade switch with many possible uses.
$38 c$

## Push Button

Switch

single circu
lite
17A276. Specia
15c


Heavy Duty On-Off Switch
Rated 70 amps at
24 volts, bakelite case $2^{\prime \prime} x 12,2^{\prime 2} x^{\prime \prime}$. tront plate, for $6-32$ crews. Toggle ex
17Ay7\%. Special, Each
95 c


## Spring

 Return Push SwitchNornially open, 75 ampa at $125 \quad V$., ing extends 11 behind panel hous ing extends 1" behind panel. sin-
 \%witeh.
No. 18A635,
35 c

S. Pole Norm. Open
Lear type actuator switch. 45 C
17 A 254 . Spectal Wach..... $.45 e$
Roller Type Leaf $\mathbf{8 w i t c h}$

Graphite roller, Fotates on pin. Acro type RO-q0N normally open, pressure 4 to 5 oz. pressure spotal Oz.
Type RD-2M Dozble Mbio. 4 S
 17A256, Speclal Each .......


ACRO switch
Type KD47L, Long Throw. ${ }^{\text {No. 18ss6, special Each...65e }}$

## Rotary 8 witch

 ${ }_{250}{ }^{8} \mathrm{~V}$. H orf-on. ${ }^{3}{ }^{3}$ Ahank with 250 V. sor shany withohaft for opera-
tion.

## Bat Handle C H Toggle switches

S.P.ID.T. Has shank ror pan elt
ness up to \%
No. 18A53\%, No. 18Assial Each Special Each ................ 30 C D.P.D.T., ${ }^{5}$ amp at 125 V." ${ }^{3}$ amp closed, compact, soldering lugs at bottom.
No. 18AE51, Specfal Each.. 4 SC D.P.R.T., otherwise identical to
above. No. 18asid, special Each... 35 C


C-H Toggle Switch
8.P.S.T., On-OP1 has epecial finger lever.
8tz. No. 18 A34.
Each
35 C


24 Volt Relay Coil resiatance 500
ohms. Requires 50 Mils at 24 V. DC
sist of 2 S.P.D.T. and 2 S.P.S.T, circuite, the S.P.S.T. circuit. are norm open. All circuito can be hooked individually or combined for D.P. operation. Horizontal or vertical mig. Size 4"x1\%"x1" 18A563.
$95 c$
24 VOLT RELAY
Coll lilse above, 3250 ohms reslst ance. Requires $71 / 2 \mathrm{MA}$ at 24 V D.C. to operate attached leaf contact arrangement to break two make one, three isolated circuits. 18AD64,

95 c

## 1 VOLT RELAY

Each
Coil resistance .7 ohms. Requires 1.3 amps at .9 V. D.C. to operate. Coil can be rewound to make a very senaltive relay with any desired operating characteristic. Conract arrangement, make one, break of contacts heavy enough to carry several amps. Over all size ir $14.11 \%{ }^{\circ}$. 950


Type YZR31 (at left) pin plunger normally open, operating preseure
7 to $81 / 2 \mathrm{oz}$. Type HZ\&HQ1T (at right) purhbuton plunger type. Single hold , No. 18 A 983
No. 18 A 169. No. 18A169.
Normally Open 65c
C-H. Plunger 8 witch


Normally Open. In "on'" position with pressure on plunger in "off" ponition fdeal saiety switch for cabinets housing high voltage.
No. 17A257,

## Bpecia! Each

65

slide Switch 8PDT, center off Spec. 5a. 18 E

C-H Heavy Duty
Toggle Switches
Prlced at One-Fall and Lefo


Beinc destgned for airplane Une hey are very rugged and of finent materials. Positive snap action and positive contact oven under extrom vibration or shock. All electrica connections are ilver to allver Flush mount; plates are \%" $\mathrm{y}^{\prime 2} 2$ ta $^{\prime \prime}$ mtg. hole conters 1 fi" holes fy
 on lig. 4. Single pole type rating is 35 amp. $24 \mathrm{~V} ; 5$ amp. 125 V. AC Double pole type rating 20 to है amp. 125 V . AC. Switche marled with have iuminous lens in end of to ele giving a wide range of visibility.
-8.P.S.T., Nomentary On-01f Type 8211-H6H, (Fig. 1.) 55 Dtk. No. 18A26, Wech ....... A! Type 8216B15

25 c
8th. No, 18A27, Each ....... 1 e B.P.S.T. Off-Momentary On (2)
 -g.P.D.T., On-Centex Olt-0n (8) Type $8200 B 9$ A.
str. No. 18A29 ............. 3 . - Q.P.D.T. Nomentery Dn-Off Momentary On (9)
Momentary on (
tt D.P.S.T., Off-Mom. On. (4). SHE
Stk. No. $18 \mathrm{~A} 81 . . . . . . . . .$. .
-D.P.D.T., Momentars On-Oft Momentary On (4).
Type 8712C11.
75c

## Switch Guard <br> For use with For use witb above switches Marked starter. 18A85, 'ma. . Ife Giant Plug and <br> Jack Set


 Jack is Ki" $^{\prime \prime}$ and fiti 12A1400.
12Er Pr. ... 25
Per No. 18A843, As above, 10 c

## BARGAINS in Type BT

 Metalized IRC Resistors
## 

Type BT1-1 Watt. Size $1 \times /{ }^{\prime \prime}$ 玉廷" ru Ohmages Only as follows.
$\begin{array}{llll}1500 & 22,000 & 100,000 & \text { Spec. } \\ 2000 & 30,000 & 250,000 & \text { Each..... } 8 C\end{array}$ $\begin{array}{llll}2000 & 30,000 & 250,000 & \text { Each } \\ 3300 & 33,000 & 1 \text { Meg. Per } \\ \mathbf{M e n}\end{array}$ No. 12A660, (Specify Ohmage) Type BW 2 Watt
Wire wound, encased in molded compound. 250 Ohng, slee $1 \% x^{6}{ }^{60}$. No. 18Ая32. 1per 100

100

## Turnbuckle For SAGGING AERIALS, Etc.

Brass barrel, high tonslle strength oteel fork and
No. 18A656, Spec. Ea. 2Se


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$G$ Grid Cap
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Our ridiculously low price is made posaible be－ cause of a quantity purchase from army surplus． Every one is brand new in original factory con calner．There is no deterioration to these bat ble the buy all you can while aval dividual cartons with bottle electrolyte for each in separate container．Shipping weight battery and electrolyte $4 \frac{1}{2}$ lbs．Can＇t be shipped vi parcel post
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Type 27－2，like nbove，alze $8 \psi^{\prime \prime \prime} \times 2 \%^{\prime \prime} \times 5 y^{\prime \prime}$ high． 2 Volt， 27 A．F Willard plastic case，rechargeable battery－AN TXACT REPLACEMMENT FO： W PORTABLE RADIOS made prewar and also other make gete． Shipped dry with electrolyte in geparate container．
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of acid－ NOTE：Because of postal regulations not permitting shipmen
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## Set of Four <br> Handy 8crowdrivers oat 99e

While a Limited Stock Lats．


Unbreakable Plastic Handlas with qually steel bita，each one a handy
size．Always needed．

（1）Round $1 / \mathbf{n}^{\prime \prime}$ diad．I $8^{\circ}$ long blt． （2）Bquare ${ }^{3 / \mathrm{m}}{ }^{\prime \prime}$ dia．I $6^{\prime \prime}$ long bit （3）Square ti＂dia＇．I $41 / \mathrm{m}^{\mathrm{m}}$ long bit Stk．No．18As65． | StE．No．18AE65． |
| :--- |
| Per Asst．of 4．On：y |

99c
＂Wiss＂Forged Steel Trimming Shears


A handy piece in every tool kit． Just It＂for trimming wire insula－ tion，light metal or even snipping small gauge wire． $5^{\prime \prime}$ over all with quality apring in handle．Unanlly priced twice what we ask．

## No， 11 A 61.

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The name amouren yon of the finest quality forsed steel－Many is the time you have need for a quality Emall meedle mose plier of this type． use． $4 \% \%$ over all and ordinarits priced mnch hisher．Order yours Today．
Stk，No． $11 A 40$ ．
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Round Nose Pliers，A handy plier for shaping wire，metal and all around radio work．Made of Forged steel with polished head and blued rinished handles．No tonl kit hould be without a pair．Over all length 6
No．11A15，
Spectal Each
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## Hリリ Bargain Wrench Set contains socket wrench lor use wlth a standard Koy Wrenches for Allen Screws sizos， 4 to $\%$ \％$\%$ ． <br>  <br>  <br> Veeder－Root <br> Cyclometers <br> Bargain <br> Priced <br> Only <br> $\$ 1.95$

Reginters 0000 to 9999 in steps of 1／10 revolution．in other words， 10 numerals register for each com－ plate revolive Chrome housing gize $1 \%$为x\％＂．Cam is $1 \%{ }^{\prime}$ long．
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$\$ 1.95$
Worm and Gears
At a Low
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Bronze Boston gear． 20 teeth．Used in combination with worm illus－ trated for 20 to 1 ratio speed ro ductlon．Ideal for makling yquir own tuning assemblies，etc．
No．18A567 gear fits $1 /{ }^{\text {＂}}$ shaft．
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Your Choice，
15c

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| 32.4843 | 814 | 14.00 | 20A780 | 9005 | 3.00 |
| 20A $\%$ 5: | 815 | 6.95 | 20.4731 | 9006 | 1.40 |


| "RCA" TRANSMITTING TVBE MANUAL-74 pages of tube circuits and data on tranamitting and special purpose tubes. Includea U.H.F. and tranmmitter clesign. Ntock No. 16i68. Your Cost Fach.......................... $35 C$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 14TATM AT $^{99}$ |  |  | *ETAA ${ }^{\text {E }}$ |  |  |
| Hils No. | Mifros Type | Net Each | Stk No. | Mir.s Type | Net Each |
| 20 A 761 | T-20 | \$ 2.75 | 20.1189 | 3C24/24G | \$ 6.00 |
| 20A76: | TZ-20 | 2.75 | 20.46\% | 265 | 6.00 |
| 20^6才 | T-21 | 1.95 | 20.A6\%1 | 35T | 7.00 |
| 20.46189 | TB-35 | 10.00 | 20.1190 | 35 TG | 8.00 |
| 20A763 | T-40 | 3.95 | $32 \mathrm{ARS1}$ | 100TH | 15.00 |
| 20.4784 | TZ-40 | 3.95 | 33 A 46 | 100 TL | 15.00 |
| 204765 | T-65 | 6.50 | $33 \wedge 49$ | 250 TH | 27.50 |
| 20.4\%66 | 203-A | 12.00 | 82, 248 | 250 TL | 27.50 |
| 32A250 | HD-203A | 14.50 | 83A47 | 4-125.4. | 25.00 |
| 20A767 | 866 JR | 1.23 | 33.148 | 4-250A | 36.00 |
| 20A768 | 856A | 1.75 | 32A 248 | K'T-21. | 10.00 |

FREE-TAYLOR TCBE MANUAL listing tubes for all ama
teur, commercial and industrial wervice. Stork No, 20 A86.

## RAYTHEON RK-4D32

A beam tetrode carrying full rating to 60 mc. Plate dis, 50 W. Requires about V . Typical operation allowis 125 W . input at 600 V . Has 6.3 V . filaV. Typical operation allows 125 W . input at 600 V . Has 6.3 V . Ilaswitching.
switching.
Stork No.
D.P.D.T. Antenna Relay Auto Elec. Mfg. Type Rs1


For any RF or power circuit re-
quiring a high quality well insulat ed relay. Contacts are $1 / 4$ " pure Nilver. Hase plate and contact car-
rying bar are mycalex. Operates quifetly on 110 v . AC. Size over-all


No. 20A188. RK-61. . \$3.50

## New! Raytheon RK-61

## RADIO CONTROL TUBF. A

 small 3 element thyratron of great interest among radio experimenters, amateurs and model airplane enthusiasts in applications requiring oxtreme economy of space, weight and bat sible to construct a simple recelver that will operate a relay to control a motor or other devices. Recelver sensitivity will be equal to that obtained by us ing 2 or 3 tubes of conventional type. See Oct., 1946, issue o Model Arplane News for circuit

# hallicrafters TRASMITING EQUPMENT 

 HT-9transmitter POWER OUTPUT 75 WATTS PHONE 100 WATTS CW CRYSTAL CONTROLLEDCorers 80, 55, 40, 20 and 10
Meter .imateur Bands SELF-CONTAINED
medium power transmitter with maximum plexibllity and convenience. Five individual piug-in tuning units and 5 crystals (one for each band) may be accommodated in the exciter section simultaneously. Band switching is accomplished easily by a front panel switen tuned. Has three panel meters, RH output matches any resistive laad fromi 10 to 600 ohnis. osc. or doubler, 814 RF anip., 6SJ7 and $6 J 5$ speech amp., 4-6LG $H F$ parallel modulator, $2-5 Z 3$ rect., 80 rect., $2-866$ rect. Cabinet is steel, finished in gray wrinkle elnanel and provided with ifd is equipped with interlock switch to remove high voltages when
 on $105-125$ V. $50 / 60 \mathrm{cy}$. AC. Normally draws 400 W . HT-9 Tranamitier with Tubes Less ('olls and Crysials.

Yoor stoek No. 30A143. Complete Set of Coils for $\$ 49.50$
$80,75,40,20$ and 10 Meter Bande. Per Set.

variable oscillator
Band Switching-Ganged Tuning
© BANDN VFG or Crystal
OUTPUT $21 /$ WATTS
Another welcome addition to the Hallycrafters line-and to any Ham Shacks As easy to shift to a new irequency as a modern receiver! Fmploys a 6BA6 tube in an F.C. oscillator circuit, plate and scree regulation, temperature compensation and a funl vision accurately cali-
brated dial. Tuned circuits of osc. and 6 V 6 GT multipller-amp. are brated dial. Tuned circuits of osc. and 6V6GT muitipler-amp. are ganged. Coils are permanently installed. Built-in power supply uses VR-105, VR-160 and a $5 \mathbb{Y} 3 G T$ rect. Has front panel switch for selec-
thon of 3 plug-in crystals and jack for keying both osc, and amp. For thon of 3 plug-in crystals and jack for keying both osc. and amp. For operation on 105-12
crafters Recelvers.
HT-18 With Tube
Your
$\$ 75.00$

## HALLICRAFTERS CN- 1 CONVERTER

To make Pre-War FM Sets work in New FM Bands
Now any FMi recelver with tuning range of 42 to 50 mc can be operated on 88 to 108 inc. Converter transforms receiver into, a double superhet. Very small, $6^{\prime \prime} \times 4^{\prime \prime} x 4^{\prime \prime}$, and will mount inside
most sets. All tuning is done with the regular recejver dial. Has most sets. A-position switch to permit normal reception or operation on any one of the new FM ringes. An attractive conversion chart is provined for easy location of new bands. Uses only one tube. Very simple to install-no soldering or alterations required.
Supplied complete with universal mounting bracket and a power take-opf plug and cable. CN-1 Converter. Your Stork No. 31A18. COst
$\$ 15.00$


## new! HT-18

## hallicrafters COMWWNICATONSREEEEVERS



## Model S-38

For All Who Want the FINEST Receiver Available at a Low Price.
A truly competent communications recelver, styled in the post-war Halli-
crafters pattern and incorporating many crafters pattern and incorporating many
of the features found only in the more expensive sets.
Frequency range of 540 KC to 32 MC covered in 4 bands. Front panel controls alt plainly marked for Tuning and Bandspread. Beat Oachlator, Band Selector, and Volume plus switches for Noise limiter, Speaker
or Phones, Standby, AM/CW and power. The AM/CW switch turns on Automatic volume Control in AM position, besides shifting from broadcast to code reception. A PM Speaker is mounted inside cabinet. Tip jacks for phones, and terminals for a doublet or single wire antenna are at the rear.
Cabinet is steel finished in satin black. Panel markings are light gray and switch knobs red. Over-all size $12 \mathrm{Y}^{\prime \prime}$ " Jong by $73 / 8$ high by $85 /{ }^{3}$ deep. Complete with six tubes. 1-12SA7, 1-12SK7, 2-12SQ7, 135L6GT, 1-35Z5GT. For operation on 105 to 125 Volts AC or DC; also 220 to 250 Volts AC or DC with line cord listed below
Model S-38, Your Cost
Stork No. 30189. Complete With Tubes
$\$ 47.50$
Stork No. 171740 , 220 Volt Adapter Line Cord. Net En.

## $+2,00$

## $M_{\text {odel }}$ S-40A

## FUNCTION and BEAUTY

## Combined. 540 kc to 43 mc

great communications recelver handsomely designed, expertly en gineered and tallor made for hams Has many circuit refinements never
 Tuning mange: 540 KC to 43 MC in 4 bands. Electrical bandspread and inertia tlywheel tuning plus wide vision glareless dials, accurately calibrated, make this recelver easy to handle in crowded bands Its many outstanding features make it especially well suited for the serious short wave listener who also wants a standard broadcast receiver that
the whole family can use. Normal positions of all controls for standard broadcast reception are marked in red
Sperla! Features: Permeabllity sdjusted "Micro-Set" inductances in the RF section, automatic noise limiter, temperature compensated RF oscillator, beat frequency oscllator, separate RF and AF gain controls. three-position tone control, rubber shock mounted PM speaker inside cabinet, and socket for connecting external " $S$ " meter. Front panel controls for MAIN and BANDSPREAD TUNING, RF SENSITIVITY ON/OFF CW/AM, NOISE LIMITER ON/OFF TONE, ACOLUME, AVC ON/OFF, CW/AM. NOISE LIMITER ON/OFF, TONE AC OFF P1TCH CONTROL and STANDBY-RECFIVE. Uses 9 tubes-6SG7 RF, 6SA7
converter, $2-6 S K 71 F^{*} R, 6 S Q 7$ 2nd det.-lirst audio, $6 F 6 G$ audio output,

The AVC-noise limiter, 6J5GT BFO, 80 rectirier. The cabinet is steel, very attractively finished in rich satin black. The entire top section swings open on a plano hinge. The chasais and panel can be removed as a unit without disconnecting any controls. External trim is satin chrome, dials are light green. lettering is in light grey and red. Over-all size $18 \frac{1 / 2}{}{ }^{\prime \prime}$ long. $9^{\prime \prime}$ high. 11" deep. For opera-
tion on 105 to 125 Volts, 50 to 60 cycle AC. Special plug in rear allows tion on 105 to 125 Volts, 50 to 60 cycle AC. Special plug in rear allows

## Model Sto Witly Tubes. Vour Cont.

Laur Cow
$\$ 89.50$

## SM-40 "S" METER

calibrated signal strength meter with indirectiy illuminated scale quipped with cable to plug in socket at rear of receiver 63 " wide, $4^{\prime \prime}$ high, $41 / 2^{\prime \prime}$ deep.
MM-40 Meter. Your Cost,
Stock No. 17A741. Escl.
$\$ 16.00$


## Model

## S-41G

The Skyrider Junior
An Outstanding Value. $6-t u b e$ AC-DC superheterodyne communications recelver covering short wave
and standard broadcast from 550 KC to 30 MC and standar
in 3 bands.
Main tuning dial is calibrated in megacycles. Has separate bandspread tuning dial (electrical bandspread). beat oscllator for code reception, automatic nolse limiter, standby switch, band switch, volume control and power switch and connections for doublet or single wire antenna. Pin tip jacke at rear for headphones and a switch on front panel permita easy change from speaker to phones. Very compact with PM speaker mounted inside the steel cabinet. Size $118 / 4$ " long, $8^{\prime \prime} \mathrm{high} .8 \frac{1}{4}$ " deep. Finished in crystalline gray with maroon dial and black knobs. Complete with tubes, 2-12SQ7, 1-12SA7. 1-12SK7, 1-35L6GT. 13575 GT . Operates on $105-125$ Volts AC or DC; also 220-250 Volts AC or DC with line cord below

## Morlel S41G Rereiver. <br> Stock Nu. 30193. <br> Complete With Tubes. <br> $\$ 36.75$

Stock No. 17:ifio. 220 Volt Adnpter Line Cord. Net


Model SX-42
Continuous Frequency Coverage 540 kc to 110 mc AM-FM-CW
Combines in one superbly ensineered unit a top - flight standard and VHF communi cations receiver; standard broadcast, short wave and FM broadcast receiver and a high
fidelity phonograph amplifler.
The tremendous frequency range fs made possible by a new "split stator" tuning system and the use of dual intermediate frequency transformers. Reception of amplitude modulated and Cir telegraph signals is provided throughout the entire range. In addition, a dis criminator and two limiter stages permit reception of FM signals on
27 to 110 megacycles. The audin system is essentially flat from 60 to 15000 cycles and has an undistorted output of eight watts.

All controls are arranged for maximum convenience and simplicity of operation. Main tuning has precision vernier scale. Other front panel controls are Band Spread Tuning, Band Selector, Volume and AC Switch, AVC Noise Limiter, Recelve/Standby, Selectivity, Tone, Sensitivity, Crystal Phasing, selector for Phono, FM or AM and CW Pitch. Freedom from "drift" and maximum stability are provided by temperature compensation and a VR-150 voltage regulator. The crystal iliter provides six different degrees of selectivity up to 30 MC. The carrier evel meter performs as a tuning meter on the FM band through automatic switching.

Extermal connertions: Are provided on rear of chassis for a single wire doublet antenna ( 300 ohm line except standard broadcast), output erminals to match 500 or 5000 ohm spouker, phono input, and socket cor external power supply and remote standby switch

The Panel and chassis are assembled as anit and can be removed from the steel cabinet for servicing or relay rack mounting. Panel is finished in deep gray, cabinet top is satin chrome and swings open on plano hinge. Lettering is light gray, red and green: remainder of cabinet satin black. Dials are light green, indirectly illuminated. Over-
 52 lbs.
Ures 15 tubes; $2-6 A G 5 R F$ amplifiers, $7 F 8$ converter, $6 S G 7$ ist IF amp. 6SK7 2nd IF amp., 6H6 AM rectifier and noise limiter, 7H7 1st FM limiter amp., 7R7 2nd FM limiter amp., 6H6 FM digeriminator, 6SL7 audio inverter, $2-6 \mathrm{~V} 6$ audio output, 7 AA BFO and FM tuning meter amp., VR-150 voltage regulator, $6 \mathbf{U 4 G}$ rectifier.
For operation on 105 to 125 V $50 / 60$ cycle AC or batteries supplying 5 Model SX-42 Receiver with tubes, less spenker

## ${ }_{\text {R. }-15}^{\text {R SPEAKERS }}$

This is the first speaker of its size to offer the splendid advantages of the
base reflex principle. Designed as a companion plece to the $\mathbf{S X 4 2}$ receiver but it may be used with any other recelver having a 500 ohm output. Speaker dia. $8^{\prime \prime}$. Has two-position switch on front panel for communication or high fidelity reception. Terminals at rear for 600/600 ohm line
Size $17^{\prime \prime} \mathrm{W}, 11 x^{\prime \prime} \mathrm{H}, 12$ 浚" deep
Monlel K- 42 Spenker.
$\$ 29.50$
Model R-45. As above except has


2nan
Panel size $12 \%^{\prime \prime}$ high, $19^{\prime \prime}$ wide.
Stock No. 30 N1f1. Your Cost. Each
$\$ 32.50$


## Model S-36A

VHF AM/FM/CW
Designed for maximum performranging from 27.8 to i43 MC. continuous in 3 bands. Incorporates a new three-watt audio system with a response curve which is exsentlally flat from 40 to 15,000 cycles. Designed for service in any climate.
Controls: RF Gain, AVC ON/OFF, Band Switch, Antenna, Send-Receive, Selectivity and Power ON,OFF, Tone, ANL ON/OFF, Tuning. Pitch Control, Meter Adjustment. BFO ON/OFF. AM/FM, AF Galn.
Fixternal Connections: Terminals for single wire or doublet antennas. 500. 600 and 5000 ohm terminals for speaker. Socket on rear of chassis permits operation from external power source.
Mounted on heavy steel chassis in black wrinkle enameled steel cabinet.

Fifteen Tuhes: 956 RF amp.. 954 converter, 955 HF osc. $6 \mathrm{AC7}$ 1st IF Rmp., 6AB7 2nd IF amp., 6SK7 3rd IF amp., 6H6 AM det. and ANL, $6 A C 7 \mathrm{FM}$ limiter, 6 H 6 discriminator, 6 SL 7 GT audio anp, and phase
inverter. VR-150 voltage regulator. $2-6 \mathrm{~V} 6 \mathrm{GT}$ power audio amp., 5 U 4 G inverter. VR-150 vol
rectifier, 6 J 5 BF osc.
Operates from 105 to 125 or 210 to 250 Volt $50 / 60$ cycles AC or battery supplying 4.5 amps at 6 volts and 145 MA at 270 volts.
Model S-36: Kereiver With Tubes, Less Spenker.
$\$ 307.50$

# ChoiceCommunicationsterceivers 



RME-45
CAL-O-MATIC TUNING
10 Tubes6 Bands Continuous Coverage 550KC-33MC
RME's latest, featur ing Cal-O-Matic tun ing, regulated oscila ages, an 1 mproved automatic noise limiter, 5 -atep crystal selectivity. a callbrated " $\mathbb{S}$ " meter and efficient loctal type tubes. Cal-O-Matic tuning is a full mechanical system with absolutely no back lash, real band spread, and large llluminated full vision main and bandspread dials directly callbrated in frequency. Knobs are arranged for two-speed fast and fine tuning
Other panel controly are TONE and SWITCH, RF GAIN and AVC SWITCH, BAND SELECTOR, BFO PITCH, AUDIO GAIN and ANL SWITCH, CRYSTAL SELECTIVITY and PHASING, SEND-RECEIVE SWITCH, and HEADPHONE JACK. At rear of chassis are speaker plug, " $s$ " meter adjustment and terminals for single wire or doublet untenna and relay control or break in. Operates on 115 V. A.C. 60 cy Tube line up, 7B7 RF, 7J7 Det and Osc, 2-7B7 IF, 7 B6 Det and BFO, 7A6 ANL. 7C7 Audio, 7C5 Output, 80 Rect and VR-150 Regulator. Cablnet is steel, gray with black trim, size $10 \%$ "xi2 $y^{\prime \prime}$ "xi2". PM speaker supplied to match. Shipping welght 65 lbs .
RME-45 With Tubes and Speaker. Stoel No. 30A53-2

Your Cont
Net Euch
$\$ 198.70$


NEW! RME-84
Continuous Coverage 540KC-44MC RF Amplification-Built-In Rubber Cushioned Speaker-Noise Limiter-Portability
Whether you are now on the alr, a potentlal amateur, a short vave listener or destre tion-you will want the NEW RME-84. Built to rigid RME standards, low in price.
Dials are of mechanleal band spread type similar to RME 45 but with aingle speed tuning. Other panel controls include switches for AC ANL BFO, Band Selector, AVC, Standby and controls for RF Gain, AF Gain, Tone and BFO Pftch. Headphone Jack is on front panel, terminals for single wire or doublet antenna and plug for external power source on rear of chassis. Streamlined cabinet is two-tone gray $18 "$ L. 9 为" H, $9 \%^{\prime \prime}$ D. Top is hinged. Weight 28 1bs.
Tubes used: $7 B 7$ RF, 757 Det and RF Osc., 2-7B7 IF'g, $7 K 7$ Det and Audio, 7K7 BFO and ANL, 6G6G Audio Output, and 5I3GT Rect. Very economical, portable operation is possible as the set requires oniy 6 V at 1.5 amp and 135 V , at 22 MA when 115 V . 60 cycle 1 s not available.
RME-84, Wlth Tubes.
Iour Cost,
stock No. 30 :92.
Net Eueh
$\$ 98.70$

DB-20 Preselector


For added sensitivity, Image rejection and galn when used with any communications receiver. Range 550 KC to 33 MC . Built-in power supply. Tubes are $2-6 K 7$ and 1-80. Cabinet matches current RME recelvers in every detall. Operates on 115 V. 60 cycle AC.
DB-20 Preselector,
With Tubes.
stk. No. B1AB4. Net Ea

VHF-152 Converter


For 2, 6 and 10 meters-to be used with your present communications receiver. Provides high order of stabllity and reception on higher
frequencies. Uses minlature tubes, requencies. Uses minlature tubes, Det. and 6J6 amp and Mixer, 6AU6 Det. and 6J6 Osc. Bullt-in 110 V.
AC power supply uses $5 Y 3 G T$ Rect. AC power supply uses 5Y3GT Rect and VR160 Regulator VHF-152 Converter,
With Tubees.
Stk. No. 31 A53 Net Ea,

NATIONAL NC-2-40D


12 TUBES - 490 KC to 30 MC - AMATEUR BANDSPREAD RF STAGE - CRYSTAL FILT CILLATOR-SLIDING COIL BANDSWITCH-"S" DB METER Every feature the Amateur needs is found in this New Recelver. Has apecial expanded amateur ranges in addition to general coverage colls. RF \& IF colls wound on Polystyrene. Other critical components isolantite Insulated. Signal-to-image ratio better than 30 db at 10 meters. High signal-to-nolse ratio. Has six-step wide range crystal fliter, series valve nolse limiter with front panel threshold control, front panel Jacks for headphone and phono plck-up, sockets for 8000 ohm speaker and external power, and single wire or doublet antenna connections at rear. Tubes 6SK7 RF, 6 K 8 lst Det, 6 J 5 HF Osc, $6 \mathrm{K7} 1 \mathrm{st}$ IF, $6 \mathrm{SK7}$ 2nd IF, 6SLT 2nd IF, 6SL7 2nd Det-Limiter, 6SJ7 AVC, 6SJ7 BFO, 6SN7 1st Audio-Limiter, 2-6V6 PP 8 Watt Audio, 5Y3 Rect.
Cabinet is two-tone gray with chrome trim. Slze 194 WL 65 lbs. Operates on 115 or 230 V .60 cy . AC.
NC-2-40D, With Tubes, Less Speaker.
Stock No. 30ABt. Four Cost.
$\$ 225.00$
Stock No. Bois2. Matching $10^{\prime \prime}$ PM Speaker
516.44

HAMMARLUND


HQ-120X. A New Recelver whlch has already won popular acclaim from Amateur operators and listeners. Covers 540 KC to 31 MC in 6 bands. Has New Tuning System with $310^{\circ}$ bandspread and callbrated main tuning and bandspread dials. calibrated " S " meter, six step Hammarlund patented crystal filter, AVC on RF and 2 IF stages, series nolse limiter and regulated HF osc. voltages. 11 tubes: 6SS7 RF, 6 K 8 converter, 3 -6SS7 IF, 6H6 2nd Det-AVC-ANL, 6SN7GT AF" $\mathrm{S}^{\prime}$ Meter, 6SJ7 BFO, 6V6GT Audio, 5Y4G Rect. and VR-105 Reg. In wo-tone gray metal cabinet. Size $11^{\prime \prime} \times 201 /{ }^{2} \times 13 \mathrm{~L} / \mathrm{m}^{\prime}$. Wt. 47 lbs. Operates on 115 V. 60 cy. AC. Complete with tubes and $10^{\prime \prime}$ PM speakor in matching Cabinet.
Stoek
No. 30.454-2.
Your 0173.25
Cont
APR-400X SUPER-PRO. An Improved veraion of the famous 18 ube Super-Pro. Five continuous bands 640 KC to 30 MC . Dial shutters cover all tuning ranges excopt ne in use. Has amateur bandpread, 3 stage variable IF, 6 posiion Hammarlund patented crystal Ilter, AVC on $2 \mathbf{R F}$ and 2 IF stages, improved nolse limiter, calirated " S " meter and high quality PP audio. Output for 500 ohm peaker or headphones. Power supply is separate to assure hum free operation. Set designed for operaon under most adverse conditions elver haty and temperature. Recelver can be removed from twoone gray metal cabinet for standard rack mig. Complete with tubes and matching speaker. Operates on


## Panadaptor PCA-2

For visual observation of signals when connected to any superhet communtcations receiver having an IF frequency between 450 to 470 is not affected. Six different moder is not affected. Six different modes of adjustment allow simultaneous screen of all signals in any section of the band up to 200 KC wide or
 viewing of a single signal for the
purpose of selecting QRM free spots and observaton of slenal charac teristics of other stations as well as Jour own. Enables detection of Interfering CW key clicks, noise, phone splat own. Enables detection of modulation per cent and frequency shipt. Provides ingtanteneourion; meter for cw and phone Has headphone fack for audibleous same range belng viewed. Cablnet is metal jack for audible check of 11"x9s wg. for connection to recejver converter tube plate pin. Operates on 115 V. AC 50-60 Cy.

Fanadaptor PCA
Stop No. 31 A5E.
Your
Cont.
$\$ 99.75$


[^0]:    －

[^1]:    Over-All Glazed Cotton

    For speaker installations, remote control equipment, multiple circuil 8001 hm transmission lines, batters cables, etc. ${ }^{3,}{ }^{4}$ and ${ }^{5}$ conductor cable of size 20 (stranded tinned) conductors with overall brown abra pon prool "Basket Weave" braid. 6, 9 . 8 and 9 conductor for use whth a low potential drop. Has 2 fize 16 conductors $1-32^{\prime \prime}$ rubber and balance same as 3, 4 and 5 conductor cable above.

    | cat. |  | Num. | Per | 100 |
    | :---: | :---: | :---: | :---: | :---: |
    | No. | Type | cond. | Ft. | Feet |
    | 2.4113 | 8443 | 3 | . 03 | \$2.37 |
    | $2 \mathrm{Al14}$ | 8,444 | 4 | . 04 | 2.34 |
    | 2A115 | 8445 | 5 | . 04 | 3.38 |
    | $2 \mathrm{Al10}$ | 8446 | 6 | . 06 | 4.98 |
    | 2A11: | 8497 | 7 | . 07 | 5.64 |
    | 2A118 | 8448 | 8 | .08 | 6.85 |
    | 2A1I9 | 8449 | 9 | . 09 | 7.19 |

    Transmission Line Cables 50. E01 type. 12 solfa. cellophane wrap "35" rubber twicted pair with ove 2A123. Beid.יn $8210 . \quad \$ 4.64$ Cat. Num. Per 100
    No. Fype Cond. Ft. Fee $\begin{array}{rrrrr}2.494 & 8.40 & 2 & 2 c & 51.72 \\ 2.195 & 8.41 & 4 & 4 \mathrm{c} & 3.13 \\ 2.196 & 8742 & 6 & 5 \mathrm{c} & 3.88 \\ 2.497 & 8743 & 12 & 9 \mathrm{c} & 7.38 \\ 2498 & 8741 & 18 & 121 / 2 \mathrm{c} & 10.45\end{array}$ $\begin{array}{llll}2.199 & 8745 & 30 & 22126 \\ 18.82\end{array}$

    Phono Pick-Up Cable Small diamoter, flexible and limp.
    Shielded with black cotton brais Shielded with black cotton braisl
    -all.
    Ft. 30 Belaen 100 Ft.
    $\$ 1.94$

    ## Belden Shielded Loom

    

    Finely woven tinned copper shlelding over impregnated loom. Proricles low capacity shielding for any ituto wire or cable and for auto antenna lead-ins.
    2A138-r" dia. Per 1 L ......... 8 c
    

    Wire Stripper and
    5 in 1 Tool 15 c
    Combination Wire Stripper, Screw Driver, Scraper, Cutter and wir Wriver, 11A276.

    Each
    15c

[^2]:     "B"'—No. 20A85: 3-WAY CURRENT TAP..........EA 16c: 10 Km 14 "C":-No. 20A121; ANYGLE TWO-WAY SOCKET...IE, 16c; 10 (1) Ka. 14 "D":-Na R0A9R; PLUG-IN. "TRTO TAP" .........Ese 120; 10 Fin 10
    
    

