CATALOG NO. 949

# LAFAYETTE CONCORD 

## RADIO \& TELEVISION

We guarantee you the immediate benefit of any lower prices prevailing after the catalog is printed. We'll return any over payment to the penny.

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HAM ECUIPMENT


COMPDNENTS


# Where the World shops... 



## shop <br> by mail...

You can live in Saskatchewon, Teaneck, N. J. or Trincomali - it doesn't matter how far uou are from the radio center of the world-you're right on the inside, now that you oun this catalog.. you can get any item you urant by mail and fast Our remarkable mail service has been famous now for 29 years. It's been fanrous for its speed, the doun-to-ewth prices (which malie most people shake their heals and say. "Don't understand how Lafayette-Concoid can worti on such a tiny markup!") and t, 1 r ansherkable reputation for relinbility. Everis printed word in this catalog is backed by guarentees. Amjthing you see on these pages can be wours just by dropping a card or letter to us. Send a trinl order. and see what we mean by LAFAYETTE-SERVICE.


## BIGGER STOCKS-LOWER PRICES

With 7 stores to keep supplied, and all our purchasing done through one central office, you can imagine the huge quantities of parts and components we buy each year Naturally, with such com te stocks and rapid turnover, we can afford to workibn slim markups... and we do just that. Almost every item in our catalog is priced lower than you would find it elsewhere.

## FAST SPEED-SERVICE

Speed is our middle name: Our mailrooms and switchboards are constantly busy with urders pouring in from every corner of the globe. We usually ship merchandise within 24 hours of recenpt of your order. If the branch to which you send your order is temporarily out of stock, there is no delay. Our inter-brarch teletype system makes it possible to relay arders and make immediate shipments from another warehouse or branch store.

## FRIENDLY COUNSEL

The men who serve you in Lafayette Radio centers are essentially engineers, not salesmen. If you visit one of our showrooms or write for advire, it will be given freely by our engineers without abligation on your part. Write, call or visi: these departments in NEW YORK or CHICAGO: AMATEUR, BROADCASTING, EXPERIMENTAL. INDUSTRIAL, INSTITUTIONS, SCHOOLS, SOUND, SPECIAL LABORATORIES, TELEVISION.

## TIME PAYMENT PLAN

Now you can own a radio, sound system or any electronic equipment that vou want, when you want it. All Lafavette centers have an easy time payment plan on radio, television, phonographs, sound and similar equipment. Time payments can be arranged through the mail... please write for details of plan and application blanks.

## LAFAYETTE BUREAU OF STANDARDS

Trained technicians in Lafayette's testing laboratories examine and test every piece of equipment down to the smallest part. Every item sold, either through this catalog or over the counter in one of ou: seven stores, has been tested and approved by Lafayette's Bureau of Standards.

## ...for Radios, Parts,

## 1950

 and Television!!
## shop <br> in person... <br> ew Englon rations a ane: HU

If you live near one of Lafavette's seven branches, Hou'll find shopping iv person an added pleasure. Here you will see these catalog pages comb to life...here you may discuss problems personally with experienced engineers... here courtesy, understanding, whalehearted cooporution are the order of the day - every day. You are familiar with Lafayette's efficient and spirited mailorder service. Now cnjoy this friendly sway of doing business first hand at your nearevt Lafayette branch.


LAFAYETIE
SELLS OVERSEAS
All ordera outaide of the cortirental United Stotes are handled by our main ofrice in New Yos $k$, and should be murked to the attention of exprot department. All prices on such orders are net, F.O.B. New Fork warehouse, subject to change without aotice. The merchendise is pg;able by either confirmed, irrevocable crefit, or l.y a remittance in United States Dollers on a New York bank, and should include enough to cover insurance and consula: expenses. All orders are to have a minimum merchandise value of $\$ 10$. Conds are packed in cardboard cartons. Fou wooten export parking, there is a slight additional charge. Pleast se ${ }^{\text {ce }}$ all correspondence by air for best service. Cable address: wholrad, new york, N. Y., U.s.a.

ATLANTA Radio and comero fans alike find their best values at Lafayette, 265 Peachtree Street Phone: WAlnut 5140


## LAFAYETTE SERVES INDUSTRY

Purchasing Agrents for industrial organizutions, schools, laboratories, goverumeni agencies, etc. etc, have corte to depend on Lafayette for unustal parts as well as for seutine electronic requirements. When an engineer buts throush a hard-to-fill order, marked "HISH", he knows and his P.A. knows that Lafasette's Industrial Division'wrill speed it all the way. Lafaretti delivers... $n$ at at the right price.


BANISH NOISE, INCREASE FIDELITY, WITH FMI

LAFAYETTE'S FM - AM TABLE SET

- FM for Noiso.Free Reception
- AM for Distonc and Variety

FM is sweeping the country Close behind comes FM is sweepug the coutiful table-model radio, deLafayette, with this beaurifage of all the improvesigned to take full advaception. And that oceaments inherent in $F M$ not yet duplicated on $F M$, or sional AM program FM range, can still be brought sinating out of FM range, ean stiftile receiver. originatio AM section of this versatlie receiver. high in on the AM in an instant from sich band to top You can switch in the $88-108 \mathrm{mc}$ FM band to top fidelity programs on theadcast band. Both FM and erformance on the $540-1700 \mathrm{kc}$ broce on the easy-to-read, slopAM scales are clearly delineated.
ing illuminated "slide-sule" dial. Circuste have been carefully designed for FM and AM. FM essoperallon. Separate $1-1$ colls are used cults include an r-i stage, mer audio output. Frequency drift callo detector, and beampower alinimum. Other leatures intas been reduced to a negligibe mM speaker, built-in AM and has been reducedrol, qualliy $5^{\circ}$ PM speakel antennas, where clude tone control connection for external FM antennas, and $12 \mathrm{AT7}, 6 \mathrm{BH} 6$. FM antennas, and cone latest types: (2) 6 BJ , $12 \mathrm{p}, \mathrm{ta}$ on $\mathrm{d}-\mathrm{C}$ desired. Tube 12ALS, 12 AT6, 35L6, and 125 volts,50-60 cycles. Cabinet size: Wolght: $8 \%$ lbs. Welght: 8 \% lbs.

Lots of 3 .


CONSOLE PERFORMANCE IN A TABLE MODEL

This Deluxe superheterodyne incorporates most of the features you'd expect to find only in a console radio. A push-pull outputstage dellvers 3 watts of undistorted signal to the powerful Allico V $6^{\circ}$ PM speaker. Neqa:ive feedback actoss the entire audio circuit greatly reduces hum lovel and insures excellent tone quality. A comtin-uously-varlable tone control-lete you plck the exact'point of pleasing tonal response. The clearly-lettered "sliderule" dial slopes just enough so that it may be read from above or in front of the sei. And you'll be proud to display the martly-mtyled Wainut plastic cabinet, with it unique grill deeign. A built-in loop eliminates the need for an outside antenna, but a connection is provided for those locations where one might be desirable. The lube complement includes one 6SA7, on 6SF7, on 6SL7-GT, two 25L6-GT, and two 25Z6-GT (rectifiers). Soperate power supplies are provided for the output stage and for the rest of the set. Operates on 105-125 volts, a-c and d-c. Cabinet size: $121 / /^{\prime \prime} \times 9^{\prime \prime} \times 81 / 2^{\prime \prime}$. Shpg. Wi; 12 lbs. 1N708-Each, in lots of 3 .. 20.95


## MODERN STYLING IN 5-TUBE SUPERHET

You'll be proud to display this 5-tube superheterodyne in its beautifully molded cabinet in walnut plastic, with its unique grill design. The efficient and sensitive circuits use multh-puspose tubes to give the effect of 7 -tube performance. The sloping, eamy-to-read "allde rule" dial can be read from above or in front of the set. A continususly variable tone control lets you adjust the tone to match the room acoustics. Excellent tone quality and good volume is assured by the $5^{\circ}$ Alnico $V$ permanent-magnet dynamic specker. Hi-Q, dual-tuned f f transformet: typlfy the high-quality components uned internally. There's a bulli-in antenna, of course. And Lafayette brings you all this at a price lower than even we thought poselble only a few ehort months ago.
The tube complement include a 12SA7 oscillator and first detector; 12SK7 1 -f amplifier: 12SQ7 detector, audio, and AVC: 50L6-GT beam-power audso output staqe; and $3525-G T$ rectifier. The cabinet measures $12^{*} \times 8 K^{\prime \prime} \times 7 \frac{1}{2}$ ". Weight: 9 lbs.
Radio in walnut plastic. Shipping Weight 12 lbs.e 1N540........................................... ゼach.... 14.95 Lots of three.......................................... Each.............. 13.95

## LUGGAGE-TYPE PORTABLE

Threo-way portable in luggage-type case of striking appearance. Sturdy plywoed cabinet is covered with attactive tan leatherette, contrasilng with shiny plastic carrying handle and control knobs. Front panel is perforated brushed brass, with dial and markings stamped in red. Radio operates on a-c and d-c 1110 volts), or on its own extra-long-life, self contained batteries. Improved superheterodyne clicult uses 4 efficient miniature tubes plus selentum rectifior. Set also has built-In loop and Alnico V PM speaker. Uses one 1R5, one 1L4, one IUS and one 2SA tubes. Cabinot dimensions: $91 / 1^{\prime \prime} x 71 / 4^{n} \times 4 / 2^{*}$. Welght, less battertes: 7 pounds.
IN425-Less Betteries....Shpg, Wt: $10 \mathrm{Ibs} . . .16 .95$ Battery kit for above; one $67 / \frac{1}{2}$ volt, four $1 / 2 / 2$ volt batt. 20N19857-Shipplng Welght: $21 / 3$ lbs.................... 1.65

## PLASTIC CASE PORTABLE

A three-way portable of smart, modern design in beautiful maroon and ivory plastic cabinet. Flexible platic strap makes carrying easy, and liea flat when not in strap makes earrying easy, and 11 es hat when not in
use. Tuning dial ranges from 540 to 1650 kilocycles in iarge, asily-read numbers. Radio operates anyin iarge itasily-read numbers. Radio operates anywhere on llt volte $\alpha-c$, 110 volte $d-c$, or its own light-
weldat batteries. The senalive Buperheterodyne cirweltht batterios. The senalive superheterodyne cir highly-effictent selenium rectifler is usod instead of om extra tube. Beam power output plus a powerfuil Alnico VPM speaker assures plenty of volume and excellent tone. Cablnetmeasures: $41^{\prime} x^{7} \times 10^{\circ}$. Welght, less battorles, only 6 lbs.
IN421-Less Battories....Shpg. Wt: 9 1bs. .. 23.95
Same as iN 421 , but adds short-wave band ( 5.8 to 18.3 mc ) less battertes.

1N422-Shipping Weight: 9 lbs . 29.95

Bort. kit for elther model; one $671 / 2$ volt, one $4^{1 / 2}$ volt battery.
20N19881-Shipping Weight: ly/ Ibs.


## SPEED RADIO-PHONOGRAPH

 One compact, hamdsorme portable ease contains n highly sensttive 5 -tube superhet radio plus an complified phoncogroph ior playing $33-1 / 3$, 45 and 78 RPM records. This outstanding en: tertanment package features the new reversiole cartridge pickup with dual needles for standard and microgroove records. Speed requlator on motor boord peraite instant change over to each speec. Special disc is provided for adapting turntable to $11 / \mathrm{m}^{m}$ center hole on 45 RPM records. Piare all records with the lid closed. A full $5^{\prime \prime}$ Alrico $V$ PM speaker alves excellent reporducilon of hiah and low notem excellent reporaucion of high and low notes trom records and radio. Tuben: 12SK7, $12 S A 7$,12 SQ .50 L 6 GT ard 35 ZSGT . Attractive two12SQ7. $50 L 6 G T$ ard $35 Z 5 G T$. Attractive two-
tone naroon and tam leatherette case mean ures
 4/7x $8 / 4 \times 14.6$ Shipping webg
$105-125 \mathrm{~V} .50 / 60 \mathrm{cycles} \mathrm{AC}$.
IN544-Complete with Tubes.
37.50

Lots of 3.........................Each........... 34.95


## AUTOMATIC PHONOGRAPH

An inexpensive cuiomatic phonograph of ex ceptional quality to give you years of record entertainment. Compact, luggage-type case is inished in cttractive two-tone brown and tan leathereite. Sturdy, prectision-made record Changer with ever-running 78 RPM motor playe awelve $10^{\circ \prime}$ or ten $12{ }^{\circ} \mathrm{records}$ with the lid closed. A high ficielity crystal cartridge in IIghtweight plckup arm assures minimum re cord weat and wide range response. 3 -tube hiqh gain amplifter and S" Alntco V PM speaker give falthful reproduction of your favorite recordings. Volume and tone controls are located on the outside of the case. Dimensions: 17x $13 \times 9^{\prime \prime}$. Shpq. Wt. 21 lbs . For $105-125 \mathrm{~V}$., $50 /$ 60 cycles AC .
34N22694-Complete with Tubes...
38.95

Lots of 3..........................Eech.
Each...
.8 .95

## High Fidelity Record Reproduction!

## NEW AUTOMATIC TABLE PHONO

You won't believe it until you hear it! Tone quality such as this welongs to a maselve console...to find it in a compact table modof phonograph is the most pleasant surprise we can imagine for the music lovers who have neither the room nor the bark account to install the large, high-priced unite formerly required for real high Ifdellty reproduciion. Here's 50 to $10,000 \mathrm{cps} \pm 1 \mathrm{db}$ from a 4-tube, push-pull beam power amplifier, plus individual bass and treble tone controls. Here's a highly afficient 6 "PM epeaker, carefully matched olectrically to the amplifier, and matched acareiully matched electricaliy to the camplifier, and matched cabinet. Here's cabinet beauty consistent with the tone quality...a rich, hand-rubbed mahoganyveneer contrasted with a soft, golden-colored speaker grille - a combination that blende with both modern and periad furniture styling. The latest type record changer operates automatically with all three kinds of records: 78, 45 and 33-1/3 RPM. The lightwelght phono plckup contains a dual-needle cartridee which is tilted into correct playing position by an easily moved lever on the plckup housing. No weight shifing is necessary. Piano hinged lid has a Hid stay, and can be left open or closed while the instrument is in operation. Dimen: $17 x 18$ kiz10-3/8"high. Shpg. Wt: 341 bs. 34N2265.。

Not....
124.50

## A Featured Value!

## FM-AM Reception Plus Automatic Phonograph for the Cabinet Price Alone <br> 2-SPEED RECORD CHANGER for LP \& 78 RPM RECORDS

Here is a sensational radio-phonograph value that stands out above all competition! A powerful 8 -tube radio PLUS staticless FM, combined with a fine automatic phonograph. You'll thrill to the full range reproduction of both records and radio... especially the brilliance of tone and nolse-iree reception on the FM band. Every feature of this exceptional instrument is the result of modern engineering design and linest workmanship. An advanced superheterodyne circuit covers the entire standard broadcast (540-1600 XC) and FM (88-108 MC) bands. Each band is equipped with its own builfin antenna for maximum signal: a loop antenna for AM and a dipole for FM. The full size speaker has plenty of reserve power and range to falthiully reproduce all the instruments of a symphony orchestra. For your record enjoyment, you can play a complete symphony or several hours of dance music with but a single record change. The quiet, gentle record mechanism plays ten 12 -inch or twelve 10 -inch records-automatically ... either 78 or 33 1/3 RPM. A spocial revers. ible cartridge in the pickup arm assures proper balance and tracking on both types of records. Tubes: 12AT7. 6BE6, (2) 6BA6, 6AL5, 6AT6, 6AQ5 and 5 Y3 rectifler. For $105-120$ volts, 60 cycles AC. Dimensions: $33 \times 341 / 2 \times 161 / 2^{\prime \prime}$. Shpg. Wt. 90 lbs.
INB 13 -Complete with Tubes 149.50 Same combination as above; except with single speed 78 RPM record changer.
IN814-Shipping Weight 88 lbs.
139.50


## Lafayette FM-AM

## Chassis-Speaker and Record Changer for your Custom Installation...

A powerful FM-AM chassis and automatic record changer built to the most exacting standards o pertormance. Ideal for custom installation. Instal it in your own furniture or select a cabinet from this catalog. This custom package includes a complete FM-AM 12 -tube radio and 3 -speed record changer mounted side by side on a record changer mounted side by side on á sturdy baseboard (a smoathly sanded wood radio panel with fromed dial cut-out is also mounted on the baseboard), a 12 -inch Alnico V PM speaker, a loop antenna for the standard broad cast bond ( 540.1700 KC ) and a soparate built-in dipole for the high fidelity FM band (88-108 MC). Important other features include a FULL RANGE TONE CONTROL PUSH-PULL AUDIO OUTPUT, AUTOMATIC FREQUENCY CONTROL and AUTOMATIC VOLUME CONTROL: The 3 -apeed record changer is supplied in a wood base mounted on a "slide-out" device for easy accessibility. It plays tan 12 -inch, twelve 10 unch and twelve 7 -inch records automatically ... elther 334.45 and 78 RPM . Tubes: 6BA6, FF8, 707, 6C4, 7AH7, 6SGS, 6SO7, 7A6, 7F7. (2) 7 CS and 5 Y 3 GT rectilier. Size: $30^{\prime \prime}$ wide,
 1N1212-Shyping Woight 75
IN1208-Chassis and Speaker
77.50

## afayette 12-Tube FM-AM Combination

Superb High Fidelity Reception Concert Hall Realism from Your Symphonic Recordings - Automatic Frequency Control For Top FM Performance

- New 3 Speed Record Changer For 331/3-45-78 RPM Records
- Push-Pull Audio Output
- DeLuxe 12" Concert Speaker - Latest FM-AM Circult

Now ... you can have true luxury in a radiophonograph combination at a moderate price. Everything you could possibly desire for complete listening entertainment, has been packed into this tine musical instrument: High fidelity FM reception on the 88-108 MC band; remark. able sensitivity and selectivity on all standard broadcast stations from $540-1700 \mathrm{KC}$ : an automatic phonograph with the latest type record changer that plays ALl speed records; $a$ handsome console cabinet of exquisite hand-rubbed mahogany veneers for added beauty and sichness in your home.

No detall has been overlooked to make this radio-phonograph one of Lafayelte's truly remarkable values. The smooth, fast operating precision record changer plays all makes and sizes of records...7. 10. 12 -inch, conventional or long-playing type. You can stack a group of 10 and 12 -inch long playing discs on the instrument and enjoy up to $41 / 2$ hours of your favorite music without interruption.
Modern engineering has worked wonders to give you the newest in circuit design including the advantages of an automatic frequency control tor the FM band. This advanced development solves the problem of stability and increased accuray in FM tuning. The powerful, elficient circuit also includes push-pull beam power audio output, an automatic volume control and 12 tubes (including rectifier) for "in person" performance on both FM and AM. A loop and separate dipole antenna built into the cabinot, make outdoor installations unnecessary in most locations. High fidelity repro duction of records and radio is provided through the deluxe 12 -inch Alnico V PM speaker and push-pull amplitier. Wattage in high enough to take care of peak output with. out distortion. yet capable of bringing out the softest passage of an orchestral solection. Tubes: 6BA6, 7F8, 6C4, 7AH7, 6SH5, 6SQ7. 7A6, 7F7, (2) 7C5 and 5Y3GT reetlier. Operaten on $105-120$ volts. 60 cycles AC only. Cabinet dimensions: $331 / 2 \times 35 \times 17^{\prime \prime}$. Shipplng Woight 100 lbs.
1N1209-Completo With Tubes 179.50 Same radio-phonograph as above except with a single spead record changer for standard 78 RPM records.
IN1207-Shipping Weigh $98 \mathrm{lbs} \quad 169.50$ CABINET ONLY-Shipping WI. 45 lbs .72 .50

If You Like The MODERN Touch


## afayette

## FM-AM Combination

Here is the same chasais, "speaker and phonograph unit described above except housed in a cabinet for the modern home. Consider this fine consele of striking design and functional beauty. . molded of selected hardwoods. biesched and hand-rubbed to a lustrous finish. The beveled molding and offert legs add a richness to the distinctive styling. Record ahanger compartment alidos out for eary accessibility without disturbing decoralive pieces on the cabinsllop. Radio chassis and tuning controls are mounted in the odiacent space; a hinged, "slide-awey" door tucks into the spece prospace; a hinged, side-awey door tucks into the spece pro-
vided above the control panel. The lower section is covered with attractive woven grille cloth concealing the boiflogend 12 -Inch high-fidelity spoaker. Dimensions: $35^{\circ}$ hiah $\mathbf{~} 36{ }^{\prime \prime}{ }^{\prime \prime}$ wide x 172 "" deep. Ship. Wi. 100 lbs .
1N1211-Bleached Oak.
1.3950
*Same FM-AM radio-phoneqraph except with airgle spet record changer for standard 78 PRM records.
iN1210-Shipping Weight 98 lbe............
CABINET ONLY-Sheping Welght 45 lbs. ....... . 179.80

## Lafayette Large Screen

For 1950, Lafayette brings you perfected and performanceproved television in the larger size screens at prices you want to pay. CONSOLES . . TABLE MODELS . . CHASSIS for custom installation-a model to fit every requirement of space and price. Laiayette television is "Eye.Fidelity" television . . . another way of expressing high fidelity reproduction in terms of visual onjoyment. Pictures come in clear and bright, and the sound is better too. because it's staticless FM. You will marvel at the life-like realim of the pictures. These fine quality units are ruggedly built with the best parts to give yoars of superb performance.


Use an existing cabinet, or adapt one of your own choosing to this TV chassis with a ble 95 -square inch pleture. Completely wired and assemblad, ready for immediate installation. Here is truly outstanding video reception at low cost. Clear, Eharp. steady image with plenty of contrast. Advanced circult fecilures fnclude automatic frequenct control and high voltage power supply to assure top performance on Ir all 13 chanct contro and high voltage powor uppiy sional areas where the averace TV recelver shows poor resulis. Now, you can enjoy all the wonderful TV programs with fine clarity and viewing brilliance. Easy enjoy all the wonderful TV programs with fine clarity and viewing briliance. Ealay
to mandpulate controls permit pin-polnt focusing and contrast. No special skill ie to manipulate controls permit pis-point focusing and contrasi. No special skill is
necessary to.bring in your favorite programs. With tubes and speaker. Dimensions: $1512^{\prime \prime} \mathrm{H}$. $1812^{\prime \prime} \mathrm{W} . \mathrm{x}^{\prime \prime} \mathrm{D}$. Shpq. Wt. 80 lbs. IN138-With $1212^{\circ \prime}$ Picture Tube.
169.00

## RADIO CRAFTSMEN 16" TV TUNER

Literally a serviceman's dreaml A. deluxe, precision enginebred video tuner of ertreme sensitivity, de tigned especially for use with a $16^{\prime \prime}$ yigned especialy kinescope of any cathoderay tube that operates af 12 kilovolts. High swoep voltage is more than sufficiont for "giant circle" type operction. Here is the ideal chassis for a fine custom installation. The tuner is fintshed in gleaming polished CHBOMIUM, neatly arranged and wired for maximum efliciency and attsactive appearance. An advanced circuit features an exclusive, fastacting automatic gain control with an extremely flat eharacteristic an extremely flat characteristic, turbances in line voliages. 12 smap turbances in line voltages. 12 snap tn, replaceable channel, turret tuner is included. Four IF stages, a separaie sound channel and four in dividually tuned RF circuits fos each channe. provide excelient sen sitivity in tringe and weak signal creas. An automatic frequency control of horizontal synchronizing assures sharp images and freedom from picture "tearing." Two video amplifiers give full 4 MC bandwidth with negligible phase distortion. No audio amplifier is included, but cathode bandwidth with negligible phase distortion. No audio amplifier is included, but cathode preserves full benefits of FM sound with response of $20-20,000 \mathrm{cps}$. at less than $1 \%$ distortion. Input impedance 300 ohms; separate matehed input tranaformer for each channel. Supplied with 22 tubes plus three selenium rectiliers, shatterproof glass escutcheon, flexible tube mount and poly-ethylene hs-voltage insulator, and all necessary hardware. Chassis dimensions: $16 \times 16 \times 15^{\prime \prime}$ high; (with picture tube mounted. $16 \times 22 \times 20^{\prime \prime}$ ). Shpg. Wi. less tube: 70 lbs.
31N24445-Lese Picture Tube.
230.00

## Television for 1950

Thousands of satisfied customers have purchased

Lafayette television by mall since the first station went on the alr. II you are within the reach of TV stations, you want a receiver that can give you full enjoyment of all the wonderful programs now available. Our engineers are ready to advise you on how to obtain good reception in your area. Let us know exactly where you live and whether your home is on a hill or in a valley. We'll be able to be specific with practical suggestions There is no obligation for this service. Remember though, Lafcyette won't sell you a TV set unless they are sure you will get good reception!

## Custom Deluxe

$16^{\prime \prime}$

## TABLE MODEL



Custom Deluxe
Beautiful, deluxe model cabinets of striking design; slurdy veneer construction, firmly reinforced throughout. Graceful console has hinged, drop-leaf pansl to conceal the controls when not in use. Table model conceal the control when no ins: $24^{\prime \prime} \mathrm{W} . \times 23 \mathrm{~V}^{\prime \prime} \mathrm{D} . \times 233 / 4^{\prime \prime} \mathrm{H}$. Shpg. Wi. 110 lbs . Consolo dimensions: $41^{\prime \prime} H . \times 26^{\prime \prime} \mathrm{W} . \times 24^{\prime \prime}$ deep. Shpg. Wi. 200 lbs.

Now, you can have giant-screen television in a choice of cabinets to meet your living room space requiremente. A full 145 -square inches of picture area fllled with thrilling sports events, drama programs, news, comedy shows and other fascinating presentations for the entire family. Here is the tamous RCA. 630.TS pre-cision-engineered circuit, especially designed for the $16^{\prime \prime}$ pleture tube, and recognized as "fops" in the TV ileid. You get the best developed circuit plus components that are built for lasting servsce. This means sharp, clear, steady pictures of unusual brilliance on all channels . . . during daylight as well as night time viewing. There's no need to crowd around the set to see with oomiort because this is a huge $16^{\prime \prime}$ picture visible from any comer of the room. The powerful 30 -tube chassis (S rectifiers) Includes the RCA front end and a voltage doubler, and features the famous "Synchro-Lock" which holds the picture steady at all times.

Tuning is simple with the four easy-to-manipulate controls providing pin-point tocusing and fast station selection. The picture is eccurately and automatically synchsonized with the latest type FM audio circuit. Both music and speech are reproduced with brilliant clarity and resonance. A top quality $10^{\prime \prime}$ speaker is brilliant clarity and resonance. A top quality wita specker is suppliec with the console receiver. The fout-stage pleture if high sensitivity with plenty of reserve power for weak signal and tinge area teception. Maximum video response and sharper contrast provided with 4 megacycle bandwidth.
INI4s-Mahogany Console with Picture Tube
339.00

IN147-As above except Blonde Maple Finish
349.00

IN 144-Mahogany Table Model with Picture Tube............... 329.00
IN145-As above except Blonde Maple Finish...................... 334.00

## BIG, BRILLIANT 12 $1 / 2^{\prime \prime}$ PICTURE POWERFUL 30-TUBE RECEPTION

Hore's high quality. bigecreen television at a real budget pricel The dependable RCA 630 TS circuit combined with an exquiatiely finished deluxe cabinet of the finest woods, will add to the pleas. ure and beauty of your home. With this set, you can celax anywhere in the room and enjoy exciting sports events, thrilling drame programs onthespot news broadcasts, movies, talent shows, comedians and musical presentations. Its 95 -square inch picture is big and bright enough to permit comiortable viewing by the entise family and friends. This is lested and pesfected televiston, engineered for the finest performance and sold diree to you for the best in dollar value. Clear, brighs, steady pletures on all channels are assured with the high powered iwo-stage video amplitier, four-stage picture IF amplitier, AF amplifier and "synchro-lock" leature. The excellent FM sound system reproduces music and speech with brilliant elarity. Smarlly-styled beatiful veneer cabinet is simply designed to harmonize with the finest interio decoration. Dimensions: $18^{\prime \prime} 4^{\prime \prime}$ high $\approx 25^{\prime \prime}$ wide $\times 20{ }^{\prime \prime}{ }^{\prime \prime}$ deep. Shog. Wi. 110 lbs.
IN 142 -With $121 y_{2}{ }^{\prime \prime}$ Picture Tube--Mahogany Finish 2.59 .50 IN 143 -As above except in Blonde Maple Finish 279.50



MODERN CONSOLE TV CABINETS for $10^{\circ}$ or $12^{\circ}$ Tubes
Constructed of fine quallty plywood with solectied outside vaneer, hand-rubbed to arlch furniture finish. Removable legs are set at an angle, giving the eabinet a distinctive appearance. Front panels removable; chassis ehelves are cut out to accommodate Hallicrafters or RCA type chassis. Dimenstions: ${ }_{39-9 / 16^{\prime \prime}} \mathrm{H}_{1} 24^{1 / 2}$ W., 21" D. Shipping Wi: 95 pounds.
40N24343-Mbhogany.
49.50

40N24342-Blonde
.49 .50

## For 15* or $16^{\circ}$ Tubes

DImensions: $42 \frac{1}{2}{ }^{\prime \prime}$ H., $25^{1 / 2 *}$ W., $25^{\prime \prime}$ D. Wt: 101 pounds.
40N24341-Mahogany.
60.00

40N24340-Blonde. 60.00


FOR $15^{\circ}$ OR $16^{\circ}$ TUBES
Fine mahogany veneer cabinets expectally designed for the Tech-Master chassis shown on page 127. Neat, atchassis shown on page 127 . Neat, attractive modern style blends with any
surrcundings. Completely drilled for surrcundings. Controls; has built-in safety qlass over tube opening. Dimensions: 261/2" W.' $25^{\prime \prime} H$., $23^{1 / 2 " D}$. Shipping Weight: 68 pounds.
40N24344-Universal $15^{n \prime}-16^{*} .54 .50$

Lafayette is proud to offer these distinctively styled cabinets of select woods to complete your cuntom television in-


FOR 12* TABLE MODEL CHASSIS
A distinctive table model cabinet, creared for the average living room. Smart-looking, seasoned mahogany veneer woods are superbly finithed to blend with the finest furniture. The modern step design creates an unusually striking effect that is rien and aly striking efrect that is rich and impe 630 television chassis ezactly; no cutting or timming is necessary; Outside dimensions: $18 y^{\circ} \mathrm{H}, \mathrm{H}^{25} \mathrm{~W}$. $20 \%{ }^{\prime \prime}$ D. Shpg. Wt: 45 16.
40N24348-Mahogany Finieh. 47.50 40N24331-Bionde Finish.........52.50 stallation. Handsome table models...and distinquished consoles in a cholce of finishes to blend with your interior decoration. All cabineta are designed to flt the TV Elts and chassls shown on pages 8 and 127.

## 16* TV PERIOD CONSOLE

Gracefully styled to blend with the conventional living room. Truly an impreasive piece of furniture, solidly bullt of selected mahogany vencer woods, hand polished to a smooth satin finlsh. Aitiractive grille cloth covers tho spocker gaffle which accommodates speakers up to 12 in dimmeter. The recelver controls are cleverly concelver controls are cleverly con-
cealed by a hinged panel that closed flush with the cabinet when the set 1 s not in use. Dimensions: $41^{\prime \prime}$ H., $26^{\prime \prime}$ W., $24^{\circ}$. D. Shipping Welght: 110 lbs. 3N108-Mahogany Finieh. 78.50 3N109-Blonde Finiah......... 88.50


## FOR $15^{\circ}$ OR $16^{\circ}$ TUBES

This becuutiful table model cabinet is solldly constructed of fine woods hand-subbed to an exqualsite satin inish. Here is distingulshed design In a deluxe model you'll be proud to own Thoroughly reinforced throughout. Bullt-in, cry stal clear lucite mask is attractively framed in matching panelling. Dimensions of $15^{\prime \prime}$ size: $24^{\circ}$ W. ${ }^{\prime} 231 / 2^{*}$ D., $231 / 2^{\prime \prime} \mathrm{H}$. Shpg. Wt: $50^{\prime} 1 \mathrm{lbs} .16^{\circ}$ alze scme dimensions So lbs. 16 size same dimensions except $1 / 4^{\circ}$ higher.
40N24347-15" Mahogany. 72.50
40N24330-15" Blonde........ 77.50
40N24346-16" Mahogeny..... 72.50
40N24329-16" Blonde........ 77.50


These table model eabineta, except No. 4ON24344, can be supplied with blank pensle (except for pleture tube cutout) when spectfied.

## FOR $10^{\circ}$ TABLE MODEL CHASSIS

Here's a handsome styled cabinet of fine walnut veneer, beautifully finished and polished. You'll be pleasod with this solidly constructed model drilled to flt the RCA 630 Type ielevision receivers exactly. The pleture tube is framed by a bullt-in lucite musk that gives protection to the fube and adds a professional toach to the overall appearance of the cabinet. Will fit all 10 inch kits and chassis shown on page
 40N24349-Shipping Weight: 25 lb ..
35.00

## Lafayette

Lafayette leads again with out tanding cabin value for the finest homes. See these exquisite, custom designed console units fordeluxe radio-phonograph and tele viaion lnstallations. Here fillawless cablnetry with the chame of fine furniture.. functional beauty that is simple and io

## good taste. <br> Custamed <br> CABINETS FOR RADIO and TV



Here is an unusually fine credenza style console of classic simplicity. Solldly constructed of cholce mahogany hardwood, hand-rubbed to a smooth satin finlsh that matches the elegance of truly exquisite furniture. Each section of the cleverly designed doors folds in two when opened, and swings back flueh with cabinet sldes, permitting easy access to controls. Record changer mechandsm la housed in to controls. Record changer mechanism is housed in a smooth-bliding drawer. Atractive matching grile compartment. TV panel accommodates plcture tubes up to $12 /{ }^{1 / 2}$. Dimensions: $44 \times 40 \times 43^{n}$.
3Nil2-Shlpping Welght: 250 mb.
349.50

## television tables

Solidly constructed swivel top TV tables. Rotate your receiver for most conventent viewing angle. Shpq. Wt: 26 pounds. $201 / 2 \times 201 / 2 x$ $26^{\circ}$ H.
$40 \mathrm{~N} 24339 . . .4 .25$
$21^{1 / 12} \times 26^{1 / 2 x} 26^{\prime \prime} \mathrm{H}$.
10N24338...... 15.75
Plain table, no ewivel. $201 / 2 \times 201 / 2 x$ $26^{\circ} \mathrm{H}$.
40N25723...... 12.75
211/3 $\times 261 / 2 \times 26^{\prime \prime} \mathrm{H}$.
40N25726...... 14.25


MODERN RADIO-PHONO \& SPEAKER CABINETS
Magnificent combination cabinets, constructed of the highest quality seasoned woods, perfectly matched and superbly desioned for your custom installation of sadio, phonograph and speaker. Three-section unit provided with tuner and amplifier compartments and wlide record changor drawer with Webtter model $356,3-s p e e d$ changer cut-out (can supply blank, if desired). Removeable $1 / 4$ finished wood panels for top and bottom compartmenti have solld brass friction lid supports. Tuner and amplifier shelves are removeable. Overall dimensions of equipment and
 compartments: $20^{\circ} \mathrm{W}^{\prime \prime} \mathrm{x}^{\prime \prime} \mathrm{H}^{\prime \prime}$. Equipped with full length protective screen back. Mahogany finished cabinet bas green lacquered tinish on back of drop lids and drawer pull-outs. Limed oak cabinet supplied with wine color lacquer instead of green. Matching speaker cablnet is available in mahogany with attractive green-grille cloth or limed oak with harmonizing wine-ari lle cloth (cream or brown also available). Cabinets are acoustically constructed and turied for $12^{\circ}$ or $15^{\circ}$ speakers. Cabinet for $15^{\prime \prime}$ speaker has inner 11p at port to lower tesonant frequency to match that of a $15^{\circ}$ speaker cone. Has a removeable front panel; entire inside lined with insulating material.
40N24336-Mahogany Radio-Phono Console Cabinet.
.128 .50
40N24335-Limed Oak Radio-Phono Console Cabinet.................. 128.50
40N24334-Mahogany Speaker Cablnot for 12* Speaker................ 79.50
40N24333-Limed Oak Speaker Cabinet for 12* Speaker............. 79.50
40N24327-Mahogeny Speaker Cabinet for 15* Speaker................ 79.50
40N24328-Limed Oak Speeker Cabinet for $15^{\circ}$ " Speaker............. 79.50
COMBINATION PRICE: Radio-Phono and Speaker Cablnets...... 201.00


BLONDE MODERN TV \& RADIO-PHONO CABINET
This striking console is an outstanding example of distinctive modern styling. Full lenath folding doors are plano hinged and give easy access to radio, phonograph and TV controls. Atractive brase handles. Ample space for record changer, padiand TV chassis and picture tube. The TV panel is supplled uncul. Stze: $44 \times 40 \times 43$. Wt. 150 lbs .
3N110-For up to 12y, Pleture Tube
3N110-For ugto $12 y^{\prime \prime}$


TV SET TURNTABLE
Place on TV table and put socelver on tumtable. Permits rotation of TV set to best viewing tation of Tumet se to
anglum. $16 \times 16^{\circ}$ angle. Alur
3 IN 24337.
2.55

## WEBSTER WIRE RECORDERS \& ACCESSORIES

## WEBSTER PORTABLE WIRE RECORDER

Model 180-1. Make instantaneous true-to-life wire recordings of your iavorite radio programs, phonograph records, speeches, parties, meetings, and play them back immediately through the self-contained $6^{\prime \prime}$ speaker, or through an external amplifier or radio. Here's an inexpensive unit as easy to use as a radio. No technical knowledge required to operate. 11 desired, artomatic erase device removes old recording while new one is being made. High impedance crystal microphone and 8 -it cord may
be held in hand, suspended, or seton table while recording. Other features include con elapsed time indicator, a removable take-up drum, automatic stops and lock-fast operating lever. Lightweight portable case finished in attractive burgundy leatherette. Dimensions: $173 / 8 \times 11$ $3 / 8 \times 71 / 2^{\prime \prime}$. Supplied with 3 spools of recording wire, tubes, microphone and cable.
35N22602-Shlppihg Welght $32 \mathrm{lbs} . . . . . . . . . . . . . . . .$. . 14.59
35N16319-Input Cord to connect radio or phono............. 2.50
35N16304-Output Cord for external speaker or amplifiet.. 1.75
35N16322-TD422. Take-up drum for abovo recorder.......... 1.59

## CONTROL BOX AND RECORDING INDICATOR



Type 183. A desirable aid for the above recorder. Attaches easily and provides push-button control for recording direct from sadio or microphone; playback can be made through recorder speak or or radio. Recording level meter assures correct volume. Shipg. Wt. 31 bs. 35N16317.
29.50

RECORDING WIRE SPOOL AL BUM
Contans 10 spool-sizeboxes in sturdy burgundy inisished cardbocurd. Titles can be wriften on boxes.
1.22

## NYLON THREAD LEADERS

For use in editing recorded wire or replacement of original wite leader. 600 feet, good for 100 spools using 3 -ftleaders.
35N 16327 -Holds wire in place.
1.11

## SLIDE-DRAWER HARDWARE KIT

Provides neat and ottractive installation of Model 178 in radio console. All hordware included. Also for tecord changers.
35N 16328.
95

## WIRE RECORDER MECHANISM

Model 178. Connect this complete recorder circuit and preamplifier to radio or amplitier for finest quallty wire recording and plinyback. Mount in record compartment of console or place on table. Pushbutton controls and easy-to-raad recording level meter simplifies operation and permits accurate setoperatson and permits accurate seting of recording volume. Other outstanding features include automatic
 stops to prevent wire from running
off spool, elapsed time indicator off spool elapsed time indicator
showing total time consumed for a showing total time consumed for any section of a recording, or "Rewind" positions, and recure settings at "Run", "Stop" or "Rewind" positions, and removable take-up drum. Metal case $11 \times 113 / 8 \times 55 / 8^{\prime \prime}$. For $105-125$ Volts, $50 / 60$ cycles AC.
$35 N 22519-S h l p p i n g$ Welght 23 lbs.
107.50

35N16321-Extratake up drum...
.1 .59

## RECORDING WIRE AND ACCESSORIES

35N16300-15-Min

1.96

35N16301-30-Minute Spool.................................................................... 2.94

35N16302-60-Minute Spool................................................. 4.90
Lots of 10, Each...................................................................3.18
35N16305-Empty Metal Spool............................................ . 73

Lots of 10, Each.............................................................................. . 25

## MICROPHONE STAND

Type MS 111. Streamlined, sturdy cast metal matching base that snaps onto mike quickly and easily. Designed for mike used with Model 180-1 recorder. Use it for any stationary placement of mike, recording long progroms.
35N16323.
1.17


## RECORDING HEAD

For replacement of head now in use on any Webster recorder models. Gives better response and erase than heads on offginal models. 35N 16324. $\qquad$ 4.78

## MAILING BOX

Provides handy and easy method for mailing tecording wire. Fast and low cost means of sending messages between office and field.
35N16326-Pkg. of 10. $\qquad$ $34 c$


## LAFAYETTE COMBINATION

 WIRE RECORDER-RADIO-PHONOHere it 1 s-all in one compact portable case! A wire recorder... a radio ...and a phonograph priced low to make this priced low outstonding valitem on outstanding value. uous recording of fonily Lous recording of family qutherings, businesscon-
ferences, interviews, ferences, interviews,
speeches, radioprogruns speeches, radio progtums
and disc recordings from and discrecordings from the built-in radio and graph. Automatically erases old material as it records. Shuts off outomatically ot the end of the spool when recording and rewnding. Equlpped with a neon volume indicator and variable tone enntrol. Visual indicator provides ameans for calculating the cmount of feet recorded. Latest type superhet radio covers the entire broadcast band. Heary duty, single speed 78 RPM motor drives a heavily weighted turntable. Lightweight crystal plctup. Thehiah qualliy anpllfier and full size PM speaiter dellvers 5 watis undistorted and faithfully reproduces muslic and volce. Supplied complete with Electro-Voice microphone and cable, tubes and 2 spools of wire ( 15 and 30 minutes). Modem, portable case rovered in beautiful two-tone brown alligator grained leatherette. Top cover can be detached easily whlle instrument is beinaused. Dimensions when closed: $14 \%^{\circ}$ wide $\times 19^{\prime \prime}$ deep $x$ $91 / 2^{\prime \prime}$ hiah. Operates on 105-125 V. 50/80 cycles.
35N22611-Shipping Welght 45 tbs.
149.50

## NEW MASCO 2-SPEED DISC RECORDER

Model RK5L. Complete selfcontained 2 -speed disc re corder and play-back with bulltin amplifer and 6 " Alnico specker. Excellent for use in educational programs, for orchestras, vocallsts, actors, language students and in the rumpus students and in the rumpus room. Features: Instant rocording at standard 78 and $331 / 3-\mathrm{RPM}_{i}$ volume level Indicator; adjustable crystal cutting head; 2 playback arms. one for standard 78 RPM \& $331 / 3$ transcription
 type \& one for the now microgroove LP records: heavy duty recording motor and table. Separate input jacks tor direct recording irom any microphona; direct recording electronically from a phonograph; directrecording from radio to record. Recording from a mictophone or radio may be independent or simultaneous Master gain and tone controls allow for any dealred volume or tone setting. $A$ three way switch provides independent selection of recording. three way switch provides independent selection of recording; plyGT. 6US, 6XSGT, rectifer. Brown allidator tabrikoldcovered case, $16 \times 191 / 4 \times 81 / 2=117-\mathrm{V}$. $60-\mathrm{cy}$. AC. 35N22534-Shpg. Wt, 25 1bs. With tubet.
100.48

## RECORDING WIRE

For use with all wire recorders. Tested, uniform quallty assures good tone reproduction and long 11 fe.
35N16311-15 msn. spool wire.
1.17

35N16312-30 min. spool wire............................................. 1.76
35N16313-60 min. spool wire................................................. 2.93
Plastic Leader for units on this page.
35 N 163 18....................................................................... Pair, 14

# TAPE AND DISC RECORDERS 

## LAFAYETTE TAPE RECORDER



Record your tavorite AM, or FM prograns, recordings, special events, meetings, etc. Recordings can be edited, spliced with scotch tope, erased, used over and over, and stored for long periods without deterioration, Up to one hour of recording on a 1200 ft . reel of twin track tape, 30 minutes in each direction. Frequency response 50 to 7000 cps . +3 dby 6 -watt power output. Heary duty $5^{\prime \prime}$ PM speaker. High frequency erase. Revolves at 78 RPMi space provided for mounting a phono arm to make a combination tape recorder and phonograph. Special switch cuts out speaker when recording with a mike. Neon volume level indicator. Positive capstan drive gives constant speed, eliminHoused in a may be used to mount a conventionul turn table. Housed in a rich brown pebbled leatherstte carring case, with white trim. Complete with crystal microphone, one thirty minute reel of iwin-track tape and an additional empty teel.
For $105-125$ volt, 60 -cycle AC. Dimensions: $21 / 2 \times 11 / 2 \times 10:$ For $105-125$ volt, 60 -cycle AC. Dimensions: $21 \frac{1}{2} \times 11 / 2 \times 10$ ㅇ Shipping Weight 38 lbs .
35N 22612.
127.50

35N16320-1200 ft. Roll tape for above............................. 3. 10

## MASCO COMBINATION TAPE RECORDER AND AM RADIO

Model R3. Combination magnetic tape recotder, radio and PA system. Records continuously for one hour. Frequency response from 100 to $7000 \mathrm{cps} \pm 3$ db. 5 watts output. Mecordings can be played back at least 5000 times without deterioration. Equipped with a permanent magnet with a permanent magnet type erase. $6 x$ PM oval
speaker. Capstan drive espeaker. Capstan dive e11 min at es possibility of
"wow" and "flutter". Heavy "wow" and "flutter". Heavy
duty motor and bearings duty motor and bearings
require no oiling. Microphone and radio-phono input channels. Three outputs: to internal speaker external speak er Jack and Jack for monitoring. Volume and tone controls, Treble attenuator (continuously variacovered in brown alle fabricoid, measures $19 \% / 4167 / 8 \times 101 / 4 "$ high. Complete with fabricoid, measures $19 \%$ x $167 / 8 \times 101 / 4$ high. Complete with buittin AM superhetrodyme radio tuner, Electro- mike with $7 / 2 \mathrm{ft}$ of cable and pluq and 1200 ft , reel crystal mike with $7 / 2 \mathrm{ft}$. of cable and plug and 1200 fl . reel
of olastic recoriling tape. For 117 V ., 60 -cycle AC. operation. of plastic recorling tape. For 117 35N $22615-$ Shipptng Welight 47 tbs.
142.76

Model 375. Same as above, less radio. Tubes used: 6SJ7, 6SC7, (2) $6 \mathrm{~V} 6 \mathrm{GT}, 5 \mathrm{Y} 3 \mathrm{GT}$ rectifier.
35N22616
123.80

## MASCO TAPE HANDLING MECHANISM



Model M-60. Same basic mechanism used in models R-3 and 375 shown above. Heavy-duty mechanical construction. Powerful shock mounted motor requires no olling. Onefunction switch to play, erase rewind, stop and fast forward. Two heads, one erase and one record playback. Separate erase head control and position Indicating light. Recording blas frequency 40 KC . Dimensions: $15 \frac{3}{4} \mathrm{x} 11 \times 6^{n}$.
35N22617-Shapping Weight 17 lbs .

## MASCO PRE.AMPLIFIER



Model P-4. Designed for use with the M-60, Tape fandling Mechan1 sm above. Three inputs for tape, microphone and radio-phono. Input sensitivity: 003 volts for microphone input and .4 volts for radiophono. Sutput to PA 1.5 volts. Frequency response 100 to 7000 $\mathrm{cps} \pm 3 \mathrm{db}$. Blas osclilator 40 KC . Noon recording level indicator. Volume control; record playback switch; input selector switch and power On-Off switch. Tubes used: 6SN7GT, 6SC7, 6V6GT and power On-Off switch. Tubes used: GSN7GT, 6SC7, 6 G 5 GT and $6 \times 5 \mathrm{GT}$ rectifier. Gray hommertone finlshed ch
sures $12 \times 6 \% \times 2 \%{ }^{\prime \prime}$. For 117 -volt, $60-c y c l e \mathrm{AC}$. 35N~2618-Shipping Welght 8 lbs
48.22

## MEISSNER RECORDER-PHONO-RADIO AND AMPLIFIER SYSTEM

A high fidelity crystal cutting head assures faithful recording of program material and an excellent crystal microphone is furnished for notural, lifelike recording. Nomal andoverload indicators stmplify control of input levels and permit anyone to cut perfect discs. Easy-10follow directions are ofven in the instruction manual. Radio broadcasis recorded by simply switching radio to one
 nels. Separate volume nels. Separate volume controls for mi crophone to the recorder allow programs to be mixed and blended with recording studio technique. Two turntable speeds, 78 and $33-$ 1/3 RPM; up to 10 -inch disc secording and 12 -Inch playback is provided with full control of tone and volume. Superheterodymerecelverdesigned for reception over the entire broadcast band with excellent sensitivity and selectivity. Amplifier serves as announcer or public address system. Provision made for connecting extra epecker where greater volume is required. Everything you neelis furnished with Radio-PhonoRecorder. Bullt-in radio and amplifier are equipped with full set of seven tubes; crystal "hand or stand" microphone and Its cable are in storaqe compartment ready for connection and immediate use. Complete unit, with cover, is only $19 \frac{1}{2}$ " square by $91 /^{\prime \prime}$ high. Sturdy wooden case, attractlvely covered in durable dirplane style faorikoid. Storage compartment fo: in durable arplane style taprikia. Storage comparment io: Wt. 52 lbs , See page 50 for recording discs.
35N 22580 .
111.28

## INDUCTION TELEPHONE PICK-UP

Picks up telephone conversatuons with no tapping of wires or spec ial tel ephone circuits Simply place the phone base, elther cracle or upright type, on the plckup platform and connect the leads to the high impedance input of any mediumgain audio amplifier, or directly to recorder. When used for public address work a speaker at home or in another city can address large andiences without special telecuarences withoul special tele phone compony equipment.
35N22523-Shpg Wit. 3 1bs.......


35N22524-Induction Coil only.

5.88

## "SCOTCH" PLASTIC RECORDING TAPE

A new high quality magnelic recording tape. Offers better frequency response at slow speeds due to extremely thin magnetic coaling. Low nolse level because of unlform dispersion of particles and mirror like surface. Higher coercive force insureshigherfrequency response and greater signal strength. Flat surface and large area provide positive contact with the recording head which gives greater dynamic range. Non-magrecording head which gives greater dynamic range. Non-magnetic tape backing betweer: the layers of magnetic coating in the reel minimizes "cross : aik". Easy to hande. No snaris, 6 lbs. Easily edited and spliced with scotch splicing tape. Erases clean with low power-no special erase head is required. Can be marked on back to indicate start and stop of different sound sequencesin the same reel. Code A-magnetic coating wound facing in. Code $B-$ magnetic coating wound facing out.

| Stock No. | Size | Code | 1 Reel | 6/Ea. | 36/E8. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 35N16410 | $1 / 4^{\prime \prime} \times 1200^{\prime}$ | A | 5.50 | 4.95 | 4.40 |
| 35N16411 | $11 /{ }^{\prime \prime} \times 1200{ }^{\prime}$ | B | 5.50 | 4.95 | 4.40 |
| 35 N 16412 | $1 / 4^{\prime \prime} \times 600^{\prime}$ | A | 3.50 | 3.15 | 2.80 |
| 35N16413 | 1/4" $\times 600^{\prime}$ | B | 3.50 | 3.15 | 2.80 |
| 35N16414 | $1 / 4^{\prime \prime} \times 150^{\prime}$ | A | 1.00 | . 90 | . 80 |
| 35N16415 | $1 / 4^{\prime \prime} \times 150^{\prime}$ | B | 1.00 | . 90 | . 80 |

TAPE RECORDING ACCESSORIES
"SCOTCH" SPLICING TAPE. $100^{\prime \prime} \times 1 / 2$ ". On metal utility dispenser. Each.

## "SCOTCH" EMPTY PLASTIC REELS

| Stock No. | Size | Holds | Each | 6/Ea. | 36/Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 35N16417 | $7 \%$ dia | $1 / 4{ }^{\prime \prime} \times 1200^{\prime}$ | . 60 | . 54 | . 48 |
| 35N16418 | 5" dia. | $1 / 4{ }^{\prime \prime} \times 600^{\prime}$ | . 50 | . 45 | . 40 |
| 35N16419 | $3^{\prime \prime}$ dia. | $1 / 4^{\prime \prime} \times 150^{\circ}$ | . 15 | . 14 | . 12 |

"SCOTCH" LEADER STOCK. For ease in editing breaks. Spaced with $3 /{ }^{\circ}$ markings for accurate timing. $150 \mathrm{ft} \times 1 / 4$, 35N16420-Lots/6 Ea. .45...Lots/36 Ea. .40...Ea. Singly . 50

## RECORD PLAYING EQUIPMENT

LAFAYETTE 78RPM LOW-COST RECORD PLAYER


PORTABLE RECORD PLAYER


78RPM Constant-speed, turm table and motor mounted in a modern sturdy portable carrying case, covered in durable, iwo-tone Brown and Tan simulated alligator leathereite Bullt-In two tube amplifier: Crystal pickup, volume and tore controls. Plays up to 12 告 records with Lid closed. Enclosed Alnico $V$ speaker reproduces all tones with excellent fidelity. $14 \times 7 \times 12 \frac{1}{2 n}$. 1110 V., 60 cy . AC. Weight: 13 lbs.
34N2 2696
22.85

78RPM WIRELESS AUTOMATIC RECORD CHANGER Plays through any Broadcast radio set without direct connectlons by means of twolube distortion-fire oscillator built into oscillator built inio ord changer gives complete enjoyment of recplete enjoyment of records without having to jump up to change them. Plays twelve 10inch or ten 12-inch records at one loading. New "CryatoDynamic velveftouch plckup brings out the full tichness of tone on your records. Self-starting, constant speed motot for smooth, even periormance. Single button for all controls. Streamlined wood case, walnut finished to blend with any surroundings. Case measures: $131 / 2 \times 131 / 2 \times 8^{\prime \prime}$. For $105-$ 115 volt, 60 cycle AC only.
34N22662-Shipping Weight: 16 lbs.

## 78RPM WIRELESS RECORD PLAYER

Merely plug in and play through your present radio set. No wiring or radio setal installation nespecial installation ne-
cessary. Has bullt-in cessary. Has bullt-in oscillator tuned to broad-
cast frequency. Brings out the richness and fulliness of tone in the finest recordings. Plays all slzes of recordings from smallest to 12 -Inch.
 Equipped with 'CrystoDynamic" plckup for extra quality. Self-starting, constant speed motor. Cabinet is of modern tear-drop de sign, made of shlmmering, Jewel-like polystyrene. Case measures $121 /{ }^{\prime \prime}$ song $\times 8 \frac{1}{2} /{ }^{\prime \prime}$ wide $\times 31 / /^{\prime \prime}$ high. Operates on $105-115$ volts, 60 long $x ~$
cycles AC only.
34N22663-Shipping Weight 51/2 lbs...............................
15.75

## LAFAYETTE 45 RPM AUTOMATIC PHONO

Here's an excellently designed cutomatic portable phonograph that plays the new $7{ }^{\prime \prime} 4$ R RPM records with plenty of power and rich tone quality. A stack of ten 7 " records at one loading provides 50 minutes of uninterruped music or a full hour and 40 minutes with one change. The s 1 mple drop" one change. The in imple drop mechanism built into the spindle hold the records. Fast...quiet... smooth change cycle takes only a few seconds. Last record repeats. Equipped with tone and volume controls and full range PM speaker. The handsome case is attractively covered in two-tone brown and tan. Measures: $121 / 2 \times 81 / 2 \times 81 / 4^{n}$. For 110-volt. 60 -cycle AC operation. Shpg. Wt: 14 los. 34 N22700.
36.25

## 3-SPEED AMPLIFIED PORTABLE PHONO

 Play any size record up to $12^{\prime \prime}$ with this new, extremely compact portable. A simple slide switch instantly requlates the speed of the motor for $331 / 3,45$ or 78 RPM. Precisionbullt motor runs at even speed onall 3 positions. All wood case houses a full-size Alnico $V$ speakor and carefully designer and caretully destgned 3-tube amplifier that gives excellent tone reproduction of volceand music. Equipped with tone, volume control and switch. Single tone arm with reversible cartridge equipped with two needles. Case is attractively covered in iwo-tone leatherette and measures $13 \times 101 / 2 \times 57 / 8^{\prime \prime}$. Omanental hardware lends a contrasting note of smatiness.
34N22701-Shipping Welght 12 ibs........................... 26.95

## 3-SPEED PORTABLE AUTOMATIC PHONO

A. deluxe model phonograph that plays $331 / 3$, 45 and 78 RPM recordsautomatically. Powerful 3-tube amplifier and high qualliy 5 speaker give cmazing tone quality. Oversize case permits playing of 12 records with the lid closed to minimize needle chatter and surface nolses. Swltch to any speed with convenient regulator on the motorboard. Has tone and volume control. Featherweight plckup features a dual reversible cartridge-each with its own long-life needle; provides instant changeover to play standard or slow speed records. Qulet, smooth-oparating changer and motor. Rugged case covered in durable leatherette with contrasting bead.
34N22702-Shipping Weiglit 23 ibs...........................
48.50

## 3-SPEED TRANSCRIPTION PLAYER

Ideal for professional use, schools, sales meetings of home. 33 -speed-7 $1 / 3$ RPM-plays all 43 records, including $16^{*}$ records, including 16 " Iranscription type. Powerful pitube pushpull amplifier delivers full 4 watts output. Excellent quality $8^{\prime \prime}$ Alnico V PM speaker mounted in detachable top. Has microphone Jack. Deluxe portizle case measures $17 \times 13$ $\times 81 / 4{ }^{\prime \prime}$.
 $34 \mathrm{~N}^{\circ} 22^{\circ} 703-S h p p i n g$ Weight 17 lbs


## 



This compact, open case phonograph is specifically designed for graph is specifically designed for complete, powerful phono with builf-In amplifier and speaker that gives you all the advantages of these slow-speed records: Brilliant tone, neqliqibleneedle scratch and unbreakable vinylite. Each record plays $5-1 / 3$ minutes, or the equivalent of a standard 12 ; record. New lightweight crystal pickup equipped with long For Il0V., 60 cycles AC. Shipping Welght: 9.lbs. 34N22697..
$\qquad$ 17.95

45 RPM RECORD PLAYER ATTACHMENT
Similar to above except has no amplifier. An easy, single comnection converts your present equipment to play the new 45 RPM records.
34N22698-Shipping Welght: 5 lbs...........................
45 RPM WIRELESS RECORD PLAYER
Includes distortion-free oscillator for playing through standard broadcast radlo. No wiring necessary. Same case and pickup as above.
34N22699-Shipping Weight: 7 lbe.
15.95
 COMPONENTS

## SELECTING THE COMPONENTS

All Lafayette High Fidelity Centers (addresses on page 1) feature the newly developed "Selector Rack" which enables you to select your components "by ear." Here's how it works: all the famous components are wired for selection on a master control panel. You point out any possible combination to the Lafayette engineer. (There are thousands of variations.) Then you sit back and hear how your selection of a high fidelity system actually sounds. You can't go wrong in your choice because you make your own on-the-spot comparisons!

## ASSEMBLING THE SYSTEM

Lafayette engineers will do all the necessary wiring and soldering to adapt your comporents. In many systems this is included without charge. No further electrical work is required. Aside from installing the components in the housing you select, it is only necessary to plug the components together.

## WHAT IS HIGH FIDELITY?

High Fidelity is reproduction of the studio or concert-hall program in your ove home with such brilliance and clarity that vocalists and instruments - whatever their range of pitch preserve their individual identities. This achieves the rare quality knawn as "room presence:" the artists and their instruments are in the same room with you!

## IS IT EXPENSIVE?

Definitely not. You can spend as little as $\$ 150$ on a custom assembly and set performance better than ready-made sets costing up to $\$ 500$. Your entire investment goes into functional audio-equipment rather than the "trimmings." You can install the components into a piece of existing furniture. A little ingenuity saves you hundreds of dollars. Note, too, that it isn't necessary to buy all the components at once. You can add one section at a time - as rapiully as you feel you can afford it. A television unit can be incorporated inexpersively, at any time, as part of your high fidelity system. By using your high quality sound systern for television. you will be in a position to enjoy superb audio reception along with your video.

## THE COMPONENTS



## MEISSNER \& RADIO GRATISMEN TUNERS



## MEISSNER AM-FM TUNER

Model 9.1001-C. Here is a top quality unit for uee wherever the very highest ifdelity reception is desired. Covers the AM broadcast band from $527-1620 \mathrm{KC}$ and the FM band from 88-108 MC. Response: 30 to 15,000 cps. $\pm 2 \mathrm{db}$. Separate bass and treble controle. Input lack provided tor cryetal or high level magnotic type phonogroph pickup. Sensituvity; 10 microvolts. Selectivity for AM.aignala may te "Broad" or "Sharp." Output 11 volts at high impedance terminals and 2 volts al belanced 500 ohm terminals. Hum level 60 db below full output. Phonograph input terminals are provided for record player use. FM antenna connections for 300 -ohm transmiasion line. FM antenne and tranemiseion line act as efficient AM antenna. Tubes: AM coction: 6 BA6 RF amplifier, $68 E 6$ converter, (2) 6BA6 IF amplliers, 6AL5 dotoctor; FM section: $6 B A 6$ RF amplifier, 6C4 oscillator, 6BE6 Ist detector or miker, (3) 6AG5 IF ampltfiers, (2) GAU6 limiters, 6AL5 detector, (2) 6JS audio amplifiers, 6US/6G5 tursing indicator and 5 Y3GT rectifier. Chassis size: $164 / 5104 \%$. Overall tuning Indicator and 5Y3GT rectitier. Chassis size: $164 / 1$ x103" Overall
 50/60 cycles AC. Shpg. Wt. 19 lbs. 30N22499-List Price $\$ 245.00$.

Net
147.00

## MEISSNER AM-FM TUNER \& AMPLIFIER

Model 9-1093. Undoubtedly one of the finest high quality AM.FM tuners and amplifiers on the market foday. Frequency range $535-1620$ KC on the AM band and $88-108 \mathrm{MC}$ on the FM band. Audio fidelity is hat from 50 to $15,000 \mathrm{cps} \pm 2 \mathrm{db}$. Hum level 65 db below. full output. Designed for use with either crystal or magnetic plekup; has bullt-in pre: amp for GE reluctance and magnetic plekups (requires 6SC7 tube not supplied). Sensilivity is less than 20 microvolts. Tuner has a two-position AM selectivity control lor distant or local reception. Phono input jack controlled by panel switch. A combination tone control provides bass boodt up to 11 db at 40 cps , and treble attenuation up to 13 db at 10,000 cps. Oulput designed for 8 to 16 -ohm speaker. Two indoor antennas are supphed: One indoor folded dipole, 300 -ohm, for FM , and one $12 \times 16^{\circ}$ noise reducing loop for AM. Provision is mode for connecting external AM and FM antennas. Tubes: (3) 6SK7, 6SA7, 6H6, (5) 6AG5, 6C4, (2) 9001, 6AL5, (2) 61S, 6SN7GT, (2) 6L6, SY3G and SV 4G rectifiers and 6U5/6GS tuning indicator. Chassis mounting space: Tuner: $141 / x 121 / 1 \mathrm{x}$
83 "; Amplifier: $71 / 5 \times 161 / 4 \times 7^{\prime \prime}$. For $105-125$ volts, $50 / 60$ cycles AC. Complete with tubes, two antennas and hardware. Shpg. Wy. 50 lbs .
30N22478-List Price $\$ 310.00$.
Net 186.00

## Radio Craftsmen Hi-Fidelity FM-AM Tuner

Model RCB. Designed with such big set features as eutomatic frequency control to eliminate FM recelver drift, electronic correction to "lock in" recelver to FM signal and luned RF elage on FM and AM. Frequency rangme: FM, $88-108$ MC: AM, $540-1600 \mathrm{KC}$. Has two AC outlets for aupplying power to amplifier and phono motor. Rear socket tor 6.3 V . $A C$ and fittered 100 V . DC for pre-amps such as GE. The following controls are included: Bass, ON-OFF Volume, AM-FM Phono-TV, Tuning and Treble. Slide rule, edge-lighted dial tor tast, easy tuning. Usea nine fully chielded miniature tubes plus rectifier. Has loop antenna for indoor AM, high impedance antenna coil for connection to ouldoor AM antenna, and alexible dipole for FM reception. Aftractive chrome plated chassis messures $9 \mathrm{ml} 4 \mathrm{x} 10^{\prime \prime}$ overall. for $105-125$ V., 60 cycles AC only. Shpg. Wi. 19 lbe 30N23487-Lisl Price $\$ 183.30$.

Nat 110.00

## Radio Craftsmen Hi-Fidelity Amplifer

Model RC2. Companion unit to tuner above. Output over 12 watts at $1 \%$ distortion. 4, 6, 8, 15 and 500 -ohm oulput taps for one or more speakers, transmission lines, recorder. Overall gain 70 db . Hum lavel 70 db bolow rated output. Frequency response within 1 db from 20 to 20,000 cycles at 8 watts output. High impedence input. Includes four tubes and rectifier. For $105-125$-volt, 60 -cycle AC. Chrome plated. tubes and rectifier. For $105-125-\mathrm{v}$
30N22488-List Price $\$ 65.00$.
Nel
39.00

## LAFAYETH, ESPEY \& BiOWNING TUNEIS

## LAFAYETTE AM TUNER

A budget priced AM tuner for high fidelity covarage of the entire kroad. Aast band from 535 to 1720 KC. Particularly designed for public address and Hi-Fi custom installations. Has phono-radio chanceover twilch. Sonsitivity 30 microvolts; high impedance oulput. Features include a large, easy-to-read alide rule dial and automatic volume control. Low hurn level. Uces the tollowing tubes: 6BE6, 6BA6, 6AT6, 6X4 rectitier.
For 115 or 220 volls AC only. Dimensions: $1015 \times 63 / 66^{\%}$. Shipping Waight 10 lbs .
30N22482-With Tubes.
. List price $\$ 54.35$.
Not 31.95

## LAFAYETTE FM-AM CHASSIS with Automatic Frequency Control

Bulld your own now FM-AM radio, or modernize an old radio contole with this fine quality chassis. Covers the entire standard broadcast bond and he FM for tuning stability, ofull range tone control and outomatic volume control. Chassis te wired for phonograph operation. Pueh-pull keara power output provided with 11 latest model tutes plue rectifier. Output matches 3.2 ohm voice coth. Indirectly illuminated slide rule dial simplifles accurate tuning. Two indoor antennas are suppliad: one loop for AM and a folded dipole for FM. Loop Antenno measures 81/2x131/2x1\%". Chassie dimenaions: $13 \times 9 \times 91 /$ " " For operation on $^{2} 05-125$ volts, 60 cycles AC only. Supplied complete with tubes, dial escutchoon and two antennas. Shipping Welght 25 lbs. IN1208-List Price $\$ 120.85$.

Net 72.50

## ESPEY FM-AM TUNER \& AMPLIFIER

A deluxe high fidelity combination unit, matched and preciation built for the discriminating listener who wants to build hie own FM-AM console. The tuner has two frequency ranges: $88-108 \mathrm{MC}$ for FM reception and $540-1620 \mathrm{KC}$ for standard broadcast use, an improved automatic volume control, and full range bass and treble tone controls. Featured also are seperate tuned RF stages on both FM and AM tor extreme sensitivity and low noise level between atations. Power supply and audio amplifier are included in the amplifier chassis. Uses the following tubes: (2) 6BA6, (2) 6BE6, 6C4, 6SG7, 6SH7, 6JS, 6SQ7, 6AL5 and 6U5 tuning indicator.

AMPLITIER POWER SUPPLY CHASSIS in ospecially designed to match the tuner described above. It uses (2) $6 J 5 s$ in a balanced phase match the tuner described above. (4) 6 V 6 triodes in a parallel push-pull inverter, push-pulc circurt (2) 5 Y 3 GT/G rectifiers. High fidelity amplifier output circuit. Includes (2) SY3GI/G rectiners. High indedity amplicuit. performance is assured through the use of an inveree teedback circuit. Tuner chassis dimensions: $133 \times 81 / 2 \times 9^{*}$; amplifior chassis dimensions: $131 / 2 \times 71 / 5 \times 8^{\prime \prime}$. Complete with escutcheon plate, dial, two antennas
tubes. for $105-125 \mathrm{~V} ., 50 / 60 \mathrm{cycles} \mathrm{AC}$. Shipping Weight 40 lbs .
30N22477-List Price $\$ 195.35$
Net 114.86
BROWNING FM TUNER \& POWER SUPPLY
RV. 10. An excellent way to add high fidelity FM reception to existing radio and amplitier syatems. Small size permits eany mounting in cabinet, adion Sonsitive Armstrong circuit covers helves, bookcases and drawerb. Sonsinvo Armstrong circule limiler 88-108 MC band. Features tuned RF stage, two-stage cascade limiler, high impedance output, Phono-FM witch and self-contained power supply. Altractive edge-lighted dial calibrated in megacycles and channel numbers. Tubes: (3) 6AU6, 7F8, (2) 6SJ7, 6H6, 6U5 tuning eye and 80 rectifier. For 115 -volt, 60 -cycle AC. Dimensions: $6 \frac{1}{2}$ ₹11x89". Supplied complete with tubes, dial escutcheon, two audlo shielded plugs and 8 ft . wire. 30N22498-Shipping Weight 14 lbs.
82.22

## BROWNING FM-AM TUNER

Model RJ. 12A. Prectsion enaineered for high fidelity reception on the 88-108 MC FM band and 530-1650 KC standard broadcast band. Famous Armstrong FM circuit features 2 -stage cascade limiting, RF stage on both bands and high impedance output; drift compensated. FM audio response flat from 20 to $15,000 \mathrm{cps} \pm 13 \mathrm{~h} \mathrm{db}$. Separate RF and IF systems on both bands assures maximum performance and eliminates coil switching. FM antenna input 300 ohms. No separate antennas required; FM antenna also serves AM. Tubes: (3) 6AU6, TF8, 6SK7, 6SG7, (2) 6S17. 6H6, 6SA7, 6U5 tuning eye and IN34 crystal detector. Dimensions: $71 / / \times 131 / 5 \times 9^{\prime \prime}$. For 115 volts, 60 -cycle AC. With lubes, dial escutcheon and plastic window. Appearance like R $J 20$ below. $30 \mathrm{~N} 28486-S h i p p i n g$ Weight 16 lbs.
113.78

Model P512. Power supply for above tuner. $6 \times 31 / 288^{\prime \prime}$
30N22513-Shipping Weight 9 lbe

## BROWNING FM-AM TUNER AND POWER SUPPLY

Model RJ-20. For the discriminating listener who wants the ullimate in full range reproduction. Especially desioned tuner and selt-contained power supply for custom installations and high fidelity recelving applicothons in the broadcast and 88-108 MC FM bands. Response: 15 to 15,000 eps $\pm 3 \mathrm{db}$. Separate RF and IF systems for AM and FM provide top performance and sensitivity. FM utlizes dual cascade limiting in a cenuine Armstrong circuit. Uses two slages of audio amplification with treble and bass controls giving a 20 db boost in either tone range. Output treble and bass controls giving a 20 -ohm input provided for FM antenne. impedance 20,000 ohms; 300 or 72 -ohm input provided or FM antenne. eye and SY3 rectifier. Dimensions: 71/xx17x9". Dial escutcheon and eye and SY3 rectifier. D
plastic window included. 30 N 22481 -With tubes. Shpg. Wt. 24 lbs
155.43


## HIGH FIDELITY AMPIIFIERS



## BOGEN PH-10 AMPLIFIER

## Low-Cost High Fidelity for the Home

This well-bullt 10 -wattamplifier is recornmended by cuthoritative sourcen for H1-FI radio and phanograph systema. Expensive auxiliary circulte and accessories have been omitted to provide a low-cost unit suitable for direct installation into many systems. Any radio tuner or crystal plakup may be connected directly to the inpot The 4-position toze control provides laboratory-selected responses: deop bass, mellow bass, wlth broadened hi-frequency range: "flat" rosponae, well up lnto the high range; and oxtended response for FM and other H1-FI inputs. Hum is down 80 db from rated output. Push-pull output with Inverse foed back gives range of 40 to
$15,000 \mathrm{cps}$ withint $i \mathrm{db}$. Tubea are one $6 S L 7-\mathrm{GT}$, two 6 V 6 one $5 \mathrm{Y} 3-G T$ (recuit or). Power input: 117 v ., 60 cycles AC. Dimensions: $5^{\prime \prime} \times 11^{\prime \prime} \mathbf{z f o}^{\circ}$. 2N155-Amplifier, complete with tubes. Shpg. Wt: 11 tom. 2Ni56-Amplifier, with tuben $\&$ with controls at end of 4-ft extension cebles. *

* WRITE FOR PRICES


## BROOK MODEL 12A3 AMPLIFIER

## All.Triode Circuit with a New Low in Distortion

"There is no manner is which the audio performance of the 12A3 could be improved by additional manufacturing expense states the manufacturer of this ine unit. Here 18 a 10 -wgit, all low-mu triode amplifier with less than $1.25 \%$ total harmonic distortion at full rated output. Even for power peaks fof less than $1 / 2$ necond duration) rising well aver 10 watt, the distortion does not increase because of the remarkable "transient peak circult" included in the amplifier. The pre-amplifier and controls are in a separate unlt connected by a 6 -foot cable to the amplifier. A con siderably longef cable can be used where required. Three inputs - iwo compensated for magnetic and valable reluctance plekups, and other provided for radio or cry${ }_{5}$ stal plckup - are furnished. Output impedances range from 1.5 to 24 ohms, plue 500 ohms from a separate winding. With treble and bass tone controls set for "llat response, the frequency range is 20 to $20,000 \mathrm{cps}$ within $\pm 1 / \mathrm{db}$. Hum level is 75 6JS, two 2A3, one 5Ui-G (rectifler). Consumes 110 watte at 117 v., $50-60$ eycles


2Na17-Amplifier and control unite, including tubes. Shpg. Wt: 28 ibs...16\%. 50 2N418-Amplifier Unit only (Fixed gain. Sultable where tunor has phono input, volume, and tone controls.) Shpg. wt: 23 lbs......................................... 89.50

## H. H. SCOTT MODEL 210A AMPLIFIER HI.Fi Plus the Scott Dynamic Noise Suppressor

Designed by am organization producing mostly laboratory and broadcast equipaent, the 20-watt Scott 210A sets a new standard of arcellence fro amplifiers of its elass. Designed especially for use with the now variable reluctance pickups, a preampllifer stage operating entiraly on d-c is included Othar features are; a spectal input for thners and crystal pickups, a calimated hi-frequency cut-off the 4-tube Scott Dymanie Nolse Suppressor fise during record-changer cyciang'bass tone controls at midpoint and volume on full, the frequency response is down 3 db at 30 and $20,000 \mathrm{cps}$. Harmonic distortion ls less than $2 \%$ and hum level is down
 Power input: $117 \mathrm{v}_{\mathrm{o}}, 60$ cycles $A C$. Dimensions: $12 \times 15 \times 8 \frac{1}{2}{ }^{\circ}$.' 2N419-Aruplifier, with tuben. Shpg. Wt. 23 lbs.
214.62

## H. H. SCOTT DYNAMIC NOISE SUPPRESSOR

Model litA. Newest verston of the famous Dynamic Nolse suppressor. Reduces annoying record scratch and motor "rumble" In any Hi-Fl syatem with this unit. Chassis mounts near other equipment; single control te at end of extension cable. Operating power for unit obtalned through plug which tits octal-base output socket of amplitier. High impedance Inupt and output circuite match most aystems. Employs new mutual inductance gate clrcult giving flat response 30 to 10,000 cycles. Useful range 20 to 14,000 cycles. Supplied complete with one 6SQ7 tube, two 6SG7 tubes, cables, and accessories. Dimensions: $7 \times 33 / 4 \times 41 / 4{ }^{4}$. 2N427-Shipping Wetght: 41/2 Ibe.
28.91

Model 112 A . Similar to above except has preamp for GE reluctance and similar cartridqes. Flat response 30 to 17,000 cycles.
$\qquad$

## THORDARSON MODEL T-32WIO AMPLIFIER

This 10-watt ampliffer incosporates only those componenta nocessary for a "flat" full-range frequency response from a radio tuner or crystal plckup. You pay for nothing more. For variable reluctance plekups or a high-impedance mike the T-32WOO pro-amplifier (listed below) plugs into a prewired sockef. Volume, separate bass and treble tone controls. Output: $3-4$, 6-8, $15-16$ ohms. Hum level down 70 db Tubes: 6SL7-GT, 6V6-GT (two), 5Y3-GT (rectifier). Power requirements: 115 2N420 AC. Dimensions
2N420 Amplifier, with tuben. Stpg. Wt. 11 Ibs........................................ 32. 3 .
Thordarson T-32WOO Plug-In Pre-Amplifier, for use with T-32W1O Amplifier, Has cortect gain and compensation for use with variable reluctance plckups. Also can be adjusted for "flat" response for use with hi-lmpedance mike.
2N421 Pre-Amplifier, with tube. Shpg, Wt, 2 Ibe.

## BELL MODEL 2122 AMPLIFIER

## A Consumers Organization Recommendation

The quality of this excollent 10 -watt amplifier is typlified by the frequency rosponse charactoristic: $\pm 3 / \mathrm{db}$ trom 30 to 15,000 cyclos (with tone control. set for "Ilat" response). Extremoly flexible in appllcation, the amplifier is well sulted for almost any high-fidelity syntem. Four inputs are provided: (1) radio - 750,000 ohms input impedamce 76 db overall galn; (2) Crystal phono dickup - 1 megohm input impedance 74 db gain; (3) magnetic (variable reluctance) pickup 1 meg. ohm input impedance, 92 db qain; (4) magnetic (variable reluctance) plckup 6 22,000 ohms input impodance, 110 db gain. Output impedances are 3.4-4 ohms, 6-8 ohms, $15-18$ ohms. Individual pre-amplifiera, each with its own equalization assure proper response from the varlous types of magnetic plekups. Separate base and treble tone controls are included. Baas variation runs from $=9$ to $\pm 12 \mathrm{db}$ at
100 cycles; troble runs from tis to $t 9$ at 10,000 cycles. Peak power output is is watts; normal (at less than $3 \%$ distortion, 1810 watif, Hum level is down 65 db from rated output. Power consumption is 76 watts at 117 volts, 60 cycles, o-c. A receptacle for radio or phonograph power 1a mounted on the rear apron of the chas-

2N404-Amplusier, with tubes.........Shpg. Wt: 11 lbe.
2N416-Amplifier, with tubee. Controls remotely connected through 4-foot ahfelded extenalion cable

Controls romotelyco

## SCOTT LABS "MUSICALE" AMPLIFIER

Build of Improve Your High-Fidelity System with this Lafoyotte "Best Buy"
A superb cmplifying aysten with a conservative rating of 20 watts, built by a manulacturer whose nome is casoclated only with the highest quality olentronic equipment. The Scott "Musicale" cmplifier was designed for those music lovers who want the utmost in high-idelity reproduction - with no limit on circults, size, or cost. It was produced originally to be a part of one of the world-famous Scott radio-phonograph combinations, which sell for much as $\$ 1000$, Lafayette made a fortunate purchase of a lingled number of these amplifters, which enables us to offer them at a pri
This amplifying systom consists of two chassis containing a total of 14 tubes ncluding 2 rectiflers. The Voltage Amplifier - Control Unit mounts a brubhed satin aluminum panel, $15 "^{\prime \prime} \times 31 / 2^{\prime \prime}$ with chrome-skirted control knobs. The Power Amplifior - Rectifier chasesis is finished in the polishod chrome that is typlcal of the craftsmanship of Scott equipment. Four feet of cable afford conalderable leoway in the mounting of the two chasgle.
The fequency characteristic is flat within $\pm 1.25 \mathrm{db}$ from 40 to 20,000 cyclos at 20 watts routput; uniform from 100 to 16,000 cycles. One lnput 18 provided for a 20 watte putput; uniform from 100 to 16,000 cycles. One input is provided lor cry tal phonograph plerup; another to the lat amplifier stage which can be componsated for variable reluctance pickups. The camous Scott Oyname Noised are pressor circuits are incorporated as part of the Control Unit. Controis provided are: olume. Bass it Mike (Low and High Gain Input). Output stage uses push-puh o Lisjoutpur mpo dance 8 owar requirementa: $110-125$ volts, 60 -cycles a-c.
IMPORTANT - Do not restrict the capablusties of this amplifying system with an inadequate mpakior. Select (from pages 42-44) a coazal epeater or a "woofertweeter" combination rated of not lese than 20 wats and extending well into the $h 1$ gh-frequency range.
2N406-Amplifler, with tubes......Shipplng Woight: 50 lbs
$.16 \% .50$

## MASCO MODEL 10-HF AMPLIFIER

This is a 10 watt, 4-input high-fidelity amplifier with bulltin compensation and ufficient gain for variable reluctanco plefups. Two of the amplifler inpute are qualized for curtent iypes of variable roluctance pickups; the thiry is equalized for crystal plekups; and the fourth is unequalized, for radio InDut. Separate treble and base tone controle are provided permitting up to 12.5 db boost ar attenuation at 50 cycles and $\pm 15$ to $\pm 14 \mathrm{db}$ variation at 15,000 cyclos. Frequency characterlstic is $\pm 1 \mathrm{db}$ from 40 to 20,000 cycles when the tone controla are set for "flat" responee. Two hum-balancing adjustmente bring the hum level down 70 db from rated output. Rated output is 10 watte (with less than $3 \%$ distortion); poak output $1=14$ watts. Output impedances arallable are $2-4-8-16$ and 500 ohmm. Power requirements: 74 watts at 117 volts, 60 cycles a-c. A power recoptacle on the chasis permlte plugging in a rodio or phonograph. Chassis is finished in gray hammerone. Dimensions: $12^{2 \prime} \times 7^{\prime \prime} \times 6 \frac{1}{2}=$ Tube complement: two 6SL7-GT, one 6SC7, two 6Ve-GT, one SY3-GT (rectufler). Wolght: 11 K lbu.
2N422-Amplifier, with tubes...... Shipping Weight: 20 lbs.
40.50

2N424-Three $6^{\circ}$ extention shefte for control............................................. 1.47

## MASCO MODEL 10-EX

## AMPLIFIER WITH VOLUME EXPANSION

This in basically the same as the Model 10-HF amplifier described above, with volume expander circults added to give up to 10 db expansion. A 4-position tone switch, giving solected response characterlatles, replaces the separate toneconswitch, giving solected response characte three 6SL.7-GT, one 6SC7. two 6V6-GT one 5 Y 3 -GT (rectifier). Welght: 12 lbs.
2N423-Ampllfier, with tubes......Shipping Weight: 20 lbs.
49.95 2N425-Three $6^{*}$ extention thaft: for controls........................................... 8.4. 47


## HIGH FIDELITY PACKAGES



## SELECT YOUR HI-FI COMBINATION FROM THESE FINE GROUPS

Now you can choose your own high fidslity radio-phonograph package from the precision-tested units listed below. For your complete istening pleasure, Lafayette affers a choice of two ouperb amplifiers (either the Bell Msdel 2122 or Bogen PHiO), two top quality Webster record changers, the tull range GE Model S12010 speaker and phonograph pre-amplitier and the popular Meissner 8C FM tuner. In addition to the cuatomary manufacturer's tesis given the individual units, Lalayette engineers will also

## BELL MODEL 2122 AMPLIFIER

Fig. C. Recommended by a famous tesearch organization for high fidelity custom installations. Frequency response $30-15,000$ cycles $\pm 3 / 4 \mathrm{db}$. Inputs for radio, magnetic, reluctance or crystal carindger. Individual bass and treble tone controls. Output impedances of 3.4 to 18 ohms to match an; high tidelity speaker. Has low hum level. This amplifier is ideal for mierogroove recard applications using the new type magnotic pilkups. Output is 10 watts with a peak of 15 . Dimensions: $712^{\prime \prime} x \hat{0}^{\prime \prime \prime} \times 11 y_{2}^{\prime \prime}$. Shipping Weight 15 libs. Supplled complets with tubes. (See pages 18 and 19 for additional ampliffer specifications.)
2122 R -Same as above plus 4 ft . extensian controls for remote control use.

## BOGEN MODEL PHIO AMPLFFIER

Fig. A. Designed to give high ficelity amplitication with minimum hum. Remarkable "Multi-Range Tone Control" provides four separate laboratory selected response curves to give the best in performance. Theres no quesswork for the user when selecting the proper tone balance for varying ptogram material Output 10 watts with a gain of $72 \mathrm{db} \pm 1 \mathrm{db}$ fram $40-15,000 \mathrm{cps}$. (Additional specifications on pages $1 \frac{1}{8}$ and 19.)
PH10C-Same as above plus $4-\mathrm{ft}$. extension coritrols for remote control use.

## WEESTER 156-27 CHANGER

Fig. F. Plays twelve $10^{\prime \prime}$ and ten $12^{\prime \prime} 78$ RPM records at one loading. Automatically shuts off after the last :ecord. Lightweight GE variable reluctance magnelic pickup inctuded for minimum wear on valuable records. Only one control button is required tor all operations of changer. Heavy duty, 4 pale single $3 p e e d$ motor opera:es on 105-120 V.,. 60 cycies AC.
wire all the plugs, eables and connectors for a nominal price of $\$ 7.00$ and then lest the group together as a HI-FI systom. Every item required for the installation, including all Inter-connections, is included in the single price lexcept cabinet and speaker enclosure). For a choice of either modern or perioc design cabinets to house the package, turn to pages 10, 11, 22, 42 and 43 of this catalog . . . or use furniture of your own.

## MEISSNER BC FM TUNER

Fig. E. Brings in FM programs free of static and station inter-ference-gives realistic high tidelity reception wi:hout distortion. The audio fldelity is flat from $50-15,000$ cps. A modern, slide rule dial is cahbrated in MC and channel numbers for fast, easy tuning of your favorite station. Precision-built, advanced circuit uses 6AL5, (2) 6BA6, (2) 6AG5, (2) SC4 and SXSGT/G rectilies. Chassis dimensions: $71 / 2^{\prime \prime} \times 11^{\prime \prime} \times 5^{\prime \prime}$. Shipping Weight 7 libs. Same chassis as above is available in plished cabinet. (See page 16 for additional apecifications and information.)

## GE PRE-AMPLIFIER AND SPEAKER

Fig. B. The model M5C preampliter is designed for use with high fidelity reluctance cartridges. It uses a shock mounted 6SC7 tube in an equalizing circul:. Covers full audio range of 20-20,000 eps.
Fig. D. Model Sl2oID speaker is excellently corstructed 12 -inch Alnico V PM type. Molded one-plece cone assures brilliant firequency response. Power handling capacity: 25 watts.

## WEBSTER 336-27 CHANGER

Fig. F. Three speeds . . plays all makes, all sizes and all speeds of records-automatically. Single switch makes speed changeover irom 78,45 and $331 / 3 \mathrm{RPM}$, last and effortless. Equipped with a lighiweight arm that plays standard and LP records without Nolght adjustment. Prckup returns to rest after last record except $7^{\prime \prime}$ size. Shock mounted mator assembly assures smooth, quiet operation at any speed. Supplied with 10 spiders for 45 RPM records and two plug.in GF. reluctance cartridqes. Mounting: $55 / 8^{\prime \prime}$ above plate; $23 / 4^{\prime \prime}$ below plafe. Dimensions of motorboard:

NOTE: Below sysiems can be supplied with the Meissner 8 C Tuner in wood cabinet if desired, a: $\$ 3.68$ additional. Charge for witing plugs, cables and connectors, and testing any group (see text at lop of

HIOFI GOMBINATIONS USING BELL AMPLIFIFRS
Stock No.


| Changer | Pro-Amp | Ac-absorios | rice |
| :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Webster } \\ 156-27 \\ \hline \end{gathered}$ | None Required |  | 9.8 |
| $\begin{gathered} \text { Wobster } \\ 156-27 \\ \hline \end{gathered}$ | None Required | All Necessary Inter-Connecting | 123.39 |
| $\begin{gathered} \text { Webster } \\ 356-27 \\ \hline \end{gathered}$ | None Required | Cables, Plugs, Jacks, Switches | 125.08 |
| $\begin{aligned} & \text { Webster } \\ & 356-27 \\ & \hline \end{aligned}$ | None Required |  | 134.83 |

GIEFI COMBINATIONS USING BOGEN AMPITIERS

| $\frac{\text { Stook No. }}{30 \mathrm{~N} 21385}$ |
| :--- |
| 30 N 21394 |
| 30 N 21393 |
| 30 N 21392 |




## MI-FI PAGKAGE MO. 1

Here is a superb custom package for the discriminating radio and record listener who demands the finest in high fidellity reproduction. Complete standard broadcast AM and FM coverage for all your favorite radio programs and a top-notch record playing system that handles all speeds, types and sizes of records. This high fidelity equipment gives you the entire range of sound, from extremely low notes of the tuba to the highest notes of the oboe. Every unlt in the package has been tested individually and in combination to assure maximum efficiency and perfect matching of ail components. To achieve these excellent results, Latayette technicians selected the fcllowing oulstanding equipment: (B) The famous high fidelity Browning Model RJ-20 FM-AM Tuner; (C) a fine 12-wat: Radio Craftsmen RC2 amplifier with a range of 20 to $20,000 \mathrm{cDs}$ to match the tuner; ( E ) the latest Webster Model 356-27 3 -speed record changer with two GE, reluctance cartridqes; (A) Stephens Tru-Sonic Model 102FR $15^{\prime \prime}$ speaker-a high fidelity cosplral unit capable of Tru-Sonic Model $h a n d i n g 20$ watis undistorted output; (D) the GE self-powered pre-amplifier for use with variable reluctance cartridges. The components are supplied with all interconnecting cables, plugs and jacks to permit immediate installation. Operates on 105 - 125 volis, $50 / 60$ cycles AC. For additional information on the above components, see pages 16-19, 43 and 46.
COMPLETE PACKAGE NO. 1 (A-B-C-D-E)
30 N 21400 -Ready To Install.
295.74

## HI-FI PACKAGE NO. 2

It's easy to enjey a high fidelity radio and phonograph installation in your home with the:e fine components...economically priced for the modest budget. A compact, three-unit package that can be readily adapted to the smaller furniture plece or console cabinet. Model IN1206 12-tube FM-AM single unit chassis (F) covers the standard broadcast and 88-109 MC FM bands. Features include automatic frequency control, push-pull output, a loop antenna for AM broadcasts and a folded dipole for FM. Full range reproduction of your finest classical records is assured with the (G) GE model S1201D 12" speaker and ( $E$ ) Webster Model 356-1 3-speed record changer. Tested and matched components give top performance from records and radio. All interconnecting cables, plugs and lacks are supplied with the package. For 105 125 volts, $50 / 60$ sycles AC. For additional information see paqes 17,42 and 46 .

COMPLETE PACKAGE NO. 2 (E-F-G)
30N21401-Reacy To Install.
122.75

## HI-FI PACKAGE NO. 3

Heres a precision built, 5-unlt package for the discriminating listener who wants a high f delity installation of unusually fine quality. The popular (H) FM-AM Espey Tuner (No. 30N22477) has separate bass and treble controls and individual RF stages on both FM and AM. A specially designed separate chassis incorporating the audio amplifter and power supply is carefully matched to the tuner for maximum efficlency. Parallel push-pull output in matched to the tuner for maximum efficiency. Parallel push-pull with utmost an inverse teedback circuit assures plenty of reserve power with uimost
fidelity. Other components are the (E) Webster Model $356-273$-speed record changer with 2 GE reluctance cartridges, (G) GE Model S1201D speaker and (D) self-powered pre-amplifier. The complete package is thoroughly tested before shipmert and includes all necessary inter-connectiong eables, plugs and jacks for immediate installation. Operates on $105-125$ volts, $50 / 60$ cycles AC. For additional information see pages $17,42,46$ and 48.
COMPLETE PACKAGE NO. 3. (D-E-G-H)
30N21402-Ready To Install.
180.60

## HI-FI PAGKAGE NO. 4

Everything you need for an excellent high fidelity radio and record installation is contained in this outstanding custom package. In order to assure flawless AM and FM radio reception and superb tone reproduction of the finest symphonic recsrdings, we selected the "hard-to-beat" Meissner Model 9-1093 tuner and amplifier ( 1 ), the Altec Lansing Model $603 \mathrm{~B} 15^{\prime \prime \prime} \mathrm{HI}$-Fi speaker with special multicellular horn (f), and the popular Webster Chicago Model 356-27 three-speed record changer (E) for all size and type records, with two GE reluctauce pluq-in cartridges. All units have been pre-tested and matched to assure perfect operating efficiency. The chassis is equipped with a built-in pre-amplifler for GE reluctance and magnetic plckups. Extremely sensitive and selective luner, plus the powerful 18-watt push-pull amplifier brings in and selective tuner, plus the powerful 18-watt push-pull amplifier brings in staticless FM reception and strong, clear standard broadcast programs with
utmost fldelity over the audible range between 50 and $15,000 \mathrm{cps}$. Components utmost fldelity over the audible range between 50 and 15,000 cps. Components
are supplied with all inter-connecting cables, plugs, tubes, cartridges and needles. For operation on $105-125$ volts, $50 / 60$ cycles AC. For additional information and specifications on the above components, see pages 16,42 and 46. COMPLETE PACKAGE NO. 4 (I-J-E)
30N21403-Ready To Install.
289.13


## UNIFMIOIDIE CUSTOM CABINETS



The Uni-Mode idea is a group of basic units in almost every required size with separate tops and bases. These units are open at the top, for easy accessibility These units are open at the lop, for easy accessibimy and nest logether vertically. Only one top and one base are required for each vertical group. These groups match together side by side so that thousands of possible combinations can be crealed, changed or added to as desifed. Uni-Modes are constructed of heavy mahogany fece lumber core plywood. The tops and bottoms are $1^{" 1}$ thick and the sides and doors $13 / 16^{\prime \prime}$. All exposed front and side odges are banded with quarter striped mahoqany. Beautitul hand rubbed lacquer finish exteriors, in Pinard Bisque (Blonde) with Tarragon oreen interiors, or deep lustrous Cordovan Marogany with Afgan Red interiors. These luxurious Mahogany win Algan iod bestc furn. Thes constrution sectionais represent sound basic furniture construetion combined with functional beauty. Uni-Mades are the complete answor to custom installations requiring many different applications. They are ideal for housing radio, television, record components, speakers, record changers, amplifiers, tape and wire recorders, elther singly or in qroups of various sizes to harmonize with your room layout. With Uni-Modes yau create an enter:ainment center that can be re-arranged or expanded as you desite.
A reminder; all Und-Mode units are supplied less top section. Be cortain to order one top for eech vertical group.


Fiq. A. Mahogany cabinet, balanced construction, $351 / 0^{\prime \prime} \mathrm{W} . \times 18^{\prime \prime} \mathrm{D}$. $\times 15^{\prime \prime}$ high. With doors.
$40 \mathrm{~N} 23800-5 h p q$. Wi. 45 lbs .37 .60 40N25 0 - As above, Blond 37.60 Mahogany basic cabinel, 351/8"W x18"D.xi5" high. Same as above, less doors.
40N 23804 -Shpg. Wt. 32 lbs .25 .60 10N25805-As abovo, Blond 25.60
Fig. B. Mahogany cabinet, $18^{\prime \prime}$ W. $x$ $18^{\prime \prime} \mathrm{D} \times 30^{\prime \prime}$ high. With shelf and right hinged door
$40 \mathrm{~N} 25790-$ Shpg. Wt. 50 lbs .48 .23 40N25792-As above, Biond 46.25 Mahoqany cabinet, as above, but Mahogany cabinet, as
with left hinged door.
40N25791
40N25791 .......................... 46.25
40N25793-As above, Blonde 46.25
Fig. C. Mahogany "tuned port", speaker cabinet, $24^{\prime \prime}$ W. $\times 18^{\prime \prime}$ D. $\times 30^{\prime \prime}$ high. Accoustically dosigned to onhance the qualitios of the finest hance the qualities of the hinest high fidelity speakers. Heary vibrationlese construction. Metal grille with polishod brass inish. Beautilullumte plastic grile clom, sag and strain resistant. Seiontiprovide bass reinforcement. Supplied with $3 / 4^{\prime \prime}$ uncut plywood baffle for any size speaker.
40N25794-Shpq. Wi. 75 lbs. 53.40 40N25795-As above, Blonde 51.40 Mahogany "tuned port" cabinet. Same as above except 3510"W.x $18^{\prime \prime} \mathrm{D} . \times 30^{\prime \prime}$ high.
40 N 2512 -Shpg. Wt. 85 lbs .84 .25 40N25si3-As above, Blonde 64.25
Fig. D. Mahogany basie cabinet, 24"W.x18"D.x15" high.
40N25802-Shpq. Wt. 24 lbs. 21.85 40N25803-As above, Blonde 21.85
Fig. E. Mahogany cabinat, 351/0" W. x18 " $D . x 30^{\prime \prime}$ high. With shelf, lour record dividers and doors. 40N25810-Shpg. Wt. 100 lbs 71.20 40N25811-As above, Blond 11.20
Fig. F. Mahogany cabinet, with doors. $351 / /^{\prime \prime}$ W. $\times 18^{\prime \prime} \mathrm{D} . \times 12^{\prime \prime}$ high. One compartment for record changer has ball bearing allde drawer $21 / 2^{\prime \prime}$ high. Other side for radio or tuner has blank panel re cessed for clearance of controls. Panel easily removable.
40 N 23908 -Shpg. Wt. 50 lbs .48 .93 40 N 25807 -As above, Blonde 48.95
F1. a. Mahogany top section, $18^{\circ}$ W. $\times 18^{\prime \prime} \mathrm{D} \times 1^{\prime \prime}$ thick.

40N25814-Shpg. Wt. 7 Ibs.... 8.00 40N25sis-As above, Blonde 8.00 Mahogany top section. $24^{\prime \prime}$ W.x18" D. $x l^{\prime \prime}$ thick.

40N25816-Shpg. WI. $10 \mathrm{lbs} . . .9 .60$ 40 N 25817 -As above, Blonde 9.60 Mahogany top section, $3516{ }_{6}{ }^{\prime \prime} \mathrm{W}$.x Mahogany
$18^{\prime \prime}$ D.x $1^{\prime \prime}$ thick. 180 N 25118 -Shick. Wt. 15 lbs .12 .00 40N25819—As above, Blonde 12.00
Fig. K. Mahogany cabinet, $24^{\prime \prime} \mathrm{W}$. x18" D. x15" high. With frame and y/8" front panel. Ideal for T.V. sets. ${ }^{3 / 8} \mathbf{1 0 N 2 5 7 9 8}$-5hpq. Wt. 31 lbs. 33.20 40N25799-A above, Blonde 33.20 Mahogany cabinet as above ex* copt $24^{\circ \prime} W^{\prime} \times 18^{\prime \prime} D . \times 24^{\prime \prime}$ high.
$40 \mathrm{~N} 25800-\mathrm{Shpg}$. Wi. 45 lbs .44 .20 40N23801-As above, Blonde 14.20
Fig. I. Mahogany speaker cabinot, with grille and baffle. $24^{\prime \prime}$ W. $\times 18^{\prime \prime}$ W. $\times 15^{\text {r }}$ high.

40N25798-Shpg. W\&. 35 lbs. 34.40 40N 25797 -As above, Blond 34.40
Fig. J. Island base section. Black onamel finish. Filter strip included with each base for dust proofing with each base for dust prooting by elosing gap between basez When Uni-Modes are assembled side by side. $17^{\prime \prime}$ W.x17"D. $\times 21 / 2^{\prime \prime}$ high.
40 N 25820 - Shpg. Wi. $5 \mathrm{lbs} . . . .4 .40$
 40N25821-Shpg. Wt, 日 lbs. ... 5.60 As above, $341 / 8^{\prime \prime}$ W, $\times 17^{\prime \prime} D . \times 21 / 2^{\prime \prime}$ high.
high. 25822 -Shpg. Wt. $12 \mathrm{lbs} . . .6 .00$
Locking: Although Uni-Modes nest securely, screws are furnished for permanent locking il desired.
Backs: Uni-Modes for radio use are equipped with screw fastened removable bocke. Backs on models with panels or frames are furnished with ventilation openings.

## afayette 8-WATT QUALITY SOUND AMPLIFIER

## 8. Watt Amplifier Specificationa

POWER OUTPUT . . . . . 8 watts at $5 \%$ distortion- 12 watts peak OAIN AND INPUTS .................. Microphone $105 \mathrm{db}, 2$ mec

FREOUENCY RESPONSE CONTROLS TUBES USED
OUTPUT IMPEDANCE POWER CONSUMPTION DIMENSIONS
hono 75 db , $1 / 2 \mathrm{mec}$
$50,10,000 \mathrm{cps} \pm 2 \mathrm{db}$
(3) Microphone Phos $\pm 2 \mathrm{a}$
.6L6G, 6SC7, 5 Y 70 watts at 117 volts 60 cycle AC
70 watts at 117 volts 60 cycle AC

8 watts normal and a full 12 watts peak output! ( $5 \%$ distortion is carcely audible at the 8 watt level). Designed especially for users requiring a high-quality, small audience coverage amplifier. Fraquency response is flat ( $\pm 2 \mathrm{db}$ ) from 50 to $10,000 \mathrm{cps}$. Tone contro for adjustment of response to any accoustical condition. Separate controls for microphone and phonograph allow smooth fading and blending of musical background and volee announcements. Circuit includes inverse feedback for improved quality and reduction of hum and distortion. Illuminated control panel permits easy control adjuitment in the darkest room.
2N157-With lubes and plugs - Shpg wt. 12 lbs.
22.95

# Lafayette 8-WATT SINGLE \& DUAL SOUND SYSTEMS 

## DUAL SPEAKER PORTABLE

Never beiore has so much value been brought together in one complete. 8 -watt sound system! Expertly engineered to the highast standards, and especially designed for store demonstrators, carnival and circus barkers, iecturers, masters of ceremony and others requiring small audience coverage up to 800 persons. Strong, compact construction makes carrying easy from one location to another.
Here are matched units-complete with everything you need to operate a quality public address system. The simple plug arrangement makes installation and operation, last and oasy. Lafayette's 8 -watt amphtier is guarantead for one full year and covers replacement or repoir of any delects in materials and workmanship. Separate microphone and phonograph inputs and controls permit use of recorded mustc as a background for announcements. This feature adds a proleasional smoothness to your precentatlons. All components are mounted in a single portable carrying presentations. All components are mounted in asingle portablalated rowcase measuring $13 x 10 y$ yin and covered in handsome simulated rowhide in tan finish. Each of the two -inch PM speakers is mounted in a erystal microphone on a 6 -inch desk stand with 7 leot of cable and piug. crystal microphone on a 6 -inch desk stand with 7 feot of cable and piug. untt) is attached to the speakers and is ready to plug into the amplifier. Complete 8-Watt Dual Portable System with amplifier, tubes, speakers, microphone, stand, cables and case.
2N184-Shipping Weight 30 lbs
44.95

## SINGLE SPEAKER PORTABLE

Similar to above system but with aingle apeaker and $35-\mathrm{ft}$. cable mounted in case.
2N186-Shipping Weight 27 lbs
39.95

## DUAL SPEAKER INDOOR SYSTEM

Engineered for use in amall areas such as clubs, restaurants, small halls, churches, schools. olfices, call systems, sales meetings and similar applications. Also practical for use in voice, diction, music and public speaking classes to familiarize students with microphone technique. Can be used with any record changer or player for a combination paging and music systern in stores and talking commercial dimplays. Built-in tone control of the amplifier has extremely broad variation to moet your proference and the acoustics of ditterent speaker locations. Ihis is a complete sound system-ready to operatel Consists of an 8 -watt amplifier (see specification above), two 8-inch PM speakers mounted In two tabrikoid wall battles, 35 -ft, cable and plug attached to anch speaker. A Shure 710 A cryatal microphone on 6 -inch desk stand with $7 . \mathrm{ft}$. mike cable and attached plug, all tubes and instructions. For $105-125$ volts, $50 / 60$ cyclea AC.
2Ni8s-Shipping Weight 40 lbs
44.95

## SINGLE SPEAKER INDOOR SYSTEM

Save money! Buy this smaller, economy system If your audienced total less then 400 persons. Stmilar to dual system described above, but with a single s-inch speaker mounted in one wall batle, and $35 . f$ cable attached.
2N187-Shtpping Weight 34 lbs
34.98

Above systems available for 220V. AC with step down tranaformer.
MICROPHONE FLOOR STAND. TOp qualty adjustable stand with ponitive grip friction clutch that firmly locks telescoping unit. with ponitive grip $^{\text {friction chutch that tirmly locks }}$ telescoping unit.
Adjusts from $3^{\circ}$ to $68^{\circ}$. Chrome plated uprights on $10^{\circ}$ diametor Adjusts from ${ }^{3}$ linish bese. Kink -27 male threads for attaching to microphone.
14N22017-Shipping weight ig lbs
4.69

# afayette 15-watt SOUND SYSTEMS 

## PORTABLE MODEL

Here's a complele portable P.A. or music aystem packed with the most modern features and priced to please the modest budgat. Suts up in a fow minutes-ready to operate. No technical knowledge necessary. The system is ideal for lectures, sales meetings, auctions, for travelling dance bands and many other applications. The high quality push pull amplifier has three input channela-Iwo for crystal, dynamic or other high impedance microphones, and another for record player or radio tuner. The inverse feedback feature eliminates hum and distortion. Separate bass and treble controls permit variation of tone to individual taste. and also reduce undesirable feedback due to adverse "on location" conditions. Amplifier is fused for complete protocation condinons. Amp.
All components are carefully matched to assure excellent performance and trouble-tree operation. The complete pystem includes two 12 -Inch high Hidelity GE PM speakers, the popular Astat Ic IT-30 crystal microphone with a reaponse of popular Astatcis-30 crystal microphone whe floor stand. Each apeaker is mounted in one section of the strong, com pact fabrikoid covered case. 70 feet of speaker cable 135 feel for each unit) and 20 feet of microphone cable with attached plug are also includad. Dimensions of the case while closed: $144 \times 18 \times 23^{\prime \prime}$. Operates on $105-125$ volts, 60 cycles AC. Complete 15-Watt Portable System with Tubes, Amplifier Dual Speakers, Microphone, Floor Stand, Cables, Case and Instructions. 2N188-Shpg. Wt. 80 lbs
74.95 Same system as above but with the Shure Model 55 moving coil dynamic mike for better plckup and less feedback. 2N194
104.95

Amplifior Avallable for 220V. AC operation by means of slep down transiormer.

## 15-WATT <br> PERMANENT INDOOR SYSTEM

If's easy to set up a Lalayette P.A. system in small dance halls, school auditoriums, churches, gymnasiums, etc. This economy indoor syatem gives you excellent coverage where the ared is no greater than 20,000 equare teet. Everything is inclisded for immediate installation and operation-oven cables and plugs are already attached to speakers and micro phone tor tast, simple asembly. You receive a high quality 15-watt amplifier (tee specifications below), Iwo GE high lidelity 12 -inch PM speakers mounted in two handsome wainut epeaker baffles, 70 teet of apeaker cable ( 35 teet for each unit), an Astatic JT30 microphone with 20 leet of cable and on adjustable microphone stand. For $105-125$ volte. $50 / 60$ cycles AC.
Complete 15 .Watt Permanent Indoor System as described above including tuben.
2N195-Shipping Weight 75 lbs
77.45

Same system as 2N195, but with Shure Model 55 moving coil dynamic microphone. 2N196.
103.25

## PHONOGRAPH ACCESSORY TOP

The top panel of the Lafayette 15 -Watt Amplifier can be removed and replaced by another panel housing a 3 -speed phono motor, turntable and crystal pickup for playing standard 78 and the new 45 and $331 /$ RPM records. A long life needle gives true reproduction of classical and popular music. All connections are made at the rear of the cabinet for protection.
Operates on 110 volts, 60 cycles AC.
2N193-Shipping Welght 9 lbe.
15.75


## 15-Wat Ampllfer Specifications

OUTPUT
CHANNELS
GAIN
BASS TONE CONTROL
TREELE TONE CONTROL
HUM AND NOISE
FREOUENCY RANGE
OUTPUT LOAD IMPEDANCES
TUBES USED
LINE DRAIN DIMENSIONS

15 watts (a) $5 \%$ or less distortion, 25 watts Peak 2 Mikes and 1 Phono or 1 Nike and 2 Phono Microphone inputs 120 db , Medium qein inputs 70 db (a) Maximum gives flat response or (3) Minimum gives 10 db atlenuation (9) 70 cp




## POWERFUL PORTABLE MODEL

Lafayetto's latest 30 -watt portable syatem meete the major portion of all sound applications. It is the ideal rental system or the public address user, as well as a most versatile com bination for theatres, auditoriums, achool gyms and dance halls where exceptional tone quality and moderately high ussble power are required. This modern, streamilined system is complete in every detail and surpasees anything oflered to date.
The amplifier has three input channels with individual gain controls for noiseless mixing and fading; two high impedance microphone inputs and one high impedance phonograph input. The separate bass and treble compen. phonograph input. ite separate bass and treble compenence and varying acoustical conditions. A pair of 6 L 6 tuber ence and varying acoustical conditions. A pair of $6 L 6$ tubeas In a feedback regulated push pull circuit deliver 30 watts
undistorted power. All connecting leads and cables between undistorted power. All connecting leads and cables between to permil fast and easy installation and removal.
Included with this complete system are two heavy duty, 25watt GE 12 -inch PM speakers which assure full range reproduction af voice or music withoul distortion, a Shure Model 707A. 20 high impedance crystal microphone on an adjustable floor stand with 20 teet of cable and attached plug, an attractive, two-bection tabsikoid carrying caeo measuring $18 \times 144523^{\prime \prime}$ (with speakers and amplifier mounted in poal. tion), 70 feet of speaker cable and attached plugs ( 35 feel for each unit) already oonnected. Unit fused against burnoul. Complete 30 -Watt Portabhe Sound Syatem with amplifier, tubes, anicrophone and floor stand, two peakers, cables, case and inatructions. Nothing else to buy-ready to operatel

2N197-Shipping Weight 80 lba
97.50

Similar to above except with Shure Model 55 moving coll dynamic microphone.
$1 \times 251$
124.75

30-watt Amplifier and Tubes only
2N280-Shipping Weight 27 lbs.
84.50

## 30-WATT INDOOR SYSTEM

This is the permanent sound system especially designed for lange halls, churchoe, school gymnasiums, night clubs, audicoriums plus a wide variety of installations requiring medium power. the heavy duty push puil amplifier and Shure Madel 707A-20 crystal microphone give exceptional performance. free from hum and distortion. I wo handsame walnut finished wood wall baffles provide correct acoustics for the two 25 watt GE PM speakers. 35 feet of cable and attached pluga are supplied with each speaker unit. A tolescopic microphon loor stand adiustable from $35^{\prime \prime}$ to $68^{\circ}$ completes the equipmont included with this outstanding sound systom.
Complete 30 -W att Indoor Syatem with amplitier, tubee, two spealers, microphone and floor stand, wall baffles, cables ond instructions .. . ready to install and operate.
2N252-Shipping weight 78 lbs.
97.50

Similar to above except with Shure Model 55 moving coil dynamic microphone.
2N253
122.80

Above systems avallable for 220V. AC oceration with step down transformer.

## ACCESSORY PHONOGRAPH TOP

The top panel of the 30 -watt amplitier can be removed and replaced by a substitute panel housing a 3 -spead phonograph motor, turntable and crystal pickup for playing the standard 78 RPM and now 45 and $33 M$ RPM long playing secords. Thio optional equipment, for elther the portablo or records. Thio optional equipment, tor etther the portable or indoor system described on this page, provides falthful
reproduction of recorded music for all occasions. The panel reproduction of recorded mumic for all occasions. The panel tion. All connections are located at the rear of the cabinel lor protection. For $110 \mathrm{~V} ., 60$-cyclo AC. 2N183-Shipping Weight 9 lbs.
15.75


SO-Wrat Amplifor Specifications

## outpur CHANNELS

BARS TONE CONTROL
TREBLE TONE CONTROL
HUM AND NOISE FREOUENCY RANGE TUBES USED
OUTPUT LOAD IMPEDNNCES DIMEXISIONB
30 -watt Amphtier and Tuioes only. 2N250-Shipping Weight 27 te.

30 watts (a) $5 \%$ or lesa distortion, 40 watte Peak 2 Mikes and 1 Phono or 1 Mike and 2 Phono Microphone inputs 120 db , Medium gain inputs 70 db (a) Maximum olves tlat reaponse or (a) Maximum attenuation (a) 70 cpa (9) Min. gives 15 db attenuation (a) $10,000 \mathrm{cp}$ Tone controls at mar. pos.; mike channels down to 60 db

2-6Sj7 1-6SF5, $\cdots 30$ to $15,000 \mathrm{cph} \pm 2 \mathrm{db}$ , 4 -6, 15, 500 -54G



## Crayyete

## DELUXE 60-WATT OUTDOOR SOUND SYSTEM

Lafayelte has gone all out to give you a high powered sound systemy with outstanding fine quality features to take care of every type of outdoor application: in ball parks, skating rinks, large auditorlums, stadiums, carnivals and armories. Esfecially engineered to deliver tremendous power without distortion or loss of tone clarity. This result is achieved through the use of two 807 high power output tubes in place of the conventional 6L6s. In addition, tour 20 -inch University type PH reentrant reflex projectors, and 25 -watt driver units step up the efficlency of this system to such an extent as to make it equivalent to 90 watts in other systems. With these non-resonant storm-proof loudspeakers you can direct sound over long distances in the open air to cover ezactly the areas you desire The horns are supplied with 140 feet of speaker cable ( 35 feet for each unit) and universal brackets to permit mounting on roots, light towers, walls or under eaves of buildings. The high gain, heavy duty amplifier has three inputs: 2 microphone channels and 1 phonograph channel. Its advanced circuit design features the newest developments for outstanding performance ot maximum efficiency opmenta for outstanding periormance at maximum etticiency backed by Lalayette's one year guarantee. The attraclive steel
cose if finished in neutral green with ailver control panel. For $110-115$ volts, 60 -cycle AC. Complete 60 Watt Sound System includes amplifier with tubes, four $20-\mathrm{Inch}$ weather-proof projectors, four 25-wat driver units, Astatic JT-30 erystal milhe with cable, adjustable floor stand, plus all necessary connectore and plugs. Entire syalom shlpped ready to set up and operate. 2N251-Shipping Weight
150 lbs
229.25

Complete 60. Watt System similar to above except with Shure
Model 55 mike. Wt. 150 Jbs
2N258-Shpg.
257.50

60-Watt Amplifier and Tubes anly
2N182-Shpg. Wi. 60 libe.
79.38

Avallable for 220 V. AC operatlon with step down transformer.


OUTPUT.

## Specifications-60 Watt Mi-Power Amplifier

Npiris ..... . 65 watte normal output, 75 watts peals power FREOUENCY RANGE Mike Channels 120 db , Phono Channal 85 db OUTPUT IMPEDANCE $\quad 4, \ddot{8}, \quad 15,93$ and $3 \dot{3} 3 \pm 2$, TONE CONTROL..........."Selectone" Frequency Range Selector
 UBES USED ........2-6SF5,1-6SL7GT, 2-807, 1-6R4G 1 GGT plus

HUM AND NOISE LEVEL. INE DRAIN.

60-W att Amplifier and Tuber only. 2N162-Shpg. Wt. 60 llb .

220 waits at 117 volts, 60 crcle AC
$.17^{\prime \prime}$ wide, $111 \mathrm{y}^{\circ}$ deep, $916^{" 7}$ high
79.38

Here's an all-purposo, low power outdoor system to take care of your P.A. Installations in emall ball parks, picnic grounds or school gymnasiums. Ready to install ... easy to operatel It uses a heavy duty 30 -watt amplitier with two individually controlled high impedance mike inputs and one phonograph input. Separate bass and treble controls provide wide variation of tone and adjustment for different acoustical conditions. Also featured are pugh pull 6L6a in an inverse feedback circuit to eliminate hum push pull 6L6a
Complete 30-Watt Outdoor System includes amplifier with tubes, two 20" prolectors (University Type PH reflex) with 35 feet of cable and plug attached to each, two 25 -watt driver unita, Shure 707A-20 crystal microphone on an adjustable floor stand with $20 \cdot \mathrm{ft}$ cable and plug.
2N259-Shipping Woight 88 lbs.
134.50

Complete System similar to above except with Shure Model 55
mike. 2 2Na60-Shpg. Wt. 88 lbe
164.45

Accessory Phonograph Top, optional equipment for above amplifiers. 3 -speed motor, furntable and crystal pickup. Plays 335.4. 45 and 78 RPM records.

2Nie3-Shipping Weight 9 libs.
15.75

## 30-Wath Amplliter Specificalions

OUTPUT.
30 watts © $5 \%$ or less distortion, 40 watt Peak CHANNELS. INPUT IMPEDANCESS. GAIN.

Microphone inputela are high impedance Medium gain inputs 70 db , 5 megohms BASS TONE CONTROL........(a) Maximum oives flat response or TREBLE TONE CONTROL...... Mives 10 db attenuation (aximum 70 cps . (3) Minimum gives 15 db ittonuation (i) 70 cps HUM AND NOISE. . . . . . . . . . . . . Tone controis in maximum position: FREOUENCY RANGE. Microphone channels 60 db below 30 walts OUTPUT LOAD IMPEDANCES ............. 2, 4, 8, 15, 500 ohms TUBES USED ..............2-6SJ7, 1-6SFS, 1-6SC7, 26 L 6 G , 1.5 V 4 G LINE DRAIN .............140 watts at 117 volts, with phono top 150 watts
30 watt Amplifier and Tubes only.
2N250-Shipping Welaht 27 lbs
54.50


## MASCO MUSICALFINSTRUMENT ? ORTABLE AMPLIFIER SYSTEMS

## MASCO 5-WATT ECONOMY MODEL

complete musical instrument amplifier system in one lightweigh ortable case. Ideally suited for musicians, singers, lecturers, circus arkers and other entertainment applications. High quality amplifier and rige heavy duty $8^{\prime \prime}$ PM speoker insures bell-clear musical repraduction 115 watts audio output at less than $5 \%$ harmonic distortion for powerful om filling volume. Extremely low hum level assures quiet operation ual channel inputs accommodate any standard electronic instrumen ickup or microphone; single volume control for simplified operation ircuits are fused in compliance with Underwritern Laboratories specifialions. Hardwood carrying case is sturdily constructed and attractively vered in two tone blue and gray fabrikajd. Complete with tuben apg. Wi. 15 lbs. N338-33.00 less $2 \%$ cash discount
32.34
3. Watt Amplifier Speaificatione

OWER OUTPUT...... . 5 watts at lais than $5 \%$ harmonic distortion NPUTS ............Two-uitable for mike or instrument plckup REOUENCY RESPONSE


LEVET
OWER CONSUMPTION IMENSIONS.

## MASCO 18 -WATT DELUXE MODEL

Devigned for the diecriminating mustcian, this new 18 -watt music ampllter offers all the latest fealures for the finest musical instrument reprowetion. Individual bass and treble controls vary the overtones from rite, clear "highs" to rich mellow "lows." Amplifier" a exclusive circuit ritp, clear hiqhs to rich mellow lows. Ampiner a exclusive circuit utign provides 18 watis of audio output at less than $5 \%$ hammonic disartion. Heavy duty 12 speaker mounted in acousificairy decigned case Fives lifelike reproduction and eliminates ialge harmonics. Prapueney
erpone $\pm 2 \mathrm{db}$ from 50 to $12,000 \mathrm{cps}$. Three instruments or microphones, evponse $\pm 2$ db from 50 to 12,000 cps. Three instruments or mucrophones, br any combination may be used separately or simultaneously by means with individual volume control of each. Sturdy hardwosd case, covered $n$ twotone blue and gray lobrikoid. Complete with tubes. Shpg. Wt.
36 lbs. 97.50 leas $2 \%$ cash discount.
. Net
95.55 18. Watt Amplifior Specificetiona

OWER OUTPUT .............. 18 watts at less than $5 \%$ distortion EAK POWER

617 (3) बsizct (2) 1.0110 db HUM LEVEL............................ below output level of 18 watts

## MUSICAL CONTACT MICROPHONES

Hi-impedance plckup designed for use with any musical instrument. Easily installed withost special strings or changes. The brilliant rounded tone resulting from the use of these pickupe for exceod the power of the musical instrument alone. Essy to instoll; will not mar surfaces. 8 -foot cable
N13746-(A) Lems volume control. Shpg. wt. 4 lbs.
4.65

N13745-(B) With volume conlrol. Shpg. wt. 4 lbs .


MASCO 12-WATT MUSICAL INSTRUMENT AMPLIFIER

A new streamlined destan case incorporates the latest sound enainee-ing lechniques to aive you this unusually fire musical instrument amolfier Perfect for uee by soloists, orchastras, meters of ceremony, etc. 12 watt undistorted output delivered through s 10 inch heavy duty matched speaker, astures excellent reproduction of tones at all volurre lemels. Hum-free, esfety-fused circuit with two inputs, permits individuet or simultaneous use of two instruments of two microphones. Fingmit p eontrol while playing is conventently prorided on top of the attractive olue and aray case volume, tone and indieating pilot light are alwave handy With Tubes- Sh pg . Wi 22 lbm . 2N343-49.50 lees $2 \%$ cash discourt.
48.51

## 12-Watt Amplifier Specifications

POWER OUTPUT... 12 watto with les than $5 \%$ harmonie dislortion INPUTS Two-sulleble for microphone or mubicel instrument ciekup FREOUENCY RESPONSE POWER GAIN
(2) 6 SLTGT (2) 6 VGGT $5 Y$ YuT Rect for)

TUBES
(2) 6 SLTGT, (2) $6 \mathrm{~V} 6 \mathrm{GT} 5 Y 3 G T$ Rectifor)
62 dh telow an outpul level of 12 watt

POWER CONSUTMPTION DIMENSIONS.
$6 C$ woth ot 117 volit. 80 CPS

## MASCO 35-WATT PORTABLE SOUND SYSTEM

The powerful Masco 35 -watt complete portable aystem is designed to give mazimum efficiency and performance in a wide range of applications. It is ideally suited for use in chapals, recreation halls, side shows, campaigns, night clube, carnivale, orchestras and various announcing uses. The ontire system is easy to carry and set up-amplifier, speakers, microphone and cables are all housed in one compact portable case. Many important teaturen and relinements are bultt into the excellently desiçned high fidelity amplifier. Separate bass and Ireble equalizer controls make it possible to attentuatio or accentuate the high or low frequencies without aflecting the opposite frequency range. Four input channels-three mikes and one phono, ach with individual volume control, provide extreme versatility. The output is tapped al varlous impedances to match any speakor or speaker combination; selector 8 witch permits easy adjustment. Excellent frequency reaponse is flat within $\pm 2 \mathrm{db}$ from 50 to $15,000 \mathrm{cps}$ for superb reproduction of volce and music. Other extras" include electronic mixing humfree operation, negative feedback and a slanted front parel with convenient "Dial-glo" indirect lighting. Amplifier is housed in attractively atyled all-metal cabinet finished in blue and gray

Complete Masco 35-Watt Portable Systom includes amplifior with tubes, two heavy duty. 25 -watt lensen 12 -inch PM speakers (or equal), each with 25 -ft. cable and attachad plug, Astatic JT. 30 gemi-directional crystal mike with $12-\mathrm{ft}$. cable and connectors and a fine two-eection case of solid, non-resonant construction, linished in wator-repallent blue labrikoid. Amplifier mounted on "sidde eary" board. Shipped ready far installation and operation. Shpg WI. 63 lbe

2N300-158.07 less $2 \%$ cash diecount.
Not 154.91
Masco Model MA-35N Amplitier only, with Tubes.
2N303-93.00 less $2 \%$... Shpg. Wt. 32 lbw ......
2N304-Set of Mike and Speoker pluge for above
Manco Model MA-35RCN Amplifies-Usea the same chassin detcribed above for the MA-35N amplifter but has a built-in automotic record changer top. With tubes. Will not it in portabie case. Shpg. Wt. 52 lbe.
2N301- 126.00 less $2 \%$ cash discount. ................ 123.48
2N302-Set of Mike and Speaker pluge tor above. . . . . . . . 1.50


## MASCO 25-WATT MOBILE SOUND SYSTEM

## MASCO 25 wat Amplifer Specifications

POWER OUTPUT. . 25 watts, less than $5 \%$ distortion, 40 walts Peak INPUTS . . . . . . . Four: 3 microphono, 1 phono POWER GAIN. $\therefore \ldots . . . \pm 2$ do 50 to 15,00 CPS Microphone, 133.5 db : Phono, 79 db Separate Motor Switch 3 micropho Phono, Bate, Treble TUBES. . 4-617, 1-6SL7GT, 1-6SC7, 2-6L6G, $2-724$ (rectifion) OUTPUT IMPEDANCES. ..........4, 8, 15, 125, 250, 500 ohm HUM LEVEL. POWER CONSUMPTION. AC: 145 walts (a) 117 V (includes phono motor). DC: 23 Amps 6 G (battery) (includes phono motor) vOLTAGE.......105-125V, $60 \mathrm{cps} \AA \mathrm{AC}$ or 6 V DC (storage battory)

It's portable . . . it's mobile . . . it operates on either 117 -volt, 60 -cycie AC or 6 -voli DC storage battery. A rugged and powerful.syetom eepecially uestoned for sound truck and other outdoor applicetions. Meets all posesble needs for P.A. installations at open-air theatrca, election campaigns, police and fire department rescue work, traveling
road shows, bathing baches and other locations where AC power is una vallable
The heart of this complete system is the new high quality amplifier with phonagraph top. It operates with equal efficiency on AC or battery. bC operation is ripple-free, asauring undistorted sound. Battery-saver switch thuts off vibrator during intermisaions; reduces battery drain to a minimum. Extra heavy duty dual vibrator maintains steady valtage and frequeney. Four input channels for three mikes and one phono are provided, each with a separate volume control.
Completo 25.Watt Mobile System Includes phono top amplifier with tubes, two University Type SMH reflex projectora, each with 35.ft cable and atteched plug, two 25 -watt driver units, and Shure Madel 505 C microphone and cable
2N344-Shupping Weight 118 lbs
$17 \% .5 \%$
MASCO MODEL MC-25PN. 25 -Watt Mobile Amphitier with phono top. Shipping Woight 44 lbs . With tuber.
2N332-108 Co less 2\% cash discount. . ...................Net 105.84 MASCO MODEL MC-25RC. 25-Watt Mobile Amplifier with tubse and record changer lop. Shpg. Wt. 52 lbe-
2N333-155.00 less $2 \%$ cash discount.
2N361-Connector Kit for MC-25PN \& MC.25RC Amplifiers .. 1.50

## panazequm frce trackz: 1. for the BIGJOB

## MASCO DRIVER PRE-AMP

Model DR-5. Designed for use with 50 and 75 -watt boosters shown on this page, but also suilable for mixing and adding extra microphone input channels to low gain and booster amplifiers. Can be used in vertical rack or operating console. Four high-gain microphone inputs permit mixing four hi-Impedance microphones. Separate bass and treble controls adjust to acoustics of instaialion. Front panel includes ON.OFF owitch with pilot light. Fused for protection. Finished in blue and gray hammertone. pilol light. Fused tor protection. Finished in biue and gray hammortone Complate with tubes and instructions. Shpg. Wt. 20 lbs. 2N317-61.50 less $2 \%$ cash discount.

## Speciflections, MASCO Driver Pre-Amplifer

OUTPUT: 1.9 volts at 500 ohms, lese than $5 \%$ dis:ortion. INPUTS: 4 microphones, 2 phono or radio. TONE CONTROLS: 9 db bass boost, 10 db attenuation at 50 cps. 10 db treble bookt, 12 ab attentuation at $10,000 \mathrm{cps}$. FREQUENCY RESPONSE: $\pm 2 \mathrm{db} 50$ to $15,000 \mathrm{cPs}$. POWER GAIN: Microphone, 97 db ; phono, 65 db TUBES: 6SL7GT, (5) 617. 6SN7GT, 6X5GT rectitier. OUTPUT IMPEDANCE: 500 ohms balancec or unbelanced line. HUM LEVEL: 35 do below zero level of 006 watts. POWER CONSUMPTION: 40 watte at 117 volts. VOLTAGE: 105-125 volte, 60 cycles. DIMENSIONS: $15 \times 81 / 2 \times 8 \% /{ }^{\prime \prime}$ high.



 npion …in wide $\times 12^{\prime \prime}$ deop $x 8 \%$

These two powertul high fidelity amplifiers answer the need for top quality pertomance in large commercial and industrial P.A. installations. They are suitable for heavy duly service covering large outdoor and indoor areas such as lootball fields, large auditoriums, rincs, etc. wherever numerous speakers are required. Other fized system applications such as paging and announcing in steel milis, drydocks and heavy construction lobe make these supe th inetruments excellent for special custom tobs requiring tremendous power and good clarity. Both units feature four mike inputs and one phono input with separate controis for each, indivdual bass and treble equalizers and full electronic mixing of all channels. If remote control operation is desired, we recommend the model MASQNR 50 watt amplitter. When used in conlunction with the Model RCB Remote Control Box, this amplifier prcvides independent or simultaneous operation of two mike channels up to 2,000 leet.
MASCO MODEL MA-SON. 50 Watt Amp. and Tubes. Wt. 42 lbs.
108.78

MASCO MODEL MA-50NR. 50-W. Amp. \& Tubes. Wt. 41 lbe.
For remote use. Net 111.72 MODEL RCB. Remole Control Box for MA-50NR. 2N313-Shipping Weight 3 lbs.
100.Ft Cable \& Piugs for Remote Control Box.

2N314-Shipping Weght 2 lbs.

MASCO 50 and

## 75-WATT <br> BOOSTERS

## Spocifications, MASCO 50-Woth Booster Amplifior

OUTPUT 50 watts, Class AB-1, leaz than $5 \%$ distortion. PEAK POWER: 70 watts. INP UTS: 500 ohms balanced or unbalanced line. FREOUENCY RESPONSE: $\pm 2 \mathrm{db} 50$ to 15,000 cpe POWER GAIN: 46 db . CONTROLS: mastor gain and separate ON-OFF switch. TUBES: (2) 6SN7GT, (4) 5 6L6G. (2) SV4G rectifiorg. OUTPUT MPEDANCES: 4, 8 , 15, 125 , 25E CONSUMPTION: 185 watts at 117 volts. VOLTAGE: $105-125$ volts,
 $2 \mathrm{~N} 318-81.00$ less $2 \%$

## Speeifications, MASCO 75-Wat Booster Amplifer

OUTPUT: 75 walts, Class AB-2, less than $5 \%$ distortion. INPUTS: 500 ohms balanced or unbalanced lint. FREQUENCY RESPONSE: $\pm 2 \mathrm{db}$ 50 to $15,000 \mathrm{cps}$. POWER GAIN 47.9 db . CONTROLS: Master gain and separate ON-OFF switch. TUBES: 6SN7GT, (2) 6V6GT, (4) 6L6G, 5 seart. (2) SV4G rectifiers. OUTPUT IMPEDANCES: 8, 15, 60,125 , 250 ohms. HUM LEVEL: 68 db below output level of 75 watte. POWER CONSUMPTION: 250 watte at 117 volte. VOLTAGE: $105-125$ volts, 60 cycles. CABINET: Steel, gray hammertone tinish; 17x12x81/" higk. 2N319-109.20 less $2 \%$....... .Shpg. Wt. 57 lbs.
2N320-Set of pluga for $50 \& 75$-Watt Amplifiers.


## MASCO 28-WATT SCHOOL SYSTEM AMPLIFIER Easy To Install... Modest in Price

Educationai institulions, hospitals, elubs and hotel find this excellen sound system amplifier a valuable addition to their eqpipment when used Esponfunction with an external microphone, phonisgraph or radio. Especially designed to provide elficient control and distribution of radio programe, phonograph music, lectures and paging to any number of rooms up to 36 , singly, in groups, or all of the same time. Calls may originate from any room to the master unit when proper interconnecting cable is used. Other features include an indicalor for correct volume level, soparate volumo controls that permit adjustment of calls, and twoway conversation to aimplity communication Shpa. Wt. 37 lhe with 2N324-6-room Model 110.70-leas $2 \%$
2N325--12-room Model 113.70-lege $2 \%$
2N326-18-room Model 116.70 - less $2 \%$ 2N327-24-room Model 119.70-Less $2 \%$ 2N345-36-room Model 137.70-less $2 \%$
We can supply radio, phonograph and microphone attachments to fit your requirements with the School Syctem Amplifer

## Specifications for School System Ampllfer

POWER OUTPUT PEAK POWER INPUTS.
FREOUENCY RESPONSE POWER GAIN CONTROL.S. .
.28 watts, class AB-1 at less than 5\% distortion External Microphone, phono and radio built-in intercommunication provision Microphone 130 db ; 15 db Separale in and out volume controle; Function selector, "Talk-listen," Master Call, Station solector, TUBES . . . . 6SC7, 6SL7GT, 65 N 7 GT , $2-6 \mathrm{LL} 6 \mathrm{G}, 6 \mathrm{U} 5,5 \mathrm{~V} 4 \mathrm{G}$ (reetifier) OUTPUT IMPEDANCES. 80 ohm belanced line, constant voltage HUM LEVEL. HUM LEVEL POWER CONSUMPTION VOLTAGE. CABINETS (Metal)

145 watts at 117 volts
$105-125$ volts 60 CPS
Brown Hammertone. $16^{\prime \prime} \times 9 y^{\prime \prime} \times 13^{\circ}$ high


## MASCO DUAL-SPEED 16" TRANSCRIPTION PLAYER

Model TLS-16. This new deluze model transcription player features duai apeod motor and two pickup arms each with the GE variable reluctance cartridgo and long playing needle. The player is also equipped with a buitt-in pre-amplifier unit. Ideal for reproduction of $16^{\circ}$ transcriptions as well as the new microgroove records used by broadcasting sludios, advertising agencies, lecturers and theatrical offices. An external apeed regulator adjusts the heavy-duty motor to play 78 or $331 / 10$ and $12^{\prime \prime}$ records. A wido range frequency response 5 -wat amplifier includes individual bam and treble ccuaizers that permit accurate tone settings. Separate microphone and phono inputs are provided. The powerful, tine quality $10^{\circ} \mathrm{PM}$ fpaker is mounted in the removable cover of the case which serves an an excellent baffle. Sloped-front control panel with drop-leal protecting piect, makes adjustments oasier and faster. Handsome, brown alligator fabrikad portable case measures $171 / \times 22 \times 10 \%$ " closed. For $105-125 \mathrm{~V}, 60$ cycles AC. With Tubes. Shpg Wt. 48 lbe
$35 \mathrm{~N} 22691-121.57$ lees $2 \%$
Not 12.14
Model TP18AL. Same as above but with crystal cartrldges in the dual pickupe. Shpg. Wt, 43 lbs
pickupe. Shpg. Wt. 43 lbs.
Nel 106.62

## UNIVERSITY "POWERMIKE" SOUND SYSTEM

Here is a new, complele voice-amplified sound system that has no vacuum tube amplifies. It operates on any 6 -voll battery (standard dry cells ins storage) and delivers $11 / 2$ watts of undis toined audio power. The Powermke is an extremely rugged carbon microphone, designed to give trouble free performance over yeare of use. This compcit, portable sound system covers amall crowds or projects sound up to 100 feot . It can be used any plam...instanily. Mersly prest the button with and ialk. Gives exceitent vorce repioduction in Euch applications as plectioneering, dispatehing, arinouncing and paging, building onetruction, lire tighusig, raitioad platforms, etc. A eigarette ighter adaptor may be plugged into the dashbeard of an autoightar adaptor may be plugged into the dashboard of an auto-
mobile tor iminediato 6 volt aritlability. Polarity can be disreciarded since the outer contarer of the Powermike is solated from the wiring. Frequency reaponbe: $100-5000$-ycles. Outpul imsedarice 24 ohins. In additiot to the mirrophont, the systm meludes a waterprosl, unit-driven reflex spealet mounted on the batlery housing, and a 6-ft cord.
2N426-Shipping Weigh 8 lbs
20N20710-Hot Shot Battery for above. Wi. $101 / 2 \mathrm{lbs}$
35.28
2.50

## NEW MASCO "Con-fer-phone" INTERCOM SYSTEMS



MASTER TO REMOTE 5-STATION SYSTEM
-ON-OFF Switch and Volume Control on Niaster Station
-Two-Way Conversation Possible with Kemote

- Separate Press-Ta-Talk
Switch on Kemote and inaster Units
- Kemote Calls to Miaster ...Privacy Assured

Here's a popular type intercom system with a single master station that has provision for five remote stations, Especially adaptable for industrial and commercial use - in plants, schools, offices and wherever there is need for private in-ter-office conversation between a chief executive and a maximum of five subordinates. The master station includes a press-to-talk switch, station selector, volume control and ON-OFF switch for instant contact between it and the five stations...either all at once or any selected one. Press-Tolalk feature on remote stations permits it to originate calls to the master and at the same time assures privacy of conversation. Clear, natural voice reproduction. Both units are enclosed in matching unbreakable cast aluminum housings finished in attractive walnut hammertone. Dimensions: $65 / 8 x$ $7 \mathrm{l} / 8 \times 5 \frac{1}{4 \prime \prime}$. Shpg. Wt of master, 6 lbs ; the remote, $31 / 4 \mathrm{lbs}$. For 110 volts AC or DC.

Type JM5-Master Station, Complete with Tmbes. 22.05
$2 N 391-22.50$ less $2 \%$ cash discount...........Net..... 22.0. Type JR-Remote Station.
2N392-7.65 less $2 \%$ cash discount...............Net............. 7. 50 3-Conductor Cable for above Intercom System.
19N16148-Per 100 ft...1.26.................Net, Per ft......... $11 / 2$


MASCO MODEL JMR 2-WAY SYSTEM

- Easy To Install and Operate - Complete - Nothing Else To Buy

A complete two-station intercom system with one master and one remote. Ideal as baby, "nurse" or for communication between any two points. Includes 50 feet of 3 -conductor cable and complete instructions for easy installation. Plug into light socket, connect the two stations with the cable and it's ready to operate. The master has its own volume control. ON-OFF switch and press-to-talk switch. Remote station also has a press-to-talk switch for originating its own call and to provide privacy if desired. Units are suitable for use as a two-way paging system. Unbreakable cast aluminum housings inished in walnut hammertone. Slze: $65 / 8 x$ $7 \mathrm{l} / 8 \times 51 / \mathrm{m}^{\mathrm{m}}$. For 110 volts, AC or DC. U/L approved. Complete system with tubes and cable. Shpg. Wt. 10 lbs .
24.99

2N389-25.50 less $2 \%$ cash discount...........Net.... 24. 99
Type JMRW-Same as above except units finished in white.
Type JMRW-Same as above except units finished in white.
2N $390-27.00$ less $2 \%$ cash discount....................... 26.46
Additional cable for the above systems.
19N16134-Per 100 ft...1.76........................ Pet, Per ft .

## MASCO ALL-MASTER INTERCOM SYSTEM

- No Cross Talk
- Instant Selection of One or All Miaster Stations

Press-To-Talk Switch - Unbreakable Cast Aluminunı 1:ousing

For less leg wark and fast action, here's a flexible, modern system that features a total of six master stations. Provides instant communication between a master and five other masters. Each unit can converse two-way with any or all masstation selector and volume control with ON-OFF switch. The specially designed 3 -tube amplifiers and matching Alnico V PM speakers give sharr, clear reproduction of voice with ample sensitivity. Dimensions: $65 / 8 \times 71 / 8 \times 5^{1 / 4 \prime \prime}$. For 110 volts, 60 cycles AC. U/L cpproved. Shipping Welght 6 lbs.
Type 1M5. Complete Master Station With Tubes.
2N393-22.50 less 2\% cash discount....Net, Each...22.05 7-Conductor Cable for use with as many as six master stations.
19N16093-Per 100 ft... 7.20............. Net, Per ft.............. . . 08 5-Conductor Cable for use with as many as four master stations.
19N16091-Per 100 ft... 5.40..............Net, Per ft..............


## 6 OR 12.STATION PUSH.BUTTON SYSTEM

A deluxe intercom system that can be installed as a Master-To-Master-To-Remote Intermix System, a Mas-ter-To-Master or Master-To-Remote installation. Master and remote units can be intermixed. Remotes can originate calls. Individual or group conversation is possible. Units have press-to-talk switch and volume controls; press-to-talk and "dictate" position on master stations. Walnut hammertone enamel case. 110 volts, AC or DC operation. Shpg. Wt. 8 lbs . 12-Station Master Unit
2N395-40.77 less $2 \%$ cash discount.....Net........... 39.95 6-Station Master Unit
2N394-34.77 less 2\% cash discount.... Net.................. 34.07 Type jS-6 Rémote Station. With 6-position master selector and call switch. Shpg. Wt. $31 / 4 \mathrm{lbs}$.
2N398-11.97 less $2 \%$ cash discount.....Net.................. 11.73
Type JS Remote Station with Call Switch
2N397-8.40 less $2 \%$ cash discount.....Net.................... 8.23
Type JI Remote Station less call switch \&s selector
2N396-7.65 less $2 \%$ cash discount.....Net........................7.50
19N16134-Master-to-jL-Remote cable...................... . $02 / \mathrm{ft}$
19N20867-Master-to-JS or JSG-Kemote shielded cable . $04 / \mathrm{ft}$
Note: To connect Master to Master use one pair of twisted for each master in the system.
3-Pair for 2 or 3 Masters.
19N16138-Per ft. .05.......
6-Pair for up to 6 Masters.
19 N 16140 -Per ft. $07 . .$.
13-Pair for up to 12 Masters.
19N16180-Per ft. . $20 . . . . . . . . .$.
2N399-Junction Box for Masters.
100 ft

## RCA <br> o

We stock both of the leading national brands. Your quarantee of fine Tukes insy be assorted to get quantity prises, You will be aiven the quality is backed by two of the most famous names in the field of elec- benefit of any price reductions bevoming effective after the publication tronics, RCA and GE. All tubes are guaranteed for six months except of this cetalog. against burnouts and breakage.

There is a $5 \%$ additional discount on lots of 50 or more assorted RCA or GE tubes.

| Tube Type | List Price | NET EACH |  | Tyре Tube | List Price | NET EACH |  | Tube Type | List Price | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Lots 19 | Lots 10 |  |  | Lots 19 | Lots 10 |  |  | Lots 19 | Lots 10 |
| OA2 | 3. 20 | 1.79 | 1.69 | 5Y4G | 1.50 | . 84 | . 79 | 6L6G | 2.90 | 1.62 | 1.54 |
| OA3 VR75 | 2.65 | 1.48 | 1.40 | 523 | 1.80 | 1.01 | . 95 | 6 L 7 | 2.40 | 1.34 | 1.27 |
| OA4G | 2.65 | 1.48 | 1.40 | 524 | 2.6 .5 | 1.48 | 1.40 | 6L7G | 2.90 | 1.62 | 1.54 |
| OC3 VR105 | 2.65 | 1.48 | 1.40 | 6 A3 | 3.30 | 1.79 | 1.69 | 6N7 | 2.40 | 1.34 | 1.27 |
| OD3 VR150 | 2.65 | 1.48 | 1.40 | 6A4/LA | 3.20 | 1.79 | 1.69 | 6N7GT | 2.40 | 1.34 | 1.27 |
| OY4 | 4.80 | 2.68 | 2.54 | 6A6 | 2.65 | 1.48 | 1.40 | 6 Q7 | 2.06 | 1.12 | 1.06 |
| OZ4 | 1.6 .5 | . .92 | . 87 | 6 A7 | 2.06 | 1.12 | 1.06 | 6Q7G | 1.80 | 1.01 | . 95 |
| OZ4G | 1.65 | . 92 | . 87 | 6 A8 | 2.00 | 1.12 | 1.06 | 607 GT | 1.80 | 1.01 | . 95 |
| 143 | 2.20 | 1.23 | 1.16 | 6A8G | $2 .(\mathrm{m})$ | 1.12 | 1.06 | 687 | 2.65 | 1.48 | 1.40 |
| 1A4P | 3.90 | 2.18 | 2.06 | 6A8GT | 2.00 | 1.12 | 1.06 | 6R7GT | 2.6 .5 | 1.48 | 1.40 |
| 1A5GT | 1.80 | 1.01 | .95 | 6AB5 6N5 | 2.0 .5 | 1.48 | 1.40 | 657 | 2.65 | 1.48 | 1.40 |
| 1 1A6 | 3.20 | 1.79 | 1.69 | 6AB7/1853 | 3.20 | 1.79 | 1.69 | 6S7G | 3.20 | 1.79 | 1.69 |
| $1 \mathrm{A7GT}$ | 2.00 | 1.12 | 1.06 | 6AC5GT | 2.90 | 1.62 | 1.54 | 6S8GT | 2.65 | 1.48 | 1.40 |
| 1B3GT/8016 | 2.65 | 1.48 | 1.40 | 6AC7 1852 | 2.90 | 1.62 | 1.54 | 6SA7 | 1.65 | . 92 | . 87 |
| 184P | 3.90 | 2.18 | 2.06 | 6AD7G | 3.20 | 1.79 | 1.69 | 6SA7GT | 1.65 | . 92 | . 87 |
| 1B5/25S | 3.20 | 1.79 | 1.69 | 6AF6G | 2.65 | 1.48 | 1.40 | 6S87Y | 2.40 | 1.34 | 1.27 |
| 1 CSGT | 2.20 | 1.23 | 1.16 | 6AG5 | 2.65 | 1.48 | 1.40 | 6SC7 | 2.00 | 1.12 | 1.06 |
| 1 C 6 | 3.20 | 1.79 | 1.69 | 6AG7 | 3.20 | 1.79 | 1.69 | 6SF5 | 1.65 | . 92 | . 87 |
| 1C7G | 3.20 | 1.79 | 1.69 | 6AH6 | 3.90 | 2.18 | 2.06 | 6SF5GT | 1.80 | 1.01 | .95 .95 |
| 1D5GP | 3.90 | 2.18 | 2.06 | 6AK5 | 3.90 | 2.18 | 2.06 | 6SF7 | 2.00 | 1.12 | 1.06 |
| 1D7G | 3.20 | 1.79 | 1.69 | 6AK6 | 2.40 | 1.34 | 1.27 | 6SG7 | 2.00 | 1.12 | 1.06 |
| 1D8GT | 3.90 | 2.18 | 2.06 | 6AL5 | 2.00 | 1.12 | 1.06 | 6SH7 | 2.20 | 1.23 | 1.16 |
| 1E5GP | 3.90 | 2.18 | 2.06 | 6AL7GT | 2.65 | 1.48 | 1.40 | 65.17 | 1.65 | . 92 | . 87 |
| 1F4 | 2.65 | 1.48 | -1.40 | 6 A Q5 | 2.00 | 1.12 | 1.06 | 6SJ7GT | 1.65 | . 92 | . 87 |
| 1F5G | 2.65 | 1.48 | 1.40 | 6A06 | 1.80 | 1.01 | . 95 | 6SK7 | 1.65 | . 92 | . 87 |
| $1 F 6$ | 3.90 | 2.18 | 2.06 | 6A97GT | 2.20 | 1.23 | 1.16 | 6SK7GT | 1.65 | . 92 | . 87 |
| 1F7G | 3.90 | 2.18 | 2.06 | 6AS7G | 6.75 | 4.53 | 4.53 | 65L7GT | 2.40 | 1.34 | 1.27 |
| 1G4GT | 2.65 | 1.48 | 1.40 | 6AT6 | 1.50 | . 84 | . 79 | 6SN7GT | 2.20 | 1.23 | 1.16 |
| 1G5G | 2.65 | 1.48 | 1.40 | 6AU6 | 2.00 | 1.12 | 1.06 | 6507 | 1.50 | . 84 | . 79 |
| 1GGGT | 2.65 | 1.48 | 1.40 | 6AV6 | 1.50 | . 84 | . 79 | 6SQ7GT | 1.50 | . 84 | . 79 |
| 1H4G | 2.20 | 1.23 | 1.16 | 684G | 3.20 | 1.79 | 1.69 | 6SR7 | 1.80 | 1.01 | . 95 |
| 1H5GT | 1.65 | . 92 | . 87 | 685 | 3.20 | 1.79 | 1.69 | 6S57 | 1.810 | 1.01 | . 95 |
| 1H6G | 3.20 | 1.79 | 1.69 | 686G | 2.20 | 1.23 | 1.16 | $65 \mathrm{T7}$ | 2.65 | 1.48 | 1.40 |
| 116GT | 3.20 | 1.79 | 1.69 | 687 | 3.20 | 1.79 | 1.69 | 6527 | 2.20 | 1.23 | 1.16 |
| 114 | 2.00 | 1.12 | 1.06 | 688 | 3.20 | 1.79 | 1.69 | 6T7G | 3.20 | 1.79 | 1.69 |
| 11.A4 | 2.65 | 1.48 | 1.40 | 6B8G | $3.20)$ | 1.79 | 1.69 | 678 | 2.90 | 1.62 | 1.54 |
| 1LA6 | 2.65 | 1.48 | 1.40 | 6BA6 | 1.80 | 1.01 | . 95 | 6U5 6G5 | 2.00 | 1.12 | 1.06 |
| 1LB4 | 2.65 | 1.48 | 1.40 | 68E6 | 1.80 | 1.01 | . 95 | 6U7/G | 1.80 | 1.01 | . 95 |
| 1LC5 | 2.05 | 1.48 | 1.40 | 6BF6 | 1.65 | . 92 | . 87 | 6V6 | .3.20 | 1.79 | 1.69 |
| 1LC6 | 2.05 | 1.48 | 1.40 | 6BG6G | 4.80 | 2.68 | 2.54 | 6V6GT | $2.00)$ | 1.12 | 1.06 |
| 12.D5 | 2.65 | 1.48 | 1.40 | 68H6 | 2.00 | 1.12 | 1.06 | 6W4GT | 1.80 | 1.01 | . 95 |
| 1LE3 | 2.0 .5 | 1.48 | 1.40 | 6816 | 2.010 | 1.12 | 1.06 | 6W7G | 2.65 | 1.48 | 1.40 |
| 1LH4 | 2.65 | 1.48 | 1.40 | $6 \mathrm{C4}$ | 1.65 | . 92 | . 87 | $6 \times 4$ | 1.50 | . 84 | . 79 |
| 1LN5 | 2.65 | 1.48 | 1.40 | 6 C 5 | 1.615 | . 92 | . 87 | $6 \times 5$ | 2.65 | 1.48 | 1.40 |
| 1N5GT | 2.00 | 1.12 | 1.06 | 6C5GT | 1.65 | . 92 | . 87 | $6 \times 5 \mathrm{GT}$ | 1.50 | . 84 | . 79 |
| 1P5GT | 2.6 .5 | 1.48 | 1.40 | $6 \mathrm{C6}$ | 2.00 | 1.12 | 1.06 | 6Y6G | 2.40 | 1.34 | 1.27 |
| 105GT | 2.65 | 1.48 | 1.40 | 6C8G | 3.20 | 1.79 | 1.69 | 6Z7G | 3.90 | 2.18 | 2.06 |
| 1R4 | 2.65 | 1.48 | 1.40 | 6D6 | 1.65 | . 92 | . 87 | 6ZY5G | 2.20 | 1.23 | 1.16 |
| 1R5 | 2.00 | 1.12 | 1.06 | 6D8G | 3.20 | 1.79 | 1.69 | 7A4/XXL | 1.80 | 1.01 | . 95 |
| 154 | 2.40 | 1.34 | 1.27 | GE5 | 2.20 | 1.23 | 1.16 | 745 | 1.80 | 1.01 | . 95 |
| 155 | 1.80 | 1.01 | . 95 | $6 F 5$ | 1.65 | . 92 | . 87 | 7A6 | 1.80 | 1.01 | . 95 |
| 174 | 2.00 | 1.12 | 1.06 | 6F5GT | 1.65 | . 92 | . 87 | 7 A 7 | 1.80 | 1.01 | . 95 |
| 1T5GT | 2.65 | 1.48 | 1.40 | 6F6 | 2.00 | 1.12 | 1.06 | $7 \mathrm{A8}$ | 1.80 | 1.01 | . 95 |
| $1{ }^{1} 4$ | 2.00 | 1.12 | 1.06 | 6F6G | 1.65 | . 92 | . 87 | 7AG7 | 2.20 | 1.23 | 1.16 |
| 105 | 1.80 | 1.01 | . 95 | GF6GT | 1.65 | . 92 | . 87 | 7B4 | 1.80 | 1.01 | . 95 |
| 1V | 2.20 | 1.23 | 1.16 | 6F7 | 3.20 | 1.79 | 1.69 | 785 | 1.80 | 1.01 | . 95 |
| 2 A3 | 3.20 | 1.79 | 1.69 | 6F8G | 3.20 | 1.79 | 1.69 | 786 | 1.80 | 1.01 | . 95 |
| 2 A5 | 2.20 | 1.23 | 1.16 | 6G6G | 2.65 | 1.48 | 1.40 | 787 | 1.80 | 1.01 | . 95 |
| $2 A 6$ | 2.65 | 1.48 | 1.40 | 6H6 | 1.65 | . 92 | . 87 | 788 | 1.80 | 1.01 | . 95 |
| 2B7 | 2.65 | 1.48 | 1.40 | 6H6GT | 1.65 | . 92 | . 87 | $7 \mathrm{C5}$ | 1.80 | 1.01 | . 95 |
| 2 E 5 | 2.65 | 1.48 | 1.40 | 615 | 1.50 | . 84 | . 79 | $7{ }^{7} 6$ | 1.80 | 1.01 | . 95 |
| 2V3G | 5.25 | 2.93 | 2.93 | 6J5GT | 1.50 | . 84 | . 79 | $7 \mathrm{C7}$ | 1.80 | 1.01 | . 95 |
| $2 \times 24$ | 4.35 | 2.43 | 2.30 | 656 | 2.90 | 1.62 | 1.54 | $7 \mathrm{E6}$ | 1.80 | 1.01 | . 95 |
| 3LF4 | 2.65 | 1.48 | 1.40 | $6 J 7$ | 2.00 | 1.12 | 1.06 | $7 E 7$ | 2.20 | 1.23 | 1.16 |
| $3 \mathrm{Q4}$ | 2.20 | 1.23 | 1.16 | 6J7G | 2.00 | 1.12 | 1.06 | $7 F 7$ | 2.20 | 1.23 | 1.16 |
| 305GT | 2.40 | 1.34 | 1.27 | 6J7GT | 2.00 | 1.12 | 1.06 | 7F8 | 2.65 | 1.48 | 1.40 |
| 3 S 4 | 2.00 | 1.12 | 1.06 | 6K6GT | 1.50 | . 84 | . 79 | 7G7, 1232 | 2.65 | 1.48 | 1.40 |
| 3 V 4 | 2.00 | 1.12 | 1.06 | $6 K 7$ | 1.65 | . 92 | . 87 | 7H7 | 2.00 | 1.12 | 1.06 |
| 574 | 3.90 | 2.18 | 2.06 | 6K7G | 1.65 | . 92 | . 87 | 717 | 2.65 | 1.48 | 1.40 |
| 5U4G | 1.50 | . 84 | . 79 | 6K7GT | 1.65 | . 92 | . 87 | 71.7 | 2.20 | 1.23 | 1.16 |
| 5V4G | 2.40 | 1.34 | 1.27 | 6K8 | 2.40 | 1.34 | 1.27 | 7N7 | 2.20 | 1.23 | 1.16 |
| 5 W 4 | 2.65 | 1.48 | 1.40 | 6K8G | 2.90 | 1.62 | 1.54 | 707 | 1.80 | 1.01 | . 95 |
| 5W4GT | 1.65 | . 92 | . 87 | 6K8GT | 2.40 | 1.34 | 1.27 | 7R7 | 2.20 | 1.23 | 1.16 |
| $5 \times 4 \mathrm{G}$ | 1.80 | 1.01 | . 95 | 6L5G | 2.65 | 1.48 | 1.40 | 757 | 2.65 | 1.48 | 1.40 |
| 5 Y3GT | 1.05 | . 59 | . 56 | 6L6 | 3.55 | 1.98 | 1.88 | 7V7 | 2.65 | 1.48 | 1.40 |

# RCA and GE RECEIVING TUBES 

| Tube Type | List Price | NET EACH |  |
| :---: | :---: | :---: | :---: |
|  |  | Lots 1-9 | Lots 10 |
| $7 W 7$ | 2.65 | 1.48 | 1.40 |
| 7X7/XXFM | 2.65 | 1.48 | 1.40 |
| $7 \mathrm{Y4}$ | 1.80 | 1.01 | . 95 |
| 724 | 1.80 | 1.01 | . 95 |
| 10 | 3.90 | 2.18 | 2.06 |
| 1247 | 3.20 | 1.79 | 1.69 |
| 12A8GT | 2.00 | 1.12 | 1.06 |
| 12AH7GT | 2.65 | 1.48 | 1.40 |
| 12AL5 | 2.00 | 1.12 | 1.06 |
| 12AT6 | 1.50 | . 84 | . 79 |
| 12AT7 | $2.0)$ | 1.62 | 1.54 |
| 12AU6 | 2.00 | 1.12 | 1.06 |
| 12AU7 | 2.40 | 1.34 | 1.27 |
| 12AV6 | 1.50 | . 84 | . 79 |
| 12AW6 | 2.65 | 1.48 | 1.40 |
| 12AX7 | 2.40 | 1.34 | 1.27 |
| 12BA6 | 1.80 | 1.01 | . 95 |
| 12BD6 | 2.00 | 1.12 | 1.06 |
| 12BE6 | 1.80 | 1.01 | . 95 |
| $12 \mathrm{C8}$ | 3.20 | 1.79 | 1.69 |
| 12F5GT | 1.80 | 1.01 | . 95 |
| $12 \mathrm{H6}$ | 1.80 | 1.01 | . 95 |
| 12J5GT | 1.50 | . 84 | . 79 |
| 1257GT | 2.00 | 1.12 | 1.06 |
| 12K7GT | 1.65 | . 92 | . 87 |
| 12 K 8 | 2.40 | 1.34 | 1.27 |
| 12Q7GT | 1.80 | 1.01 | . 95 |
| $12 \mathrm{SA7}$ | 1.65 | . 92 | . 87 |
| 12SA7GT | 1.65 | . 92 | . 87 |
| $12 \mathrm{SC7}$ | 2.20 | 1.23 | 1.16 |
| 12555 | 1.80 | 1.01 | . 95 |
| 125F7 | 2.00 | 1.12 | 1.06 |
| 12SG7 | 2.90 | 1.12 | 1.06 |
| 12SH7 | 2.20 | 1.23 | 1.16 |
| 12557 | 1.65 | . 92 | . 87 |
| 12517 GT | 1.65 | . 92 | . 87 |
| $125 K 7$ | 1.65 | . 92 | . 87 |
| 12SK7GT | 1.65 | . 92 | . 87 |
| 12SL7GT | 2.40 | 1.34 | 1.27 |
| 12SN7GT | 2.20 | 1.23 | 1.16 |
| $12 S Q 7$ 12507 GT | 1.50 1.50 | .84 | .79 |
| 12SQ7GT | 1.50 | . 84 | . 79 |

Federal Miniature Selenium Rect.
 Designed to last the life of the sel. Instant starting and low operating temp. 2 soldering terminals. Rectiliers may be connected ds doubler to supply 250 , 404D3450A and 438D3428A designed for televison

| $\begin{gathered} \text { Nowk } \\ \text { No. } \end{gathered}$ | Type No. | MA | list Price | Earh | Inots/th Barta |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 37N10558 | 402D3452A | 0.5 | 1.10 | . 65 | . 58 |
| 37N10559 | 102D3150A | 75 | 1.30 | . 76 | . 68 |
| 37N10561 | 103D2ti25A | 100 | 1.60 | . 94 | . 84 |
| 37 N 10562 | +138D2:87A | 150 | 1.95 | 1.15 | 1.03 |
| 37N10563 | 104D2795A | 200 | 2.25 | 1.32 | 1.19 |
| 37N10564 | 104D3450A | 250 | 2.50 | 1.47 | 1.32 |
| 37N10557 | 438D3428A | 500 | 3.80 | 2.23 | 2.01 |

Raytheon Sub-Miniature Tubes Extremely compact, flat tubes. Lower voltage batleries can be used because of the low filament drain. Tubes can be either soldered or plugaed into socket Types with (*) use 5 -prong socket; ( $\dagger$ 6-prona; and ( $\ddagger$ ) 7 -prong.
Receiving Tubes

| Stock No. | Type No. | Each |
| :---: | :---: | :---: |
| 37N24961 | 2E32* | 1.56 |
| 37N24963 | 2E36* | 1.88 |
| 37N24965 | 2E42† | 1.56 |
| 37N24967 | 2G22 | 1.56 |
| Hearing Aid Tubes |  |  |
| 37N24968 CK502AX* 1.88 <br> 37N24969 CK503AX* 1.88 <br> 37N24970 CK505AX* 1.88 <br> 37N24972 CK507AX* 1.88 <br> 37N24973 CK510AX $\ddagger$ 3.15 <br> 37N24974 CK512AX* 1.88 <br> 37N24976 CK522AX* 1.88 |  |  |.


| Tube Type | List Price | NET EACH |  |
| :---: | :---: | :---: | :---: |
|  |  | Lots 19 | Lots 10 |
| 12SR7 | 2.20 | 1.23 | 1.16 |
| 1223 | 2.6 .5 | 1.48 | 1.40 |
| 14A4 | 2.65 | 1.48 | 1.40 |
| 14A5 | 3.90 | 2.18 | 2.06 |
| 14A7 | 2.20 | 1.23 | 1.16 |
| 14AF7/XXD | 2.20 | 1.23 | 1.16 |
| 1486 | 2.20 | 1.23 | 1.16 |
| 1488 | 2.20 | 1.23 | 1.16 |
| $14 \mathrm{C7}$ | 2.20 | 1.23 | 1.16 |
| 14E6 | 1.80 | 1.01 | . 95 |
| 14 F 7 | 2.20 | 1.23 | 1.16 |
| 1458 | 2.0 .5 | 1.48 | 1.40 |
| 14H7 | 2.20 | 1.23 | 1.16 |
| 14.17 | 2.65 | 1.48 | 1.40 |
| 14N7 | 2.05 | 1.48 | 1.40 |
| 14.97 | 2.20 | 1.23 | 1.16 |
| 14R7 | 2.20 | 1.23 | 1.16 |
| 19 | 3.20 | 1.79 | 1.69 |
| 1978 | 2.90 | 1.62 | 1.54 |
| 24A | 2.20 | 1.23 | 1.16 |
| 25A6 | 3. 20 | 1.79 | 1.69 |
| 25L6 | 3.20 | 1.79 | 1.69 |
| 25L6GT | 1.65 | . 92 | . 87 |
| 2525 | 1.50 | . 84 | . 79 |
| 2526 | 2.20 | 1.23 | 1.16 |
| 2526GT | 1.35 | . 75 | . 71 |
| 26 | 1.80 | 1.01 | . 95 |
| 27 | 1.50 | . 84 | . 79 |
| 30 | 2.00 | 1.12 | 1.06 |
| 31 | 2.65 | 1.48 | 1.40 |
| 32 | 3.55 | 1.98 | 1.88 |
| 33 | 3.20 | 1.79 | 1.69 |
| 34 | 3.30 | 1.79 | 1.69 |
| 35 | 2.00 | 1.12 | 1.06 |
| 35A5 | 1.80 | 1.01 | . 95 |
| 3585 | 2.00 | 1.12 | 1.06 |
| 35L6GT | 1.65.5 | . 92 | . 87 |
| 35W4 | 1.25 | . 70 | . 66 |
| $35 Y 4$ | 1.80 | 1.01 | . 95 |
| 3523 | 1.80 | 1.01 | . 95 |
| 35Z4GT | $1.51)$ | . 84 | . 79 |
| 3525GT | 1.25 | . 70 | . 66 |
| 36 | 2.65 | 1.48 | 1.40 |

RCA AND GE TV PICTURE TUBES


| RCA No. | GE No. | Type | Each |
| :---: | :---: | :---: | :---: |
| 36N249]1 |  | 5 BP 4 | 22.50 |
| 36N24912 | 36N24680 | 5TP4 | 59.40 |
| 36N24915 |  | 7DP4 | 23.80 |
| 36N24922 | 36N24682 | 7JP4 | 16.88 |
|  | 36N24683 | 8AP4 | 16.50 |
| 36N24917 |  | 9AP4 | 57.60 |
| 36N24918 | 36N24684 | 10BP4 | 27.50 |
|  | 36N24685 | 10FP4 | 33.25 |
| 36N24919 |  | 12AP4 | 66.00 |
|  | 36N24688 | 12 KP 4 | 36.45 |
| 36N24923 | 36N24689 | 12LP4 | 34.40 |
| 36N24924 | 36N24690 | 16 AP4 | 55.88 |

Sylvania 1 N34 $\qquad$ ก줄
Diode Detector
Ffficient HF operation to 100 MC . Use in TV receivers as second delertor or DC resistor, in FM circuits as frequency discriminat dis. $x^{n}{ }^{n}{ }^{n}$. 1 t/2" tinned copper leads. 854
29N 13858 -Sinqle Diode IN34..... $\$ 4$. 29N13859-Dual Drode IN35. ............ 2.05 Cinch Sockets For Sub-Miniature Tubes


| Tube Type | List Price | NET EACH |  |
| :---: | :---: | :---: | :---: |
|  |  | Lots 1-9 | Lots 10 |
| 37 | 1.80 | 1.01 | . 95 |
| 38 | 2.20 | 1.23 | 1.16 |
| 39/44 | 2.65 | 2.48 | 1.40 |
| 41 | 1.0 .5 | . 92 | . 87 |
| 42 | 1.6 .5 | . 92 | . 87 |
| 43 | 1. 0.5 | .92 | . 87 |
| 45 | 1.6 .5 | . 92 | . 87 |
| 4523 | 1.80 | 1.01 | . 95 |
| 45Z5GT | 1.80 | 1.01 | . 95 |
| 46 | 2.65 | 1.48 | 1.40 |
| 47 | 2.40 | 1.34 | 1.27 |
| 50 | 3.90 | 2.18 | 2.06 |
| 50A5 | 2.20 | 1.23 | 1.16 |
| 5085 | 2.010 | 1.12 | 1.06 |
| 50L6G'T | 1.65 | . 92 | . 87 |
| 50Y6GT | 1.80 | 1.01 | . 95 |
| 53 | 2.61 .5 | 1.48 | 1.40 |
| 55 | 2.20 | 1.23 | 1.16 |
| 56 | 1.80 | 1.01 | . 95 |
| 57 | $2 .(1)$ | 1.12 | 1.06 |
| 58 | 2.00 | 1.12 | 1.06 |
| 59 | 3.55 | 1.98 | 1.88 |
| 70L7GT | 3.90 | 2.18 | 2.06 |
| 71A | 2.10 | 1.12 | 1.06 |
| 75 | 1.65 | . 92 | . 87 |
| 76 | 1.65 | . 92 | . 87 |
| 77 | 1.65 | . 92 | . 87 |
| 78 | 1.65 | . 92 | . 87 |
| 79 | 2.65 | 1.48 | 1.40 |
| 80 | 1.15 | . 64 | . 61 |
| 81 | 3.90 | 2.18 | 2.06 |
| 82 | 2.65 | 1.48 | 1.40 |
| 83 | 2.6 .5 | 1.48 | 1.40 |
| 83V | 3.20 | 1.79 | 1.63 |
| 84/624 | 1.80 | 1.01 | . 95 |
| 85 | 2. ' 1 | 1.23 | 1.16 |
| 89 | 2.20 | 1.23 | 1.16 |
| 117L7, M7GT | 3.90 | 2.18 | 2.06 |
| 117N7GT | 3.10 | 2.18 | 2.06 |
| 117P7*T | 3.90 | 2.18 | 2.06 |
| 11723 | 1.50 | . 84 | .79 |
| 11726GT | $2: 10$ | 1.34 | 1.27 |



DUMONT

| Stocl. No. | Type | Each |
| :---: | :---: | ---: |
| 36N24954 | $12 Q P 4$ | 34.75 |
| 36N24955 | 12 RP 4 | 34.00 |
| 26N24956 | $15 \mathrm{DP4}$ | 53.50 |
| 36N84953 | 20 BP 4 | 222.75 |

RCA SALES PROMOTIONAL AIDS
Free promotional aids when ordered with tube quardities shown

| Store No. | $\begin{aligned} & \mathrm{RCA} \\ & \mathrm{No} \end{aligned}$ | Description | Each | No. Tubes |
| :---: | :---: | :---: | :---: | :---: |
| 23N19963 | R( -15 | RCA Tube Manizal. | . 35 | 10 |
| 23N19986 | Pri-101 | Powerand Gas Tube Manual |  |  |
| 23N19384 | 1275-1) | Tube Manual. Tube Char. | .10 | 5 |
| 23N19384 | 12,9-1) | Booklet | . 10 | 5 |
| 23N18801 | $2 \mathrm{F3} 36$ | Trinie Pindex | . 75 | 20 |
| 23N188( (1) $^{\text {( }}$ | $1 F 9910$ | RCA Resist or Code P'encil. | 1.49 | 50 |
| 23N18807 |  | RCA Dummy Cartons. | Free |  |
| 23N18806 | 2F420 | Service Decal. | Free |  |

## INDUSTRIAL-TRANSMITTING-SPECIAL PURPOSE TUBES

RCA and GE tubes are manufactured with the most modern, high-precision equipment, and are pretested to insure long trouble free service. They are fully guaranteed by the world's two largest manufacturers.

As one of the largest distributers of RCA and GE tubes, we carry a complete stock of industrial, transmitting, and special purpose tubes. If the particular type that you want is not listed please write for a quotation.

| RCA |  | Type | GE |  |
| :---: | :---: | :---: | :---: | :---: |
| No. | Each |  | No. | Each |
|  |  | $\begin{aligned} & \text { OB3/ } \\ & \text { VR90 } \end{aligned}$ | 36N24568 | 1.20 |
| 36N24803 | 2.25 | 1 C 21 |  |  |
| 36N24804 | 29.00 | 2 C 40 | 36N24572 | 29.00 |
| 36N24805 | 29.00 | 2 C 43 | 36N24573 | 29.00 |
| 36N24806 | 2.00 | 2D21 | 36N24574 | 2.00 |
| 36N24807 | 5.10 | 2 F 24 | 36N24575 | 5.10 |
| 36 N 24808 | 3.85 | 2E26 | 36N24576 | 3.85 |
| 36N24811 | 5.80 | $3 \mathrm{B25}$ |  |  |
| 36N24812 | 12.50 | 3 C 23 | 36N24580 | 12.50 |
| 36N24813 | 15.00 | 3D22 |  |  |
| 36N24943 | 24.50 | 4E27 |  |  |
| 36N24944 | 37.50 | 4-250A |  |  |
| 36N24945 |  | /5D22 |  |  |
| 36N24946 | 110.00 | $4 \times 500 \mathrm{~A}$ |  |  |
| 36N24814 | 27.50 | 4-125A | 36N24582 | 27.50 |
|  |  | /4D21 |  |  |
| 36N24815 | 1.50 |  | 36N24583 | 1.50 |
| 36N24816 | 1.75 | 6AG7Y |  |  |
| 36N24818 | 8.05 | 614 |  |  |
| 36N24886 | 159.50 | 7 C 24 |  |  |
| 36N24819 | 1.95 | 10Y |  |  |
| 36N24820 | 13.75 | 203A | 36N24588 | 13.75 |
| 36N24885 | 115.00 | 204A |  |  |
| 36N24821 | 13.75 | 211 | 36N24589 | 13.75 |
| 36N24822 | 4.30 | 801 A | 36N24590 | 3.75 |
| 36N24823 | 4.75 | 802 | 36N24591 | 4.75 |
| 36N24947 | 24.25 | 803 |  |  |

## RCA PHOTO TUBES

Noted for their high quality and long operating life. High vacuum and gas filled type. No grid.

| Stock No. | RCA Type | Each |
| :---: | :---: | :---: |
| 36N24925 | $1 P 21$ | 50.00 |
| 36N24926 | $1 P 22$ | 14.75 |
| 36N24927 | $1 P 28$ | 15.50 |
| 36N24928 | $1 P 29$ | 2.95 |
| 36N24929 | $1 P 37$ | 2.85 |
| 36N24930 | $1 P 39$ | 1.85 |
| 36N24931 | $1 P 40$ | 1.85 |
| 36N24932 | $1 P 41$ | 2.80 |
| 36N24933 | $1 P 42$ | 5.70 |
| 36N24843 | 868 | 2.50 |
| 36N24848 | 917 | 3.50 |
| 36N24849 | 918 | 3.10 |
| 36N24850 | 919 | 3.50 |
| 36N24851 | 920 | 4.15 |
| 36N24852 | 921 | 2.05 |
| 36N24853 | 922 | 1.95 |
| 36N24854 | 923 | 2.05 |
| 36N24855 | 925 | 2.40 |
| 36N24856 | 926 | 2.90 |
| 36N24857 | 927 | 2.50 |
| 36N24858 | 929 | 1.50 |
| 36N24859 | 930 | 1.65 |
| 36N24860 | $931 A$ | 9.75 |

## RCA CATHODE RAY TUBES

Incorporate all the recent improvements in material and design.

| RCA |  | Type |
| :---: | :---: | :---: |
| No. | Each |  |
| 36N24905 | 10.55 | 2APlA |
| 36N24906 | 9.60 | $2 \mathrm{BP1}$ |
| 36N24907 | 14.25 | 3APlA |
| 36N24908 | 14.50 | 3 KPl |
| 36N24909 | 22.50 | 5BPIA |
| 36N24910 | 23.25 | 5 CPl A |
| 36N24913 | 17.75 | 5UP1 |
| 36N24914 | 30.75 | 7 CPl |
| 36N24895 | 32.25 | 7 CP 4 |
| 36N24920 | 15.50 | 913 |
| 36N24921 | 47.50 | 5527 |
| 36N24934 | 85.00 | 1816P4 |

We can supply all GE, RCA types not listed here due to space limitations; also Eimac, Taylor, Hytron \& Heintz Kaufman.

| RCA |  | Type | GE |  |
| :---: | :---: | :---: | :---: | :---: |
| No. | Each |  | No. | Each |
| 36N24948 | 17.50 | 804 |  |  |
| 36N24824 | 13.50 | 805 | 36N24592 | 13.50 |
| 36N24949 | 34.25 | 806 |  |  |
| 36N24825 | 2.50 | 807 | 36 N 24593 | 2.50 |
| 36N24826 | 10.75 | 808 |  |  |
| 36N24827 | 4.00 | 809 | 36N24595 | 4.00 |
| 36N24828 | 14.50 | 810 | 36N24596 | 14.50 |
| 36N24829 | 3.30 | 811 | 36N24597 | 3.30 |
| 36N24830 | 4.05 | 812A | 36N24598 | 4.05 |
| 36N24831 | 16.00 | 813 | 36N24599 | 16.00 |
| 36N24832 | 14.25 | 814 | 36N24600 | 1425 |
| 36N24833 | 6.90 | 815 | 36N24601 | 690 |
| 36N24834 | 1.65 | 816 | 36N24602 | 1.30 |
| 36N24835 | 12.50 | 826 | 36N24603 | 12.50 |
| 36N24836 | 13.75 | 828 | 36N24604 | 13.75 |
| 36N24837 | 16.25 | 829 B | 36 N 24605 | 16.25 |
| 36N24838 | 12.90 | 832A | 36N24606 | 11.75 |
| 36N24887 | 49.50 | 833 A |  |  |
| 36N24896 | 9.00 | 836 |  |  |
| 36N24839 | 5.80 | 837 | 36 N 24607 | 4.75 |
| 36N24840 | 4.35 | 841 |  |  |
| 36N24888 | 2.00 | 843 |  |  |
| 36N24841 | 13.75 | 845 | 36N24609 | 13.75 |
| 36N24889 | 138.00 | 849 |  |  |
| 36N24890 | 209.00 | 857B |  |  |
| 36N24891 | 11.50 | 865 |  |  |
| 36N24842 | 1.95 | 866A | 36N24610 | 1.95 |
| 36N24844 | 8.20 | 872A | 36N24612 | 8.20 |
| 36N24845 | 12.75 | 878 |  |  |
| 36N24846 | 1.85 | 884 | \|36N24614| | 1.85 |

RCA TELEVISION CAMERA TUBES
High-quality camera tubes designed and built to meet the rigid requirements of Television broadcasting.

| Stock | Type No. | Description | Eac |
| :---: | :---: | :---: | :---: |
| 36N24935 | 2P | Image Orthicon | 1200.00 |
| 36N24936 | 56 | Image Orthicon | 1300.00 |
| N24937 | 5769 | Image Orthico | 1200.00 |
| N24900 | 5820 | Image Orthi | 1200.00 |
| N24938 | 1848 | Iconoscope | 500.00 |
| N24939 | 1850-A | İc | 540 |
| 36N24921 | 5527 |  |  |
| 36N24940 | 2 F 21 | Monoscope | 105.00 |
| 36N24941 | 5FP4-A | View Finde |  |
|  |  | escope |  |

## TV TRANSMITTER AMPLIFIER TUBE

Designed and engineered to meet exacting specifications. Please specify desired channel when ordering.

```
36N24942 | Model RCA 8D21 | 1300.00
```


## SYLVANIA SPECIAL PURPOSE TUBES



Sylvania special purpose stromeasurement of speed of revolving machinery and studying them while in motion. No Filament voltage is In motion
The Electroflash tube, when used with suitable equipment, provides a brilliant flash of daylight intensity with a duration of only $1 / 5000$ seconds. Permits sharp clear shots of all subjects, day or night. Good for 10,000 flashes. Trigger tukes are used to control high voltage required for photoflash tubes, welders, etc.


## THEATRE EXCITER LAMPS

For Sound-on-Film. 31/8 long, 1 "
dia. Single-contact bayonet base. No. Type Volts Amp. Ea. 1 $10 N 12241$

$10 N 12242$ $\qquad$ | T- 8. |
| :--- |
| T- |
| T- |
| T- | $\qquad$


| RCA |  | Type | GE |  |
| :---: | :---: | :---: | :---: | :---: |
| No. | Each |  | No. | Each |
| 36 N 24847 | 2.00 | 885 | 36N24615 | 2.00 |
| 36N24861 | 5.65 | 954 | 36N24629 | 5.65 |
| 36N24862 | 3.60 | 955 | 36N24630 | 3.60 |
| 36N24863 | 6.30 | 956 | 36N24631 | 6.30 |
| 36N24864 | 3.75 | 957 | 36N24632 | 3.75 |
| 36N24865 | 6.25 | 958A |  |  |
| 36N24866 | 7.40 | 1603 | 36N24634 | 7.40 |
| 36N24867 | 3.00 | 1612 | 36N24635 | 3.00 |
| 36N24892 | 2.05 | 1614 |  |  |
| 36N24868 | 6.60 | 1620 | 36N24636 | 6.60 |
| 36N24893 | 2.15 | 1621 |  |  |
| 36N24869 | 2.30 | 1622 | 36N24637 | 2.30 |
| 36N24870 | 4.05 | 1623 | 36N24638 | 4.05 |
| 36N24871 | 4.00 | 1624 | 36N24639 | 4.00 |
| 36N24872 | 2.65 | 1625 | 36N24640 | 2.65 |
| 36N24873 | 1.85 | 1626 |  |  |
| 36N24874 | 1.40 | 1629 | 36N24642 | 1.40 |
| 36N24875 | 3.10 | 1851 | 36N24643 | 2.90 |
| 36 N 24876 | 1.85 | 2050 | 36N24644 | 1.85 |
| 36N24878 | 7.40 | 8005 | 36N24646 | 7.40 |
| 36N24894 | 8.20 | 8008 |  |  |
| 36N24879 | 15.50 | 8012A | 36N24647 | 15.50 |
| 36N24880 | 10.30 | 8013A | 36N24648 | 10.30 |
| 36N24897 | 22.00 | 8020 |  |  |
| 36N24898 | 10.00 | 8025A |  |  |
| 36N24881 | 3.10 | 9001 | 36N24649 | 3.10 |
| 36N24882 | 2.50 | 9002 | 36N24650 | 2.50 |
| 36N24883 | 3.10 | 9003 | 36N24651 | 3.10 |
| 36N24884 | 1.60 | 9006 | 36N24652 | 1.60 |

## RCA SPECIAL RED TUBES

Specially designed for critical industrial ap. plications. 10,000 hour life. Sturdy construc tion, uniformity and stability. Specifications similar to 6SL7GT, 6SN7GT and 6S17 respectively. Send for free RCA Red Tube Bullein, RCA 5RB-1002.

## 23N19926.

| Stock No. | RCA Type | Each |
| :---: | :---: | :---: |
| 36N24904 | 5691 | 7.75 |
| $36 N 24903$ | 5692 | 7.75 |
| 36N24902 | 5693 | 6.40 |

## GE INDUSTRIAL TUBES

 IGNITRONSHigh peak current gas-filled tubes with mercury pool cathode. Supply heavy current or use in spot or seam welding. Use in place of rotating machinery for changing $A C$ to $D C$.

| No. | G-E Type | Each |
| :---: | :---: | :---: |
| 36N24776 | GL-415 | 44.00 |
| $36 N 24777$ | FG-271 | 73.50 |
| $36 N 24778$ | FG-235A | 110.00 |
| $36 N 24779$ | FG-258A | 241.00 |

## GE THYRATRONS

Grid-controlled gaseous discharge rectifier tubes with one or more grids to control the starting of the plate current. Run D-C motors directly from AC lines and hold desired motor speed constant

| Stock No. | G-F Type | Each |
| :---: | :---: | :---: |
| 36N24784 | FG-97 | 22.00 |
| 36N24785 | FG-17 | 7.00 |
| 36N24786 | FG-27A | 21.00 |
| 36N24787 | FG-33 | 21.00 |
| 36N24788 | FG-57 | 19.50 |
| 36N24789 | FG-95 | 23.00 |
| 36N24790 | FG.105 | 48.00 |
| 36N24791 | FG-172 | $\mathbf{6 5 . 0 0}$ |

## GE PHOTOTUBES

Gas-filled and high-vacuum type. No grid.

| No. | G-E Type | Each |
| :---: | :--- | :--- | :--- |
| 36N24780 | P-J22 | 2.20 |
| 36N24781 | PJ23 | 2.50 |
| 36N24782 | 1P29/FJ401 | 2.95 |
| 36N24783 | GL-441 | 4.50 |

Television Pictures Tubes Are on Page

## PILOT LAMPS AND SOCKETS

FULL－VIEW NEON PILOT LIGHT


Plastic head，built－in resistor for 110 volts． Uses NE5I neon bulb．Head unscrews to replace $7 / 16^{n}$ in front pane．． $1-7 / 32$ long，extend washer，threaded $11 / 16-27$ ． 10N14181—Red Hd．10N14182－Amber Hd．10N14183－Opal Hd． Any color above，Each

88

## ＂ENCLOSED PILOT LIGHT

Single unit socket assembly unaffected by heat． Porcelain and brass．For standard S6 lamp， removable from front of panel．Single $1^{* \prime}$ mtg． Faceted jewels．U．L．listed．


94

## MINIATURE PANEL LIGHT

For panel mtg．S．C．Min．Bay．Base．Mts．in $3 / 8$ hole．With $12^{\prime \prime}$ lead，nut and washer．

## RELIANCE POLISHED CHROME BULL＇S－EYES

Takes candelabra base bulbs type S－6．For panels up to $1 / 2^{\prime \prime}$ thick， $1^{\prime \prime}$ diameter glass jewel－ with set of 4 color discs－red，green，amber－ and white．Jewel bezel．

10N14174－Each
ON14175－As above，with Red or Green faceted 1 ON14176－Same as above，but with Miniaature Base

## $1 / 2^{\prime \prime}$ AND $3 / 4^{1 "}$ JEWEL PILOT BRACKETS

For amplifiers，transmitters，etc．All have faceted jew els，highly polished nickel plated steel brakets．Stand－ and jewelled brackets have $1 / 2^{\prime \prime}$ jewel requiring a $7 / 16^{\prime \prime}$ mounting hole．Jumbo brackets have a $3 / 4^{" ~}$ jewel，requiring a $11 / 16^{\prime \prime}$ hole．Available with Candelabra 110V．Miniature Bayonet and Screw base sockets．

| Base Type |  | Green | ｜Ea．） | Red | ｜Ea．｜ | Amber | Ea． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assembly with | Min．Screw | $110 N 6433$ | 19 d | 10N6432 | 19 c | 10N6434 |  |
| $1 / 2^{\prime \prime}$ Jewel． | Min．Bay． | 10N6456 | 19 d | 10N6454 | 19¢ | 10N6458 | 9\％ |
| Brackets． | Candelabra | 10N6 | ， | 10N6426 | 21 c | 10N6428 |  |
| Assembly with | Min．Screw | 10N6330 | 35¢ | 10N6331 | $35 ¢$ | 10N6332 | $35 ¢$ |
| 8／4＂Jewel | Candelabra | 10 N 6333 | 35t | 10N6334 | 35¢ | 10N6335 | 35 d |

## RUBBER DIAL LIGHT INSTALLER

For miniature and candela ora in hard－to－reach places．
PORCELAIN RECEPTACLES FOR NEON GLOW LAMPS
 Mounting hole spacing all types is 10N13387 requires $11 / 16^{\prime \prime}$ socket hole in addition to mtg ．hole． 10N13331－Candelabra（B）） ON13331－Candelabra（B）


2－CONTACT CAND．BAY．METAL SHELL SOCKETS
（A）Base Mtg．Type：Bakelite base．
 10N13332－Base 48女 plus mitg．holes $11 / 4^{\prime \prime}$ apart．

10N13389－Flush
294


PILOT LIGHT SOCKETS MINIATURE， CANDELABRA，BAYONET BASE


| Type | Min．Screw | Min．Bay． | Cand．Base |
| :---: | :---: | :---: | :---: |
| A | 10N6510 | 10N6488 | 10N6539 |
| B | 10N6511 | 10N6489 | 10N6557 |
| C | 10N6512 10N6513 | $10 N 6490$ $10 N 6514$ | 10N6540 |
|  | Each ．．．．．． 5 ¢ | Each | ch． |
| OUR | 10 for．．．．． 488 | 10 for | 10 for．．．． 90 é |
| PRICE | 100 for．．． 4.32 | 100 for ． 5. | 100 for ．． 8.10 |

Min．Ba
Bay．
Can
Cand．Base


GIANT 1＂JEWEL BRACKETS
1＂diameter faceted jewels．Candelabra takes 3 or 6 walt 110 volt bulb．

| Color | Candelabra <br> Base | Miniature <br> Base | Bayonet <br> Base | Each |
| :--- | :---: | :---: | :---: | :---: |
| Red | 10N6403 | 10N6404 | 10N6405 |  |
| Opal | 10N6321 | 10N6324 | 10N6327 | $5 母$ |
| Green | 10N6322 | 10N6325 | 10N6328 | $5 母 母$ |
| Amber | 10N6323 | 10N6328 | 10N6329 |  |

## GE NEON GHOW LAMPS

For use in test instruments．On DC，only neg－ alive electrode glows．All except $1 / 2$－watt types operate on 105－125 volt＝AC or DC and require minimum starling voltages（approx．） 65 on AC， 90 on DC． $1 / 2$－watt minimum starting voltage 105 －recommended for AC orly．Clear glass ex－ cept 10N12263 which is orange．Tax included．


| Stock No． | Watts | NE No． | Bulb | Base | Start AC | Volts DC | Each | $\begin{gathered} 10 \\ \text { For } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10N12266 | 1 | NE30 | G10 | A | 60 | 85 | 40¢ | 3.60 |
| 10N12267 | 2 | NE34 | S14 | A | 60. | 85 | $50 ¢$ | 4.50 |
| 10N12263 | 2 | NE34 | S14 | A | 60 | 85 | $50 ¢$ | 4.50 |
| 10N12276 | 3 | NE40 | S14 | A | 60 | 85 | $60 ¢$ | 5.40 |
| 10N12264 |  | NE45 | T41／5 | B | 65 | 90 | $40 ¢$ | 3.60 |
| 10N12215＊ | 1／25 | NE51 | T31／4 | C | 65 | 90 | 104 | ． 90 |
| 10N12216＊ | 1／25 | NE2 | T2 | D | 65 | 90 | 86 | 72 |
| 10N12268＊ | $1 /$ | NE48 | T41／2 | E | 65 | 90 | 35 c | 3.15 |
| 10N12269＊ | $1 / 2$ | NE29 | G10 | E | 105 |  | 45 ${ }^{\text {¢ }}$ | 4.05 |
| 10N12270＊ | 1 | NE32 | G10 | E | 60 | 85 | 45¢ | 4.05 |
| 10N12271＊ |  | NE26 | S14 | F | 60 | 85 | 55d | 4.95 |
| 10N12209＊ | 1／4 | NE7 | T41／2 | D |  | 70 | 31. | 2.79 |

＊Resistorless Type
Bases：A：Standard Edison．B：Candelabra screw．C：S．C．Min．Bay D：Wire terminals．E：2－Cont．Bay．F：Sk．D．C．Bay．Cand．
genuine ge－mazada pilot light bulbs


## FLASHLIGHT AND MISCELLANEOUS BULBS

G－31／2（C）is small round．G－41／2 is lge．round．TL－3（E）is lens bulb P－31／2（not illustrated）is pre－focuesd miniature flange type bulb．

| Stock No． | Type | ulb | Bead Color | Volts | A mps． | Ea． | $\begin{aligned} & 10 \\ & \text { For } \end{aligned}$ | $\begin{aligned} & 100 \\ & \text { For } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10N12200 | 13 | G－31／2 | Green | 3.8 | ． 30 | $10 ¢$ | 67 ¢ | 5.94 |
| 10N12201 | 14 | G．31／2 | Blue | 2.5 | ． 30 | 10d | 67 d | 5.94 |
| 10N12202 | 605 | G－41／2 | Brown | 6.0 | ． 50 | 116 | 73¢ | 6.59 |
| 10N12203 | 222 | TL－3 | White | 2.2 | ． 25 | 10¢ | 67 ¢ | 5.94 |
| 10N12204 | 112 | TL－3 | Pink | 1.1 | ． 22 | 10． | 67 ¢ | 5.94 |
| 10N12205 | 233 | G－31／2 | Purple | 2.3 | ． 27 | 10¢ | 67¢ | 5.94 |
| 10 N12206 | PR2 | P．31／2 | Blue | 2.4 | ：50 | 146 | 93 ć | 8.37 |
| 10N12207 | PR3 | P－31\％ | Green | 3.6 | ． 50 | 14¢ | 93e | 8.37 |
| 10N12208 | 263X | G－31／2 | Blue | 2.6 | ． 30 | 10c | $66 t$ | 5.94 |
| 10N12219 | 1446 | G－31／2 | No Bead | 1.2 | ． 20 | 15t | 99 d | 8.9 |

120－YOLT PILOT LAMPS
110－120 V．pilot lights for replacements．

| Stock No． | Type | Description | Watts | Each |
| :---: | :---: | :---: | :---: | :---: |
| 10N12257 | S－6 | Candelabra base | 6 | 16 ¢ |
| 10N12210 | S－6 | DC Bay，base | 6 | $26 ¢$ |
| 10N12211 | S－6 | Candelabra base | 3 | 25¢ |
| 10N12212 | S－6 | DC Bay base | 3 | 35 e |
| 10N12213 | T． $61 / 2$ | Candelabra base | 10 | 16¢ |
| 10N12275 | C－7 | Cone－3hape frost． Candelbra base | 7 | $11 \%$ |
| 10N12280 | C． 7 | Cone－Shape clear Cardelabra base | 7 | 11d |
| 10N12272 | ．．．．．． | Tubular Candel．base | 4 | $39 \%$ |



## FRONT REMOVABLE

JEWEL BRACKET
Mounts in＂1／8＂hole． $1 / 2$＂jewel re moveable；bulb can be replaced from front

| Min．Screw Base | Min．Beyonet Base | Color | Each |
| :---: | :---: | :--- | :--- |
| 10N6416 | 10N6408 | Red |  |
| 10N6418 | 10N6410 | Amber | 29 |
| 10N6417 | 10N6409 | Green | 29 |
| 10N6425 | 10N6411 | Opal |  |

## SHURE MICROPHONES AND ACCESSORIES



## MODEL 55 - "UNIDYNE"

Supet-Cardiold, uni-directional moving coil dynamic, with new "Shure Uniphrase" principle. For public address and recording. Flat response from 40 to $10,000 \mathrm{cps}$. Impedance selector switch at rear of case to allow selection of Low, Medium or High impedance. Output is -55.1 db into 35 to 50 ohms, -56.8 db . into $150-250$ ohms, and -57.5 db . into 35,000 ohms. Tllting head adjustment. Complete with 25 ft . of cable and connector plug. Shpg. Wt: $41 / 2 \mathrm{lbs}$.
14N13689-List Price $\$ 67.50$..Net 39.69 MODEL 556 "BROADCAST"
Super-Cardioid type uni-direcitional moving coil dynamic microphone. Uni-directional characteristic obtained by "Shure Uniphase" principle. Especially designed and tested to meet the requirements of the broadcast studio. Random nolse pickup reduced $73 \%$. Spring suspended in case to reduce mechan ical vibration pickup. Frequency response from 40 to $10,000 \mathrm{cps}$. Switch at rear of case for selection of Low, Medium, or High impedance. Output -56.1 db . at $35-50$ ohms, -56.8 db . at $150-250$ ohms and -57.5 db . at 35,000 ohms. Tilting head adjustment. With 7 ft . cable and connector. Shipping Weight: $41 / 2$ pounds.
14N13562-List Price $\$ 92.50$..Net 54.39

## MODEL 51 "SONODYNE"

High output, semi-directional pressure dynamic microphone. For general purpose use with public address systems, amateur transmitters, general communications, recording and paging systems. Operates on the principle of moving coll element in a magnetic field. Peak-free frequency response from 60 $10,000 \mathrm{cps}$. Selector switch at front of case for cholce of outputs, -53 db . at $35-50$ ohms, -52.5 db . at $150-250$ ohms or -52.0 db . at high-impedance. Rich pearl Gray finished high-impedance. Rich pearl Gray finlshed
case, designed to provide improved acousticase, performance and modern appearance. Complete with 20 ft . of cable and one cable connector. Shpq. Wi: 5 lbs . 14 N13432-List Price $\$ 39.75$..Net 23.37

## MODEL 710A - "REX"

Semi-directional. Low-cost, dependable, handheld, crystal mike. Ideal for Homs, P.A. systems and as replacement tor home recording units. Excellent voice reproduction. Frequency response colp 6000 cps . Output -50 db . Burgundy red metalic finish. With stand adapter and $7-\mathrm{ft}$ cable. Shpq. Wt. $11 / 2$ lbs.
4N13627-List Price $\$ 10.00$.
5.88
$14 \mathrm{~N} 13628-\mathrm{A}$ above, but with "ON-OFF' switch........... 7.06


MODEL 707 A CRYSTAL MIKE
Semi-directional. High-impedance, mechanically isolated, moisture proofed Bimorph crystal. Suitable for amateur phone transmitters, P.A. equipment and call systems. Good response for general voice and music reproduc tion. Output -51 db . Pearl gray finish and chrome qrille. With 7-ft. cable. Shipping Welgh1 $1 / \mathrm{lbs}$.
8.53

As above, but with $20-\mathrm{ft}$. cable. Output -54.5 db . Shipping Weight: 2 ibs.
$\$ 16.00 .$. . .9 .41


MODEL 737A "MONOPLEX"
Uni-directional. Super Cardiod wide-range crystal, diaphragm type, allows highly sat isiactory operation under adverse conditions of background noise and reverberation where conventional mikes would be useless. High impedance. Excellent for high quality P.A. communications, recording, etc. Response 60 to $10,000 \mathrm{cps}$. over wide range angle at front. Output - 54 db . With $20-\mathrm{ft}$. cable and connector; swivel head. Satin-chrome finish Shipping Weight: 4 lbs.
14 N 1343 t-List Price $\$ 39.75$. Net 23.37

## MODEL 76B LAPEL MICROPHONE

Eesigned for public address, lecturing, portable transmitters and all qeneral uses for intelligible reproduction of speech. Heavy lapel clip at rear of case permits user to move freely and have both hands free for demonstrations. Frequency response 40 to $6,000 \mathrm{cps}$. High-impedance.
High frequencies accentuated for maximum clarity. Pressure actuated thaphragm type crystal mike. High capacity, moisture sealed Graphoil Bimorph crystal. Output -57 db. Dia. 1-7/8". Wixh lapel clip, 25 ft . cable. Shpg. Wt: 1 lb. 14N13638-List Price $\$ 27.00$.
15.88

NEW CONTROLLED RELUCTANCE PRINCIPLE
In the controlled reluctance microphone, the output voltage is induced in a coll of wire by causing a sound wave to modulate the reluctance of the magnetic circuit. An important feature of this type of unit is the ruggedness and stability that make it practically unaffected by heat and humidity, especially in tropical countries and all coastal areas.

MODEL 520 - "GREEN BULLET"
Controlled Reluctance Mike. Stability insured by unique control of the reluctance of specially designed magnetlc system. High output, good response and high impedance without the need of a transformer. Practically immune to high temperatures and humidity. Frequency response 100 to 7000 cps . Output -52.5 db . Metallic plied with $15-\mathrm{ft}$. cable. Shpg. Wt: $1 / 1 / \mathrm{lbs}$. 14N13632-List Price $\$ 16.50$.


## MODEL 510C - "HERCULES"

Controlled Reluctance Mike. Hand, desk or stand operated high output unlt. Rugged - use either indoors or outdoors; ideal for tropical countries and
coastal areas. Stability insured by unique control of reluctance of the magnetic system. High sensitivity and good fidelity are achleved because of balanced armature transducer. Frequency response 100 to 7000 cps . Output level 50.5 db rallic qreen finish. With stand adapter and $7-\mathrm{ft}$. cable. Shipping Weight: $13 / 4 \mathrm{lbs}$.
14N 13636 -List Price $\$ 12.95 \ldots .$. .Net.
7.61
t4N13637-As above but with "ON-OFF" switch...8.79
MODEL 505C - "RANGER"
Controlled Reluctance. A tough hand microphone recommended for those applications where long ines are voice response of high intelligibility. Fits snugly into palm of hand. Heavy-duty single-throw, double pole leaf type switch for push-totalk operation. Frequency response 100 to 9000 cps . Output -50.5 db . High impedance. Supplied with 7 -ft. cable. Shipping Weight: $11 / 4$ ibs.
14N13640-Ļist Price $\$ 25.00 . . . . .$. . Net

## Controlled Reluctance Cartridge

 Shure Model R5. Ideal for replacement in cases of the Shure 707A design. High impedance, acoustically balanced-armature transducer. Practically unaffected by heat and humidity. Response: 100 to 7000 cps . Output -52.5 db . With rubber mtg. ring $21 /{ }^{\prime \prime}$ dia. $\times 3 / 16^{\prime \prime}$ thick; Cartridge $7 / 8^{\prime \prime}$ depth. Shpg. Wt. 4 oz. 5.29$14 \mathrm{~N} 13641-$ List Price $\$ 9.00$..Net 5.29


## A88A - "GRIP-TO-TALK" SWITCH

Employs long life, leaf type switch element. Guaranteed ro withsiand severest field requirements. Spring temper, phosphor bronze switch blades, with pure sllver contacts. Large grip bar minimizes hand and finger tatigue; assures positive contact. Slight downward pressure locks switch. No soldering necessary. Element can be rewired for other switching combinations. Satin Chrome finish. Shipping Weight: pound.
14 N 13625 List Price $\$ 10.75$.......Net.......
6.32


A83B - "ON-OFF" MIKE SWITCH
Rotary type. Quickly attached to any cable connector type Shure mike. Nosoldering necessary. Internal plug establishes connections. Bakelite arrow knob. Shipping Weight: ilb.
14N13594-List Price $\$ 6.00$...Net...
3.53

## A86A - INPUT TRANSFORMER

Solves problem of installations requiring long lengths of mike cables without loss of H-F response. Matches 35-50, 150-250 ohm mikes to high impedance amplifler unit. 7-ft. cable. $1-5 / 8^{\prime \prime}$ dia. x 2-7/8" L. Shpq. Wt: $1 \frac{1}{2}$ lbs. 14N13673-List Price $\$ 15.25$..Net 8.97


## ASTATIC - ELECTRO-VOICE - TURNER - AMPERITE <br> ASTATIC T-3 CRYSTAL MIKE

Highly practical for studio set-ups, with amateur rigs, intercom systems, P.A. installations and quality recording purposes. Microphone head can be tilted for semi- or nondirectional use. Output level -52 db ; frequency response substantially uniform from quency response Substied with interchangeable pluq and socket connector, and $25-\mathrm{ft}$ able plug and socket connector. And $25-$. ft . 3 pounds. 3 pounds.
16.08

Model GT-3. As above with Grip-to-Talk Modend. Shpp. Wt: 5 lbs.
14Ni3525-List Price $\$ 32.85 \ldots$...Net.. 19.32

## ASTATIC "YELVET VOICE" CRYSTAL MIKE



Model 200. Convertible type, high impedance unlt providing wide range response. Detachable base makes it easy to use as a desk. hand or floor stand mike to meet practically hand or floor stand mike to meet praciically every need. Output level -Si dif response
$30=10,000 \mathrm{cps}$. Beautiful gold inish case and $30-10,000$ cps. Beautitul gold inish caseand handle with bright chrome grille. $15-\mathrm{ft}$ shield ed cable. Shpg. Wt: $11 / 2$ lbs
14 Nt 3364 -List Price $\$ 13.95 .$. Net... : 20
Model 200-S. As above but with ON-OFF switch. Shpq. Wt: $1 / 21 b s$.
14N13365-List Price $\$ 15.00$...Net........ 8.82


## ASTATIC MULTI-UNIT MIKE

Model WR-40. A specially designed, high qualfty mike, recommended for studio, P.A. and recording purposes. Due to a special interior design this microphone is practically transparent to sound waves and cannot beacoustically overloaded. Able to handle up to $200-\mathrm{ft}$. cable with negligible loss of output. Substantially flat frenegligible loss of output. Substantialy tlat fre-
quency response to to 10,000 cycles. Output quency response ap to 10,000 cycles. Output level - 56 db. Bright chrome finish with satin chrome grille. Supplied with $25-\mathrm{ft}$. cable. Shipping Weight: 4 lbs.
14N13425-List Price $\$ 43.25$...Net... 25.43

## ELECTRO-VOICE CARDAX MIKE

Model 950. Moisture-sealed crystal element. High impedance, cardiold microphone with new Mechanophase principle provides true cardioid uni-directional pickupand relatively high gain. Selector switch varies response for hi-fidelity sound pickup or extra crispness of speech. Output -57 db . on flat curve, -48 db . On r ising curve. Compact rugged construction for indoor or outdoor use. Tilting head. Built-in on-off switch. Satin chromilum finish. With $20-\mathrm{ft}$, cable, plug. Shpg. Wt: 4 lbs .
14 N13720-List Price $\$ 39.50$. Net.
23.23

ELECTRO.VOICE "MERCURY" CRYSTAL MIKE


Model 911-20. Adds smartness and utility to economical P.A. and paging systems, recording equipment, ham rigs. Substantially lat response, $50-8000 \mathrm{cps}$. with an outpu level of -50 db . Can be used with any standard amplifier using high impedance input. High capaclty crystal fully enclosed for oreater molsture protection. Tiltable head; ON-OFF switch. With $20-\mathrm{ft}$. cable and built-in connector. Durable satln chromium finish. Shpq. Wt: $31 / 2 \mathrm{lbs}$.
4N13447-List Price $\$ 24.00$.. Net.
14.11

## "MERCURY" DYNAMIC MIKE

Model 611-20. Features exclusive "acoustalloy" - withstands. high humidity and temperature extremes. Response 50-8000 cps , substantially flat; output -53 db . Matches any input. $\mathrm{Cps}, \mathrm{z}$ substantally or 500 ohms. ON-OFF swltch; tiltable head. 20-ft cable and built-in connector. Finished in satin chromium. Shpq. Wt: 4 lbs.
14N13448-List Price $\$ 31.00$ $\qquad$

## LAFAYETTE.CONCORD CONTACT MIKES



Excellent volce performance, especially suited for anateur, home recording and P.A. systems. Output level -52 db , providing ample reserve for use with high gain amplifers. Supplied complete with concentric cable connector, wood handle, interlocking metal base and $15-\mathrm{ft}$ cable. Wood handle cam be removed and mike used on floor stand. Substantially flat response. Opalescent gray finish with bright chrome grille. Shipping Weightr 4 lbs.
14N13427-List Price $\$ 16.95 \ldots .$. Net......9.97

## ASTATIC CERAMIC MIKE

Model JT-30-C. Fine general purpose, high fidelity mike for hams, commanications work and P.A. systems. Tough piezaelectric ceramic element cuts danger of accidental shocks. stresses and the effects of heat and humidity. Frequency response 30 to 10000 cps . Output level 62 db Adspele 10 all existing hookevel -62 db . Adaptable to all existing hookups without change. Heavy interlocking base. opalescent gray inish with chrome grille. Comnector. Shpg. Wt: 4 lbs.
14N13428-W.1st Price $\$ 16.15 \ldots$...Net....
9.50


## ASTATIC CRYSTAL MIKE

Model K-2-S. Small size, dual diaphragm type crystal mike with switch. Twice the usual capacitance permits correspondingly longer cable. Cannot be overloaded. Smooth undistorted reproduction: excellent for conference recording producito wire P insiallations and general on tape or wire, P.A. installations and general appligations where quality periormance is required. Output level -62 db. Bright chrome finish. Equipment includes plug and socket connector, and 25-ft cable. Shipping Welght: $21 / 2$ pounds.
14N13423-List Price $\$ 32.85$...Net.... 19.32


## TURNER PROFESSIONAL DYNAMIC MIKE

Model U9S. Saddle tllts 900 for semt or nondirectional use. Response 40-9000 cps. Output -52 db . Gun metal finish. With $20-\mathrm{ft}$. cable and connector. Switch qives cholce of $50,200,500$ olms or high 1 mpedance . Shipping Weight: 5 lbs.
14 N13754-List Price $\$ 40.00$..Net.
23.52

## TURNER DYNAMIC MIKE

Model 22D. High impedance. For amateurs, call and paging systems. $90^{\circ}$ tilting head permits semi-or non-directional operation. Quality Alnico magnet. Response 70-9000 Qus. Output -54 db . Chrome finish. 7 - it cable and connector. Shipping Welght: cable and
$21 / 2$ pounds. 21/2 pounds. 14N13751~List Price $\$ 25.50$..Net.14.99

## TURNER SHOCKPROOF CRYSTAL MIKE

Model 22X. Mechanically shookproof mounting; high quality, humidity protected crystal. Has automatic barometric compensator. Same design and characteristics as Model 22 D except output of -52 db . Shpg. Wt: $21 / 2 \mathrm{lbs}$.
14N13750-List Price $\$ 20.00$............Net.
11.76

## AMPERITE KONTAK MIKES



Falthfully reproduce the vibrations of any musicalinstrum ment. Molsture-proof rubber case, Response 40-6000 cps. Without volume control -40 db . $\mathrm{l}^{\prime \prime} \times 3^{\prime \prime} \times \mathrm{l}^{\prime \prime}$. 15 ft . cable. ShipWeight: 2 lbs.
14N13675-High-Impedance, List Price $\$ 12.00$..Net.. 7.06 With volume control $-30 \mathrm{db}, 3^{\prime \prime} \times 1^{\prime \prime} \times 5 / 8^{\prime \prime} .25 \mathrm{ft}$. cable. Shipping Welght 2 lbs.
$14 \mathrm{~N} 13690-\mathrm{High}$ Impedance. List Price $\$ 18.00$. Net...... 10.58 14N13687-Strap for flat top ruitars.................................. 59 . "KF" Foot Volume Control, Provides smooth control of volume by footaction. 15 ft . cable. Shpg. Wi. 4 lbs .
14N13663-High Impedance. List Prtce \$i8.00.. Net........ 10.58

## MICROPHONE STANDS AND ACCESSORIES


(A) LAFAYETTE FLOOR STAND

Smooth action adjustments from 35" to 64". Positive grip friction clutch firmly locks stand against slipping or sudden dropping. Full chrome uprights on gray shrivel finish base, $0^{\prime \prime}$ dilumeter. 5/8"-27 thread. Shipping weight 9 pounds.
14N22047-List Price 8.25
.............Net $\qquad$ 4.69

## (B) NEW ATLAS "SLEEVE ACTION* FLOOR STAND

 Model MS 12S. Adjust height of stand from 35" to 65" - cutomatically. Slight downward pressure on "sleeve-action" control permits telescoping section to be lowered. To raise, grasp at ony point and merely extend. Comnot creep or change position without actual pressure. Full chrome uprights on gray shrivel base, 10 "diameter. $5 / 8^{"-27}$ thread. Shipping Weight 12 lbs .14N22085-List Price 16.00 $\qquad$ Net.
9.41
(C) ATLAS ALL CHROME FLOOR STAND

Model MSIIC. Deluxe type stand adjusts easily and securely from $35^{W}$ to $65^{\prime \prime}$. Full chrome finish on tubing and base assures lifetime wear; $10^{\circ}$ dianeter. Shipping weight 12 pounds. 5/8"-27 thread.
14N22084-List Price 11.00 $\qquad$ .Net. $\qquad$ 6.47

## (D) BANQUET MIKE STAND

Bearutiful polished chrome finish uprights on gray wrinkle base. Height adjustable from $13^{\prime \prime}$ to $221 / 2^{\prime \prime}$. Rubber ring insulation covers entire $8^{\prime \prime}$ base to prevent slipping. Shipping Weight 4 lbs.
14N13536-List Price $\$ 6.75 . . . . . . .$. Net........................ 3. 97
LAFAYETTE.CONCORD FIXED DESK STAND
 6" high. Chromium tube. $6^{\prime \prime}$ diametar black wrinkle base. 5/8"-27 male threads for ottaching to microphone. Shpg. t. $2 / 2$ bs.

14N13539......Net. $\qquad$ 1.25

Atlas Adiustable Desk Stand Newly designed two-section telescopic stand. Easily adjusted from $8^{\prime \prime}$ up to $13^{\prime \prime}$; Chromium finished Gray base, $6^{\prime \prime}$ dia. Shpg. Wt. 4 lbs. 14N13537-List Price 4.50 ....Net.... $2_{9} 65$


## SPECO "MAX-MIXER"

For adding and mixing two additional microphones than provided for by requald cmplifier input. No complicated connections, just plug into mike jack of amplifier. Has three individually controlled highimpedance inputs. With 6 ft . cable connector and phone plug adaptor. Shipping Weight $21 / 2 \mathrm{lbs}$. 14N13642-List Price 18.95..Net.. T. T/

## BABY BOOM ARM

Quickly cond easily attached to any standard floor stand. Has Universal swivel for adjusting
and locking into position. Adjustable for weight of any mike. Length of the arm $32^{\prime \prime}$.
14 N 22060 .
. Net...
4.12

## BRACKET CLAMP

Can be used directly as microphone support, or with the baby boom arm Clamps to overhanging edge of table or piano. Chrome finish.
14N13371-6" Lonc.


MIKE FLANGES, EXTENSION RODS Widely used for neat inconspicuous permanent mounting on desk top pulpit and amateur rigs. Fits all standord 5/8"-27 mikes. Available in male or female types. Base dianeter $11 / 4^{\prime \prime}, 3$ mounting holes with $7 / 8^{*}$ mounting centers. Extension rods male on both ends.
14N13350-Male Fig.. 304 14N13351-Female Fig. 394 14N13352-6"Ext. Rod..444 14N13353-12*Ext. Rod....S9 MIKE ADAPTERS
Adapts special fittings to standard stands

14N13368-1/8" female pipe to 5/8" 27 male.................. 294
14N13369-3/4 long, $5 / 8^{n-27}$ male runnin'g thread............... $15 \$$
14N13370-5/8n-27 female to $5 / 8^{n}-27$ female coupling..... 29 .


D


SINGLE CONTACT
MIKE CONNECTORS AMPHENOL SERIES 75
Polished chrome plated brass fittings with $5 / 8{ }^{w-27}$ threads.
A. Type 75-MC1F. Female with coupling ring.
13N13359-Each.
264
E. Type $75-\mathrm{MC} 1 \mathrm{M}$. Male- fits above connector.

21\$
C. Type $75-\mathrm{PC} 1 \mathrm{M}$. Male, nonshorting chassis mount. FitsMClF. chassis mount.
13N13361-Each..........
184

## SINGLE AND DOUBLE PIN CONNECTORS AMPHENOL SERIES 80

Metal shells are heavily plated. Bakelite elements; screw type coupling rings. Shells may be utilized for second con-
ductor. For cable up to $1 / 4$ diameter.

## SINGLE CONDUCTOR

80M. Male (B)
13N13286-Each.......... 424
80F. Female (A)
13N13287-Each........ 4 \&
Female Chassis connector. Mounts in a single $5 / 8^{\prime \prime}$ hole (C).

13N13288-80C.......... 26 2


TWO-CONDUCTOR
80-MC2F. Female (A)
13N13289-Each..........52
$80-\mathrm{MC} 2 \mathrm{M}$. Male (B)
13N13290-Each.........52 5
Female chassis connector.
Mounts in a single 5/8 hole
(C).
13N13292-80-PC2F... $29 \$$
D. Type 75-SP-PC 1M. Same as PCIM but with floating center contact.
13N13385-Each..........2.24
D. Type 75-CL-PC1M. Like 75-SP-PClM except closed circuit type.
13N13268-Each.......... 2. $2 \phi$
E. Type 75-MC1F-A. Angle ype, female connector colupling ring; use with PClM, etc.

594
F. Type 75-MC1P. Adaptor. Connects $75-\mathrm{MClF}$ to standard phone plug. ard phone plug.

294


THREE AND FOUR CONTACT CONNECTORS AMPHENOL SERIES 91
Polarized shells. For use on $5 / 8^{\prime \prime}-27$ stands. With cable clamps. Spring cord protector. Interchangeable bakelite elements. Coupled, $23 / 4 \times 7 / 8^{\prime \prime}$. Coupling ring on male.

## 3-CONTACT CONNECTORS

91-MC3M. Male (A)
13N13489-Each.........
91-MC3F. Female (B)
13N13490-Each.........
65

Female Chassis (C) $13 / 10$
Female Chassis (C) 13/16" hole.
13N13396-91-PC3F.
.324


Microphone Switch Type 75-MC1S. Attaches between male and female of my of the 75 series connectors. Push to talk
or slide switch for or slide switch for permanent nection.
h82


ICA SHIELDED 3-WAY MICROPHONE PLUG
Barrel made of nickel plated brass. Fully insulated bushing.
13N13519-Each......... $85 申$
As above but with bakelite 13N13521-Each.......... 59 5

FLEXIBLE GOOSENECK
Attaches to any microphone stand. Can
be used where moderate adjustment is required, 5/8"-27 thr male and female ends. Chrome finish. $13^{\prime \prime}$ long.
14N13372
.1 .47

# UNIVERSITY PROJECTORS, DRIVERS, SPEAKERS 



## UNIVERSITY REFLEX PROJECTORS

High efficiency exponential air column type projectors. Heavy-gauge all metal spun horns. Incorporate design features that insure superior acoustic results. Non-resonant rubber rims with each unit. Will handle 25 watts output. With universal "U" type mounting bracket. Battleship grey finish, waterproofed for outdoor use. Less drivers. Overall lengths listed below are with driver unit installed.

| No. | Model | Dia. | Length | Cutoff | Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22N20049 | PH | $20^{\prime \prime}$ | $19^{\prime \prime}$ | 150 cyc. | 12 | 17.05 |
| 22N20047 | LH | $25.5^{\prime \prime \prime}$ | $22.5^{\prime \prime}$ | 120 cyc. | 18 | 26.17 |
| 22N20466 | SMH | $15.5^{\prime \prime \prime}$ | $16^{\prime \prime}$ | 200 cyc. | 8 | 14.41 |
| 22N21362 | GH | $30^{\prime \prime}$ | $29^{\prime \prime}$ | 85 cyc. | $101 / 2$ | 35.28 |



## UNIVERSITY PAGING SPEAKERS

Intercommunicator "booster" speaker has high projecting power. Clear sound output overcomes factory noises. Use as "Talk Back" speakers in intercom systems. High sensitivity permits initiating or answering calls at a distance. With adjustable mtg. bracket.

| No. | Type | Watt. | Imp. | Fieq. | Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22N19349 | MIL | 3 | 8 | $400-9,000$ | 5 | 14.70 |
| 22N21322 | MIL | 3 | 45 | $400-9,000$ | 5 | 15.43 |
| 22N19348 | IB8 | 12 | 8 | $300-10,000$ | 7 | 19.11 |
| 22N24015 | CR | 18 | 16 | $250-6,000$ | 11 | 24.70 |

## CAR-TOP HORN CARRIER

For all horn type speakers and baffles used in mobile PA work. Waterproof flywood and angle Waterproof Flywood and angle
iron construction. 4 suction cups iron construction. 4 suction cups
and gutter hooks with adjustable
 straps included. Size: $8 \times 461 / 2$ Easily and quickly attached or removed. Will not mar car finish. 22N20028-Shpg. Wt. 8 lbs.


## MODEL 2YC CONNECTOR

For connecting two-driver units to any trumpet. 22N21305-Shpg. Wt. 3 lbs.
5.88

## UNIVERSITY DRIVER UNITS

Phenolic diaphragm; Alnico mag̣net. Hermetically sealed. MA25 recommended for single speajer systems. $41 / 8^{\prime \prime} \mathrm{Dx} 33^{\prime \prime} \mathrm{m}^{\prime \prime} \mathrm{H}$. SA. HF effective in locations where naise level is high. $41 / 2^{\prime \prime} \mathrm{Dx} 43 / 4^{\prime \prime} \mathrm{H}$. PA-30 and PA-30C have built-in line matching transformers 165, 250, 500, 1000, 2000-ohm terminals. Constant voltage taps $30,20,10$ terminajs. Constant voltage taps $30,20,10$, , $21 / 2$ w. permit 3 db. changes wih each step. PA-30 maintains high varying intensity levels over long periods. PA-30C for broadcasting chime music from church steeples. $63 / 4 \mathrm{Dx} 63 / 4^{\prime \prime} \mathrm{H}$.

| No. | Type | Range | Watts | Ohms | Lbs | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22N21307 | MA-25 | $90-6,000$ | 25 | 16 | 4 | 14.70 |
| 22N21308 | SA-HF | $90-10.000$ | 25 | 16 | 6 | 21.76 |
| 22N21363 | PA-30 | $80-10,000$ | 30 | 16 | 6 | 29.40 |
| 22N21364 | PA-30C | $70-6,000$ | 30 | 16 | 6 | 32.34 |

## UNIVERSITY COAXIAL SPEAKER

Model WLC. Specially designed for outdoor installations with maximum protection against rain and other adverse weather conditions. Consists of $12^{\prime \prime}$ treated cone speaker, 25 -watt unit driven tveeter and built in crossover network. Spreaker enclosed in large volume, infinite baffle providing necessary loading for clear, low frequency reproduction. Corrosion-resistant, all metal construction. Adjustable " $U$ " bracket permits easy horizontal and ver tical positioning. Response $50-10,000$ cycles Impedance 8 ohms. Power 25 watts. Crossover 1,000 cycles. Dia. $331 / 2^{\prime \prime}, 20^{\prime \prime}$ depth Attractive baked Gunmetal finish.
22N21370-Shpg. wt. 70 lbs.
.117 .60

## LINE MATCHING TRANSFORMER

Designed for use with University speakers in indoor or outdoor installations. Housed in water tight enclosure with die cast mounting bracket which acts as combined support for both the transformer and speaker. Easily mounted on the "U" bracket of any trumpet with clamp provided, or screwed on any surface.

| No. |  |  |  |
| :---: | :---: | :---: | :---: |
| 22N5899 | $\frac{\text { Type }}{5402} \left\lvert\, \frac{\text { Pri. Imp. }}{250-500-1000-1530-2000}\right.$ | $\frac{\text { Sec. Imp. }}{4-8-16}$ | $\frac{\text { Watl }}{25}$ |$\left|\frac{\text { Each }}{11.76}\right|$

## MODEL PMA ADAPTOR

For mounting trumpet on pipe fitting. 22N21306-Shpg. Wt. 3. lbs.
$88 c$


## UNIVERSITY TWEETERS - FILTERS AND ADAPTOR



## UNIVERSITY TWEETER ADAPTOR

Model 4407. Converts any 12 -inch conventional type speaker to coaxial type when used with model 4405 high pass filter listed below. Consists of model 4401 single tweeter, aluminum housing, mounting bar and all necessary hardware. Response 2,000 to $15,000 \mathrm{cps} .12^{\prime \prime}$ dia. $3^{\prime \prime}$ Deep.
22N21329-Shpg. Wt. 6 lbs.
14.70

## UNIVERSITY SINGLE AND DUAL TWEETERS



Provides efficient and economical method of extending. upper regis ter to obtain high fidelity speaker response. Reproduces frequencies between 2000-15000 cps. Recommended for FM or AM sets, transcription reproduction and broadcast studio monitoring. Easily wired. Requires high pass filter, 440, listed below.
Model 4401, 6-watt single tweeter. Converts the speaker of the average radio or phono amplifier to a high fidelity system. Impedance 12 ohms. Size: $41 / 2^{\prime \prime} W \times 25 /{ }^{\prime \prime}{ }^{\prime \prime} H \times 5$ " $D$ 22N21323-Model 4401, Single type. Wt. 4 lbs
11.76

Model 4402. 12 -watt, dual tweeter. For home and wired music systems, quditoriums, etc. Impedance 6 to 8 ohms. Size: $91 / 2^{\prime \prime} x$ 25/8"x5"
22N21324-Model 4402, Dual type. Wt. 6 lbs.
23.52

## UNIVERSITY HIGH PASS FILTER



Model 4405. For use with models 4401, 4402 and 4407. Makes possible connection of tweeters to the voice coil terminals of any P.M. or field excited speaker without creating an electrical unbalance. Includes HF volume control. Low frequency cutoff approximately 2,000 cycles. Size: $31 / 2^{\prime x} \times 21 / 4^{\prime \prime} \times 21 / 2$ 22N21328-Shpg. Wt. 2 lbs .
5.88

## TWEETER AND FILTER IN CABINET

Model 4404. Self-contained 12 -watt tweeter housed in attractive walnut cabinet. Includes 4402 tweeter and elecrical equivalent of 4405 filter. Fre quency response 2,000 to $15,000 \mathrm{cps}$. Ideal for use where limitations preven the use of built-in tweeter. 6-8 ohm impedance. Crossover freq. 2,000 cps. Size: $111 / 2^{\prime \prime} W \times 33 / 4^{\prime \prime} \mathrm{F} \times 61 / 2^{\prime \prime} D$.
22N21366-Shpg. Wt. 10 lbs.
35.28

## DUAL TWEETER AND FILTER



Model 4408. Designed for wide range reproduction requiring cutoff as low, as 600 cycles. Recommended for two and three-way speaker systems, concert halls, theatres and auditoriums. Fealures cobra horn of one piece aluminum casting flared to provide maximum vertical and horizontal dispersion; also has bakelite diaphragms, Alnico 5 magnets and aluminum voice coils. Response 600 to 15,000 cps. Impedance 16 ohms. Power 6 watts. Size $53 / 4^{\prime \prime} H \times 73 / 8^{\prime \prime} \mathrm{W} \times 111 / 8^{\prime \prime} \mathrm{D}$.
22N21367-Shpg. Wt. 8 lbs .
16.17

Model 4409. Similar to above, 25 watt power. 22N21368
Model 4410. Cross-over network for above. Aluminum housing. insures proper attenuation rate at 600 cycle cross-over.
22N21369-Shpg. Wt. 4 lbs

# HIGH FIDELITY SPEAKERS \& CABINETS ALTEC LANSING HI-FI UNITS 



MODEL 605
SPEAKER CABINET

Beautiful, hand-rubbed hardwood speaker enclosures that provide balanced, frequency response. Simple, yet. attractive style harmonizes with any fine furniture and adds a note of extra beauty to the room. A truly substantial fine quality cabinet with attractive metal grille and matching cloth. Excellently designed and constructed to house elther $12^{\prime \prime}$ or $15^{\prime \prime}$ speakers. All joints are, glued and reinforced with screws to eliminate the danaer of vibrations and reverberations. The interior is lined with moisture resistant, sou dibsorbing me" | prevent side reflections. Overall dimensions: $38^{\prime \prime}$ high $x$ |
| :--- |
| $30^{\circ}$ wide $x ~$ |
| $16^{\prime \prime}$ deep. Shipping Weight 149 lbs . Model 605 A | for $15^{\prime \prime}$ speaker; Model 605 B for $12^{\prime \prime}$ speaker.

22N21340-. $\qquad$ Model 605 A in Walnut 22N21341Model 605A in Mahogany 22N21342-. $\qquad$ ...Model 645E in Walnut 22N21343-. .Model 605L
ANY TYPE, EACH. $\qquad$ 135.00


## MULTICELLDIA.CONE SPEAKER

Nodel 6035. Larye $15^{\prime \prime}$ cone for Irue bass reproduction. Metal diaphraym tor hiyh frequency coverage. Multicellular horn gives smooth distribution over a wide angle - $60^{\circ}$ horizontally, 40 verticaliy. Dia-cone principle reproduces frequencies over 2000 cycles from an aluminum diaphragm secured directly to a $3^{\circ}$ voice coll form. Voice coil impedance 8 ohms. Has large Alnico $V$ permanent magnet. Power rating 25 watts. 7 " deep.
22 19395-Shpg. Wt. 21 lbs
6300

## MODEL 600B DIA.CONE

Economically-priced, high quality $12^{\prime \prime}$ speaker using the Dio-tone principle ol high Irequency reproduction from a metal diaphragm. Highly efficient...light weight... small space reguirement. Ideal for home use, sound reinforcement systems and industrial appilcations. ${ }^{3}$ volce coll, with an impedance of 8 ohms, made from edgewound flat aluminum wire. Power rating 20 watts. Depth $51 / 4^{m}$.
22N19394-Shpg. Wt. 15 1bs...........38.00


## MODEL $400 B$ DIA-CONE

Lower priced 8" speaker of exceptionally high efticiency, especially desirable when used with an amplifier that delivers only 5-6 watts. Small size, lightweight, using the Dia-cone principle of high frequency reproduction from a metal diaphragm. Ideally suited for portable, compact uses requiring high output and top quality. Voice coil im. pedance 8 ohms; power rating 12 watts. pedance
3
$5 / 8{ }^{\circ}$ deep.
22N19393-Shpg. Wit. 7 lbs.
18.00


## $15^{\circ}$ DUPLEX SPEAKER

Model 604B. This new, improved twoway speaker system in the standard professional unit in the sound industry wherever top quality is demanded. -arge 15" low frequency speaker multicell unit covers from 30 io 16 , nulticell unit covers from 30 to 16 , sponse. With essentially flat response. Delivers 6 horizontal and
 400 vertical smooth distribution. In-
cludes a matching 1000 -cycle cross-ove cludes a matching 1000 -cycle cross-over net wor with adjustable high frequency controls for perfect crossover between low and high frequency units. Network impedance 16 ohms; required amplifier output impedance $8-15$ ohms. Power rating 30 watts. Speaker depth $111 / 8^{\prime \prime}$. Shipping Weight 48 lbs .
22N19392 - With Crossover Network..

## HIGH QUALITY SPEAKERS

## 15" CINAUDAGRAPH CINAXIAL



CIN-15B. Economical and space-saving 15-wat speaker that yives fine reproduction from 55 to $15,000 \mathrm{cps}$. Designed for FM, television and all uses requiring finest reproduction over the widest frequency range. Easily connected to all home recervers haviny an 8-ohm amplifier output. Has a $5^{\prime \prime}$ high frequency unit. Bridging network is built-in; no controls are required. Alnico $V$ magnets. Shipping Weight: 15 pounds.
22N19381-
27.93

CIN-12A. Similar to above but $12^{\prime \prime}$ size with $3^{\prime \prime}$ high frequency unit. 10 watts. Shpg. Wt. 10 lbs .
22N19364-
16.17


## GE 12010 SPEAKER

A deluxe $12^{\prime \prime}$ Alnico V PM unit recommended for use with public oddress systems and replacement in home radios. Rated at 25 watts undistorted power. The latest speaker design developments have been incorporated into this model to assure brilliant frequency response over an extended range. We have supplied thousands of these fine speakers for custom installations. 8 -ohm, aluminum base voice coil; molded cone. Equipped with universal transformer mountings. Plated finish.
22N19352-Shpg. Wit. 9 lbs....
.17 .35


## 8" RMC HYPER-MAG

A low cost replacement speaker of unusual quality. Has a center dome parabolic projector for broad high frequency response. Uses a new magnet designed for linear response from 100 to $10,000 \mathrm{cps}$. Input impedance $4-5$ ohms. Undistorted power railng $12-15$ watts. Overall dimensions: $81 / 8^{\prime \prime}$ diameter $x$ $31 / 2^{n}$ deep.
22N 19399-Shpg. Wt. 3 lbs.
.8 .35

## TRU-SONIC HI-FI SPEAKERS \& ENCLOSURES

15" SUPER COSPIRAL SPEAKER
Model 102FR. 20 watts power handling capacity. Seamless, molded curvilinear cone for lowest frequencies, and Silver Spiral differential diffuser give more extended range and yreater efficiency than any single voice coil speaker. Repro ducing range 30 to 14,000 cycles; fla $\pm 5 \mathrm{db}$ from 50 to 9500 cps . Uses $4-1 \mathrm{~b}$ powerful Alnico $V$ magnet. Suitable fo outputs from $8-16$ ohms nominal impedance. Depth behind mounting panel, $81 / 2^{\circ}$ Shipping Wt. 30 lbs .
22N21386.
52.92

## $12^{*}$ COSPRIAL SPEAKER

Model P22FR. Similarconstruction to above but $21 / 2-\mathrm{lb}$ magnet and frequency range from $40-14,000 \mathrm{cps}$; power capacity 15 wats.
22 N21313-Shipping Weight 28 lbs
41.16


## $10^{*} \mathrm{HI}-\mathrm{FI}$ SPEAKER

Model 100. An economy model high fidelity unit for limited space installations. Full range irequency response from 70 to 8000 cps $\pm 5 \mathrm{db}$; useable range 50 to 11,000 cps. Input impedance 5-12 ohms: ower capacity 8 watts. Alnico $V$ magnet weighs $1 / 2$ lbs. Depth behind mounting panel, 6 22N21388-Shpg. Ht. 14 1bs.
29.40

STEPHENS 2-WAY SPEAKER SYSTEM
For those who demand a superb hi- $\{1$ speaker installation. Rich, resonant bass notes with crisp, vibrant highs to produce a smooth, extended response from 35 to $14,000 \mathrm{cps} \pm 5 \mathrm{db}$. This is a complete wide range speaker system including an 800-cycle crossover network. Model P52LX low frequency driver with 4.2-1b Alnico $V$ mugnet Model P-15 high frequency unit, and 814 H 4 cell H.F. Horn. Input impedance is 10 to 20 ohms; input power 20 watts. "18" wide, $27^{\prime \prime}$ high, $14^{1 / 2 "}$ deep. Car be used for conversion of existing speaker and radio installations, or as a new job with the deluxe cabinets shown elsewhere on this page.


22N21375-Model 409. Shipping Weight 50 1bs....... 117.60 Model 414. Two-Way Speaker System described above in 22N21376-Shipping Weight 120 ibs....................... 194.04 Mode1 412. As above in bleached mahoyany cabinet. 22N21377 $\qquad$
$\qquad$
$\qquad$ Mode cabinet (see opposite column)的 Model 410. As above but in Model 515 modern low-boy bleached niahogany cabinet.
22N21379.......................................................................... 205.80 22N21380-814-ti 4 -cell IIF hom. Shpg. Wt. 12 1bs..........18.37 P-15 HF Driver. 20 watts. $11 / 4 \mathrm{lbs}$ Alnico $V$ naggnet. Shipping Weight 151 bs .
$\qquad$

41.16

22N21381............................................................................. 18.37

## 15* LOW FREQUENCY DRIVER

Model P52LX. Built to the most exacting standards of precision engineering, this Low Frequency driver unit is designed for use in separate two-way speaker systems. It employs a top quality 4 pound Alnico $V$ permanent magnet to insure peak efficlency. Cone resonance 55 cycles. Characteristics: 20 watt power capacity, input impedance 16 ohms. Shipping Weight 30 lbs . $22 \mathrm{~N} 21312-151 / 8^{*} \times 81 / 8^{*}$
47.04
$15^{\circ}$ COAXIAL SPEAKER
Model 106AX. Desiyned for highest quality custom installations, monitoring for broadcast stations, and motion picture reproduction. Recognized as the standard of excellence by which other speakers are judged. Combines in a single assembly a new low resonant, bow frequency unit of the cone type, and a high frequency reproducer of the multicellular type with a complementary crossover network. Frequency response 35 to 12,000 cps. $\pm 5 \mathrm{db}$; usable range 20 to $15,000 \mathrm{cps}$. Handless power input of $20^{\circ}$ watts: 1200 -cycle crossover frequency. Wide angle hiyh frequency gispersion $400 \times 800$. Input impedance 16 ohms. The speaker also features a $6^{1 / 2-1 b}$ Alnico $V$ magnet. Baffle opening, $131 / 2^{\prime \prime}$; depth behind the mounting pomel, $101 / 2^{\prime \prime}$
22N21387-Shipping Weight 35 lbs.
105.84

REFLEX CABINETS
Model 511. Here is a truly fine modern mahogany cabinet constructed of the finest ve neers by master craftsmen and hand-rubbed to a smooth rich finish. Beautiful, simple design blends with the best interior decorations. Acoustically perfect for $15 \%$ speakers; uses the bass-phase-inverted reflex method of low end reinforcement. The attractive grille is polished, vi-bration-proof brass, lacquered for extra protection. Accomodates the two-way speaker system and coaxial speakers aescribed on this page. Dimensions: $24^{\prime \prime}$ wide, $3^{\circ}{ }^{\circ}$ high, $17 "^{\prime \prime}$ deep. Weight 70 lbs .
76.44

Model 510. Same as above except bleached mahogany finlsh.
22N21382....................... 76.44

## MODERN "LOW-BOY" CABINETS

Model 510. Mahogany.
Functional beduty com-
bined with precise acoustic design mark this striking speaker cabinet as an outstariding example of effective styling. Two sturdy offset base supports raise the major portion of the cabinet to create an effect of classic simplicity. Fine, handrubbed mahogany veneers are used througtquality furniture piece
 that harmonizes with the decorative schemes of the finest homes and professional studios. The interior has been designed on the true bass reflex principle of reproduction. It brinys out the full capacity of high fidelity specker systems. Accomodates the two-way speaker systent described 22N21385-Shipping ${ }^{\prime \prime}$ deep. Shipping Welght 80 ib s... 22N21384

$12^{\circ}$ AND $15^{\prime \prime}$ SPEAKER BAFFLES
Finished and unfinished baffles for high fidelity speakers. Careful acoustic design assures excellent performance. Constructed of $1 / 2^{\prime \prime}$ plywood, with speaker mounting board, screws tacks and special grille cloth. Dimensions of $12^{\prime \prime}$ cabinet:
 shpg. wt. 35 lbs.
16.25
$22 \mathrm{~N} 22068-12$ * Tan Leatherette. 19.25 22N22065-15" Unlinished....... 19.25 22N22066-15" Tan Leatherette.22.50

JENSEN BASS REFLEX ENCLOSURES
Economical, yet durably constructed of impregnated composition material. Finished in hammered brown lacquer. Designed especially for Jensen speakers but suitable for other makes. B151. For $15^{\prime \prime}$ speaker. $30 \%$ ${ }_{22 N} 18998-$ Shpg. Wt. 43 lbs.
34.47 B121. F
22N18996-Shpg. Wt. 34 lbs $\qquad$ 29.08 381. For $8^{\mathrm{m}}$ speaker. 223 x $\times 18 \times 9{ }^{\prime \prime}$ 22N18994-Shpg. Wt. 24 Ibs.......... 20.58


## JENSEN DELUXE ENCLOSURES

 Handsome, beautifully finished bass reflex cabinets constructed of selected woods and hand-tubbed to a lustrous walnut finish. Distinctive styling combined with perfect acoustical design make these fine enclosures ideal for home or professional installations. Has contrasting bronze wire grille. Accomodates Jensen or other high fidelity speakers listed in this catalog.
D151. For $15^{\prime \prime}$ speaker. $31 / 4 \times 27 \% \times$ $133 / 8^{\prime \prime}$.
$22 \mathrm{~N} 18946-$ Shpg. Wt. $50 \mathrm{lbs} .$.
50.64

22N18945-Same Size \& Weight....50.64

## JENSEN SPEAKERS



## STANDARD PM SPEAKERS

A complete line of replacements for radio receivers, low power public address systems and intercommunication equipment. Highly efficient Alnico $V$ magnets insure maximum ife. All models supplled less transformers. For a complete listing of output transformers to use with these speakers, look below
P. M. SPEAKERS

| Stock No. | Model | Size | Watts | V. C. <br> Ohms | Output Trans. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22N18960 | P 4.X | 4 " | 2.0 | 3-4 | E | 2.44 |
| 22N18952 | P 5.X | 5 " | 2.5 | 45 |  | 2.91 |
| 22N18968 | P 5-X | $5^{\prime \prime}$ | 2.5 | 3-4 |  | 2.53 |
| 22N19016 | P525-V | $51 / 4^{\prime \prime}$ | 4.0 | 3-4 | D | 3.23 |
| 22N18969 | P6-W | $6^{\prime \prime}$ | 3.5 | 3.4 | E | 3.32 |
| 22N19017 | P7.U | $7{ }^{\prime \prime}$ | 5.5 | 3-4 | D | 4.67 |
| 22N18970 | P8-U | 8 " | 6.0 | 3-4 | D | 4.91 |
| 22N19018 | P8-V | 8 " | 5.0 | 3.4 | D | 4.29 |
| 22N19076 | P8-S $\dagger$ | $8{ }^{\prime \prime}$ | 8.0 | 6-8 | C | 7.60 |
| 22N19019 | P69-V | $6 \times 9$ " | 5.0 | 3-4 | D | 4.65 |
| 22N19020 | P69-T | $6 \times 9^{\prime \prime}$ | 7.5 | $3-4$ |  | 5.64 |
| 22N18971 | P10-T | $10^{\prime \prime}$ | 8.0 | $6-8$ |  | 6.26 |
| 22N18972 | P12-T | $12^{\prime \prime}$ | 9.0 | 6-8 | C | 6.97 |

$\dagger$ Extra heavy magnet
UNIVERSAL OUTPUT TRANSFORMERS
Universal tube transtormers match V.C. to 4500, 7000, 10,000 and 14,000 ohms. Universal line transformers match V.C. to 500, 1000, 1500 and 2000 ohm lines. All have $6-8$ ohm secondaries except las our which are $3-4$ ohms.

| No. | JENSEN | Application | Watts | Term. | Type | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22N19026 | ZX-1007* | Univ. Tube | 25 | Pintip | A | 5.73 |
| 22N19027 | ZX-2005 | Univ, Line | 25 | Pintip | A | 5.73 |
| 22N19025 | 2X-1005* | Univ. Tube | 16 | Pintip | B | 4.23 |
| 22N19024 | ZY-2003 | Univ. Line | 16 | Pintip | B | 4.23 |
| 22N18965 | ZX-1002* | Univ. Tube | 10 | Pintip | C | 2.94 |
| 22N18964 | ZY-2002 | Univ. Line | 10 | Pintip | C | 2.94 |
| 22N19031 | ZP-1024* | Univ. Tube | $61 / 2$ | Solder lug | D | 1.53 |
| 22N19028 | ZY-4002 | Univ. Line | $31 /$ | Pintip | D | 1.97 |
| 22N19029 | ZP-1023 | Univ. Tube | $31 / 2$ | Solder lug | E | 1.26 |
| 22N19030 | ZL-2021 | Univ. Line | 61/2 | Solder lug | E | 1.26 |

*All primary windings center tapped.

## YOLUME LEYEL CONTROLS



L-pad type controls that are highly satisfac. tory for controlling volume in speaker circuits All models come complete with pointer knob and escutcheon. 8 ohms, 5 -watt. Model ST-Shpg. wt. $1 \mathrm{lb}, \ldots . . .$.
Model ST-760. $3-4$ ohms.
22N9016-Shatt 1.29 1.29

Model ST-411. 8 ohms, 15 -watt. 1.76

PM CONCERT SPEAKERS


Use in all types of radios, phonographs, public address equipment and the Jensen Bass Reflex enclosures and cabinets. All models less output transformer. Transformers listed in opposite column.

| No. | Model | Size | Watts | V.C. | Trans. | Wt. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22N19075 | P 8-R | $8{ }^{\prime \prime}$ | 9 | 6 - | C | 4 lbs . | 8.97 |
| 22N19073 | Pl0-R | $10^{\prime \prime}$ | 10 | 6-8 | B | 5 lbs . | 10.88 |
| 22N19077 | P12-R | 12" | 12 | 6.8 | B | 7 lbs . | 11.47 |
| 22N19071 | Pl2-Q | $12^{\prime \prime}$ | 13 | 8 | B | 9 lbs . | 16.32 |
| 22N19069 | P12-N | 12" | 15 | 8 |  |  |  |
| 22N19078 | P15-Q | 15" | 14 | 8 | B | 15 lbs. | 21.76 |
| 22N19079 | P15-N | $15^{\prime \prime}$ | 20 | 8 | A | 17 lbs. | 32.34 |

## EXTENDED RANGE SPEAKERS

ALNICO V PM speakers providing high fidelity performance up to 10,000 c.p.s. designed for monitoring in broadcast stations for replacement and modernizing units for F.M. and TV receivers for radio-phono combination, etc. Less output transformers.

| Stock No. | Model | Size | Watts | V.C. | Output trans. | $\begin{aligned} & \text { Shpg. } \\ & \text { Wt. } \end{aligned}$ | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22N19021 | P 5-TX | 5" | 4 | 3-4 | E | 31/2 lbs. | 4.70 |
| 22N19035 | P 6.TX | $6^{\prime \prime}$ | 5 | $3-4$ | D | 4 lbs. | 5.29 |
| 22N18948 | P 8-SX | $8^{\prime \prime}$ | 7 | 6-8 | C | 5 lbs. | 8.35 |
| 22N19000 | Pl2-SX | 12" | 9 | 6-8 | B | 6 lbs. | 10.58 |
| 22N19036 | P12-QX | $12^{\prime \prime}$ | 12 | 8 | B | 7 lbs . | 17.20 |
| 22N19037 | P15-QX | 15** | 14 | 8 | B | 9 lbs. | 21.76 |
| 22N18999 | P15-NX | $15^{\prime \prime}$ | 18 | 8 | A | 10 lbs . | 33.66 |

## 'SPEECH-MASTER'

Model AP-10. Desk type PM speaker employs Peri-Dynamic principle. For desk or wall mig. Has "tilt" adjustment, sturdy base. Dustproof, fully enclosed. Internal bracket for $1 / 2 \times 1 / 2^{\prime \prime}$ transformer included. Handsome gray hammered finish with salin chrome trim. Complete with base, swivel bracket plus $36^{\prime \prime}$ cord; 4 ohm voice coil; will handle 5 watts. Height $6 \%^{\prime \prime}$; Diameter $5^{\prime \prime}$ : Depth $5^{\prime \prime}$
Depth $5^{\prime \prime}$ _-Shpg. wt. 6 lbs
9.70 Model AP Model AP-11. Similar to above, but less base and swivel bracket. Mounts in $427 / 64^{\prime \prime}$
cutout.
22N18930-Shpg. wt. 4 lbs.
8.77

## NEW JENSEN HI-FI SPEAKERS

## 15" HI-FI COAX SPEAKER

## With New Wide-Angle Acoustic Lens

 Model H-510. Unsurpassed for the most critical applications including professional sound use, broadcast monitoring and home entertainment systems. Wide-angle acoustic lens gives clean, realistic and essentially constant reproduction of highs over entire room. New Anmular Diaplane low-frequency, radiator gives increased smoothness of response. Alnico V PM magnetic structure. Impedance 16 ohms. Power rating 30 watts. Integral frequency division system provided. (See listing of adjustable H-F system provided. (See isting of adjustable H-F control network). Depth $99^{\prime \prime}$ ": baffle opening $131 / 2^{\prime \prime}$. Shipping weight 25 lbs.22N19038-List $\$ 135.00$.
.79 .38

## 15" HI-FI COAXIALS



Model K-410. This new high efficiency speaker is recommended for custom instal lations and protessional application requiring best reproduction quality. Exceptionally smooth wide range response from low frequency radiator and new high frequency unit. Input impedance 16 ohms; rated at 25 watts maximum. Integral frequency division system provided (for adjustable H.F. control network see opposite column). Depth $9^{\prime \prime}$ : baffle opening $131 /{ }^{\prime \prime}$. Shpg. Wt. 22 lbs.
22N19039-List $\$ 94.25 \ldots . . . . . . . . . . .$.
Model K-310. Similar to above except rated Model K-310. Similar to above except rated
at 20 W . maximum. Shpg. Wt. 20 Jbs . at 20 W . maximum. Shp
22N19040-List $\$ 56.25$.
33.07

## 12" HI-FI COAXIAL

Model K-210. Compact and low cost speaker for modernizing radio receivers, phonographs and TV sets. Provides high fidelity reproduction of high and low frequencies. Equipped with built-in bridging type frequency division system. Impedance 8 ohms;
22N19042 . . . . . Shpg. Wt. 16 lbs. . . List 33.40 . . 19.64 'L" type variable control for above, with escutcheon and bar knob. 22N19043.
.2 .85


## A-110 CONTROL NETWORK

Provides adjustable level and high frequency range controls for Models H-510, K-410 and K-310 speakers. Mounts directly on speaker housing with plug-in connectians. Impedance 16 ohms. Complete with olug, cables, knobs and screws
22N19044 Shpg Wt. 5 Ibs. List 26.50 . . 15.58


## Impedance-Adjusting Transformers

Designed to provide two alternate input 3 m pedances for Models H-510, K-410 and K-310 speakers. Plugs into socket on speaker terminal panel. Switch selects imp. Model T-101. 4 and ohms.
22N19046. Shpg. Wt. 2 lbs. . . 7.06 Model T-102. 500-600 and 250 ohms.
2N19047
Model T-103. 10,000 \& 5000 ohms C.T.
22N19048.


## WALL BAFFLES-CASES-SPEAKERS



WALNUT WALL BAFFLES
Beautifully polished walnut baffte for Deluxe sound systerns. Frieze grille cloth 22N21325-6-inch. 22N21326-8-inch. 2.35

22N21327-10-inch. . 2.65 22N20051-12-inch. . 4.10

## FABRICOID BAFFLES



Efficient enclosed speaker baffles with correctly angled front faces to provide coverage over a wide area. Sturdily built of selected wood. Brown leatherette covered. Average shipping weight 6 pounds.

| Stock No. | Speaker | H. W. D. | Each |
| :---: | :---: | :---: | :---: |
| 22N20060 | $6^{\prime \prime}$ | 81/2x 71/2x 43/4 | 1.69 |
| 22N20042 | $8{ }^{\prime \prime}$ | $101 / 2 \times 9 \times 61 / 2$ | 2.10 |
| 22N20055 | 10* | $14 \times 12 \times 81 / 2$ | 3.15 |
| 22N20056 | $12^{\prime \prime}$ | $15 \times 14 \times 10$ | 3.35 |

PORTABLE REFLEX SPEAKER ENCLOSURE


Insures perfect bass response. Designed to form two-piece portable carrying case for two 12 " speakers. Compact, easy-to-carry style. Attractively covered in Tan simulated rawhide leather with contrasting Brown grill cloth. Includes recessed receptacles to guard connectors against damage. Strong carrying handles. Overall Size: $191 / 4^{\circ}$ w high, and $14^{*}$ deep.
22N22055-Shpg. wt. 25 lbs...
14.50

## CARRYING CASE FOR AMPLIFIER, $12^{\prime \prime}$ SPEAKERS



Holds two $12^{*}$ speakers plus amplifier. Amplifier bolts to panel-slides in or out of case quickly and easily. Holds any amplifier up to $14^{\prime \prime}$ wide $\times 14^{\prime \prime}$ deep $\times 11^{\prime \prime}$ high. Firm corner construction with metal corner shields. 4 snap locks. Made of $3 / 8^{\circ}$ thick plywood covered with Tan simulated rawhide leather. Overall Size: $163 / 4^{\prime \prime}$ wide, $243 / 4^{\circ}$ high, $145 / 8^{\prime \prime}$ deap.
11.95

## CARRYING CASE FOR AMPLIFIER, $\mathbf{8 " \prime}^{\prime \prime}$ SPEAKER

Case holds both amplifier and an $8^{\prime \prime}$ speaker at the same time. Heavy plywsod construction with handsome tan simulated rawhide leather covering and carrying handle. Firm corner construction affords double protection. Four sturdy snap locks hold case securely closed. Overall Size: 13 "x 105 g "xl $^{2}$ ". (See carrying case illustrated above.) $22 \mathrm{~N} 22053-5 \mathrm{hpg}$. Wt. 10 lbs .
6.50

## CASE FOR AMPLIFIER AND 2 SPEAKERS

Same as above except for amplifier and two 8 -inch speakers. Size: $13 \times 10^{5 / 8177}$ 22N22054-Shipping Weight 10 lbs .
7.50


## DUAL SPEAKER CASE

Houses two speakers up to $12^{\prime \prime}$ in diameter. Opens into two halves, each serving as an efficient baffle. Sturdy plywood with strong handle, black leatherette covering. Metal bumpers top and bottom. Plated snap lock fasteners (two each side). Size, closed, $9 \times 141 / 4 \times 221 / 4^{\circ}$. .... 6.45
22N22062-Shpg. wt. 13 lbs............ Single speaker case similar to above. Size 22N22061-Shpg. wt. $121 / 2 \mathrm{lbs} . . . . . . . . .4 .45$

## QUAM ALNICO V PM SPEAKERS

Alnico V magnet provides maximum performance with minimum weight. High conversion factor. 3.2 ohm V.C. Less Trans. $31 / 2^{\prime \prime}, 4^{\prime \prime} .51 / 4^{\prime \prime}$ are square.


| St.ock No. | Dia. | Wattage Nor.-Peak |  | Alnico V | Depth In. | Shpg. Wt. Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22N19306 | $31 / 2^{\prime \prime}$ |  | 2. | . 68 oz . | $1!$ |  | 2.35 |
| 22N19311 |  |  | 3.0 | 1.00 |  |  | 2.50 |
| 22N19310 | $4{ }^{\text {" }}$ | 21/2 | 33/4 | .68 oz . | $21 / 6$ | 3/4 | 2.35 |
| 22N19314 | 5" |  | 3.5 | 1.0 oz. | $2^{5}$ 价 | $1{ }^{1 / 4}$ | 2.62 |
| 22N 19313 | 5 " | 3 | $41 / 2$ | . 68 oz. | $2^{3}$, 66 | 1 | 2.47 |
| 22N19304 | 51 |  | 4.0 | 1.0 oz . | 259 |  | 2.74 |
| 22N19316 | 6 | 4 | 6 | 1.00 oz . | 25 | 1 | 2.82 |
| 22N19317 |  |  | 5.0 | 1.47 oz. | 25980 |  | 3.06 |
| 22N19324 |  |  | 6.0 | 2.15 oz. | $231 / 2$ | 1 | 4.27 |
| 22N19319 | $8 *$ | 6 |  | 2.15 oz. | 33/8 | 2 | 4.23 |
| 22N19300 | $4 \times 6$ |  | 3.5 | . 68 oz. | 1566 | 3/4 | 2.62 |



## GE PUBLIC ADDRESS SPEAKERS

Aluminum base voice coils provide higher wattage output and will not warp. Molded cores assure high fidelity and brilliant frequency response. Plated finish protected by new Lusteron treatment. Assembled with universal transiormer mounting brackets. A.I have 8 -ohm V. C.

| Stock No. | Model <br> No. | Dio. | Annico V <br> Magnet Wt. | Wattage | Shpg. <br> Wt. | Coast <br> Each |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 22N19350 | Sl218D | $12^{\circ}$ | 6.8 | 12 | 7 | 10.00 |
| 22N19351 | S1203D | $12^{\circ}$ | 9 | 25 | 8 | 12.05 |
| 22N19352 | Sl201D | $12^{\circ}$ | 14.5 | 25 | 9 | $\mathbf{1 7 . 3 5}$ |

## GE REPLACEMENT SPEAKERS

Alnico $V$ magnets, aluminum fo:l base voice coils, molded cones universal transformer mounting brackets. 3.2 ohm voice coils.

| Stock No. | Type | Size | Magnet |  | ost |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Watts | Wt. | Each |
| 22N19354 | S400D | 4* | 4 | 1.3 | 2.50 |
| 22N19355 | S525D | $51 / 4 "$ | 4 | 1.3 | 2.79 |
| 22N19356 | S625D | 61/2" | $\div$ | 1.3 | 3.23 |
| 22N19357 | S650D | $61 / 2^{\prime \prime}$ | 4 | 2.98 | 3.97 |
| 22N19358 | S800D | 8 | 8 | 2.98 | 5.26 |
| 22N19359 | Sl000D | 10" | 12 | 6.8 | 8.97 |
| 22N19360 | SI200D | 12* | 12 | 6.8 | 9.70 |
| 22N19363 | S703D | $6^{\prime \prime} \times 9^{N}$ | 3 | 1.47 | 4.41 |

## LAFAYETTE-CONCORD PM SPEAKERS

High quality permanent magnet :speakers. High permeability Alnico V magnets used tor utmost efficiency. One-piece seamless cones, plated metal frames. Voice coil impedance 3.2 ohms up to $8^{*}$ size, 6.8 ohms for $10^{\circ}$ and $12^{\prime \prime}$. All supplied less output transformer.


| Stock No. | Dia. Inches | Wat:s |  | Depth | Wt. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Nor. | Peak |  |  |  |
| 22N19155 | 2 | 2 | 4 | 11/2" | 1 | 1.75 |
| 22N19268 | 3 | 2 | 4 | 112" | 2 | 1.75 |
| 22N19257 | 4 | 2 | 4 | ${ }^{125} 5$ |  | 1.45 |
| 22N19269 | 5 | 3 | 5 | 129 ¢ ${ }^{\prime \prime}$ |  | 1.50 |
| 22N19270 | 6 | 5 | 7 | $2^{7} 16^{\circ}$ | 3 | 2.35 |
| 22N19271 | 8 | 7 | 9 | 31夝", | 4 | 2.55 |
| 22N19290 | 10 | 9 | 11 | 43\%" | 6 | 4.45 |
| 22N19272 | 12 | 10 | 12 | 53/3" | 7 | 6.45 |
| 22N19258 | $4 \times 6$ | 3 | 5 | $17{ }^{\circ}{ }^{\circ}$ | 1 | 1.65 |

LAFAYETTE-CONCORD FIELD COIL SPEAKERS
Ideal for general replacement in AC-DC radios, amplifiers and inter. communications systems. Frequency, "esponse from 100 to 4500 cps. when properly baftled. Seamless molded one-piece cones. 3.2 ohms V.C.

* Tapped at 300 ohms. † 6V Auto.

| Stock No. | Dia. | Ohms | Watts | Wt. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 22N19279 | 3 | 450 | 2 | 3 | 1.68 |
| 22N19115 | 4 | 450 | $21 / 2$ | 3 | 2.34 |
| 22N19261 | 5 | 6 vilt $\dagger$ | $21 / 2$ | 3 | 2.49 |
| 22N19262 | 5 | 450 | $21 / 2$ | 3 | 2.39 |
| 22N19263 | 5 | 3000 | $21 / 2$ | 3 | 2.39 |
| 22N19264 | 5 | 1800* | $21 / 2$ | 3 | 2.43 |
| 22N19117 | 6 | 6 valt $\dagger$ | $31 / 2$ | 4 | 2.92 |
| 22N19118 | 6 | 1000 | $31 / 2$ | 4 | 2.92 |
| 22N19119 | 6 | 1800* | $31 / 2$ | 4 | 2.92 |
| 22N19121 | 8. | 1000 |  | 6 | 3.63 |
| 22N19124 | 8 | 1800* | 4 | 6 | 3.63 |
| 22N19292 | 8 | 2500 | 4 | 6 | 3.63 |
| 22N19125 | 10 | 1000 | 8 | 7 | 5.83 |
| 22N19126 | 12 | 1000 | 12 | 9 | 6.81 |

## TELEVISION REPLACEMENT SPEAKERS

22N19277-4 "x6". 60 -ohm field; ₹2 V. C. $21 / 2$ W. Wt. $11 / 2$ lbs. 2.70

# AUTOMATIC RECORD CHANGERS 

NEW 3-SPEED MARKEL CHANGER


- Plays Both Sides
- Plays All Speeds

Model 75. The changer that does everything that the most expersive changers ever did-and more! Automatically plays all speeds-3-1/3, 45, 78 RPM; all sizes$7^{\prime \prime} 10^{\prime \prime} 12^{\prime \prime}$ records...PLUS BSTH SIDES of all $10^{\circ}$ and $12^{*}$ records in sequence and automatically... without turning them over. Nine hours of continuous music without touching the record changer! Handles twelve $12^{\prime \prime}$ and twelve $10^{\prime \prime} 33-1 / 3$ RPM records, twelve $10^{\circ}$ or ten 12 . 78 MPM records on one or both sides. Also plays stack of dsteen one side automatically cords on one side automatically. Unit is equipped with two Interchangeable playing heads and semi-permanent needles. Automatic shut-off on last record of stack of 10 or $12^{\prime \prime}$ re cords. Improved push-off post eliminates chipping or cracking of records. Operates on 115 V . 60 cycles AC. Dimen. sions: $151 / 4 \times 14 \% \times 10^{\prime \prime}$ high. $7^{\prime \prime}$ above and $3^{\prime \prime}$ below mtg. plate. Shipping Weight: 23 lbs.
34N22463-List Price $\$ 109.50 . \ldots . . . . .$. Net.
69.76

Same as above except without wood finish cabinet base. List Price \$99.50
34 N22464.
Net.
63.39

## VM 3-SPEED RECORD CHANGERS

Model 406GE. Plays all sizes and speeds automatically. This changer will do any of the follow. ing: Play 12 RCA 45 RPM or Columbia 33-1/3 RPM $7^{\prime \prime}$ records: $10^{\prime \prime}$ or $12^{\prime \prime}$ 33-1/3 RPM separately, 78 RPM separately or inermixed, and all automatically. Shuts off after mast record. Uses a plugiast record. Uses a plugplete with two GE reluctance cartridges and shells. 12 spiders also included to adap the oversized hole on the RCA 45 RPM records so they can the oversized hole on the RCA 45 RPM recards so they can be played automatically. A GE pre-amp is re 34N22468-List Price $\$ 63.15$
37.14

## VM MODEL 4060GE CHANGER

Same as the 406GE described above except mounted on an attractive base $15 \times 15 \times 10^{m}$. Wt: 191 bs .
34N22469-List Price $\$ 66.15$.
Net.
38.91

## VM MODEL 406 CHANGER

Similar to 406 GE except with standard arm and crystal car triage instead of reluctance type. No nre-amp required. Dimensions: $13-3^{\prime / 1} 6^{\prime \prime} \mathrm{W} . x 121 / 4^{\prime \prime} \mathrm{L} . \times 71 / 4^{\prime \prime} \mathrm{H}$ 34N22470-List Price $\$ 59.50$.

Net.
33.22

## VM MODEL 4060 CHANGER

Same as 406 except mounted on attractively finished base. Dimensions: $15 \times 15 \times 10^{\prime \prime}$
34N22471-List Price $\$ 50,50 . . . . . .$. . Net
34.99

45 RPM RECORD SPIDERS
Adapts center hole for standard size spindles.
34N201.
10 f

## RECORD CHANGER CABINET

This sturdy record cabinet makes a handsome addition to any room. Constructed of beautiful straightgrained walnut veneers. Panel will fit Webster 356,256 and 156 . Twin hinge top. Satin-smooth finish. 22N19425-Shpg. Wt. 12 Lbs... 14.95 As above with blank pane!
14.95


SEE YELLOW SECTION FOR PORTABLE CARRYING CASES

## WEBSTER-CHICAGO 3-SPEED CHANGER

Model 356-27. Flays all makes, all slzes and all speed records - automatically. Three speed switch makes the changeover to 78 , 4.5 and $33-1 / 3$ RPM, fast and effortless. Designed for use with GE reluctance car ridges. Lightweight arm makes it unnecessary to adust weight when shifting fom standard to $L P$ records.
 After last record, pickup arm returns to rest except on $7^{\prime \prime}$ records which keep repeating. Shock mounted motor assembly assures smooth, quiet operation at any speed. Supplied with 10 spiders for insertion in center of 45 RPM records. Dimensions of motor board: $141 / 4 \mathrm{x}$ $141^{\prime \prime}$. Height above plate $5-5 / 8^{\prime \prime}$; below the plate, $23 / 4^{\prime \prime}$. Unit requires the GE pre-amp and cartridges listed below. Shipping Weight: 18 lbs .
34N22465-List Price $\$ 43.00$.. Less Cartridges-Net. 27.31 GE long playing cartridge for above changer.
34N 13485 -List Price $\$ 9.95$ With Needle....Net........... 5.85
Same as above, but for standard 78 RPM records.
5.85

GE self-powered pre-amp. Shpg. Wt. 2 lbs.
GE self-powered pre-amp. Shpg. Wt. 2 lbs.
Same as above, less rectifier. 13465 -List Price $\$ 9.90$..........................Net........5. 82
NOTE: For Full Descriptions On Above See Page 48.

## WEBSTER-CHICAGO 3-SPEED CHANGER

Model 356-1. Similar to Webster model 356-27 except arm is supplied with standard crystal cartridge with tandem needle. No pre-amp required. Shpg. Wt. 18 lbs .
34N22466-List Price $\$ 5 \mathrm{i} .75 \ldots . . . .$. . Net
32.91

## WEBSTER-CHICAGO 3-SPEED CHANGER

Model 346 -1. Same specifications as Model 356 -l except measures $12 \times 12^{3 / 4^{\prime \prime}}$. Height above nlate $5-3 / 32$ mi $_{\text {i }}$ below the plate, $2-5 / 32^{\prime \prime}$. Shipping Weight: 15 lbs .
34N22467-List Price $\$ 46.50$............Net.
29.62

NEW WEBSTER-CHICAGO 2-SPEED CHANGER
Model 77-1. The "Duo-Seven" is an entirely new record changer designed to play 45 or $33-1 / 3$ RPM 7 m records automatically. Simple in design, yet incorporates such features as velocity ates such eatures as velocily trip, 3-second change cycle, smooth, controlled tone arm action and no record slippage. The physical dimensions of this model changer makes it interchangeable with other current 45 RPM record changers, including exact duplication of mounting holes. Mounting dimensions of the base plate: $10-1 / 8 \times 7-1 / 8^{\prime \prime}$. Shpg. Wt: 111 bs . 34 N226n3-List Price $\$ 27.50$.
17.52

## WEBSTER SINGLE SPEED CHANGER

Mode1 156-27. Provides automatic playing of ten $12^{\prime \prime}$ or twelve $10^{\mathrm{N}} 78$ RPM records. Shuts off automatically after the last iecord. Home recordings or "inside out" records up to $12^{\prime \prime}$ size can be played manually. Smooth running, heavy duty, 4 -pole motor operates on 110 volts, 60 cycles AC. Supplied with mounting template, instruction manual and hardware, for mounting on $5 / 8^{\prime \prime}$ board. Dimensions of motorboard: $14 \times 14^{\prime \prime}$. Height above plate $611^{\prime \prime}$; below plate, $21 / 2^{\prime \prime}$. Complete with GE cartridge and needle. Only pre-amp required. Shipwith GE Cariridge
34 N 22502 -List Price $\$ 44.50$
26.58

## WEBSTER SINGLE SPEED CHANGER

Todel 156-1. Same as Model 156-27 described above excepl with standard crystal pickup. No pre-amp required. Shipping Weight: 18 lbs . 34N22500-list Price $\$ 38.50 \ldots \ldots .$. ..........
24.52

## WEBSTER SINGLE SPEED CHANGER

:.'Todel 146-1. Similar to Model $156-1$ except does not shut off atomatically. Size: $12 \times 12^{\circ}$. 5-3 32 above plate; 2-5.32" below plate. Allow additional $1 / 2^{\prime \prime}$ front, side and rear for $12^{\prime \prime}$ record clearance. Shpg. Wt: 15 lbs .
34N22501-List Price $\$ 34.75 \ldots . . . .$. . Net.
22.12

METAL BASES FOR WEBSTER CHANGERS
Brown wrinkle finish. Mounting brackets welded in place. Felt feet. Shipping Weight: 5 lbs.
34N22355-For Models 146, 246, $346 \ldots . . . . . . . . . . . . . . . . . . .3 .12$
34 N22356-For Models 56, 156, 256 \& 356.
3.44

## PHONO MOTORS \& RECORD ACCESSORIES


#### Abstract

45-78-33 1/3 RPM PHONO MOTOR GI Model TS. Compact, triple-speed  motor win powerin 2pole, drive. Suitable for every installation requiring dependable performance at low cost. Light werght constrethon; smooth, quet operaton. Eveng permits use in partially closed cabinets. Employs two identical Neoprene belts for 45 and $331 / 3$ RPM speeds. 78 RPM speed obtained directly from rotor shaft. Speed regulated by simple external lever. Size: $31 / 8^{\prime \prime} 1 \times 21 / h^{\prime}$ Wx29/16"D below mounting plate. Complies with Under winters liahoratory requiremenis. Complete with turntable. mounting plate and speed indicator dial ready for installa34N22457 -Shpa worle AC. 6.51




## ALLIANCE 3-SPEED MOTOR

Plays $331 / 3,45$, and 78 RPM records. Turntable shaft equiped wath $11 / 2^{\prime \prime}$ removable center disk to accommodate new RCA 45 RPM records. Speed change control permits instantaneous engagement of proper idler for deoperation assured by rubber-shock-mounted friction type motor Mounting centers $41 / 2^{\prime \prime} \times 33 / 8^{\prime \prime}$. Depth below base mtg. plate $21 / 8$ 1.10 V ., 60 -cvcle AC

34N22458-Shpg. wt. $31 / 2 \mathrm{lbs}$
List Price 10.95
6.44

## 3-SPEED PHONO-RECORDER ASSEMBLY



Model GI-R85-L. Employs dual purpose pickup cartridge and external and $331 / 3 \mathrm{LP}$ records. Special spring furnished for changing $331 / 3 \mathrm{RPM}$ to 45 RPM. Cuts record up to $10^{\prime \prime}$ at 160 lines/inch and plays records up to $12^{\prime \prime}$. Convenient depth of cut adjustment. Dynamically batanced
A-pole molor. Compensating switch operated by speed change dial. Size: $15^{\prime \prime} \mathrm{W} \times 111 / 2^{\prime \prime}$ front to back; $23 / 4^{\prime \prime} \mathrm{H}$ above base plate; $37 / 8^{\prime \prime}$ below lower edge of base plate. 115 V .60 -cycle AC.
35N22459—Shpg. wt. 17 lbs.........................ist Price 53.50 .32 .10

DUAL SPEED PHONO MOTORS


## 78 \& 33 1/3 RPM'S

 Compact, low-cost dual speed rim-driveunits with external lever type speed
change control. Same size as present single speed motors. Model DM. 78 and $331 / 3$ RPM two-pole motor with 9 turntable and mounting plate. New siable rubber belt rim drive or 110 volts, 60 cycles AC weight 4 lbs.
34N22571-List Price 10.75
6.45

Model DR. Deluxe 78 and 33 l/3 RPM shielded two-pole phono-34N22572-Shıpping weight $61 / 2$ lbs.......... List Price 18.5011 .10

## 45 \& 33 1/3 RPM'S

Gl Model DS. Compact, rim drive, 2-pole motor. 45 RPM speed obtaned from rotor shaft. Employs Neoprene bell for $30 \mathrm{~s} / \mathrm{PM}$ speed. Simple external lever controls speed. Dimensions: $31 / 8^{\prime \prime} L x$ 21/4"Wx2 9/16"D below mounting plate. Complete with turntable and mig. plate ready for in

### 6.45

## DUAL SPEED 45-33 $1 / 3$ RPM PHONO MOTOR

GI Model DV. Deluxe rim drive, 2 -pole motor with a simple and positive mechanism for shifting from one speed to the other. Speed change accomplished by means of an external push-puli lever. Special mechanism raises and lowers entire ider assembly, disengages the idler wheel from the 2-diameter motor shaft and moves idler "wheel from one diameter to the other. Size:
$\times 55 / 8^{\prime \prime} \mathrm{W} 25 / 8^{\prime} \mathrm{D}$ below mounting plate. Complete with $10^{\prime \prime}$ turntable and mitg. plate. 115-volt, 60 -cycle AC
34N22456--Shpg. wi. 61/2 lbs. . . ..... List Price 18.50. 11.10
CONSTANY SPEED MOTOR
Model CX. Gear Drive. 78 RPM. Self-

starting induction type. Fuly enclosed helical cut gears in oil. Fan
coled. $41 / 4 \times 41 / 8 \times 318^{\prime \prime}$ deep. For 110
v. 60 cycles. $10^{\circ \prime}$ turntable. 34 N 22525 -Wt. 10 lbs. 14.0 . 8.5 Model CX 3. $331 / 3$ RPM. Wt. 10 lbs.

RIM DRIVEN MOTOR
GI Model LX. Insulation between motor and mounting plate and motor and furntable for quiet operation. Oil-less bronze bearings. Two-pole high speed motor. $78 \mathrm{RPM}, 110 \mathrm{~V} .60$ cycles AC only. 9 T.T. Shpg. w. 5 lbs.
 34N22531-List Price 6.80.4. 88 Model LX3. Two-pole $331 / 3$ RPM motor with $9^{\prime \prime}$ turntable.
$34 N 22573$-. Shipping weight $5 \mathrm{lbs} . . . \quad$.ist Price 8.0040 Model LX45. 45 RPM. Rim drive, 2-pole motor with 9" turntable.
34N22454-Shipping weight 4 lhs List Price 8.004 .80


## 3-SPEED STROBOSCOPE

Fasily and accurately checks turntable speed of $331 / 3,42$, and 78 RPM phono motors. For 50 and 60 cycle.

## LYRIC RECORD CARRYING CASE

Stores fifty ten-inch records safely and conveniently. Smooth, rounded corners, streamlined design with welded seams protect your records from scratches, dust and warpage. Extra strong steel and arcraft aluminum combined in construction to form a very light and durable case. Handy indexing system uses numbered tabs and dividers. Sturdy snap-lock fastener, rubber cushions and leather carrying handle. Finished in two leane brown ripple enamel. Shpg. wt.

### 4.33

 34N21885-List Price 6.50.

## RECORD CASE



A fitting companion to any record player o phonograph. Rugced case is finished in fire simulated leather. Brass fittings, plastic handle. fecords. With tab index, $111 / 4 \times 111 / 4 \times 41 / 2$. 4 . 34N21873-Shpg. wt. 3 lbs.

### 2.49

Each, lots of three.

### 2.25

## HARMONY RECORD RACK

Ho'ds up to fifty 10 or 12 in . tecords. Steel

## 34N21874-Shpg. wt. 2 lbs

### 1.50

## LYRIC RECORD HOLDER

 Why risk broken and scratched recoris when ycu can sately tile filty 10 or la records in only 12 inches of table or shelf space? Soft red felt covers the unbreakable steel base and separators, keeping your records in parfect condition. Handy indexing system included helps you iocate any record in a dew seas. onds. Handles are copper
## STANDARD ALBUMS

Altractive maroon covers. 12 pockets. Opens flat. Index inside cover. Shpg. wt. 2 lbs. $34 \mathrm{~N} 21890-10$-inch size. 34N21891-12-inch size..


## DELUXE RECORD ALBUMS

Padded brown swirl leatherette. 12 pockets. Padens flat. Gold embossed Gothic design on Opens flat. Gold embossed Gothic design on sturdy construction. Shpg. wt. 3 lbs.
34N21888-: 0 -inch size..
34N21889-12-inch size..

## PHONO PICKUPS-ARMS-CARTRIDGES-PREAMPS

## SHURE CRYSTAL PICKUPS


(A) Model 901A. For standard 78 RPM recordings. Same "Vertical Drive" principle as above. Tracks with a force of only 7 grams. Frequency response to $6,500 \mathrm{cps}$. Output level 1.1 V. Constructed of diecast aluminum, scientifically curved for best tracking angle. Sapphire replaceable needle.
34N13510--Shpg. wt. 12 oz.......................... List Price 11.756 .91
(A) Model 901MG. For use with $33 \mathrm{l} / 3$ and 45 RPM fine-groove recordings. Frequency response to $10,000 \mathrm{cps}$. Equipped with .001" Sapphire replaceable needle. Needle pressure: 5 gms. Output level 1.0 Volts. Vertical drive cartridge.
34N13509-Shpg. wt. 12 oz .
.List Price 12.75
7.50

(B) Model 900B. Muted Stylus Type for home or coin phonos. Over comes noise and distortion. Has specially designed muted Osmium reedle for longer record life-needle retracts when too much force is applied to cartridge. Low mass aluminum tone arm is designed or maximum, faithful tracking. Needle force is low loz.; output woltage 1.8. Peak-free wide frequency response. 34N13419-Shipping weight 1 lb .
6.17
(C) Model 93A. "Glider"' Type Pickup-Lightweight, replacement for pickups. Takes up to 12 " records. High 1.8 volts output with response from 60 to 6000 cps . Changeable needle with pressure (1/8 oz.
34N13417-Shipping weight 8 oz..
List Price 7.50
4.4

Model 96A. "Glider" type. Same as model 93A above, but with 4.3 -volt output level. 34N13508--Shipping weight 13 oz..

## List Price 8.505 .00



## GE TRANSCRIPTION ARM

 Model FA-21-A. Designed to mount the GE Variable Re luctance Cartidge above. Used by broadcasting stations and those desiring the tinest quality reproduction of lateral transeriptions and records Mass of the transcription arm reduced to the minimum point through use of special design and magnesium alloy for moving parts. Low friction assured by precision cone type bearings. Mounts on motor boards whose dimensions from the center of the turntable to the edge of the mounting surface is at least $15^{\prime \prime}$ 34N13514-Shpg wt. 1 lb .40.18

Model RWP-001. Counterweight adapts above for L.P.
records.
3.77
34N1351S.
PICKERING CARTRIDGE REPRODUCER


Designed to give the highest quality reproduction of records and transcriptions. Will fit into almost any arm-"Keystone Clip" mounting permits adaptation to a large variety of arm shapes and sizes. Requires pre-amp equalizer listed below. Includes sapphire stylus with tip radius of 0.0027 .
34N13493-Model S-120M
9.90

34N13494-Model D-120M, with Diamond Tip. 24.90 MICROGROOVE Cartridge, for new Long-Play records. 34N13495-Model D-140-S, with Diamond Stylus. 36.00 34N13498-Model S-140-S, with Sapphire Stylus. 14.70 Bracket for mounting Pickering cartridge in Webster Model 356 thiee speed changers. No charge with order $34 N 13504-F$ For $\mathrm{S}-140-\mathrm{S}$ and D-140-S... Free
Model 125H. Equalizer-amplifier. Designed for use with Pickering Cartridge Reproducers above. Compensates for average recording characteristics and raises output voltage as high as that obsainable from crystal pickups. Easily installed. Operates from power supply of amplifier or radio set. Normal HF characteristics 14N 13496.................................................................................... 19.50


Fig. A. Model RPX041. Variable Reluctance cartridge with replaceable needle. Provides smooth, wide range reproduction of both able needle. Provides smooth, wide range reproduction of both
conventional and long playing records. Low mechanical impedance. Small size and light in weight. Unaffected by widely varying temperature and humidity conditions. Reproduces entire usable range. Output: 12 millivolts at 1000 cycles. Pre-amplifier listed below is required between pickup and input. Size 1 15/32 $\times 3 / 4 \times 9 / 16^{\prime \prime}$. For L.P. ( $331 / 3$ \& 45 RPM) records. (Complete with replaceable needle.
34N13485-List Price 9.95................................................................ 5.85
Model RPX040. Same as above but for standard 78 RPM records. Complete with replaceable needle.
34N13500-List Price 9.95
5.85

34N108—Replaceable needle for L.P. cartridge................................................................................... 34N107-Replacement needle for Standard cartridge ...............2.06 Fig. B. GE Pickup Arm, with either standard or L.P. cartridges above. Plays 10 or $12^{\prime \prime}$ secords. Can be used with any nonautomatic record player. Factory balance for proper stylus pressure, which can be adjusted if desired. Simple to install. Single hole mounting. $24^{\prime \prime}$ lead, mounting rest and mounting template hole mount
34N13502-List Price 15.95
.with L.P. cartridge
9.38

34N13501-List Price 15.95 ....... with Standard cartridge .........9.38 Fig. C. Model UPX-003. Self Powered Pre-Amplifier for above cartridges and pickups. Uses 1-6SC7 tube in equalizing circuit, plus reftifier. Includes input jack, $14^{\prime \prime}$ output lead with phono plug. 115 V., 60 -cycle AC. $35 / 8 \times 35 / 8 \times 33 / 4$ 34N13473-List Price $15.95 \ldots \mathrm{Shpg}$. w!. 2 lbs.....With tube 9.38 Model SPX-001. As above, less rectifier. Obtains filament and plate voltage from receiver or amplifier.
34N13465-List Price 9.90..
.Shpg. wt. 2 lbs.
5.82

## BROADCAST CARTRIDGE

Model RPX-046. GE Broadcast type cartridge. Less needle. 6.73
34N13479 ................................................................................
Model RPJ-004. Diamond Stylus. .001" radius. Stylus pressure $6-8$ grams. For long playing records. 34 N 128
16.17

Model RPJ-003. Diamond Stylus. Radius .003". Stylus pressure 3,4-1/4 oz. for 78 RPM records.
16.17

## ASTATIC PICKUPS



## STANDARD AND MICROGROOVE

Model 6D. Crystal. For standard and long playing records. Response 50 to $7,000 \mathrm{cps}$. Output voltage 1.2 V . at $78 \mathrm{RPM} ; 0.9 \mathrm{~V}$ at $331 / 3$ and 45 RPM. Needle pressure 8 grams. Equipped with precious metal and sapphire stylus tips in reversible cartridge. Dark brown finish.
34N13512-Shpg. wt. 2 lbs .
List Price 15.90
9.35

## MICROGROOVE PICKUP

Model 507L-92-33. For use with $331 / 3$ and 45 RPM long playing records. Crystal type. Frequency range $50-10,000 \mathrm{cps}$. 1.6 volts output. Needle pressure 10 grams range
Needle not included. Opalescent gray finish.
34N13513-Shpg. wt. 11/8 lbs.
List Price 8.00
4.70

## ASTATIC TONE EQUALIZER

For use between crystal pickup and amplifier. Has 4 positions: Bass, Med., Hf. Off. Single hole mounting. Dimensions: $2^{\prime \prime} \times 3 / 4^{\prime \prime \prime}$ 4345 -Shpg. wt. 1 lb.


## CLARKSTAN PHONO NEEDLE PRESSURE GAUGE

Indispensable to the serviceman! Checks weight and balance of pickup arm from one gram to four ounces.
Has 2 scales, plus calibrated dial with $4: 1$ scale multiplie 34N447-Shipping weight I lb.

## PHONO PLAYBACK \& RECORDING NEEDLES

All the needles listed below are 3 -millimeter radius for use with standard 78 RPM recordings except where otherwise specified. Long playing and microgroove needles are 1 -millimeter radius, designed


## ROYAL JEWEL NEEDLE

Plays up to 10,000 sides! Genuine sapphire jewel point. Specially designed offset shank reduces noise and distortion to a minimum.
LP needle for $331 / 3$ and 45 RPM 1
34N179 Each...................... 1.47
Lis of 13 Each
15.00

## CLASSIC NEEDLE



Designed especially for brilliant reproduction of instrumental and vocal recordings. New spring construction minimizes hiss and scratch Osmium alloy tip.
34N176-Each
Lots of 13 .
83c
LP needle for $331 / 3$ and 45 RPM records 34N177-Each.
Lots of 13
83 c
9.00

## DUOTONE SHOCKPROOF NYLON NEEDLE

Eliminates damage to needle or record if pickup accidentally drops. Osmium tip on steel spring set in Nylon bumper. 5,000 plays. 1.47

## 

NEW MICROGROOVE NEEDLES
OSMIUM ALLOY TIP
Designed for new, long-playing and microgroove records. ${ }^{3} / \mathrm{tb}^{\prime \prime}$ offset shank for hi-fidelity, softer tone. 34Ni20-. 001 "radius.

69c


## SAPPHIRE AND RUBY POINTS



## SAPPHIRE TIP STRAIGHT NEEDLE

Designed for the new lightweight pickups and the new Long-Play records. 001 "radius. 89 c
34 N 123 . .....................................

## JEWEL-TIPPED OFFSET-SHANK NEEDLES

$$
\begin{aligned}
& 5000 \text { plays. Cushion action design. T. } 07 \\
& \begin{array}{l}
1000 \text { pla } \\
34 \mathrm{~N} 16 .
\end{array} \\
& 1.07 \\
& \text { 54c }
\end{aligned}
$$

## PERMANENT TYPE PHONO NEEDLES

Sapphire Tip Needle. Guaranteed for 8,000 plays. Tapered duraluminum shaft completely eliminates tone distortion. Precision ground and polished point. For tone arms with less than $21 / 2$ oz. pressure. 34N117-List price 1.00

59c Lots of 24 .
$50 c$
 Ruby Jewel Tip Needle. 12,000 plays. Double bend tapered shaft absorbs shock. Diamond polished tip. 34N118-List price..1.50..Each..88c Lots of 20, each. $75 c$

## STANDARD JEWEL-TIP NEEDLES

Duotone Durpoint-offset type, plays up to 4000 records. 34N443
Walco Tru-Trac-sapphire point, plays 5000 records. 34N170.

59c
88c

## WEBSTER TANDEM REPLACEMENT NEEDLES

Metal. For models 256 and 246 changers
Metal.
Osmium.
34N178.
For models 356 and 346 changers.
Sapphire
34N179.

Singly 4.00 ea. Lots of 102.00 ea .
Singly 4.00 ea. Lots of 102.00 ea .
346 changers.
. Singly 5.00 ea. Lots of 102.50 ea.
for use with the new Columbic $331 / 6$ and RCA 45 RPM recordings. Precision made for best reproduction of all types of recordings. For exact replacement types see listings on cartridge page 50.

## LONG LIFE PLAYBACK NEEDLES



1. Precious Metal point needle with offset shank. For maximum record sides without changing.

Each 88e
2. Reliance 4000 play needie. Plastic case. Low surface noise.

59c
. Each
$59 c$
3. Permo Point 2000 play needle with patented precious metal elliptical point. Standard for coin machines.
34N164.
50c
3. Reliance Permanent Point Needles, 2000 plays.

上ach
39c

## 34N165

Each
4. Fidelitone "Floating Point" needle filters record scratch. 3 to 6 months average use ( 1000 or more sidęs). Platinum point. Ideal for changers.

50c
4. Deluxe Fidelitone "Floating Point" needle. As above, but good tor 5000 plays.
1.00

34N478.
Each 1.00
9. Presto transcription metal alloy needle. Long life, high-fidelity. Semi-permanent self-lubricating point. 40 to 50 hours on standard records, longer on home recordings.

Each $\mathbf{6 9} \mathbf{c}$

- plays 2000


## 34N286.

11. Sapphire Tipped Playback Needle! Permanent needle-plays 2000 commercial records with minimum wear. Excellent frequency acteristics. A real value.
34N448.
.Each
1.15

## STANDARD PLAYBACK NEEDLES

9. Red shank needles for aceterte recordings. Individually shadow tested $\qquad$ Package of 100 .
Each 46e
10. Filter point highly polished surgical steel needle. Shadow tested. Low surface noise. 10-15 plays.
34N209-Package of 10.
Each Be
34N222-Package of 25 .
. Each 21c

11. RCA steel phonograph needles.
34N153-Full Tone (Pack of 100 ).

34N153-Full Tone (Pack of 100 ).
34N160-Extra Loud (Pack of 160 )
15c


9. Green Shank shadowgraphed needles.

Good for 12 plays each.
46c
4N432--Package of $10 . . . . . .$.
30c
34N141-Package of 50
. .2 .00

## RECORDING NEEDLES

5. Lapped edge sapphire cuttirg needle for acetate discs. Precision cut jewel for low surface noise and highest fidelity. Over 5 hours cutting life.

Each 3.23
5. Like above, but with Long Shank to fit Presfo Professional and Brush cutting heads
3.45

## 35N198.

6. Sapphire cutter ground to W. E. spec. For acetate discs. About
10 hours life. Can be resharpened.
35N196............................................................. 4.

35N196.
d and lapped.

uts hundreds of
7. Stellite cutter for acetate discs. Extremely quiet. Cuts hundreds
sides; can be resharpened.

35N337.
8. Individually polished steel cutter for acetate discs. Will cut 15 to

2510 -in. discs.
35N348-Package of 4.
$5 \%$
8. Alloy cutter for ucetate; ha:der than steel. Polish while they cut. Hand lapped.

95c
35N434A-Package of 5 ..
...Each 1.79

## CARTRIDGES-RECORDING DISCS

## CRYSTAL PICKUP REPLACEMENT CARTRIDGES

Replacement units with accompanyina needles for all standard miakes of crystal pickups as recommended by manufacturers. Precision made and individually tested.

ASTATIC

|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Model | Type | Pressure | Output | Foch |
| 34N13407 | B. 2 | 2 | $23 / 402$. | 2.5 V . | 3.26 |
| 34N140 | B-4 | 2. | $27 / 40 \%$. | 2.5 V | 3.26 |
| 34N13848 | CQJ* | 7 | 5 gr . | . 7 V | 4.41 |
| 34N13973 | L-26A | 1 | 23/4 07. | 1.4 V . | 2.62 |
| 34N13965 | L.40A | 1 | $11 / 402$ | 6 V | 2.62 |
| 34N13969 | L.70A | 1 | 11/407. | 1.0 V | 3.26 |
| 34N13972 | L-71A | 1 | 1 oz. | 1.0 V | 3.91 |
| 34N13981 | L.72A | 1 | $11 / 4 \mathrm{cz}$ | 3.5 V . | 3.91 |
| 34N13841 | L-82A | 1 |  | 3.5 V | 3.27 |
| 34 N 13842 | L-92A | 1 | 1 oz. | 2.25 V . | 3.53 |
| 34N13840 | L-92-33 | 4 | 10 gr . | $1 . \overline{6} \mathrm{~V}$. | 3.53 |
| 34N13790 | LT 1 MA | 4 | 3/9 oz. | 1.0 V | 4.12 |
| 34N13843 | LT 2 MA | 4 | 3/9 oz. | 1.0 V | 4.12 |
| 34N13791 | LT 3 MA | 4 | 3/4 oz. | 1.0 V | 4.12 |
| 34N233 | M-22 | 1 | $23 / 40 \%$ | 2.9 V | 3.26 |
| 34N13844 | QT 2 IA | 3 | 1 oz. | 85 V . | 5.24 |
| 34N13845 | QT 2 MA | 3 | 182. | 85 V | 4.94 |
| 34N13961 | OT 3 M* | 3 | $11 / 4 \mathrm{oz}$. | . 75 V | 4.94 |
| 34N13962 | QT 3 J $\dagger$ | 3 | 11408. | 75 V . | 5.23 |
| 34N13404 | U-Jt | 5 | 5 gr . | . 5 V . | 5.23 |
| 34N13405 | U-78-J $\dagger$ | 5 | 5 ar. | 5 V. | 5.23 |
| 34N 13980 | Nylon-1-J $\ddagger$ | 6 | 11/4 oz. | 1.0 V . | 4.56 |

* With precious metal needle.
$\dagger$ With sapphire needle. $\ddagger$ With nylon needle.
*With special brackets tor RCA 45 RPM changers


## REPLACEMENT NEEDLES FOR ABOVE

31 N106-Precious metal tip tor LT models
34N101- Precious metal tip for Model QTM
3! N102-Sapphire tip needle for Model QTI
34N114-Nylon needle for Model Nylon-1 J
34N139-3 Mil sapphire for U.78-f carticig
DOUBLE NEEDLE TURNOVER CARTRIDGE



REPLACEMENT NEEDLES FOR ABOVE
34N102-3 Mil sapphire tipped needle for 78 RPM records.. T. 47
34N 137-1 Mi! sapphire tipped needle for LP records.

| Stock No. | Madel | Pressure | Output | Each |
| :---: | :---: | :---: | :---: | :---: |
| 34N215 | 31050 | 2.7 oz . | 1.5 V | 2.52 |
| 34N249 | 37158 | 3 \% 0. | 1.5 V | 2.82 |
| 34N277 | 33217 | 2.7 \% | 1.5 V . | 2.52 |
| 34 N 280 | 33122 | 2.7 oz . | 1.5 V. | 2.52 |
| $34 N 13424$ 34N13979 | 31156 .88610 | $\begin{array}{ll}3 & \mathrm{oz} \\ 2 & \mathrm{oz} .\end{array}$ | 1.5 V 1.5 V | 2.85 3.33 |

WEBSTER
Model C2
Tim
34N13976-Flange mount
2.65

> REPLACEMENT CARTRIDGES FOR WEBSTER-CHICAGO CHANGERS

Type V 47. For Webster 356-1 changer.
34 N 13708
34N13708
34N13709 42. For Webster 256 -1 and 246 changers

## RCA MAGIC TONE CELL KIT

Maqıc Tone Cell with "Silent Sapohire" semipermanent jewel tip needle for high-fidelity reproduction. Output volts $11 / 2$. Includes Magic tone cell, silent sapphire jewel point and ha
34N13960-Each.
4.12


SHURE CARTRIDGES
Reversible cartridge for playing 78, 331/3 and 45 RPM. "Vertical Drive" construction. neadle chuck rotates on vertical axis. Meets needs of high needle point compliance and ficielity for microgroove records. Response to 6000 cps . Output Pressure 6 grams
Type W22A. With 1 Mil and 3 Mil sapphire needles. 34 N 13713.
Type W22AB. With I Mil sapphire and 3 Mal osmum. 34N13714.

## LEVER TYPE

| Stork No. | Modipl | Prosture | Cutput | Earh |
| :---: | :---: | :---: | :---: | :---: |
| 34N13985 | W5:4 | $3_{1}$ nz. | 1.68 | $\overline{3.26}$ |
| 34N13987 | W58A | ${ }_{1}{ }_{1} \mathrm{nz}$. | 1.61: | 3.26 |
| 34N13988 | W59.4 |  | 2.5 \". | 3.26 |
| 34N13993 31NI3835 | W5biA W421 | [1/807. | 4.3 V 1.3 V. | 3.91 2.02 |
| 31 N13400 | W5sa! ${ }^{\circ}$ | is mr. | 1.0 V . | 5.00 |
| 34Ni3836 | W5ik | 102. | 4.3 V . | 4.41 |

*With Usmium needle.

## MUTED STYLUS TYPE

| 34 N 13991 | Wina | 1 oz. | 1.61. | 5.00 | -1\% 3 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 34N13992 | Whin | $10 \%$ | 1.6 V | 4.41 | Y\% |
| 34 N 13837 | Whill | 108. | $1.6{ }^{\prime}$ | 4.41 | N+ |
| 34NI3838 | Wifis | 1 oz. | 4.0 V . | 5.00 |  |

All with 3 Mil Osmiun needle except Whiod which is sapphire.

NEW VERTICAL DRIVE TYPE


## 34N105--1 milo Osmium needle for W53MG

-••.....1. 18 34N103.
3 mil Osmum needle for W60B, W61B, W65B and all "Vertical
Drive Cartridges.
Drive
34 N 104.
.88

## RECORDING DISCS

## PRESTO "ORANGE SEAL" PRESTO "GREEN SEAL"

Sturdy alumunum base coated with Presto's special compound -have low surlace noise and long-playina life.

| No. | Nize | Pach | \|lats 10|Ints50 |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Fach | Earh |
| 35 N11960 |  | 26 c | 23 c | 21 c |
| 35 N 11961 | $8^{\prime \prime}$ | 37 c | 33 c | 30 c |
| 35 N11962 | $10^{\prime \prime}$ | 56e | 50 c | 45 c |
| 35 N 11963 | $12^{\prime \prime}$ | 75 c | 66c | 60 c |

## AUDIODISCS "YELLOW LABEL"

For amateur, school or home use Acetate coated on aluminum bas:e. Double-sided and labeled

| No. | Size | Fiach | $\left.\right\|_{\text {Lots of } 25} ^{\text {Earh }}$ |
| :---: | :---: | :---: | :---: |
| 35N11990 | R" | . 70 | . 42 |
| 35N11997 | $10^{\prime \prime}$ | . 90 | . 54 |
| 35N11998 | $12^{\prime \prime}$ | 1.5月 | . 90 |
| 35N11999 | $16^{\prime \prime}$ | 2.70 | 1.62 |

## RECORDISC "ORANGE LABEL'

Adinarably suted to the avernge type of amateur transcription. Bond base, professional nitrale conted.
35N11969-Pkg of 6 61/2. 54 35N11970-Pka. of 6 8. 90
35N11971-Pkq. of $60^{\prime \prime} 1.26$
RECORDISC "RED LABEL"
Professional quelity. .021" thick aluminum base with murror-like nitrate finish.

| No. | Size | Each | 5 for |
| :---: | :---: | :---: | :---: |
| 35N11972 | $6^{\prime \prime},^{\prime \prime}$ | $20 c$ | .90 |
| 35N11973 | $8^{\prime \prime}$ | $27 c$ | 1.20 |
| 35N11974 | $10^{\prime \prime}$ | $270 c$ | 1.80 |
| 35N11975 | $12^{\prime \prime}$ | $53 c$ | 2.40 |

Finest grade-aluminum base with special compound. Used by lahoratores to demonstrate the capabilities of recording equrpment. Thickness: .052".

| \%o. | Niz* | Each | Ints 10 | Lots 30 |
| :---: | :---: | :---: | :---: | :---: |
| 35N11992 | 12" | 1.35 |  | Fach |
| 35 N 11967 | $1314^{\prime \prime}$ | 1.68 | 1.50 | 1.35 |
| 35N119?3 | $16^{\prime \prime}$ | 2.44 | 2.17 | 1.95 |

## AUDIODISCS "RED LABEL"

For professional use. Acetate coated on smooth aluminum brise. Deruble-sided with 3 drive pin holes. .054* thirkness.

| No. | Nize | Earh | l.ots of 25 Each |
| :---: | :---: | :---: | :---: |
| 35N11989 | S" | . 80 | . 48 |
| 35N11994 | $10^{\prime \prime}$ | 1.15 | . 69 |
| 35N11995 | $12^{\prime \prime}$ | 1.85 | 1.11 |
| 35N11996 | 16" | 3.40 | 2.04 |

## RECORDISC "PURPLE LABEL'

Simikar to Red Labol, but with
lighter weight aluminum base, and mirror-like nitrale cont.

| No. | Size | Each | 5 for |
| :---: | :---: | :---: | :---: |
| 35N11945 | 61:" | Ife | . 60 |
| 35N11946 | $8^{\prime \prime}$ | 20 c | . 90 |
| 35N11947 | $10^{\prime \prime}$ | 30 \% | 1.35 |

## RECORD RENEWERS

For acetate records. Cleans, Iubricates, protects, etc.
$35 N 15300-2-o z$. bottle
$26 c$ For commercial records 35N15301-2.oz. bcttle

# INVERTERS - POWER PACKS - GENERATORS 

CORNELL-DUBILIER CONYERTERS


Provides smooth, dependable operation of radios amplifiers, intercoms and other H.P.F. appll ances. Delivers 110 -volt, 60 cycle $\AA C$ from 6, 12
and 110 -volt DC power sources: Completely RH iltered tor broadcast, short wave and FM Models 6R5, 6R10, $12 R 8$ and 12RU15 feature 4. way adjustable load control switch. Model Phantom switch can be added to Model 110R25.

| $\begin{aligned} & \text { Nork } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | $\begin{gathered} \text { DC } \\ \text { hиat. } \end{gathered}$ | Wat | atts Cont | $w$ |  | $\begin{aligned} & \text { Nopg. } \\ & \text { Wr. } \end{aligned}$ | list Price | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21N17285 | 6 R 5 | ${ }^{6}$ | 5.5 | 50 | $6^{3} \mathrm{~s}^{-3}$ | ${ }^{\prime \prime}$ | 12 | 11.15 | 24.67 |
| 21N17286 | (iR10 | fi | 125 | 109 | - 125 |  | 19 | 5:1, 50 | 34.99 |
| 21N17287 | 12188 | 13 | 120 | 81 | $8^{13} 1^{1} \mathrm{x}^{-3}$ |  | 12 | 11.95 | 24.67 |
| 21N17288 | 12 Rl 15 | 12 | 200 | 150 | - $\times 123 / 8 \mathrm{x}$ |  | 22 | 7R. 95 | 46.42 |
| 21N17289 | $110 \mathrm{R10}$ | 1111 | $1.51)$ | 10 k | $63 / 8 r^{-3}$ |  | 101: | 39.95 | 23.49 |
| 21N17290 | 110 RA 15 | 110 | 2010 | 150 | 183/8\% 1 | 51, | 1212 | 18.75 | 28.66 |
| 21N17291 | 110R25 | 110 | 3010 | 250 | ¢1 423 |  | 221: | 64. 95 | 38.19 |
| C-D REPLACEMENT VIBRATORS |  |  |  |  |  |  |  |  |  |
| Ntork No |  | Type No. | Repl. For Model |  |  | List lrime |  | Each |  |
| $\begin{aligned} & \text { 21N6039 } \\ & 21 \mathrm{~N} 6040 \end{aligned}$ |  | $\begin{aligned} & 3103 \\ & 412: 3 \end{aligned}$ | filR 5 <br> 18R10 |  |  | $\begin{aligned} & 10.65 \\ & 14.85 \end{aligned}$ |  | $\begin{aligned} & 6.26 \\ & 873 \end{aligned}$ |  |
| 21N6041 |  | 1315 | 110R10 <br> 110RT25 <br> I10RAI5 |  |  | 10.65 |  | 6.26 |  |
| $21 N 6042$ <br> 21N6043 <br> 21N6044 |  | $\begin{aligned} & 3077 \\ & 3077 \mathrm{~V} \end{aligned}$ | 110 RT 15110 RT 25110 RT 35 |  |  | 12,165 |  | 7.44 |  |
|  |  | 15.6516.85 |  | 9.209.91 |  |
|  |  | 3079 |  |  |  |  |  |

C-D MOBILE MOUNTING BRACKETS

| Stork No. | Type No. | For | List I'rice | Earh |
| :---: | :---: | :---: | :---: | :---: |
| 21N6045 <br> 21N6046 | $\begin{aligned} & 3164 \\ & 3165 \end{aligned}$ | $\begin{aligned} & \text { (iR5, 12R8 } \\ & 6 \mathrm{RIO}, 12 \mathrm{RI} 15 \end{aligned}$ | $\begin{aligned} & 1.95 \\ & 1.95 \end{aligned}$ | $\begin{aligned} & 1.15 \\ & 1.15 \end{aligned}$ |

C-D PHONO MOTOR CONVERTERS
Model 110PA5. For operation of automant and manual
Supplies filtered, 110 -voll, 60 -cycle AC power from 110 voil DC source. Hammered enamel finish. Has leads for permanent wiring installation. Output 75 volt-ampere 21N17296-List 14.95
8.77

Model 110PB5. receptacle and silide
2iN17297-List 16.95
NDARD \& HEAYY
ATR STANDARD \& HEAUY DUTY RADIO INVERTERS This newly develored ine Radios, Public Address Systems, Amplifier etc., from DC voltages. Extremely well filtered to insure inferference Iree all-wave radio reception. All models listed below have 110 volt
60 cycle AC output. Standard models measure $8^{3} \times 9 \times 9 \times 5^{1}+$, shipping 60 cycle AC output. Standard models measure $8^{3} \times \times 9 \times 5{ }^{1}{ }^{\prime \prime \prime}$ ", shipping
wt., 19 lbs . Heavy duty model measures $61 / 2 \times 11^{1 / 8 \times 81 / 2^{\prime \prime} \text {, }}$ shipping


VIBRATORS FOR ABOVE 21N6048--For 6V nindels.

## 21N6049-For 110 V models...................... <br> KATO GAS-ELECTRIC PLANTS

Fillered, shielded, compact and ightweight consistent with good engineering practice to meure rugged duratnity and power output.
Both models illustrated provide 115 volts 60 cycles $A C$ at the rated wattages for continuous duty, and the hirst model shown also provides $15 n$ watts at 6 vo

B. Model 26HAB4. Heavy duty unit. Single-cylinder, 4 -cycle, 2.4 h.p. en! gasoline. Manual starting 21N19821 Weighs 295 lbs.

CORNELL-DUBILIER TV CONVERTERS
Specially designed to meet the critical power conversion requirements of TV. Telivers 110 volt 60 cycle AC from 110 V . DC power source. RF illered for broadcast, shorl wave. FM and Model llorT15 features phantomzwich and rea. control. lloRT25 features Ire tion for the addition of "phantomswitch
 110RT35-Fully automatic power conversion
"phantomswitch."

| $\begin{aligned} & \text { Stock } \\ & \text { Son. } \end{aligned}$ | $\begin{aligned} & \text { Type } \\ & \text { N゙o. } \end{aligned}$ | $\frac{\text { Watts }}{\text { Int. }}$ |  | $\mathrm{w} \stackrel{\underset{\text { size }}{\text { s. }} \mathrm{H}}{ }$ | Shpg. Wt. I.bs. | list Price | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21N17239 | H0RT15 | 250 | 150 | 60 $0^{5} \times 121 / 4 \times 712^{\prime \prime}$ | $16^{3 / 4}$ | 65.00 | 38.22 |
| 21N17293 | IInRT25 | 300 | 250 | $6 \cdot 5 \times 128 \times 8{ }^{\text {\% }}$ | 2212 | 69.095 | 41.13 |
| 21N17235 | 110RT:35 | 500 | 350 | ${ }^{-1} 2 \times 14 \times 8 / 8{ }^{\prime \prime}$ | $40^{1}$ | 119.50 | 70.27 |

C=D "PHANTOMSWITCH"
Model 3155. For use with models $110 R 25$ and IIORT25. Self contained plug-in unit. No wiring necessar Automalicaly on the AC equipment
hin of switch on the
8.53

## C-D BATTERY ELIMINATOR-CHARGER

## Model $110 B A 6$. Provides 6 -volt DC, power

from 110 V. . 60 -cycle AC source. 60 watts conmuous output. Bultin visible adust ment of output voltage. 7 -position switch gives choice of $4,5,6,7,8,9$ or $: 0 \mathrm{amps}$ deal for testing auto radios and chargin batteries.
21N17292
21N17292
32.21


Model 110 BA12. Supplies 6 and 12 V . DC for servicing and testing auto, truck and boat radios and appliances. 120 -watt continuous output. Built-in ammeter and voltmeter. 7 step switch from 8 to 20 amps $13^{\prime \prime} \mathrm{L} \times 811^{4} \mathrm{H}$
50.27

## BROOKS PHONO-MOTOR INVERTERS

Provide an efficient and ecrnomical method for the operation of AC phono motors in Model Z-1. Standard type. Will operate player or changer on DC current. 9.95 Model Z-2. AC-DC switch type. For use with any record player or chanejer. Can used on either AC or DC without disAC or DC as desired.


## 21N17299.

10.95

MALLORY VIBRAPACKS

 NOTE: Two types are listed, self-1ectifier and tube rectifier. " $B$ " thimus is at ground potentials in the seli-rectifier tynes. Use the fube rectifer type for applications where " $B$ " minus should not be grounded
Type VF- 223 Filter-For all single unit packs where utmost hum suppression and vothage requiation is required. 21 N 6060 . . . . . . . 4.70

| So. | Type | Vitg. | Output Voltage | Out put | Type | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21N6059 | VP-510¢ | 6.0 | 250 | 60 ma . | Self-Rect. | 17.64 |
| 21N6090 | VP-551 | 6.3 | 125-150-175-200 | 100 ma . | Self-Rert. | 12.94 |
| 21N6094 | VP-552 | 6.3 | 225-250-2-55-300 | 100 mar . | Self-Reet. | 15.43 |
| 2IN6091 | 1P-553 | 6.3 | 125-150-175-200 | 100 ти. | Tuhe Rect. | 14.41 |
| 21N6095 | VP-554 | 6.3 | 225-250-275-300 | 100 mil. | Tulve Rect. | 16.90 |
| 21N6066 | 1P-555* | 6.3 | 300 | 200 ma . | Tube Rect. | 30.58 |
| 21N6067 | VP-557* | 6,3 | 100 | 1.50 mm . | Tube Rect. | 30.58 |
| 21N6092 | VP-(7554 | 12.6 | 225-5\%102? | 109 mat. | Self-Rect. | 16.90 |
| $21 N 6068$ | 1P-F558 | 32.0 | 225-200-2-5-300 | 1 mma ma. | Tube Rect. | 18.37 | *Sperial Dual Parks for high outpmi. Dutput slta, not iuljustable. †riltered. Requires no filter.

21ppressi

## REPLACEMENT VIBRATORS FOR VIBRAPACKS



## BURGESS BATTERIES

## STANDARD DRY BATTERIES

For radio or laboratory use．Suffix letters of battery numbers denote type of terminal．PI－plug－in；SC－spring clip；all others have screw terminals except＊with strap terminals，$\dagger$ tapped at $221 / 2$ volts；\＃tapped at $3,41 / 2,16$ and $221 / 2$ volts．

| $\begin{aligned} & \text { Cat. } \\ & \text { No. } \end{aligned}$ | Burgess Type | Volt | Size | $\left\|\begin{array}{c}\text { Shpg } \\ \text { Wt．} \\ \text { Lbs．}\end{array}\right\| \begin{gathered}\text { Std．} \\ \text { Pkg．}\end{gathered}$ | Net Each |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Sgle． Lots | Std． Pkg． |


| ＂BB＂BATTERIES |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20N198 | 2130 | 45 |  | 15 | 6 | 3.41 | 3.10 |
| 20N19832 | $213085 \mathrm{C} \dagger+$ | 45 |  | 15 | 6 | 3.41 | 3.10 |
| 20N19824 | 10308PIt $\dagger$ | 45 | $81,6 \times 41 / 2 \times 7310^{10}$ | 13 | 6 | 3.26 | 2.96 |
| 20N19831 | $103085 C \dagger$ | 45 | $81,5 \times 41 / 52 \times 71 / 16^{\prime \prime}$ | 13 | 6 | 3.26 | 2.96 |
| 20N19825 | 2308PI $\dagger$ | 45 | $1815 \times 2293 \times 711^{\prime \prime}$ | 8 | 6 | 2.38 | 2.16 |
| 20N19829 | 2308 SC $\dagger$ | 45 |  |  | 6 | 2.38 | 2.16 |
| 20N19861 | 5308 | 45 |  | 31／2 | 10 | 1.65 | 1.50 |
| 20N20683 | X30X | 45 | $1{ }^{3} / 16 \times 215,16 \times 51 / 8{ }^{\prime \prime}$ |  | 6 | 2.86 | 2.60 |
| 20N19865 | Z30NX | 45 | $17 / 8 \times 31515 \times 1 / 10^{\prime \prime}$ | 11／2 | 10 | 1.98 | 1.80 |
| 20N19826 | 5156P1／ | 221／2 | $41 / 8 \times 23 / 8 \times 2{ }^{15} / 64^{17}$ |  | 10 | 1.39 | 1.26 |
| 20N19862 | 5156SC\＃ | 221／2 | 41／8×21／2 $\times 28 / 4$ | 2 | 10 | 1.39 | 1.26 |
| 20N19863 | 4156 |  |  | 1 | 10 | 1.00 | ． 91 |
| 20N20682 | AlSST＊ |  | $13716 \times 21 / 8 \times 25 / 8 \prime$ | 1 | － | 1.18 | 1.07 |
| ＂C＇＂BATTERIES |  |  |  |  |  |  |  |
| 20N19868 | 5540 | 71／2 | $4 \times 7 / 8 \times 2 \frac{1}{4 \prime}$ |  | 10 | ． 74 | 67 |
| 20N19866 | 5360 |  |  |  | 10 | ． 39 | ． 35 |
| 20N19827 | 2370 PI |  |  |  | 10 | ． 62 | ． 56 |
| 20N19867 | ${ }^{2370 B P}$ | $41 / 2$ | $3^{15} 1616 \times 18 / 8 \times 27 / 8^{\prime \prime}$ |  | 0 | ． 62 | ． 56 |
| 20N20686 | B3BPX | 41／2 |  | $1 / 2$ | － | ． 84 | .76 |

## ＂A＂BATTERIES

| 20N20680 | F4BP | 6 |  |  | O | 56 | 51 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20N20679 | 2F2BP | 3 |  | 11／2 | 10 | 1.05 | ． 95 |
| 20N19844 | F2BP | 3 |  |  | 10 | ． 53 | ． 48 |
| 20N20685 | B2BP | 3 | $15 / 8 x^{13} / 6 \times 2^{31} / 4^{\prime \prime}$ | $1 / 2$ | 6 | ． 48 | ． 44 |
| 20 N 20611 | 422 | 3 |  | $1 / 4$ | 10 | ． 23 | ． 21 |
| 20 N 20678 | 2FBP | $13 / 2$ |  | $1{ }^{1}$ | 10 | ． 53 | ． 48 |
| 20N20681 | 44 | 1312 | 115 亿́ndia．$\times 40$ 亿6＂ | 1 | 10 | ． 66 | ． 60 |

＂A＂and＂B＂BATTERIES FOR HEARING AIDS

| Stock No． | Burgess No． | Volts | Shpg． Wt． | Size | Std． <br> Pkg． | Price Each |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Single | Std． Pkg． |


| ＇${ }^{\text {a＇＇}}$ BATTERIES |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20N20688 | 1ES | 13／2 | 12 oz． | 16／16x ${ }^{31}$／r $^{\prime \prime}$ diam． |  | 7 c | ， |
| 20N20689 | 2ES | $11 / 2$ | 5 oz ． |  | 96 | 71／2k | 61／2 |
| 20N20691 | TE | $11 / 3$ | 5 oz ． | 37／8×11／68 diam． | 96 | 196 | 17 c |
| 20N20687 | 2ZE | 13 | 11／20． | $11 / 8 \times 19 / 2 \times 129.2^{\prime \prime}$ | 100 | 156 | $14 \%$ |

STANDARD＂B＂BATTERIES

| 20N20693 | XX22E | 33 | 7 Oz ． | $28 / 8 \times 1^{8} 110 \times 3$ | 10 | 1.23 | 1.12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20N20694 | XX30E | 45 | 7 oz | 21／2x ${ }^{29}$／$x^{3}{ }^{27}$ | 20 | 1.45 | 1.32 |
| 20N20677 | UlOE | 15 | 2 oz． | $1 \times 96 \times 15$ | 20 | ． 62 | ． 56 |
| 20N20676 | U15E | 221／2 | 21／208． |  | 20 | ． 78 | 71 |
| 20N20675 | U20E | 30 | 3 oz ． |  | 20 | ． 95 | ． 88 |

## IGNITION－LANTERN－TELEPHONE BATTERIES

| Stock No． | Burgess No． | Volts | Shpg． Wt． | Size | Std． Pkg． | Price Each |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Single | Std． Pkg． |
| 20N19858 | 4 | 11／2 |  |  | 20 | e | 46 |
| 20N19846 | 4F2H |  | 3 lbs. | $28 \times 31^{10}=55^{5 / 16}$ | $8$ | 996 | 90 ¢ |
| 20N19837 | 4F4H | 6 | 7 lbs ． |  | ${ }^{6}$ | 2.38 | 2.16 |
| 20N19838 |  |  | 8 C libs |  | 20 | ${ }_{3}{ }^{586}$ ch | 52158 2.78 |
| 20N19841 | 4 F 6 H | 9 | 91／2lbs． |  | 6 | 3.06 3.51 | 2.18 3.19 |



## FLASHLIGHT CELLS

No．1，2，and Penlite cells－superior quality bat－ teries constructed for intermittent use in lanterns and flashlights．
20N20621－No． 1 Cell．Size： $17 / 8 \times 1^{\prime \prime}$
20N20622－No． 2 Cell．Size $2 \% / 8 \times 1 / 10^{\prime \prime \prime}$ ．
Either above，each．
20N20623－Penlite cell． $23 / 3 x^{37} / 6^{\prime \prime}$ ．
PORTABLE＂A＂BATTERIES

STANDARD BATTERY PLUGS
Fit all batteries above with Pl after their numbers．Will also fit similar make batteries．With fahnestock clips for cable．

| Stock <br> No． | Type |  | Volt． | Ea． |
| :---: | :---: | :---: | ---: | ---: |
|  | Lots <br> of 10 |  |  |  |
| 20N20591 | 3 prong | 45 | 96 | .81 |
| 20N20592 | 3 prong | $41 / 2$ | 106 | .90 |
| 20N20593 | 5 prong | $221 / 2$ | 166 | 1.44 |

PORTABLE BATTERY PLUGS


| Stock No． | $\begin{aligned} & \text { Il- } \\ & \text { lus. } \end{aligned}$ | Desc． | Ea． | $\begin{gathered} \mathrm{I} .0 \mathrm{t} 8 \\ 10 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| 20N20590 | 4 | 2－prg．＂A＂ | ． 03 | ． 27 |
| 20N20595 | 5 | 2－prg．＂A＂ | ． 03 | ． 27 |
| 20N20596 | 6 | 3－prg．＂B＂ | ． 04 | ． 36 |
| 20N20597 | 7 | 4－prg．＂A\＆B＂ | ． 05 | ． 45 |
| 20N20598 | 8 | 2－prg．＂A＂ | ． 03 | ． 27 |
| 20N20599 | 9 | 4－prg．＂AdBB＂ | ． 05 | ． 45 |
| 20N20585 | 10 | 3－prg．＂A＂ | ． 05 | ． 45 |
| 20N20586 | 11 | t－prg．＂A\＆B＂ | ． 04 | ． 36 |
| 20N20588 | 12 | 4－prg．＂A\＆B＂ | ． 05 | ． 45 |
| 20N20589 | 13 | 4－prg．＂A\＆B＂ | ． 05 | ． 45 |
| 20N20594 | 14 | 5－prg．＂AAB＂ | ． 07 | ． 63 |

SNAP FASTENER TERMINALS


Same battery terminals as used for Eveready types 430 435，455，467；Burgess type XX－45 and XX30 midget bat teries．Sturdy，well－made terminals．Male and female anits sold separately．
20N11733－Male Snap Fastener．
20N11734－Female Snap Fastener．
Any above，Ea．4\＆．Lots of 10，32\＆

| Stock No． | Burgess No． | Volts | Uses Plug No． | $\mathrm{L} \times \stackrel{\text { Size }}{\mathrm{W}} \times \mathrm{H}$ | $\begin{gathered} \text { WILL } \\ \text { REPLACE } \end{gathered}$ |  | Shpg． <br> Wt． <br> Lbs． | Std． Pkg． | Price Each |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Ever． eady | $\begin{aligned} & \text { Ray-o- } \\ & \text { Vac. } \end{aligned}$ |  |  | Sgle． | $\begin{aligned} & \text { Std. } \\ & \text { Pkg. } \end{aligned}$ |
| 20N19854 | 2F |  | 5 |  |  |  |  |  |  |  |
| 20N19850 | 4F | $11 \%$ | 5 | $25 / 8 \times 25 / 8 \times 4^{3} / 2^{\prime \prime}$ | 742 | P94A | 2 | 12 | ． 73 | ． 38 |
| 20N20625 | 2R | $11 / 2$ |  | $25 / 6 \times 1{ }^{5} 96{ }^{\prime \prime}$ |  |  | 402. | 192 | ． 07 | ． 065 |
| $\begin{aligned} & \text { 20N20610 } \\ & \text { 20N19842 } \end{aligned}$ | G3 ${ }_{\text {F }}$ | $41 / 2$ | 4 | $4 \times 13 / 8 \times 415 / 4{ }^{\prime \prime}$ | 746 | P83A | － | 12 | ． 56 | ． 31 |
| 20N20613 | ${ }_{2} \mathrm{~F} 4 \mathrm{~L}$ | 6 | 8 | ${ }^{25} 8 \times 25 / 8 \times 4^{\prime \prime}$ |  | P694A | 2 | 12 | ． 73 | ． 66 |
| 20N19843 | G5 | 71／2 | 10 | $35 / 8 \times 2^{111} 16 \times 45166^{60}$ | 747 687 | P698L | 4 | 6 | 1.43 | 1.30 |
| 20N20626 | T5 | 71. | 8 |  |  | P85A | $11 / 4$ | 6 | ． 85 | ． 77 |
| 20N19851 | 6 F | $11 / 2$ | 5 | $43.82 \times 23 / 4 \times 41 / 11^{\prime \prime}$ | 743 | P96A | $3^{1 / 4}$ | 6 | ． 96 | ． 98 |
| 20N20628 | 4 FL | 11. | 5 |  |  | P94L | 3 | 18 | ． 69 | ． 63 |
| 20 N 20629 | F3 | $41 / 2$ | 4 |  | 736 |  | 11／2 | 6 | ． 56 | ． 51 |
| 20N20630 | ${ }^{24}$ |  |  | $1^{3 / 5 \times 1^{5} 5 \times 2^{5}}{ }^{5}$ | 724 |  | $1 / 1$ | 24 | ． 39 | ． 35 |
| $\begin{aligned} & \text { 20N20631 } \\ & \text { 20N20632 } \end{aligned}$ | $\stackrel{\text { B5 }}{ }$ |  | 10 10 | $378 \times 17 / 2 \times 213$ |  |  | 1 | 10 6 | ． 74 | ． 68 |
| 20N20632 | C5 | 7／2 | 10 | $2{ }^{3} 10 \times 1{ }^{19} 39 \times 3{ }^{\prime \prime}$ |  | 751 C | \％ 18 | 6 | ． 75 | ． 68 |

## PORTABLE＂B＂BATTERIES

| 20N20627 | XX45 | 673 | p | $2^{21} 5 \times 195 \times 35 / 8$ | 467 | 4367 |  | 12 | ． 74 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20N20612 | A30 | 45 | 6 | $3916 \times 21 / 4 \times 45 / 8$ |  | 430 P | 3 | 6 | 1.65 | 1.50 |
| 20N20614 | B30 | 45 | 6 | $418 \times 2196 \times 51 / 8^{\prime \prime}$ | 762 | P5303 | 3 | 12 | 1.82 | 1.65 |
| 20N20616 | 230 | 45 | 6 |  | 738 | P7R30 | 2 | 6 | 1.92 | 1.75 |
| $\begin{aligned} & \text { 20N20617 } \\ & \text { 20N20615 } \end{aligned}$ | M30 $\times \times 30$ | 45 45 | 6 snap－on | 39 $16 \times 18 / 4 \times 53$ | 482 | P5S30 | 4 | 12 | 1.54 | 1.40 |
| 20 N 20634 | K45 | $451 / 2$ | snap－on | 231 |  |  | 12 oz． | 12 | 1.28 | 1.16 |
| 20N20633 | N60 | $90^{1 / 2}$ | snap－on | $3^{21} 10 \times 11 / 43^{12}$ | 457 |  |  | 12 | 1.64 | 1.58 |
|  |  |  |  |  | 490 |  | $11 / 4$ | 6 | 2.28 | 2.07 |

COMBINATION PACKS FOR PORTABLES AND FARM USE

| 20N19871 | 5DA60 | $11 / 2$ \＆ 90 | 7 | 5 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20N19874 | 6FA60 | $11 / 1880$ | 11 |  |  | AB84 | 6 |  |  | 3.47 3.47 |
| 20N19875 | 4GA．42 | $11 / 5$ \＆ 63 | 11 | $9 \mathrm{2} \times 4{ }^{3} /{ }^{\prime \prime}$ |  | AB419 | 5 |  |  | 3．47 |
| 20N20618 | G4850 | 6 \＆ 75 | 12 | $123 / 8 \times 2^{11}$ ¢6x $4^{1} 8^{\prime \prime}$ |  |  | 7 |  |  | 3.47 |
| 20N20624 | 6TA60 | 1112 \＆ 90 | 7 | $10 \times 21 / 4 \times 47 / 16^{\prime \prime}$ |  |  | 51／4 |  |  | 3.85 |
| 20N20620 | G6B60 | 9\％90 | 13 |  | 752 |  | $81 / 4$ |  |  | 3.85 |
| 20N19872 | F6A60 | 71／2A，9A， |  |  |  |  |  |  |  |  |
|  |  | 90B | 14 | $95 / 8 \times 27 / 8 \times 41 / 2^{\prime \prime}$ | 753 | AB994 | 6 |  |  | 3.45 |
| 20N19873 | D5A60 | 71／2A，90B | 14 | $98 / 8 \times 2^{33} \cdot 5 \times 4^{9} / 12^{\prime \prime}$ |  |  | 5 |  |  | 4.45 |
| $\begin{aligned} & \text { 20N19876 } \\ & \text { 20N19877 } \end{aligned}$ | 2F4B60 | 6A，90B | 9 |  |  | 10896 | 9 |  |  | 4.59 |
|  |  | $\begin{array}{ll} 7 / 2 A_{1} \\ 67,2 B \end{array}$ |  | $9^{9}$ 价 $\times 211$ 价 $\times 16^{\prime \prime}$ |  | AB767 | 6 |  |  | 3.15 |
| 20N20619 | 17GD60 | $13 / 2 \mathrm{~A}, 90 \mathrm{~B}$ | 7 | $1511 / 10 \times 48 / 8 \times 71 / 16^{\prime \prime}$ | 758 | AB82 | 22 |  |  | 4.46 |
| 20N19859 | $2 \mathrm{TXX40}$ | 11／8A，60B | 11 |  |  |  | 2 |  |  | 2.10 |
| 20N19860 | F4A50 | 6A，75B | 12 |  |  |  | 6 |  |  | 3.10 |
| 20N19864 | G5A42 | 71／2A，63B | 14 | $918 \times 2^{13} 10 \times 4^{11 / 4}$ |  | AB－794 | 5 |  |  | 2.95 |
| 20N19869 | 15760 | 71.12 A，90B | 14 | 91／2x21／8 $38 /{ }^{\prime \prime}$ |  |  | 4 |  |  | 3.85 |
| 20N19870 | G6M60 |  | 14 |  | 754 | AB－878 | 7 |  |  |  |
| 20N20635 | T5Z50 | 6A，71／2A， |  |  |  | AB－818 | 7 |  |  | ．85 |
| 20N20636 | F6A60P | 9A，90B |  |  |  |  | 4 |  |  | 3.15 |
| 20 20036 | F6A60P | 9A，90B |  |  |  |  | 6 |  |  | 3.50 |

# （9）batteries－mallory chargers 

RCA FLASHLIGHTS


RCA Model RT22RIP．Pre－focused for maximum spot．Silver－plated zinc parabolic reflector．Rusi resistant，nickle plated，drawn steel barrel．Pre－set bulb．Uses two VSOOI or No． 2 batteries．


RCA Model LU010IP．Chromium plated brass case．Variable focus adjustment． 3 －position roller switch．Uses 2 VSOOl or number 2 cells．
2ON20571
95c
RCA PENLITE，LU020 barrel durable spring alip plated brass barrel；dulb guard itses IS034 bateries 20N20572．

95c

## MICRO－LITE GLOW TIP



Miniature flashlight with tip that glows all night after switch is off，without using battery． Brass case with phosphorescent plastic tip． Uses 1 penlight battery． 20N20563－Each．
$60 c$

## SELENIUM BATTERY ELIMINATORS



For＂$A$＂and＂$B$＂battery replacement in portable and farm radios using 4－7 tubes．Converts such sets or operation from 110 v ． completely filtered and hum free reception．Uses no tubes．Easy to install．Universal sockets for all type battery plugs．Delivers 1.5 v ．＂ A ＂and 90 v ． B． $21 / 8 \times 41 / 2 \times 63 / 4$
21 N15708－Shpg．wt． 5 lbs.
9.85

As above，but uses tube rectifier．
8.82

## GE TUNGAR BULBS FOR CHARGERS



For replacement in chargers，＂A＂elim－ inators，etc．

| Cat．No． | Type | Amp． | GE No． | Each |
| :--- | :---: | :---: | :---: | :---: |
| 21N21901 | B | 2 | $12 \times 825$ | 3.31 |
| 21N21902 | C | 2 | 206501 | 3.31 |
| 21N21904 | B | 5 | $20 \times 672$ | 4.41 |
| 21N21903 | D | 6 | 189049 | 3.67 |
| 21N21911 | D | 15 | 217283 | 7.35 |

## GE TUNGAR－TYPE BULBS

21N21907－Type B， 2 amp ．Wt． 2 lbs．． 2.25 21N21906－Type C， 2 amp ．Wt． 2 lbs．．． 2.25 21N21908－Type D， 6 amp．rating．
Wt． 2 lbs．
21N21909－Type D， 15 amp．rating．
Wt 2 lbs
4.50

## HYDROMETER

Live red rubber bulb and nozzle；beaded float．

## BIAS CELLS AND HOLDERS

Biases high gain amplifiers． 20N6424．
20N6420－Hoil4 volt．．．．． 20N6421－Holder for 2 cells 20N642－Holder for 2 cells 20N642－Hor for 4 cells

## INSTRUMENT PANEL PLUG FOR BATTERY CHARGERS

Permits charging of batteries through cigar－ ette lighter receptacle．Plug fits into lighter receptacle on instrument panel． 6 ＂leads connect to clips on leads of chargers
21N15689－Shpg．Wt． 6 oz．．．．．．．．．．
1.18

RCA BATTERIES TO FIT ANY APPLICATION

| Stock No． | Type No． | Volts | Size Inches | Sim，to Burgess | $\begin{aligned} & \text { Std. } \\ & \text { ? } \mathrm{kg} . \end{aligned}$ | $\begin{gathered} \text { Shpg. } \\ \text { Wt. } \end{gathered}$ | $\begin{gathered} \text { List } \\ \text { Price } \end{gathered}$ | Singly Each | Sid． <br> Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PORTABLE＂A＂BATTERIES |  |  |  |  |  |  |  |  |  |
| 20N20709 | VS036 | $11 / 2$ | $236 \times 1{ }^{18}$ | 2R | 48 | 4 | ．121／2 | ． 09 | ． 08 |
| 20N20703 | VS004 | $11 /$ | 25\％825／8x 41 10 | 4 F | 6 |  | ． 95 | ． 74 | ． 68 |
| 20N20712 | VS005 | $11 / 2$ | $3^{13} 10 \times 13$ \％$\times 5$ \％ | 4FL | 5 | $11 / 2$ | ． 90 | ． 69 | ． 63 |
| 20N20704 | VS007 | $11 / 2$ | 315／6x2598416 | 6 F | 4 | 2 | 1.25 | .96 | ． 88 |
| 20N20705 | VS008 | $11 / 2$ | 37／8×17／0x103／4 | 8FL | 6 | 3 | 1.75 | 1.35 | 1.23 |
| 20 N 20706 | VS002 | 41／2 | 4×13／8x411／6 | G3 | 6 | $11 / 4$ | ． 75 | ． 58 | ． 53 |
| 20N20707 | VS009 | 6 | $25 / 9 \times 256 \times 41 / 8$ | F4P1 | 6 | $13 / 4$ | ． 95 | ． 73 | ． 67 |
| 20N20708 | VSO11 | 6 | $37 / 8 \times 1710 \times 103 / 4$ | 2F4L | 6 | 3 | 1.75 | 1.35 | 1.23 |
| 20N20711 | VS003 | $71 / 2$ | 37／8x 25 \％$\times 4910$ | G5 | 5 |  | 1.10 | ． 84 | ． 77 |

PORTABLE＂B＂BATTERIES

| 20N20715 | VSO14 | 45 | $3^{7} 16 \times 21 / 4 \times 49$ 亿 | A30 | 6 | 2 | 2.15 | 1.65 | 1.50 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20N20716 | VSO13 | 45 |  | M30 | 12 | $21 / 4$ | 2.00 | 1.54 | 1.40 |
| 20N20717 | VSO12 | 45 | $41 / 8 \times 25 / 6 \times 5$／16 | B30 | 6 | 23 | 2.35 | 1.81 | 1.65 |
| 20N20719 | VS015 | 45 | 3x | 230 | 10 | $11 / 4$ | 2.50 | 1.92 | 1.75 |
| N20720 | VS055 | 45 | 2 2 | XX30 | 12 | 3／4 | 1.65 | 1.27 | 1.16 |
| 20N20718 | VS016 | 671／2 | $25 / 8 \times 33 / 4 \times 15$ | XX45 | 12 |  | 2.25 | 1.73 | 1.58 |
| 20N20713 | VS090 | 90 | $3^{11}$ 伯x $\times 13 / 8 \times 3$／ 4 | N60 | 12 | 3／4 | 2.95 | 2.27 | 2.07 |

PORTABLE＂A－B＂BATTERY PACKS

| 20N20714 | VSO18 | 71／2－9－90 | ， | G6M60 | 6 | 71／4 | 5.50 | 3.85 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20N20730 | VSO19 | 7／2－9－90 | $91 / 2 \times 2^{23}$ ¢x ${ }^{3} 36$ | F6A60 | 6 |  | 5.50 | 3.85 |  |
| 20N20721 | VS046 | 6．75 | $125 / 6 \times 23 / 4 \times 41$ | G4B50 | 6 | 61 | 4.95 | 3.45 |  |
| 20N20731 | VS047 | 9－90 | 135\％949\％623／4． | G6B60 | 6 | $81 / 4$ | 5.50 | 3.85 |  |
| 20N20728 | VS050 | 6－71／2－75 | 89／16x ${ }^{7} 16 \times 311 / 16$ | T5Z50 | 6 |  | 4.50 | 3.15 |  |
| 20N20732 | VS054 | 11／2－90 |  | 6TA60 | 5 | $61 / 2$ | 5.50 | 3.85 |  |
| 20N20733 | VS057 | 71／2－9－90 | $93 / 8 \times 23 / 16^{3} 33 / 4$ | T5Z60 | 6 | $41 / 2$ | 5.50 | 3.85 |  |

FARM＂A＂BATTERIES


FARM＂B＂BATTERIES


FARM＂A－B＂BATTERY PACK
20N20729｜VS022｜11／2A－90B｜153／4 $\times 41 / 4 \times 66^{13 / 18}|17 G D 60| 1|22| 5.95|4.46|$
INDUSTRIAL BATTERIES

| 20N20734 | VS | $1 / 2$ | 33 | 41 | 10 |  | 1.80 | 1.38 | 1.25 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20N20735 | VS 106 | $11 / 2$ | $2^{11} 16 \times 2^{11 / 6 x}$ | 4FH | 10 |  | 70 | ． 50 | 465 |
| 20N20736 | VS112 | 221／2－45 | 41／8x256855／6 | 5308 | 5 | 3 | 2.15 | 1.65 | 1.50 |
| 20N20737 | VS114 | 221／2－45 | $2^{215} \times 1 \times 137$ 牫 $\times 4^{18}$ 价 | Z30NX | 10 | $11 / 2$ | 2.58 | 1.98 | 1.80 |
| 20N20738 | VS130 | $11 / 2-3-41 / 2$ | $4 \times 176$ | 2370 BP | 10 | 1 | ． 81 | ． 62 | 56 |
| 20N20739 | VS131 | 221／2＊ | $41 / 8 \times 21 / 2 \times 33$ 价 | 5156SC， | 5 |  | 1.80 | 1.39 | 1.26 |
| 20N20726 | VSO28 |  | $23 / 8 \times 13 / 6 \times 27 / 8$ | 5360 | 10 |  | ． 50 | ． 38 | ． 35 |
| 20N20727 | VS029 | ／2 | $3^{15 / 16 \times 7} 8$ | 5540 | 10 | $3 / 4$ | ． 95 | 73 | ． 67 |

＊Tapped at $3-41 / 2-6-9-101 / 2-16 \frac{1}{2}$＊＊Tapped ct $11 / 2-3-41 / 2-6$

## FLASHLIGHT BATTERIES



## MALLORY MAGNESIUM－COPPER SULFIDE RECTIFIERS

Replacements for Battery Chargers，Eliminators，Pin ball Machines，etc． All metal construction．Ruggedly assembled under high pressure to withstand severe vibrations and shock．Withstands temperatures from $-90^{\circ}$ to $+265^{\circ} \mathrm{F}$ ． ＇Self－healing＂rectifying film protects against accidental damage due to voltage surge．IB8R can be used for reversing the dizection of HO model rains and 1 BI2R for $O$ qauge trains．

| Stock No． | Type No． | AC Volt． Input | DC Volt． Output | Cont． Amps． | Used In | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21N10543 | IB4R | 3.6 | 1.7 | 1.5 | GTC Battery Elim． | 1.21 |
| $21 N 10544$ | IB8R | 7.2 | 3.4 | 1.5 | GTC Battery Elim． | 1.44 |
| $21 N 10545$ | IB12R | 10.8 | 5.2 | 1.3 | Elec．Fence Supply | 1.65 |
| 21N10546 | IB12CIJ | 10.8 | 5.1 | 3.2 | Mallory 3C，6AC4 | 3.21 |
| 21N10547 | F16C3 | 14.4 | 6.8 | 3.9 | Mallory 5535 | 4.50 |
| 21 N10548 | 1516CB7 | 14.4 | 6.6 | 6.0 | Mallory 5535B，6AC6 | 4.76 |
| 21N10549 | F24H1P | 21.6 | 10.4 | 4.8 | Pin Ball Machines | 5.03 |



## MALLORY BATTERY CHARGERS

Convenient，efficient and economical charging of any storage battery used ：n automobiles， buses，trucks，tractors，small bosats，airplanes， on the farm and for industricl applications． Taper charging is designed into all Mallory chargers to prevent damage tc battery plates． Provides excellent power source for electro－ plating，telegraph systems，reiays，generator tields，etc．


| Stock No． | Type No． | Chara | DC Amps | Size Inches | Shpg． Wt． | $\begin{gathered} \text { List } \\ \text { Price } \end{gathered}$ | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Max． | Taper to |  |  |  |  |
| 21N15698 | 6AC6（B） | 6 | 4 | $4^{7} 16 \times 73 / 6 \times 3^{3}$ 廈 | 7 | 19.95 | 13.03 |
| 21N15700 | 6AC10（A） | 10 | 7 | $6 \times 8 \times 41 / 4$ | 121／4 | 27.95 | 18.91 |
| $21 N 17217$ | 12ACS（A） | 5 | 3 | 6x8x41／4 | 1034 | 35.96 | 23.48 |
| 21N15696 | 6AC4（B） | 4 | 2 | $4^{7} 16 \times 73 / 8 \times 3^{3}$ 价 | $43 / 4$ | 14.98 | 9.76 |

## TEST EQUIPMENT SECTION

Here is a representative selection of famous make, top quality test equipment for radio, television and industrial use. In addition to these latest, popular models, we can also supply any make not listed here, from our large inventory or on special order. Write for complete manufacturer's specifications.

## TIME PAYMENTS ON YOUR TEST EQUIPMENT

You can take advantage of our liberal Time Payment Plan. Now, you can pay for this equipment on convenient monthly payments while you use it. Write us for terms on the particular instruments you want.

## TUBE AND SET TESTERS

## RCP MODEL 802NA TUBE AND SET TESTER



Compact service shop ready to take out on the job. Tests all receiving type tubes. Jack for noise test. type tubes. Jack for nolse test. Doubtful" section for tube testing. Easily read fiqures for set testing. Easily read figures for set testing
battery test. Tests paper, mica and battery test. Tests paper, mica and
electrolytic condensers for leakage. Rectrolytic condensers for leakage.
Ranges: $0-10 / 50 / 500 / 1000$ volts RC or AC at 1000 ohms per volt. DC milliammeter $0-1 / 10 / 100 / 1000$ ma., 0-10 amperes. Ohmmeter $0-500$ / $5000 / 100,000$ ohms, $1 / 10$ megohms. 100,000 ohm range battery operatéd. Decibel measurements from -8 to +55 db . Output meter $0-10 / 50 / 500 / 1000$ volts. Hardwood case with compartment and self-latching cover, battery and test leads. $100-130 \mathrm{~V} ., 60-\mathrm{cyc}$. AC. $121 /{ }^{\prime \prime} \times 12^{\circ} \mathrm{x}$ $51 / 4$ ". Shipping Weight: $111 / 2$ Ibs. 25N21587.
58.31

## RCP "DYNOPTIMUM" TUBE TESTER



Model 322A; Easy to operate. Exclusive "Dynoptimum" circuit requires only 5 controls for complete tube check. Permits accurate checking of wide variety of old or new tubes, including the new miniature and sub-miniature recelving types. Provisions for checking individual sections of multi-purpose tubes. Neon indicator lomp for quick testing of short and leakage between elements. Jack provided for headphone tests of tube noises. Operates on $100-130$ volt, $50-60$ cycle AC power supply. Model 322A is housed in handsomely styled open face steel cabinet with sloping panel. $51 / 4 \times 121 / 4 \times 7{ }^{\prime \prime}$ 25N21599-Shipping weight 11 lbs .
37.19

Model 322 AP. Same electrical characteristics as above, but housed in steel carrying case with detachahle cover. 25 N 21600 --Shipping weight $13 \mathrm{lbs} .$.
41.11

## RCP ROLINDEX TUBE CHART



Model 105 roll chart unit to be used in conjunction with Tube Tester Models 322, 322P, 322A, 322AP, 802 N and 802 NA . The unit comes in a grey hammertone finish metal case with plastic window, desigmed to fit the test lead compartment of above equipment. Size: $3 \times 8 \times 2 y^{\prime \prime}$. Wt: 4 lbs.
25N21588
7.35

## RCP MODEL 8073 SERVISHOP



In one compact unit--Tube tester Multi-Tester, FM and AM Signal Generator, Audio Oscillator, and Condenser Tester. Checks 800 different recelving tubes including miniature types. Condenser tester reads "Good or Bad" for leakage of electrolytics, paper and milca condensers. Four pre-set frequencies for aligning FM receivers, and four for aligning AM recelvers. Audio oscillator has 400 eycle output. Multi-tester ranges: DC and AC volts $0-10 / 50 / 500 / 1000$ DC millicmps 0/1/10/100/1000; DC amps 0/10; Ohms 0/500/ 5000 ohms, $0 / 0.1 / 1 / 10$ meqohms: Output meter $0 / 10 / 50 / 500 /$ 1000 volts. Decibel meter -8 to +55 db on 4 ranges. Natural Oak portable case. With test leads and instructions. $13^{\circ \prime} \times$ 91/2" $\times 5^{\prime \prime}$. For 105-135 V., 50-60 CYc. AC. 23N21725-Shipping Weight: $15^{1 / 2}$ 1bs
83.25

## RCP MODEL 8573 SERVISHOP

Similar to above except incorporates RCP Model 805B Tube and Set Tester which has roll chart and gives more extensive testing features. AC and DC volt ranges and output volt ranges up to 5000 V . Resistance readings to 25 megs and db reading ranges to $+69.16 \frac{1}{2} \times 121 / 4 \times 51 / 4^{\prime \prime}$.
25N21551-Shipping Weight: 17 lbs.
97.95


## STAR TUBE CHECKER

Model TE-1. Compact, precisionbuilt tube tester. Light welght for portable or workbench use. Separate switching for each pin of each socket so any heater or plate voltage can be applied. Checks 570 different tubes including new noval. Crackle finishmetal case. $9 \times 7 \times 31 / 2^{\circ}$. Shpg. Wt: 6 lbs.
25N21554.
29.95

HICKOK TUBE AND SET TESTER
Model 534B Mutual conductance
 tester - checks all receiving-type tubes under operating conditions. Special switch enables checking useful tubelife. Scale reads directly in micromhos - important in television where weak, but ordinarily passable tubes cause fuzzy pictures. Rollchart. Multi-tester ranges: AC-DC V 0-20/200/500/ 100095000 , DC 20,000 ohms/volts, AC 1000 ohms/volf; ohms 0.1 ohms to 100 megs in 3 ranges; DC MA $0-5 / 20 / 200 ; 0-50$ microamps; Ca pacitance . $0001-150 \mathrm{mfd}$. Checks pakage on electrolytics and paper condensers. Checks inductance to 100 Hentles. DB from -10 to +50 db .110 V .60 cycles. $17 \mathrm{x} 18 \times 81 / \mathrm{m}^{\mathrm{m}}$.
25N21452-Shpg. Wt: 35 lbs.
169.20

Model 533P - as above, less set testing features.
25N21457 - Tube Tester. Shpg. Wt: 34 lbs.
133.20

Model 536 . Portable Tube and Set Tester. All the features of Model 534 B plus additional accuracy, dependability of part cular interest to the exacting technician and laboratory engineer. Separate line voltage meter.
25N21458 - Portable Tester. Shpg. Wt: 38 lbs.
204.00

## NEW HICKOK MODEL 600 TUBE TESTER



Dynamic mutual conductance type tester of unexcelled accuracy, reads directly in micromhos. Ranges: 0-3000-6000-15000. The only accurate dependable test for tubes. used by tube manufocturers in their used by tube manufocturers in their own labs. Tests future life and gas content of tube under actual operating conditions. Operating voltages, including DC grid bias, are applied to every element. Signal is applied to control grid and meter reads AC component in plate current. Detects more weak tubes. Checks all latest types, Including television. Attractively designed sturdy case in durable red leatherette. Bracket in cover holds line cord Size: $71 / 2 x 111 / 4 \times 16 \%{ }^{\prime \prime}$ 25N21612 - Shpg, Wt: 21 Ibs.
126.00

Acorn Adaptor for the above Tube Tester
25N21613..
4.95

## SUB-MINIATURE TUBE ADAPTOR FOR ALL HICKOK TUBE TESTERS. <br> 25N2 1614 ......................................................... 3.60

## NEW JACKSON CHALLENGER TUBE TESTER

A low cost, high quality instrument
 for the serviceman who needs an extra Instrument, Includes famous dynamic testing method which provides tube tests under actual use conditions. Tests over 700 types inconditions. Tests over 700 types including TV rectiffers and sweep tubes. Has built-in roll chart. Makes noise and short tests. Features a combination push-button, rotary switch element and voliage selection.
25N21690.
45.81

## TUBE AND SET TESTERS

PRECISION TUBE AND SET TESTERS


Model 620-P. Newly designed to provide general purpose test of tubes and circuits of radio receivers. Complete portable ser vice laboratory, tests all modern tube types. Dual short check sen sitivity free-point 10 element and short check lever selection. Individual tests of multi-section tubes. Built-in roll chart. Checks radio A, B and C batteries under oad. Circult tester ranges. 5 AC DC and Output ranges: $0-12 / 60$ ) $300 / 1200 / 3000$ volts at 1000 ohms/volt; DC current 0-1.2/12/ hard wood portable carrying case. Size: $12 \times 13 \times 6^{\prime \prime}$ 25N21662-Shpg. wt. 21 lbs . $\qquad$ 92.22

Model 654 P . Same as Model 620 P except following ranges: DC V. $0-12 / 60 / 300 / 1200 / 6000,20 \mathrm{M}$ ohms/volt; AC V. same as DC at 1000 ohms/volt; Output Volis same as AC V; DC current $0-120$ microamps, $0-1.2 / 12 / 120 \mathrm{MA}, 0-1.2 / 12 \mathrm{amps}$. Ohms C $-6,000 / 600 \mathrm{M} / 60$ meg.; Decibels -20 to $+70 \mathrm{db} .12^{2} \mathrm{x}$ $13^{\circ} \times 6^{\prime \prime}$.
25N21664-Shpg. wt. 19 lbs .
104.27

Model 612-P. Tube and Battery Tester. Features sane as model $620-\mathrm{P}$, but less set testing features.
25 N2 1663 -Shpg. wt. 17 lbs .
68.11

## SUPREME TUBE AND BATTERY TESTER



Model 589-A. Easy-to-read full view scale, portable case. Untversal floating filament circuit provides for testing old, new and future tubes. Neon lamp checks open circuits and leakage between elements. Built-in roll chart carries full tube setting data. New tube setting data supv plied for one year at no extra charge. Tube tester has 18 filament voltages from $3 / 4$ to full line voltage. Correct plate loads for all tubes. Jacks proviled for use of headphones for checking nolsy, loose and bad connections. Checks A and B batteries under normal load 15 and 60 vits portable batteries tested "Replace-Goo" scal Now pore heplace-cood scale. New type luggage carrying case, plastic hardware and leather carrying handle. Gray wrinkle panel. F or
$\times 8-7 / 8 \times 5-3 / 8 \%$
25N21753-Shpg. wt. 10 lbs.
53.75

## CONDENSERS TESTERS



SPRAGUE TO-3 TEL-OHMIKE Speedy check locates open, intermittent, or shorted condensers without removing them from the circurt. Direct reading dial, color coded to selector switch. Measures . 00001 to $2,000 \mathrm{mfd}$. in 4 ranges, power factor from 0 to $50 \%$ at' 60 cycles, 0 to 2,500 megohms insulation resistance. 2.5 ohms to 25 megohms in 3 resistance ranges, and DC voltage in three ranges to 750 volts. DC milliamperes measured to 75 MA . In three ranges. Capacity and power factor of electrolytic condensers measured with rated polarizing voltage applied. Electrolytic leakage measured in MA. at rated DC voltage. For 115 volts, 60 cycles.
25N21787-Shpg, wt. 15 lbs
59.70


PRECISION TUBE AND SET TESTER


Model 10-20-P. Mutual conductance tube tester with new "Electronamic" feature, plus multirange Volt-Ohm-Milliameter and Battery Tester. The Electronamic feature checks tubes over complete path of operation. Tests all modern tube types. Free point lever element selection and interelement short checks. Tests radio $A, B$, and $C$ batteries under load. Built-in roll chart. Push-button operated circuit tester. Ranges: AC-DC and output rariges. 0-6/$12 / 60 / 300 / 1200 / 3000$ at 1000 ohms/volt; DC Current $0-600 \mathrm{mi}$ croamps, $0-6 / 60 / 300 / 1200 \mathrm{MA}$ and $0-12$ amps; Ohms $0-1000 /$ 100,000 ohns and $0-1 / 10$ megohms; Decibel -20 to 464 db . With batteries and test leads. $131 / 4 \times 171 / 4 \times 63 / 4$. 25 N 21659 -Shpg. wt. 23 lbs. $\qquad$ .117 .40 Model 10-54-P. Same as abpve except DC voltage ranges are 20,000 ohms/volti Curtent ranges $0-60 / 120$ microamps, $0-$ $1.1 / 12 / 120 / 1200 \mathrm{MA}$, and $0 / 12 \mathrm{amps}$; Hesistance ranges $0-60 \mathrm{C} / 600,000$ ohms and $0-6,60$ megohms; 6 Decibel ranges -20 to +70 db .
25N21605-Shpg. wt. 23.lbs.
131.71

Mode1 $10-12-\mathrm{p}$. Tube and Battery Tester. Has same features as Model $10-20-\mathrm{P}$, but less set testing features.
25 N 21658 -Shpg. wt. $21 \mathrm{lbs} . .$.
-4.18

## EMC MUTUAL CONDUCTANCE TUBE TESTER



Model R200 BP. For the first time a mutual conductance tube tester with complete flexibility, at an unbelievably low price. Checks mutual conductance on a calibrated micromho scale as well as on a"Reject-Good" scale. 41/2" meter. Checks tubes for gas content shorted and open elements. Sufticient plate current to check both emission and mutual conductance. Flexible switching permits al testing tubes regardless of location of the elements on the base Checks ballasts and yoltage lators. Bulltin roll chart. Fused on front panel. Portable carrying case, $121 / 2 \times 18 \times 5 \frac{1}{2}$ 25N21616-Shpg. wt. $20 \mathrm{lbs} .$. $\qquad$ 67.13 Model R200 BC. Same as above, but housed in attractively styled sloping counter cabinet. $14 \times 11 / 3 \times 5$ ". 25N21615-Shpg. wt. 17 lbs.
63.21

## JACKSON CONDENSER TESTER

Model 650-A. Push-button contral gives fast, positive range selection for capacity and leakage test of electrolytic, paper or mica condensers. 4 ranges: . 00001 to 1000 mfd. Scale expander provides two scale ranges for each push-button range. Magic Eye assures positive indications fos both capacity and leakage tests. New principle gives positive leakage indication without bother of counting flashes or other inate methods. Test voltages $20,100,200,300,400$, or 500 Measures power factor on direct reading scale. Range caltbrated from 0 to $60 \%$. Dimensions:, $81 / 2 \times 8^{1 / 2 x} 6^{\circ}$.
53.41

## 



## C.D "BF-50" ANALYZER

Wein bridge with visual "eye" and power supply for leakage and insulation tests. Measures paper, mica, air and electrolytic condensers, from 00001 to 240 mfds . Measures power factor, tests for shorts. With tubes. factor, tests for shorts. With tubes.
Wginut portable case, $61 / 2^{2 \prime} \times 12^{\prime \prime} \times$ 25N21727-Shpg. wt. 11 lbs .41 .80


## C-D "BN" CAPACITOR BRIDGE

Measures accurately and quickly all capacitors between .00001 and 50 mids. Wein bridge circuit, with visual "eye" to indicate balanced condition. Direct reading scale. Uses 12 A 7 and 6 AF 6 G . Indicates power lactor, shorts. $3-5 / 8^{\prime \prime} \times 5^{\prime \prime} \times 3^{\prime \prime}$. For 110 volt, 60 cycles. 25N21728-Skpg. wt. 4 lbs.
19.50

## C-D CAPACITOR DECADES

Use with "BN" Capacity Bridge. Calibration chart with each. Ratina: 600 volt DC; 220 volt AC: Tolerances available: $\pm 3 \%$ or $\$ 5 \%$. Bakelite case. $3-5 / 8 \times 5 \times 3^{\prime \prime} .4 \mathrm{lbs}$.

## 25N21729 - To. 011 mfd . in

 01 mid stops ( $5 \%$ 25N21751 - Same except $3 \% \ldots . .8 .33$ 25N21731 - To 0 mfd in 25N21731 - TO 10 mfd. in1.0 mid. steps ( $5 \%$ ).....17.15 25N21752-Scme except 3\%....19.11

# FM-TV SWEEP SIGNAL GENERATORS 

RCA TV SWEEP GENERATOR


Model WR-59A. Frequency modulated TV sweep alignment genera tor - generates signals of fundamental frequency on all ranges 12 TV RF channels, picture and sound $\mathrm{IF}_{1} \mathrm{~V}$ ideo ( $100 \mathrm{KC}-10 \mathrm{MC}$ ) picture IF ( 2 bands: $5-15 \mathrm{MC}$ \& 20-30 MC), standard FM interme diate ( $10-11.5 \mathrm{MC}$ ), and spare 25 40 MC channel. Sweep width con tinuously variable. Output cable termination will match balanced or unbalancedilines. Unit develops a sweep frequency signal for a scope; a phasing control is provided. Return-trace blanking produces zero reterence line formeasurement of instantaneous voltages. Output impedance: RF, 150-0-150 ohms; IF and Video, 100 ohms. Outdance: RF, $150-0-150$ ohms; if and Video, 100 ohms. put voltage 125 volts, $50 / 60$ on all frequency ranges. Operates on 1 . Blue-gray finished case meas125 volts, $50 / 60$ cycles AC. Blue-gray finished case measures $10 \times 131 / 2 x 7 / 2$.ables.
25N2 1669-Shpg. Wt: 35 Ibe.
325.00

## RCA TELEVISION CALIBRATOR



Model WR-39A. Arugged, portable service instrument that includes a marker signal generator, a dual crystal standard and a heterodyne frequency meter with built-in audio amplifier and speaker for zero beat indication during scale calibration. This precision signal
source generates marer frequencles for aligment of TV and FM receivers. The marker VFO operctes on fundamentals. Continuous coverage frequency ranges: 4 bands from 19 to 110 MC and 2 bands from 170 to 240 MC . Two crystal osclllators are provided: primary standard operates at 2.5 MC and modulating vided: primary standord operates at $2,5 \mathrm{MC}$ and modulating
standard ot 25 MC . Outpot impedance 100 ohms; output voltstandard at. 25 MC. Output impedance 100 ohms; output volt-
 Shpg. Wt: 22 lbs.
25N21689.
250.0

## JACKSON TV-FM SWEEP GENERATOR



Mode1 TVG-1. Complete, self-conained test instrument that requires only addition of an oscillograph for visual alignment of TV and FM radlos. Coverage: $2-$ 216 MC in 3 ranges: 2-12 MC, $12-$ $108 \mathrm{MC}, 174-216 \mathrm{MC}$ all on fundamentals. Designed for accurate allgnment of RF, Osclllator, IF and Trap Circults. Sweep width adjustable from 100 KC to 12 MC . Built-in marker generator and crystal calibrated oscillator. 400-cycle modulation. Accurately calibrated, large dial with range coding for easy identification. TV channels and FM band clearly marked. For 105-125 V., $50 / 60$ cycles AC. Finished in attractive two-tone grey and red case measuring $12 \frac{1}{2} \times 7 / 2 \times 19^{\prime \prime}$. Supplied with coaxial typeRF output and scope horizontal timing leads,
25N21693-Shipping Wt: 38 lbe
215.60

## SILYER FM-TV SWEEP GENERATOR



Model 911. Designed specifically for visual alignment of wide band IF and RF amplifiers in FM and TV recelvers when used with any good oscilloscope. Unit includes two bullt-in crystal marker oscillators Individually adjusted to exactly 1 and 5 MC. Markers are essentlal to correct alignment of TV recelver, video IF cmplifiers. Amplitude of markers is variable to provide proper "plp" strength for circuit under est. Coverage: 2 through 226 MC in 3 ranges (2-77 MC; 60-154 MC; 151-225 MC) - no band switching required. This feature is achieved by a fixed frequency oscillator that beats its 114 MC signal with output of a 37 112 MC VFO to produce freguencles for all 3 ranges. Output voltage variabla from 0 to $1 / 2 \mathrm{~V}$. maximum; output impedance variable from 5-125 ohms. FM sweep variable from 0'-10 MC Supplied complete with tubes, marker osclllators, coaxial cables, ground clip lead, and 6-ft AC cord and plug. Operates on 105-125 volts, $50 / 60$ cycles AC.
25N21546-Shpg. Wt: 14 1bs.
78.50

MORE FM-TV SWEEP SIGNAL GENERATOR ON
LOWER HALF OF FACING PAGE


Model 610A. A new model universal TV generator that replaces separate sweep generator, marker generator and crystal calibrator used in ordinary TV testing. Supplies signal to visually align a TV set to any of 12 channels from 44 to 216 MC . Frequency ronge $10-250 \mathrm{MC}$, directly calibrated on dial and readable to $.5 \%$ accuracy. Vorlable sweep width 0-15 MC. Sweep frequency ranges: 0-40 MC, 35-75 MC, 75-115 MC, is 0-230 MC. Self-contained markers ( $20-30 \mathrm{MC}$ and $30-40 \mathrm{MC}$ ) readable directly on dial to .05 MC . Special generator included provides IF frequencies. Standby switch shuts off all $B+$ so generator tubes can cies. Standby switch shuts off all B+ so qenerator tubes can finish case with satin chrome finish panel $14 \times 16 \frac{1}{2} \times 8^{\prime \prime}$. inish case with satin
Shipping Welght: 31 lbs .
25N21456.
195.00

HICKOK MICROVOLT SIGNAL GENERATOR


Model 292X. New popular priced generator covers both upper channel TV and moblle band frequencles - on fundamentals. Fundamental frequency coverage: Bands A through G, 25 KC to 110 MC ; Band $\mathrm{H}, 150-$ 220 MC. Modulated and uinmodulated output callbrated from 1 to 100,000 microvolts. Self-contained crystal oscillator circuit has front ponel jack permitting crystal vutputs from 250 KC to 20 MC on fundamentals; and to 250 MC on hamonics. Modulation fixed at 400 cycles; AF output $0-2$ volts. Wired for oplional plug-in type cyystal ( $152-162 \mathrm{MC}$ ) formobile band coverage. May be externally modulated from $15-10,000 \mathrm{cps}$. A erage. Mary be externally modulated from $15-10,000$ cps. A self-contained db meter ( -10 to +38 db $\ln 3$ ranges). For
volts, $50 / 60$ cycles. Blue lacquered steel case $14 \times 15$
$x$ 8olts, $50 / 60$ cycles. Blue lac 29 lbs. Less Crystals.
25N2 1450..
195.00

HICKOK TV CROSS HATCH GENERATOR


Model 620. New, crystal controlled innearity pattern generator for rapd servicing in borderline areas where broadcast reception is unpredictable. Provides means for checking and allgning horizontal and verifal linearity and drive controls, horizontal and vertical width, height and hold controls, horizontal AFC circults. Stable video pattern consists of 12 vertical lines and 8 or 9 horizontail lines for faster alignment and trouble shooting. Checks relative recelver sensitivity. Output frequencles: 4 channels, $2-5$ inclusive; only one is necessary for servicing. For $105-125$ V., 60 cycles AC. Blue hammertex steel case.
25N21611-With Tent Leads.
. 144.85


## FM-TV SWEEP GENERATOR

Nowly designed model embodies the latest in engineering design, precision accuracy and slmplicity of operation. Complete FM \& TV frequency coverage of 2 to 227 MC on 3 bands. Sweep width 500 KC MC on 3 bands. Sweep width 500 KC to 10 MC . Dial calibrated directly in frequency, no mental calculations necessary. Maximum output 500,000
microvolts. Built-in power line filter. Generator output can be used either Frequency Modulated or pure RF. Steel cabinet finished in gray wrinkle enamel. $105-125$ volts $50-60$ cycle AC.
25N21736-Shpg. Wt: 16 1bs.
.34 .95


## Precision Sweep Signal Generator

Model E-400. Specifically engineered for TV and FM. Direct reading from 2 to 480 MC in 7 bands without skip. Harmonically callbrated from 240 to 480 MC . Narrow and wide band sweep0 to I MC and $0-10$ MC are continuously adjustable. Wide range phasing control for horizontal sweep. Has built-in multiple crystal marker cal bult-in multiple crystal marker-calMC and 2 MC crystals of $.01 \%$ accuracy supplied. 6-Position rotary band switch eliminate coil switching. $61 / 2^{\prime \prime}$ etched alum-
inum 1500 point vernier tuning dial. Portable copper plated inum 1500 point vernier tuning dial. Portable copper plated case with aluminum panel.
2 crystals and test cables.
25N21701-Shpg. Wt: 18 lbe
122.21

## AM-FM SIGNAL GENERATORS

SILVER FM/AM SIGNAL GENERATOR


Elght fundomental ranges, di$1 \%$ accuracy 90 KC cated 170 MC. RC' audio oscillator provides 400 cycle AM modula provides 400 cycle AM modula $100 \%$. FM 90 KC throug 100\%. FM 90 KC through 210 MC with built-1n electronic FM sweep variable from 0 to. 500 KC. Output continuously variable from less than 1 microvolf, to over 1 volt. Metered output dual variable and 4 position ladder attenuators; complete multiple shlelding, 4 section line filter, colls mounted in rotary turret. 10: 1 . vernier dial. Permits design and service of AM and FM receivers by cural, meter or visual alignment methods. Complete with $105 / 125$ volt, $50 / 60$ cycle built-in mains-isolating power supply, tubes, output cable and terminal box, 6 ft . cord and plug. S1ze: $123 / 8^{\circ}$ long, $73 / 8^{\prime \prime}$ high, $53 / 8{ }^{\circ}$ deep. In grey steel cabinet with leather carrying handle. Shpg. Wt: 14 lbs.
25N21542.
116.50


## PRECISION MODEL E200C

Units cre individualiy hand calibrated to better than $1 \%$ on all 8 bands which range from 88 KC . to 120 MC . Fundamentals to 30 MC . Direct reading, no charts seeded. Large full vision $61 / 2^{2}$ noglare dial with a $0-1000$ point vemier scale allowing direct reading to one part In 1000. 400 cycle sine-wave audio oscillator provides modulation and external test signal from zero to 50 volts Complete shielding including electrostatically shielded transtormer and AC line is RF filtered. 0-100\% modulation cortrolmore than triples signal utility. 110 -volt, $50 / 60-$ cycle Black ripple tinlshed, heavy gruge portable steel case. $10 \%$ x $12 \times 6{ }^{\circ}$. Shpq. Wt: 20 lbs.
25N21715. $\qquad$ 65.90 NEW JACKSON TEST OSCILLATOR


Model 106. Standard AM type for testing AM and FM sets. Also as a marker generator for AM, FM and TV sweep generctors. Fundamental freq. from 100 KC to 32 MC . Harmontes 28 MC to 120 MC . Twocircuit attenuator for controlcircuit attenuator for controling signal strength. 400 -cycle. CW . Accuracy: $1 / 2$ of $1 \%$.

25N21692
49.50


HICKOCK FM-AM GENERATOR
Model 288x. H:gh degree of accuracy for servicing $A M$, $F M$ and television equipment. Fundomentals used throughout entire range of 100 KC to 110 MC on AM output and 100 KC to 160 MC on FM output. Variable cudio output: $0-15 \mathrm{KC}$ is produced by heterodyne type oscillator. Decibelmeter provides conventent means of measuring power and voltage and determining resonance in alignment work. A 100 KC and 1000 KC crystal controlled sional, accurate to $0.01 \%$ unmodulated of modulated at 400 cycles is avallable. By using hamonics of the crystal controlled osclllator, accurate signals up to 125 MC are obtained in multiples of 100 KC and 1000 KC . Complete with ali tubes, necessary cables, instruction manual. For 110 volts $50 / 60$ eycles. $14 \times 161 / 2 \times 8$. Satin manual. For 110 volis, $50 / 60$ cycles. $14 \times 161 / 28^{\circ}$. Satin Shpog. Wi. 30 lbs.
25N2 1455

## AM SIGNAI. GENERATOR



Here is a low-priced, precision manufactured product for laboratory technicians and radio servicemen. An extremely stable signal generator covering long wave, broadcast and. short wave frequencies. RF from 100 KC to 25 MC in six bands of fundomentals and 19 MC to 75 MC in two bands of hamonics. Internal modulation of 440 cps variable from 0 to $100 \%$. New RF and AF oscllators of highly stable design. Operates sions: $8 \times 10 \times 12$. See adjoining page for companion FMTV Sweep Generator. Shpq. Wt: 19 libs. 25N21738..

## SILVER GRID DIP ADAPTOR

New, tubeless electronic device af lows direct measurement of all tuned circuits: RF, IF etc., quickly and simply without the receiver being tumed on. Checks all osclllators, antenna systems, transmitters, trap ling. Determines value of all colls and condensers. Requires no power supply or tubes; two simple connections permlt quick attachment to any signal generator. Coverage: 100 KC through 300 MC by use of 3 caltbrated plug-in colls. Supplied with phone jack, colls and probe.
25N21536...
34.95

## TRIPLETT FM-TV GENERATORS \& MARKERS

## TV.FM SWEEP GENERATOR

Model 3434. A new sweep signal generator with bullt-in markers to complete TV o FM servicing. Pre cision enqineered and designed for continuous coverage to 240 MC . Marker frequency tor IF 19.5 to 40 MC tor FF and Oschllator $57-240 \mathrm{MC}$ can be used stmultaneously for faster identitication of proper bandpass of curves. Marker has both plp and absorption dip control. Sweep center trequency in 3 ramges: 0-60 ecuve vartable sweep widit 500 KC to 12 MC . 400 -cycle modulation on both crysial and marker trequenctes; 400 -cycle audio. Provision for crystal markers up to 216 MC (plug-in crystals not supplied). Black enamel metal case with suede Hnlsh measures $153 / 8 \mathrm{x} 11 \times 81 / 4^{\prime \prime}$ Has leather handle. For insh measures 115 volis, $50 / 60$ cycles AC. Ship. Wt: 28 lbs. 25N21621-Complete with Lesds and Tubes...........
146.51

## TV.FM ABSORPTION MARKER

Model 1235. Two ranges ( 10 MC to 27 Model 1235 . Two ranges (10 MC to 27 MC and 17 MC to 50 MC ) provide complete coverage of all present TV and future addultons. Can be used with any tuture addultons. Can be used with any
sweep generator as an external marker. sweep generator as an extemal marker. Conrects easily and quickly to circult under lest through a panel connector. Provides control of marker dip amplitude. Includes co-axial cable for lowloss connection to sweep generators. Metal case with black suede baked-on enariel innsh measuses $77 / 8 \times 65 / 8 \times$ $6 \mathrm{5} / 8^{\prime \prime}$. Shpg. Wt. 7 lbs.
25N21624.
24.01


## TV.FM SWEEP GENERATOR

Model 3435. Here's a low cost, high quallty sweep signal qenerator designed espectally for the service engineer who has his own provision tor an external marker (any good AM generator). Provides continuous range coverage to 240 MC for all TV carrier and if frequencies. Sweep center frequency on three ranges:
$0-60 \mathrm{MC}, 60-120 \mathrm{MC}, 120-240 \mathrm{MC}$. Continuously variable s weep width effective from 500 KC to 12 MC , with OFF position. Main frequency dial marked with channels as well as frequency. An extema marker generator con be connected to the circuit under test through the panel connector. Metal case. with black suede baked-on enamel finish, measures $15-11 / 32 \times 11-1 / 32 \times 61 / 4{ }^{\circ}$ Has leather handle and copper plated feet for better ground ing. For $105-115$ volts, $50 / 60$ cycles AC. Shpq. Wt: 24 lbs ing. For $105-115$ volts, $50 / 60 \mathrm{c}$
25 N2 1622
97.51

## TV-FM CRYSTAL MARKER

Model 1236. Companion unit for model 3435 above receives power by plugging into Jack of 3435 . Provides marker frequencles of crystal controlled accuracy for TV and FM, IF or RF requirements. Coverage up through 19 MC on crystal lundamentals; up through 216 MC on crystal harmonics. For faster checking of bandpass characteristics of curves merely throw the switch to the desired crystal. Metal case, with black suede baked-on enarel linish measures 7 7/8 $\times 65 / 8 \times 65 / 8^{\circ}$. Has metal handle. Shipping Weight 7 lbs.
25N21623-Lees Crystals
19.11

## VACUUM TUBE VOLTMETERS

MeMURDO SILVER VOMAX UNIVERSAL VTVM


Model 900A. Completely new desion. True VTVM. Meter $100 \%$ protected for all voltage, db and resistance overloads. 24 DC voltage ranges (including polarity reversal) $0-3 / 12 / 30 / 120 / 300 /$ 200 at 51 meqohms input resistance. $0-7.5 / 30 / 75 / 300 / 1200 / 3000$ at 126 megohms, $6 A C, A F, I F, R F$ ranges 20
cycles thru $100 \mathrm{MC}, 0-3 / 12 / 30 / 120$ / cycles thru 100 MC ; $0-3 / 12 / 30 / 120 /$
$300 / 1200$ at input resistance of 20 meg $/ 7 \mathrm{mmfd}$. 6 resistance ranges of $0-2 \mathrm{~K} / 20 \mathrm{~K} / 200 \mathrm{~K} / 2 \mathrm{meg} /$ $20 \mathrm{meg} / 2000 \mathrm{meq}$. using internal battery. 3. DB ranges - -10 to +50.6 DC ma ranges $0-1.2 / 30 / 120 / 300 / 1200 \mathrm{ma}$ and 12 amps. Automatic voltage requation. Single knob zeros meter for all ranges and tunctions. Uses 6 AL5, two 6 ARS and 6X4 rectifier. Shielded probe. $105-125 \mathrm{~V} ., 50-60$ cycles AC. $123 / 8 \times 73 / 8 \times 53 / 8^{\prime \prime}$. 25N21544-Shpg. Wt. 14 lbs.
68.50

MUL TIPLIER PROBE FOR VOMAX VTVM
Converts Models 900 and 900A Vomax VTVM to a TV Kilovoltmeter. Safe, direct meter readings from 1/10 volt to 30,000 volts DC. Heavy duty methacrylate construction built for long life and hard usage. Attaches easily and readily with pluq-in tips. Eachunit has been thoroughly tested in use assuring safety of operation.

25N21545
9.95

## ELECTRONIC DESIGN V T VOLT-OHMMETER



Model 100. Extreme care in matching and choice of component parts has resulted in a high quality test instrument. DC ranges: $0-3 / 10 / 30 / 100 / 300 / 1000$ volts at constant input resistance of $11,000,000$ ohms. Ac;
curacy $\pm 3 \%$. AC ranges $0-10 / 30 / 100 / 300 /$ curacy $\pm 3 \%$. AC ranges $0-10 / 30 / 100 / 300 /$ 1000 volts. 1000 ohms/voltsensitivity with ranges: $0-1000 / 10,000 / 100,000$ ohms; $1 /$ 10/1000 megohms. Complete with signal tracer probe, test leads, batteries. Case Size: $95 / 8 \times 6 \times 43 / 4^{\prime \prime} .110-120$ V. 50 60 cyc. AC. Shpg. Wt. 11 libs. 25N21710
52.50

Ediprobe. Use with any VTVM. Permits use of high resistance DC scale to measure RF voltages with response of 60 cycles through 100 MC without loading circuit. 25N21703 $\rightarrow$ Shpg. Wt: 2 Ibs.
7.00

## VACUUM TUBE VOLT-OHM-CAPACITY METER



Electronics Measurements Model 300. New Electronic input with resistance of 1 to 30 megohms/volt on DC, 1000 ohms/volt on $A C$ with full wave tube rectification;
Ranges: DC volts $0-3 / 10 / 30 / 100 / 300$; 1000; AC volts $0-10 / 30 / 100 / 300 / 1000 ; 6$ resistance ranges from 2 ohms to 1000 megohms. Capacity in 4 ranges .000025 mfd . to 20 mfd . Zero center position for aligning $F M$ discriminators. Open-face model - comes complete with test leads and ohmme.
$9 \times 6 \times 4$.
25N21679-Shpg, Wt: $51 / 2 \mathrm{lbs}$
38.71

Model $300-\mathrm{P}$. In portable case with cover, test leads.
25N2 1680-Shpy. Wt: 61/2 Lbs.............................................43.61 High Frequency Probe, Enables measurements up to 100 MC .
25N2 681 -Shpg. Wt: 3 lbs................................................... 25N21681-Shpg. Wt: 3 lbs...................................................... 6.37

## HIGH FREQUENCY KILOVOLTYST

## New, high voltage VTVM-and Ohri-

 meter with high frequency probe for TV servicing. DC Kilovolts: $0-101 / 30 \mathrm{M}$ volts: AC Ranges: $0-10 / 30 / 100 / 300 / 100 C$ valts; DC Ranges: $0-3 / 30 / 100 / 300 / 1000$ voltsi RF Vollage Range: $0-3 /$ Hanges: $0-1 \mathrm{M} 10 \mathrm{M} 100 \mathrm{M}$ ohms, Ranges: $0-1 \mathrm{M}$ and $0-1000$ megs. $0-1 / 10$ megs and -100 megs. at 10 and 30 KV . RF mirequency at 10 and 30 KV . RF irequency response: 300 cycles to 300 Mc , 3.4 mmfd . Features completely shockproof resistance multiplier block able to withstand 50,000 volts; improved high trequency signal tracing probe; advanced type Alnico 5 sev-en-inch meter, tilted for easy readin:; separite high and low voltage test leads. Bridge cmplifier circuit meter individually calibrated for use with set of test leads, DC leads, RF probe and batteries. Hiyh voltage test leads also provided. For $110-120$ volts, $50 / 60$ cycles $A C$. Housed in copper colored steel case measuring $12 \times 6 \times 9$. Shipping wi. 15 lbs.
150.00

## RCA VOLT OHMYST

Model 195-A. Constomt protection against meter burn-out. Ranges: 0-5/50 100/500/1000 DC volts at input impedance of 10 megohms; $0-5 / 10 / 50 / 100 /$ 500/1000 AC volts on linear scale; 0 $500 / 1000$ AC volts on hnear scale; 10 $1000 / 10,000 / 100,000$ ohms/l meg. $/ 10$
megs./100 megs. by using internal megs. $/ 100$ megs. by using internal
source of 3 volts. Frequency response source of 3 volts. Frequency response
of 30 cyc , to 100 KC . Input imped. 200 M of 30 cyc. to 100 KCimput mped. $0-5 / 10 / 50 / 100$ ohms plus 170 mmid. $0-5 / 10 / 50 / 100$
volts. 20 to 62 db . (1MW across 600 volts. - 20 to 62 db . (l MW across 600 ohm line) FM allqnment indicator. New style easily read meter in Gray stee! case. With ohmmeter battery and test
leads. Overall Size: $9-5 / 8 \times 6-3 / 8 \times x$ 6\%". Shpg. Wt: 14 lbs .
25N21771.
79.50

WV-65A. Same as above model except battery operated. AC voltmeter is 1000 ohms/volt and reads DC mllliamps to 300 in five ranges. Also 0-10 amps DC. Batteries last up to 10 months with normal use. Has isolating resistor in DC probe for measurement of $D C$ voltages in high impedance $A C$ aircuits. Complete with batteries and leads.
25N2 1776-Shipping Wieight: 10 lbs
.59 .50

## RCA MASTER VOLTOHYMST



Type WV-95A. Measures DC current and volts, AC, AF, and RF volts, capacity, and resistance. Burnout proected. $2 \%$ accuracy. DC volts $-5,10$. volis $0-1 / 5 / 10 / 50 / 100 / 500 / 1000$ at 5 megohms, 30 to $20,000 \mathrm{cps}$; RF volts $0-5 / 10 / 50 / 100$ using diode probe (not furnished) flat from 30 cycles to 250 MC. DC current $0-10 / 100$ microamps, 1/10/100 MA, 1/10 amps. Resistance 0-1000/10,000/100,000 ohms, $1 / 10 / 100$ megs; Capacity .000005 mfd . to 1000 mid . in six ranges. Gray metal cabinet. Dimensions: $10 \times 131 / 2 \times 7 \frac{1}{2}{ }^{\prime \prime}$. For operation on 105-125 volts 50-60 cycles AC only. Comes complete with test leads and operating instructions. Shipping Weight 20 lbs .
25N21671...
152.50


RCA crystal probe for converting DC circuit of any Voltohmyst to read AC so RF voltages up to 100 MC are ind cuted directly on DC scale. $25 N 21775$ - Shpg. Wi: 2 lbs.
8.95

## RCA MUL TIPLIER PROBES

Extends DC voltage range of RCA
 Volt-Ohmyst $195,195 \mathrm{~A}$ and Chanalyst
170 A to 30,000 volts. Measures DC voltages in '?'V sets, X-ray machines and other high voltaye dovices. Useful in measuring output voltage of pulse-operated and RF power supplies and other high resistance voltage sources.
15.95

Same as above but for all other model RCA Voltohmysts and Chanalysts.
$25 N 21697-$.

## HICKOK LABORATORY VTVOM

Model 209A. Measures any resistance, capacitance, $A C$, IF and RF voltages ages, FMS and peak to peak voltage found in radio receivers. Some ranges have both zero left and zero center scale for discriminator alionment. Hanges: $A C \& D C$ volts $0-3 / 12 / 30 /$ Ranges: AC © Input impedmee 15 megs DC, 12 megs/6mnfd AC; DC MA $0-3 / 12 / 30 / 120 / 300 / 1200 . \quad$ Capacity $0-10,000 \mathrm{mnfd}$ in 2 ranges, $0-1000 \mathrm{mfd}$
 in 5. Inductance 50 mh to 100 hy, by
use of conversion chart. Resistance $\quad$. 10 ohm to 10,000 megs in 8 ranges. Tubes: 6SJ7, 6SN7GT, (2) $6 \times 5$, OD3/VRISO, plus 9006 in high frequency probe: Chrome finish panel, metal cabinet of blue hummertex 14 x $16 \frac{1}{2} \times 8^{\prime \prime}$. For $105-125$ volts, $50 / 70$ cycles AC. Complete with probes,batteries and tubes.
25N21459-Shpg. Wt. 25 lbs.
119.40

Model 203. Same as above but in portable case $9 \times 11 \times 7$ "; less high frequency prove. Does not have zero cdnter scales or read peak to peak voltage. Measures AC up to SO MC.
25 N 21453 -Shipping Weight 17 1bs................................. 89.40 PK30 PROBE, Voltage multiplier probe. Increases range of either of above to 30,000 volts DC. $25 \mathrm{~N} 21461-$
.10 .80

## MULTITESTERS

SIMPSON MODEL 260 PORTABLE TESTER


Black bakelite roll top safety case prevents injury or damage to meter or tester. Accurate full scale readings. Ranges: Volts AC and DC 0 000 ohes/volt DC and 1000 , volt AC. Output AC volts $0-2.5 / 10$ $150 / 250 / 1000 / 5000$. DC microamperes $0-100$ milliamps $0-10$ / amperes $100 / 500$. DC amps $0-10$. Decibels in five ranges from -10 to +52 db Resistance $0-2000 / 200,000$ ohms and $0-20$ megohms center scales
$12 / 1200 / 120 \mathrm{~K}$. All ranges controlled by a single rotary switch. Polished black case with roll-top cover. $51 / 2 \times 7 \times 3^{\prime \prime}$. With test leads. 25 N 21578 -Shipping weight 3 lbs .
45.03


## TRIPLETT MODEL 630 MULTITESTER



Bluck molded plastic case with $51 / 2$ Inch Red-Dot 50 microampere meter $1200 / 6000$ valts DC: $0-3 / 12 / 60,300 /$ volt. $0-3 / 12 / 60 / 300 / 1200 / 6000 \mathrm{AC} V$. at $5,000 \mathrm{ohms} / \mathrm{V}$. Direct reading of six decibel romges from -30 to +70 db. $0-60$ DC microumperes. $0-1,2$, $12 / 120 \mathrm{DC}$ milliamperes, $0-12$ DC amperes. Hesistance: $0,1000 / 10,000 / 1$ meg $/ 100$ meg. with centre scales of $4.4 / 44 / 4.4$ meg with centre scales of 4.4/44/4.4 K/440K. Condenser in series with AC voltage ranges. Single rotary switch. leads.
36.75

25N21493-Shipping weight 6 lbs.
Black leather carrying case. Space for accessories. 25N21620-Shipping weight 3 lbs....................................5.63 Multiplier probe to read up to $12,000 \mathrm{~V}$ DC on above. 25 N 21494 -Shupping weight $21 \mathrm{bs} . . . . . . . . . . . . . . . . . . . . . .$. 14.21

Multiplier probe to read up to $12,000 \mathrm{VDC}$ on above. 19. 11

## TRIPLETT LAB MODEL 630A MULTITESTER

A new, deluxe model multitester similar to the Triplett 630 described above, but designed for laboratory use. This fine instrument features a hand drawn, mirrored scale for taking readings that are accurate to $1 \%$. Further accuracy is ussured through the use of special resistors with a tolerance of only $51 / 20$. Sturdy, black molded plustic case measures $3-7 / 32 \times$ 25N21499.
46.55

## CHICAGO MULTITESTER

Model 371. Strictly y UC metter, its runges are as follows: $0.3 / 15 / 30 / 300$ volts, $0-25$ mili. amperes and a resistance scale of 0 to 10 , 000 ohns. Operates on 2-flashlight cells, included. $1-7 / 8^{\prime \prime} \times 23 /^{\prime \prime} \times 3-7 / 8^{\prime \prime}$. 25N21504-Shpg. wt. 3 lbs..................5.54

Mode 1312. For both AC and DC volts: 0-25/ 50/125/250; Millamperes; 0-50; up to 100 ,25 N21505-Shpg. wt. 3 Ibs
6.61

SUPERIOR MODEL 670 SUPERMETER


Combination voli-ohm milliammeter. plus capacity reactánce, inductance and decibel measurements. includes a special GOOD-BAD scale for checking the quality of electralytic condensers at a test potential of 150 Volis. Ranges: DC Volts: 0 to 7.5/ 15/75/150/750/1,500,7,500 Volts. 3000 Volts. Cutput Volts: $0-15 / 300$ $150 / 300 / 1500 / 3000$ Volis: DC Cur rent: $0-1.5 / 15 / 150 \mathrm{Ma}$. 0 to $1.5 \mathrm{am}-$ rent: $0-1.5 / 15 / 150 \mathrm{Ma} 0$ to $1.5 \mathrm{am}-$
peres. Resistunce: $0-500 / 100,000$ ohms 0 to 10 Megohms. Capacity: 001-.2 Mfd. .1-4 Mid. (Cuality test tor electrolytics). React ance: 700 to 27,000 Ohms, 13,000 Ohms to 3 Megohms. Indurtance: 1.75 to 70 Henries, 35 to 8,000 Henries. Decibels: -10 to 118,110 to 138,130 to 458 . Ruqqed, crackle-finished steel cubinet. Complete with test leads and cperating instruction... Size $51 / 2 \times 7!2 \times 3^{\prime \prime}$. For 110 Volts, 60 CA
25 N 2169 s -Shipping weight $5 \mathrm{lbs} . .$.
27.83


## PRECISION SERIES 85 TESTER

 Six $A C$ Oitput and $D C$ voltage ran-ges: $0 / 3 / 12 / 60 / 300 / 1200 / 6000 ; ~ D C$ ranges at 20,000 ohms per volt, AC and output at 1000 ohms per volt. 6 DC current ranges: $0-120$ microann, 0/1.2/12/120 MA; 0/1.2/12 Amp, Fesistance rangés: $0-6000 / 600 \mathrm{M}$ ohms, $0 / 6 / 60$ megs. 6 DB: -26 to +70 db . Rotary range selectors for all standard functions. In molded bakelite case with plastic handle. Dimensions: $51 / 2 \times 7-1 / 8 \times 3^{\prime \prime}$. Complete with ohmmeter batteries and test leads. 25N21650-Shipping weight $6 \mathrm{lbs} . . . . . . . . . . . . . . . . . . . . . . .37 .97$
Series 80. 1000 ohms/volt, 10 meg. res, 400 microampere meter.
25N21651-Shipping weight $6 \mathrm{lbs} . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .32 .05$
Custom leather case for Series 80 and 85 testers.
25N21652-Shipping weiyht 2 lbs 8.57


Model 666R. A new, precision manufactured pocket tester that provides a completelaboratory for voltage, resistance and direct current checking Beautiful streamline design with flush panel controls. RED-DOT life time guaranteed $3^{10}$ meter, $0-200 \mathrm{mi}$ croamps. AC \& DC Volts: $0-10 / 50 /$ $250 / 1000 / 5000$ at 1000 ohms/volt. DC MA: $0-10 / 100$ and $0-1$ amp. at 250 MV . Ohms: $0-3000 / 300,000$ (center scale 20/2000); 0-3 megs (center scale 20,000 ohms). Enclosed, moldetains contact alignment permariently. keeps dirt out and rectifier, batteries all housed in single unit molded base: direct connections without cablimg eliminate possibility of shorts. Four jacks at top of panel take care of all normul esting. Supplied complete with batteries, $50^{\circ}$ test leads, clips and plugs. Size: $3-1 / 16 \times 5-7 / 8 \times 2-9 / 16^{\circ}$. Weight: $1 / 1 / 21 \mathrm{bs}$. With Instruction Book. 23N21497..
24.01

## TRIPLETT MODEL 666HH MULTITESTER

Similar to Mode: 666 R described above except for 0.200 mi croamp meter und following differences in ranges: $0-10 / 100$ DC milliampere range and $0-2000 / 4 \mathrm{CO}, 000$ olims with $12 /$ 2400 certer scale. Has no megohm or DC amp. ranges. All normal functions available from :wo bununa jacks with a special $5000 \quad V$. jack. Supplied complete with batteries $50^{\circ}$ test leads, clips und plugs.
25N21576.
21.56

Black leather carrying case for Triplett Models 66if or 66 bHH testers.
25N21577.

## TRIPLETT ELECTRIC ANALYZER



Model 625 NA. Multi-range, dual sensitivity. $6^{\prime \prime}$ meter with mirrored scale. Ranges: DC volts 0-1.25/5/25/125; $500 / 2500$ at 20,000 ohms/volt $0-2.5$ / 10/50/250/1 C00/5000 at 10,000 ohmis/ volt. AC volts $0-2 / 5 / 10 / 50 / 250 / 100 /$ 5000 at 10,000 ohms/volt. DC mucro. anps $0-50, D E$ milliamps $0-1 / 10 / 100 /$ $000, D C$ an ps $0-10$. Resistances $0-$ $2000 / 200,000$ ohms $/ 40$ negs. DE ranges $-3010{ }^{469}$ db. Portaille
$6 \times 51 / 2 \times 21 / 2^{n}$. With test leads.
25N21475-Shpq. wt 12 lbs...
44.10

Black leather carrying case.
25N21476-Shpg. wt. I lb.

## RCP MODEL 447 MULTITESTER



1000 ohms/valt. DC volts: $0-5 / 50 /$ 250/500/2500. DC ma: 0-1/10/100/ 1000. DC amps: $0-1 / 10$. AC volts: $0-10 \% 100 / 500 \% 1000$. Ohms: $0-500 \%$ $100 \mathrm{M} / \mathrm{Ne}$. DB -8 to +55 db . Output rariges scame as $A C$ volts. Open-face hardwood case, test leads, battery. $3 \times 81 / 2 \times 5^{\prime \prime}$.
25N21722-Shpg. wt. 4 lbs .17 .59
Model 447 P , in portable hardwood
case. 25 N 21721 -Shpg. Wh. $5 \mathrm{lhs} . . . .21 .51$

## OSCILLOSCOPES

DUMONT 5.INCH OSCILLOSCOPE
Model 208B. Calibrated removable scale. Frequency range: $Y$-axis, $\pm 10 \%$ from 2 to 100,000 sinusoidal cycles; X-axis, ${ }^{2} 15 \%$ from 2 to 100,000 sinusoidal cycles. Voltage gain: $Y$-axis, 2000 times; $X$-axis, 43 times. Deflection sensitivity: maximum Y-axis ol RMS volts/inch; maximum $X$-axis . 5 RMS volts/ inch. Direct deflection plates 21 and 22 RMS volts/inch, $Y$-axis and $X$-axis respectively. Recurrent sweep over continuously varinble range from 2 to 50,000 cycles. Black wrinkle enamel finished steel case with leather handle. Size: $141 / 4 \times 8 \% x$ $19 \mathrm{~K}^{\prime \prime}$. For 110 volts, $40 / 60$ cycles. Uses SLP 1 tube 25N21782 - Shipping Weight: 67 lbs. . $\qquad$ 285.00

## DUMONT 5.INCH OSCILLOSCOPE



Model 274A. Amplified Sweep Circuit over continuous range from 20 to 50,000 cycles. Input impedance: Horizontal, 5 cycles. Input impedance: Horizontal, S megohms: vertical, I megohm. Deflec-
tion sensitivity: Max. vertical 0.65 RMS tion sensitivity: Max. vertical 0.65 RMS
volt/in. Horizontal 0.65 RMS volt/in. volt/in.i horizontal 0.65 RMS volt/in.
Input signal may be applied to the vertical plates either directly or through the vertical omplifier through a switch provided on the front panel. Intemal modulation of the horizontal beam is provided for by a separate terminal. Horlzontal amplifier maybe switched to either sweep circuit or external signal. All-metal case finished in black wrintle enamel. Leather handle. With scope tube qrid safety Shipping Welght: 35 lbs.
25N21774
.124 .50

## HICKOK 5-INCH OSCILLOGRAPH

Model 505A. Wide band vertical amplifier from 30 cycles to $1 \mathrm{MC}$. Horizontal amplifler 10 cycles to 50 KC . Deflection sensitivity .03 volts RMS/inch on vertical. 22 RMS/inch on horizontal direct. Input impedance is 1 megohm, 25 mmf . on vertical and 4 megohm, 25 mm . on horizontal. Built-in Wide and Narrow-Band FM osciliator, 3range frequency compensated attenuator network. Demodulator permits modulated RF signal to be viewed. Signal tracer phone jack. Self-contained mixer circuit for FM turn trace eliminator speeds up FM and AM aligmment. Modulation circuit permits internal or external FM oscillator modulation. Sinusoidal sweep with phasing control. Light.shield. Dimensions: $14^{\prime \prime} \times 11^{1 / 2 "} \times 19^{\prime \prime}$. Ship ping Weight: 35 lbs.
25N2145
.179 .00


## HICKOK 5-INCH OSCILLOGRAPH

Model 195B. Sinusoidal sweep with phasing control. Wide range sweep circuit oscillator. Deflection sensitivity, Vertical: . 03 volts RMS/ inch, direct 15 volts RMS/inch. Horizontal:. 15 volts RMS/inch, direct 20 volts RMS/inch. Vertical amplifier 30 cycles to 1 MC. Horizontal amplifier 10 cycles to 50 KC . All input terminals at front of panel for convenience. Input impedance: Vertical: 1 meg., 25 mmf . Direct: 2.2 meg. Horizontal: 4 meg., 35 mmf. Direct: 2.2 meg. Light shield and calibrated screen. Blue Hammertex steel cablnet with metal handle. 105-125 volts, 50-70 cycies. 8-5/16 x 18-1/2 $\times 13^{\prime \prime}$. Scope tube cradled in rubber. With tubes. Shpg. Wt: 30 lbs . 25N21594
156.00


## NEW RCA 5-1NCH OSCILLOSCOPE

 Mode1 WO-58A. Expressly designed for servicing TV recelvers. Gives accurate presentation of synchronizing pulses, deflection wave forms and composite video signals. Stef by step tracing of defective signals. Vertical cmplifier flat from 5 cycles to 2 MC . Horizontal cmplifier $\pm 10 \%$ from 6 to $100,000 \mathrm{cps}$. Deflection sensitivity vertical amplifier: 0.5 peak to peak V./inch. Input 1 mpedance : 1 meg/ 62 mmfd. Tilt and overshoot on square wave response, less than $2 \%$ from 30 to 50,000 cycles. Peak-to-peak voltages can be read at all times during operation. Vertical range control is graduated in suitable voltage intervals, and a calibrating voltage source is provided. Supplied with crystal probe for use in kinescope socket of set under test. SUPI Cathode-ray tube easily and quickly replaced without tools. Blue-qrey Hammeroid finish case measures $133 / 4 \times 91 / 2 \times 19-13 / 32$ ". For $105-125$ volts, $50 / 60$-cycle AC. Shipping Weight: 40 lbs .25N21518.


SIMPSON FM-TV GENESCOPE
Model 480. A combination sweep signal generator and oscilloscope that provides all necessary signal sources for proper alignment and servicing of $F M$ and TV recelvers. Equipped with high frequency crystal probe for signal tracing. Continuously variable attenuator. Both oscillator dials have 20-1 vernier control and 1000 division logging scale. FM oscillator ranges: $2-120 \mathrm{MC}$ and 42-260 MC. Sweep width variable from 0 to 15 MC at a rate of 60 cps . AM oscillator: $3.5-15 \mathrm{MC}$, $15-$ 70 MC and $75-250 \mathrm{MC}$. $30 \%$ modulation at 400 cycles or unmodulated. 5 MC crystal calibrator $\pm .05 \%$; audio oscillator 400 cycles. Output impedance 75 ohms. Also features step attenuator for control of output. Handles on elther side of case facilitates carrying. Dimensions: $22 \times 14 \times 71 / 2^{\circ}$. Supplied with test leads. Shipping Welght: 48 lbs . with test leads. Shipping Weight: 48 bs.
25N21519-With Operator's Instruction Manual.
375.00

SIMPSON TV-FM SIGNAL GENERATOR


Mode1 479. Exactly the same as Model 480 described above with exception of the oscilloscope which is not included. $17 x$ $14 \times 7 / 1 /{ }^{\prime \prime}$. With Test Leads and Manual. Welght: 35 lbs .
25 N 21520 .
245.00
 PRECISION 5-INCH OSCILLOSCOPE
Model ES-500. Excellent performance, visibility and operational flexibility at a moderate cost. Meets the needs of AM, FM and TV servicing work. Response, both amplifiers, from 10 cycles to 1 MC. Linear sweep circuit 10 cycles to 30 KC plus line or external sweep. Vertical amplifier deflection sensitivity .02 volts/inch. 2 megohms input resistance and 22 mmfd capacity. Extended range horizontal amplifier with .5 volts/inch deflection sensitivity. Also features step attenuator plus continuously varlable gain control in cathode follower input stage. $1 / 2 \mathrm{meg}$ input resistance and 20 mmfd capacity. Has sweep phasing control for sinusoldal line sweep usage; wide angle bridge circult. Heavy gauge aluminum panel with removable and rotatable light shield and mask. Black ripple steel case meas ures $81 / 4 \times 141 / 2 \times 18^{\prime \prime}$. Shipping Welght: 35 lbs .
25N21521-Complete with Instruction Manual
146.51

## NEW JACK SON OSCILLOGRAPH

Model CRO-1. Here is an oscillograph that gives you wide or narrow range, and high or reduced sensitivity with the flip of a switch. This fine instrument is perfectly suited for labs and servicemen. 4.5 MC band width for observation and measurement of pulse wave forms. Vertical amplifier . 018 RMS volts/inch on narrow band; horizontal amplifier . 55 RMS volts/inch. Input impedance 6 megs/il mmfd direct balanced; unbalanced 3 megs $/ 22$ mmfd. Horizontal amplifier 1.5 megs. Response on vertical amplifier 20 cycles to $4 \mathrm{MC} \pm 1.5 \mathrm{db}$, easily usable to 5 MC . Saw tooth sweep frequency 20 cycles to 50 KC in five steps. Size: $10 \times 12 / 2 \times 15^{\circ}$. Shipping Welght: 42 lbs .
25N21691.
119.10


## RCP SCOPE \& SWEEP GENERATOR

Model TV90. Combines a complete oscilloscope and sweep generator into one compact unit for all TV testing, alignment and service. Variall TV testing, alignment and service. 45 ariable linear sweep circuit from cps., and a sensitivity of 285 RMS volts/inch cps., and asensitivity of
vertical and .32 RMS volts/inch horizontal devertical and . 32 RMS volts $/$ inch horizontal de-
flection. Input resístance 1 meg $/ 20 \mathrm{mmfd}$. Sine flectlon. Input resistance 1 meg/20 mmid. Sine
wave response, uniform from 5 cycles to 200 Wave response, uniform from
KC with $\$ 2 \mathrm{db}$. Frequency range of independent sweep generator 1.5 to 45 MC with chaice of any $1 F_{5}$ freguency desired. Band width continuously variable from .5 KC to 7 MC . For $105-130 \mathrm{~V} ., 50 / 60$-cycle AC. Supplied complete with tubes, probe, coaxial output cable and operating instructions. Hammertone grey case: $14 \times 8$ $\times 121 / 2^{\prime \prime}$.
25N21643-Weight 25 Ibs.
.124 .95

## EICO 5-INCH OSCILLOSCOPE



Low cost quality scope for general AM, FM and TV servicing. Deflection sensitivity: :65 $V$./ inch full gain. Horizontal sweep circuit 15 to $30,000 \mathrm{cps}$. Horizontal and vertlcal amplifiers 50 to $50,000 \mathrm{cps} .110-130$ V., $50 / 60$ cycles AC. $81 / 2 \times 13 \times 17^{n} .30^{\circ} \mathrm{lbs}$.
25N21688-With instructions..
69.95

Same as above in Kit Form
32N24552~NOTHING ELSE TO BUY 39.95

# INDUSTRIAL \& SPECIAL TEST EQUIPMENT 

## PORTABLE GEIGER COUNTER

Keleket "Snooper". Earn the $\$ 10,000$ government bonus for discovery of ore having a content of . $05 \%$ U308 with this complete, portable counter. Responds to radiation from radio-active materlals. Designed for locating new deposits of carnotite, pltchblende, curite, or other radio-active materials; Uranlum can be found even when covered with thick overburden. Highly sensitive to both beta and gamma rays. Small and compact it measures only $61 / 2 \times 3 \% \times 21 / 4$. No bothersome Gelger probe is required. Only two ordinary flashlight batteries are used for power. phones, magmellc type, 1000 to 24,000 ohms impedance. May be connected to P.A. system for classroom demonstrations. Less phone, Shipping Weight: 3 lbs. 25N21635.
45.00

## DUMONT ELECTRONIC SWITCH



Model 185A. Permits the simultoneous observation, for purposes of comparison, of two ormore independent signals on the screen of a single cathode ray oscillograph. Square wave signals may be used in studles of vacuum tube amplifiers and other networks over a range of 10 to 500 c.p.s. Switching rate $10-$ 2000 times per second. Input resistance 100,000 ohms. Output resistance 50,000 ohms. All controls and connectlons on front panel for convenlence and ease of operation. Complete. with tubes. Black winkle tinish steel cablnet. Size: $11-1 / 2^{\prime \prime} \times 7-5 / 8^{\prime \prime} \times 13^{\prime \prime}$. For operation on 115 volts, 40-60 cycles oñly.
25N21783-Shpg. Wt: 17 lbs.
105.00

## DUMONT VOLTAGE CALIBRATOR



Type 264-A. Designed to measure the peak-to-peak voltage of cany signal vlewed on any commercial cathode-ray osclllograph. It square-wave output is continuously variable from 0 to 100 volts in 4 ranges. By throwing a selector switeh, the signal to be measured or any of 4 ranges of oalibrating voltage is applied to the input of the oscillograph, eliminating the need to switch leads between signal and callbrating voltage. Amplitude measurements of any part of a complex, composite waveform may be made. Range: $0-0.1 ; 0-1.0 ; 0-10 ; 0-100 \mathrm{~V}$. Accuracy: ${ }^{4} 5 \%$ of full scale on each range. Input impedance: 20 mmfd . Overall dimensions: $4 \frac{1 / 2}{2} \times 8^{\prime \prime} \times 5 \frac{1}{4}{ }^{\prime \prime}$. $25 \mathrm{~N} 21672-5 h p g$. Wt: 10 tbe
39.50

## $\because \dot{B}$ E

REINER TYPE " $Z^{*}$ MULTIPLIER PROBES
Multiply the DC voltage ranges on your present VTVM100 times. Especially desiqned with connectors to fit models with connectors to ift mo
of test instruments listed.

| Stock No. | Manufacturer | Mfrs. No. |
| :---: | :---: | :---: |
| 25N21800 | Electronlc Desígn | 100 |
| 25N2:800 | Relner Electronics | 450, 451 |
| 25N21800 | Superior Instrument | 400 |
| 25N2t800 | RCA VoltOhmyst | MV-65A, WV-75A, 165A. |
| 25N21800 | RCA Rider Chanalyst | 162, $162 \mathrm{~A}, 162 \mathrm{~B}, 162 \mathrm{C}$ |
| 25N21800 | Triplett Elec. Inst. | 2450.2451 |
| 25N21801 | Electronic Instrument | MA-113A, 210, 221, 221K |
| 25N21802 | Precision Apparatus | EV-10 |
| 25N2 1803 | RCA Voltohmyst | 195, 195A |
| 25N21803 | RCA Audio Chanalyst | 170A |



100
450,451
400 ,
MV-65A, WV-75A, 165A. 165S. 165 $162,162 \mathrm{~A}, 162 \mathrm{~B}, 162 \mathrm{C}$ MA-113A, $210,221,221 \mathrm{~K}$ EV-10
170A

INDUSTRIAL AND SPECIAL TEST EQUIPMENT
PLEASE NOTE: Just $\alpha$ reminder that our test equipment if avallable on our convenlent TIME PAYMENT PLAN. Thls applies to orders for this merchandise whether listed here or not. Lafayette-Concord cam obtaln any plece of test equipment you desire, on special order. Write for full detalls and manufacturer's specifications on the items you want.


## DUMONT 3-INCH OSCILLOGRAPH

Model 164 E employs 3APIA tube. Amplified sweep circult over contlnuous range from 15 to 30,000 cycles. Input Impedance vert1cally: 1,000,000 ohms; horizontally: 800.000 ohms. Maximum potential 400 DC volts. Deflection sensitivity: maximum vertical 0.80 r.m.s. volU/in.; maximum horizontal .065 rims. vollin. Handy deflection-plate 06 riinals available at rear. Frequency rane: minals avallable at rear. Frequency range: form within $20 \%$ from 5 to 100,000 cycles. Horizontal ampliliers may be switched to ampllify elther sweep circult or exfers may be switched to ampllfy elther sweep circult or externat signal, so that Lissajou paterns for trequency determination may be used. In black wrinkte finish steel cabinet.
Plastic scope screen. For.operation on 115 volts, $40-60 \mathrm{cy}^{-i}$ cles. Size: $11-5 / 8^{\circ} \times 7-3 / 8^{\prime \prime} \times 14^{\circ}$.
25N21557-Shpg. Wt: 25 lbs.
124.50

## RCP HI-MEGOHM MUL TITESTERS



Accurate high megohm range requirea no batteries or tubes. Rectanqular 4-5/8" meters provide excellent readabllity with $\pm 2 \%$ accuracy. Output ranges correspond to the $A C$ voltage ranges. Attractive natural finish, por table oak cases with leads. Case has removable hinged cover with latch and leather bandle. Dimenaions: B-7/8×7-1/2 $\times 4-3 / 4^{\circ}$. Wt: $41 / 2$ lbs.
Model 450AP-1000 Ohms/Volt Moter Sensitivity Ohmmeter: $0 / 5000$ 500,000 , 0-50 megs; DC V.i 0-5/50/ $125 / 500 / 2500 ;$ AC $V:=0-10 / 100 / 250 /$ 1000; DC MA: 0-2.5/10/100/1000; db: -9 to +55 .
24.45

25N2 1522
Model $450 \mathrm{BP}-5000$ Ohms/Volt Meter Sensilivity
Ohmmeter: $0 / 5000 / 500,000,0-100$ megs; $A C$ \& $D C$ volt ranges and dectbels same as Model 450 AP . DC MA: $0-.5 / 10 / 100 \%$ 1000.
27.93

25N21523.
Model $450 \mathrm{CP}-20,000$ Ohms/Volt Meter Sensitivity
Ohmmeter: $0-5000 ; 0-5 / 1000$ megs; AC \& DC volt ranges and db. same as 450AP; DC MA: 0-.1/10/100/1000.
34.25
$\qquad$

## PROBES

12.69

FEILER SIGNAL TRACING PROBE


Type TS-6C. Use with any high-gain amplifier as cudible tracer or oscilloscope or VTVM as Visual tracer. IN34 erystal. Measures up to 50 volts RF. Shipping Wt: 11 b .
25N2 1763.
7.50

## Hickek Crystal Demodulator Probe

Type 34. Used with any oscilloscope to trace up to ${ }^{\circ} 500 \mathrm{MC}$ modulated RF thru any recelver from antenna post to detector or discriminator.
25N21759-Shpg. Wt: 1 1b

## MULTITESTER HV PROBES



For all VTVM 6 Multimeter. Meosures HV In TV FM x-ray. Utilize lowest range on your meter scale, and multiply readings by 1000.
Increases range of any 20,000 ohms/volt multitester to 30,000 volts.
25N21804........................................................................... 3
Increases range of any 5000 ohms/volt multitester to 30,000 volts. $\qquad$ .10 .73
Increases range of any 20,000 ohms/voli multitester to 25,000 volte.
25N21806.
10.73

Increases range of any 5000 ohme/volt multtester to 25,000 volts.
25N21807
10.73

## NEW HICKOK TV PROBE



Model TVP-1. With this probe, circult characteristics shown In set manufacturers service manuals can be viewed accurately without misaligning stages, espectally where capacitance in ordinary cable would pioduce improper pictures. Input impedance 25 mmfd . Frequency response linear 20 cycles to ! MC. Supplied with 4 -ft. heavy duty cord and spade connectors. Light, easy to handle black and chrome probe. 25N21696.
.12 .01

## TEST EQUIPMENT <br> "Build-If-Yourself" <br> KITS



HIGH QUALITY KITS

## OSCILLOSCOPE KIT

Model 400K. 5" oscilloscope. An indispensable aid for AM, FM and Television servicing. Horizontal sweep circuit 15 to 30,000 cycles. Frequency response of vertical and horizontal amplifiers 50 cycles to 50 KC . Deflection sensitivity. 65 volis per inch full qain. Input impedance 1 megohm and 59 mmfd Provision for external synchronization test voltage and intensity modulation. Complete with tubes: 2-6SJ7, 2-5Y3 1-884, 1-5BP1. Linear sweep with 884 gas triode. Graph screen. Size: $8^{1 / 2}{ }^{\prime \prime} W \mathrm{~W}$ $13^{m} \mathrm{Hx} 7^{\prime \prime} \mathrm{D}$.
32N24552-Shpg. Wt: 40 lbs
39.95

25N21688-As above, but wired. Ready for use. ...........69.95


## VTVM KIT

Model $22: \mathrm{K}$. A precision type vacuum tube voltmeter kit at a price everyone can afford. $4^{1 / 2^{n}}$ meter. All multiplier resistors matched to $1 \%$ accuracy. DC and AC volt ranges: $0-5 / 10 / 100 / 500 / 1000$. Ohmmeter ranges: 2 ohms to 1000 megohms in sieps Rxl, Rxio, Rxi000, ohms in steps Rxl, Rxio, Rxlood: Rx10,000 and $R x l$ megohm. $D B$ scale:
-20 to +55 db in 5 ranges. $D C$ input re--20 to +55 db in 5 ranges. DC input resistance 25 megohms. AC input impe-
dance is over $11 / 2$ megohms. Size: $9-7 / 16 x$ dance is over $11 / 2$ megohms.
$6 \times 5 \mathrm{~N}$. Complese with tubes.
23.95

## H. F. PROBE KIT



Model P-75K. Germanium crystal probe for visual RF signal tracing and measurements to over 200 megacycles. For use with the above oscilloscope or VTVM.
32N24533-Shipping Weight: 8 oz......................3.75
SIGNAL GENERATOR KIT


Model 320. Feotures highly stable Hartley oscillator with frequency range of 150 KC to 100 MC on 7 34 MCated bands. Fundamentals to 34 MC . Can be modulated with pure 400 -cycle audio supplied by Colpitts type oscillator included. Audio voltage can also be obtained extermally. Simple to align. Handsome etched panel with easy-to-read callbrations. Complete with tubes. ShipWeight: 22 lbs. 32N24562.
.19 .95

Build your own test equipment this practical, easy, moneysaving way. Excellent for schools, aboratories, servicemen and homs. Instructions for step-by-step assembly and easy and hams. Instructions for st ep-by-step assembly and easy it-yourself $\mathrm{kits}^{\prime \prime}$ see pages 125,126 and 127 .

## FM/TV SWEEP GENERATOR KIT

A new standard in FM and TV sweep generator performance. Features special Midline capacity tuning condenser. High frequency insulation denser. High frequency insulation
throughout. Generator output can be throughout. Generator output can be used as either frequency modulated
or pure RF. Builtin power line fitter. Sweep width 500 KC to approximately 10 MC . Frequency range covered in 3-bands: 2-77 MC; 40-154
 MC; 151-227 MC. No bandswitching necessary. Tube lineup: 2-6SJ6, 2-6C4, 1-7Y4. Maximum output 500,000 UV. For $105-125$ volts $50 / 60$-cycle AC operation. Complete with tubes, cables, and heavy gauge steel cabinet, battleship grey crackle finish. Dimensions: $8 \times 10 x$ 12". Shpg. Wt: 25 lbs.
32N24399.
24.50

Same as above, but assembled and ready for use.
25N21736..................................................................... 34.95

## MULTITESTER KIT IN PORTABLE CASE



A versatile, compact test instrument ideal for radio receiver servicina. Equipped with $31 / 2^{\prime \prime}$ round 0-1 MA meter. Voltage range, AC/DC: 0-5/ 50/150/500/1500. Sensitivity 1000 ohms/Volt. Milliamperes DC range: $0-5 / 50 / 150$. Ohms range: $0 / 2000 /$ $20,000 / 200,000$. Internal source $41 / 2$ valts. Comes complete with handsome portable case. $51 / 2 \times 7 \times 31 / 2$ ". 32N24458-Shpg. Wt: 5 lbs.
.13 .45

## FEILER SIGNAL TRACER KIT



Model TS-3. Electronic "stethoscope" that gets to the heart of radio troubles in a flash. Completely portable and AC operated. Uses biased diode detector probe. Does not upset the most critical circuits.5" PM dynamic speaker included. Makes audible all signals - 30 cps to 120 MC - RF IF, Audio - without using special controls or tuning. Provision for output meter for silent tracing. Output connections to enable the use of on RF vacuum-tube voltmeter for visual indications. All-metal cabinet finished in handsome Brown iridescent enamel included. For 115 volts, $50 / 60-c y c l e$. Size: $111 / "^{" \times 8 "} \times 6$ ". With diode detector probe and leads.
32N24565-Shpg. Wt: 22 lbs. Complete Kit.
22.75

25N21778-As above, but assembled. Ready. For use... 34.95

## SIGNAL TRACERS

## SIGNALETTE SIGNAL TRACER



Vacuum-tube aid for signal tracing and quick check in alignment of sets. RF, IF and AF signals from 2500 cycles to 20 mc. Used for checking sensitivity, audio amplifier gain, and AVC. 25N21764-Each.
9.95

## SIGNAL TRACER AND TEST SPEAKER

Silver mode1 905 A. Effectively
traces signals through AM, FM, TV sound and TV video R.F: I.F. and A.F. circuits. Built-in 18 -watt output transformer and high-quality $6{ }^{*}$ PMspeaker. T wo panel knobs give insiant choice of 30 transformer primary impedances. Speaker can also be used seperately. Probe frequency range: 20 cycles to 300 megacycles. Amplifier frequency range: 60 to 20,000 cycles flat to $\pm 4 \frac{1 / 2}{} \mathrm{db}$. Undistorted power output: 3.4 watts. Sensitivity: 50 microvalts for 50 milliwatt output. Probe capacitance: 2 mmid . Probe input resistance: 2 megohms. For 105 125 volts, $50 / 60$ cycles AC. Complete with tubes, probe of prod tips, 6 -ft line cord. 25N21548-Shpg. Wt: 14 lbs .

.44.50

PRECISION SIGNAL TRACER AC operated portable tracer. Excellent for trouble shooting AM, FM and TV sound circuits from 30 cycles to over 100 MC . Seperate channel for audio frequencies. HF tube in probe with 3-tube high-gain amplifier makes all signals audible and does not upset the most-sensitive circuit. Full control of RF-IF stage provided by vaniable control and resistive attenuator. Attractive metal cabinet con-
 tains built-in speaker and all controls. Complete with tubes, HF probe and test leads. 110 volt, $50 / 60$-cycle. Size: $91 / 2 \times 61 / 2 \times 61 / 4^{\prime \prime}$. 34. 50

## FEILER APPLIANCE TESTER

Tesis any appliance while in operathon in a few seconds. Tells whether circuil is shorted, open or has correct resistance. Unique systern of light indicators gives positive proof of condition of circuits. Operates from 95 125 volts DC and 25,50 and 60 -cycle AC . Tests any $95-125 \mathrm{~V}$ and 60 -cycle 50 , 60 -cycle electrical appliance.
 Supplied complete with test leads, and a "Basic Course in the Fundamentals of Appliance Repair". Dimensions: $8 \times 6 \times$ $111 / 2^{\prime \prime}$.
25N21516-Shpg. Ht: 10 1bs................................................... 18.95

TRIPLETT METER DIMENSIONS


| Model | Flange | Body Dia. | *Body Depth |
| :---: | :---: | :---: | :---: |
| 221 -T, 241.T | $2^{11, / 6_{6}^{\prime \prime}}$ | $2^{\top} s^{\prime \prime}$ | $15 / 8{ }^{\prime \prime}$ |
| 227-T | $2^{3 / 18 \%^{\prime \prime}} \mathrm{sq}$. | $2^{3}$ | $111{ }^{16}$ |
| 231-S | $2^{41} 1 x^{\prime \prime}$ | $2^{7}{ }^{\text {s }}$ " | 2 "' |
| 237-S | $23 / 8^{\prime \prime}$ sq. | $2^{5} x^{\prime \prime}$ | $1^{27} 4^{\prime \prime}$ |
| 321.T, 341-T | 31/2" | 23/" | $13 /{ }^{\prime \prime}$ |
| 327-T, 347-T | $3^{\prime \prime} \times 3^{\prime \prime}$ | $23 / 4{ }^{\prime \prime}$ | $11116_{17}^{\prime \prime}$ |
| 331-S | 31/2" | 23/" | $125.6{ }^{\prime \prime}$ |
| 337-S | $3^{\prime \prime} \times 3^{\prime \prime}$ | $2 \%^{\prime \prime}$ | $]^{37} 5^{\prime \prime}$ |



* Indicates overall body depth including terminals.

TRIPLETT ROUND AND SQUARE CASE PANEL METERS
Incorporate finest materials and workmanship. Molded cases, all terminals molded in. Sapphire jewels in adjustable screws. Accurate within $2 \%$.
D.C. MILLIAMMETERS-ROUND AND SQUARE CASE

|  | $\begin{gathered} 2^{\prime \prime} \text { Round } \\ 221-T \end{gathered}$ | $\begin{gathered} 2^{\prime \prime} \text { Square } \\ 227-\mathrm{T} \end{gathered}$ |  | $\begin{gathered} 3^{\prime \prime} \text { Round } \\ 321-T \end{gathered}$ | $\begin{gathered} 3^{\prime \prime} \text { Square } \\ 327-1 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Range | No. | No. | Each | No. | No. | Each |
| 0-1 | 25N11208 | 25N11288 | 6.76 | $25 N 11200$ | 25N11320 | 7.74 |
| 0-1.5 | $25 N 11209$ | 25N11289 | 6.76 | 25N11201 | 25N11321 | 7.74 |
| 0-3 | 25N11415 | 25N11290 | 6.76 | 25N11411 | 25N11322 | 7.14 |
| 0-5 | 25N11416 | 25N11298 | 5.68 | 25N11412 | $25 N 11323$ 25N11324 | $\begin{aligned} & 6.66 \\ & 6.66 \end{aligned}$ |
| $0-10$ | 25N11210 | 25N11299 | 5.68 | 25N11202 | 25N11324 |  |
| 0-15 | 25N11211 | 25N11300 | 5.68 | 25N11203 | 25N11325 | 6.66 |
| 0.25 | 25N11398 | 25N11306 | 5.68 | 25N11394 | 25N11326 | 6.66 |
| $0-50$ | 25N11212 | 25N11309 | 5.68 | 25N11204 | 25N11327 | 6.66 |
| 0-100 | 25N11213 | 25N11311 | 5.68 | $\text { 25N } 11205$ | 25N11328 | 6.66 |
| 0.150 | 25N11417 | 25N11312 | 5.68 | 25N11413 | 25N11329 | 6.66 |
| 0-200 | 25N11214 | 25N11313 | 5.68 | 25N11206 | 25N11330 | 6.66 |
| 0-250 | 25N11418 | 25N11314 | 5.68 | 25N11414 | 25N11331 | 6.66 |
| $0-300$ | 25N11287 | 25N11315 | 5.68 | 25N11395 | 25N11332 | 6.66 |
| 0.500 | 25N11215 | 25N11316 | 5.68 | 25N11207 | 25N11333 | 6.66 |
| 0-750 | 25N11400 | 25N11317 | 5.68 | 25N11396 | 25N11334 | 6.66 6.66 |
| 0-1000 | 25N11401 | 25N11318 | 5.68 | 25N11397 | 25N11335 | 6.66 |

D.C. MICROAMMETERS-ROUND AND SQUARE CASE

| $3^{\prime \prime}$ Round 321-T |  |  | $3^{\prime \prime}$ Square 327-T |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 10.68 | 0-50 | 25N11354 | 10.68 |
| $0-100$ | 25N11353 | 10.68 | 0-100 | 25N11355 | 10.68 |
| 0-200 | 25N11434 | 8.72 | 0-200 | 25N11356 | 8.72 |
| 0.500 | 25N11435 | 8.13 | 0-500 | 25N11357 | 8.13 |

A.C. VOLTMETERS-ROUND AND SQUARE CASE

|  | $\begin{gathered} 2^{\prime \prime} \text { Round } \\ 231-S \end{gathered}$ | $2^{\prime \prime} \text { Square }$ |  | $3^{\prime \prime}$ Round $331 \cdot 5$ | $\begin{gathered} 3^{\prime \prime} \text { Square } \\ 337-5 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Range | No. | No. | Each | No. | No. | Each |
| $0-5$ | $25 N 11280$ | 25N11449 | 5.68 | 25N11273 | 25N 11459 | 6.66 |
| 0.10 | 25N11281 | 26 N 11454 | 5.68 | 25N11274 | 25N11460 | 6.66 |
| 0.15 | 25N11282 | 25N11455 | 5.68 | 25N11275 | 25N11461 | 6.66 |
| $0-25$ | 25N11283 | 25N11456 | 5.68 | 25N11276 | $\begin{aligned} & 25 N 11462 \\ & 25 N 11381 \end{aligned}$ | 6.66 6.66 |
| 0-50 | 25N11284 | 25N11380 | 5.68 | 25N11277 |  |  |
| )-150 | 25N11286 | 25N11457 | 6.76 | 25N11279 | 25N11463 | 7.74 |
| 0-300 | 25N11409 | 2SN11458 | 8.33 | 25N11406 | 25N11464 | 9.31 |
| $0-500$ | 25N11410 | 25N11453 | 11.56 | 25N11407 | 25N11452 | 12.54 |
| 0-15-150 |  |  |  | 25N11408 | 25N11465 | 13.52 |

A.C. MILLIAMMETERS

| Model 231-S |  |  | Model 331-S |  | Model $231-\mathrm{S}$ |  |  | Model 331-S |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Each | Ma. | No. | Each | No. | Each | Ma. | No. | Each |
| 25N11420 | 6.76 | 0-10 | 25N11419 | 7.74 | 25N11271 | 5.68 | 0-50 | 25N11267 | 6.66 |
| 25N11269 | 5.68 | 0-15 | 25N11265 | 6.66 | 25N11272 | 5.68 | 0-100 | 25N11268 | 6.66 |
| 25N11270 | 5.68 | 0-25 | 25N11266 | 6.66 | $25 N 11424$ | 5.68 | -500 | 25N11422 | 6.66 6.66 |

## D.C. VOLTMETERS

125 Ohms per Volt.

| Range |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Model $221 . \mathrm{T}$ |  | Model 321.T |  |
|  | No. | Each | No. | Each |
| 0-5 | 25N11247 | 5.68 | 25N11230 | 6.66 |
| 0-10 | 25N11248 | 5.68 | 25N11231 | 6.66 |
| 0-15 | 25N11249 | 5.68 | 25N11232 | 6.66 |
| 0.25 | 25N11250 | 5.68 | 25N11233 | 6.66 |
| $0-50$ | 25N11251 | 5.68 | 25N11234 | 6.66 |
| 0-150 | 25N11253 | 5.68 | 25N11236 | 6.66 |
| 0.250 | 25N11254 | 6.96 | 25N11237 | 7.94 |
| 0.500 | 25N1140S | 8.53 | 25N11404 | 9.51 |

D.C. VOLTMETERS

1000 Ohms/Volt Model 321-T

| Range |  | No. |
| :--- | :--- | :--- |
|  | Each |  |
| $0-10$ |  |  |
| 0.50 | 25N11240 | 9.21 |
| 0.100 | 25N11241 | 9.21 |
| $0-150$ | 25N11242 | 9.51 |
| $0-500$ | 25N11243 | 9.51 |
| $0-1000$ | 25N11364 | 12.94 |
|  |  | 11.66 |

## A.C. AMMETERS

With internal shunt.

| Amps. | Model 221-T |  | Model 321-T |  |
| :---: | :---: | :---: | :---: | :---: |
|  | No. | Each | No. | Each |
| 0.1 | 25 N11223 | 5.68 | 25N11216 | $6 . \overline{6} 6$ |
| 0-3 | 25N11376 | 5.68 | 25N11372 | 6.66 |
| 0-5 | 25N11224 | 5.68 | 25N11217 | 6.66 |
| $0-10$ | 25N11225 | 5.68 | 25N11218 | 6.66 |
| 0.15 | 25N11377 | 5.68 | 25N11373 | 6.66 |
| 0.25 | 25N11378 | 5.68 | 25N11374 | 6.66 |
| 0.30 | 25N11379 | 5.68 | 25N11375 | 6.66 |



SHURITE METERS
Model 550, round, with clamp. Model 950 , square, flange mounted. Both models require 25/2" hole.

## D.C. VOLTMETERS

| Range | Model 550 |  | Model 950 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | No. | Each | No. | Each |
| 0-3 | 25N11052 | 1.27 | 25N11010 | 1.42 |
| 0-8 | 25N11055 | 1.27 | 25N11013 | 1.42 |
| $0-10$ | 25N11056 | 1.32 | 25N11014 | 1.47 |
| $0-15$ | 25N11057 | 1.37 | 25N11015 | 1.52 |
| 0.25 | 25N11059 | 1.27 | 25N11016 | 1.42 |
| 0-50* | 25N11062 | 2.74 | 25N11019 | 2.89 |
| 0-100 | 25N11063 | 1.47 | 25N11020 | 1.62 |
| 0-150 | 25N11065 | 1.65 | 25N11023 | 1.81 |
| 0.300 | 25N11067 | 3.18 | 25N11025 | 3.33 |
| 0-500 | 25N11068 | 3.67 | 25N11026 | 3.82 |


| $0-15$ | $25 N 11075$ | 2.30 | $25 N 11031$ | 2.25 |
| :--- | :--- | :--- | :--- | :--- |
| $0-150$ | $25 N 11076$ | 3.04 | $25 N 11032$ | 3.18 |
| 0 |  |  |  |  |


D.C. MILLIAMMETERS

| Range | Model 550 |  | Model 950 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | No. | Each | No. | Each |
| 0 | 25N11109 | 1.96 | 25N11160 | 2.11 |
| 0-5 | 25N11050 | 1.81 | 25N11150 | 1.96 |
| $0-10$ | 25N11100 | 1.71 | 25N11151 | 1.86 |
| 0.15 | 25N11101 | 1.32 | 25N11152 | 1.47 |
| 0-25 | 25N11102 | 1.27 | 25N11153 | 1.42 |
| 0.50 | 25N11103 | 1.27 | 25N11154 | 1.42 |
| 0-100 | 25N11104 | 1.27 | 25N11155 | 1.42 |
| 0-150 | 25N11105 | 1.27 | 25N11156 | 1.42 |
| 0-200 | 25N11106 | 1.27 | 25N11157 | 1.42 |
| 0-300 | 25N11107 | 1.27 | 25N11158 | 1.42 |
| 0-400 | 25N11108 | 1.22 | 25N11159 | 1.37 |

D.C. AMMETERS

| $0-1$ | 25N11091 | 1.27 | 25N11162 | 1.42 |
| :---: | :---: | :---: | :---: | :---: |
| $0-3$ | 25N11092 | 1.27 | 25N11163 | 1.42 |
| $0-5$ | 25N11093 | 1.27 | 25N11164 | 1.42 |
| $0-10$ | 25N11094 | 1.27 | 25N11165 | 1.42 |
| $10-0.10$ | 25N11098 | 1.27 | 25N11169 | 1.42 |
| 20-0-20 | 25N11099 | 1.37 | 25N11170 | 1.52 |

## A.C. AMMETERS

| 0.1 | $25 N 11081$ | 2.30 | $25 N 11004$ | 2.45 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 0.3 | $25 N 11081$ | 2.30 | $25 N 11005$ | 2.45 | | $0-1$ | 25N11082 | 2.30 | 25N11005 | 2.45 |
| :--- | :--- | :--- | :--- | :--- |
| $0-3$ | 25N11082 | 2.30 | 25N11006 | 2.45 |
| $0-5$ | 25N11083 | 2.30 |  |  |
| $0-10$ | 25N11084 | 2.30 | 25N11007 | 2.45 |
| $0-50$ | 25N11085 | 2.94 | 25N11008 | 3.09 |

RESISTANCE METER
Direct reading 10,000 ohms, 4.5 volls.
25N11078.......1.76 $\quad 25 N 11071 . . . . .1 .91$
FLANGE FOR ROUND METERS
25N11041-23/4" Black Finish.
Each 18k


MARION MULTI-RANGER METERS
Foundation meter is designed to permit the user to assemble a highly accurate Volt-OhmMilliameter. Have full 100 degree three-color scales reading $0-10,0-50,0-250,0-1000$ A.C. and D.C. Volts. 0-1, 0-10, 0-50, $0-500$ Milliamps. $0-500,0-100 \mathrm{M}, 0-1 \mathrm{Meg}, 0-10 \mathrm{Megohms}$. -10 to 54 decibels. Available in three sizes as listed below.

| No. | Model | Size | Each |
| :---: | :---: | :---: | :---: |
| 25N10720 | 53SN | $3^{\prime \prime}$ Square | 7.84 |
| 25N10721 | 55 | $48 / 8^{\prime \prime} \times 418^{\prime \prime}$ | 9.80 |
| 25N10722 | 57S | $7^{\prime \prime} \times 8 \frac{1}{6 \prime}$ | 13.06 |

## SHUNT AND RESISTOR KIT

Kit for Marion Multi-Ranger foundation meter. Congists of 14 metalized carbon film resistors and 4 Manganin wire wound shunts. Complete with schematic diagrams.
25N10719
8.16

## METER RECTIFIERS



## CONANT INSTRUMENT RECTIFIERS

General replacement for all types of meters and relays. "A" for applications requiring more than one millamp current output. Disc diameter .50 inch. " $B$ " for applications requiring good frequency response and less than one mil. current output. "C". Same as B" but outside case fits standard midget fuse clip. Ratings shown are continuous peak. Inter!nittent are twice figures shown. Instantaneous are three times the figures shown.

| No. | Diag. | Fig. | Volts | M.A. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 25 N 10569 | 1 | A | 10 | 30 | 2.06 |
| $25 N 10550$ | 2 | A | 5 | 30 | 1.50 |
| 25 N 105551 | 3 | A | 10 | 30 | 1.50 |
| 25 N 10552 | 4 | A | 5 | 30 | 1.18 |
| 25 N 10572 | 1 | B | 10 | 5 | 2.06 |
| 25 N 10553 | 2 | B | 5 | 5 | 1.50 |
| 25 N 10554 | 3 | B | 10 | 5 | 1.50 |
| 25 N 10555 | 4 | B | 5 | 5 | 1.18 |
| 25 N 10556 | 1 | C | 10 | 5 | 2.06 |



ELECTROX RECTIFIER UNITS 5 ma at 3 volts $D C$
D. Full wave copper oxide rectiffer in metal housing with four insulated 3-inch leads. ContInuous output of 5 max at maximum of 3 volts DC. Maximum input 4 yolts AC.

25N10566.
2.59

## 20 ma at 3 volts DC

E. Full wave copper oxide rectifier In bakelite houslng with five insulated 3 -inch leads. Continuous output of 20 ma at maximum of 3 volts DC. Maxlmum input 4 volts A.C.

25N10567.
1.95

## 64 ma at 3 volts DC

F. Full wave copper oxide rectifler with five insulated 3 -inch leads. Continuous output of 64 ma at a max. of 3 volte DC. Max. iriput 4.1 volts A. C.

25N10568....................................... 75

ACCESSORIES


## BAKELITE METER BOX

G. Sturdy heavy molded plastic meter case. Will withstand rugged use without damage to case or meter. Overall dimensions $613 / 16^{\prime \prime} \times 55 / 16^{\prime \prime}$. Inside dimensions: $61 / 2 \times 5 \times 21 / 8^{\prime \prime}$. Panel mounting screw inserts are molded into case.
Shipping weight 3 lbs .
25N21418-Less Panel.
90
Bakelite Panel for above. Shipping weight 1 lb . 25N21419.

## RELIANCE METER CASES

H. Black crackle finish steel cases $4 \times 4 \times 41 /{ }^{\prime \prime}$ high. Two ceramic insu ators. Shipping welght 2 lbs. $25 N 10398-2$ 3/16" die
$25 N 10399-2 \quad 13 / 16^{\circ} \mathrm{n}$

AMPHENOL ADAPTORS
A simple way to make adaptors sultable for modernizing tube checkers and analyzers, adapting new tubes to old circuits and for connections to output meter, phonograph pickup, etc. Socket tops \& bases.

| No. | Socket | Type | Price |
| :---: | :---: | :---: | :---: |
| $13 N 13085$ | (Octal) | $44-8$ | 14 c |
| $13 N 13086$ | Loctai | $44-\mathrm{L}$ | 14 c |
| 13 N 13087 | 9 Pin (Noval) | $44-9$ | 26 c |
| No. | Base | Type | Price |
| $13 N 13088$ | 8 (Octal) | $50-8 S G$ | 22 c |
| $13 N 13089$ | Loctal | $44-13$ | 39 c |

## TEST LEADS AND PRODS



PENCIL PROD KIT
Spring prongs at end of prods allow changing from spade lugs to phone tips or spring clips. Handles 6 long, $1 /{ }^{\prime \prime}$ diameter. Red and Blacic kinkless wire. Kit comes complete with two allicjator clips, two needle point phone tips and two tapered lugs.
25N12971-Prod Kit...............
1.47

As above, with fired Spring Clip Ends. 25N12882 .................................
25N12883.
ica test lead kit
Contains pair of test leads with $60^{\prime \prime}$ Red and Black kinkless wire, one end with insulated phone tips, other insulated removable banana plugs. Comes in leatherette case, complete with pair of alligator clips, spade plugs, needle points.
25N12861-Complete kit.
2.06

## WESTON TYPE TEST LEADS


$5^{\prime \prime}$ long handles of red and black phenolic, with kinkless rubber wire. 65" overall length. Comes complete with molded finger grip tips with set screws.
23N12988-Per palr. $\square$ .1 .03


15,000-VOLT TEST LEADS

INSULATED TEST PRODS Type A: standard solderless phone tip with knurled collari Type B has chuck and nut to hold plain phono needle; Type Chas banana plug to ilt standaro banana Jack. Avallable in Red and Black-specify color.

| No. | Length | Each |
| :---: | :---: | :---: |
| 25N12881 | 51/4" | 24 |
| 25N12884 | 63/4n | 29c |
| PHONO NEEDLE TIP (B) |  |  |
| 25N12868 |  | 24 c |
| 25N12869 | $51 / 8{ }^{*}$ | 26 c |
| BANANA PLUG TIP (C) |  |  |
| 25N12912 | $21 / 4{ }^{\circ}$ | 24 c |
| 25N12910 | $35 / 8{ }^{\prime \prime}$ | 26 c |



## NO BREAK" PRODS

Top qrade insulated prods of solid brass, nickeled and covered with shockless ive rubber-one Red, one Black. Tips are sharp point ed type. Other end of $50^{\prime \prime}$ kinkless rubber wires have solderless insulated phone tips.
23N 12999-Pair. $\qquad$ 68 6
As above but with standard phone tips. 25N13000--Palr.................................594

## ICA LABORATORY PRODS



Contains removable phono needle chucks. Extra-long slim Black and Red handles knurled at end for easier grip. Handles are 6 inches long with 48 inch length heory duty kinkless and ex-ra-flexible rubber wire. Choice of space or phone tips.
25N12978.-Spade Tips.......Palr Each
25N12979-Phone Tips.......Palr 824


Designed for high voltage TV measurements. Thick walled bakelite handles with finger guards withstand 15,000 Volt DC. 48 Inch heavy cableconnected to plugs.
2.94

25N15238

## SAFE-T-TESTER

Tester has spring in handle. Contact is made only when pressure is applled. 10,000 volts insulation. $7^{\circ}$ handle 48" leads. Ideal for smallspace probing. Fits standard jack.
25N15237. $\qquad$ 884


NEEDLE \& SOLDERLESS TIP PRODS Red and Black colored kinkless wire with sturdy hbre handes 4 inches long and $3 / 8$ of an inch in diameter. Type A: chucks and nuts hold plain phonograph needles. Type B contains solderless tip with long point. Both type leads are 50 ins. in length.

## NEEDLE TIP PRODS (A)

No. Wire Ends Pair 25N12976-Phone Tips(...................53c 25N12975-Spade Lugs SOLDERLESS TIP PLUGS (B) 25N12968-Phone Tips 65 c $53 \%$


# TV \& RADIO ALIGNING TOOLS 



## ICA ALIGNING KIT

14 tools conveniently designed to elescope into six easy-to-carry units in compact case. Tools include: a flexible screwdriver, alignment tool, alligator side wrench $6^{\prime \prime}$ insulated driverwrench, ${ }^{6}$ insulated drivermetal nib, $1 / 4^{\prime \prime} / 16^{\text {and }} 1 / 4$ nutated square wrench, $1 / 4^{\prime \prime}$ insulated square nut wrench, $1 / 4^{\prime \prime}$ hex metal side wrench, $21 / 2^{\prime \prime}$ insulated driver with metal nib, $1 / 4^{\prime \prime}$ hex slotted insulated wrench driver, $5 / 16^{\prime \prime}$

## hex insulared nut wrench, $5^{\prime \prime}$ and $6^{\prime \prime}$ insulated driver. 18N15088-Kit <br> 4.4

Asabove, less flexible screwdriver and aligning tool.
18N15089 18N14915-Complete.

UHF AlIGNING TOOL
Ampherol colystyrene. Large end has a metal tip; small diamete
end has ban lengthened for TV set adjustments.
18N15075-Won't effect capacity of circuits................................ 15

ICA LOW "C" ALIGNER
Low capazity screwdriver for aligning superhets. $1 / 4^{\prime \prime}$ bone fibre, two nibs: cne recessed, one $1 / 2$ long.
18N 15145
43c
ICA 5-IN-1 ALIGNER KIT
Combines $1 / 4^{\prime \prime}$ and $5 / 16^{\prime \prime}$ nut wrenches, miniature blade full-size
screwdrivisi in fountain pen size tool.
$18 N 15082-3$ pc. Set.....................................................................

## FIBRITE SCREWDRIVER

 18N15151-5/16" diameter 7"' long23c
SOLID TUNING WAND6' rod, one end brass loaded, other core steel. Insulated.18N 14976.

59c

## V.H.F. FLEXITUNER

Tuning wand, designed for FM, TV, and other high fidelity applications. Powdered iron core, copper slug ends. Increases, decreases ircuctance.
18N 14977.
39c
Y多
Especialir made for aligning coils, condensers, etc. Size: 18N15080

24c

## NEON TESTER


(1) New neon electrical tester indicates valtage from 60 to 500 volts, operating on AL or DC. Especially useful in tracing sterts, open or grounded circuits. 25N12958
29

## NEON CIRCUIT TESTER

(2) Shows open circuits, polarity, continuity, etc. Checks fuses in circuits. Tiny neon lamp g.ows on 1 ma. Coded leads have phone tips. ACDC.
25N11310-90-550 V. Tester.
$5 \%$
(1) Low voltage, alligator clip leads. 25N11308-5-50 V. Tester.
1.10

## TV SERVICING KIT

A compact tool kit for all TV servicing. Contains 9 tools including one each of stock numbers 152?7, Big Stretch Aligner; 15228, Tran-Aligner; 15229, Slim Aligner; 15234, Tuning Wrench; 15231, Dual Aligner; 15232, Deep-Nib Aligner; 15235, Tuning Wand; 15233, Channel Tuner; also one stackpole core aligner. See copy below for description of these tools. Supplied complete in complete in eatherette case.
 18N15226
4.09

## "BIG STRETCH" ALIGNER

For adjustment of nested iron cores of Admiral, Zenith and similar TV sets. Extra thin, $9^{\prime \prime}$ bone fibegr :ool with $61 / 2^{\prime \prime}$ blade. Also for RCA front ends.
18N15227
59

## TRAN-ALIGNER

New, all-insulated aligning tool for standard IF and RF, and "K-Tran" midget transformers. Milled at one end, screw diver at other. $21 / 2^{\prime \prime}$ blade. Fiber hand.e.
18N15228-6" overall..
SLIM ALIGNER
Has extra thin recessed blade and slim metal shaft for cramped probing in TV receivers. For Ad miral and similar makes.
18N15229-Fiber handle..

## 59c

## TUNING WRENCH

Insulated fiber with extra thin rezessed blade on one end and extra thin screw driver blade on sther. Tenite handle. Designed especially for Zenith TV sets, etc.
18N 15234-43/4" long
44c
STUB ALIGNER
Ideal when cramped space derrauds short insulated tuning tool. Exposed nib for screw driver type controls not carrying high voltages. Tough fiber handle.
18N $15230-21 / 2^{\prime \prime}$ long $\times 1 / 4^{\prime \prime}$ diarneter.
24c

## DUAL ALIGNER

Narrow shaft, fiber alignment fool for trimmers, IF transformers, etc. Dual purpose type with recessed screw nib on one end and metal screw driver on other.
18N15231
44
DEEP-NIB ALIGNER
For tuning IF \& RF shielded coils and trimmers. Fits under TV tubes without removing tubes. Insulated nib set in barrel enc.
18N15232-21/2" L. x 1/4" diam..
 18N15235-For Zenith TV, etc....

59c

## ADJUSTING TOOL

For aligning all iron core tuning systems. Screw driver blade on one end, socket screw driver on cther. 18N15114

44c

## ICA TELEVISION <br> CHANNEL TUNER"

A narrow, all-insulated screw driver of machined fiber. Ideal for deep, inaccessible tuning. $1 / 8^{\prime \prime}$ blade on $41 / 2^{\prime \prime}$ shaft.
18N15233-7" Long.
44c


Checks any voltage from 110 to 550 volts- $A C$ or $D C$, spark plugs, radio sets, appliances, etc. Distirguishes AC from DC. Comes in handsome bakelite case with porket clip.
25N12983.
$72 c$

## TOOLS: PUNCHES, CUTTERS \& STRIPPERS

The following pages contain groups of important tools and accessories to speed the work of active radio servicemen, hobbyists and experimenters. We offer a representative cross-section of high quality cutters,
hand and electric drills, soldering irons, wire strippers, saws, wrenches, pliers, screw drivers, plus a variety of other handy miscellaneous items made by top companies noted for their precision manufacturing.

## PIONEER SCREW ACTION SQUARE HOLE PUNCH



New self-aligning chassis punch with die-shearing action. Operates on screw principle for punching power. Takes several full cuts or nibbles to enlarge first square hole to size desired. Cuts square (or angular holes. High grade tool steel. 18N 15076-5/8" Square Hole Punch..
2.89 18N15077-3/4" Square Hole Punch..
PIONEER ROUNO CHASSIS PUNCHES
Excellent for cuiting clean, commercial looking holes in chassis or panel. Ordinary wrench serves as turning power for punch. No reaming or filing necessary.

| Stock No. | Size | Each | Stock No. | Size | Each |
| :--- | :---: | :---: | :---: | :--- | ---: |
| $18 N 15800$ | $1 / 2^{\prime \prime}$ | $\$ 1.91$ | $18 N 15807$ | $1-1 / 8^{\prime \prime}$ | $\$ 2.25$ |
| $18 N 15801$ | $5 / 8^{\prime \prime}$ | 1.91 | $18 N 15808$ | $1-5 / 32^{\prime \prime}$ | 2.25 |
| $18 N 15802$ | $11 / 16^{\prime \prime}$ | 1.91 | $18 N 15809$ | $1-11 / 4^{\prime \prime}$ | 2.25 |
| $18 N 15803$ | $3 / 4^{\prime \prime}$ | 1.91 | $18 N 15810$ | $1-3 / 16^{\prime \prime}$ | 2.25 |
| $18 N 15804$ | $7 / 8^{\prime \prime}$ | 1.91 | $18 N 15811$ | $1-1 / 4^{\prime \prime}$ | 2.25 |
| $18 N 15805$ | $1 \prime \prime$ | 2.11 | $18 N 15812$ | $1-3 / 8^{\prime \prime}$ | 2.60 |
| $18 N 15806$ | $1-1 / 16^{\prime \prime}$ | 2.25 | $18 N 15813$ | $1-1 / 2^{\prime \prime}$ | 2.88 |



## RIVET-EYELET PUNCH SET

Hardened stee! tool with cast fron holder. Hex sides on holder assures firm grip in vise. Supplied complete with rivets and eyelets.
18N15045
Rivet-Eyelet Assortment
100 assorted rivets and eyelets. 18N 15066-Per Package.
2.35

47 t

## GENERAL PURPOSE STEEL CIRCLE CUTTERS



Provides easy, accurate method for cutting clean circular with hand brace or slow sperd drill press. Heat-treated steel.

| Cat. No. | Type | Cuts Hole | Shank | Type Work | Cost |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 18 N 14720 | JR | $5 / 8$ to $21 / z^{*}$ | Round | Light | 78 c |
| 18N14711 | 4 | $7 / 8$ 10 4* | Round | Medium, | 1.30 |
| 18 N 14713 | 5 | 1 to $51 / 2{ }^{\prime \prime}$ | Round | Heavy | 1.88 |
| 18 N 14715 | 5 | 1 to $51 / 2^{\prime \prime}$ | Square | Heavy | 1.88 |
| $18 N 14717$ | ${ }^{1}$ * | 7/8. to $4^{\prime \prime}$ | Round | Medium | 1.88 |
| 18N 15069 | 5 | $11 / 4$ to $8^{\circ}$ | Square | Ex.Heavy | 3.88 |

## REPLACEMENT DRILLS, BLADES FOR ABOVE

18N1507u-Blade for use with 18N15069.........................350 18N14716-Blade for above except 18N15069, i8Ni4720.30c 18N15068-Drill for use with 18Ni5069.............................35c

## AMP SHEARITE STRIPPER \& CUTTER

Three tools in one! Cuts and strips wire from slzes 22 to 10 ; cuts brass or steel machine screws without $8-32,6-32$ and $4-40$. Has accurately sized stripping notches and precision hreaded cutter holes plus stud size guage stamped on tool. Made of hardened steel; shock-proof flastic handle shaped to fit hand.
18N15592..
3.95

## FLEXTRON TV WIRE STRIPPER



A "must" for every TV serviceman's kit! Strips 300-ohm transmission line quickly - easily clearly. Merely insert twin lead in opening at top, turn bar handle 900 and pull out stripped wire ready for use. Durable metal.
3.95

DELUXE COIL WINDER WITH ACCESSORIES
Easy-to-use set
 winds honey comb spiderweb, or solenoid coils of various widthes and diametersequal in appearance to factory job. Indicator counts turns. With accessories for winding all lor winding all lypes. Instruc-
lions. Wit. 6 lbs.
18N14725.. 4.95

## PORTABLE, EASY-TO.USE ELECTROPLATERS



Consists of $5 / 8^{*}$ plating brush (for all metals); poz. plating compound; loz. metal cleaner: 1 oz. metal polish; polishing stick; set of wites and clios: illustrated directions and notes on metals. Operates on two $1^{1 / 2}$ $V$. dry batteries (not inclui'ed).
18N15359-Nickel Plating Outfit......................................... 47
18N15360-Copper Plating Outfit..................................... 1.4 4
18N15360-Copper Plating Outrit.................................................. 47
18N15371-Silver Plating Outfit........................................................... 8
EXTRA COMPOUNDS FOR ABOVE: Plate 125-175 sq. in. 18N15372-Nickel Compound, 1-oz. Botlle....................37c 18N15373-Copper Compound, 1-02. Bottle....................... 37 c 18N15374-Cadmium Compound, 1-oz. Bottle.................... 37 c 18N15375-Silver Compound, 1-oz. Bottle... $.73 c$

## NEW MPC WIRE STRIPPER

Hardened steel blades adjustable for wire size, avoids biting off wire. Tool culs insulation sharp and clean, strips solid or stranded wire with easy pull. Excellent for use in hard-to-reach places. Haniles up to No. 12 wire. 59 \&


## SPEEDEX HANDY WIRE STRIPPERS

|  | Fast, pocket-size tool strips insula tion easily from all lypes of wires and cables. Use on ends or center of wire. Will not damage solid or stranded wire. Deluxe tools stay open while wire is removed. |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Size | Standard | Each | Deluxe | Eac |
| 14-24 $12-20$ wire $10-18$ wire | $\begin{aligned} & 18 N 15538 \\ & 18 N 15537 \\ & 18 N 15539 \end{aligned}$ | 3.53 | 18N15565 <br> 18N15566 <br> 18N15567 | 4.78 |
| $\begin{aligned} & 300 \text {-ohm } \\ & \text { Twin-Lead } \end{aligned}$ | 18N 15587 |  | 18N15588 |  |

REPLACEMENT BLADES FOR ABOVE
18N15596-12 to 20 Wire Size.
18N15597-14 to 24 Wire Size.......
18N15598-10to 18 Wire Size.......
$18 \mathrm{~N} 15595-\mathrm{F}$ or 300 Ohn, Line.......
88


SPEEDEX WIRE STRIPPER KIT
Contains wire siripper, 7 different blades in steel box. Handles No. 8 to No. 30 wire. Shpg. wt. 31 lbs . Deluxe Stripper Kit $\qquad$ 18N15568.
10.00

18N15569-StandardSiripper Kit.........................
QUICK STRIP INSULATION STRIPPER
Just the thing to solve the serviceman's wire stripping problems. Rapidly and cleanly strips
all types of insulation from solid or stranded all types of insulation from solid or stranded
wire. Ali sizes from No. 12 to No. 22 ; also has wire. Ali sizes from No. 12 to No. 22 ; also has
slot to clean wire. High grade hardened steel gives years of service. Well designed, easy to USE. 18N15059.

47 $\$$

## PLIERS AND SCREWDRIVERS

## KRAEUTER STANDARD PLIERS

From Kraeuters extra-quality "Standard" series-made to stand up under severe strain. Drop forged from extra high grade steel with "blue temper" finish. These are not the lower-priced "K" tools.

DIAGONAL CUTTING PLIERS


18N14942-41/2" Length............. 1. 53
18N14944-6" Length....................... 2.53

## WIRE STRIPPING DIAGONAL CUTTER

As above, but with notch in blades for .062 wire and spring in handle.
18N14947-61/2" Length
2.42

LONG NOSE PLIERS


Side-cutting blades. Choice of short-jaw and long-jaw needle nose types. 18N14946-5" Length Short-jaw... 1. 79 18N14945-6" Length Long Jaw........l. 96 ELECTRICIAN'S CUTTER


Modified fitted lap joint, cutters.
18N14935-61/2" Length
1.79

18N14936-8* Length..
2.34

## GENUINE KLEIN PLIERS <br> Ot finest alloy tool steel individually tempered for long-life

 cutting edges.

## PARROTT JAW PLIERS



4-5/8" long; has adjustable faws opening to $3 / 8^{\prime \prime}$ wide. Nickel plated steel. Wt: 2 Oz . 18N14941
$15 \phi$
"CAN'T ROLL" CENTER PUNCH
Tempered steel with large square head and knurled grip. 4-1/16" long. .325" dia. Wt: llb. 18N 14999.

12 \&

## BEVELED WOOD CHISELS AND CHISEL KIT

 Correctly proportioned bev els-high grade heat-treated steel blades, Amberite handles.
18N15514-1/2" Blade.
494
18N15513-1/4" Blade...45\% 8N15515-3/4" Blade......524 18N15517-Complete Set of 4 in Canvas Roll.................. 2.25

> STANDARD HAND DRILL WITH HARDWOOD HANDLE $31 / 2$ " gear wheel meshed with smal! qear at 4:1 ratio. $1 /{ }^{*}$ capacity chuck with 3 spring-controlled centered jaws.
jaws.
18N 14727 -Overall length $11 \%$. Shpg. Wt: $11 / 2 \mathrm{ibs}. . . . . \mathrm{I} .45$

## BREAST DRILL WITH $3 / 8^{\circ}$ CAPACITY CHUCK

$121 / 2^{\prime \prime}$ long, full-size breast plate and $1 / 2$ " gear meshed with small gears of Shipping Welght: 2 lbs .
Shipping 18 N14726.
2.25


SWIVEL HEAD HAND DRILL WITH FLAT HUB BASE Works around corners! Chuck head adjusts, locks to 7 positions, handle adjusts, locks along $180^{\circ}$ base, $1 / 4$ chuck. Overall length $81 / 2^{\prime \prime}$.
18N14724-Shpg. Wt: 2 lbs.
3.19

## AUTOMATIC PUSH DRILL



For boring small holes in hard or soft wood and soft metals. Multiple toothed spiral and center nut operating mechanism. Chuck has 4 steel jaws to hold drills securely. Index rinq gives number and dia. of drill in each handle compartment. With 8 drill sizes: $1 / 16^{\prime \prime}$ S/64". $3 / 32^{*}$, $7 / 64^{\prime \prime}, 1 / 8^{\prime \prime}, 9 / 64^{\prime \prime}, 5 / 32^{\prime \prime}$ and $11 / 64^{\prime \prime}$. Red plastic handle, nickle and aluminam metal parts. 9-1/8" long.
18N17184-Shpg. Wt: 1 lb . $\qquad$ 2.57


SCREW DRIVER SET
A $n=w$, practical tool kit consisting of 5 tempered, ground blades of 5 tempered, ground handle. 3 standard with amber hancie. 3 standard screw drive blades: $5 \frac{1}{2} \times 1 / 4^{\prime \prime}$ tip, $3 \times 3 / 16^{\prime \prime}$ tip 3-1/8"xl/8" tip; 2 Philips head Pl, $33 / 4^{\prime \prime}$ L., P2, $4^{\prime \prime}$ L. Slotted chuck accomodates specially designed blades for positive fit. Packed in convenient leatherette tool roll. 18N14712.

98

## "ICA" FLEXIBLE SCREWDRIVER

Strong, unbreakable flexible
shaft ind insulatedmovable screw POCKET SCREWDRIVER
Transparent amber colored plastic handle. Tool steel blade, shockrooi construction. With pocket clip. .104

## RATCHET SCREW DRIVER

With automatic return. Has 5 actions: automatically drives
 or draws screws, left or right hand ratchet or rigid screw driver. $201 / 2^{\prime \prime}$ extended: $12-5 / 8^{n}$ =losed. 18N14733-Weight $11 / 41 \mathrm{bs}$.

## GRIPPER SCREWDRIVERS

Gripper holds screw, releases inst mitly when screw is drivenideal for tight places. Amber plastic insulated handles with tempered steel blades.
18N14710- $2 \times 5 / 32^{*}$ Blades............................................. 26 6
18N14721- $4 \times 5 / 32^{*}$ Blades.............................................. $46^{\prime}$
18N14709- 6x5/32* B1ades............................................ 50 ¢
18N14722-10x5/32* Blades........................................... 52 .
Same as above, but for Phllips head screws. Fits all sizes.
18N14746-2x5/32" Blades.............................................. 46¢
18N14747-4x5/32" Blades............................................... $55 \$$
18N14748-6x5/32* Blades................................................ 59 .
RECESSED HEAD SCREWDRIVERS

$\sqrt{2}$
Sturdily made with sare-grip wooden handles and steel blades.

| No. | Size | Length | Cost |
| :---: | :---: | :---: | :---: |
| 18 N15251 | Up to 4 | $6-3 / 4^{\prime \prime}$ | 254 |
| 18 N15252 | 5 to 9 | $8-3 / 8^{\prime \prime}$ | 254 |
| 18 N15253 | 10 to 16 | $11-1 / 2^{\prime \prime}$ | $33 \$$ |

## XCELITE SCREW DRIVERS

Polished chrome vanadium blades with tips ground for accurate if in screw heads. Tough, shockproof amber handles. Weight: 5 oz .


| Stock No. | Mfrs. Type | Blade Size | Each |
| :---: | :---: | :---: | :---: |
| 18N 15240 | R-144 | $4^{\prime \prime} \times 1 / 4^{\prime \prime}$ tip | . 59 |
| 18N 15241 | R-146 | $6^{\prime \prime} \times 1 / 4^{\prime \prime} \operatorname{tip}$ | . 62 |
| 18N 15242 | R-148 | 8"x1/4" tip | . 69 |
| 18N 15243 | R-182 | $2^{\prime \prime} \times 1 / 8{ }^{\prime \prime}$ tip | . 29 |
| 18N15244 | R-184 | $4^{* *} \times 1 / 8^{*}$ tip | .32 |
| 18N 15245 | R-186 | $6^{\prime \prime} \times 1 / 8^{\prime \prime}$ ip | . 36 |
| 18N 15246 | R-188 | $8^{*} \times 1 / 8^{\prime \prime}$ tip | . 39 |

4 IN 1 SCREW DRIVER
Ideal for mechanics, shop and tome use. Solid brass with indestructible hardened steel bits - will not zust. Master screw driver contains other 3. Weight 2 oz .

18N14734
38


## TAP, DRILL AND DIE SET

Useful set for handy men and model shop workers. Three 1" workers. 4 dia. dies (4-36, 6-32, 8-32) with die stock;
 three taps $14-36$, 6-32, 8-32) and 3 , matching tap drills for these tups. Tap holder and mahogany case, Shipping Weight 3 lbs.
18N14994.
2.25

## SOLDERING IRONS AND ACCESSORIES

## DRAKE "Instant Heat" SOLDER GUN

 New, quick-action trigger olcer gun for busy sertrigger on the pistal the rigger on the pisiol grip handle for Instant soldering heat. Durable, handsome maroon plastle case, perfectly balanced for easy handling. Built-in spollight keeps work in sight at all times. Designed with long, thin tip convenient for hord-to reach and tlaht corner soldering. Tip easily removed. 135 W . on 115 V., 60 cycle AC. With extra $61 / 2^{\prime \prime}$ soldering tip.$$
\text { 18N14872-Shipping Weight } 3 \mathrm{lb}
$$

$\qquad$
$\qquad$
 18N14872-Shipping Weight 3 is

### 11.76

18N14874- 61/2m tins. Pk 2 ................................... 304

## DRAKE INDUSTRIAL IRONS-UNDERWRITERS LISTED

100 WATT IRON No. $600-$
10. For siltchboards, ta- and other light manu-
dio and for
facturing uses. Ideal for dio and other light manuelose quarters. Comes complete with 6 foot cord, stand. 3/8Inch tip.
18N15164-Shpg. Wt: 2 lbs...
4.70

18N15152-Replacement Tip for Above................................. 73
100 WATT IRON No.
600 for light manufacuring purposes. Com-
plete with 6 ft. cord,
Magic Cup" stand, $3 / 8$-inch tip.
18N15551-Shpg. Wt: 2 lbs....
18N15152-Replacement Tip for Above................................. 73
60 WATT COMPACT IRON No.
400. A small tool for tight corners, delicate instrument wir-
With $6-\mathrm{ft}$. cord, "Magic Cup" stand. $1 / 4$ " tip.
18N 14835-Shpg. Wt: 1 lb...
3.23

18N15 1.57-Replacement Tip for Above.........................................................................

## DRAKE DELUXE SOLDERING IRONS



Num, For medium heavy work. wire on amber mica. Nichel plathest quality Nichrome and plug, "Magic Cup" stand, 5/8-in inp.
18N15552-Shipping Weight: 2 lbs..
5.88

18N15153-Replacement Tip for Above.
.1 .17

## DRAKE SPECIAL IRONS



Resistance wire on porcelain tubes.
18N14892-60-Watt, Type 315 with cord, plug. Wt. 1 lb.... I. 11 18N15158-Replacement Tip for Above.......................... 53 \$

18N14893-100-Watt, Type 316 with cord, plug. Wt. 1 1b...... 1.88 18N15159-Replacement Tip for above................................ 1.06

35 WATT MIDGET IRON No. $350-$ Only $6 \frac{1}{2}$-inches long. Element wound on mica-industrial lorns. Straight $1 / \varepsilon^{\prime \prime}$ tip, bent $1 / 8^{\prime \prime}$ tip and stand. Shipping. Weight l lb. 18N15177-35 Watt Iron.
18N15178-Replacement Straight Tip
.15
18N15179-Replacement $45^{\circ}$ Tip
$.15 \$$

## HARMIC SOLDERING KIT



Contains U.L. apprd. chrome-plated 75 -watt soldering iron, steel scraper, spool of rosin core solder, stand, sandpaper. Instructions. Wt: 3 lbs.
t8N14834........ 3.

## WELLER SPEED SOLDERING IRONS


$\qquad$ STANDARD MODEL SOLDERING TOOL - No Waiting-Heats, Cools in 5 Seconds - Easy to Handle-Gets Into Tight Corners - New, Pistol-Type Grip Is Easy to Hold - Built-in Spotlight Lights Up Your Work - Tips are Easy to Tin-Stays Tinned

The first really new idea in soldering tools. Operates on the resistance welder principle giving high current at extremely low voltage. No more walting for iron to heat up-merely pull the trigger when it's time to solder. New type pistol grip gets you in close with a trons. No bulky tip-no working in dark-spotlight lets you see where you are working. Tips stay tinned, solder easily, bend by hand. 100 watts on 115 Volts 60 cyc.AC.
18N15183-Shpg. Wt. 3 lbs
11.75

As above, with dual heat unit (100-135 W).
18N15 186-Shpg. Wt. 3 lbs. ................................... 13.67
18N15187-Extra Long Life Tip. Pkg. of 4............. 25 \$
18N15188-Stud for Fastening Tip............................ 10 ¢


WELLER HEAVY DUTY SOLDERING TOOL

For heavier soldering, 200 W 18N14869-Wt. 4 lbs...........
Dual Heat Unit ( $200-250$ W.) Dual Heat Unit ( $200-250$ W.) Rigid-Tip for above irons 18N14866-Package of Two
12.69 13.67 .35

## LENK GUN GRIP TYPE IRỌ



Perfectly balanced-lightwelght - easy to handle all-purpose soldering iron. Spring construction cushions pressure for delicate work, protects handle and units, keeps handle cool and insures perfect soldering, always. Has built-in stand that rests fron safely on work table. Contains long-life element. Supplied with 4 tips: straight, 450 , 900 and heavy duty. Draws 75 watts on 110-120 volts AC or DC. Chrome-plated over nickel and copper. Overall size: $91 / 2^{\prime \prime} x$ $4 \%$ ".
18N 15101 -With $6-\mathrm{ft}$ cord 8 plug. Shpg. Wt: 1 lb
3.26

18N15 102-125-Watt Model. Shpg. Wt: 2 lbs
3.92

## UNGAR ELECTRIC SOLDERING PENCIL



So tiny it can be handled as easily as a pencil! Efficient, well-constructed, for perfect soldering jobs. Only 3.6 ounces, overall length is $7^{\prime \prime}$ for use in tight comers, hard-to-reach places. 20 watts; heats in 90 seconds. Heatresistant plastic handle. Line cord and pluq. Operates on 110 volts AC or DC. UL approved. Uses any tip listed on low.
18N15575-Soldering pencil, less tip. Shpg. Wt: $6 \mathrm{oz} . .$.
18N 15576 -(A) Standard Copper, tip only..................... Eac
18N15577-(B) Elkaloy A, Extra Hot, Tip only............... 7 :
13N15579-(D) Elkaloy D, Pencil, Tip only.
784
18N15580-(E) Brass Marking, Tip only.....

## ungar soldering set

Ideal for hobby work. Includes soldering pencil, 3 tips, flux and brush, core solder, emery cloth.U.L. approved. 18N15583
2.19

Lots of 6,.......Each....... 1.65


UNGAR ELECTRO.CRAFT BURNING PENCIL
Burning pencil forms plastic, burns designs into leather, cork, wood and velvet. Embosses toil. Set consists velvet. Embosses burning pencil, 6 of $b$ ass interchangeable tips, 6 colors of metallic foil, emery cloth. 18NI5582-With instructions . . 1.65 Lots of 3 , each. 18N15585-Pkg. of 5 sheets $3^{\prime \prime} \times 5^{\prime \prime}$ 18N15585-Pkg, of 5 sheets ${ }^{2}$


## SOLDERING IRONS AND ACCESSORIES

## KWIKHEAT 225-WATT IRON



## KWIKHEAT INTERCHANGEABLE TIPS



1


2


3


5


9

No. 5 is aluminum. Others are forged Tellurium.
18N15122-No. O........18N15125-No. 3........18N15127-No. 5
8N15123-No. 1........18N15126-No. 4.........18N15165-No. 9
18N15124-No. 2
Any tip.
. Each 94\%
Each, in Lots of 3............................................................... 83 \&

## QUICK ACTION SOLDERING IRON

Lightweight iron gives soldering heat in a few seconds - at the flick of a switch! Flat non-
corrosive nickel-alloy tip contains heating element. No filing or tinning necessary; will not scale or oxidize. Modern, easy-grip handle has ON-OFF switch that controls heating action. "Bucking coil" maintains soldering heat while soldering smallest wiring job up to No. 18 wire. For AC-DC. List Price \$7.95.
18Ni5189-Weight 6 oz.
5.30

## VASCO PETITE IRON

Compact, lightwelght soldering iron designed for light wiring, tiqht corners, and those really hard-to-get-atthose realy hard-to-get-atplaces. Draws 25 watis, $6^{n}$. Complete with cord and plug.
18N14836-Shipping Weight: $31 / 2$ oz


## KESTER SOLDER \& FLUX

Preferted by servicemen and large users. Uniform compound of tin and lead with evenly distributed and free-flowing flux.

|  | Rosin Core |  | Acid Core 3/16" |  | $\begin{aligned} & \text { Rosin } 1 / 16^{\prime \prime} \\ & \text { Thin-Core } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per Tin | 18N14857. | 174 | 18N 14878 | 174 |  |  |
| 1 lb . Spool | 18N 14858 | 1.04 | 18N 14877 | 1.04 | 18N14851 | 1.07 |
| 5 ib . Spool | 18N14859 | 5.00 | 18N14879 | 5.00 | 18N14852 | 5.15 |



Kester Paste Flux. Non-corrosive.
18N15278-2 oz. can.

## NEW KESTER "Resin-Five" SOLDER

A new flux-core solder that is absolutely non-corrosive and non-conductive. The better solder for TV...all radio and electronic parts. Easily solders zinc, brass, nickel plate, copper and ferrous alloys.
18N $14741-3 / 32^{\circ}$ diamete $\qquad$
$\qquad$ 1.03
$18 \mathrm{~N} 14742-3 / 32^{\text { }}$ diameter..... 5 lb . spool. .... 4.95
18N14743-1/16" diameter..... 1 lb. spool.
1.06

18N14744-1/16" diameter..... 5 lb. spool.
. 5.10

## LENK ALCOHOL TORCHES

Double burner, alcohol fuel torch for heavy duty work. Adjustable for broad or needle point flame. Copper heat conductor in pressure chamber assures quick starling. Cleanser pin included in handle. $7 \times 4 \frac{13}{4} \times 2^{1 / 20}$. Shiping Weight 3 lbs . 18N14867
3.17

## AMERICAN BEAUTY 100-WATT IRON


hose who want the
very best! Heavily plated and polished metal parts. Length 12-7/8". 3/8" 1ip.
18N15171-With 6-ft. cord and stand. Wt: 2 lbs..........5.5. 36
18N15 170-Extra tip for above............................................... 34 .
AMERICAN BEAUTY THERMOSTAT STAND

Adjustable thermostat requ-
ates temperature of solder-
ing irons. Molded plastic
body. Operates on 110 volts,
AC. Comes complete with
cord, plug, receptacle for iron.
18N15169-Shipping Weight: 3 ibs.


## ESICO SOLDERING IRONS

High grade elements finest mica insulation. U.L. Listed. For AC or DC. With cord; stand, tips.


## Soldering Irons

18N14900-60 watts, 3/8* tip...... 1.73 18N14901......214 18N14902-100 watts, 3/8* tip....... 2.32 18N14903....... 214 18N14905-130 watts, $1 / 2^{\text { }}$ tip.......2.91 18N15168....... 324

## ESICO 200-WATT SOLDER POT



Equipped with pilo light that indicates when pot is heating. Sturdily constructed but not top heavy. May be screwed to benches. Capacity $1 / 1 \mathrm{lb} .11 /{ }^{\prime \prime} \times 11 /{ }^{\prime \prime}$. Helght 4\%". 18N15554-Shpg. Wt: $31 / 4 \mathrm{lbs} . . . . .4$. 4 军

## ESICO THERMOSTATIC STAND



Thermostatic control stand makes it impossille to overheat iron. Keeps ron at desired heat while in stand. When removed, full current goes on. For up to $l^{\prime \prime}$ diameter tlps.
18N14885-Shpg. Wt: 3 lbs. . 3.82

## ERSIN MULTICORE SOLDER

Latest solder research development from sectet British formula. Maximum flux action'at correct solder melting point. Reduces surface tension solder melting point. Reduces suriace tension
of molten solder and metal wets rapidly. Fast of molten solder and metal wets rapidly. Fast melting, non-corrosive, non-sticky, non-toxic.
3 -core construction insures constant flux. Has 3-core construction Insures constant flux. Has
excellent cleansing action. $40 \%$ tin, $60 \%$ lead. excellent cleansing action. $40 \%$ tin, $60 \%$ lead.
14 gauge. 14 gauge.
18 N $1480 \mathrm{I}-1 \mathrm{lb}$. Spool
1.22

18N14802-7 ib. Spool .................................. 8.30

## RUBYFLUID LIQUID FLUX

Produces strong joints with thin film of solder on brass, tin, copper. Non-corrosive. 18N 15279-3-oz. Can. Shpg. Wt. 4 'oz

## NOKORODE CORE SOLDER

$30 \%$ in and $70 \%$ lead. A superior paste used for flux. Non-corrosive. No. 10 gauge. Approxi. 1/202. 18N14882

## NOKORODE PASTE

Non-corrosive, fluxes all metals except aluminum without corroding or discoloring. Insures perfect soldered joint at extremely economical cost.
18N15277-Per Can....

## COMPACT, ECONOMY MODEL

 LENK TORCHDouble barrel, self-blowing type torch for servicemen and home mechanics. Uses denatured or commerclal alcohol. Leak-proof non-clogging construction. Screw top and bottom. Slze: $6 \times 2 \times 1 / 2^{\text {m }}$.
18N14868-Shipping Weight 1 lb .
. 1.14



## ELECTRIC DRILLS \& DRILL ACCESSORIES




SET NO. M-7. Contains 7 drills $1 / 16^{\prime \prime}$ to $1 / 2^{\prime \prime}$ by 32 nds with red bakelite stand which serves as index with inarked holes.
${ }_{18 N 15760-S h p g, ~ W t . ~ 1 / 2 l \mid . . . . . . . . . . . ~}^{2.05}$

SET NO. M-3. 13 drills $1 / 16^{*}$ to $1 / 4^{*}$ by 64 ths with Huot index. Smallest, but with the most often used sizes. Shpg. Wt. $1 / 2 \mathrm{lb}$. 18N15761-
4.05


SET NO. M-2. Contains 21 drills $1 / 16^{\prime \prime}$ to $3 / 8^{\prime \prime}$ by 64 ths with Huot index. Medium size Huot index, with the extended drill size range, adding those often needed drill sizes. Shpg. Wt. $2^{1 / 2}$ lbs. 18N15762

SET NO. M-15. Contains 15 drills $1 / 16^{\prime \prime}$ to $1 / 2^{\prime \prime}$ by 32 nds with Huot index. Large size Huot, with provisions, for adding 14 drills of the 64 th sizes. Most used larger sizes. Shpq. Wr. 3 lbs.
18N15763-
11.21


## CENTURY HIGH SPEED DRILLS SOLD SEPARATELY

| No. | Size | Each | No. | Size | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 18N15770 | 1/16* | ${ }_{214}$ | 18N15780 | 2" | 364 |
| 18N15771 | 5/64" | ${ }^{219}$ | 18N15781 | 15/64 ${ }^{7}$ | 384 |
| 18N15772 | 3/32" | 234 | 18N15782 | 1/4** | 424 |
| 18N15773 | ${ }^{7 / 64 *}$ | ${ }^{234}$ | 18N15783 | 17/64" | 484 |
| 18N15774 | ${ }^{1 / 8}{ }^{\prime \prime}{ }^{\prime \prime}$ |  | 18N15784 | 9/32 ${ }^{\text {c/ }}$ | S14. |
| $18 N 15775$ <br> $18 N 15776$ | 9/64"* | 24\% | 18N15785 18 N 15786 | $19 / 64{ }^{\prime \prime}$ $5 / 16^{\prime \prime}$ | ${ }_{6}^{54} \times$ |
| 18N1577\% | 11/64" | 284 | 18N15787 | 21/64* | $65{ }_{4}$ |
| 18N15778 | 3/16" | 304 | 18N15788 | 11/32" | 694 |
| N15779 | 13/64" | 324 | 18N15789 | 3/8 ${ }^{\text {n }}$ | $83 ¢$ |

CONVERT YOUR DRILL TO A POWER-HAMMER


A highly efficient adaptor tool which converts on electric drill into a powerful hammer. Excellent for drilling into cement, stone, brick, tile, etc. Powerfully built for speed and efficiency and ease of operation. Size: $6-7 / 16 \times 1-1 / 8{ }^{\prime \prime}$. Selfcontained lubrication. An adaptor tool at low cost.
9.31

18N15472-Less handle. $\qquad$
18N15470-Handle for Power Hammer............................... 1.23
18N15471-Hammer Head.................................................... 33
18N15473-1/4" bit for above................................................. 70
18N15474-3/8" bit for above.............................................. 95
18N15475-1/2" bit for above................................................ 1.55

## BLACK \& DECKER $1 / 4$ ELECTRIC DRILL

Sensational $11 /{ }^{\prime \prime}$ drill value at a popular price. Powerful, high quality 2250 RPM motor equipped with 3-jaw Jacobs hex-key chuck, drills holes in steel cast-iron, aluminum, brass, sheet metal, wood, plastic tc. Also drives countersinks wood auqers, wire brushes and numerous cleaning, sanding and polishing accessories. Instan release trigger switch can be locked "ON". Strong; lifht diecast aluminum housing fits hand. $7 / 8^{\prime \prime}$ long. For 110 V . AC or DC
18N15797-Home Utility Model....Shpg. Wt: S Ibs.

## GILBERT $1 / 4-I N C H$ ELECTRIC DRILL

An economy model, ideal for medium home and shop jobs. Has selftightening chuck attached to preci-sion-built 1400 RPM motor. Enclosed in strong, die cast zinc housing with aluminum finish. Equipped with ONOFF toggle switch. Convenient pis-tol-grip handle. For 110 volts, 60 cycles AC. Shpg. Wt: 4 lbs . 18N15796-List $11.95 . . .$.
8.95


DRILL CASE
Metal case, tap drill index numbered ito 60. Cover lifts drills or selection

### 2.45 <br> 18N 1470

## GREENE SAW ATTACHMENT FOR HAND DRILLS



STEEL DRILL SET
9 drills, sizes $1 / 16$ $103 / 16^{\%}$. Expertly ground cutting steel. In strong hardwood box.

Instantly converts your hand electric drill for sawing, filing, peening, riveting, or embossing. Just insert shaft into your drill chuck-needs no special skill to operate. Small and compact-fan get into places where or dinary tool cannot easily parts-no geats or shafts to wear out. Uses broken hack saw blades. Works with any $1 / 4^{n}$ electric drill. Shipping Weight: 3 lbs. drill. Shipping Weight: 3 lbs 18N15790-With Allen head $\qquad$

## 5 TO 1 RATIO GEARED CHUCK

 Made expressly for small eleciric drills up to and including one half inch. Well made of sirong and durable materials: 18 N 14698 -Shpg Wt. $4 \mathrm{lbs} . . . . . . . . . .8 .25$
## ELECTRIC DRILL ARBOR

Universal for all makes of electric drills from $1 / 6$ "capacity up. Shaft at drill end is $1 / 4$ " hardened knurled steel. Body of shaft is $1 / 2 \mathrm{~m}$, suitable for all standard buffs, stones, scratch brushes, etc. 18N15094.
$59 \Varangle$
POLISHER \& SANDER KIT
Converts your electric drill into a power polisher and sander to turn out professional jobs. Kit inciudes flexible $1 / 4^{\prime \prime}$ adaptor, sllicon carbide sanding disc, lambswool polishing bonnet, and pattern for cutting additional sanding disc.
18N 15755
1.45

PRG of 12 Assorted Nedium, Fine and Coarse Grit Discs 18N15795.
..........................684


HANDY, SUPER-FIBER PLUGS Easy to anchor bolts, screw-
eyes, etc. Safe, economical eyes, etc. Safe, economical and reliable to use! Can be snipped without damage to
the plug.
18N15476-1"'fos $1 / 4^{\prime \prime}$ hole, 100 for .1 .65
18N15477-1* for $3 / 8 \mathrm{~m}$ hole. 50 for
$18 \mathrm{~N} 15478-11 / 2^{\prime \prime}$ for $1 / 2^{\prime \prime}$ hole. 25 for.

## NUT DRIVERS, WRENCH SETS \& REAMERS

## XCELITE MULTI.PURPOSE TOOL KIT



Sensational new kit with paented stay-locked" fastener in the multi-purpose handle tools. ools, Each unit snaps in easily and securely, yet can be removed by pulling on the shaft. Case is made of sturdy netal with attractive mottled Inish. Opens like a book; can be set on work bench or fastened on wall or cabine through two holes in back of the case. Kit includes; a multi purpose handle, $1 / 8^{\prime \prime} 105 / 16^{\text {W }}$ reamer, $3 / 16^{\prime \prime}$ and 9/32" Xcelite screwdriver blade and nine nutdrivers from $3 / 16^{\prime \prime}$ to $1 / 2^{\prime \prime}$. All tools are chrome plated. Shpg. Wt: 4 lbs.

## XCELITE DELUXE REAMER KITS

Designed for reaming wood, plastic or sheet metal. Extremely hard cutting edges. Detachable handle made of unbreakable am* ber plastic. $4^{\prime \prime}$ long. No. 1, $1 / 8^{\prime \prime}$ to $5 / 16^{n}$ No. $2^{\prime \prime} 1 / 4^{n \prime}$ to $1 / 2^{n}$ : No. $3,7 / 16^{\circ}$ to ${ }^{\circ} 1 / 16^{\circ}$. RK-42 Kit. Nos. 1 \& 2 reamers and handle in roll kit. 18N15248 2.77


3.89

## XCELITE SUPER NUT DRIVER SET



Contas̉ns most popular socket sizes. Plastic handles color coded for easy identification. Includes 7 wrenches from 3/16" ic $3 / 8^{\prime \prime}$ in $1 / 32^{\prime \prime}$ steps. Made of hardened steel, carefully polished to insure snug fit of nuts. Deep enough to hold 2 nuts at one time. Complete in lockable holder. size: $71 / 2 \times 71 / 4 \times 1 / 4^{\prime \prime}$.

## XCELITE NUT DRIVERS-STURDY, SHOCKPROOF

Time-saving spin-type wrenches meet every need! Un-breakable--transparent amber handles insulated against 5000 volts. Extra-deep sockets for long studs. 5" long. 18N 15330 -for $3 / 16^{\prime \prime}$ hex nut. 18N 15328-for 7/32" hex nut. 18N15331-for $1 / 4^{\prime \prime}$ hex nut. 18N 15327 -for $9 / 32^{*}$ hex nut. $18 N$ i5332-for $5 / 16^{n}$ hex nut. 18N1.5333-for $11 / 32$ "hex nut. $18 N 1533$-for $1 / 38^{2}$ hex nut. Any Above, each.......... $45 \$$
18N15335-for 7/16" hex nut. 18N15336-for $1 / 2^{\prime \prime}$ hex nut. Any Above, Each............. 69

HOLLOW SHAFT TYPE

Extra-long hollow shaft. For installing and removing volume controls and other panel equipment. Permits removal equipment. Permits removal with up to 5 " shafts. Ideal with up to $5^{\prime \prime}$ shafts. Ideal studs.

18 N 15344-for $1 / 2$ " hex nut. $75 \$$ 18N15329-for 9/16n" ${ }^{\prime \prime} 78$


## J-K WRENCH SET

Now, all-putpose wrench set for work on ignition, carburetor and radio. 16 plece kit contains reversible ratchet, $2^{\prime \prime}$ and $6^{\prime \prime}$ extensions, flex handle, $X$ bar. $3 / 16^{\prime \prime}, 7 / 32^{\prime \prime}, 1 / 4^{\prime \prime}{ }^{\prime \prime} 9 / 32^{\prime \prime}$ and 5/16" 6 pt. skts. $11 / 3^{\prime \prime} 2^{\prime \prime}, 3 / 8^{\prime \prime}$ and $7 / 16^{\prime \prime} 12 \mathrm{pt}$. skts., and $1 / 4^{\prime \prime \prime} 5 / 16^{\prime \prime}$ and 3/8" $8^{\prime \prime}$ pt. skts. in $1 / 4^{\prime \prime}$ square drive. Chromium plated and polished. Wrench set is shipped in handy wrinkle finish metal box. 18N15590-Shpg. Wt: 2 lbs.


STEVENS-WALDEN "SPINTITE"
WRENCH SET
Invaluable for radio and electrical servicemen. Well made of cadmium plated steel and hardwood han-dles-designed to stand up under years of regular use. Set includes 7 wrenches in convenient holder. Will handle following size nuts: 3/16" $1 / 4^{\prime \prime}$, $5 / 16^{\prime \prime}, 11 / 32^{\prime \prime}$. 3/8"' and $1 / 2^{\prime \prime}$ ", Weight: 3 pounds. 3.82 18N15570.
3.82

## DELUXE CHUCK TYPE SPINTTITE KIT



Consists of chuck type handle for use with wrench shanks, sciewdrivers and reamer. $3 / 16^{\circ}$ $1 / 4^{\prime \prime}, 5 / 16^{\circ}, 11 / 32^{\prime \prime}, 3 / 8^{\prime \prime}, 7 / 16^{\prime \prime}$ and " $1 / 2^{\prime \prime}$ wrench shaniks'; $1 / 8^{\prime \prime}$, 3/ivers: and $1 / 4^{\prime \prime}$ by $4^{\prime \prime}$ screw arivers; $1 / 16^{\prime \prime}$ to ${ }^{3 / 16^{\prime \prime}}$ Ream awli long nose, 5 diagonal alignment wrench. In leatherette +11.
18N15572-Wt. 3 lbs .
18N155.71-Less Pliers and neutralizer. W't. 2 1bs.......... 5. 44

## STEVENS-WALDEN MIDGET WRENCH SETS

For accurate work on meters, radios and other small appliances. Consists of 8 midget hex sockets $3 / 16$ to $7 / 16^{\prime \prime} ; 3$ dousle square sockeis $1 / 4^{\prime \prime} 5 / 16^{\prime \prime}$ and $3 / 8^{\prime \prime}$ sizes; ratchet, hinge and spintite handles ples $6 "$ long extension and sliding tee handle. Metal carrying case. Wt: 4 lbs.
18N 15573 -Deluxe Set Type 3100
9.44 STANDARD SET: As above less ratchet, sliding tee handies and extension. Weight: 2 pounds.


18N15574-Standard Set Type 3100 A..... 5.26
4.24
7.52

RADIO WRENCH SET
Made entirely of high grade steel with case hardened sockets. Hollow handle holds screw driver socket and 5 wrench sockets: $1 / 4^{\prime \prime}, 5 / 16^{\prime \prime}, 3 / 8^{\prime \prime}, 7 / 16^{\prime \prime}, 1 / 2^{\prime \prime}$. Handle and shank are $71 / 2$ long; finished in white nickel.
18N15593.

## RATCHET BRACE

A low-priced $10^{\prime \prime}$ brace with Barber chuck and alligator jaws in semiboxed ratchet. Steelclad, ball bearing head. Mahogany finished hardwood handle and head; exposed metal parts nicke
 18N14732-Weight: $21 / 2$ tbs.

GOOD QUALITY TOMAHAWK SOCKET WRENCH SET E5EUOT

Handy, compact little set for hard-toreach places. Consists of $31 / 2^{\prime \prime}$ L himdle and 6 hexagon sockets. Cadmiumplated. Hexagon socket sizes: $3 / 16^{\prime \prime}, 1 / 4^{\prime \prime}, 5 / 16^{\prime \prime}, 3 / 8^{\prime \prime}$, $7 / 16^{\prime \prime}$, and $1 / 2{ }^{\text {n }}$. Shpq. Wt: 1 lb .
18 N 15589.

## TOOL STEEL REAMERS

Made of heat treated steel. Tapered shank has "T" handle for easy hand use, Enarges 1/8" to $/ \mathrm{F}^{\prime}$ holes. $5 \mathrm{~K}^{\circ}$ overall.
18N 15049
86

## SAMSON LEVER WRENCH

5 in 1 handy tool for all jobs-adjustable jaw makes it equally useful as pliers, locking wrench, clamp, pipe wrench, and toggle press. Instant adjustment or locking by turn of set screw. Double leverage mul:iplies pressure 1000 times. 18N14986-W.t: 2 lbs
1.25

## AUTOMATIC PUNCH

Speedy, automatic, and adjustable - a single-hand justable $\overline{\text { operated }}$ punch gives light operated punch gives light
or heavy impressions with or heavy impressions with
fust the turn of $a$ screw. Just the turn of a screw. Center punch has replace-
able points. $1 / 2{ }^{N} \times 5^{n} .2 .55$
18 N $14991 \ldots \ldots \ldots . .2 .25$ 18N14991.
Steel replacement point
18N14992...................23¢

## NEW ELECTRIC MOTO-SAW



Lightening-fast-makes 7200 strokes per minute-cuts 1 foot per minute through wood up to " "thick! The only electrically-
driven hand jig saw on the inardriven hand jig saw on the inarket today. Saws the most intricate patterns, cuts at any angle, works on assembled projects. Automatic switch in handle instantly stops, stats motor. For $50 / 60$ cyc. AC. With cord and plug. 18 N 15352 -With 3 blades, Wt. 2 lbs...... 5.85 18 N 15353 -Extra blade for above....... 12 for 004

## ALL.PURPOSE VIBRO.SPRAYER



Even amateurs can produce a professional looking paint job with this self-contained spraying unit. Specially designed to permit one-hand operation - and is complete in itself. Screw-top Jor has a 24 ounce capacity. Equally adaptable for spraying other iquids, such as light oll, insectiis a finely made sprayer that will last for years, qiving you excellent service and years, qiving you exce
results. For 110 volts.
18N15619-List Price \$12.95 Dealers Cost Ea........ 9.75
Dealer's Cost Lots of 2...................................................... 8.65
Dealer's Cost Lots of 6......................................Each, 7.80
G.M. CO. ALL-STEEL HOBBY LATHE OUTFIT A fine precision tool for pre; cision work! Consists of $61 / 2^{\prime \prime}$
high lathe head with $1 / 2 \times 614^{\prime \prime}$ shaft accurately turned and threaded at both ends with two flanges and nuts for grindstones, buffing wheels and scratch brushes. ${ }^{9 / 32^{\prime \prime}}$ capacity chuck with 3 spring-controlled Jaw hold drill in dead
 center. All steel unbreakable body with naval brass bearings for shaft Complete outft includes: 2-speed puiley; 4 for shaft. face vitrified grinding wheel; $4^{n \prime}$ wire scratch brush with securely beld wires; $4^{\prime \prime}$ laminated cotton buffing wheel; ook fanned leather belt complete with coupling; and one block of high grade polishing compound. 18N22399-Red Enamel Finish. Shpg. wt. 6 lbs. 3.75

MODELMAKERS VISE WITH 11/2" JAWS


Double parallel bearns keeps jaws alignedprevents wobbling insures steadiness of
implement in the vise. Finer threaded worm screw provides tighter grip, more holding surface per inch. $11 / 2$ " jows open to full $21 / 4$ ". Equipped with double mountings for permanent or temporary attachment to any bench or table-edge not exceeding 2-1/16" thick. Rust-resistant Bronze finish. Size fully closed: $51 / \times 4 \times 2^{\prime \prime}$.
18N15735-Shpg. Wt: 3 1bs.................. 51 Same of above, but with larger, $21 / 2$ in jaws. 18N85734-shpg. Wt. 4 1bs.......................5S


DH GRINDER WITH 5* STONE
Dirt-proof gear case with extra long bearings assure gears being in alignment and wheel running and meshed. Clomps on any table and meshed, Clamps on any table added ease in sharpening. Baked Red enamel finish. With 5" stone. Shpg. Wt: 4 lbs .
18N15356.
.2 .79

## G. M. UTILITY GRINDER

A smooth running and long lasting Finder - accurately made and assembled. Completely enclosed all steel gear case is finished in bright nickel plate. Extra long brass bearings assure proper alignment of gears and a truerunning wheel. Clamps on any table or bench up to $1-1 / 8^{\prime \prime}$ thick. Supplied complete with high grade fine abrasive wheel, tool rest and clamp. 18N15355-Weight $1 \mathbf{1 b}$.'

## BURGESS ALL.PURPOSE TOOL KIT <br> Low Cost Kits <br> for Home or <br> Model Shop <br> 

Model V75. Vibro-Tool Master KIt. Here is the Ideal experimenters and hobbyists tool kit that meets the needs of most wood, metal, leather, plastic and glass working problems. This handy package contains every basic tool necessary for marking and engraving metal and decorating glass and plastic. It carves, slices, peens quickly and easily. Supplied complete with, vibrotool and one of each of the following: $V 24$ knife, $V 23 \mathrm{knife}, V 3$ carbide point, $V 82$ leather punch, V45 ball point, V87' standard modeler, V81 abiasive, V5! curved chisel, $V 55 \mathrm{~V}$-shaped chisel and V115 stone. Packed curved chisel, for convenient storage. Operates on 110 volts, in sturdy case for convenient storage. Ope
60 cycles AC only. Shipping Weight $51 b s$.
18N15638-List Price 9.95. Dealer Price..... Each.....7.50

## LEATHER KRAFT KIT

Model V225. Vibro-tool Leather Kraft Kit. Complete with Vibro-tool and nine leather working attachments. Includes One each of the following ten basic leather working tools: ball point, $V 86$ deerfoot modeler, $\forall 46$ ballpoint, $V 83$ leather liner, V84 leather slotter, V85 double liner and cripper. Tool and accessories housed in sturdy convenient storage case. Operates from 110 -volt, 60 -cycle AC only. Shipping Weight 5 lbs.
18N15639-List Price 9.95. Dealer Price.....Each.....7.50

## MARKING KIT

Model V77. Vibro-Tool Merking Kit. Consists of Vibro-tool and hard tantalum carbide point. For metals, plastics etc. Operates from 110 -volt, 60 -cycle AC only.
18N15620-List Price 7.50. Dealer Price.....Each..... 5. 55

## DELUXE HANDEE GRINDER KIT IN STEEL CASE

Hand-size, with high-speed, 25,000 RPM motot. 27 accessories include: rubber polishing wheel and saw 2 steel cutters; 3 drills; push-pin mandrel; steel wire cavity brush; bristle brush; wire scratch brush; rubber disc; felt cnd rubber polishing points; felt polishing wheel; drum sander,
 discs; 6 mounted wheels, speed ail. $110-120$ volts AC-DC. 18N15263-No. 3010. Shpg. Wt. $8 \mathrm{lbs} . . . . . . . . . . . . . . .23 .37$ As above, but with 26 Mtd . Whls, for industrial use. 23.37
$18 \mathrm{~N} 15264-\mathrm{No}$. 3011 . Shpg. Wt. 4 1bs................... 37 18N15264-No. 3011. Shpg. Wt. $1 / 8^{\prime \prime}$ Coli......" $\mathrm{s}^{\text {M }}$ Wheels; 1 Rubber Polishing Wheel; 1 Wheel Dressing Stone. Speed as
18N15354-No, 3008. Shpg. Wt, 2 1bs........................ 17.42
FAIRCHILD FLEXIBLE SHAFT TOOL
The hobbylst's answer to engraving, buffing, grinding cind routine polishing needs! Precision, dynamically balanced $1 / 20 \mathrm{H} . \mathrm{P}$. motor turns up $15,000 \mathrm{rpm}$ at the handpiece-with power to spare when usIng any of the 10 ing any of the rard tools supplied. Pencil-6ize hand-piece permits precision work of pro
 fessional quality, and takes any standard $3 / 32^{\circ}$ or $1 / 8^{\prime \prime}$ shank tool. Flexible shaft is full three feet long and covered with plastic for clean, oll-free operation. Every electrical component checked at factory with 1500 volts for breakdown to ground. Complete with selected accessory tools, two wrenches, flexible shaft, motor and bracket for motor. Supplied in sturdy blond wooden cabinet. Operates on $110-120$ volts. AC or DC.
18N15645-Shipping Weight 7 lb
15.95

# TOOLS TO MAKE YOUR WORK EASIER 



## GENERAL DRILL GRINDING ATTACHMENT

Precision-built tool designed for accurate repointing of twist drills. Adjustable for all popular drill point angles, including countersinks-correctly resharpens twist drills of following sizes: $1 / 8^{\prime \prime}$ to $3 / 4^{n}$ Iractional; 1 to 30 number size; $A$ to $Z$ letter size; and 3.0 to 19.0 millimeter size. 18N 15759-Shpg. Wt: 2 lbs....
4.75

## AIR PRESSURE TOUCHUP SPRAYER



For louching up marred panels, cabinets, and radio chassis. Designed to operate periectly with very low pressure tainer. Comes complete with airtight brass valve, adjustable brass spray tip, brass val ve, adjustable brass spray tip, alass jars. Inexpensive, easy-10-use. 18N $14705-$ Shpg. wt. 3 dbs.............
POWER SPRAYER WITH 12 FOOT HOSE Newest type of touch-up sprayer that operates from the spork plug of any automobile. Will spray paint, lacquer or any other free-flowing liquid. Comes complete with sproyer, pint glass jar, spark plug air check valve compression tank, set of adaptors and a twelve-foot hose.
18N14704-Shpg. wt. $6 \mathrm{lbs}, \ldots .$. .
4.70


Sharp polnted projections for accurate dividing, scribing, etc. Lock nut insures against errors caused by sliding gauge. Rule graduated in 16 th and 32 nds plus $5^{n}$ depth gauge. Precision-made Shpg. Wt: l lb.
18N15027-
98\$

## WALSCO SERVICE TWEEZERS



Serve hundreds of useful purposes, Of polished nickel-plated spring steel. 18N15484-Self-Closing Type, $\quad 61 / 2^{n}$ 18Ng with blunt points................564 18N15485-Heavy-Duty T ype, $61 / 2^{\prime \prime}$ long, with slide lock and blunt points.............................................. 42 c 18N15487-All 3 inleatherettecase.1.91
G.C INSPECTION MIRROR


WALSCO LIGHTWEIGHT STAPLE DRIVER

(\%)


Fully automatic-for neater, faster jobs on wire and cable. Staples wires up to $1 / /^{\prime \prime}$ dlaholis 24 staples. With box meter. Magazine Magazine
staples. of 250 staples.
$18 N 15091$-Shpg. wt. 2 lbs.. .4 .85 RUBBER CAP for plunger head-makes it easier on the hand.
$18 \mathrm{~N} 15090-$ Rubber Cap......................................................22c

## WALSCO CARBON TOOL STEEL STAPLES

In handy strips especially made for the Walsco Staple Driver. Brown color outside, inside coated with special clear insulating lacquer.
18N15093-Box of 250 . 35
18N15099-Box of 1000 .. 1.32
$18 \mathrm{~N} 15100-\mathrm{Box}$ of 5000 . .5.73

## FEATHERWEIGHT TACKER AND STAPLER

Quick, convenient tacker for attaching light wire or spaghetti cobeis, etc.i tacking on grille ceipts, or stapling papers, re-built-steel body with fine Elack finish.
18N 15280.
.1 .60
18N15281-Boxof 1000 staples........................


SAVE MORE! 10,000 staples.. 2.90


ADJUSTABLE HACK SAW Accomodates $8^{\prime \prime}$ to $12^{\prime \prime}$ blades. Blede can be faced in lour directions. Easy-grip composition handle, nickel-plated stock.
Complete with 8 -inch blade.
794

FLEXIBLE HACK SAW BLADES
Excellent quality, herit-treated for extra hardness. Fits all standord frames. $1 / 2{ }^{\prime \prime}$ wide, . 025 " thick.

| Cat. No. | Length | Teeth/in. | Each | Dozen |
| :---: | :---: | :---: | :---: | :---: |
| 18N17273 | 10* | $18^{\prime \prime}$ | 74 | 674 |
| 18N17274 | 10* | $24^{*}$ |  |  |
| 18N 17275 | 12* | 18* | 8 | 804 |
| 18N17276 | 12* | 24* | $9 ¢$ | 87\% |

$\square$
ALL-PURPOSE HACK SAW
 Handy for tight places. Fits where ordinary hack saws cannot be used. Complete with 715 tapering blade. 18N17278-Hack Sew 18N17279-Ex.Blades, Ea...12c

## HEX AND SPLINE WRENCH KIT

 Contains complete range of wrench keys, both hex (Allen) and spline (Bristr)) for No. 2 to $3 / 8^{\prime \prime}$ screws; all wrench sizes used in electronic trade. Comes in durcble leatherette case.18Ni5488-Shipping Weight 8 az
$.97 \$$

G.M. CO. FLARING TOOL

Flares copper, brass and aluminur tubing without cracking or splitting New type slip on clamp can be slipped popular sizes: $3 / 16^{*}, 1 / 4^{"} 5 / 16^{*}, 3 / 8^{\prime \prime}$. $1 / 2^{*}, 5 / 8$. Bright nickel tinish.
18N15732.. Weight 2 ibs
2.79

## BLOCK PLANE

Cuts with or across grain. For llight work. Black enameled cast cap with lever cam lock. Screw end adjustment of high carbon steel cutter. Rosewood knob handle. $7 *$ long: cutter $15 / 8^{\prime \prime}$. 18N15617. Weight $12 / 2 \mathrm{lbs}$. 1.99 SMOOTH PLANE

Finest plane made for finishing broad surfaces. End and side adjustment of cutters. Solid high corbon steel, =osewood knobs and handles. Berutifully finished. $9^{n}$ long; $2^{n}$ cutters.
18N15618..................Weight $33 / 4$ lbs


# UTILITY CABINETS AND PARTS DRAWTRS 



DRAFTING MACHINE
Cuts drafting time by one-third! Eliminates use of T-square, protractor, and triangles. Makes sharp, accurate drawings up to $16 \times 22^{\prime \prime}$. Combination 900 angle, calibrated scale moves at any angle to any point on the masonite board. Includes $171 / 2 \times 231 / 2 x^{1 / 4}{ }^{n}$ board, steel arms, fittings, rubber feet.
18N15092-Wt. 8 lbs..
6.63

## NEW UTILITY CABINET

An ideal all steel cabinet for stocking and storing small parts. Drawer partitions are removable. to make from two to eight compartments in eachdrawer. Identification cand holders are part of the drawer handles. Top and bottom of cabinet are embossed so as to fit securely when stacked. Silver grey, quality finish and strong construction make this cabinet an an excellent value. Dimensions:
 $6^{\prime \prime}$ wide $\times 6^{\frac{1}{2} /{ }^{\prime \prime}}$ high $\times 8^{\prime \prime}$ deep. Drawers measure $1-3 / 8^{\prime \prime}$ deep. Shipping Weight:5 lbs. 18N22374.

## 4-DRAWER ALL STEEL CABINET

Attractive, impressive, practical in design. Embossed cabinets fit securely when stacked in multiple units. Drawers are $8 \times 101 / 4 \times 11 / n^{n}$, each with card holder and removable partitions to furnish 2 to 12 compartments per drawer, Constructed of heavy gcuge steel with no shoup edges. $71 / 2 \times 81 / 2 \times 101 / 4$. Brown. Shipping. Wt: 9 lbs. 18N2235 1.
5.25


TRANSPARENF UTILITY BOXES


These attractive, crystalclear plastic boxes make ideal storage compartments for screws, nuts, bolts and hundreds of other small parts. Bullt-in partitions keep parts separated at all keep parts separated at all
times. Tight, snug fit of hinged cover assures parts hinged cover assures parts
remaining in correct comremaining in correct compartment even when caried
upside down. $7 \times 31 / 2 \times 1-3 / 16^{\prime \prime}$ Wt: $1 / 2 \mathrm{lb}$.
18N22383-9-Compartment Utility Box.
t: $1 / 2$
Box...
Box... . .674
18N22384-5-Compartment Utility Box .. $.67 \$$ A hondy unit of exceptional quality for storIng your small parts. Use individually, stack or insert under counters and in shelving. one strony, solid assembly that can be
 stacked with additional frames. Each of the eighteen drawers comes equipped with three adjustable and removeable cross dividers making four compartments possible. This makes a total of 72 adjustable compartments. Dimensions of cabinet: $34^{\prime \prime}$ wide $\times 13^{3 / /^{\prime \prime}}$ high high. Olive grean finish. Shipped set up and ready for use Shipping Weight: 76 lbs.
18N22373.
21.50

## CHUCK ARBORS TO FIT ANY SMALL MOTOR

Fits shaft of any small motor in place of a pulley. With flange and locking nut to hold grinding wheels, saws, and other tools. $1 / 4$ "three-jaw chuck. Cholce of four sizes.

| No. | Unit No. | Motor Shaft | Cost |
| :---: | :---: | :---: | ---: |
| $18 N 15095$ | 495 | $1 / 4^{\prime \prime}$ | .83 |
| 18 N 15096 | 490 | $3 / 8^{\prime \prime}$ | 1.05 |
| $18 N 15097$ | $490-A$ | $1 / 2^{\prime \prime}$ | 1.97 |
| 18 N15098 | $490-B$ | $5 / 8^{\prime \prime}$ | 1.13 |



A practical, heavy gauge steel cabinet especially designed for small parts. Provides ready storage space for resistors, condensers hardware and other similar items. All drawers are $11 / 4^{\prime \prime}$ deep and have removable dividers that adjust each compartment for one to 12 sec tions. Identif!cation card holders on each drawer. Cabinets can be easily stacked, one on top of another. Each cabinet top has indentations that hold the feet of the one above. Sturdy construction - finished edges - handsome brown Hammerlaid finish. Size: $161 /{ }^{\prime \prime}$ wide $\times 8^{\prime \prime}$ high $\times 10^{\prime \prime}$ deep.
$18 \mathrm{~N} 223^{\circ} 50$-Shipping Weight: 17 lbs.
7.88
"SNAP-ON* TYPE PARTS DRAWER
The modern, convenient way to store small parts. A strong, compact combination of gun-metal steel shells and water-clearplastic drawers. Merely snap together additional units on side, top and bottom to form strong metal cabinet with extra space. No tools required - simple to do; required and simple to interlock securely and quickly. Plastic dividers make it convenien securely and quickly. Plastic dividers make it convenient
to sub-divide drawers into two or more compartments. Rails on bottom of drawers assure smooth easy movement under heavy loads. Dimenslons: $6-1 / 16^{\circ \prime}$ long $x 3-1 / 8^{\prime \prime}$ wide $x$ 1-7/8" high. Weight: 9 oz.
18N22382...
... 4 5

## ALL-STEEL MULTI DRAWER

Convenient and economical storage for fittings, and small parts. Each and consinced ton gue and slot designed to interlock with other unitsat top, bottom or side. Units may be fitted and securely locked around existing fixtures for economy of space. Each drawer has handy pull and holder for contents card. All steel construction, finished in attractive two-tone green. Ample drawer depth per- mits storage of reasonably large parts. Overall dimensions:
 $2-3 / 8 \times 2-1 / 4 \times 5{ }^{\prime \prime}$.
18N22381-Shpg. Wt: 10 oz. 10 for.....2.70 Each....... 304

## NEW UNION PERSONAL FILE CHEST

Indispensable as a safe place to keep insurance papers, leases, contracts, correspondence, and other private or business popers. A systematic, time-saving, ready reference for instant use. Sturdily made of fire-sesistant steel, equipped with spillprool lock and two keys. Conventent, prood lock and two keys. convenient, sturdy carrying handle with built-in identiilcation card-holder. Comes with 10 Alphaand 3 plain folders. Gray enamel finish. and 3 plain fo
$121 / 2 \times 101 / 1 \times 5 \frac{1}{21}$.
18N22352-Shpg. Wt. 4 lbs.
2.90


TEN DRAWER SMALL PARTS CABINET andsome brown Hammerloid
. 7.8

CHASSIS, CHANGER CRADLE Steel framework and coris-padded clamps keep your work off the table-holds chassis or phonochanger at any angle so you can work on the bottom of chassis without endangering tubes. Stands on table or work bench. Adjustable for any size chassis or changer. Complete with standard clamps for grasping vertical surfaces of chassis or record changer. Groove in each sis. Shpg. Wt: 3 lbs.
18N15085.
3.87

## BALLASTS - LINE CORDS - FUSES

JFD AIR-COOLED ADJUSTABLE BALLAST KIT
Handy new kit of adjustable AC-DC ballasts

air-cooled perforated metal tubes, designed replace more than 2700 diffrent types of ballast
tubes. Contans 22 Type "A." 2 Type "B", and tubes. Contans 2 Type "A." 2 Type "B", and 1
Type. "C"' ballasts, with book giving complete instructions and replacement deta.
4.4

REPLACEMENT TUBES FOR ABOVE KIT
7N6856-Type "A" Ballast 8 Prong Octal
7N6858-Type "C" Ballast 4 Prong $A$...... $\mathbf{8 8} \boldsymbol{8}$
IFD REPLACEMENT CHART

| Use | To Replace Types |  |  |
| :---: | :---: | :---: | :---: |
| Type | Beginning With | Numbers | Ending With |
| $\begin{aligned} & \mathrm{A} \\ & \mathrm{~B} \end{aligned}$ | $\begin{aligned} & \mathrm{K}, \mathrm{~L}, \mathrm{M} \text { or } \mathrm{B} \\ & \mid \mathrm{K}, \mathrm{~L}, \mathrm{M}, \mathrm{BK}, \mathrm{BL} \text { or } \mathrm{BM} \end{aligned}$ | $\begin{aligned} & 10 \text { to } 42 \\ & 45 \text { to } 105 \end{aligned}$ | A, B,C,D,F,G or $H$ <br> A,B,C,D,F,G,H,S1,S2, |
| C | To replace most 4 KX'55 140 R165R | types | s LX42, KX49, |

## UNIVERSAL RESISTOR CORD

 sistance trom 22 to 330 ohms in : Complete instruction:
one cord. 7N5321--Reststor cord. Shug. wt. 8 or
$88 \phi$

## LINE CORD RESISTORS



Flexible, sturdy cords for AC phono radios, oscillators supplies, ings are at .3 arnps. Voltage drop subtracted from line oltage gives total voltage applied to tube thlaments

| No. | Ohms | Voltage Drop | No. | Ohms | Voltage Dro |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 7N5322 | 135 | 40.5 volt:: | 7N5325 | 250 | 75.0 volts |
| 7N5332 | 150 | 45.0 volts | 7N5329 | 280 | 84.0 volts |
| 7N5331 | 160 | 48.0 volts | 7N5242 | 310 | 93.0 volts |
| 7N5323 | 180 | 54.0 volts | 7N5326 | 330 | 99.0 volts |
| 7N5330 | 200 | 60.0 volts | 7N5241 | 360 | 108.0 volts |
| 7N5324 | 220 | 66.0 volts | 7N5320* | 560 | *78.75 volts | Any above Type, Each

## SPECIAL AC-DC CORDS WITH PILOT LIGHT TAP

 Similar above, but includes| 7N5334 | 160 Total O-hms | Tapped at 24 Ohms |
| :---: | :---: | :---: |
| 7N5335 | 180 Total Ohms | Tapped at 25 Ohms |
| 7N5336 | 200 Total Ohms | Tapped at 40 Ohms |
| 7N5337 | 200 Total Ohms | Tapped at 25 Ohms |
| 7N5339 | 280 Total Ohms | Tapped at 40 Otums |

Any Above Type, Each................................... $81 申$
 ohm for sets using 3 dmp. tubes, 50 ma. plate supply. 7N5243-Total Capacity 350 ma. na. Shpg 1.41 Standard 560 ohms for sets usina

## 7N5245--Total Copacity 200 ma . Shpq. wt. 8 oz. 7N5233 A: above, bul toreign. Shpg. wt. 8 oz. kish ... 1. 41


SIGNALITE 6 IN 1 PLUG FUSE
U. L. approved. Contans 0 separate tuse ing trom socket. Signal lamp lights in shock proot indicator cap wher fuse blows-remains hit until cap is turned to renew fuse. Eliminates changing of fuses in dark, fum made with difterent colored cap.

| 38N13250 | Io Amp. Fuse, Orange |  |
| :---: | :---: | :---: |
| 39N13251 | 15 Amp. Fuse, Red Cap. |  |
| 39N13252 | 20 Amp. Fuse, Blue Cap. | Euch |
| 39N13253 | 25 Amp. Fuse, Yellow Cap. | 6 asst 2.16 |
| 39N13254 | 30 Amp. Fuse, Green Cap. | 120 asst for 25.28 |

"METER BACK" FUSE MOUNT
Mounts directly on any meter terminal. Will not towch other posts Takes $1 \times 1 / 4^{\prime \prime}$ instrument fuses only 25N11049

## JFD DUPLICATE TV

REPLACEMENT BALLASTS
Exact duplicate ballasts for the television
 metal tubes.

| Stork No. | Replarement for |  | Each | stock No. | Replacement for |  | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | fake | Part No |  |  | Mak | Part No. |  |
| 7N6840 | Beliment | B9.1116534 | 1.32 | 7N6849 | Motorola | 17A470303 | 1.32 |
| 7N6841 | Belmont | B9 \15882 | 1.32 | 7N6850 | Motorola | 17 A 485459 | 1.32 |
| 7N6842 | Belmont | B9M11505 | 1.32 | 7N6852 | Stew. Warn. | SW50\%300 | 1.32 |
| 7N6843 | Emrssun | 397021 | 1.32 | 7N6853 | Teletone | TBR102D | 1.32 |
| 7N6844 | Emorson | 34702.3 | 1.32 | 7N6854 | Teletone | TBR103D | 1.32 |
| 7N6846 | Emerson | 3970:3 | 1.32 | 7N6855 | Teletone | TBR104D | 1.32 |

## AMPERITE AC.DC BALLAST TUBES

By using these fine regulators, tubes are kept to within $5 \%$ of their correct voltage, ever if the line varies from 85 to 145 volts. Complete with starting resistor that saves pilot lights and lubes. Ah KL types are Cictal base.
otes exact replacement unit.
Any Type Below, Each
734
$\begin{array}{cccccc}\text { No. } & \text { Type } & \text { No. } & \text { Type } & \text { No. } & \text { Type } \\ 7 N 12238 & 4 P-45 & 7 N 12225 & 20 n R^{*} & 7 N 12232 & \text { KL. } 45\end{array}$ $7 N 12237$ KL-75H...... REPLACES ALL AC.DC BALLASTS

| Type | Beginning With | Numbers | Ending With |
| :--- | :--- | :--- | :--- | :--- |
| KL-45 | K, L, M or BK | 36 to 67 | A, B, C or D |
| KL.50H | K, L, M or BK | 36 to 67 | F, G or H |
| KL. $75 H$ | K, L, M or BK | 67 to 105 | F, G or H |

TYPE 4P-45-4 PRONG
REPLACES THE FOLLOWING TYPES:

| $\begin{aligned} & 50 \mathrm{~A} 2 \\ & 50 \mathrm{~B} 2 \\ & 50 \times 3 \mathrm{~T} \\ & 140 \mathrm{k} 4 \end{aligned}$ | $\begin{aligned} & 140 \mathrm{R} 8 \\ & 140 R 44 \\ & 140 \mathrm{~L} 4 \\ & 140 \mathrm{~L} \end{aligned}$ |  | $\begin{aligned} & \text { LX } 42 \overline{3} \\ & \text { LX42C } \\ & \text { LX42J } \end{aligned}$ |  |  | $\begin{aligned} & \text { RXS5C } \\ & \text { LX5SB } \\ & \text { LX5SC } \\ & \text { LX55D } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## LITTLEFUSES FOR TEST INSTRUMENTS

Type 8 AG. Protect delicate instruments. Break circuit immediately on reaching blow point. Length $1^{\prime \prime}$ diam. $1 / 4^{\prime \prime}$. May be used on 250 volts AC or DC. High Speed action.


| 39N12368 | 4 | $14 \times 5 / 8$ | $3{ }^{2}$ | 2.45 |
| :---: | :---: | :---: | :---: | :---: |
| 39N12369 | 9 | $1+\times 7 / 8$ | $21 / 2 \mathrm{c}$ | 1.96 |
| 39N12370 | 14 | $1 / 4 \times 116$ | $21 / 24$ | 1.96 |
| 39N12371 | 20 | 1/4×11/4 | 2. | 1.71 |

SAG FUSE RETAINER. (A) Two piece metal. $21 / 2^{\prime \prime}$ 39N12372-Each 8c
FOR PHILCO, MOTOROLA. $2 \mathrm{pc} .21 / 2^{\prime \prime} \times 1 / 2^{\prime \prime} \mathrm{D}$
39N8349-Each 17¢

| EXTRACTOR FUSE POSTS (B) |  |  |  |
| :---: | :---: | :---: | :---: |
| Stock No. | For Type | Knobs | Each |
| 39N12328 39N 12329 39N12326 39N12331 |  | Screw driver slot <br> Thumb <br> Screv driver slot <br> Thumb | $\begin{aligned} & 27 d \\ & 26 d \\ & 26 \delta \\ & 26 \delta \\ & \hline \end{aligned}$ |
| (C) FUSE MOUNTS. Bakelite base. |  |  |  |
| $\begin{aligned} & \text { 39N123822 } \\ & \text { 39N12327 } \\ & \text { 39N12383 } \\ & \text { 39N12324 } \end{aligned}$ | Sub-pane Sub-pane Panel, in Panel, 3 | instrument 3AG trument G | ¢ 6 |



IRC INSULATED RESISTORS-TYPE BT COMPOSITION MEETS JAN SPECS


Fully insulated, moisture proof, filament type element in bakelite housing. Exclusive construction features provide low operating temperature and excellent power dis-

- 7 N sipation Eusily meets the axacting quirements of TV. BTS corresponds to IAN RC10 and RC20; BTA to JAN RC30 and BT-2 to JAN RC41. Tolerance $\pm 10 \%$ $\pm 5 \%$ available on special order at slightly higher prices, in minimum quantities of 10 of one value. Specify resistance when ordering.

STANDARD RMA CODE-SPECIFY RESISTANCE

| Ohms | Ohms | Ohms | Ohrns | Ohms | Ohms | Megs. | Megs. |
| :--- | ---: | :---: | ---: | :---: | :---: | :---: | ---: |
| 0.47 | 4.7 | 47 | 470 | 4700 | 47000 | 0.47 | 4.7 |
| 0.51 | 5.1 | 51 | 510 | 5100 | 5000 | 0.51 | 5.1 |
| 0.56 | 5.6 | 56 | 560 | 5600 | 56000 | 0.56 | 5.6 |
| 0.68 | 6.8 | 68 | 680 | 6800 | 68000 | 0.68 | 6.8 |
| 0.82 | 8.2 | 82 | 820 | 8200 | 82000 | 0.82 | 8.2 |
| 1.0 | 10.0 | 100 | 1000 | 10000 | 100000 | 1.0 | 10.0 |
| 1.2 | 12.0 | 120 | 1200 | 12000 | 120000 | 1.2 | 12.0 |
| 1.5 | 15.0 | 150 | 1500 | 15000 | 150000 | 1.5 | 15.0 |
| 1.8 | 18.0 | 180 | 1800 | 18000 | 180000 | 1.8 | 18.0 |
| 2.2 | 22.0 | 220 | 2200 | 22000 | 220000 | 2.2 | 22.0 |
| 2.7 | 27.0 | 270 | 2700 | 2700 | 27000 | 2.7 | $\ldots .$. |
| 3.3 | 33.0 | 330 | 3300 | 33000 | 330000 | 3.3 | $\ldots .$. |
| 3.9 | 39.0 | 390 | 3900 | 39000 | 390000 | 3.9 | $\ldots$. |


| $\begin{aligned} & 1 / 2 \text { Watt-BTS } \\ & \text { Size: } 18 / 4 \times 1 / \mathbf{s}^{\prime \prime} \\ & \text { Range } 470 \text { ohms to } 22 \end{aligned}$ | $\begin{aligned} & \text { 1 Watt-BTA } \\ & \text { Size } 33, \text { at }^{1 / 1 / 4} \text {. } \\ & \text { Range } 330 \text { ohms to } 22 \end{aligned}$ | $\begin{aligned} & 2 \text { Watt-BT-2 } \\ & \text { Size: } 18 / 1 \times 3{ }^{n} \text {. } \end{aligned}$ <br> Range 470 ohms to 22 |
| :---: | :---: | :---: |
| megohms. | megohms. -5 | megohms. ? |
| 100 ofone value. | 100 of | 100 of on |
| Each............ $6 ¢$ | Each........... $\mathbf{1 0}$ \% | 100 of one value. Each... 124 |

"BW" INSULATED WIRE-WOUND RESISTORS
Similar to the BT units listed above, but contain a wire wound element, completely encased in molded compound. Tolerance $\pm 10 \%$. Order sizes desired from tabulated listing above. Specify Resistance.

| $1 / 2$-Watt-BW-1/2 | 1-Watt-BW-1 | 2-Watt-BW-2 |
| :---: | :---: | :---: |
| Size: 5/8 $\times{ }^{3} /$ /r $^{n}$. Range 0.47 to 820 ohms. | Size: 11/4x $1 / 4^{\prime \prime}$. Range 0.47 to 4700 ohms. | Size: 18/4 $x^{31} / 4^{\prime \prime}$. Range 1.0 to 6800 ohms. |
| 7N5298..... 104 | 7N5259..... T5¢ | 7N5299...... 204 |
| 100 of one value. $6 \&$ | 100 of one value. $9 ¢$ | Each of one value. 124 |

IRC METAL RESIST-O-CABINETS


Sturdy all steel cabinet with 4 non-spill drawers; has 28 range identified compartments. Meas-
ures $58 / 8^{\prime \prime} \times 5^{15} / / 6^{* \prime} \times 107 / 8^{\prime \prime}$. FREE with purchase of any assortment below.

## Assortment No. 4

 100 BW 1/2 \& BTS 1/2-watt assorted resistors. Range: 47 ohms to 10 megohms 7N5310-With Cabinet.9.80

Assortment No. 5
83 BW 1 \& BTA 1-walt assorted resistors. Range: 47 ohms to 4.7
12.20

91 assorted insulated 1/2 Assortment No. 6 Range 47 ohms to 5 megohms. 7N5312-With Cabinet.
14.65

## NEW IRC RESIST-O-KITS

Flat, pocket-sized all metal casefree with either of the assortments below. Ten-range identified com. partments. Con service calls or small bench stocks. Attractive blue and yellow finish. Measures ${ }^{11} 1 / 0^{\prime \prime} \times 37 / 8^{\prime \prime} \times 65 / 8^{\prime \prime}$.

IRC Assortment No. 7 45 BTS $1 / 5$-watt, assorted resistors. Range 1,000 ohms to 2.2 megohms. 7N5313-With Cabinet.


## IRC POWER WIRE WOUND VARIABLE RESISTORS

For all industrial and radio uses. Dissipate heat rapidly, withstand heavy overloads, heat rapidly, withstand heavy overloads, have great mechanical strength. All supplied with contact band. Above ten watts have silver contact. Mounting brackets with

 ESA, $612^{\prime \prime} \times$ " $^{\prime \prime}$; HAA, $612^{\prime \prime} \times 118^{\prime \prime} ; \mathrm{HOA}^{\prime} \rightarrow$ Accuracy $5 \%$ Extra Contact Sliders for Resistors.
ZN5213-for 10 watt
7N5219-for 25 watt.
12
7N5218-for 100-200 watt.
15d
Available resistances in each wattage indicated by price:

|  | 10 | 25 | 50 | 80 | 100 | 200 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| OHMS |  |  | $\begin{gathered} 50 \\ \text { Watt } \\ \text { 7N5225 } \end{gathered}$ NSSCLA |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 71 | . 92 | 1.16 | 1.33 |  |  |
| 10 | 71 | . 92 | 1.16 | 1.33 |  |  |
| 25 | 71 | 92 | 1.16 | 1.33 |  |  |
| 50 | . 71 | . 92 | 1.16 | 1.33 |  |  |
| 100 | . 71 | . 92 | 1.16 | 1.33 | 1.74 |  |
| 150 | 71 | . 92 | 1.16 |  |  |  |
| 200 | . 71 | 92 | 1.16 | 1.33 |  |  |
| 250 | . 71 | 92 | 1.16 | 1.33 |  |  |
| 500 | . 71 | 92 | 1.16 | 1.33 | 1.74 | 2.14 |
| 750 | 71 | 92 | 1.16 | 1.33 |  |  |
| 1000 | . 71 | 92 | 1.16 | 1.33 | 1.74 | 2.14 |
| 1250 | . 73 | . 93 | 1.21 |  |  |  |
| 1500 | . 73 | 93 | 1.21 | 1.39 |  |  |
| 2000 | . 73 | 93 | 1.21 | 1.39 |  |  |
| 2500 | . 73 | . 93 | 1.21 | 1.39 | 1.79 | 2.18 |
| 3000 | 73 | 93 | 1.21 | 1.39 |  |  |
| 4000 | 73 | 93 | 1.21 | 1.39 |  |  |
| 5000 | 73 | 83 | 1.21 | 1.39 | 1.79 | 2.18 |
| 6000 | . 78 | 1.00 | 1.28 | 1.47 |  |  |
| 7500 | 78. | 1.00 | 1.28 | 1.47 | 1.89 |  |
| 10,000 | 78 | 1.00 | 1.28 | 1.47 | 1.89 | 2.30 |
| 15,000 |  | 1.03 | 1.39 | 1.56 | 2.01 |  |
| 20,000 |  | 1.03 | 1.39 | 1.56 |  |  |
| 25M |  | 1.11 | 1.50 | 1.71 | 2.14 | 2.47 |
| 40M | . . | .... | 1.50 | 1.71 |  |  |
| 50 M |  |  | 1.62 | 1.76 | 2.22 | 2.53 |
| 75M |  |  | 1.80 |  | 2.33 | 2.67 |
| 100M |  |  | 1.81 | 2.13 | 2.43 | 2.77 |

IRC WIRE WOUND FIXED POWER RESISTORS


Machine wound on non-hygroscopic cores; with heavy insulating coating that resists mechanical damage. Sizes: $A B, 184^{\prime \prime} \times 5^{5} 6^{\prime \prime}$; DG, $2^{\prime \prime} \times 96^{n}$;

Available resistances in each wattage indicated by price:

| OHMS | $\begin{gathered} 10 \\ \text { Watt } \\ \text { 7N5210 } \\ \text { AB } \end{gathered}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | . 34 | . 44 |  | ....... | . . . . . . |
| 5 | . 34 | . 44 | . 80 | . . . . . . | ....... |
| 10 | . 34 | . 44 | . 80 | ......'. |  |
| 25 | . 34 | 44 | 80 |  |  |
| 50 | . 34 | . 44 | 80 | ....... | ... |
| 75 | 34 | 44 |  |  |  |
| 100 | 34 | 44 | . 80 | 1.20 | 1.59 |
| 150 | . 34 | 44 |  | ....... | ...... |
| 200 | . 34 | 44 | . 80 |  |  |
| 250 | . 34 | 44 | 80 | 1.20 | 1.59 |
| 500 | . 34 | 44 | 80 | 1.20 | 1.59 |
| 750 | 34 | 44 | 80 | 1.20 |  |
| 1000 | 34 | 44 | . 80 | 1.20 | 1.59 |
| 1250 | 37 | 46 |  | 1.22 |  |
| 1500 | 37 | 46 | 85 | 1.22 | 1.62 |
| 2000 | 37 | 46 | 85 | 1.22 | 1.62 |
| 2250 | 37 | 46 |  |  |  |
| 2500 | . 37 | 46 | . 85 | 1.22 | 1.62 |
| 3000 | 37 | 46 | . 85 | ....... | . ...... |
| 3500 | 37 | 46 | $\ldots$ | ...... | ........ |
| 4000 | . 37 | 46 | . 85 | ....... | ...... |
| 4500 | . 37 | 46 | - ${ }^{\circ}$ | 1. $2 \cdot$ | 1.0.. |
| 5000 | . 37 | 46 | 85 | 1.22 | 1.62 |
| 6000 | . 42 | . 52 | 93 |  |  |
| 7000 | . 42 | . 52 | 93 | . | ...... |
| 7500 | 42 | . 52 | 93 | 1.32 | 1.73 |
| 10,000 | 42 | . 52 | 93 | 1.32 | 1.73 |
| 12,000 | . 47 | . 55 | 1.03 |  |  |
| 12,500 | . 47 | . 55 | 1.03 |  |  |
| 15,000 | 47 | . 55 | 1.03 | 1.45 | 1.84 |
| 20,000 | . 47 | . 55 | 1.03 | 1.45 | 1.84 |
| 25M | . 51 | . 64 | 1.15 | 1.51 | 1.91 |
| 30M |  | . 64 | 1.15 | . . . . . . | ....... |
| 35 M |  | . 64 |  |  |  |
| 40M | . . . | . 64 | 1.15 | ..... | $\cdots$ |
| 50M |  | . 73 | 1.25 | 1.86 | 1.98 |
| 60M | ...... |  | 1.25 |  |  |
| 75M |  |  | 1.44 | 1.76 | 2.09 |
| 100 M | . . . |  | 1.56 | 1.86 | 2.20 |

# OHMITE FIXED \& ADJUSTABLE RESISTORS 



BROWN DEYIL FIXED RESISTORS
Wire-wound, vitreous enameled units. Tin ned copper terminals. Protected aqainst humidity. Tolerance $\pm 10 \%$. Wt. 3 oz.

OHMS

| $0.4 \pm$ | 10 | 150 | 750 | 2,250 $\ddagger$ | 8,000 | 20,000 | 25,000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.6才* | 12† | 200 | 800 | 2,400* $\ddagger$ | 8,500† | 22,500t | 80,000* |
| 0.8.** | $15 \dagger \ddagger$ | $225 \dagger$ | 850* $\ddagger$ | 2,500 | 10,000 | 25,000 | 85,000* |
| $1 . t$ | 20 t | 250 | 900† $\ddagger$ | 2,750* $\ddagger$ | 11,000 $\dagger$ | 30,000 | 90,000* |
| $1.2 \pm \ddagger$ | 25 | 300 | 1,000 | 3,000 | 12,000 $\dagger$ | 35,000 | 95,000* |
| $1.37 \ddagger$ | $30 t$ | 350 | $1.100 \dagger$ | 3,500 $\ddagger$ | 12,500 | 40,000 | 100,000* |
| $1.5 \dagger \ddagger$ | $35 \dagger \ddagger$ | 400 | 1,200 $\ddagger$ | 4,000 | 13,500 $\dagger$ | 45,000 | 100,000 |
| $2 \dagger$ | $40 \dagger \ddagger$ | $450 \dagger$ | 1,250 | 4,500 $\ddagger$ | 14,300 $\dagger$ | 50,000 |  |
| $3 \dagger$ | 50 | 500 | 1,500 | 5,000 | 15,000 | 55,000* |  |
| 4 $\ddagger$ | 75 | $600 \dagger$ | 1,750 $\ddagger$ | 6,000 | 16,000 $\dagger$ | 60,000* |  |
| 5 | 100 | 650** | 1,850* $\ddagger$ | 7,000 $\ddagger$ | 17,500t | 65,000* |  |
| $7.5 \dagger \ddagger$ | $125 \dagger$ | $700 \pm$ | 2,000 | 2.500 | 18,000 $\dagger$ | 70,000* |  |

5-WATT
All sizes to 10,000 ohms except $\ddagger$

| No. | Ohms | Each |
| :---: | :---: | :---: |
| 7N7103 | $1-1000$ | .31 |
| 7N7103 | $1100-5000$ | .33 |
| 7N7104 | $6000-10000$ | .36 |


| All sizes except those marked * |
| :--- |
| 7N7150 $0.4-1000$ .34 |


| 7N7150 | $0.4-1000$ | .34 |
| :---: | :---: | :---: |
| 7N7150 | $1100-5000$ | .37 |
| 7N7150 | $6000-10000$ | .42 |
| 7N7151 | $11000-20000$ | .47 |
| 7N7151 | $22500-25000$ | .51 |
| 7N7151 | $30000-50000$ | .57 |

## VITREOUS ENAMELED FIXED RESISTORS

Lug type resistors, wire wound on porcelain and insulates the wire Tolerance $\pm 10 \%$.

| Ohms | $\begin{gathered} \text { 25W } \\ \text { 7N7125 } \end{gathered}$ | $\begin{gathered} 50 \mathrm{~W} \\ \text { 7N7132 } \end{gathered}$ | $\begin{aligned} & \text { 100W } \\ & \text { 7N7139 } \end{aligned}$ | $\begin{aligned} & 200 \mathrm{~W} \\ & \text { 7N7144 } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 1 | . 47 | 1.11 | 1.66 | 2.20 |
| 2 | . 47 | 1.11 | 1.66 | 2.20 |
| 3 | . 47 | 1.11 | 1.66 | 2.20 |
| 4 | . 47 | 1.11 | 1.66 | 2.20 |
| 5 | . 47 | . 80 | 1.20 | 2.20 |
| 10 | . 47 | . 80 | 1.20 | 1.59 |
| 25 | . 47 | . 80 | 1.20 | 1.59 |
| 50 | . 47 | . 80 | 1.20 | 1.59 |
| 75 | . 47 | . 80 | 1.20 | 1.59 |
| 100 | . 47 | . 80 | 1.20 | 1.59 |
| 150 | . 47 | . 80 | 1.20 | 1.59 |
| 200 | . 47 | . 80 |  |  |
| 250 | . 47 | . 80 | 1.20 | 1.59 |
| 500 | . 47 | . 80 | 1.20 | 1.59 |
| 750 | . 47 | . 80 | 1.20 | 1.59 |
| 800 | . 47 | . 80 |  |  |
| 1000 | . 47 | . 80 | 1.20 | 1.59 |
| 1500 | . 51 | . 85 | 1.22 | 1.62 |
| 2000 | . 51 | . 85 | 1.22 | 1.62 |
| 2500 | . 51 | . 85 | 1.22 | 1.62 |
| 3000 | . 51 | . 85 | 1.22 | 1.62 |
| 3500 | . 51 | $\cdots$ | . |  |
| 4000 | . 51 | . 85 | $\ldots$ | $\ldots$ |
| 5000 | . 51 | . 85 | 1.22 | i.62 |
| 6000 | . 55 | .... | .... |  |
| 7500 | . 55 | . 93 | 1.32 | 1.73 |
| 8000 10,000 |  | . 93 |  |  |
| 12,000 | . 59 | 1.93 | 1.32 | 1.73 |
| 15,000 | . 59 | 1.03 | 1.45 | i. 84 |
| 20,000 | . 59 | 1.03 | 1.45 | 1.84 |
| 25,000 | . 67 | 1.15 | 1.57 | 1.91 |
| 30,000 | . 67 |  | 1.57 | 1.91 |
| 35,000 | . 67 | 1.15 |  |  |
| 40,000 | . 67 | .... | 1.57 | 1.91 |
| 45,000 | . 76 |  |  |  |
| 50,000 | . 76 | 1.25 | 1.66 | 1.98 |
| 60,000 | . 76 | .... | 1.66 | 1.98 |
| 70,000 | . 89 |  |  |  |
| 75,000 | ... | 1.44 | 1.76 | 2.09 |
| 80,000 100,000 | .89 1.02 | 1.56 |  |  |
| 125,000 |  | 1.66 | 1.86 | 2.20 |
| 150,000 |  | 1.71 | ... | .... |
| 175,000 | .... | 1.78 |  |  |
| 200,000 |  | 1.84 |  |  |
| 225,000 |  | 2.08 |  | $\cdots$ |
| 250,000 | . | 2.08 |  | $\ldots$ |

STANDARD ADJUSTABLE SLIDERS
Screwdriver Type

| pe |  |  | Bakelite Knob Type |  |
| :---: | :---: | :---: | :---: | :---: |
| Diam. | No. | Each | No. | Each |
| 5.6" ${ }_{6}{ }^{\prime \prime}$ | 7N7193 | 124 |  |  |
| \%"" | 7N7194 7N7195 | 12 15 | 7N7197 | 184 |
| 11/8* | 7N7196 | 15. | 7N7199 | 24 |

20-WATT
All sizes except those marked $\dagger$

| No. | Ohms | Each |
| :---: | :---: | :---: |
| 7N7152 | $0.4-1000$ | .44 |
| 7N7152 | $1200-5000$ | .46 |
| 7N7152 | $6000-10000$ | .52 |
| 7N7152 | 12500.15000 | .55 |
| 7N7153 | 20000 | .55 |
| 7N7153 | $25 \mathrm{M}-40 \mathrm{M}$ | .64 |
| 7N7153 | $45 \mathrm{M}-50 \mathrm{M}$ | .73 |
| 7N7154 | $55 \mathrm{M}-60 \mathrm{M}$ | .73 |
| 7N7154 | $65 \mathrm{M}-80 \mathrm{M}$ | .86 |
| 7N7154 | $85 \mathrm{M}-100 \mathrm{M}$ | .99 |



## OHMITE "LITTLE DEVIL" RESISTOR ASSORTMENTS FREE PLASTIC CABINET



## OHMITE "LITTLE DEVIL" INSULATED RESISTORS

Insulated molded plastic. Meet JAir specifications including humidity and salt water immersion lests. Used in critical equipment and in foremost laboratories. Dissipate heat rapicly Tolerance $\pm 10 \%$.

STANDARD RMA CODE-SPECIFY RESISTANCE

| Ohms | Ohms | Ohms | Ohms | Megohms | Megohms | Megohms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 100 | 1.000 | 10,000 | 0.1 |  |  |
| 12 | 120 | 1.200 | 12,000 | 0.12 | 1.2 | 12.0 |
| 15 | 150 | 1.500 | 15,000 | 0.15 | 1.5 | 15.0 |
| 18 | 180 220 | 1,800 2,200 | 18,000 22,000 | 0.18 | 1.8 | 18.0 |
| 27 | 220 | 2,200 2,700 | 22,000 | 0.22 0.27 | 2.2 | 22.0 |
| 33 | 330 | 3,300 | 33,000 | 0.33 | 3.7 | $\cdots$ |
| 39 | 390 | 3,900 | 39,000 | 0.39 | 3.9 | $\ldots$ |
| 47 | 470 | 4,700 | 47,000 | 0.47 | 4.7 |  |
| 56 | 560 | 5,600 | 56,000 | 0.56 | 5.6 | $\ldots$ |
| 68 | 680 | 6,800 | 68,000 | 0.68 | 6.8 | .... |
| 82 | 820. | 8,200 | 82,000 | 0.82 | 8.2 |  |

 olerance in multiple quantities of 10 of one value. Send us your specifications and we will gladly submit quotations.


ADJUSTABLE RESISTORS
Wire wound, vitreous enameled on m"celain cores with a narrow strip of wire exposed to form contact surface. With slider.

| Ohms | $\begin{gathered} 10 \mathrm{~W} \\ \text { 7N7174 } \end{gathered}$ | $\begin{gathered} 25 W \\ 7 \mathrm{~N} 7175 \end{gathered}$ | $\begin{gathered} 50 \mathrm{~W} \\ \text { 7N2178 } \end{gathered}$ | $\begin{gathered} \text { 100W } \\ \text { 7N7182 } \end{gathered}$ | $\begin{gathered} 200 \mathrm{~W} \\ \text { 7N7185 } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | .... | . . . | 1.47 |  |  |
| 2 | ... | . . . | 1.47 | . . | . . . . |
| 3 | .... | . . . | 1.47 | . . . | . . . |
| 4 |  |  | 1.47 |  |  |
| 5 | . 71 | . 93 | 1.16 | .... | $\cdots$ |
| 10 | . 71 | . 92 | 1.16 | 1.74 | 2.14 |
| 25 | . 21 | . 92 | 1.16 | 1.74 | 2.14 |
| 50 | . 71 | . 92 | 1.16 | 1.74 | 2.14 |
| 75 |  |  | 1.16 |  |  |
| 100 | . 71 | . 92 | 1.16 | 1.74 | 2.14 |
| 150 | ... | . . . | 1.16 |  |  |
| 200 |  | $\cdots$ | 1.16 | . . $\cdot$ | , |
| 250 | . 71 | . 92 | 1.16 | 1.74 | 2.14 |
| 300 | .... | .... | 1.16 | ... | . |
| 400 | ... | .... | 1.16 | ... | ... |
| 500 | . 71 | . 92 | 1.16 | 1.74 | 2.14 |
| 750 | . 71 | . 92 | 1.16 |  |  |
| 800 | , |  | 1.16 |  |  |
| 1000 | . 71 | . 92 | 1.16 | 1.74 | 2.14 |
| 1250 | .... | .... | 1.21 | .... | ... |
| 1500 | $\cdots$ |  | 1.21 | . . |  |
| 2000 | . 73 | . 93 | 1.21 | . | ... |
| 2250 | - |  | 1.21 |  |  |
| 2500 | . 73 | . 93 | 1.21 | 1.79 | 2.18 |
| 3000 | . 73 | . 93 | 1.21 | ... | . . |
| 3500 |  |  | 1.21 |  |  |
| 4000 | . 73 | . 93 | 1.21 | .... | . . |
| 4500 |  |  | 1.21 |  | .... |
| 5000 | . 23 | . 93 | 1.21 | 1.79 | $\ddot{2} .18$ |
| 6000 | .... | . . . | 1.28 | .... | . |
| 7000. | . . . | .... | 1.28 | . . | . |
| 7200 |  |  | 1.28 | ... | . |
| 7500 | . 78 | 1.00 | 1.28 | ... | .... |
| 8000 | .... | .... | 1.28 | .... |  |
| 9000 | .... | .... | 1.28 |  | .... |
| 10,000 | . 78 | 1.00 | 1.28 | 1.89 | 2.30 |
| 12,000 | . |  | 1.39 |  |  |
| 15,000 | . . . | 1.03 | 1.39 | 2.01 | 2.42 |
| 20,000 |  | 1.03 | 1.39 | 2.01 | 2.42 |
| 25,000 | ... | 1.11 | 1.50 | 2.14 | 2.47 |
| 30,000 | *... | ... | 1.50 | 2.14 | 2.47 |
| 40,000 | ... | .... | 1.50 | 2.14 | 2.47 |
| 50,000 | .... | .... | 1.62 | 2.22 | 2.53 |
| 60,000 | ... |  | 1.62 | ... |  |
| 80,000 | .... | .... | 1.80 | . . . | .... |
| 100,000 | . | . . . | 1.91 | . | ... |

# RELIANCE RESISTORS_SMALL PARTS CABINETS 

INSULATED $1 / 2$ AND 1 WATT RESISTORS

RMA color coded insulated
 resistant. Securely anchored pigtail wire leads. Ideal for congested wiring in compact equipment.
All resistors are constructed to the highest quality standards. Low noise level. Each is compactly made to small size consistent with ralings for use where space is critical. RMA preferred values only. Guaranteed accuracy $\pm 10 \%$

| Resis. <br> Ohms | 1/2 Watt Cat. No. | 1 Watt Cat. No. | Resis. <br> Ohms | $\frac{1}{2}$ Watt Cat. No. | 1 Watt Cat. No. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 220 | 7N4250 | 7N4300 | 56,000 | 7N4278 | 7N4328 |
| 270 | 7N4239 | 7N4354 | 68,000 | 7N4279 | 7N4329 |
| 330 | 7N4245 | 7N4348 | 82,000 | 7N4280 | 7N4330 |
| 390 | 7N4251 | 7N4301 | 100,000 | 7N4281 | 7N4331 |
| 470 | 7N4252 | 7N4302 | 120,000 | 7N4282 | 7N4332 |
| 560 | 7N4253 | 7N4303 | 150,000 | 7N4283 | 7N4333 |
| 680 | 7N4254 | 7N4304 | 180,000 | 7N4240 | 7N4355 |
| 820 | 7N4255 | 7N4305 | 220,000 | 7N4284 | 7N4334 |
| 1000 | 7N4256 | 7N4306 | 270,000 | 7N4285 | 7N4335 |
| 1200 | 7N4257 | 7N4307 | 330,000 | 7N4286 | 7N4336 |
| 1500 | 7N4258 | 7N4308 | 390,000 | 7N4247 | 7N4350 |
| 1800 | 7N4259 | 7N4309 | 470,000 | 7N4287 | 7N4337 |
| 2200 | 7N4260 | 7N4310 | 560,000 | 7N4241 | 7N4356 |
| 2700 | 7N4261 | 7N4311 | 680,000 | 7N4242 | 7N4357 |
| 3300 | 7N4262 | 7N4312 | 820,000 | 7N4298 | 7N4353 |
| 3900 | 7N4263 | 7N4313 | Megohms |  |  |
| 4700 | 7N4264 | 7N4314 | 1.0 | 7N4288 | 7N4338 |
| 5600 | 7N4265 | 7N4315 | 1.2 | 7N4243 | 7N4358 |
| 6800 | 7N4266 | 7N4316 | 1.5 | 7N4248 | 7N4351 |
| 8200 | 7N4268 | 7N4318 | 1.8 | 7N4244 | 7N4359 |
| 10,000 | 7N4269 | 7N4319 | 2.2 | 7N4289 | 7N4339 |
| 12,000 | 7N4270 | 7N4320 | 2.7 | 7N4249 | 7N4352 |
| 15,000 | 7N4271 | 7N4321 | 3.3 | 7N4290 | 7N4340 |
| 18,000 | 7N4272 | 7N4322 | 3.9 | 7N4291 | 7N4341 |
| 22,000 | 7N4273 | 7N4323 | 4.7 | 7N4292 | 7N4342 |
| 27,000 | 7N4274 | 7N4324 | 5.6 | 7N4293 | 7N4343 |
| 33,000 | 7N4275 | 7N4325 | 6.8 | 7N4294 | 7N4344 |
| 39,000 | 7N4276 | 7N4326 | 8.2 | 7N4295 | 7N4345 |
| 47,000 | 7N4277 | 7N4327 | 10 | 7N4297 | 7N4347 |

$1 / 2$-Watt Size
10 for 29
4.

100 tor 2.49

T-Watt Size
10 for 38 ............ 100 for 3.40

## KIT OF 100 RESISTORS

An assortment of 100 popular sarhon resistors. Kıt contains approxiRMA color coded. Shipping werght $2 / 4$ lhs. 7N3816-Kit of 100 resistors. Each Kıt
1.50


RESISTOR COLOR CARD INDICATOR
Permits instant calculation of the value in ohms of any RMA color coded resistor. The circular rule can be set in a moment-read ings ore accurate. Full directions printed on 7N3847.

10 \$

OHMITE POCKET-SIZE OHM'S LAW CALCULATOR


Solves Ohm's Law problems quckly and easily with one setting of slide. No decimal points to cause confusion-all values are direct reading. Requires no slide-rule knowledge. Size: $3^{\prime \prime} \times 9^{\prime \prime}$. RMA Resistor Color Code chart also included for handy reterence. 2 5


## 4 DRAWER ALL STEEL CABINET

Attractive, impressive, practical in design. Embossed cabinets fit securely when stacked in multiple units. Drawers are $8 \times 101 / 4 \times 11 / 4^{\prime \prime}$, each with card holder and removable partitions to furnish 2 to 12 compartments per drawer. Con-
structed of heavy gauge steel with no sharp edges. $71 / 2 \times 81 / 2 \times 101 / 4$. Brown. 18N22351-Shpg. wt. 9 lbs. .
5.25

## IRC RESIST-O-GUIDE

A handy resistor color code chart that meas. ures $3 \times 5$ inches. It includes both the old and the new style codes, together with tolerance designations. Also has Ohm's Law lormulas and a ruler printed on the Pyrolin card. 23N19747

5 AND 10 WATT WIRE-WOUND RESISTORS


Tolerance within 5\%
All are wound with genuine nichrome wire on fine ceramic tubes. Guaranteed accuracy $5^{\circ} \%$. Tinned copper wire leads and Jugs for easy soldering. When ordering, specify size desired.


| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 50 | 150 | 500 | 2000 | 5000 |  |
| 25 | 100 | 200 | 1000 | 2500 | 1000 | $\mathbf{2 9}$ |

7N4445-Specify resistance.
7N4446-Extra Slider for above. Each
. $\$$

## Reliance Vitreous Resistors

 Guaranteed plus or minus $10 \%$. All are non-porous, dissipate heat rapidly, have positive lug contacts and do not change in value. Each marked for resistance.

| No. | Ohms | No. | Ohms | No. | Ohms | No. | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7N4850 | 1 | 7N4866 | 100 | 7N4876 | 1000 | 7N4886 | 10000 |
| 7N4854 | 5 | 7N4868 | 150 | 7N4879 | 2000 | 7N4888 | 15000 |
| 7N4856 | 10 | 7N4870 | 250 | 7N4880 | 2500 | 7N4889 | 20000 |
| 7N4861 | 30 | 7N4872 | 400 | 7N4881 | 3000 | 7N4489 | 25000 |
| 7N4863 | 40 | 7N4873 | 500 | 7N4883 | 5000 | 7N4893 | 30000 |
| 7N4864 | 50 | 7N4875 | 750 |  |  |  |  |




## ALL-STEEL MULTI DRAWER

Convenient and economical storage for 'fittings, and small parts. Each unit constructed with tongue and slot designed to interlock with other units at top, bottom or side. Units may be fitted and securely locked around existing fixtures for economy of space. Each drawer has handy pull and holder for contents card: All-steel construction finished in attractıve two-tone green. Ample drawer depth permits storage of reasonably large parts. Overall dimensions $23 / 8$ " $\times 21 / 4^{\prime \prime} \times 5^{\prime \prime}$.
18N22381-Shpg. wt. 10 oz. 10 for.... 2.70 Each

30

## WIRT RESISTOR CABINET 24 ROOMY COMPARTMENTS

Handsome blond finish wooden cabinet designed for the systemalic and sate storage of resistors, small condensers and hardware or small precision tools. Saves you time and effort, keeps small parts at your fingertips, protects them from damage by condenser leads need not be bent as denser leads need not be bent as drawers measures, 4 deep. Six drawsure ample space to file hundreds of
 1 -watt resistors. Flat top and bottom allows cabinets to be stacked when more drawer space is required. Sturdy tonque and groove construc fion throughout. Measures $9^{\prime \prime}$ high, $7^{\prime \prime}$ wide, $6 \frac{1}{2}$ " deep. 7N22363-Shipping weight 5 lbs.

## SPECIAL RESISTORS \& CLAROSTAT VOLUME CONTROLS

SPRAGUE "KOOLOHM" RESISTORS



STANDARD FIXED

| Ohms | Oh | Ohms |  |
| :---: | :---: | :---: | :---: |
| $\begin{array}{r} 10 \\ 20 \\ 25 \\ 30 \\ 50 \\ 75 \\ 100 \\ 150 \end{array}$ | $\begin{gathered} 250 \\ 300 \\ 400 \\ 500 \\ 750 * \\ 1000 \\ 1250 \\ 1500 \\ 2000 \\ \hline \end{gathered}$ | $\begin{gathered} 2500 \\ 3000 \\ 5000 \\ 7500 \\ 10,000 \\ 12,000 * \\ 12.500 \dagger \\ 15,000 \\ 17,500^{*} \end{gathered}$ | $\begin{aligned} & 30,000 \\ & 40,000 \\ & 50,000^{*} \\ & 60,000^{*} \\ & 70,000^{*} \end{aligned}$ |
| $\dagger-5$ watt only. *- 10 watt only Type 5KT-5 W. $1^{1 / 8 \times 13 / 32^{\prime \prime}}$ |  |  |  |
|  |  |  |  |
| $\begin{aligned} & \text { 7N75 } \\ & \text { 7N75 } \\ & \text { 7N75 } \\ & \text { 7N75 } \end{aligned}$ | 15 | $\begin{array}{r} 30 \text { to } 15 \\ 20,000 \\ 25,000 \\ 30,000 \\ 40,000 \\ \hline \end{array}$ | $\begin{aligned} & 31 d \\ & 35 d \\ & 39 d \\ & 49 d \\ & 53 d \end{aligned}$ |

Type $10 \mathrm{KT}-10 \mathrm{~W} .13 / 4 \times 13 / 32^{\prime \prime}$ 7N7520 10 to 10 MO Ohms $\mid 34 \mathrm{c}$ 7N7520 12M 15M Ohms 38\& 7N7521 17,500\&20,000 42 \& 7N7522 7N7523 7N7524 7N7525 7N7526 7N7527 25,000 30,000
40,000 40,000 50,000
60,000 70,000

New Tropicalized fixed resistors. Insulation has high di-electric strength, withstands red heat and is impervious
to moisture. Units are encased in tubular ceramic shells which permit mounting in contacl with metal parts without shortincs. $21 / 2^{\prime \prime}$ tinned copper wire leads. Meet requirement of television and other high-voltage circuits. Negligible resistance drift. Insulated for 10,000 volts. Accuracy guaranteed $\pm 5 \%$. Non-inductive types show zero anductance up to 50 mc . and distributed capacitance is only 2 mmfd .

STANDARD ADJUSTABLE Type 10AD-10 W. $\mathrm{Y}^{3 / 4 \times 13 / 32^{\prime \prime}}$ With odjustable clip.

| Ohms | Ohms | Ohms | Ohms |
| :---: | :---: | ---: | ---: |
| 10 | 200 | 750 | 3000 |
| 25 | 250 | 1000 | 4000 |
| 50 | 300 | 1500 | 5000 |
| 100 | 400 | 2000 | 7500 |
| 150 | 500 | 2500 | 10,000 |

7N7534-Any Above
58
NON-INDUCTIVE FIXED
Type 10 NIT-10 W. $13 / 4 \times 13 / 32^{\prime \prime}$

| Ohms | Ohms | Ohms | Ohms |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & 10 \\ & 20 \\ & 30 \\ & 40 \\ & 50 \\ & 60 \end{aligned}$ | 70 80 90 100 250 400 | $\begin{array}{r} 500 \\ 750 \\ 1000 \\ 1250 \\ 1500 \\ 2000 \end{array}$ | $\begin{array}{r} 2500 \\ 3000 \\ 3500 \\ 4000 \\ 5000 \\ 7500 \\ 10,000 \end{array}$ |
| Stock No. | Ohms |  | Each |
| $\begin{aligned} & \text { 7N7528 } \\ & \text { 7N1529 } \\ & \text { 7N7530 } \\ & \text { 7N7531 } \\ & \text { 7N7532 } \\ & \text { 7N7533 } \end{aligned}$ | $\begin{gathered} 10 \text { to } 1000 \\ 1250 \text { to } 2000 \\ 2500 \text { to } 4000 \\ 5000 \\ 7500 \\ 10,000 \\ \hline \end{gathered}$ |  |  |
|  |  |  | 54d |
|  |  |  | 61 ¢ |
|  |  |  |  |



MALLORY YARD.OHM RESISTANCE KITS
Real solution to the odd-value resistor probi lem. Ideal tor meter shunts, experimentalab., etc. Contain all necessary materials to construct flexible resistors of a wide range of values. Each kit consists of 1 yard spiral wound resistance wire, 1 yard insulated braid
and 24 spiral wire leads. Available in eight and 24 siriral wire leads. Available in eight resstance values. Dissipation -all types; $1 / 2$ watt per inch. With in.


## CONTINENTAL "NOBLELOY" X-TYPE RESISTORS

New 1 -watt resistor involving metal film principle, with accuracy of wire wound unit. No carbon used. Metallic resistance film is formed on the surface of a low loss ceramic tube, then hermetically sealed by a layer of vitreous enamel. Ceramic tubes are hollow and allow greater area for heat dissipation characteristics. Will withstand overloads of $200 \%$ and temperatures of 400 F . without change in value upon relurn' to room temperature. Critical tolerance
 within $1 \%$. Size $9 / 32^{\prime \prime} \times 1^{1 "} .11 / 2^{\prime \prime}$ tinned copper leads.

| Ohms | Ohms | Ohms | Ohms | Ohms |
| :---: | :---: | :---: | :---: | :---: |
| 10 | $\begin{aligned} & 2950 \\ & 3500 \end{aligned}$ | $\begin{array}{r} 9950 \\ 10,000 \end{array}$ | $\begin{aligned} & 85 \mathrm{M} \\ & 90 \mathrm{M} \end{aligned}$ | 500M |
| 2.5 | 4000 | 13,500 | 100 M | 750 M |
| 50 | 4450 | 15 M | 150 M | 800 M |
| 100 | 4950 | 20M | 200 M | 900 M |
| 200 | 5000 | 25M | 240 M | 1.0 Meg. |
| 400 | 5500 | 30 M | 250 M | 1.5 Meg. |
| 500 | 5950 | 40M | 300M | 2.0 Meg. |
| 1000 | 7450 | 50 M | 400M | 2.5 Meg . |
| 1450 | 8500 | 60 M | 450M | 3.0 Meg . |
| 2000 | 8950 | 75M | 490M |  |

7N7105--Specify Resiatance. Each. . . . . . . . . . . . . . . . . . . . . . . S9¢
CLAROSTAT SERIES "M" AND "T" VOLUME CONTROLS


Compact, efficiert with exxelusive stabilized element. "T" type mit special functional operation not attainable with other types of
controls. Dia. $11 / \mathrm{s}^{\prime \prime}$. Shaft $2^{\prime \prime} \times 1 / 4$
Switches to tht either type control listed below. Last letter of type numbers listed below identifies tape: of control.

## CLAROSTAT TAPER CODE

S-Linear, Std. Pot.
V-Light Hand C Bias Rheosiat
Z-Light Hand, Audio Shunt, AVC
-Left Ha
W-LLeft Hand Screen Grid Vout - Phono Pickup

Left Hand, Audio Shunt and AVC When Steep Taper is Desired

## STANDARD CONTROLS

| No. | Type | Ohms | No. | Tyue | Ohms | No. | Type | Obms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8N7350 | M-5.s | 500 | 8N7362 | M-4 $\mathrm{H}^{\text {S }}$ | 25,000 | 8N7374 | M-63-Z | 1 Meg . |
| 8N7351 | M-8-S | 1,000 | 8N7363 | M-44- | 50,000 | 8N7375 | M-66-Z | 2 Meg. |
| 8N7352 | M-11-S | 2,000 | 8N7364 | M-46-Z | 50,000 | 8N7376 | M-67-Z | 3 Meg . |
| 8N7353 | M-15-S | 3,000 | 8N7365 | M-4i-S | 75,000 | 8N7377 | M-68-Z | 4 Meg . |
| 8N7354 | M-19-S | 5,000 | 8N7366 | M-4 $\mathrm{m}_{\text {- }} \mathrm{S}$ | 100,000 | 8N7378 | M-69-Z | 5 Meg . |
| 8N7355 | M-20-U | 5,000 | 8N7367 | M-5:-Z | 100,000 | 8N7379 | M-89-Z | 10 Meg . |
| 8N7356 | M-23-N | 7,500 | 8N7368 | M-5:- ${ }^{\text {a }}$ | 200,000 | 8N7400 | M-81-Z | 10 Meg . |
| 8N7357 | M-27-S | 10,000 | 8N7369 | M-5.5-S | 250,000 | 8N7401 | M-37-U | 20 Meg . |
| 8N7358 | M-29-U | 10,000 | 8N7370 | M-6t-Z | 250,000 | 8N7402 | M-41-W | 25 Meg . |
| 8N7359 | M-30-V | 10,000 | 8N7371 | M-5.2.s | 500,000 | 8N7403 | M-45-W | 50Meg. |
| 8N7360 | (1-32- | 15,000 | 8N7372 | M-6\%-Z | 500,000 | 8N7404 | M-50-Y | 500 Mg . |
| 8N7361 | M-33-U | 15,000 | 8N7373 | M-61-S | 1 Meg. |  |  |  |

Your Cost, any of above controls
$73 \$$
SERIES (T) TAPPED CONTROLS

| O. | Type | Ohms | Tapped | No. | Type | Ohms | Tapped |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8N7380 | T-42 | 250,000 | 125,000 | 8N7388 | T-114 | 2 Meg . | 100,000 |
| 8N7381 | T-69 | 350,000 | 75,000 | 8N7389 | T-115 | 2 Meg . | 500,000 |
| 8N7382 | T-78 | 500,000 | 100,000 | 8N7390 | T-116 | 2 Meg . | 1 Meg . |
| 8N7383 | T-101 | 1 Meg . | 50,000 | 8N7405 | T-120 | 2 Jeg . | 400,000 |
| 8N7384 | T-102 | 1 Meg . | $\left\{\begin{array}{l} 100,000 \\ 500,000 \end{array}\right.$ | 8N7391 | T-121 | 2 Meg . | $\left\{\begin{array}{l} 250,000 \\ 500,000 \end{array}\right.$ |
| 8N7385 | T-103 | 1 Mcg . | 100,000 | 8N7406 | T-123 | $2: 5 \mathrm{Meg}$. | 250,000 |
| 8N7386 | T-109 | 1 Meg . | 225,000 | 8N7392 | T-128 | 4 Meg . | 500,000 500,000 |
| 8N7387 | T-112 | 1 Meg. | 500,000 |  |  |  |  |

## CLAROSTAT WIREWOUND CONTROLS

Series 58. Wirewound controls w th alloy wire precisely wound on thin bakelite strip. Perfect sliding contast. $1 / 4^{\prime \prime}$ shaft. 11/2"lqng. All controls listed below are linear.

| No. | Ohms | No. | Ohms | No. | Ohms | No. | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8N7048 | 1 | $\overline{8 N 7056}$ | 25 | 8N7097 | 200 | 8N7087 | 3000 |
| 8N7049 | 2 | 8N7057 | 30 | 8N7096 | 300 | 8N7084 | 5000 |
| 8N7051 | 4 | 8N7058 | 40 | 8N7095 | 400 | 8N7078 | 10000 |
| 8N7052 | 6 | 8N7099 | 50 | 8N7094 | 500 | 8N7073 | 15000 |
| 8N7053 | 10 | 8N7060 | 60 | 8N7093 | 750 | 8N7070 | 20000 |
| 8N7054 | 15 | 8N7061 | 75 | 8N7092 | 1000 |  |  |
| 8N7055 | 20 | 8N7098 | 100 | 8N7090 | 2000 |  |  |

Any Above Type--Each. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 7 ?
8N7068 25000 8N7066 40000 8N7067 30000-Each.. 944 8N7065 50000-Each
8N77064 75000 8N7063 100000

## IRC "PRECISTORS" CARBON RESISTORS


excellent for multipliers, test equipment, HF TV circuits and RF high voltage systerrs. Guaranleed accuracy $\pm 1 \%$. Type DC: 1/2-watt; size ${ }^{15}$ 10x $^{9} 8^{\prime \prime}$ diam. DCH l-watt; size: $21,16 \mathrm{x}^{9} \mathbf{2}^{\prime \prime}$ diam.

*Special indust. price applies to lots of 25 of one value.

## MALLORY VOLUME CONTROLS

MALLORY RADIO SERVICE ENCYCLOPEDIA-6TH ED.


Only complete servicing reference on all pre-war and post-war receivers. Approximately $25 \%$ more listings than the Sth edition. Up-to-the-minute facts on correct replacement parts, volume and tone controls, capacitors, vibrators, circuit information, servicing hints, etc. Lists radio sets by make and number side-by-side with replacement data on its components. Complete information on IF peaks, correct tube complements, all conveniently arranged for instant reference. Provides for further reference by listing page and volume in Rider's Manual where further information on the subject
may be obtained.
2.00

## STANDARD UNIVERSAL TAPPED CONTROLS

Standard $11 / /^{\prime \prime}$ diameter controls with tap for various applications. Furnished with two nuts, washer, ground terminal and knob adapter, *No provision for use with switch; if switch is desired use TRP624. †Has slotted shaft for auto sets. $\ddagger$ Special taper for fader service. Others are taper 1 . Less switches.



Each-Shipping weight $1 / 2 \mathrm{lb}$.
1.09

## STANDARD UNIVERSAL DUAL CONTROLS

Consists of two volume controls strapped together and driven by a y all receivers
Wire Wound Controls

| Wire Wound Controls |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Res. in Ohms |  | Taper |  |
| No. | Type | Front | Rear | Front | Rear |
| 8N6684 8N6658 8N6685 | $\begin{aligned} & \mathrm{CE} \\ & \mathrm{GE} \\ & \mathrm{GG} \end{aligned}$ | $\begin{aligned} & 2000 \\ & 10000 \\ & 10000 \end{aligned}$ | 5000 5000 10000 | $\begin{aligned} & \text { II } \\ & \text { VII } \end{aligned}$ | IV |
| Carbon Controls |  |  |  |  |  |
| 8N6686 | GK | 10000 | 50000 |  |  |
| 8N6659 | LL | 100000 | 100000 | 1 | 1 |
| 8N8687 | LM | 100000 | 250000 |  | I |
| $8 N 6149$ $8 N 6689$ | MM | 250000 | 250000 | I | I |
| 8N6689 | NN | 500000 | 500000 | 1 | I |

Each-Shipping weight 1 lb .
1.82


UNIVERSAL VOLUME CONTROLS
The Mallory-Yaxley Volume Controls listed on these pages can be used to service over $90 \%$ of all the radio receivers now in use. With comparatively few units, the serviceman is enabled to meet practically all service requirements. Mallory Yaxley Controls feature: minimum bias adjustment on all bias controls; $3^{\prime \prime}$ shafts that can be shortened by notching and breaking off; complete shielding; all furnished with knob adopter, and mounting hordwore. Approved switch (listed below) can be added to any control.

## UNIYERSAL REPLACEMENT CONTROLS

All with two mounting nuts, washer, ground terminal and knob adapter. Wire wound units have adjustable bias feature (exclusive MalloryYaxley); carbon element units with adjustable bias resistor where required.

| No. | Part | Ohms | Taper | No. | Part | Ohms | Taper |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8N6660 | Q | 2 | 4 | 8N6711 | G7* | 10000 | 7 |
| 8N6661 | R | 6 | 4 | 8N6675 | H* | 15000 | 2 |
| 8 N6662 | S | 10 | 4 | 8N6713 | H7* | 15000 | 7 |
| 8 N6663 | T | 20 | 4 | 8N6141 | A20MP* | 20000 | 4 |
| 8N6664 | U | 30 | 4 |  |  |  |  |
| 8N6665 | , | 60 | 4 | Carbon Controls |  |  |  |
| 8N6666 | W | 100 | 4 | 8N6738 | Y5MP | 5000 | 4 |
| 8N6667 | X | 200 | 4 | 8N6710 | F12* | 7500 | 1 |
| 8N6732 | A400P | 400 | 4 | 8N6740 | Y10MP | 10000 | 4 |
| 8N6668 | A | 500 | 1 | 8N6714 | H12* | 15000 | 1 |
| 8N6733 | A550P | 550 | 4 | 8N6715 | Y* | 20000 | 1 |
| 8N6734 | AlMP | 1000 | 4 | 8N6742 | Y25MP | 25000 | 4 |
| 8N6669 | B | 1000 | 1 | 8N6676 | J* | 25000 | 1 |
| 8N6719 | UC500 | 1000 | 2 | 8N6677 | K* | 50000 | 2 |
| 8N6735 | A2MP* | 2000 | 4 | 8N6716 | K12 | 50000 | 1 |
| 8N6670 | C* | 2000 | 2 | 8N6717 | 2* | 75000 | 2 |
| 8N6704 | Cl2* | 2000 | 1 | 8N6718 | Z12 | 75000 | 1 |
| 8N6736 | A3MP* | 3000 | 4 | 8N6729 | UC510* | 100000 | 2 |
| 8N6671 | D* | 3000 | 2 | 8N6721 | UC502 | 150000 | 1 |
| 8N6705 | D7* | 3000 | 7 | 8N6745 | Y200MP | 200000 | 4 |
| 8N6706 | D12* | 3000 | 1 | 8N6679 | M ${ }^{\prime \prime}$ | 250000 | 1 |
| 8N6703 | A 4 MP * | 4000 | 4 | 8N6730 | UC511t | 250000 | 1 |
| 8N6737 | A5MP* | 5000 | 4 | 8N6728 | UC509* | 250000 | 2 |
| 8N6672 | E* | 5000 | 2 | 8N6722 | UC503 | 750000 | 1 |
| 8N6707 | E7* | 5000 | 7 | 8N6723 | UC504 | 3 Meg. | 1 |
| 8N6673 | F* | 7500 | 2 | 8N6724 | UC505 | 4 Meg . | 1 |
| 8N6709 | F7* | 7500 | 7 | 8N6725 | UC506 | 5 Meg. | 1 |
| 8N6739 | A10MP* | 10000 | 4 | 8N6726 | UC507 | 5 Meg . | 2 |
| 8N6674 | $\mathrm{G}^{*}$ | 10000 | 2 | 8N6727 | UC508 | 9 Meg . | 1 |

*-Has adjustable bias feature. Wire wound units have adjustable plate; carbon element controls have external adjustable resistor. plate; carbon elernent controls have external adjustable resistor.
$\dagger$ Hiss slotted shaft for auto sets. Supplied Less Switch.

EXPLANATION OF MALLORY VOLUME CONTROL TAPERS

No. (1) For audio or antenna shunt circuits.
No. (2) For series circuits such as cathode voltage controls.
No. (3) For antenna shunt and " C " bias circuits.

## CONTROL SWITCHES



Attachable switches to fit all universal, tapped, and dual controls listed on this page.

| No. | Part | TYpe | Ea. |
| :---: | :---: | :---: | :---: |
| 8N62888 | 6.9 | S.P.S.T. | .35 |
| 8N12853 | 8 | S.P.D.T. | .44 |
| 8N6289 | 7 | D.P.S.T. | .44 |
| 8N6290 | 13 | 3.P.S.T. | .44 |
| 8N6291 | 14 | 4.P.S.T. | .44 |

## EXTENSION SHAFTS



Type A-Length $4^{\prime \prime}$.
8N6561-14 " diam. $1 /$ m $_{7}$ flat. 8N6562-1/" diam., s/2"n flat. 8N6563-3/18" diam., $1 / 6_{8}^{\prime \prime}$ flat Any Size, Each.
Type B- $-2^{\prime \prime}$ long, $1 / 4^{\prime \prime}$ diameter with $3 /$ rin $^{n}$ slot. Enclosed in tight fitting tube. 8N6559-Each.

No. (4) Linear taper; for voltage divider circuits.
No. (4A) Modified linear taper, similar to No. 4.
No. (7) Wire wound element. For antenna and " C " bias.

MOUNTING BRACKETS


For use where control mounts off chassis. Plated metal. Adjustable mounting centers.

8N6297-Type RB-248-Mounting centers $13 \frac{2}{\prime \prime}^{\prime \prime}$ to $2 \frac{3}{8} 8^{\prime \prime}$.
8N6298-Type RB-249-Mounting centers $28 / 8^{\prime \prime}$ to $27 / \mathrm{s}^{\prime \prime}$
Either Type, Each..

15

CONTROL HEX NUTS
For $8 / 8^{\prime \prime}$ bushings

|  | No. | For | Panels |
| :---: | :---: | :---: | :---: |
|  | Each |  |  |
|  |  |  |  |

## VOLUME CONTROL

 WRENCH

For standard volume control nuts. 8N6387-No. 178-Each..... 15 \&

## MALLORY CONTROL DEALS



Fast-moving selections of Mallory controls, switches and accessories in neat, heavy-duty cabinets. Contains $95 \%$ of all your control needs. The cabinet has provision for the Mallory Encyclopedia (not supplied), and the cabinet is FREE. See facing page for full description of controls contained in these cabinets.

| MIDGETROL SELECTION |  |  |  |
| :---: | :---: | :---: | :---: |
| 4 | U-48 | U-55 | 2 UP-10 |
| 3 | U-53 | 1 U-39 | 5 Extra Spring Clips |
| 2 | U-50 | 1 U. 41 | 5 Extra U Clips |
| 2 | U-44 | 9 US-26 | 1 Web Removing Tool |
| 1 | U-18 | 4 UE-50 |  |


| 4 MR-48 | 1 | MR-18 | $5 \mathrm{M}-26$ |
| :--- | :--- | :--- | :--- |
| 3 | MR-53 | 1 | MR-55 |
| 2 | 3 M-27 |  |  |
| 2 | MR-40 | 1 | MR-39 |
| 2 | 1 | MR-28 |  |

8N7023.

## UM SELECTION

| 4 UM-154 | U. | $2 \mathrm{M}-27$ |
| :---: | :---: | :---: |
| 3 UM-161 | 1 UM-163 | $1 \mathrm{M}-28$ |
| 2 UM-147 | 1 UM-142 | 5 SS-25 |
| 2 UM-156 | $3 \mathrm{M}-26$ | 1 SS-14 |
| 1 UM-140 |  |  |

## MALLORY VOLUME CONTROLS

## MALLORY TELEVISION ENCYCLOPEDIA

200 page manual following the same format as the famous MALLORY RADIO SVCE. ENCY. Lisis all makes and models T.V. sets through April, 1949, showing values and replacement of con.

$35 \$$
TELEVISION CONTROLS

| No. | Type | Ohms | Price |
| :---: | :---: | :---: | :---: |
| 8N6600 | SU29 | 25 M | .88 |
| 8N6601 | SU41 | 100 M | .88 |
| 8N6602 | SU50 | 500 M | .88 |
| 8N6603 | SU67 | SNM. | .88 |
| 8N6604 | SUD1235 | SMeg. tap- | 2.20 |
|  |  | ped atl Meg. |  |

Switches: Uses same switches as Mallory type "U" midgetrols listed on right.


## MALLORY "UM" AND "TM" JUNIOR CONTROLS

Ultra-compact controls featuring noiseless composition elements; attachable switches; plug-in type shafts. Both UM and TM types have slots which will take any one of the special shafts listed below. The TM types are similar to the UM but are provided with a tap as shown. TM type designed for use in tone compensating circuits. All are $1 / 2^{\prime \prime}$ thick, $110^{\prime \prime}$ diameter. Complete with SSI shaft.
MALLORY "UM" TYPE JUNIOR CONTROLS

| No. | Type | Ohms \& Taper | No. | Type | Ohms \& Taper |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8N6926 | UM114 | $5 \mathrm{M}(4 \mathrm{~A})$ | 8N6940 | UM140 | $100 \mathrm{M}(1)$ |
| 8N6927 | UM118 | 10M(1) | 2N6941 | UM141 | 100M (2) |
| 8N6928 | UM119 | -10M(2) | 8N6942 | UM142 | $100 \mathrm{M}(4)$ |
| 8N6929 | UM120 | $10 \mathrm{M}(4)$ | 8N6943 | UM144 | 150M(1) |
| 8N6930 | UM121 | 15M(1) | 8N6944 | UM147 | 250M(1) |
| 8N6931 | UM122 | 15M(2) | 8N6945 | UM149 | $250 \mathrm{M}(4)$ |
| 8N6932 | UM124 | 20M(1) | 8N6946 | UM151 | $350 \mathrm{M}(1)$ |
| 8N6933 | UM128 | 25M (2) | 8N6947 | UM154 | $500 \mathrm{M}(1)$ |
| 8N6934 | UM129 | 25M(4) | 8N6948 | UM156 | 500 M (4) |
| 8N6935 | UM133 | $50 \mathrm{M}(1)$ | 8N6949 | UM158 | $750 \mathrm{M}(1)$ |
| 8N6936 | UM134 | $50 \mathrm{M}(2)$ | 8N6950 | UM161 | 1 Meg . (1) |
| 8N6937 | UM135 | $50 \mathrm{M}(4)$ | 8N6951 | UM163 | 2 Meg. (1) |
| 8N6938 | UM137 | $75 \mathrm{M}(1)$ | 8N6952 | UM165 | $3 \mathrm{Meg}$. (1) |
| 8N6939 | UM138 | $75 \mathrm{M}(2)$ |  |  |  |
| Comple | - | Shaft. E |  |  | 734 |

MALLORY 'TM' TYPE TAPPED CONTROLS

| No. | Type | Ohms | Tapped | No. | Typ | Ohms |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 8N6OSO |  |  |  |
| 8 N6954 | TM221 | 250M | 110 M | 8N7006* | TM241 |  |  |
| 8N7013 | TM222 | 250M | 110M | 8N7007* | TM242 | Meg. | 450M |
| 8N7014* | TM223 | 500 M | 60 M | 8N6960 | TM243 | Meg . | 450M |
| 8N7015* | TM224 | 500 M | 100M | 8N7008 | TM244 | 11/2 Meg. | 200M |
| 8N6955 | TM225 | 350 M | 70M | 8N6961 | TM245 | 2 Meg. |  |
| 8N7016 | TM226 | 500M | 15M | 8N6962 | TM246 | Meg. | 15M |
| 8N7017 | TM227 | 500M | 100M | 8N6963 | TM24 | Meg. | 60 M |
| 8N6956 | TM228 | 500M | 5M | 8N6964 | TM24 | Meg. | 250M |
| 8N6957 | TM230 | 500 M | 150M | 8N6965 | TM249 | Meg. | 600M |
| 8N6958 | TM231 | 500 M | 225M | 8N7009 | TM25 | Meg . | 125M |
| 8N7018 | TM232 | 500 M | 225M | 8N6966 | TM251 | Meg. | 900M |
| 8N7019 | TM233 | 500 M | 60M | 8N7010* | TM252 | g. | 900M |
| 8N7020 | TM234 | 1 Meg | 65M | 8N7011 | TM254 | - | 400 M |
| 8N7021 | TM236 | 1 Meg | 125M | 8N6967 | TM257 | Meg . | 900M |
| 8N7022 | TM238 | 1 Me | 300 M | 8N7012 | TM259 | Meg . | 900M |
| 8N6 | TM239 | 1 Meg . | 300 M | 8N | T | Meg. | 1 Meg . |
| $\mathrm{Co}$ |  |  |  |  |  |  |  |

Switches: Uses same switches as "MR" controls-see listing lowe right.

## MALLORY PLUG-IN SHAFTS



NEW MALLORY MIDGETROLS
Small diameter ( ${ }^{15} / \mathrm{Kl}^{\prime \prime}$ ), special resistance element. New type contact for smooth, quiet operation. New shaft easily cut with side snips. With hardware and clips for

| No, | Type | Ohms | Taper | No. | Type | Ohms | Taper |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8N7450 | U-12 | 5M | (1) | - 8N7465 | U-40 | 100M | (2) |
| 8N7451 | U-14 | 5 M | (4) | 8N7466 | U-41 | 100 M | (4) |
| 8N7452 | U-18 | 10M | (1) | 8N7462 | U-42 | 150M | (1) |
| 8N7453 | U-19 | 10M | (2) | 8N1468 | U-43 | 200 M | (4) |
| 8N7454 | U-20 | 10 M | (4) | 8N7469 | U-44 | 250M | (1) |
| 8N7455 | U-21 | 15 M | (1) | ' 8N7470 | U-45 | 250 M | (2) |
| 8N7456 | U-22 | 15M | (2) | $18 N 7471$ | U-46 | 250M | (4) |
| 8N7457 | U-24 | 20M | (1) | \| 8N7472 | U-48 | 500 M | (1) |
| 8N7458 | U-28 | 25M | (2) | 8N7473 | U-50 | 500M | (4) |
| 8N7459 | U-29 | 25M | (4) | 8N7474 | U-51 | 750 M | (1) |
| 8N7460 | U-33 | 50M | (1) | 8N7475 | U-53 | 1 Meg. | (1) |
| 8N7461 | U. 34 | 50M | (2) | 8N7476 | U-54 | 1 Meg . | (4) |
| 8N7462 | U. 35 | 50 M | (4) | 8N7477 | U-55 | 2 Meg . | (1) |
| 8N7463 | U.36 | 75M | (1) | 8N7449 | U-56 | 2 Meg . | (4) |
| 8N7464 | U-39 | 100M | (1) | 8N7478 8N7479 | U. 57 | 3 Meg. 5 Meg. | (1) |

TAPPED MIDGETROLS

| No. | Type | Ohms | Tapped | No. | Type | Ohms | Tapped |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8N7480 | UT-420 | 250M | 50 M | 8N7484 | UT-443 | 1 Meg. | 450M |
| 8N7481 | UT-425 | 350 M | 70M | 8N7485 | UT-450 | 2 Meg . | 125M |
| 8N7482 | UT-427 | 500M | 100M | 8N1486 | UT-448 | 2 Meg . | 250M |
| 8N7496 | UT-429 | 500 M | 50 M | 8N7487 | UT-454 | 2 Meg . | 400 M |
| 8N7483 | UT-431 | 500M | 225M | 8N7488 | UT-451 | 2 Meg . | 900M |

## AC On-Off Attachable Switches for Midgetrols  8N7493-4PSTShorting US-23.44\% *Has dummy terminal. <br> ACCESSORIES <br> 

 8N7495-Idler Pulley Type UP-10........................................... 12MALLORY TYPE "MR" JUNIOR CONTROLS
Uitra compact controls are similar to the types
UM and TM iunior controls listed at left except
that they feature standard shafts, $3^{n}$ long, milled
(for spring length and furnished with knob adapters
at $1 / 2$ watt.

| No. | Type | Ohms | No. | Type | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8N6900 | MR14 | 5M (4A) | 8N6913 | MR37 | 75M(2) |
| 8N6901 | MR18 | $10 \mathrm{M}(1)$ | 8N6914 | MR39 | 100M (1) |
| 8N6902 | MR19 | 10 M (2) | 8N6915 | MR40 | $100 \mathrm{M}(2)$ |
| 8N6903 | MR20 | $10 \mathrm{M}(4)$ | 8N6916 | MR41 | $100 \mathrm{M}(4)$ |
| 8N6904 | MR21 | 15M (1) | 8N6917 | MR42 | 150M(1) |
| 8N6905 | MR22 | 15M (2) | 8N6918 | MR44 | 250M (1) |
| 8N6906 | MR24 | 20M(1) | 8N6919 | MR45 | $250 \mathrm{M}(2)$ |
| 8N6907 | MR28 | 25M (2) | 8N6920 | MR48 | $500 \mathrm{M}(1)$ |
| 8N6908 | MR29 | 25M (4) | 8N6921 | MR50 | $500 \mathrm{M}(4)$ |
| 8N6909 | MR33 | 50M(1) | 8N6922 | MR51 | 750M (1) |
| 8N6910 | MR34 | 50M (2) | 8N6923 | MR53 | 1 Meg (1) |
| 8N6911 | MR35 | 50M (4) | 8N6924 | MR55 | 2 Meg (1) |
| 8N6912 | MR36 | 75M(1) | 8N6925 | MR57 | 3 Meg. (1) | Each

JUNIOR CONTROLS WITH FIXED KNURLED SHAFTS
Similar to type "MR" controls abovs, bul have $3^{\prime \prime}$ universal knurled shaft for replacing original units of this type

| No. | Type | Ohms \& Taper | No. | Type | Ohms \& Taper |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8N6637 | MK400 | 250M (1) | 8N6639 | MK402 | 1 Meg (1) |
| 8N6638 | MK401 | 500M(1) | 8N6640 | MK403 | 2 Meg. (1) |

## MRT Midget Controls-Single Tap

Fixed shaft. Easy-to-cul channel shaft and insert fits all type knobs. Nuts, washer and ground terminal furnished. 11/8" dia. Switches below attach easily.


| No. | Type | Ohms | Tapped | No. | Type | Ohms | Tapped |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8N6762 | MRT420 | 250M | 50M | 8N6772 | MRT443 | 1 Meg . | 450 M |
| 8N6763 | MRT425 | 350M | 70M | 8N6773 | MRT460 | 1 Meg . | 500M |
| 8N6764 | MRT428 | 500M | 5M | 8N6774 | MRT445 | 2 Meg . | 5M |
| 8N6765 | MRT426 | 500M | 15M | 8N6775 | MRT446 | 2 Meg . | 15M |
| 8N6766 | MRT427 | 500M | 100 M | 8N6776 | MRT447 | 2 Meg. | 60M |
| 8N6767 | MRT430 | 500M | 150 M | 8N6777 | MRT450 | 2 Meg. | 125M |
| 8N6768 | MRT431 | 500 M | 225M | 8N6718 | MRT448 | 2 Meg . | 250 M |
| 8N6769 | MRT436 | 1 Meg . | 125M | 8N6779 | MRT454 | 2 Meg . | 400M |
| 8N6770 | MRT440 | 1 Meg . | 2009 | 8N6780 | MRT449 | 2 Meg . | 600N |
| 8N6771 | MRT438 | 1 Meg . | 30 | 8N6781 |  |  | 900 |

## MALLORY ATTACHABLE SWITCHES

[^0]
## INDUSTRIAL AND P.A. CONTROLS

## OHMITE POWER RHEOSTATS



Designed to produce permanently smooth, close control. Ceramic and metal construction. Provided with insulated shafts with provision to keep the rheostat from turning on the panel The resistance wire is wound over a solid porcelain core. Each turn is locked agains shifting by vitreous enamel, which also cover the core and base. Requires $3 / x^{n}$. Wt. I lh.


MODEL "K'"-100 WATT (31/3" DIA.)

| No. | Ohms | Type | Each | No. | Ohms | Type | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8N8378 | 10 | 0446 |  | 8N8383 | 500 | 0455 | 5.35 |
| 8N8379 | 25 | 0448 |  | 8N8384 | 1,000 | 0457 | 5.73 |
| 8N8380 | 50 | 0449 |  | 8N8385 | 2,500 | 0460 | 5.73 |
| 8N8381 | 100 | 0451 | 35 | 8N8386 | 5,000 | 0461 | 6.12 |
| 8N8382 | 300 | 0453 |  | 8N8387 | 10,000, | 0463 | 6.88 |

## OHMITE "AB" POTENTIOMETERS

Two walt molded composition potentiometers designed especially lor industrial, laboratory and radio service use. "1n" diameter x ${ }^{9} 16$ thick. $1 / 4^{\prime \prime}$ diam. shaft extends $2^{\prime \prime}$ from back panel. Requires //9" $_{\prime \prime}$ mounting hole on panel up to $1 / 4$.
CA types clockwise log. taper:
CB types counter-clockwise log. taper. Tolerance $\pm 10 \%$ excepl 1 meg. and higher which are $\pm 20 \%$.

| No. | Type | Ohms | No. | Type | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8N8810 | CU5001 | 50 | $8 N 8822$ | CB5031 | CO |
| 8N8811 | CU1011 | 100 | $8 N 8823$ | CU1041 | 100,000 |
| 8N8812 | CU2511 | 250 | $8 N 8824$ | CA1041 | 100,000 |
| 8N8813 | CU5011 | 500 | $8 N 8825$ | CU2541 | 250,000 |
| 8N8814 | CU1021 | 1000 | $8 N 8826$ | CA2541 | 250,000 |
| 8N8815 | CU2521 | 2500 | $8 N 8827$ | CU5041 | 500,000 |
| 8N8816 | CU5021 | 5000 | $8 N 8828$ | CA5041 | 500,000 |
| 8N8817 | CU1031 | 10,000 | $8 N 8829$ | CU1052 | 1 Megohm |
| 8N8818 | CB1031 | 10,000 | $8 N 8830$ | CA1052 | 1 Megohm |
| 8N8819 | CU2531 | 25,000 | $8 N 8831$ | CU2552 | 2.5 Megohms |
| 8N8820 | CB2531 | 25,000 | $8 N 8832$ | CA2552 | 2.5 Megohms |
| 8N8821 | CU5031 | 50,000 | 8N8833 | CU5052 | 5 Megohms |

Any Type of Above Controls.
8N8834-SPST Switch for "AB" Controls.


MALLORY "T" \& "L" PADS
For controlling level of low impedance audio circuits, mike or phono Cont. DC rating 4 walts. With bar knob, dial plate, and mounting nuts. L pad $15 / 8$ diameter $x$ 11/8" deep T pad $15 / 8^{\prime \prime}$ diamater x $1111^{16}$ deep.

| "L" PADS |  |  | 'T" PADS |  |
| :---: | :---: | :---: | :---: | :---: |
| No. | Type | Ohms Imp. | No. | Type |
| 8N6356 | L6 | 6 | 8N6362 | T6 |
| 8N6355 | 18 | 8 | 8N6363 | T8 |
| 8N6357 | L15 | 15 | 8N6364 | T15 |
| 8N6358 | L50 | 50 | 8N6365 | T50 |
| 8N6359 | L200 | 200 | 8N6366 | T200 |
| 8N6381 | L250 | 250 | 8N6382 | T250 |
| 8N6360 | 1500 | 500 | 8N6367 | T500 |
| 8N6361 | L2000 | 2000 | 8N6368 | T2000 |
| "L" Pads |  | "T" Pads |  |  |
| Any type ab | $\ldots$ | 2.20 Any | pe above. | ... 2.50 |

CLAROSTAT 10-WATT OUTPUT ATTENUATORS
Type CIB: Compact constant impedance attenuators dissipate 10 watts in any position. Ideal for individual speaker controls. Linear attenuation in 30 db steps to 30 db final step to infinity. $2^{\prime \prime}$ dia., $23 / \mathbf{4}^{\prime \prime}$ shaft $1^{\prime \prime}$ long. With dial plate and knob.


| No. | Ohms | No. | Ohms | No. | Ohms | Any Type, Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { 8N7837 } \\ & \text { 8N7838 } \end{aligned}$ | 8 15 | $\begin{aligned} & \text { 8N7839 } \\ & \text { 8N7840 } \end{aligned}$ | 50 200 | $\begin{aligned} & 8 N 7841 \\ & \text { 8N7842 } \end{aligned}$ | $\begin{aligned} & 250 \\ & 500 \end{aligned}$ | 6.37 |

36For use
vices,
Bmooth, CENTRALAB FADERS vices, xtal pickups, mikes, etc. Provide smooth, quiet fading from one source to
 another. Each tapped at center.

| Stock No. | Resistance Each Side c.t. | Your Cost |
| :---: | :---: | :---: |
| 8N9004 <br> $8 N 9005$ | 1 Meg. |  |
| 18 |  |  |

Gain Control
Like above but without center tap.

| No. | Resistance | Each |
| :--- | :--- | :--- |
| $8 N 9000$ | $\frac{250 M}{}$ |  |
| $8 N 9001$ | 500 M |  |
| $8 N 9002$ | 1 Meg. | $\mathbf{1 . 0 3}$ |
| 8 N 9003 | 2 Meg. |  |

'Delta-T"' Pad
Dual control maintaining constant impedance to both sides. For sound amplifiers, recorders, elc.

| No. | Impedance | Each |
| :---: | :---: | :---: |
| 8N9006 | 50 ohms |  |
| 8N9007 8 SN 9008 | 200 ohms |  |
| 8N9008 | 500 ohms |  |

## CENTRALAB POWER RHEOSTATS

Ideal for motor speed controls, etc. All metal trame; core insulated with treated asbestos. Wire wound All for single-hole mounting; knob supplied. Diameter $2^{\prime \prime}$; bushings $8 / 8 \times 1 / 2^{\prime \prime}$ long. Depth behind panel: 25 watt units $8^{\prime \prime}$; 50 watt units $11 / 4^{\prime \prime}$. Solder lug erminals.


| 50 Watts |  |  |  |  |  | 25 Watts |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Ohm | Price | No. | Oh | Price | No. | Ohms | Price | No. | Ohm | rice |
| 8N8962 | 2 | 2.06 | 8N8994 | 300 | $\overline{2.24}$ | 8N8977 | 2 | 1.76 | 8N8957 | 250 | $\overline{1.76}$ |
| 8N8985 | 10 | 2.06 | 8N8990 | 500 | 2.21 | 8N8978 | 6 | 1.76 | 8N8982 | 400 | 1.91 |
| 8N8987 | 25 | 2.06 | 8N8991 | 1000 | 2.21 | 8N8979 | 15 | 1.76 | 8N8958, | 500 | 1.91 |
| 8N8988 | 60 | 2.06 | 8N8960 | 2500 | 2.35 | 8N8980 | 50 | 1.76 | 8N8983 | 1000 | 1.91 |
| 8N8986 | 100 | 2.06 | 8 N8992 | 5000 | 2.35 | 8N8976 | 100 | 1.76 | 8N8984 | 5000 | 2.06 |
| 8N8989 | 150 | 2.06 |  |  |  | 8N8981 | 150 | 1.76 |  |  |  |

## MALLORY CONTROLS

## TYPE M-4 WATTS

Wire wound. Conservatively rated at 4 watts. Fully enclosed. $15 / 8{ }^{\prime \prime}$ diameter. Mounts in ${ }^{7}{ }^{7}{ }^{16 \prime}$ hole. Shaft $1 / 4^{\prime \prime}$ diameter, $\frac{3}{8}{ }^{n}$ long. With dust cover.

RHEOSTATS

| No. | Ohms | Type | Each |
| :---: | :---: | :---: | :---: |
| $\overline{8} \mathbf{N 6 4 8 0}$ | T | M1R |  |
| 8N6481 | 2 | M2R |  |
| 8N6482 | 3 | M3R |  |
| 8N6483 | 6 | M6R |  |
| 8N6484 | 10 | M10R |  |
| 8N6485 | 15 | M15R |  |
| 8N6486 | 20 | M20R | 4 |
| 8N6487 | 25 | M25R |  |
| 8N6173 | 40 | M40R |  |
| 8N6174 | 50 | M50R |  |
| 8N6175 | 60 | M60R |  |
| 8N6176 | 75 | Mi5R |  |

## POTENTIOMETERS

| No. | Ohms | Type | Each |
| :---: | :---: | :---: | :---: |
| 8N6503 | 20 | M20] |  |
| 8N6492 | 50 | M50P |  |
| 8N6495 | 100 | M100P | 734 |
| 8N6496 | 200 | M1200]' |  |
| 8N6497 | 400 | M400 ${ }^{\text {P }}$ |  |
| 8N6498 | 1000 | M1MP |  |
| 8N6499 | 2000 | M2MP |  |
| 8N6500 | 3000 | M3MP | 824 |
| 8 N6501 | 5000 | M5.1P |  |
| 8N6502 | 10000 | M10MP |  |
| 8N6177 | 15000 | M15MP |  |
| 8N6178 | 20000 | M201P | 78 |
| 8N6179 | 25000 | M25MP |  |
| 8N6180 | 50000 | M50MP |  |
| 8N6181 | 70000 | M70MP | 1.5 |

TYPE C-2 WATTS
Wire wound. Extremely compact design makes them ideal for use where space is limited. Contact arm is grounded to the shatt. Overall diameter of unit is 11 In" $^{\prime \prime}$ Shaft $1 / /^{"}$ diameter and $\$ / 8^{n} \mathrm{~L}$.

RHEOSTATS

| No. | Ohms | Type | Each |
| :---: | :---: | :---: | :---: |
| 8 N 6197 | 10 | C6R |  |
| 8N6198 | 10 | C10R |  |
| 8 N6199 | 15 | C15R |  |
| $8 \mathrm{N6200}$ | 20 | C20R |  |
| 8N6201 | 30 | C3012 | 94 |
| 8N6202 | 40 | C40R |  |
| 8 N 6203 | 50 | C50R |  |
| 8N6204 | 100 | C100R |  |

## POTENTIOMETERS

| No. | Ohms | Type | Each |
| :---: | :---: | :---: | :---: |
| 8N6205 | 6 | C6P |  |
| 8N6206 | 10 | C10P |  |
| 8N6207 | 15 | C15P |  |
| 8N6208 | 20 | C20P |  |
| 8N6209 | 30 | C30P |  |
| 8N6210 | 40 | C40P | 734 |
| 8N6211 | 50 | C50P |  |
| 8N6212 | 100 | C100P |  |
| 8N6213 | 200 | C200- |  |
| 8N6214 | 100 | C400P |  |
| 8N6215 | 1000 | CIMP |  |
| 8N6216 | 3000 | C3MP | 824 |
| ${ }^{8 N} 6217$ | 5000 | C5MP |  |
| 8N6218 | 6000 | C6MP |  |
| 8N6219 | 10000 | C10MP | 974 |
| 8N6220 | 15000 | C15MP |  |

## ERIE CERAMICONS

|  |  | ERIE | SHVER- ON C ENSER | MICA ON- S |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Midget silver-mica cond. Unmatched for VHF and |  |  |
|  |  | MC not less than 1000 |  |  |
| - 0.5 |  |  |  |  |
| ring type metal shell, soldering ears. High poten- |  |  |  |  |
|  |  | ter | at | her end |
| for feed thru connection. 370.FA bolted with $3 / 48^{*}$ screw. Tolerance |  |  |  |  |
| $\begin{aligned} & 370-\mathrm{FA} \text { bo } \\ & \pm 20 \% . \end{aligned}$ | ted with | $3 / 48^{\circ}$ | srew. T | olerance |
| Type 370-CB |  |  |  |  |
| No | Cap. (mmf) | Ench | Lots/25 | Lots/50 |
| 5N2250 | 15 | . 65 | . 60 | 50 |
| 5N2239 | 25 | . 65 | . 60 | 50 |
| 5N2251 | 50 | . 47 | . 43 | . 36 |
| 5N2252 | 100 | . 47 | . 43 | . 36 |
| 5N2253 | 150 | . 53 | . 43 | . 36 |
| 5N2254 | 200 | . 65 | 49 | . 41 |
| 5N2225 | 250 | . 59 | . 54 | . 45 |
| 5N2255 | 300 | . 65 | . 60 | . 50 |
| 5N2256 | 400 | . 65 | . 60 | . 50 |
| 5N2257 | 500 | . 65 | . 60 | . 50 |
| 5N2258 | 750 | 1.00 | . 82 | . 77 |
| 5N2259 | 1000 | 1.29 | 1.18 | . 99 |
| Type 370-FA |  |  |  |  |
| 5N2360 | 15 | . 65 | . 60 | . 50 |
| 5N2240 | 25 | . 65 | . 60 | . 50 |
| 5N2261 | 50 | . 47 | . 43 | . 36 |
| 5N2262 | 100 | . 47 | . 43 | . 36 |
| 5N2263 | 150 | . 53 | . 43 | . 36 |
| 5N2264 | 200 | . 65 | . 49 | 41 |
| 5N2226 | 250 | . 59 | . 54 | . 45 |
| 5N2265 | 300 | . 65 | . 60 | . 50 |
| 5N2266 | 400 | . 65 | . 60 | . 50 |
| 5N2267 | 500 | . 65 | . 60 | . 50 |
| 5N2268 | 750 | 1.00 | . 92 | . 77 |
| 5N2269 | 1000 | 1.29 | 1.18 | . 99 |

## ERIE FEED THRU CERAMICONS



Type 362. Compac leed-through ceramic cond. 5/8" long body. 20 gauge wire leads. $500 \mathrm{~V} . \mathrm{DC}$ work. 1500 mm 59c Lots of $25 \ldots . .550$ - Lots of 50 ...... 40

## HIGH VOLTAGE CERAMICONS

Type 410. For TV power supply. filter and by-pass applicadions. Special body design qives extra long creepage path. Low loss molded case $11 / 8$ dia. $x^{7 / 8}$ long. Conservatively rated at
K.V. Rod type terminals. Capacity 500 mmf . 5N2303-Each
1.32

Lots of 25....... 1.13-Lots of 50
. .90c

## ERIE TUBULAR TRIMMERS <br> Type 532. Platic dielectric trimmer. provises adjustment, precise adjusiment, Stability of capacity. Working Voltage, 5CO V. DC. <br> SN2301-. 5-5 MMF. V. DC. <br> 5N2302-1.0-8 MMF <br> Either above, lots of 25 . <br> Either above, lots of 50



ERIE DISC CERAMICONS
Flat Hi-K ceramic dielectric with silver fired on to the dielectric Lead wires firmly soldered to the silver electrodes. Phenolic coated. Very efficient at high frequ
500 V . Tolerance $\pm 20$

Stock No. Type Size Value Each $/ 50$ /100


Small fixed capacitors. Ceramic dielectric with silver electrodes fired on at a very high temperature. Excellent HF characteristics. Dimensions: Style K. 562 "x. 250 ", Style L 812 "x. 250 ", Style M $1.328^{\prime \prime} \times .340^{\prime \prime}$, Style $3341.213^{\prime \prime} x .45^{\prime \prime}$. Style $3351.650^{\prime \prime} x .45^{\prime \prime}$. Styles 331 and $3381^{17} / 3^{\prime \prime} x^{18} / 2^{\prime \prime}$. NPO CERAMICONS
Has zero temperature coefficient. "Q" for NPO Ceramicons; above 30 mmf is 1000 or hi- her Below 30 mmf , " Q ' decreases slightly as capacity decreases. Working Voltage, 500 Volts DC. Tol. $\pm 10^{\circ}$

| Stock No. | Type | MMF | Each | $\begin{gathered} \text { Lots/ } \\ 50 \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Lots/ } \\ & 100 \end{aligned}$ | Stock No. | Type | MMF | Each | $\begin{gathered} \text { Lots/ } \\ 50 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Lots/ } \\ 100 \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5N2367 SN2270 <br> 5N2368 | $\begin{aligned} & 1 \mathrm{~K} \\ & \mathrm{~K} \\ & \mathrm{~K} \end{aligned}$ | $\begin{aligned} & 1.5 \\ & 3 \\ & 3.3 \end{aligned}$ | 29c | 25c | 20 c | 5N2273 5N2274 5N2275 5N2275 | $\begin{aligned} & \mathrm{K} \\ & \mathrm{~L} \\ & \mathrm{~L} \end{aligned}$ | $\begin{aligned} & 20 \\ & 25 \\ & 33 \end{aligned}$ | 29c | $25 c$ | 20 c |
| 5N2369 | K | 4.7 |  |  |  | 5N2276 | M | 50 |  |  |  |
|  | K | $\begin{aligned} & 5 \\ & 6.8 \end{aligned}$ |  |  |  | $\begin{aligned} & 5 \mathrm{~N} 2277 \\ & \text { 5N2278 } \end{aligned}$ | $\begin{aligned} & \mathrm{M} \\ & \mathrm{M} \end{aligned}$ | $\begin{array}{r} 75 \\ 100 \\ \hline \end{array}$ | 32c | 27 c | 22 c |
|  | K | 8.2 |  |  |  | 5N2372 | 334 | 150 | 35 c | 30c | 24c |
|  | K | 10 |  |  |  | 5N2373 | 334 | 175 |  | 30 c | 24c |

NEGATIVE TEMPERATURE COEFFICIENT CERAMICONS
Tubular type N750
Tubular type N080

| Tubular typ |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type | MMF | Each | $\begin{gathered} \text { Lots/ } \\ 50 \end{gathered}$ | $\begin{aligned} & \text { Lots/ } \\ & 100 \\ & \hline \end{aligned}$ | Stock No. | Type | MMF | Each | $\begin{gathered} \text { Lots/ } \\ 50 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Lots/ } \\ 100 \\ \hline \end{gathered}$ |
| 5N2374 <br> 5N2375 <br> 5N2376 <br> 5N2377 5N 2378 <br> 5N2378 | $\begin{aligned} & \mathrm{K} \\ & \mathrm{~K} \\ & \mathrm{~K} \\ & \mathrm{~L} \\ & \mathrm{~L} \end{aligned}$ | $\begin{array}{r} 5 \\ 10 \\ 47 \\ .75 \\ 100 \end{array}$ | 29c | 25c | 20c | 5N2379 5N2380 5N2381 SN2382 SN2383 | $\begin{aligned} & 331 \\ & 331 \\ & 338 \\ & 338 \\ & 338 \end{aligned}$ | $\begin{aligned} & 10 \\ & 22 \\ & 33 \\ & 47 \\ & 62 \end{aligned}$ | 35 c | 30c | 24c |

GP CERAMICONS
For general purpose applications such as by-pass and blocking condensers, where temperature coelficient is not important. Capacity will not decrease more than $20 \%$ nor increase more than $10 \%$ from their value at room temperature as the temperature is varied from $-40^{\circ} \mathrm{C}$ to $85^{\circ} \mathrm{C}$. Power factor will not exceed $3 \%$. Rated voltage of GP1 is 500 V DC: GP2 350 V DC. Tolerance $\pm 20 \%$.

| Stock No. | Type | MMF | Each | Lots/ 50 | $\begin{gathered} \text { Lots/ } \\ 100 \end{gathered}$ | Stock No. | $1 \text { Type }$ | MMF | Each | $\begin{gathered} \text { Lots/ } \\ 50 \end{gathered}$ | $\begin{gathered} \text { Lots/ } \\ 100 \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5N2280 | 1K | 10 | 15c | $121 / 2 \mathrm{c}$ | 10 c | 5N2351 | 2 K | 330 | 15c | $121 / 2 \mathrm{c}$ | 10 c |
| 5N2337 | 1 K | 12 |  |  |  | 5N2352 | 2K | 390 |  |  |  |
| 5N2338 | 1 K | 15 |  |  |  | 5N2353 | 2K | 470 |  |  |  |
| 5N2339 | 1 K | 18 |  |  |  | 5N2289 | 2K | 500 |  |  |  |
| 5N2340 | 1 K | 22 |  |  |  | SN2354 | 2K | 560 |  |  |  |
| 5N2281 | 1 K | 25 |  |  |  | SN2355 | 2K | 680 |  |  |  |
| 5N2341 | 1 K | 27 |  |  |  | 5N2290 | 2K | 750 |  |  |  |
| 5N2342 | 1 K | 33 |  |  |  | 5N2291 | 2L | 1.000 |  |  |  |
| 5N2343 | 1K | 39 |  |  |  | 5N2356 | 2L | 1.200 |  |  |  |
| 5N2344 | 1K | 47 |  |  |  | 5N2292 | 2L | 1.500 |  |  |  |
| 5N2282 | 1 K | 50 |  |  |  | $5 N 2357$ | 2 M | 1.800 |  |  |  |
| 5N2345 | 1 K | 56 |  |  |  | 5N2293 | 2M | 2,000 |  |  |  |
| 5N2346 | 1 K | 68 |  |  |  | 5N2358 | 2 M | 2.200 |  |  |  |
| 5N2283 | 1 K | 75 |  |  |  | 5N2359 | 2 M | 2,500 |  |  |  |
| SN2284 | 1 K | 100 |  |  |  | 5N2360 | 2 M | 2,700 |  |  |  |
| 5N2347 | 2K | 120 |  |  |  | 5N2294 | 2M | 3,000 |  |  |  |
| 5N2285 | 2K | 150 |  |  |  | 5N2361 | 2M | 3,300 |  |  |  |
| 5N2348 | 2K | 180 |  |  |  | 5N2362 | 2M | 4,700 |  |  |  |
| 5N2286 | 2 K | 200 |  |  |  | SN2295 | 2 M | 5.000 |  |  |  |
| 5N2349 | 2K | 220 |  |  |  | SN2383 | 2M | 5,600 | $18 c$ | 1150 | $12 e$ |
| 5N2287 | 2K | 250 |  |  |  | SN2364 | 334 | 6,800 |  |  | $12 c$ |
| 5N2350 | 2K | 270 |  |  |  | 5N2365 | 335 | 7,500 |  |  |  |
| SN2288 | 2K | 300 |  |  |  | 5N2366 | 335 | 10,000\| |  |  |  |



## ERIE STAND OFF CERAMICONS

deal for R.F. by-pass to ground. May be used to support orher circuif elements. Supplied in dealded phenolic case for greater insulation qualities and mechanical strength. Both types
 27 . Ideal for V.H.F. and U.H.F. applications. Tolerance $\pm 20 \%$.



30c

## CERAMICON TRIMMER

Give maximum stability and ease of adjustment. Capacity change constant per degree of rotation. Silver electrodes fired on ceramic rotor and base. 360 degree rotor completely covers entire track on slator thus preventing dust and other foreign matter from affecting the characteristics of the unit.

| Stock No. | Type | Range MMFD | Temp. Ccef | Each | Lots/25 | Lots/50 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \mathbf{A} \\ \operatorname{TS} 2 \mathrm{~A} \end{gathered}$ | $\begin{aligned} & 1.5-7 \\ & 3-12 \\ & 4-30 \\ & 7-45 \end{aligned}$ | NPO NPO N500 N500 Nso | 88 c | 75c | 60 c |
|  | $\begin{gathered} \mathbf{A} \\ \text { TD2A } \end{gathered}$ | $\left.\begin{array}{l}1.5-7 \\ 3-12 \\ 4-30 \\ 7.45\end{array}\right\}$ each sect. |  | 1.47 | 1.25 | 1.00 |
| 5N2296 5N2297 5N2299 | $\begin{array}{r} \hline \mathbf{B} \\ 557 \end{array}$ | $\begin{aligned} & 3.12 \\ & 5.25 \\ & 8-50 \end{aligned}$ | $\begin{aligned} & \text { NPO } \\ & \text { NPO } \\ & \text { N750 } \end{aligned}$ | 73c | 62c | 50c |

## CORNELL DUBILIER CONDENSERS

## ＂BLUE BEAVER＂TYPE DRY ELECTROLYTICS



Small，handy to use．Conveniently mounted．Hi－Form－ ation Process as．
age breakdown．Sealed in drawn－aluminum cans．Cardboard insulating sleeves with polarity marked．

| Stock No． | $\begin{aligned} & \text { Type } \\ & \text { No. } \\ & \hline \end{aligned}$ | Cap． <br> Md． | Volts | Size | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5N1090 | $\overline{\text { BR．} 102 \bar{A}}$ | 10 | 25 | 5／8x11／16 | ． 44 |
| 5N1091 | BR 202A | 20 | 25 | 5／8x 1 | 47 |
| 5N1092 | BR 252A | 25 | 25 | 5／8x13 | ． 50 |
| 5N1093 | BR 502 | 50 | 25 | 5／8×13 | ． 56 |
| 5N1094 | BR 550 |  | 50 | 5，8x1伯 | ． 44 |
| 5N1095 | BR 105 | 10 | 50 | 5／8x ${ }^{1 / 1 / 16}$ | 47 |
| 5N1096 | BR 205 | 20 | 50 | 3／8×17\％ | ． 50 |
| 5N1097 | BR 255 | 25 | 50 | 5\％81316 | ． 53 |
| 5N1098 | BR 505 | 50 | 50 | 8／8x1166 | ． 62 |
| 5N1099 | BR 415 |  | 150 | $5 / 8 \times 11 / 16$ | ． 44 |
| 5N1100 | BR 815 | 8 | 150 |  | ． 47 |
| 5 N1101 | BR 1215 | 12 | 150 | 5 $8 \times 176$ | ． 50 |
| 5 N 1102 | BR 1615 | 16 | 150 | 56x1766 | ． 53 |
| 5N1103 | BR 2015 | 20 | 150 | $5 / 81^{11}$ | ． 56 |
| 5N1054 | BR 3015 | 30 | 150 | $88 \times 2$ | ． 59 |
| 5N1104 | BR 4015 | 40 | 150 | 3／4x2 |  |
| 5N1045 | BR 5015 | 50 | 150 | 7／8x2 | .71 |
| 5N1046 | BR 8015 | 80 | 150 | 7／8x21／2 | ． 85 |
| 5N1105 | BR 425 | ＋ | 250 | 3 $6 \times 110$ | ． 47 |
| 5N1106 | BR 825 | 8 | 250 |  | ． 47 |
| 5N1107 | BR 1225 | 12 | 250 | 5／8x2 | 5 |
| 5N1108 | BR 1625 | 16 | 250 | 3／481116 | ． 65 |
| 5N1109 | BR 2025 | 20 | 250 | $3 / 4 \times 116$ | ． 71 |
| 5N1110 | BR 4025 | 40 | 250 | 7／8x21／2 | ． 82 |
| 5N1129 | BR 145 | ， | 450 | $\frac{8}{88 \times 11}$ | ． 47 |
| 5N1130 | BR 245 | 2 | 450 | 8／6x11／6 | ． 50 |
| 5 N1111 | BR 445 | 4 | 450 | 5 $6 \times 17$ 价 | ． 53 |
| 5N1112 | BR 845 | 8 | 450 | $3 \times 2$ | ． 56 |
| 5N1047 | BR 1045 | 10 | 450 | 3／8×2 | ． 62 |
| 5N1 | BR 1245 | 12 | 450 | 7／8x2 | ． 68 |
| 5N1114 | BR 1645 | 16 | 450 | 7／8x21／2 | ． 79 |
| 5N1115 | BR 2045 | 20 | 450 | 1×21／2 | ． 88 |
| 5N1055 | BR 3045 | 30 | 450 | $1 \times 3$ | ． 97 |
| 5N1048 | BR 4045 | 40 | 450 | 1x3 | 1.18 |
| 5N1116 | BR 850 |  | 500 | 7／8x $1^{11 / 16}$ | ． 76 |
| 5N1117 | BR 1650 | 16 | 500 | $1 \times 2{ }^{1 / 18}$ | 1.18 |

＂EDL＂CARDBOARD CASED ELECTROLYTICS

|  |  | Multiple wax filled All common negative except（＊）separate section．Center mount ing strap；color coded leads． |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No． | Type | Mfd． | Volts | Size | Ea． |
| 5N1118 | EDL 2055 | 5－5 | 25 | 5／8x13／4 | ． 56 |
| 5N1119 | EDL 2101 | 10－10 | 25 | 5／88184 | ． 62 |
| 5N1120 | EDL 3055 | 5－5 | 50 | 3／8x13／4 | ． 65 |
| 5N1121 | EDL 115 | 10－10 | 50 | 3， $821 / 4$ | ． 68 |
| 5N1122 | EDL 8815 | 8－8 | 150 | 3／4x2 4 | ． 68 |
| 5N1123 | EDL 8115 | 8 8－16 | 150 | ${ }^{13} 16 \times 21 / 4$ | ． 71 |
| 5N1124 | EDL 2215 | 20－20 | 150 | 718x $21 / 2$ | ． 76 |
| 5 N 1131 | EDL 4215 | $40-20$ | 150 | 1516x28／4 | ． 88 |
| 5N1132 | EDL 4415 | 40－40 | 150 | 1x3 | 1.00 |
| 5N1133 | EDL 5315 | 50－30 | 150 | 1×3 | 1.00 |
| 5N1134＊ | EDI 2215SS | 20－20 | 150 | $15 / 1{ }^{15}$ | 1.18 |
| 5N1135 | EDL 2215 C | 20－20／20 | 150／25 | 1x21／2 | 1.12 |
| ${ }_{5}$ N1136 | EDL 4215C | 40－20／20 | 150／25 | $1 \mathrm{x}^{3 / 4}$ | 1.18 |
| 5N1137 | EDL 5315C | 50－30／20 | 150／25 | 11／8x ${ }^{3}$ | 1.23 |
| 5N1125 | EDL 8125 | 8－16 | 250 | $7{ }^{7} \times 2^{3} / 4$ | ． 94 |
| 5N1126 | EDL 1125 | 16－16 | 250 | $1 \times 2^{3} 4$ | 1.00 |
| 5N1127 | EDL 8845 | 8－8 | 450 | $1 \times 28 / 4$ | 1.00 |
| 5N1128 | EDL 8145 | 8－16 | 450 | $11 / 10 \times 31 / 4$ | 1.18 |

## ＂BBR＂MINIATURE

## ELECTROLYTIC CONDENSERS

## 푸우울 훈

 Baby BBR type tu－ bular electrolytics． Hermetically sealed． Designed for use in compact equipment such as hearing aids，pocket radios，etc．| Stock No． | Type No． | MId． | Size | V．Each |
| :---: | :---: | :---: | :---: | :---: |
| 5N1081 | BBR 50.6 | 50 | 36x11＇6＂ | 659 c |
| 5N1082 | BBR 25－6 | 25 | 368114＂ | 659 c |
| SN1083 | BBR 5－6 | 5 | $3{ }^{3} \times 1115{ }^{\circ}$ | 6 59c |
| 5N1084 | BBR 20－25 | 20 | $1 / 2 \times 11 / 16^{\prime \prime}$ | 25 59c |
| 5N1085 | BBR 10－25 | 10 | 38×11／6＂ | 25 59c |
| 5N1086 | BRR 10－50 | 10 | $1 / 2 \times 11 / 16$ | $\overline{50} \overline{59 c}$ |
| 5N1087 | BBR $5-50$ | 5 | 3／8x11／16 | 50 59c |
| 5N1088 | BBR 10－90 | 10 | $1 / 2 \times 11 / 16$＂ | 9059 c |
| 5N1089 | BBR 16－90 | 16 | $1 / 2 \times 17 / 16$ | 90－59c |

Listed on these pages are fast selling C－D capacitors to fill practically all radio and television service requirements．These excellent units are recognized standards throughout the indusiry and are precision made for accurate operation and long life．Whether it be a miniature tubular capacitor or a large Dykanol transmitting type capacitor you are always assured of the best product obtainable．

## MOLDED MICAS



Compact，in molded bakelite units．Rec－ ommended for use in low voltage circuits． Individually tested for accuracy of capacity and voltage breakdown．Designed to give dependable service where small size units are required．Types 1 W and ID（fig．A）${ }^{18} 16 \mathrm{x}^{13} / 16$ ；
type 5 W （fig．B） $7 / 18 \mathrm{x}^{11} / 16^{\prime \prime}$ ．All are 1000 V． test， 500 V ．working except sizes higher than .006 mid．which are 600 V ．test， 300 V ．
working．

| Stock No． | Type No． | Cap． | Fig． | Each |
| :---: | :---: | :---: | :---: | :---: |
| －5N1303 | 5W SV5 | ． 000005 | B | 15c |
| 5N1356 | 5W 502 | ．00002 | ${ }_{B}$ | ${ }_{\text {15c }}^{15 \mathrm{c}}$ |
| ${ }^{5 N \mathrm{~N}} 13358$ | 5W $5{ }^{\text {5025 }}$ | ．000025 | ${ }_{8}^{8}$ | ${ }_{\text {－}}^{15 \mathrm{c}}$ |
| 5N1305 | 5W 504 | ．00004 | ${ }_{B}$ | 12c $12 c$ |
| ${ }_{\substack{5 N 1358 \\ 5 N 1359}}$ | 5W 505 | ．00005 | ${ }_{8}^{8}$ |  |
| 5N1360 | SW ST15 | ． 00015 | ${ }^{8}$ | ${ }^{12 \mathrm{c}}$ |
| ${ }_{\substack{\text { SN }}}^{5 N 1362}$ | SW 5T2 | ．00022 | ${ }_{8}^{8}$ | $\xrightarrow{12 \mathrm{c}} \mathrm{l}$ |
| 5N1306 | 5W 573 | ． 0003 |  |  |
| ${ }_{\text {SN }}^{5 N 1307}$ | SW 574 | ．0004 |  | ${ }_{\text {－}}^{150}$ |
| 5N1308 | 1W 5 T5 | ．0006 | ${ }_{\text {A }}$ |  |
| 5N1309 | IW ST7 | ．0007 | ${ }_{\text {A }}$ | $\underset{\substack{\text { cisc } \\ 15 c}}{15 c}$ |
| ${ }_{\substack{5 N 1310}}^{501364}$ | 1W ${ }^{\text {W }}$ S78 | ． 0008 |  |  |
| 5N3 | IW 5 St | ． 00 |  | ${ }^{188}$ |
| 1366 | IW 5 S2 | 22 |  |  |
| SN1312 | IW SD25 | ：0025 | ${ }_{\text {A }}$ | $\underset{220}{20}$ |
| S13 | 1W 5D3 | ． 003 |  |  |
| 373 | 554 | ． 004 |  | ${ }_{35}^{326}$ |
| 5 SN 374 | ${ }_{1}{ }^{\text {W }}$ SD6 | ．006 | A | ${ }_{4}^{356}$ |
| 5N1372 | 1D 351 | ． 01 | A | 71 c |

## ＂SILVER－MIKE＂UNITS

Molded in low－loss red bakelite．Designed for use in high $Q$ electronic circuits where fre－ quency stability and minimum loss must be maintained．All rated at 1000 V test， 500 V working．Tolerance $\neq 5 \%$ ．Sizes through $.0005^{3 \prime}$＂thick；． 001 through $.003 \mathrm{t} / \mathrm{m}^{2}$ ；． 004 and ．005，5／6

Fig．B－3／10 ${ }^{*} \times 11 / 10^{*}$

| Stock No． | Type No． | Mfd． | Each |
| :---: | :---: | :---: | :---: |
| 5N1351 | 5R 5V5 | ． 000005 | ． 26 |
| SN1352 | 5R 5Q1 | ． 00001 | ． 24 |
| 5N1353 | 5R 5Q25 | ． 000025 | ． 24 |
| 5N1371 | 5R 5Q4 | ． 00004 | ． 24 |
| 5N1383 | 5R 5Q5 | ． 00005 | ． 24 |
| 5N1384 | 5R 5Q7 | ． 00007 | ． 24 |
| 5N1385 | 5R 5T1 | ． 0001 | ． 24 |
| 5N1386 | 5R 5T15 | ． 00015 | ． 26 |
| SN1387 | 5R 5T2 | ． 0002 | ． 26 |
| 5N1388 | 5R 5T25 | ． 00025 | ． 26 |
| 5N1389 | 5R 5T3 | .0003 | ． 32 |
| 5N1390 | 5R 5T4 | ． 0004 | ． 38 |
| 5N1391 | 5R 5T5 | ． 0005 | ． 41 |

Fig．A－${ }^{13}$ ¹6 $^{\circ}$ Square

| 5N1392 | IR SD1 | .001 | .65 |
| :--- | :--- | :--- | ---: |
| SN1393 | 1R 5D15 | .0015 | .79 |
| 5N1394 | 1R 5D2 | .002 | .79 |
| 5N1395 | 1R 5D25 | .0025 | 1.06 |
| SN1396 | 1R SD3 | .003 | 1.21 |
| 5N1397 | 1DR 5D4 | .004 | 1.26 |
| 5N1398 | IDR 5D5 | .005 | 1.32 |

＂BLUE CUBS＂
New molded plastic， Vikane impreg． nated，paper tubu－
 leads．Withstands temperatures troms $-70^{\circ}$ to $+212^{\circ} \mathrm{F}$ ．

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| No． | Type No． | Mid． | Inches |  |
| ${ }^{\text {SNOOO }}$ | PTE－4S1 | ． 01 | ${ }^{11461}$ |  |
| ${ }^{5}$ | PTE－42 | ． 02 |  | ${ }^{15 c}$ |
| 3N903 | PTE－4P1 | 1.1 |  |  |


| 600 V DC |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| SN904 | PT |  |  |  |
|  | PTE．6 | ． 002 | 1188110 | 13c |
| 5N906 | PTE．6D3 | ． 003 | ${ }^{11}$ | ${ }^{15}$ |
| 5N907 | PTE－6D4 | ． 004 | $11 / 8$ | ${ }^{15 c}$ |
| 5N90 | PTE－6DS | ． 005 | $11 / 2 \times 116$ | 15 c |
| 5N909 | PTE－6 | ． 0 |  |  |
| 5N910 | PTE－6 | ． 01 |  | 18 c |
| 5N911 | PTE－6S15 | ． 015 | ， $76 \times 1$ | 18 c |
| 5N91 | PTE－652 | ． 02 | 1／2x | 18 c |
| V913 | PTE．6S3 | ． 03 |  | ${ }_{21 c}$ |
| V914 | PTE－6S4 |  |  |  |
| SN915 | PTE－6S5 | ． 05 | 96x1 | 24 c |
| 5N916 | PTE－6P1 | ． | $11 / 6 \times 1$ | 28 c |


|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 5N918 | PTE－16D2 | ． 002 | ${ }^{1} 16 \times 1{ }^{1}$ | 32c |
| 5N919 | PTE－16D3 | ． 003 | 低119 | 32 c |
| 5N920 | PTE－16D4 <br> PTE－16D5 | ． 004 | 1／2x ${ }^{1 / 3}$ | 32 c |
| 5N922 | PTE．16D55 | ． 0055 |  |  |
| 5N923 | PTE．16D6 | ． 006 | 9， | ${ }_{32 \mathrm{c}}^{32 \mathrm{c}}$ |
| 5N924 | PTE－16D7 | ． 007 | \％倠19\％ | 32 c |
| 5N925 | PTE－16D75 | ． 0075 | ${ }^{2} 16 \times 19$ | 32 c |
| 5N926 | PTE－16D8 | ． 008 | 9 倠19 ${ }^{10}$ | ， |
| 5 N 927 | PTE－16S1 | ． 01 | \％\％ 619 |  |
| 5N928 | PTE－16S15 | ． 015 | 96x19 | 35c |
| 5N929 | PTE－16S2 | ． 02 |  | ${ }^{35 \mathrm{c}}$ |
| 5N930 | PTE－16S25 | ． 025 | $1140 \times 1$ 15\％ | 35c |
| 5N931 | PTE－16S3 | ． 03 | $11 / 16 \times 1{ }^{15}$ | 35 c |
| 5N932 | PTE－16S4 | ． 04 | 11／10x115， | 35 c |

Same type of molded condenser except higher voltage for television．Size：${ }^{11 / 16 \mathrm{z} 1^{15}, 16}$

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | － | Mid． | Vitg． |  |
| :---: | :---: | :---: | :---: | :---: |
| 5N933 | PTE－60T5 | ． 000 | 6000 | 79 |
| 5N93 | PTE－60D1 | ． 001 | 6000 | 79 |
| 5N935 | PTE－60DS | ． 005 | 6000 | 79 |
| 5N936 | PTE－100T5 | ． 0005 | 10，000 |  |

## ＂KR＂DRY ELECTROLYTICS



Compact atched foil Color coded leads Seamless drawn metal can，mtg．nut．Dual
units have separate sections except dual 20. 450 Volks D．C．Working

| Stock No． | Type No． | Cap． MId． | Size Inches | Each |
| :---: | :---: | :---: | :---: | :---: |
| 5N1295 | KR 504 | 4 | $1 \times 21$ | 1.00 |
| 5N1296 | KR 508 | 8 |  | 1.03 |
| 5N1297 | KR 512A | 12 | $1 \times 2$ | 1.26 |
| 5N1298 | KR 516A | 16 | $1 \times 31$ | 1.41 |
| 5N1292 | KR 520 | 20 | $13 / 8 \times 21 / 2$ | 1.56 |
| 5N1293 | KR 530 | 30 | $13 / 8 \times 31 / 2$ | 1.76 |
| 5N1294 | KR 540 | 40 | $138 \times 43 / 8$ | 2.00 |
| 5N1299 | KR 548A | 4－8 | $1389 \times 3$ | 1.47 |
| 5N1300 | KR 588A | 8－8 | $138 \times 3$ | 1.62 |
| 5N1354 | KR 5816A | 8.16 | 17909 $41 / 2$ | 1.91 |
| 5N1290 | KRC 5220 | 20－20 | $138 \times 43$ | 2.35 |
| 5N1302 | KR 5888A | 8－8．8 | $1398 \times 4$ | 2.50 |
| 600 Volts D．C．Working |  |  |  |  |
| 5N1289｜ | KR 604 | 4 | $8{ }^{8}$ | ． 76 |
| 5N1050 | KR 608 | 8 | 13884 | 2.35 |
| 5N1051 | KR 616 | 16 | $11 / 2 \times 4 / 2$ | 2.94 |



## WET ELECTROLYTIC REPLACEMENTS

Type＂WR＂．Dry electrolytic，alu－ minum cans．Can is negative，lug terminal．Rated at 450 W .10 mfd ． Replace wet electrolytics from 4 to 12 mid．， 20 mid．， 16 to 20 mfd． 30 mfd．＂， 20 to 30 mfd．， 40 midd． 30 to 40 mfd． $3 / 4$＊mounting stud with palnut．

| Stock No． | Type No． | Mfd． | $\begin{gathered} \text { Size } \\ \text { Inches } \end{gathered}$ | Each |
| :---: | :---: | :---: | :---: | :---: |
| 5N1052 | WR 10 |  |  |  |
| 5N1053 | WR 20 | 20 | 13 x21／2 | 1.32 |
| 5N1057 | WR 30 | 30 |  |  |
| 5N1056 | WR 40 | 40 | $138 \times 31 / 4$ | ． 71 |

# CORNELL DUBILIER CONDENSERS 

HIGH VOLTAGE SERIES CAPACITORS


Type DSTH for high voltage filtering, coupling and bypass applica.
tions in television. Exceptionally large satety factor, double case construction. Withstands $85^{\circ}$ temperature. Sturdy leads for mounting.

3000 Volts DC

| Stock No. | Type No. | $\begin{aligned} & \text { Cap. } \\ & \text { MFD } \end{aligned}$ | Size Inches | Each |
| :---: | :---: | :---: | :---: | :---: |
| 5N3200 | DSTH 30T5 | . 0005 | $1 / 2{ }^{\prime \prime} \times 21 / 8$ " | 56 c |
| 5N3201 | DSTH 30D1 | . 001 |  | 56c |
| 5N3202 | DSTH 30D5 | . 005 | 7/8"x21/8 | 59c |
| 5N3203 | DSTH 30S1 | . 01 | ${ }^{15} 510^{\prime \prime} \times 238$ | 62c |
| 5N3204 | DSTH 3055 | . 05 | $13 / 8{ }^{\text {cx }}$ " | 71 c |


| 4000 Volts DC |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 5N3205 | DSTH 40 T5 | . 0005 |  |  |
| 5N3206 | DSTH 40D | . 001 | \% | 59c |
| 5N3207 | DSTH 40D5 | . 005 |  | 62 c |
| 5N3208 | DSTH 40S1 | 01 |  | 65c |
| 5N3209 | DSTH 4055 | . 05 | 17 /8*x |  |
| 5000 Volta DC |  |  |  |  |
| 5N3210 | DSTH 50T5 | . 0005 | 11 | 62c |
| 5N3211 | DSTH 50D1 | . 001 | 13 10 "x2 $1 / 2$ " | 62c |
| 5N3212 | DSTH 50D5 | . 005 | $1116{ }^{1} \times 234^{\prime \prime}$ | 65 c |
| 5N3213 | DSTH 50SI | . 01 | $13{ }^{\prime \prime} \times 31 / 4{ }^{\prime \prime}$ | 68c |
| 5N3214 | DSTH S0S5 | . 05 | $1{ }^{9} 8 \times 41 / 2$ " |  |

MTV TELEVISION COND.


Metal cased, high voltage condensars. Dykanol filled and impregnated. Ideal for IV and other HV applica-
tions. Rated 6000 V.

| Stock No. | Type No. | $\begin{aligned} & \text { Cap. } \\ & \text { MFD } \end{aligned}$ | Size Inches | Each |
| :---: | :---: | :---: | :---: | :---: |
| 5N937 | MTV 60T5 | . 0005 | $1 \times 13 / 4$ | 76c |
| 5N938 | MTV 60D1 | . 001 | $1 \times 13 / 4$ | 76 c |
| SN939 | MTV 60D5 | . 005 | $1 \times 11 / 8$ | 76c |
| 5N940 | MTV 6051 | . 01 | $1 \times 21 / 4$ | 82 c |
| 5N941 | MTV 60S3 | . 03 | 13/48259 | 88c |
| SN942 | MTV 60S5 | . 05 | $13 \times 818$ | 94c |

"TVC" METAL TUBULAR CAPACITORS


Compact can type withstands severe climatic conditions. Noninductive, impreg. nated, filled with Dykanol to maintain high insulation resistance.

| 600 Volts D. C. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type No. | Cap. | Size Inches | Each |
| $\overline{\text { 5N1172 }}$ | TVC 6D5 | . 005 | 7/6x $1^{11}$ | . 56 |
| 5N1173 | TVC 6S1 | . 01 | $716 \times 1$ | . 56 |
| 5N1174 | TVC 6S15 | . 015 | T10x 1 | . 59 |
| 5N1190 | TVC 6S2 | . 02 | ${ }^{7} 16 \times 11$ | . 62 |
| 5N1191 | TVC 6S3 | . 03 | 17/50x11/8 | . 65 |
| 5N1192 | TVC 6S4 | . 04 | 9/10x11/8 | . 65 |
| SN1193 | TVC 6S5 | . 05 | 96 T 1 | . 65 |
| 5N1194 | TVC 6P1 | . 1 | 56xl 1/2 | . 73 |
| 5N1195 | TVC 6P25 | . 25 | 3/4×113/16 | 1.00 |
| 5N1196 | TVC 6P5 | . 5 | $1 \times 1{ }^{1,18}$ | 1.30 |

1000 Volts D. C.

| SN1175 | TVC 10D5 | . 005 | 120.20 | 63c |
| :---: | :---: | :---: | :---: | :---: |
| 5N1176 | TVC losl | . 01 | 17/1015 | 65 c |
| 5N1177 | TVC 10S15 | . 015 | 17\% 619 | 71c |
| 5N1178 | TVC 10S2 | . 02 | $17 / 6 \times 196$ | 71 c |
| 5N1179 | TVC los3 | . 03 | 56x1906 | 71 c |
| 5N1180 | TVC l0S4 | . 04 | 598210 | 71 c |
| 5N1181 | TVC los5 | . 05 | 价 | 76 c |
| 5N1182 | TVC 10P1 | 1.1 | $3 / 4 \times 2{ }^{1 / 16}$ |  |

1600 Volts D. C.

| 5N1183 | TVC 16D5 | 005 | 17/10x1916 | 71 c |
| :---: | :---: | :---: | :---: | :---: |
| 5N1184 | TVC 16S1/ | . 01 | 17/6x $\times 19$ | 71c |
| 5N1185 | TVC 16S15 | . 015 | $5{ }^{5} \times 19$ | 73 c |
| 5N1186 | TVC 16S2 | . 02 | $5{ }^{5} \times 21$ 亿6 | 76c |
| 5N1187 | TVC 16S3 | . 03 | 78x $\times 1 / 16$ | 76 c |
| 5N1188 | TVC 1654 | . 04 | 7/8×21/6 | 76c |
| 5N1189 | TVC 16S5 | 1.05 | 7/8×2100 | 82 |

"TLA" DYKANOL "A"
FILTER CAPACITORS


In sealed aluminium containers $41 / 2 \times 11 / 2$ except *) which are $27 / 8$ high. Mount in any position. Dykanol dielectric. Can negative.

| Stock <br> No. | Type No. | Cap. <br> Mfd. | Wkg. <br> Volt. | Each |
| :--- | :---: | :---: | :---: | :---: |
| SN4195* | TLA 6020 | 2 | 600 | 2.44 |
| 5N4196 | TLA 6040 | 4 | 600 | 3.35 |
| 5N4197* | TLA 10010 | 1 | 1000 | 2.23 |
| 5N4198 | TLA 10020 | 2 | 1000 | 2.91 |
| 5N4194* | TLA 15005 | .5 | 1500 | 2.68 |
| 5N4199 | TLA 15010 | 1 | 1500 | 2.91 |

"TLAD" TRANSMITTING COND.
Same as above except insulated can. 41/2" x11/2" except (*) which are $27 / 8$ " high.

| Stock No. | Type No. | Cap. Mtd. | D. C. Wkg. Volt. | Each |
| :---: | :---: | :---: | :---: | :---: |
| 5N4114* | TLAD 6020 | 2 | 600 | 2.88* |
| 5N4115 | TLAD 6040 | 4 | 600 | 3.79 |
| 5N4116* | TLAD10010 | 1 | 1000 | 2.68 |
| SN4117 | TLAD10020 | 2 | 1000 | 3.35 |
| 5N4118* | TLAD15005 | . 5 | 1500 | 3.12 |
| 5N4119 | TLAD15010 | 1 | 1500 | 3.35 |

"TJU" DYKANOL "A"


Dykanol filled and im pregnated. Porcelain high tension terminals for trouble free high voltage use. New universal type mounting bracket for quick, easy mounting. Weight 4 lbs .

|  | $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | Cap. Mfd. | Wkg. Volt. | Ht. | Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5N2994 | TJU 6010 |  | 600 | 23 | 3.09 |
| 5N2995 | TJU 6020 | 2 | 600 |  | 3.82 |
| 5N2996 | TJU 6040 | 4 | 600 |  | 4.85 |
| 5N2957 | TJU 6080 |  | 600 |  | 7.20 |
| 5N2997 | TJU 10010 | 1 | 1000 |  | 3.38 |
| 5N299 | TJU 100 | 2 | 1000 | 4" | 4.41 |
| 300 | TJU 10040 | 4 | 1000 | 45 | 5.59 |
| 295 | TJU 10080 | 8 | 1000 | 43 | . 08 |
| 5N2959 | TJU 10100 | 10 | 1000 |  | 8.97 |
| 5N2999 | TJU 15010 | 1 | 1500 | 4" | 3.97 |
| 5N3000 | TJU 15020 | 2 | 500 |  | 69 |
| 3005 | TJU 15040 | 4 | 1500 | 45 | . 5 |
| 5N2960 | TJU 15080 | 8 | 1500 | 43 | 11.17 |
| 5N2991 | TJU 20001 | . 1 | 2000 |  | 3.53 |
| 5 N | TJU 200025 | 25 | 200 |  | 3.82 |
| 3 | TJU 20005 | . 5 | 2000 |  |  |
| 5N3001 | TJU 20010 | 1 | 2000 |  | . 85 |
| 5N3003 | TJU 20020 | 2 | 2000 |  | . 73 |
| 5N3021 | TJU 20040 | 4 | 2000 |  | 8.08 |
| 5N3019 | TJU 30010 |  | 3000 |  | 10.73 |
| 5N3020 | TJU 30020 | 2 | 3000 |  | 13.38 |
| 5N3022 | TJU 50020 | 2 | 5000 |  | 28.65 |

## "BRH" HIGH CAPACITY LOW VOLTAGE UNITS



Etched foil electrolytic capacitors for power packs, electric ence devices, telephone and DC timing cir
dboard sleeves.


## X'MITTING MICAS



Moulded in bakelite; mechanically strong; special impregnation; high insulation resistance. No magnetic material-reduces loses at all frequencies Short heavy terminals-minimum RF and con tact resistance. India Mica. For grid and plate blocking.

| $600 \mathrm{~V} . \mathrm{Wlg} .{ }^{\text {Type }} 4000 \mathrm{~V} . \text { Test }$ |  |  |  |
| :---: | :---: | :---: | :---: |
| Stock No. | C. D. No. | Cap. Mid. | Each |
| 5N4156 | 4.14050 | . 00005 | . 41 |
| 5N4157 | 4-13010 | . 0001 | . 41 |
| 5N4158 | 4-13020 | . 0002 | . 41 |
| 5N4159 | 4-13025 | . 00025 | . 41 |
| 5N4160 | 4.13050 | . 0005 | . 41 |
| SN4161 | 4-12010 | . 001 | . 41 |
| 5N4162 | 4-12020 | . 002 | . 47 |
| 5N4163 | 4-12060 | . 006 | .71 |
| 5N4164 | 4-11010 | . 01 | . 94 |
| 5N4165 | 4-11020* | . .02 | 1.29 |
| 5N4166 | 4-11030* | . 03 | 1.73 |

1200 V. Wkg. 2500 V . Test

| SN4168 | $4-23010$ | .0001 | .59 |
| :--- | :--- | :--- | ---: |
| 5N4169 | $4-23025$ | .00025 | .59 |
| 5N4170 | 4.23050 | .0005 | .59 |
| 5N4171 | 4.22010 | .001 | .73 |
| 5N4172 | $4-22020 *$ | .002 | 1.12 |
| SN4173 | $4.22050 *$ | .005 | 1.41 |
| 5N4174 | $4.21010^{*}$ | .01 | 2.29 |

2500 V. Wkg. 5000 V. Test

| 5N4175 | 4-53010 | . 0001 | . 73 |
| :---: | :---: | :---: | :---: |
| 5N4176 | 4.53020 | . 00002 | . 82 |
| 5N4177 | 4.53025 | . 00025 | . 88 |
| 5N4178 | 4-53050 | . 0005 | 1.00 |
| 5N4179 | 4-52010 | . 001 | 1.21 |
| 5N4180 | 4-52020* | . 002 | 1.82 |
| 5N4181 | 4.52040* | . 004 | 2.56 |
| 5N4182 | 4-52050* | . 005 | 2.76 |

All thickness ${ }^{11 / 2, ~ e x c e p t ~ * ~ — ~} 7$ /6.

## "DYR" CAPACITORS



Dykanol filled and im pregnated. For severe re. quirements of aircraft, marine and tropical use Moisture proof; withstands $85^{\circ} \mathrm{C}$. temp. Metal case. 600 V D. C. Wkg.

| Stock Nn. | Type | Cap. Mfd. | Size Inches | Each |
| :---: | :---: | :---: | :---: | :---: |
| 5N3006 | DYR 6005 | . 05 | $113 / 16 \times 1 \times 3 / 4$ | 1.53 |
| 5N3011 | DYR 6010 | . 1 | 13/36x1x ${ }^{3 / 4}$ | 1.56 |
| 5N3012 | DYR 6025 | . 25 | $1 \frac{13}{16 \times 1 \times 3 / 4}$ | 1.65 |
| 5N3013 | DYR 6050 | . 5 | 113 ¢x1x ${ }^{7 / 8}$ | 1.76 |
| 5N3014 | DYR 6100 | 1.0 | 2x18,9\% ${ }^{\text {\% }}$ | 2.00 |
| 5N3015 | DYR 6200 | 2.0 | $2 \times 2 \times 11 / 8$ | 2.68 |
| 5N3010 | DYR 60055 | .05-.05 | $113 / 6 \times 1 \times 3 / 4$ | 1.94 |
| 5N3007 | DYR 6011 | .1-. 1 | 113 Kx1x ${ }^{1 / 4}$ | 1.97 |
| 5N3016 | DYR 6022 | . $25-.25$ |  | 2.00 |
| 5N3008 | DYR 6055 | .5-. 5 | $2 \times 13 / 4 x^{7} 8$ | 2.29 |
| 5N3017 | DYR 6110 | 1.-1. | $2 \times 2 \times 11 / 8$ | 7.82 |
| 5N3009 | DYR 6111 | .1-1-1-. 1 | $1^{13} / 10 \times 1 \times 3 / 4$ | 2.23 |
| 5N3018 | DYR 6222 | .25-.25-. 25 | $2 \times 13 / 4 x^{13} 16$ | 2.53 |
| 5N3023 | DYR 6555 | . $5-.50 .5$ | 2x2x11/8 | 3.06 |

## "DA" AND "DB" METAL CASED

|  |  | Non-inductively wound Wax impregnated. |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 400 Volts |  |  |  |  |
| Stock No. | Type | Mfd. | L x W x T | Each |
| 5N12 | DA 4011 | . 1 |  | 1.03 |
| 5N1278 | DA 4025 | . 25 | $11510 \times 1 \times{ }^{3}{ }^{\text {m }}$ | 1.18 |
| 5N1279 | DA 4050 | . 5 | $11^{15} 16 \times 1 x^{3}$ | 1.26 |
| 5N1342 | DA 4100 | 1.0 | $2 \times 13 / 4 x^{13}$ | 1.53 |
| 5N1343 | DA 4200 | 2.0 | 2×2x13 | 1.97 |
| 5Ni344 | DB 4010 | . $1-1$ | $1{ }^{13} 16 \times 1 x^{8}$ | 1.62 |
| 5N1345 | DB 4025 | . $25-.25$ | $2 \times 11 / 4{ }^{3 / 1 / 4}$ | 1.76 |
|  | DB 4050 | 5-5 | 2x13/4x |  |
| 600 Volts D.C. Wkg. |  |  |  |  |
|  | DA 6050 | . 5 | $2 \times 13 / 4$ | 1.6 |
| 5N1350 | DA 6100 | 1.0 | 2x2x11/ | 1.8 |

# MALLORY ELECTROLYTIC CONDENSERS 



| No. | Type | Mfd. | Volts | Size | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5N3700 | WP039 | , 000 | 15 |  | 1.91 |
| 5N3701 | WP041 | 2,000 | 15 | $13 / 8{ }^{\prime \prime} x^{\prime}$ | 2.76 |
| 5N3702 | WP055 | 100 | 25 | $1^{\prime \prime} \times 2$ " | . 85 |
| 5N3703 | WP057 | 500 | 25 | $1^{\prime \prime} \times 21 /{ }^{\prime \prime}$ | 1.44 |
| 5N3704 | WP059 | 1,000 | 25 | $138^{\prime \prime} \times 2^{\prime \prime}$ | 2.09 |
| 5N3705 | WP065 | 500 | 50 | $13 / 8{ }^{\prime \prime} \times 2$ " | 2.09 |

## DUAL SECTION

5N3662 FP211 $30-30$ 150 1 " $\times 2$ " 11.03 | SN3710 | FP214 | $50-50$ | 150 | $1 " \times 21 /{ }^{\prime \prime}$ | 1.23 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| SN3726 | FP208 | $20-20$ | 150 | $1^{\prime \prime} \times 2^{\prime \prime}$ | .91 | 5N3727 FP210 40-20 150 1" $\times 2^{\prime \prime} \quad 1.03$ SN3728 FP212 40-40 $150 \mid 1^{\prime \prime \prime} \times 21 /$ " $^{\prime \prime} \quad 1.15$

## TYPE FP AND WP COMPACT DRY ELECTROLYTICS

For top chassis mounting in filler and audio bypass circuits. Light weight. Hermetically ealed aluminum Sane SECTION

| No. | Type | Mid. | Volts | Size | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5N379 | FP115 | 50 | 150 | $1^{*} \times$ | 85 |
| 5N3706 | FP116 | 100 | 150 | $1^{*} \times 3$ | 1.15 |
| 3699 | FP135 | 30 | 350 | 1 "x | 1.00 |
| N3707 | FP137 | 50 | 350 | $1 \times$ | 1.21 |
| 5N3658 | FP142 | 10 | 450 |  | . 76 |
| 5N3659 | FP143 | 15 | 450 | $1^{\prime \prime} \times 2^{\prime \prime}$ |  | DUAL SECTION


| 5N3729 | FP213 | $50-30$ | 150 | $1 " \times 211^{\prime \prime}$ | 1.15 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| SN3370 | FP217 | $20-20$ | 250 | $1^{\prime \prime} \times 2^{\prime \prime}$ | 1.21 |
| SN3793 | FP225 | $15-15$ | 350 | $1^{\prime \prime} \times 2^{\prime \prime}$ | 1.23 |
| SN3792 | FP227 | 20.20 | 350 | $1^{\prime \prime} \times 3^{\prime \prime}$ | 1.33 |
| SN3664 | FP231 | $10-10$ | 450 | $1 " \times 2^{\prime \prime}$ | 1.23 |

Designed for twist prong mounting through suitable chassis slots. Solder luq type terminals all at one end. SINGLE SECTION

| No. | Type | Mfd | Volts | Size | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5N3708 | FP144 | 20 | 450 | $1^{\prime \prime} \times 2$ " | 1.03 |
| 5N3791 | FP145 | 30 | 450 | $1^{\prime \prime} \times 3^{\prime \prime}$ | 1.15 |
| 5N3709 | FPl 46 | 40 | 450 | $1^{\prime \prime} \times 3^{\prime \prime}$ | 1.32 |
| 5N3681 | FP149 | 80 | 450 | $13 / 8{ }^{\prime \prime} \times 21 / 2$ | 2.29 |

DUHL SECTION
5N3665 FP234 20-20 $450 \quad 1$ " $\times 3^{n} \mid 1.56$ 5N3711| FP238 $40-40450 \quad 1^{3} \times{ }^{\prime \prime} \times 3^{\prime \prime} \quad 2.35$ 5N3712 FP245 $80-10 \quad 450 \quad 13 / 8^{\prime \prime} \times 3^{\prime \prime} \mid 2.50$ 5N3731 FP237 $30-30 \quad 450 \quad 13 / 8{ }^{\prime \prime} \times 21 / 2^{\prime \prime} 1.91$

MULTIPLE SECTION

| No. | Type | Cap. Mid. | Wkg. Volts | Size | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5N3713 | FP354 | 20-20-20 | 150 | 1"x2" | 1.29 |
| 5N3795 | FP357 | 40-40-40 | 150 | 1"x3" | 1.53 |
| 5N3870 | FP355 | 40-20-20 | 150 | - $1^{\prime \prime} \times 212^{\prime \prime}$ | 1.41 |
| 5N3714 | FP367 | 10-10-10 | 350 | 1 "x2 | 1.41 |
| SN3670 | FP389 | 10-10.10 | 450 | 1"x3" | 1.47 |
| 5N3798 | FP390 | 15.15-10 | 450 | " $\times 3$ " | 1.68 |
| 5N3725 | WP302. | 15.15/1000 | 150/2 | 1"x2" | 1.59 |
| 5N3732 | FP307 | 40-20/100 | 150/25 | 1"x21/2" | 1.76 |
| SN3733 | FP310 | 40-40/20 | 150/25 | 1"x21/2" | 1.41 |
| SN3871 | FP410 | 50-50-50/20 | 150/25 | $13 / 8{ }^{\prime \prime} \times 21 / 2^{\prime \prime}$ | 2.00 |
| SN3715 | FP306 | 40-20/20 | 150/25 | 1"x2 | 1.35 |
| 5N3716 | FP309 | 50-30/100 | 150/25 | $1^{\prime \prime} \times 21 / 2^{\prime \prime}$ | 1.76 |
| 5N3717 | FP328 | 15-10/20 | 350/25 | $1^{\prime \prime} \times 2^{\prime \prime}$ | 1.35 |

FP - TC TELEVISION CONDENSERS
These capacitors have been specifically designed for television. FP is a fabricated plate, twist prong, dry type. Type TC is a metal, tubular dry, electrolytic cond. Extremely dependable under adverse operating

| No. | Type | Mid. | Volts DC | Size | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5N3874 | WP505 | 10230 cycles | 3V.NP | $3 / 4{ }^{\prime \prime} \times 2$ " | 1.23 |
| 5N3875 | WP510 | . 5 Z 15750 cycles | 3V.NP | 1"x2" | 1.71 |
| 5N3876 | WP540 | 1.0 Z 60 cycles | 3V.NP | $13 / 8{ }^{\prime \prime} \times 3^{\prime \prime}$ | 2.65 |
| 5N3877 | WP204 | 250-1000 | 10.6 | $13^{\prime \prime}{ }^{\prime \prime} \times 2^{\prime \prime}$ | 2.50 |
| 5N3878 | FP117 | 150 | 150 | 1 "x3" | 1.68 |
| 5N3879 | FP215 | 125-100 | 150 | $18 /{ }^{\prime \prime} \times 21^{\prime \prime}{ }^{\prime \prime}$ | 2.09 |
| 5N3880 | FP218 | 120-20 | 300 | \%/8" | 2.47 |
| 5N3881 | FP235 | 20.80 | 450-350 | $13 / 8^{\prime \prime} \times 2 \frac{1}{2 \prime \prime}^{\prime \prime}$ | 2.41 |
| 5N3882 | FP236 | 40-10 | 450 | 13/8"x2" | 1.85 |
| 3N3883 | FP239 | 50-40 | 450 | $13 / 8{ }^{\prime \prime} \times 3^{\prime \prime}$ | 2.38 |
| 5N3884 | FP244 | 80-50 | 450-50 | $13 / 8{ }^{\prime \prime} \times 3^{\prime \prime}$ | 2.32 |
| 5N3885 | FP303 | 20-250-100 | 150-15-15 | $18 / 81 \times 2$ | 2.00 |
| 5N3886 | FP312 | 100.25-50 | 150-25-50 | $1^{\prime \prime} \times 3^{\prime \prime}$ | 1.59 |
| 5N3888 | FP318 | 90-90-20 | 200-200-50 | $13 / 8{ }^{\prime \prime} \times 3^{\prime \prime}$ | 2.76 |
| 5N3891 | FP326 | 100-60-20 | 300-150-25 | $1^{3} \times{ }^{*} \times 3^{\prime \prime}$ | 2.53 |
| 5N3892 | FP341 | 40-90-50 | 450-150-150 | 13/6"*3" | 2.41 |
| 5N3893 | FP342 | 40-40-130 | 450-150-50 | $1^{3} \mathrm{~s}^{\prime \prime} \times 3^{\prime \prime}$ | 2.35 |
| 5N3894 | FP343 | 40-100.50 | 450-150-50 | $18 / 8{ }^{\prime \prime} \times 3^{\prime \prime}$ | 2.35 |
| 5N3895 | FP344 | 10-30-30 | 450-400-300 | $13 / 8{ }^{\prime \prime} \times 2{ }^{1 / 2}{ }^{\prime \prime}$ | 2.20 |
| 5N3919 | FP345 | 40-10-80 | 450-450-200 | $1{ }^{1 / 8}{ }^{\prime \prime} \times 3^{\prime \prime}$ | 2.56 |
| 5N3920 | FP393 | 40-40-10 | 450 | $18 / 8{ }^{\prime \prime} \times 3^{\prime \prime}$ | 2.53 |
| 5N3921 | FP395 | 40-40-40 | 450-450-150 | $13 / 8{ }^{\prime \prime} \times 3^{\prime \prime}$ | 2.53 |
| 5N3922 | FP413 | 40-40-40-20 | 300-300-300-150 | $18.8{ }^{\prime \prime} \times 3^{\prime \prime}$ | 2.65 |
| 5N3923 | FP414 | 15-80-40-200 | 350-200-200-25 | $13 / 8{ }^{\prime \prime} \times 3^{\prime \prime}$ | 2.68 |
| 5N3924 | FP421 | 5-5-50-80 | 400-400-300-250 | $13 / 8{ }^{\prime \prime} \times 3^{\prime \prime}$ | 2.70 |
| 5N3925 | FP428 | 40-10-35-10 | 450-450-350-350 | $18 / 8{ }^{\prime \prime} \times 3^{\prime \prime}$ | 2.65 |
| 5N3926 | FP431 | 40-10-15-25 | 450-450-450-25 | $13 \times 1 \times 3^{\prime \prime}$ | 2.44 |
| 5N3927 | FP432 | 40-10-10-250 | 450-450-450-25 | $13 / 8^{\prime \prime} \times 3^{\prime \prime}$ | 2.62 |
| 5N3928 | FP433 | 60-10-10-20 | 450-450-450-150 | $18 / 8{ }^{\prime \prime} \times 3^{\prime \prime}$ | 2.65 |
| 5N3929 | TC308 | 5215750 cycles | 3V.NP | $1^{1} 4^{\prime \prime} \times 2^{\prime \prime}$ | 1.78 |
| 5N3930 | TC420 | 1.5Z 60 cycles | 4V.NP | $14,6{ }^{\prime \prime} \times 27 / 8{ }^{\prime \prime}$ | 2.06 |
| 5N3931 | TC2505 | 500 | 25 | $1^{1} 16{ }^{\prime \prime} \times 27 / 8{ }^{\prime \prime}$ | 1.32 |

## Cardboard Tubular Dry Electrolytics

waxed caraboard fubes with an adjustahle strap for horizontal mounting. Insulated leads. Type numbers marked (*) have leads at bot


| No. | Type | Mid. | Volts DC | Size | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5N3734 | ST595 | 8 | 450 |  | 68 |
| 5N3735 | ST597 | 16 | 450 | $13^{16}{ }^{\prime \prime} \times 23 / 4$ " | 91 |
| 5N3736 | ST598 | 20 | 450 | $1^{\prime \prime} \times 38 /{ }^{\prime \prime}$ | 1.00 |
| 5N3737 | ST599 | 30 | 450 | 1"x31/2" | 1.09 |
| 5N3738 | 2N509* | 20-20 | 150 | $7 / 8^{\prime \prime} \times 2 \frac{18}{8 \prime}$ | . 78 |
| 5N3739 | 2N513* | 20-30 | 150 | 7/8"x25\%" | . 88 |
| 5N3740 | 2N514* | 40-20 | 150 | 7/8 $\times 25 / 8$ | . 88 |
| 6N3741 | 2N511* | 40-40 | 150 | "x25/8" | 1.00 |
| 5N3742 | 2N520* | 50-30 | 150 | $1^{\prime \prime} \times 25$ " | 1.00 |
| 5N3743 | 2N521 | 50-50 | 150 | 11/8" $\times 2 \frac{8}{8 \prime}$ " | 1.21 |
| 5N3744 | 2N518 | 8 -8 | 450 | $15^{\prime \prime}{ }^{\prime \prime} \times 23^{\prime \prime}{ }^{\prime \prime}$ | 1.12 |
| Triple-Types 3N and TN-Common Negative |  |  |  |  |  |
| 5N3745 | 3N527* | (20-20) (20) | (150) (25) | $1510 \times 25{ }^{\prime \prime}$ | 1.12 |
| 9N3746 | 3N533** | (30-30) (20) | (150) (25) | $1^{\prime \prime} \times 25 / 8{ }^{\prime \prime}$ | 1.15 |
| 5N3747 | TN125* | (20-10) (10) | 150 | 7/8"x219" | 1.09 |
| 3N3748 | TN129 | (40-20) (20) | 150 | $14 / 8{ }^{\prime \prime} \times 2 /{ }^{\prime \prime}$ | 1.35 |


| No. | Type | Cap. Mid. | Wkg. Volts | Size | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5N3718 | FP371 | 30-10/20 | 350/250 | $1 \times 3^{\prime \prime}$ | 1.68 |
| 5N3719 | FP330 | 30.20/20 | 350/25 | $1 " \times 3^{\prime \prime}$ | 1.65 |
| 5N3668 | FP332 | 10.10/20 | 450/25 | $1^{\prime \prime} \times 2^{\prime \prime}$ | 1.38 |
| 5N3799 | FP339 | 20-20/20 | 450/25 | $1^{\prime \prime} \times 3^{\prime \prime}$ | 1.73 |
| SN3720 | FP346 | 40-40/20 | 450/25 | $13 / 8{ }^{\prime \prime} \times 3^{\prime \prime}$ | 2.15 |
| 5N3721 | FP409 | 40-40-30/20 | 150/25 | $13 \times 1$ x ${ }^{\prime \prime}$ | 1.82 |
| 5N3673 | FP424 | 15-15-10/20 | 450/25 | $1^{3 / 8}{ }^{\text {" }} \times 2$ " | 2.00 |
| 5N3722 | FP426 | 20-15/20-20 | 450/25 | $1^{3} \times{ }^{\prime \prime} \times 2{ }^{\prime \prime}$ | 2.00 |
| 5N3723 | FP429 | 40-30-10/20 | 450/25 | $1{ }^{8 / 88^{\prime \prime} \times 3^{\prime \prime}}$ | 2.47 |
| 5N3873 | FP416 | 40/40-20/20 | 350/300/25 | $188^{\prime \prime} \times 3^{\prime \prime}$ | 2.32 |
| 5N3724 | FP434 | 10.10-10-10 | 450 | $18 / 8 \times 2 \times 2$ | 1.91 |
| 5N3873 | FP444 | 20-20-20-20 | 450 | $18 \%{ }^{\prime \prime} \times 3^{\prime \prime}$ | 2.65 |

## MOUNTING PLATES FÓR F́P - WP CONDENSERS <br> For $8 / \mathbf{n}^{\prime \prime}$ dia. cans 5N3674-Bakelite 5N3677-Metal) Any Type 

TC DRY ELECTROLYTICS


Hermetically sealed in aluminum case. Sup plied with leads and insulating tube. Can Ideal for under chassis mounting conditions diameter 1 " SINGLE SECTION - TYPE TC

| Stock No. | Cap. <br> Mfd. | Wkg Volts | Each | $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | Cap. <br> Mid. | Wkg. Volts | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5N829 | 1000 | 3 | 1.06 | 5N988 | 40 | 150 | . 65 |
| 5N830 | 500 | 6 | 1.00 | 5N838 | 50 | 150 | . 71 |
| 5N831 | 1000 | 6 | 1.32 | 5N839 | 60 | 150 | . 76 |
| SN832 | 500 | 15 | 1.23 | 5N840 | 10 | 250 | . 56 |
| 5N848 | 10 | 25 | . 44 | 5N841 | 20 | 250 | . 71 |
| 5N875 | 25 | 25 | . 50 | 5N842 | 10 | 350 | . 59 |
| 5N876 | 50 | 25 | . 59 | 5N843 | 20 | 350 | . 76 |
| 5N833 | 100 | 25 | . 71 | 5N844 | 5 | 450 | . 53 |
| 5N987 | 10 | 50 | . 47 | 5N888 | 8 | 450 | . 56 |
| 5N897 | 25 | 50 | . 53 | 5N889 | 10 | 450 | . 62 |
| 5N898 | 50 | 50 | . 62 | 5N845 | 15 | 450 | . 76 |
| 5N834 | 5 | 150 | . 44 | 5N846 | 20 | 450 | . 88 |
| 5N835 | 10 | 150 | . 50 | 5N847 | 30 | 450 | . 97 |
| 5N836 | 15 | 150 | . 53 | 5N849 | 40 | 450 | 1.18 |
| 5N837 | 20 | 150 | . 56 | 5N850 | 10 | 500 | 1.59 |
| 5N882 | 30 | 150 | . 57 | 5N851 | 10 | 600 | 1.73 |

DUAL COMMON NEGATIVE TYPE TCD

| Stock No. | Type | Cap. <br> Mid | Wkg. Volts | Each | Stock No. | Type | Cap. Mid. | Wkg. Volts | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5N852 | TCD28 | 25.25 | 25 | . 65 | 5N858 | TCD62 | 10-10 | 350 | 94 |
| 5N853 | TCD45 | 20.20 | 150 | . 76 | 5N859 | TCD65 | 20-20 | 350 | 1.23 |
| 5N854 | TCD47 | 30.30 | 150 | . 88 | 5N860 | TCD7! | 8-8 | 450 | 1.00 |
| SN8S5 | TCD48 | 40-40 | 150 | 1.00 | 5N861 | TCD72 | 10-10 | 450 | 1.09 |
| 5N856. | TCDS 2 | 10-10 | 250 | . 88 | 5N862 | TCD74 | 15-15 | 450 | 1.29 |
| 5N857 | TCDS5 | 20-20 | 250 | 1.06 | 5N863 | TCD75 | 20-20 | 450 | 1.41 |

"'TPW PAPER TUBULARS
Oil treated non-mductive units, wax filled and impregnated. y humid climatic conditions All have wire leads

| No. | Mfd. | Volts | Each | No. | Mtd. | Volts | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5N3896 | . 01 | 400 | 144 | 5N3907 | . 005 | 600 | 14¢ |
| 5N3897 | . 02 | 400 | $14 ¢$ | 5N3908 | . 006 | 600 | 146 |
| SN3898 | . 05 | 400 | 168 | 5N3908 | . 01 | 600 | 16 c |
| 5N3899 | . 1 | 400 | 196 | 5N3910 | . 02 | 600 | $16 ¢$ |
| 5N3818 | . 2 | 400 | $24 t$ | 5N3820 | . 03 | 600 | 196 |
| 5N3900 | . 25 | 400 | 24 ¢ | 5N3821 | . 04 | 600 | 194 |
| 5N3901 | . 5 | 400 | 318 | 5N3911 | . 05 | 600 | 224 |
| 5N3819 | 1.0 | 400 | $48 \%$ | 5N3912 | . 06 | 600 | 226 |
| 5N3902 | . 0001 | 600 | $14 \%$ | 9N3913 | . 1 | 600 | 244 |
| 5N3903 | . 00025 | 600 | 146 | 5N3914 | . 25 | 600 | 29 |
| SN3904 | . 0005 | 600 | 14 | 9N3915 | . 5 | 600 | 424 |
| 5N3903 | . 001 | 600 | 146 | 5N3823 | 1.0 | 600 | 67¢ |
| 5N3906 | . 002 | 600 | 146 |  |  |  |  |


|  | UE | $\cdots$ |  | FOR MINIA | URE R | RADIOS |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 600 Working |  |  |  | 400 Working |  |  |  |
| No． | Mfd． | Size | Each | No． | Mtd． | Size | Each |
| 5N2494 |  | 1／4 $\times 1^{11 / 66^{\prime \prime}}$ |  | 5N2500 | ． 001 | 1／7／13／10＂ | ． 21 |
| 5N2493 | ． 002 | 1／4 $\times^{11 / 16}$ | ． 21 | 5N2501 | ． 002 | $1 / 4 x^{11}{ }^{16}$ | ． 21 |
| 5N2492 | ． 003 | $948{ }^{1 / 11 / 16}$ | ． 21 | 5N2502 | ． 003 | 1／4 $\times^{11 / 16}$ | ． 21 |
| 5N2491 | ． 004 | $9.2 x^{1 / 3}$ | ． 21 | 5N2S03 | ． 004 | ${ }^{3 / 4} \times 11{ }^{16}$ | ． 21 |
| 5N2490 | ． 005 | $y^{3}$ S2x $x^{13} 16$ | ． 24 | 5N2505 | ． 006 | 1／4 $\times^{1 / 3 / 166}$ | ． 21 |
| 5N2489 | ． 006 | $3_{16 \times 15}{ }^{13}{ }^{16}$ | ． 24 | 5N2505 | ． 01 |  | ． 21 |
| 5N2488 | ． 01 | 3，16x 16 | ． 26 | 5N2506 | ． 02 | ${ }_{5,16 \times 1}^{516}$ | ． 26 |
| SN2487 | ． 02 | $11 / 3 \times 1$ | ． 29 | 5N2508 | ． 05 | $13_{52}^{16 x}$ | ． 29 |
| 5N2486 | ． 05 | $155911 / 8$ | ． 32 | 5N2499 | ． 1 |  | ． 38 |
| 5N2485 | ． 1 | $5 / 8 \times 1 / 8$ | ． 41 | 5N2498 | ． 25 | $5 / 881818$ | ． 44 |
| 5N2484 | ． 25 | $5 / 8 \times 2^{\prime \prime}$ | ． 47 | 5N2497 | ． 5 | $5 / 8 \times 2^{5}{ }^{16}$ | ． 52 |

200 Working Volts DC

| 5N2509 | ． 005 | 1／4 $\mathrm{x}^{1}$ | ． 21 | 5N251 | ． 05 | ${ }^{516 \times 1}$ | 析 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5N2510 | ． 006 | $1 / 4 \times^{14}{ }^{16}$ | ． 21 | 5N2514 | ． 1 | ${ }_{13}^{13} \mathrm{x}^{2} \mathrm{x}$ ］ | ． 35 |
| 5N2511 | ． 01 | ＂${ }_{30} x^{1.3}{ }_{15}{ }^{\prime \prime}$ | ． 24 | 5N2496 | ． 25 | ${ }^{17} 53 \times 11 / 8$ | ． 41 |
| 5N2512 | ． 02 |  | ． 26 | 5N2495 | 5 | 5／8×18／8 | ． 47 |


|  | 100 Working Volts DC |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5N2520 | ． 25 | $15 / 82 \times 1 / 3 / 8{ }^{\prime \prime}$ | ． 41 | 5N2521 | ． 5 | 5／6x11／8 | ． 47 |

## MOULDED TELECAPS

TYPE TM＂600＂LINE
All－purpose，small size．Heat－resistant bakelite phenolic，paper tubular．For high－temperature TV receivers，auto sets，etc．Oll－filled．Shock and humidity－proot，non－inflammable．
No． $\mid$ Mifd．Ea． $\mid$ No． $\mid$ Mfd，Ea， $\mid$ No．Mfd，Ea． $\mid$ No．Mfd．｜Ea．

 \begin{tabular}{l|l|l|l|l|l|l|l|l|}
$5 N 2628$ \& 00025 \& 15 \& $5 N 2633$ \& .003 \& .15 \& $5 N 2637$ \& .01 \& .18 <br>
$5 N 2 N$ \& 5642 \& .25 \& .32

 

\hline $5 N 2629$ \& .0004 \& .15 \& $5 N 2634$ \& .004 \& .15 \& $5 N 2638$ \& .02 \& .18 \& $5 N 2643$ \& .5 \& .47 <br>
5N2630 \& .0005 \& .15 \& $5 N 2635$ \& .005 \& .15 \& $5 N 2639$ \& .05 \& .24 \& $5 N 2681$ \& 1.0 \& .73 <br>
\hline
\end{tabular} 5N2631 ． 001

## TYPE＂MB＂MOLDED TUBULARS

 1600 Valts Working，Oil Impregnated| No． | Mtd． | Dia．Lgt． | Each | No． | Mid． | Dia．Lgt． | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5N2690＊ | ． 001 | $88 \times 188{ }^{\prime \prime}$ | ． 32 | 5N2693 | 01 | 1／2x2 | ． 35 |
| SN2691 | ． 002 | $8 / 8 \times 13 / 8{ }^{\prime \prime}$ | ． 32 | 5N2694 | ． 02 | ${ }^{3} 10 \times 2$ | .35 |
| 5N2692 | ． 005 | 9／14＊15／8＂ | ． 32 | 5N2695＊ | 05 | ${ }^{13} 16 \times 21 / 8$ | ． 41 |

pletion of molds．
TYPE TVM－6，000 \＆10，000 VOLTS

| No． | TVM | Mid． | WVDC | Size | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5N2696 | 356 | ． 0005 | 6，000 | 1／2×11／2 | ． 79 |
| 5N2697 | 216 | ． 001 | 6，000 | $5 / 8 \times 17 / 8$ | ． 79 |
| 5N2698 | 256 | ． 005 | 6，000 | 3／8x17／8 | ． 79 |
| SN2699 | 351 | ． 0005 | 1，0000 | 5／8×17／8 | ． 88 |
| 5N2700 | TVO－116 | ． 01 | 6，000 |  | ． 82 |
| 5N2701 | TVQ－156 | ． 05 | 6，000 | $1 \times 3$＂ | ． 94 |

SPRAGUE＂ATOMS＂
Ultra－cumpact dry electrolytics sleeve．Protected dgainst＂Blow－ ups．＂ $31 / 2^{\prime \prime}$ bare leads uveted to end caps．

| Nu． | Mid． | $\begin{gathered} \text { Wkg. } \\ \text { VIts. } \end{gathered}$ | Nize | Ea |
| :---: | :---: | :---: | :---: | :---: |
| 5N769 | 10 | 25 | \％6x | ． 44 |
| 5N770 | 25 | 25 | 9／6x ${ }_{6}$ | 5 |
| 5N2680 | 5 | 50 | Y／15x | 44 |
| 5N2682 | 10 | 50 | ${ }^{11} 16 \times 1$ | 47 |
| 5N771 | 25 | 50 | 5／8x15／8． | 53 |
| 5N2841 | 50 | 50 | ${ }_{11}^{16 \times 1}$ | 62 |
| 5N772 | 4 | 150 | 5／8x1 | 44 |
| 5N773 | 8 | 150 | \％ 81 | 47 |
| 5N774 | 12 | 150 | 5／8x | ． 50 |
| 5N775 | 14 | 150 | ${ }^{4} 16 \times 1$ | ． 53 |
| 5N776 | 20 | 150 | ${ }_{14}{ }^{1} 1$ | 56 |
| 5N2840 | 30 | 150 |  | ． 59 |
| 5N777 | 40 | 150 |  | ． 65 |
| 5N778 | 4 | 450 | 56x1 | 53 |
| 5N779 | 8 | 450 | ${ }^{3} \times 1$ | 56 |
| 5N780 | 12 | 450 | $7_{8 x}$ | ． 68 |
| 5N781 | 16 | 450 | ${ }^{53} \mathrm{H}_{6} \times 22^{1} 8^{\prime \prime}$ | 79 |
| 5N782 | 20 | 150 | ${ }^{7} 88213^{*}$ | 88 |
| 5N783 | 11－10 10 | 50 | 5／8x：2 | 68 |
| 5N3164 | －－8＊ | 151 | ${ }^{5} 8 \times$ | ． 68 |
| 5N2842 | $12-20^{*}$ | 150 | ${ }^{3}{ }_{16} \times 2 \times 2$ | ． 73 |
| 5N3165 | $20 \sim 20^{*}$ | 150 | $3{ }^{3} \times 23$ | ． 76 |



TYPE TVL TWIST－LOKS
TELEVISION REPLACEMENTS．Hermekically sealed for lonc life．Designed for $85^{\circ} \mathrm{C}$ operation up to 450 WVDC．

SINGLE UNITS

| Stock No． | Type | Mfd． | WVDC | Dia．$\times$ L． | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5N2702 | TVL，－11 | ． 5 0hm＠ 15.75 kc | 3，non－pol． | $1 \times 2$＂ | 1.70 |
| 5N2703 | TVL－42 | 1 ohm＠ 60 cps | 3，non－pol． | 1／8x21／2＂ | 2.65 |
| 5N2704 | TVL－43 | 2000 | 6 | 1／8x2＂ | 2.47 |
| 5N2705 | TV＇－1 | 80 | 150 | 1821／2＂ | 1.03 |
| 5N2706 | TVL－61 | 80 | 150 | $13 / 8 \mathrm{x} 2^{\prime \prime}$ | 1.03 |
| 5N2707 | TYL－70 | 15 | 250 | $1 \times 2{ }^{\prime \prime}$ | ． 82 |
| 5N2708 | TVL－63 | 30 | 250 | $1 \times 2 /{ }^{\prime \prime}$ | ． 91 |
| 5N2709 | TVL－3 | 50 | 250 | $1 \times 2$＂ | 1.12 |
| 5N2710 | TVL－62 | 80 | 250 | 1×31／2＂ | 1.41 |
| 5N2711 | TVL－t | 100 | 300 | $1 \times 4^{\prime \prime}$ | 1.85 |
| 5N2712 | TV1－5 | 80 | 350 | $18 / 8 \times 212^{\prime \prime}$ | 1.65 |
| 5N2713 | TVL－45 | 40 | 450 | $1 \times 3{ }^{\prime \prime}$ | 1.32 |
| 5N2714 | TVI－6 | 125 | 450 | $1 \frac{1}{6 x} 4^{\prime \prime}$ | 3.38 |
| 5N2715 | TVI－ | 30 | 475 | $1 \times 3^{\prime \prime}$ | 1.53 |
| 5N2716 | TVL－8 | 40 | 175 | $18 / 8 \times 2{ }^{\prime \prime}$ | 1.76 |
| 5N2717 | TVI．－9 | 40 | 475 | 18／8x ${ }^{1} \times 2^{\prime \prime}$ | 3.82 |

DUAL UNITS

| 5N2718 | TV゙L－10 | $1000+500$ | 15，non－pol． | 13／832 ${ }^{\prime \prime}$ | 1.73 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5N2719 | TVb－13 | $1000+1000$ | 15 | $1 \times 3{ }^{1 / 2}{ }^{\prime \prime}$ | 2.88 |
| 5N2396 | TVL－H | $80+80$ | 300 | 13／6x31／2＂ | 2.26 |
| 5N2397 | TVI－15 | $30+10$ | 400 | $1 \times 3{ }^{\prime \prime}$ | 1.47 |
| 5N2398 | TVL－64 | $40+40$ | 450 | $18 / 883^{\prime \prime}$ | 2.35 |
| 5N2399 | TVL－1i | $80 / 10$ | $450 / 25$ | $13 / 8 \times 3{ }^{17}$ | 2.18 |
| 5N2400 | TV1－4 | $80+10$ | 150 | $13883^{\prime \prime}$ | 2.50 |
| 5N2401 | TVL－19 | $20 / 100$ | 475／300 | 136031／2＂ | 2.41 |
| 5N2402 | TVL－20 | $40+40$ | $\underline{175}$ | 1\％${ }^{1} \times 3^{3}$ | 2.73 |

TRIPLE UNITS

| 5N2403 | TVL－50 | $70+70 / 20$ | 200／50 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 2.35 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5N2404 | TVL－21 | $100+10 / 40$ | $200 / 50$ | 189820＂ | 2.26 |
| 5N2405 | TVL－22 | $80+80 / 60$ | 250／200 | 18／8x ${ }^{1} /{ }^{\prime \prime}$＂ | 2.50 |
| 5N2406 | TVI－23 | 40／20／10 | 350／300／200 | $18 / 8 \times{ }^{\text {c }}$ | 1.71 |
| 5N2408 | TVL－24 | $80+40 / 150$ | 400／50 | 1\％\％x＋＂ | 2.73 |
| 5N2409 | TV1－28 | 10／10／50 | 450／350／25 | $1 \times 3{ }^{\prime \prime}$ | 1.56 |
| 5N2410 | TYL－26 | $30 / 100+25$ | 450／25 | 18／8x2＂ | 1.62 |
| 5N2414 | TVL－5゙2 | $10+10 / 40$ | ＋50／50 | $1 \times 2{ }^{1 / 2}{ }^{\prime \prime}$ | 1.68 |
| 5N2415 | TV1－67 | $20+10 / 50$ | 450／50 | $1 \times 3{ }^{\prime \prime}$ | 1.82 |
| 5N2417 | T L L－29 | $40+10 / 40$ | 450，50 | 18／8x21／2＂ | 1.91 |
| 5N2418 | TVL－57 | 40／100／130 | 450／150／50 | 1 $1 / 8 \times 3{ }^{\prime \prime}$ | 2.44 |
| 5N2419 | TV1－65 | $20+20 / 60$ | ＋50／350 | $18 / 8 \times 3 \cdot \frac{11}{}{ }^{\prime \prime}$ | 2.26 |
| 5N2420 | TVL－53 | $40+10 / 10$ | 450／350 | $136 \times 3{ }^{\prime \prime}$ | 2.06 |
| 5N2421 | TVL－31 | 20／20／40 | 475／300／25 | $12 / 8 \times 2{ }^{\prime \prime}$ | 1.97 |
| 5N2422 | TVL－32 | 40／40／25 | 475／400／50 | $13 / 8 \mathrm{xa}^{\prime \prime}$ | 2.73 |
| 5N2423 | TVL－33 | $10+10+10$ | 475 | $1 \times 3^{\prime \prime}$ | 1.76 |
| 5N2424 | TVL－55 | $30+30+20$ | 475 | $13 / 8 \times 3{ }^{\prime \prime}$ | 3.06 |

QUADRUPLE UNITS

| 5N2425 | TVL－60 | $60+40+20 / 5$ | $300 / 25$ | $13 / 8 \times 31 /{ }^{\prime \prime}$ | 2.35 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5N2432 | TVL－34 | $10+10 / 10+10$ | 350／300 | $13 / 8 \times 2{ }^{\prime \prime}$ | 1.82 |
| 5N2433 | TVL－35 | $40 / 10 / 80+10$ | 400／350／250 | 13／6x31／2＂ | 2.62 |
| 5N2435 | TVL－36 | $10+10+10 / 10$ | 450／150 | 11982＂ | 1.79 |
| 5N2438 | TVI－68 | $60+10+10 / 20$ | ＋50／250 | $18 \mathrm{x}^{\text {a }}{ }^{\prime \prime}$ | 2.56 |
| 5N2442 | TVL－5t | 10／30／30 | 450／400／300 | $13 / 8 \times 23^{\prime \prime}{ }^{\prime \prime}$ | 1.82 |
| 5N2443 | TVL－58 | $30+30+15+10$ | 450 | $13 / 8 \times 3{ }^{1 / 2}{ }^{\prime \prime}$ | 2.50 |
| 5N2444 | TVL－37 | 10／10／80／50 | 475／450／200／50 | 1\％ $\mathrm{x}^{3}{ }^{3}$ | 2.70 |
| 5N2445 | TVL－38 | $40+20+10 / 10$ | 475／25 | 18\％${ }^{3} 3^{\prime \prime}$ | 3.00 |
| 5N2446 | TVL－39 | $10+10+10+10$ | 155 | $138 \times 2{ }^{4}$ | 2.32 |
| 5N2447 | TVL－40 | $40+20+10+10$ | 175 | 18／8x ${ }^{10}$ | 3.23 |

## TYPE TVA ATOMS

Especially designed to take care of both television and radio． Small sized，metaleencased dry electrolytic tubulars．．．．All are sult－ able for $85^{\circ} \mathrm{C}$ operation．

TVA－11 through TVA－14 are specially designed miniatures tor TV and FM discriminator circuits．

SINGLE UNITS

| No． | TVA | Mfd． | WVDC | Dia．x L ． | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5N2448 | 1 | 1000 | 6 | ${ }^{15} 56 \times 2{ }^{3}{ }_{18}{ }^{\text {a }}$ | 1.32 |
| 5N2449 | $\because$ | 2000 | ${ }^{6}$ |  | 2.29 |
| 5 N 2450 | 3 | $\because 50$ | 10） | ${ }^{11,16 \times 1{ }^{18} 8^{\prime \prime}}$ | 1.03 |
| 5N2451 | 4 | 500 | 10 | ${ }^{13} 16 \times 21 / 1{ }^{46}$ | 1.12 |
| 5 N 2452 | 5 | 10 | 25 | 11／6x15／6＂ | ． 44 |
| 5N2453 | 6 | 25 | 25 | ${ }^{11} 118 \times 15 / 6^{10}$ | ． 50 |
| 5N2454 | 7 | 50 | 25 |  | ． 59 |
| 5N2455 | 8 | 100 | 25 | 11／16x $\times 1^{13} 966^{\prime \prime}$ | ． 71 |
| 5N2456 |  | 250 | 25 |  | 1.18 |
| ${ }_{5}{ }^{\text {N2457 }}$ | 10 | 500 | 25 |  | 1.32 |
| SN2458 | 11 | $!$ | 50 | $7^{76 \times 15} 16{ }^{\text {a }}$ | ． 44 |
| 5 N 2459 | 12 | 2 | 50 | ${ }^{31} \times 1 \times 1{ }^{3} / 66^{\prime \prime}$ | ． 44 |
| 5N2460 | 13 | 5 | 50 | ${ }^{7} 16 \times 1516{ }^{16}$ | ． 44 |
| 5N2461 | 14 15 | 10 | 50 50 |  | ． 47 |
| ${ }_{5}{ }^{\text {N } 2462}$ | 15 | 25 | 50 | ${ }^{110} 10 \times 190$ | ． 53 |
| 5 N 2463 | 16 | 50 | 50 | ${ }^{11} 16 \times 1{ }^{1319 \%}$ | ． 62 |
| 5N2464 | 17 | 100 | 50 |  | ． 88 |
| 5N2465 | 18 | 30 | 150 | ${ }^{15} 96 \times 1{ }^{13} / 6^{\prime \prime}$ | ． 59 |
| 5N2466 | 19 | 80 | 150 |  | ． 88 |
| 5N2467 | 21 | 10 | 450 | ${ }^{13 / 10 \times 25 / 8{ }^{\prime \prime}}$ | ． 62 |
| 5N2535 | 22 | 20 | 450 |  | ． 88 |
| 5N2536 | 23 | 30 | 450 | $1360{ }^{213}$ \％＂ | ． 97 |
| 5N2537 | 24 | 40 | 450 | $136 \times 356^{\prime \prime}$ | 1.18 |

DUAL UNITS

| SN2538 | 20 | $20+ \pm 0$ | 150 | $13 / 10 \times 19 / 0^{\prime \prime}$ | .76 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 5N2539 | $25^{\circ}$ | $10+10$ | 450 | $1310 \times 290^{\circ}$ | $\mathbf{1 . 0 9}$ |

## INTERFERENCE FILTERS - WAVE TRAPS

## C-D QUIETONE INTERFERENCE FILTERS

## Type IF-18. An efficient allwave

 compactive inductive type filter fo use in connection with all types o electrical appliances where inter ference conditions are severe. With frame connection for reduction o radiation. Bakelite case finished in Walnut. Rating 110 volts AC or DC 5 amperes. Reduces interference when installed between radio and outlet-suppresses noise conditions when installed at offending appliance or motor. Shpg. wt. 5 bs. 5N12493-List Price $\$ 8.35$4.91

## Type IF-4. For use on small radio receivers, such as AC-DC midget sets, where the noise level is, not too severe. Connects in power line between the radio receiver plug and wall receptacle. Rating 5 amperes 5N12490-Shipping weight 8 oz . List $\$ 1.10$. <br>  <br> FILTERS FOR USE AT THE APPLIANCE

Type IF-6. For all types of home electrical appliances where inter ference is of moderately low intensity. Installed between appliance and power supply with short return lead which reduces radiation Rating 5 amperes at 110 volts AC or DC. Walnut finish. 5N12425-Shipping weight 8 oz. List $\$ 1.75$.
1.03


Type IF-21. All-wave capacitive-inductive type filter for use on appliances where relurn lead cannot be made, such as shaver, barber clippers. Bakelite case Rating 1.6 amperes at 110 volts AC or DC. Walnut finish. Wt. 2 lbs. 5N12495-List Price $\$ 4.00$
2.35

Type IF-19. Capacitive-inductive type filter for use where interference is severe. Frame connection provided. In Bakelite case, Walnut inish. 5 amperes at 110 V . AC-DC.
4.12

Type IF-22A. For use in connection with electric shavers such as Schick, Knapp-Monarch and similar type shavers, 5 amperes at 110 volts AC. Bakelite case, black finish. Shpg. wt. 1 lb
1.62

Type 22B. Physically the same as Type 22A, but for use with Packard, Zephyr, Remington-Rand, and Ronson type electric shavers. 5 amperes at 110 V. AC or DC. Bakelite case
1.62


## INDUSTRIAL QUIETONE INTERFERENCE

## FILTERS

Type IF-7A. Capacitive-inductive type heavy duty filter for eliminating noise created by motors, oil burners, diathermy machines, elevators, etc. In cable or conduit. For single phase 110.220 volts AC or DC at 5 amperes. Shpg. wt. 9 lbs. 5N1 2500 -List $\$ 12.50$.
7.35

Type IF-27. Capacitive-inductive heavy duty type for severe inter. erence from oil burners, motors, etc. For 110 volts AC or DC at 5 amperes. In steel box with flexible leads. $5 N 12498$-Shipping weight 5 lbs. List $\$ 7.00$
Type IF-28. Same as Type IF-27, but for equipment
drawing up to 10 amps. at 110 V. AC or DC
SN12499-Shpg. wt. 7 lbs . List $\$ 12.50 . . . . .7 .35$

## FLUORESCENT NOISE FILTER

Type IF-24. Mounts inside fixture by means of slotted strip which slips under any assembly bolt. Case is grounded and leads are shunted across power line. Cylindrical, $2^{\prime \prime} x^{7 / 8 "}$. For use on 110 volts AC or DC. Shipping weight 802.
5N12501-List Price $\$ 1.10$
65 8
Type IF-54. Capacitive-inductive filter which provides extremely high attenuation over a wide range of frequencies. Suitable for fluorescent lights, sign flashers, etc. Drawn metal container $2^{\prime \prime} \times 2^{\prime \prime} \times 11 / 8^{\prime \prime}$. Insulated wire leads $6^{\prime \prime}$ long. Rated at 2 amperes on $110-220$ voits AC or DC. Shpg. wt. 1 lb .
1.32 5N12491-List \$2.25.

## ICA 'FILTERYOLTS'

All-Wave Model. Contains heavy duty R.F. chokes, large filter capacitors, "Pl"' filter-unit. Eliminates noises caused by irons, toasters, vacuum cleaners, etc. Rated 5 amps at 32, 110 and 220 volts AC or DC. For use with any all-wave or broadcast receivers. Shpg. wt. 5 lbs .
5N12508-List Price \$7.50.
4.41

Intermediate model. Eliminates extremely noisy radio reception due to power line disturbances caused by lights, electrical appliances, etc. Can be installed at et or source of interserence. $44 / 8 \times 38 / 8 \times 13 / 16$. Shipping weight 2 lbs .
5N12507-List Price $\$ 4.50$



## MEISSNER TV-FM WAVE TRAPS

Designed expressly for use in the reduction of unwanted signals of certain types encoun tered in frequency modulation and television reception. Can be used with receivers having balanced or unbalanced antenna input impedances of $400,300,72$ or 50 ohms Easily installed across antenna terminals 12N10255-Model 15-7510. 6-13MC 12N10257-Model 15.7511. 13-27 MC 12N10258-Model 15-7512. $27-54 \mathrm{MC}$ 12N10259-Model 15-7513. $54-108 \mathrm{MC}$ 12N10260-Model 15-7514. 108-216 MC Any Model, List \$5.00. Each..

## MEISSNER BROADCAST BAND WAVE TRAP

These popular Meissner wave traps are compact units designed for the elimination of interference caused by strong broadcast stations. All are fully shielded and moisture protected. Limited coverage permits easy adjustment. Full instructions are furnished for use as either reject or by-pass arrangements. Shields are $13 / 8 \times 17 / 8^{\prime \prime}$ high. Brackets for mounting the unit to the chassis or cabinet are attached to the shield. 12N10261-Model 15-8479. 400-700 KC 12N10262-Model 15-8480. 650-1000 KC 12N10263-Model 15-8481. 950-1600 KC Any Model. List \$1.50. Each.


## MEISSNER LINE FILTER

Type 15-7515. A combination in ductor-capacttor type which filters both sides of the line. Greatly reduces interference carried into the receiver by the power line. Especially true in small radios with built in antennas where one side of the ine is connected to the chassis; thus infroducing interference directly volts AC or DC at 3 amps. 3.82


## NOISE SUPPRESSOR

Eliminates noise from $115 \mathrm{~V} .50 / 60$ cycle fluorescent. Leads shunted across power line. 41/4"xly/4"x $5 N 12520-\mathrm{Wt} .1 \mathrm{lb}$.

75


## MALLORY INTERFERENCE FILTERS


(A) Type X-6 for medium interference. Plug into socket ahead of affected installation. Brown plastic case. Size: $11 / 4^{\prime \prime} \times 22^{1 / 0^{\prime \prime} \times l^{\prime \prime}}$ 5 amperes at 110 yolts AC or DC WN1 82509 -List $\$ 1.60 \ldots 94$ Each, in lots of 6
(B) Type X-5. Triplecapacityfiller with provision for return lead to appliance. For Vacuum Cleaners, food mixers, etc. $18 / 8^{\prime \prime} \times 21 / 8^{\prime \prime}$. 5 DC Weres at $110-220$ volts AC o 5N12523-List $\$ 2.70 . .$. . 59
(B) X-3 Plug-in. Capacitive type for use between set and out.
let. Rated 5 amps. at $110-220$ let. Rated 5 amps. at $110-220$ $21 / 4$ "
5N12510-List $\$ 1.80 \ldots 1.96$

## W-7 MOTOR TYPE

(C) Dual capacity unit. Use on molor brushes or rings. Bracket for mig. to frame. For moderate interference $110-220$ volts. 7/8x 5N12512—List \$1.35.... 794
W.11. Like above, for severe interference. $11 / 8 \times 3^{\prime \prime}$
5 N12513-List $\$ 2.10$
1.23
 5N12516-List \$3.60... 2.12

Type Z-4. Dual inductance-capacity for severe interference where return lead is inconvenient or vibrators. $18 / 8^{\prime \prime} \times 3^{\prime \prime}$. 3 amperes $110-220$ volts. Wt. 8 oz .
5N12524-List $\$ 2.50$... 1.47

Z-2. Capacitive-inductive. ${ }^{3}$ mps. at $110-220$ V. 18/8×2\%/4. SN12511-List $\$ 2.20$. . 29

## HEAYY DUTY FILTERS



LC-5. Inductance capacity filter for severe interference.
Rated $110-220$ Rated $110-220$ cord, plug and receptacle. 27/8 x3x31/2" high. Case has mig. ilanges. Wt. 8 lbs. 25 . 6.61

LC-10. Same as above, rated 110.220 V-. 10 amps.
$5 N 12515$-List $\$ 15.00 .8 .82$

## MERIT QUALITY TRANSFORMERS

A



## VIBRATOR TRANSFORMERS

Exact duplicate vibrator transformers. P3068 replaces Chevrolet 986241, Philco CR4, CR6, CR8. P4076 for Cadillac 7256609, Chevrolet 985793, Oldsmobile 982399, Pontiac 984171 . P4077 for Buick 980690, 980733, 980744, 980745, 980797, 980798.

| Stock No. | Type No. | Sec. DC to Filter |  | Dimen.$H \times W \times D$ | Mtg. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Volts | M.A. |  |  |  |
| 6N1915 | P3068 | 260 | 80 | $23 / 16 \times 25 / 8 \times 17 / 8^{\prime \prime}$ | ${ }_{\text {C }}$ | 2.65 |
| 6N1916 | P4076 | 265 | 55 | $31 / 4 \times 25 / 8 \times 25 / 8^{\prime \prime}$ | JG | 3.29 |
| 6N1917 | P4077 | 230 | 65 | $315 / 16 \times 21 / 4 \times 23 / 8{ }^{\prime \prime}$ | IT | 3.53 |

## FIXED OUTPUT TRANSFORMERS

Fig. A. All class A operation except type A2936 which is class $\mathrm{B}_{1} \AA \mathrm{~B}_{1}$. Secondary impedance 3.5 ohms.

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \\ & \hline \end{aligned}$ | Type | $\begin{gathered} \text { Pri. } \\ \text { Impedance } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Pri. } \\ & \text { M.A. } \end{aligned}$ | Max. <br> Watts | Mtg. Centers | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N1918 | A3025 | 2,500 | 50 | 3 | " | 73 |
| 6N1919 | A3026 | 5,000 | 40 | 3 | $13 / 4$ | 73 c |
| 6N1934 | A2935 | $5,000 \mathrm{ct}$. | 150 | 18 | $213 / 16^{\prime \prime}$ | 1.76 |
| 6N1935 | A2927 | 8,000 | 20 |  | 11/2" | 73 c |
| 6N1936 | A 2936 | $10,000 \mathrm{ct}$. | 75 | 10 | 23/8 | 1.41 |

## UNIVERSAL OUTPUT

Fig. F. Matches single or push-pull tubes to voice coil. Primary imp: 4000-7000-8000-10000-14000 ohms ct. Sec. imp. . 17 to 32.

| Stock No. | Type No. | M.A. | Max. <br> Watts | Mtg. Centers | $\begin{aligned} & \text { Dimensions } \\ & H \times W \times D \end{aligned}$ | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 61 | A2900 | 35 | 4 | $2^{\prime \prime}$ | $13 / 8 \times 23 / 8 \times 11 / 4^{\prime \prime}$ | 11 |
| 6N1938 | A. 2901 | 40 | 8 | 23/8 | 15/8x2 13/16x11/2' | 1.50 |
| 6N1939 | A. 2904 | 40 | 18 | $23 / 8{ }^{\prime \prime}$ | 21/4x27/8×17/8" | 1.91 |

## MERIT UNIVERSAL LINE TRANSFORMERS

Fig. F. To couple various line impedances to $\alpha$ voice coil. Primary imp: 500-1000-1500-2000 ohms.

| Stock No. | Type | Sec. | Watts | Mtg. Centers | $\mathrm{Him}_{\mathrm{W}} \times \mathrm{D}$ | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N1931 | A2906 | 3.2, 6-8 | 10 | 23/8" | 15/8x2 $13 / 16 \times 11 / 2^{\prime \prime}$ | 1.32 |
| 6N 1932 | A2907 | 3.2, 6-8 | 18 | 23/8' | 21/4×27/8×17/8' | 2.20 |
| 6N1933 | A2908 | 6-8, 16 | 24 | $31 / 8{ }^{\prime \prime}$ | 21/4x3 $11 / 16 \times 21 / 8^{\prime \prime}$ | 2.35 |

## POWER TRANSFORMERS

Fig. C. Receiver replacement type. For use in radio and amplifiers. Primary for 115 V. 60 -cycle AC. Leads R.M.A. color coded.


## PLATE TRANSFORMERS

DC voltage ratings are approximate values at output of a 2 section choke input filter using M.V. rectifier tubes. Primary 115 vols, 60 -cycle AC. ( $t$ ) Both secondaries avallable simultaneously. (*) Has 40-volt bias tap.

| Stock No. | Type No. | Sec. <br> Rms <br> Volts | Sec. Volts | $\begin{aligned} & \mathrm{DC} \\ & \mathrm{Sec} . \\ & \mathrm{M.A.} \end{aligned}$ | $\mathrm{H} \times \mathrm{W}^{\mathrm{Dim}} \times \mathrm{D}$ | Mig. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N1995 | $\overline{\text { P3157 }}$ | ) $660 \mathrm{ct}^{*}$ | 50 | 250 | 45/8x3 13/16x43/81 | D | 6.76 |
| 6N1996 | P315 | \{1080 ct | $1000 \uparrow$ | 125 |  | D | 8.23 |
| 6N 199 | P315 | $\left\{\begin{array}{l}500 \mathrm{ct} \\ 900 \mathrm{ct}\end{array}\right.$ | $400 \dagger$ 750 | 150 |  | D | 7.9 |
| 6N1997 | P3 | $\left\{\begin{array}{l}900 \mathrm{ct} \\ 800 \mathrm{ct}\end{array}\right.$ | 600 |  |  |  |  |
| 6N1998 | P3167 | $\left\{\begin{array}{l} 1450 \mathrm{ct} \\ 1175 \mathrm{ct} \end{array}\right.$ | 1200 1000 | 300 | $53 / 4 \times 61 / 8 \times 4^{\prime \prime}$ | EH | 19.84 |

## ISOLATION TRANSFORMERS

To provide isolation between line and associated circuits. Primary for $117 \mathrm{~V}, 50 / 60$-cycle AC. Static shielding between primary and secondary. 117 V . secondary.

| Stock No. | Type No. | Watts | Dimensions | Mtg. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\mathrm{H} \times \mathrm{W} \times \mathrm{D}$ |  |  |
| $\begin{aligned} & \text { 6N } 1986 \\ & \text { 6N } 1987 \end{aligned}$ | $\begin{aligned} & \hline \text { P3096 } \\ & \text { P3197 } \end{aligned}$ | $\begin{aligned} & 40 \\ & 80 \end{aligned}$ | $\begin{aligned} & 31 / 2 \times 25,6 \times 25 / 8^{\prime \prime} \\ & 37 / 3 \times 33 / 16 \times 31 / 2^{\prime \prime} \end{aligned}$ | $\begin{aligned} & \mathrm{B} \\ & \mathrm{D} \end{aligned}$ | $\begin{aligned} & 3.38 \\ & 5.00 \end{aligned}$ |

## RELIANCE REPLACEMENT TRANSFORMERS



1


2

1. FILAMENT TRANSFORMERS

| Stock No. | Primary | $\left\lvert\, \begin{gathered} \text { Secondary } \\ \text { Volts } \end{gathered}\right.$ | Secondary Amperes | Dimen. $\mathrm{H} \times \mathrm{W} \times \mathrm{D}$ | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6N1950 | 115, 60 cy . | 6.3 ct . | 1 | 15/8x2 13/16x11/2" | 85 c |
| 6N1951 | 115, 60 cy . | 6.3 ct . | 3 | $2 \times 31 / 4 \times 17 / 8^{\prime \prime}$ | 1.20 |
| 6N1952 | $115,60 \mathrm{cy}$. | 6.3 ct . | 6 | $29 / 16 \times 4 \times 21 / 4^{\prime \prime}$ | 1.59 |
| 6N1945 | 115, 60 cy. | 5 ct . | 6 | 21/4×3 11/16x17/8' | 1.65 |

## 3. UNIVERSAL LINE TRANSFORMERS

Match voice coil to any tube, single or push-pull, universal line ransformers match voice coil to $500,1000,1500$, or $2000-\mathrm{h} m$ line. Shipping weight 2 lbs.

| Stock No. | Watts | Sec. | Mtg. Cent. | Dim. H x W $\times \mathrm{D}$ | Each |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 6N1949 | 10 | $3.2,6-8$ | $23 / 8$ | $15 / 8 \times 213 / 16 \times 11 / 2^{\prime \prime}$ | .98 |
| 6N19190 | 18 | $3.2,6-8$ | $23 / 8$ | $21 / 4 \times 27 / 8 \times 17 / 8^{\prime 2}$ | 1.45 |
| $6 N 19191$ | 24 | $6-8,16$ | $31 / 8$ | $21 / 4 \times 311 / 16 \times 21 / 8^{\prime \prime}$ | 1.59 |

## 4. STEP-DOWN AUTOTRANSFORMERS

Permits use of standard voltage motors, accessories and appliances with line voltages from 220 to 250 V . 50-60 cycles. Sec. voltage 110-125. Built-in receptacle, cord with plug.

| Stock No. | Watts | Size | Wt. | Each |
| :---: | ---: | :---: | :---: | :---: |
| 6N1981 | 80 | $35 / 8 \times 3 \times 27 / 8$ | 5 | 3.35 |
| 6N1982 | 150 | $37 / 8 \times 3518 \times 31 / 8$ | 7 | 3.98 |
| 6N1983 | 250 | $43 / 4 \times 31 / 4 \times 33 / 8$ | 9 | 5.10 |
| 6N1984 | 500 | $43 / 4 \times 45 \times 33 / 8$ | 12 | 6.40 |
| 6N1985 | 1,000 | $71 / 4 \times 65 / 8 \times 55 / 8$ | 17 | 17.25 |

## 2. POWER TRANSFORMER5-115V, 60 CYC. PRI.



## 1. UNIVERSAL OUTPUT TRANSFORMERS

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | Class | $\begin{gathered} \text { Primary } \\ \text { Impedance } \end{gathered}$ | Sec. | Max. <br> Watts | $\left\|\begin{array}{l} \text { Mtg. } \\ \text { Ctrs. } \end{array}\right\|$ | Dimen. H. W. D. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N1954 | Sin. | 4000/7000 | .17) | 4 | $2^{\prime \prime}$ | 23/8x | 85 |
| 6N1955 | or | 8000/10000 | to | 8 | 23/8' ${ }^{\prime \prime}$ | $15 / 8 \times 2$ 13/16x11/2 | . 97 |
| 6N 1956 | P.P. | 14000 Ct . | 32 | 18 | 23/8" | $21 / 4 \times 27 / 8 x$ | 1.19 |
|  | Sin. |  |  |  |  |  | 1.59 |
| 6 | P.P. | $\left\|\begin{array}{c} 7000 / 8000 /- \\ 10000 \end{array}\right\|$ | 10 10 | 24 |  |  | 1.59 |

## 1. FIXED OUTPUT TRANSFORMERS

| Stock No. | Pri. Imp. | Sec. | Pri. M.A. | Watts | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6N1964* | 2000 | 3.2 | 60 | 5 | . 49 |
| 6N1947 $\ddagger$ | 5000 ct . (PP 6L6) | 3.2 | ISO | 18 | 1.08 |
| 6N1965* | 5000 | 3.2 | 40 | 5 | . 49 |
| 6N1966* | 7000 | 3.2 | 30 | 5 | . 49 |
| 6N1948 | 8000 | 3.2 | 20 | 3 | - .47 |
| 6N1967* | 10000 | 3.2 | 30 | 5 | . 49 |

## 1. FILTER CHOKES-1500 V. INSULATION

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | Inducance Henries | $\begin{gathered} \text { Current } \\ \text { M.A. } \end{gathered}$ | $\left\|\begin{array}{c} \text { DC } \\ \text { Res. } \\ \text { Ohms } \end{array}\right\|$ | Mtg. Ctrs. | Dimen. $\mathrm{H} \times \mathrm{W} \times \mathrm{D}$ | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N1971 | 8.5 | 50 | 40c | 23/8' | 15/8x2 $13 / 16 \times 11^{\prime \prime}$ | . 65 |
| 6N1973 | 15 | 75 | 400 | 31/8' | 21/4x ${ }^{\text {1 }} 11 / 16 \times 21 / 8^{\prime \prime}$ | 1.13 |
| 6N1974 | 10.5 | 110 | 220 | $3 \mathrm{~g} / 16^{\prime \prime}$ | $29 / 16 \times 4 \times 21 / 4{ }^{\prime \prime}$ | 1.35 |

# UTC TRANSMITTING TRANSFORMERS 



## CASE DIMENSIONS

| Type | Height | Width | Depth | Type | Height | Width | Depth |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \mathrm{G} 2 \\ & \mathrm{G} 3 \\ & \mathrm{G} 4 \end{aligned}$ |  |  |  | $\begin{aligned} & \mathrm{GF}_{5} \\ & \mathrm{C7} \\ & \mathrm{~GB} \end{aligned}$ |  |  |  |

## SINGLE SECONDARY FILAMENT TRANSFORMERS

Primaries tapped 105,115 volts, $50 / 60$ cycles AC.

| No. | Type | Sec. Volts | Amps. | Insul. | Case | Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N5853 | S. 53 | 2.5 c.t. | 10 | 1500 v . | G. 3 | 4 | 3.14 |
| 8N5854 | S-54 | 5 c.t. | 4 | 2500 v. | G. 3 | 4 | 3.14 |
| 6N5855 | S-55 | 6.3 c.t. | 3 | $1500 \mathrm{v}$. | G-3 | 4 | 3.14 |
| 6N5857 |  | 2.5 c.t. |  | $10000 \mathrm{v}^{\dagger}$ | G-5 |  | 4.41 |
| 6N5858 | S-58 | 2.5 u.t. | 20 | 10000 v . | G. 5 | $61 / 2$ | 5.39 |
| 6N5859 | S-59 | 5 to 5.25 c.t. | 13 | 5000 v . | G-5 | 61/2 | 4.41 |
|  | S.61 | 7.5 tapped. | . 8 | 3000 v . | G-5 | 61/2 | 4.41 |
| 6N5862 | S. 62 | 10 c.t. | 10 | 5000 v . | G. 5 | 61/2 | 5.39 |
| 6N5863 | S.63 | 14 v. c.t. lap <br> 12 v. c.t. | $\text { ct } \text { c.t. } 10$ | 5000 v. | G-7 | 11 | 9.80 |

FILTER, SWINGING AND AUDIO CHOKES

| Nos. | Type | Service | Hy. | Ma. | Ohms | Case | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N5823 | *S.23 | Audio | 500 | 5 | 6000 | G-2 | 3.33 |
| 6N5827 6N5829 6N5830 | $\begin{aligned} & * S-27 \\ & * S-28 \\ & * S-29 \\ & * S-30 \\ & *=20 \end{aligned}$ | Filter <br> Filter <br> Filter Swing. | $\begin{array}{r} 30 \\ 20 \\ 10 \\ 5 / 25 \end{array}$ | $\begin{array}{r} 75 \\ 100 \\ 175 \\ 175 \end{array}$ | $\begin{array}{r} 350 \\ 350 \\ 95 \\ 95 \end{array}$ | $\begin{aligned} & \mathrm{G} \cdot 4 \\ & \mathrm{G}-4 \\ & \mathrm{G}-4 \\ & \mathrm{G} \cdot 4 \end{aligned}$ | $\begin{aligned} & 3.72 \\ & 3.72 \\ & 3.72 \\ & 3.72 \end{aligned}$ |
|  | $\begin{aligned} & * S .31 \\ & * S .32 \\ & +S .33 \\ & +5.34 \\ & +5.36 \end{aligned}$ | Filter Silter Swing. | $\begin{array}{r} 20 \\ 5 / 25 \\ 20 \\ 5 / 25 \\ 5 / 25 \\ \hline \end{array}$ | $\begin{aligned} & 225 \\ & 225 \\ & 200 \\ & 300 \\ & 400 \\ & \hline \end{aligned}$ | $\begin{array}{r} 120 \\ 120 \\ 90 \\ 90 \\ 85 \\ \hline \end{array}$ | $\begin{aligned} & \mathrm{G}-5 \\ & \mathrm{G} .5 \\ & \mathrm{G} .7 \\ & \mathrm{G} .7 \\ & \mathrm{G} .8 \\ & \hline \end{aligned}$ | $\begin{array}{r} 4.90 \\ 4.90 \\ 6.86 \\ 6.86 \\ 10.29 \\ \hline \end{array}$ |
| 6N5837 | +5-37 | Filter | 20 | 550 | 60 | G-8 | 13.72 |

UNIVERSAL DRIVER TRANSFORMER

| No. | Type | Application | Case | Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6N5809 | S-9 | P.P. Driver plates to grids of |  |  |  |
|  |  | Class B tubes up to 400 watts output | G-4 | 4 | 5.10 |
| 6N5810 | S. 10 | P.P. 56, 6C6 Triode, 6C5, or similar plates to 45 's, 2A3's or 6L6's, self or fixed bias. | G-3 | 5 | 4.61 |

## ULTRA COMPACT AUDIO UNITS

Hi-fidelity, small, lightweight, suitable for compact equipment. Frequency response $\pm 2 \mathrm{db}$. from 30 to $20,000 \mathrm{cps}$ Maximum operating level +10 dt . Top of bottom nitq. Size: $11 / 2^{\prime \prime} \times 11 / 2^{\prime \prime} \times 2^{\prime \prime}$. Wt. 1 b

| No. | Type | Pri. Imp. Ohnes | Seer Imp. (hmes | Euch |
| :---: | :---: | :---: | :---: | :---: |
| 6N5394 | A 10 | 50, 125, 200/251), 333, 500/ (000) ohms | 30,600 ohnus. | 8.82 |
| 6N5726 | A 11 | 50, 200, $500 \ldots \ldots .$. | 50,000 ohnts. | 8.82 |
| 6N5370 | A 12 | $50,125,200 / 250,333,500 /$ 600 ohms | 80,000 ohns overall, in 2 sections | 8.82 |
| 6N5371 | A 14 | 30 olıms | 50,000 ohms overall in 2 seetions | 8.23 |
| 6N5372 | A 16 | 15,0100 ohms | 10,000 ohms 2:1 turn ratio | 7.84 |
| 6N5373 | A 18 | 15,000 ohms. | 80,000 ohms overall, 2.3:1 turn ratio overall | 8.28 |
| 6N5374 | A 19 | 15,000 ohms. | 80,000 ohms overall, 2.3:1 turn ratio overal] | 10.58 |
| 6N5375 | A 20 | 50, 125, 200/250, 333, 500/ 600 ohms | $50,125,200 / 250,333,500 /$ 600 ohms | 8.8 |
| 6N5376 | A 21 | 50, 200/250, 500/600 | 50, 200/250,500/600 | 9.41 |
| 6N5397 | A 24 | 15,000 ohins. | $50,125,200 / 250,333,500 /$ 600 ohins | 8.82 |
| 6N5377 | A 25 | 15,000 ohms. | 50, 125,200/250, 333, 500/ | 8.23 |
| 6N5378 | A 26 | 30,000 ohms plate to plate. . | $50,125,200 / 250,333,500 /$ | 8.82 |

## UNIVERSAL INTERSTAGE EQUALIZER

Type CGE-1. The ideal device for all applica Deirequing lrequency response correction. Designed to be connected between two triode audio stages or match a high impedance ( 5000 to 30,000 ohms) source to grid. Employs resohant circuits to permit low or high end equaliza tion without effecting mid-frequencies. Bass may be raised and highs may be dropped simul. taneously. Continuously adjustable to Size: $28 / 8^{\prime \prime} \times 4^{\prime \prime} \times 2 \frac{1}{2}$
6N5399-Shipping weight 3 lbs
14.70


## DYNAMIC NOISE SUPPRESSION INDUCTOR

Type CG-50. Incorporates two accurate High $Q$ colls ( 8 and 2.4 hy.) for use in dynamic noise suppression circuits. Effectively suppresses surface and needle noise in high tidelity phonograph equ ment. Excellent circuit included. Case type RC (see listing below) $2^{s}{ }^{16^{\prime \prime}} \times 27 / 8^{\prime \prime} \mathrm{H}$. 6N5396.
9.41

## VARIMATCH MODULATION TRANSFORMERS

Universal modulation transpormer For matching all tubes to plate modulated Class C amplifier stage. Secondaries are designed
to carry the plate current to carry the plate current of the Class C stage. CVM. 0 through 4 use RC case.


| Stock No. | Type | Max. <br> Audio <br> Watts | WattsClass C Stage | Dimensions |  |  | Shpq. Wt. Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L. | W. | H. |  |  |
| 6N5359 | CVM-0 | 12 | 10-25 |  |  |  |  |  |
| 6N5360 | CVM-1 | 30 | 20-60 | 31/11" | \% |  | 6 | 8.23 |
| 6N5361 | CVM. 2 | 60 | 40.125 | 35/8/ |  |  | 12 | 12.05 |
| 6N5362 | CVM-3 | 125 | 100.250 |  |  |  | 20 | 17.64 |
| 6N5363 | CVM-4 | 300 | 200.600 |  |  |  | 31 | 29.40 |
| 6N5364 | CVM-5 | 600 | 450-1200 | " |  |  | 89 | 67.62 |

## UTC STANDARD VARITRAN

 VOLTAGE CONTROLSEmploys a sliding contact riding over the transtormer turns. Provides continu-ously-variable output voltages from 0 to 130 volts without interruption of the circuit. All completely shielded. Type V-1 (illistrated) includes cord, plug, and switch. Other units have screw terminals on insulated strip. For 115 volts.


| No. | Type | Watts | Amps. | Size | Wt. | Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $21 N 5733$ | V-0 | 230 | 2 | $4 \times 6 \times 48 / 4{ }^{\prime \prime}$ | 10 lbs | 11.27 |
| 21N5721 | V-I | 570 | 5 | $5 \times 81 / 2 \times 31 / 2$ | 14 lbs . | 17.15 |
| $21 N 5716$ | *V1-M | 570 | 5 | $5 \times 10 \frac{1}{2} \times 31 /{ }^{\prime \prime}$ | 14 lbs . | 28.42 |
| 21N5772 | V. 2 | 570 | 5 | $15 \times 7 \times 412^{\prime \prime}$ | 13 lbs . | 14.70 |
| 21 N5773 | V. 3 | 850 | 7.5 | $5 \times 7 \times 51 / 8$ | 19 lbs | 21.56 |
| 21 N5774 | V. 4 | 1250 | 11 | 63/8x 9\%/4 $6^{\prime \prime}$ | 37 lbs . | 31.36 |

*Same as V-1, but includes 0.150 volt A.C. meter.

## OUNCER AUDIO UNITS

Compact quality transformers that weiqh only one ounce! deal for portable broadcast, hearing aid, aur cratt and simmar applications. High fidelity charac
teristics, uniform from $40-15,000$ cps., except for $0-14$ teristıcs, uniform from $40-15,000 \mathrm{cps}$., except for 0-14, 0-15 and unts carrying DC which are for voice frequencies from $150-4000 \mathrm{cps}$. Maximura leval 0 dto. Fully impregnated and sealed in drawn aluminum housing $7 / 8^{\prime \prime}$ diameter, 1/8" hugh.


| Stock No. | Type | Pri. Impedance | Sec. Impedance | Each |
| :---: | :---: | :---: | :---: | :---: |
| 6N5479 | O-1 | 50, 200/250, 500/600 | 50,000 | 2.79 |
| 6N5480 | O-2 | 50, 200/250, 500/600 | 50,000 P.P | 7.79 |
| 6N5481 | O-3 | 7.5/30............ . | 50,000 | 7.06 |
| 6NS482 | O-4 | 15,000. | 60,000 | 6:17 |
| 6N5483 | O-5 | 15,000 DC in Pri. | 60,000. | 6.17 |
| 6N5484 | O-6 | 15,000 | 95,000 P.P. | 7.06 |
| 6N5485 | O-7 | 15.000 DC in Pri. | 95.000 P.P. | 7.06 |
| 6N5486 | 0.8 | 15,000. | 50, 200/250, 500/600 | 7.79 |
| 6N5487 | 0.9 | 15,000 DC in Pri | 50, 200/250, 500/600 | 7.79 |
| 6N5488 | 0.10 | 30,000 P. to P | 50, 200/250, 500/600 | 7.79 |
| 6N5489 | O-12 | 50, 200/250 | 50, 200/250, 500/600 | 7.06 |
| 6N5491 | O. 14 | 200. | 1/2 megohm. . . . . . | 7.79 |
| 6N5492 | O-15 | 15,000. | I megohm. . . . . . . . | 7.79 |

6N5490-O-13 Reactor. 200 hys., no DC; 50 hys., 2 MA DC: 6000 ohms

## UTC LABORATORY TRANSFORMERS

UTC LINEAR STANDARD TRANSFORMERS
High permeability cores and precisely balanced interleaved windings guarantee unform trequency response，minmum hum pickup and negligible wave form distortion．Vacuum－baked，impregnated coils． Minimum distributed capacity and le
INTERSTAGE AUDIO
TRANSFORMERS

Response $\pm 1 \mathrm{db}, 20-20,000 \mathrm{cps}$ ．Hum－pickup re－ duction compared to uncased type， L．S． 19 and LS－22，－ 50 dh．LS－1 case： $31 / 8^{\prime \prime}$ long， $23 / 8^{\prime \prime}$ wide， $31 / 3^{\prime \prime}$ high．＊LS－2 case： $4^{7}{ }^{16} \times 31 / 2^{\prime \prime} \times$ ， 16 ．Shpg．wt． 4 lbs．，except LS－22， 9 lbs
Primary Impedance， 15,000 ohms．For Single Plate．


| No． | Type | Use | Secondary | Max．Lev． | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6N5417 | LS－19 | ToPP grids | 95，000 ohms；11／4：1 | ＋17 DB | 14.11 |
| 6N5418 | LS－20 | To grid | 60，000 ohms；2：1 | ＋14 DB | 12.35 |
| 6N5413 | LS－21 | To PP grids | 135，000 ohms；3：1 | ＋14 DB | 14.11 |

Primary Impedance， 30,000 ohms．P．to P ．for Push－Pull Plates．
 6N5420｜LS－25 ToPP grids 50,000 ohms； $1.3: 1 \mid+17$ DB 16.46

OUTPUT TRANSFORMERS－TO LINE AND VOICE COI！ The multiple taps of these units provide a wide range of impedances or every application．Have large cores and precisely balanced，inter leaved coll structures．Unequalled response（ $\pm .2 \mathrm{db}, 25-20,000 \mathrm{cps}$ ） with minimum harmonic distortion．In LS－2 case $4^{4}$ ro＂long，31／2＂wide $4^{31} 16^{\prime \prime}$ high．Shpg．w1． 9 lbs．＊In LS－3 case： $5^{13} 11^{\prime \prime \prime} \times 5^{\prime \prime} \times 4^{11} 16^{\prime \prime \prime}$ ．Shpg．
wt． 17 llos．tPush－pull，fixed bius for cathode tollower drive．

| No． | Type | Pri．P．to P． | Secondary | Watts | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6N5421 | LS． 52 | 8，000 ohms | 500 to 1.2 | 15 | 16.46 |
| 6N5422 | LSS－54 | 8，000 ohms | 30 to 1.2 | 15 | 11.76 |
| 6N5412 | L．S．55 | 5，000 \＆3，000 | 500 to 1.2 | 20 | 16.46 |
| 6N5423 | LS－57 | 5，000 \＆3，000 | 30 to 1.2 | 20 | 11.76 |
| 6N6424 | LS－58＊ | 2，500 \＆1，500 | 500 to 1.2 | 40 | 29.40 |
| 6N5425 | LS－60A＊$\dagger$ | 4，600 | 15 to 1.2 | 30 | 20.58 |
| 6N5426 | LS－61 | 10，000 \＆6，000 | 500 to 1.2 | 15 | 16.46 |
| 6N5427 | LS－62A＊$\dagger$ | 4，600 | 500， 125 | 30 | 20.58 |
| 6N5428 | LS．6L1＊ | 9，000 ohms | 500 to 1.2 | 30 | 24.70 |
| 6N5398 | LS－6L3＊ | 9，000 ohms | 30 to 1.2 | 30 | 16.46 |
| 6N5429 | LS－6L． 4 | 3，800 \＆4，500 | 500 to 1.2 | 55 | 29.40 |

## HIGH LEVEL MATCHING TRANSFORMER

Type LS－33．High level line matching．Pri．mped：50，125，200， 250 $333,500 / 600$ ohms；sec．imped： $1.2,2.5,5,7.5,10,15,20,30,50,125$ evel 15 watts．Size： 47 ohms． 6N5493
16.46

## HYBRID AND REPEAT COILS

Type LS－140．Line to line for isolating balanced and unbalanced cir
 Type LS－141．Three sets of balanced windings for hybrid service，center tapped．Pri．and sec．500／600 ohms．$\pm 1 \mathrm{db}$ from 30－15，000 cps． 6N5499
16.46

## 2－SECTION FILTER CHOKE

rype LS－90．Filter choke with hum－bucking tap．Inductance in series 50 hy at 50 MA DC；in parallel， 12.5 hy at 100 MA DC．DC resistance， 510 ohms in series and 128 ohms in parallel．hisulation test voltage centers： 211 Housed
Centers：－Shipping weicht 9 lt）s
8.23


## UTC VARIABLE INDUCTORS

Adjustment of set screw on side of case permits a change in inductance of plus $90 \%$ to $-50 \%$ from mean value shown．Die cast case $111{ }^{\prime \prime}$＂long，11／4＂ wide， $17 / 10^{\prime \prime}$ high．Mounting centers on terminal board side ${ }^{13}$ 作＂by ${ }^{29}$ 葒＂．Weight－－51／2 ozs．

| No． | Type | Mean Hys． | Each | No． | Type | Mean Hys． | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N5444 <br> 6N5445 <br> 6N5446 <br> 6N5447 <br> 6N5449 <br> 6N5450 | V1－C1 | $\begin{aligned} & .0085 \\ & .013 \\ & .021 \\ & .034 \\ & .053 \\ & .084 \end{aligned}$ | 6.34 | 6N5458 | VI－C |  |  |
|  | VI－C2 |  |  | 6N5457 | VI．C13 | 2.2 | 8.07 |
|  | VI－C3 |  |  | 6N5458 |  | 3.4 |  |
|  | VI－C5 |  |  | 6N5459 | VI－C15 | 5.4 |  |
|  | Vi－C6 |  |  | 6N5460 | VI．C | 8.5 |  |
| 6N5451 <br> 6N5452 <br> 6N5453 <br> 6N5454 <br> 6N5455 | VI－C7 <br> VI－C8 <br> VI－C9 <br> VI－Clo <br> VI－Cll | $\begin{aligned} & .13 \\ & .21 \\ & .34 \\ & .54 \\ & .85 \end{aligned}$ | 8.97 | 6N5462 | VI－C18 | 21. | 9.53 |
|  |  |  |  | 6N5463 | $\begin{aligned} & \text { VI-C19 } \\ & \text { VI-C20 } \end{aligned}$ | $33 .$ |  |
|  |  |  |  | 6N6464 |  |  |  |
|  |  |  |  | 6N5465 | VI－C21 | 83. | － 0 |

UTC HIPERM ALLOY TRANSFORMERS
Light in weight and small in dimensions，with
full dependability dnd fidelity for all compact till dependabitity and fidelity for all compact 33 to $20,000 \mathrm{cps}$ ．All meorporate a Hiperm alloy mickel ron core and hum balanced coil structure． Rirgged die cast case is of high conductivity alloy， fimshed in black，arranged for inounting with the termunals either up or down．All are $23 / 8^{\prime \prime} \mathrm{L}$ ， $115_{16^{\prime \prime}}$ W， $3^{1} 夕^{\prime \prime} \mathrm{H}$ ．，and weigh 2 lbs ．


Low Impedance to Grid and Mixing Max．Level＋15 DB

| No． | Type | Application | Pri．Innp． | Sec．Imp． | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6N5466 | 11A－100 | Mike，pickup， multiple line to grid |  | $\begin{aligned} & 60,000 \\ & \text { two sections } \end{aligned}$ | 11.17 |
| $6 N 5467$ $6 \times 5468$ | H：-100 X Hi－101 | Same but with tri－ alloy internal shiedd |  |  | 14．13 |
| 6N5468 | HA－101 | mike，pickup， multiple line to pp grids | $\begin{aligned} & 50,125,2010 \\ & 250,3,3,510 / \\ & 0.6010 \end{aligned}$ | 120，000 <br> in two sec－ <br> tion＇s | 12．94 |
| 6N5469 | HA－101 X | same but with tri－alloy internal shicid |  | $\left\lvert\, \begin{aligned} & \text { xo,000 in two } \\ & \text { seections } \end{aligned}\right.$ | 15 |
| 6N5470 | HA－108 | Mixing，mike， pickup，or mul－ tiple lise | $\begin{aligned} & 30,125,200, \\ & 250,3,3,500 / \\ & 100 \end{aligned}$ | $\begin{aligned} & 500,125,200, \\ & 1250,333,500 / \\ & 600 \end{aligned}$ | 17 |
| 6N5471 | HA－108X | same but with tri－alloy intersal shield |  |  | 4.11 |

UTC TOROID PERMALLOY CHOKES

| New Permalloy dust toroid units are used in audio，carrier，and supersonic appl cations requiring high $Q$ and qreat stability． HQA cycles．HQB couls have maximum Q of 200 at 4003 cycles．All coils have extremely low hum pickup，can be spaced closely，are tolerance． |  |  | HOA | HOB |
| :---: | :---: | :---: | :---: | :---: |
| No． | Type | Henrys | $\begin{aligned} & \text { DC Ma. } \\ & \text { Max. } \end{aligned}$ | Each |
| 6N5434 <br> 6N5435 6N5436 6N5437 6N5438 | HQA－2 <br> HQA－4 <br> HOA． 6 <br> HQA． 8 <br> HQA－10 | $\begin{aligned} & 12.5 \mathrm{Mh} . \\ & 30 \mathrm{Mh} . \\ & 80 \mathrm{Mh} . \\ & 200 \mathrm{Mh} . \\ & 500 \mathrm{Mh.} \end{aligned}$ | $\begin{array}{r} 400 \\ 160 \\ 70 \\ 65 \\ 40 \end{array}$ | $\begin{aligned} & 6.86 \\ & 6.85 \\ & 7.84 \\ & 8.82 \\ & 9.80 \end{aligned}$ |
| 6N5439 <br> 6N5440 <br> 6N5441 <br> 6N5442 <br> 6N5443 | HOA． 12 <br> HQA． 13 <br> HQB－S <br> HQB－7 <br> HQB－10 | $\begin{aligned} & \text { 1.25 Hy } \\ & \text { 2. Hy } \\ & .5 \mathrm{Mh} . \\ & 2 . \mathrm{Hy} . \\ & \text { 12. Hy. } \end{aligned}$ | $\begin{aligned} & 26 \\ & 20 \\ & 60 \\ & 30 \\ & 11 \end{aligned}$ | $\begin{aligned} & 10.78 \\ & 10.78 \\ & 16.66 \\ & 18.62 \\ & 21.58 \end{aligned}$ |



## SOLA CONSTANT VOLTAGE TRANSFORMERS

Automatic regulation of voltage tor all types of electically operated equipment．They deliver a constant output voltaqe independent of transient or continuous variations in supply voltage to within $\pm 1 \%$ ． Especially recommended for precision laboratory equipment such as photo－electric devices，x－ray equipment，Link trainers，projection equipment，etc．Input $95-125 \mathrm{~V}$ ．，Go cycles，A．C．except those market with（＊）which have addetional input 100250 V ．Solatrantormarke available for 25,50 cycles．Over 1000 types of Sold transformers are available tor 25 ，so cycles． quotations

| Stock No． | Mfrs． Type | Output | Output | Dimensions Inches | $\begin{aligned} & \text { Wt. } \\ & \text { libs. } \end{aligned}$ | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 N 1410 | 301042 | 15 | 6.3 | $5^{5} 16^{17} \times 3 / 31 / 2^{\prime \prime} \times 21 /{ }^{\prime \prime}$ | 412 | 18.50 |
| 6N1411 | 301003 | 15 | 115.0 | $5{ }^{3} 1{ }^{\prime \prime} \times 31.2^{\prime \prime} \times 21{ }^{\prime \prime}$ | 412 | 18.50 |
| 6N1412 | 30488 | 15 | 6.0 | $5^{111} 16^{\prime \prime} \times 25 / 8^{\prime \prime} \times 3^{71} 16^{\prime \prime}$ | 6 | 15.00 |
| 6N1413 | 30492 | 15 | 6.3 | $51196^{\prime \prime} \times 258^{\prime \prime} \times 33^{\prime \prime \prime} 6^{\prime \prime}$ | 6 | 15.00 |
| 6N1414 | 30498 | 15 | 115.0 | $511.6{ }^{\prime \prime} \times 28 / 8^{\prime \prime} \times 3{ }^{\prime \prime}{ }^{\prime \prime}$ | 6 | 15.00 |
| 6 N 1415 | 30804 | 30 | 115.0 | $89.1{ }^{16} \times 43 / 6^{\prime \prime} \times 48 / 8^{\prime \prime}$ | 12 | 17.00 |
| 6N1416 | 30805 | 60 | 115.0 | $88^{13} 10^{\prime \prime} \times 4^{3} 10^{\prime \prime} \times 43 / 8{ }^{\prime \prime}$ | 13 | 24.00 |
| 6N1417 | 30806 | 120 | 1150 | $9^{117} 75^{\prime \prime} \times 4^{3} 16^{\prime \prime} \times 43^{\prime \prime \prime}$ | 17 | 32.00 |
| 6N1418 | 30886 | 120 | 115.0 | $11^{3} 10^{\prime \prime} \times 43^{\prime \prime} 100^{\prime \prime} \times 488^{\prime \prime}$ | 26 | 32.00 |
| 6N1419 | 30807 | 250 | 1150 | $118 / 8^{\prime \prime} \times 6^{15} 16^{\prime \prime} \times 55 / 8^{\prime \prime}$ | 28 | 52.00 |
| 6N1420 | 30808 | 500 | 115.0 | 141／2＂$\times 66^{13} 16^{\prime \prime} \times 55 /{ }^{\prime \prime}$ | 40 | 75.00 |
| 6N1 421 | 30809 | 1000 | 115.0 | 191／8＂$\times 9312^{\prime \prime} \times 77{ }^{\prime \prime}$ | 110 | 125.00 |
| 6N1422 | 30811 | 2000 | 115.0 | $311 / 8^{\prime \prime} \times 91 / 2^{\prime \prime} \times 77^{\prime \prime}$ | 205 | 225.00 |
| ＊6N1423 | 30M813 | 3000 | 115.0 |  | 325 | 300.60 |
| ＊6N1424 | 30M815 | 5000 | 115.0 | $241 / 8^{\prime \prime} \times 423 / 4^{\prime \prime} \times 97 / 6^{\prime \prime}$ | 570 | 475.00 |

# THORDARSON REPLACEMENT TRANSFORMERS 


AGF

PUV

FGV

CAV

## Thordarson Replacement Output Transformers

BAH type mounting, measure $2 \frac{3}{6 \prime \prime} \times 11 /^{\prime \prime} \times 18 / 8^{\prime \prime}$ with $2^{\prime \prime}$ mtg. ctrs. Wt
 of $238^{\prime \prime}$. Class $\AA$ operation $3-4$ ohms secondary. Service Output Transformers

| No. | Type | Pri. Imp. | Pri. Ma. | Watts | Esch |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6N1880 | TS-24S48* | 4-5000 | 10 | 1 | $85 ¢$ |
| 6 N 1881 | TS.24449* | 7-8000 | 10 | 1 | $85 ¢$ |
| 6N2143 | TS-24S50 | 2000 | 55 | 5 | $82 \%$ |
| ${ }_{6}^{6 N 2144}$ | TS-24S51 | 5000 | 40 | 5 | 918 |
| 6N2146 | TS.24S54 | ${ }_{1}^{7000}$ | 30 10 | 5 | 946 |

- Midget Replacement: Measures $21 / 8^{\prime \prime} \times 1^{\prime \prime} \times 11^{3} / 6^{\prime \prime}$.

Universal Service Replacements for Single and push-pull plates

| No. | Type | Pri. Imp. | Pri. Ma. | Sec. | Watts | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N2147 | TS-24S60 | 4M 7 M | 35 |  | 4 | 1.41 |
| 6N2148 | TS-24S6 | $14 \mathrm{M}, \mathrm{C} . \mathrm{T}$. | 40 |  | 8 | 1.53 |

## Universal Replacement Power Transformers

Adjustable mounting brackets. All leads RMA color-coded. 117 V $50-60$ cycle input.

| AGF Mtg. Stock No. | GGV Mtg. Stock No. | Thord. Type No. | Plate Voltage | Ma | $\begin{aligned} & \text { Rect. } \\ & \text { Fijl } \end{aligned}$ | Fil. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N1882 | 6N1883 | TS-24R00* | 240-0-240 | 40 | $\overline{\text { SV-2A }}$ | 6.3V.C.T.-2A | 2.88 |
| 6N1884 | 6 N 1885 | T8-24R01* | 325-0-325 | 40 | $5 \mathrm{~V}-2 \mathrm{~A}$ | 0.3V.c.T.-2A |  |
| 6N1886 | 6N1887 | TS-24R02* | 350-0-350 | 70 | $5 \mathrm{~V}-2$ | 6.3V.C.T.-2.5A |  |
| 6N1888 | 6 N 1889 | TS-24R04* | 350-0-350 | 90 | $5 \mathrm{~V}-3$ | 6.3V.C.T.-3.5A | 3.97 |
| 6N1890 | 6N1891 | TS-24R | 350-0-350 | 120 | $5 \mathrm{~V}-3 \mathrm{~A}$ | 6.3V.C.T.-4.7A |  |
| 6 N 1892 | 6 11893 | TS-24R06* | 375-0-375 | 150 | $5 \mathrm{~V}-3 \mathrm{~A}$ | 8.3V.C.T-4.7A | 5.32 |
| 6N1894 | 6N1895 | TS-24R07* | 400-0-400 | 200 | $5 \mathrm{~V}-3 \mathrm{~A}$ | 6.3V.C.T.-5A |  |
| 6N2088 |  | T-22R07 | 350-0-3 | 200 | $5 \mathrm{~V}-3 \mathrm{~A}$ | 6.3V.C.T.-6A | 7.29 |
|  | 6N2098 | T-22R32 | 350-0-350 | 110 | $5 \mathrm{~V}-2 \mathrm{~A}$ | $\left\{\begin{array}{l} 6.3 V, C, T-3 A \end{array}\right\}$ |  |

*Thordarson Type No. shown is for AGF mtg. For GGV mtg., add "U".

## AUDIO INTERSTAGE TRANSFORMERS

| No. | Type | Mtg. | Application | Ratio | ch |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6N2008 | T20A16 | BAH | Sgl. pl. to sgl. | 1:2 | 1.70 |
| 6N2009 | T20A17 | FGV | Sgl. pl. to sgl. or PP grids | 1:2 | 2.23 |
| 6N2010 | T20A19 | BAH | Sgl. or PP pl. to sgl. or PP grids |  | 9 |
|  | T2 |  | Sgl. pl. to sgl. or PP grids | 1:3 | 2.50 |
| 2012 | T20A23 | GV | Sgl. pl. to sgl. or PP gric | 1:3 | 2.70 |
| 6N2013 | T20A24 | FGV | PP plates to PP grids | 1:3 | 2.94 |
| 6N2014 | T20A25* | RTV | Sgl. or PP pl. to sgl, or PP grids | 1:1.4 | 5.8 |

* Fully potted; hum-bucking coil and core.


## UNIVERSAL CHOKES

Newly designed Universal Chokes replace swinging or smoothing types. Voltage regulation not affected. Provides more inductance throughout current range decreasing ripple voltage. *Tuned audio circuit reactor.

| Stock No. | Type No. | Inductance Hy. |  | Current MA |  | $\begin{gathered} \text { DC } \\ \text { Ohms } \end{gathered}$ | Mtg. <br> Type | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rated | Max. | Rated | Max. |  |  |  |
| 6 N 2015 | T20C50 | 350 | 75 | 5 | 25 | 5500 | BAH | 2.03 |
| 6N2016 | T20C51 | 35 | 15 | 15 | 25 | 1850 | BAH | 1.35 |
| 6N2017 | T20C52 | 8 | 4 | 40 | 65 | 450 | BAH | 1.29 |
| 6N2018 | T20C53 | 12 | 8 | 80 | 100 | 375 | BAH | 1.79 |
| 6N2019 | T20C54 | 8 | 4 | 150 | 200 | 145 | GGV | 2.88 |
| 6N2020 | T20C55 | 6 | 2 | 200 | 300 | 75 | GGV | 3.73 |
| 6N2021 | T20C56 | 7 | 4 | 300 | 375 | 60 | GGV | 5.23 |
| 6N2022 | T20C57 | 10 | 6 | 500 | 600 | 65 | PUV | 20.29 |
| 6N2023 | T20C58* | .75 | . 75 | 0 | 10 | 30 | BAH | 1.35 |

## DRIVER TRANSFORMERS

|  |  | Input Tubes | Output Tubes | Ratio | MA | Mtg. <br> Type | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N2028 | T20D75 | $1-30,1-49,1-6 \mathrm{C} 5,$ | $1 \mathrm{~J} 6,19,2-30,2-49$ | 2.4:1 | 3 | BAH | 1.62 |
| 6N2029 | T20D76 | $1-6$ N7, 6A6, 53, 1-70 (gl. pl.) | $1-6 N 7,6 A 8 \text {, }$ <br> (class B) | 5.2:1 | 7 | BAH | 1.7 |
| 6N2030 | T20D77 | 1-89, 6F6, triode <br> 1-6C5 (sgl. pl.) | $\begin{aligned} & 79,2-46,59 \\ & \text { (class B) 25L6 } \end{aligned}$ | 2.5:1 | 30 | FGV | 2.5 |
| 2031 | T20D78 |  | $\text { 2) }{ }_{2}^{2}$ | 4:1 | 40 | GGV | 3.3 |
| 6N2032 | T20D79 | $\begin{aligned} & 2-6 \mathrm{~N} 7 \text { (sgl. or } \\ & \mathrm{PP} \text { pri.) } \end{aligned}$ | 2-6N7 (PP class B grids) | 5.2:1 | 30 | FGV | 2.88 |



RAV

## DUAL TONE CONTROL

An effective tone compensating network for sound systems. Treble and bass frequencies attenuated or accentuated independently. For smooth control over wide range of audio freguencies.
T20C74 Tone Control Choke with Hum-bucking Coil and Core. DC ohms 220. Test volts 500. Mtg. Type RAV.
6N2027.
R1068-X Dual Tone Control Potentiometer for above circuit.

.... 2.44

## FEEDBACK CONTROL TRANSFORMER

T20A26 is the control element in a variable audio inverse feed. back system, basis of compressor-expander circuit. Variable gain back system, basis of compressor-expander circuit. Variable gain
is produced by automatically controlling inverse feedback voltage. Superior to DC grid bias control, response faster, harmonic distortion does not rise. Transformer comes with complete detalls on 10 -Watt hi-fidelity amplifier incorporating above circuit. Mtg. type RTV. 6N2026.
5.59

VIBRATOR POWER TRANSFORMERS

| No. | Type | Primary | Secondary | Mtg. Type | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6N2093 | T22R20 | $6-8 \mathrm{~V}$ DC | 250 v DC 50 ma | CAV | 3.73 |
| 6N2094 | T22R22 | 6-8V DC | $325 v$ DC 75 ma | CAV | 4.41 |
| 6N2095 | T22R24 | $\left\{\begin{array}{l}6-8 \mathrm{~V} \text { DC } \\ 117 \mathrm{~V} \text { AC }\end{array}\right.$ | $\left.\begin{array}{l}325 \mathrm{v} \text { DC } 135 \mathrm{mad} \\ 6.3 \mathrm{v} \mathrm{CT} 4.75 \mathrm{~A}\end{array}\right\}$ | GGV | 8.47 |

## AUDIO INPUT TRANSFORMERS

| Stock <br> No. | Type <br> No. | Mtg. <br> Type | Turns <br> Ratio | Each |  |
| :--- | :---: | :---: | :--- | :--- | :--- |
| 6N2000 | T20A00 | BAH | Line or mic. to single or PP grids | $1: 10$ | 1.85 |
| 6N2001 | T20A01 | FGV | Line or mic. to single or PP grids | $1: 20$ | 2.70 |
| 6N2002 | T20A02 | FGV | Line or mic. to PP grids | $1: 20$ | 2.85 |
| 6N2005 | T20A05 | RTV | Line to PP grid mic.tosingle or PP grids | $1: 10$ | 6.23 |
| 6N2004 | T20A04 | BAH | V.C. or low imp. mic. to grid | $1: 80$ | 1.70 |

Tranzceiver Transformer

| Stock No. | Type No. | Mtg. Type | Application | $\begin{aligned} & \text { Turns } \\ & \text { Ratio } \end{aligned}$ | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6N2003 | T20A03 | BAH | Single pl. to grid Line or mic, to grid | $\begin{aligned} & 1: 3.25 \\ & 1: 35 \end{aligned}$ | 2.38 |

## OUTPUT TRANSFORMERS

| Stock No. | $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | Application | Pri. Imp. | Sec. Imp. | Power Output | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N2103 | $\bar{T} 22 \mathrm{~S} 45$ | Sgl Pl to VC | 1500 to 3000 | 3.2 to 4 | 3 | 1.35 |
| 6N2105 | T22S47 |  | 6000 to 12000 CT | 3.2 to 4 | 3 | 1.62 |
| 6N2107 | T22S56 | Sgl. \& PP | 8000 to 10000CT |  |  | 2.44 |
| 6N2108 | T22S58 | Pl to VC | 5000 to 7000 CT | 3.2 to 4 | 8 | 2.44 |
| 6N2109 | T22S60 |  | 2500 to 4000 CT | 6 to 8 | 8 | 2.53 |
| 6N2127* | T22S90 | Sgl or PP Pl | 20000 CT | $\begin{gathered} 125-200- \\ 500 \text { to } \\ 600 \mathrm{CT} \end{gathered}$ | 3 | 3.17 |

- Type FGV Mounting.

Special Duty Hi=Level Output Transformers (GGV)

| 6N2111 T22S64 | Sgl \& PP Pl to Line \& VC | 10000 CT |  | 25 | 4.23 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6N2112 T22S66 |  | 8000 CT | 3.2 to 4 | 25 | 4.23 |
| 6N2113 T22S68 |  | 6500 CT | 6 to 8 - | 25 | 4.41 |
| 6N2114 T22S70 |  | 5000 CT | 15-250-500 | 25 | 4.53 |
| 6N2115 T22S72 |  | 3000 CT |  | 25 | 4.53 |
| 6N2118 T22S78 |  | 3300 CT |  | 60 | 6.44 |

Universal Replacement to Multiple Voice Coil (BAH)

| 6N2116 | T22S74 | $\begin{aligned} & \text { Sgl or PP Pl to } \\ & \text { VC } \end{aligned}$ | $\left\lvert\, \begin{aligned} & 14000-10000-8000- \\ & 6600-3000-3000- \\ & 2500 \mathrm{CT} \end{aligned}\right.$ | 1 to 30 | 25 | 3.73 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N2110 | T22S62 | Sgl Pl to VC | $\begin{aligned} & 4000-3000-2500- \\ & 2000-1500 \end{aligned}$ | 1 to 30 | 8 | 2.50 |
| 6N2124 | T22S86 | Sgl Pl or | $14000 \mathrm{CT}-8000 \mathrm{CT}$ | 3.2 to 4 | 3 | 1.85 |
| 6N2125 | T22S87 | ,PP PI to VC | 3500-2000 | 6 to 8 | 6 | 2.03 |
| 6N2126 | T22S88 |  |  |  | 8 | 2.20 |

Matching Line or Lines to Voice Coil (BAH)

| 6N2119 | T22S80 | Sgl Line to VC 500 to 600 |  |  | 8 | 2.59 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N2120 | T22S82 | Multiple |  |  | 25 | 4.20 |
| 6N2121 | T22S83 | Lines to | 2000-1500- | 3.2 to 4 | 15 | 3.23 |
| 6N2122 | T22S84 | VC | 1000-500 | 6 to 8-15 | 5 | 2.65 |
| 6N2123 | T22S85 |  |  |  | 3 | 2.41 |

## FILAMENT TRANSFORMERS

These excellent quality filament transtormers are wound with a single secondary. Carefully designed for improved voltage regulation and minimum heat rise. Rated for continuous operation at peak load; 117 volts, 50/60 cycles. Insulated for 1600 volts RMS.

| No. | Type | Secondary |  | Dimensions HxWxD | Mtg. | Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $V$ | Ampe. |  |  |  |  |
| 6N2045 | T-21F08 | 6.3CT | 1 | 2x2\%/8x11/2 | BAH | $8 / 4$ | 1.85 |
| 6N2046 | T-21F10 | 6.3CT | 3 | 2131/4x13/4 | BAH | 1 | 2.44 |
| 6N2047 | T-21F11 | 6.3CT | 6 | 31/6x21/5x21/4 | CAV | 21/4 | 3.62 |
| 6N2048 | T-21F12 | 6.3CT | 10 | $31 / 6 \times 21 / 2 \times 2 \frac{3}{4}$ | CAV | 23/4 | 3.56 |

# STANCOR REPLACEMENT TRANSFORMERS 

UNIVERSAL OUTPUT

| No. | Type | Application | Mtq. | Each |
| :---: | :---: | :---: | :---: | :---: |
| 6N1675 | A-3856 | Sgl or PP Pl ( 4 M to 14 M ) to VC. | $\bigcirc$ | 1.53 |
| 6N1663 | A. 3822 | Sgl Pl (7M to 10M) to VC. . . . . |  | 1.29 |
| 6 N1637 | A.3823 | Sgl or PP Pl ( 4 M to 14 M ) to VC. | Q | 1.62 |
| 6N1671 | A-3850 | Sgl or PP PI ( 4 M to 14 M ) to VC. |  | 1.73 |
| 6N1670 | A-3849 | Sgl PI ( 1,500 to 10M) to VC. | Q | 1.53 |
| 6N1763 | A. 3880 | PP Pl ( 4 M to 14 M ) to VC. | Q | 2.88 |
| 6N1574 | A-2855 | PP P1 ( 4 M to 14 M ) to VC. |  | 2.47 |
| 6N1678 | A-3890 | PP Pl ( 4 M to 14 M ) to VC | TD | 3.82 |
| 6N1673 | A-3852 | PP Pl ( 4 M to 14 M ) to VC | J | 2.09 |
| 6N1666 | A-3830 | PPP PI ( 3 M to 10M) to VC | J | 2.88 |

## FIXED OUTPUT TRANSFORMERS

Single Plate to Voice Coil. Class A.

| No. | Type | Impedance in Ohms |  | Max. Watts | Mtg. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Pri. | Sec. |  |  |  |
| 6N1677 | A-3865 | 1.500 | 6,4,2 | 5 | A | 1.38 |
| 6N1518 | A-3330 | 2,000 |  | 5 | A | 1.23 |
| 6N1640 | A-3876 | 2,000 | 4 | 5 | A | 1.03 |
| 6N1576 | A-3328 | 4,000 | 3.5 | 3 | A | . 85 |
| 6N1571 | A. 2203 | 4,000 | 8 | 5 | A | 1.50 |
| 6N1645 | A-3877 | 5,000 | 4 | 5 | A | 1.09 |
| 6N1659 | A. 3310 | 5,000 | 500, 15, 8, 4 | 20 | C | 4.09 |
| 6N1646 | A. 3878 | 7,000 |  | 5. | A | 1.06 |
| 6N1573 | A-2313 | 7.000 | 8 | 10 | A | 1.59 |
| 6N1577 | A-3329 | 8.000 | 3.5 | 3 | A | . 85 |
| 6N1648 | A-3879 | 10,000 | 4 | 5 | A | 1.03 |
| 6N1575 | A-3327 | 25,000 | 4 | 5 | A | 1.00 |

Push-Pull Plates to Voice Coil. All are Class AB except $\dagger-A B 1$.

| 6N1762 | A-3872 | 5,000 | $15,8,4$ | 18 | TD | 3.53 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N1661 | $A-3800$ | 5,000 | $500,250,15,8,4$ | 30 | $C$ | 4.65 |
| 6N1662 | A-3801 | 6,600 | $500,250,15,8,4$ | 35 | $C$ | 5.41 |
| 6N1647 | A-2201 | 8,000 | 6 | 10 | $A$ | 1.82 |
| 6N1657 | A-3304 | $10,000 / 7,000$ | $500,15,8,4$ | 25 | C | 4.23 |
| 6N1660 | A-3311 | 10,000 | $500,15,8,4$ | 25 | C | 4.41 |
| 6N1667 | A-3831 | 10,000 | $8,4,2$ | 5 | $A$ | 1.59 |
| 6N1572 | A-2312 | 14,000 | 4 | 10 | $A$ | 1.65 |
| 6N1676 | A-3857 | 25,000 | 4 | 5 | $A$ | 1.32 |

## AUDIO TUBE TO LINE

| No. | Type | Application | Impedance Ohms | Mtg. | Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6N1599 | A. 3250 | SglPlorPP <br> Pl to line | Pri-20M, 10M, 5M <br> Pri-20M CT. <br> Sec-500, 333, 200, 125, 50 | Q | 2.65 |

## AUDIO LINE TO VOICE COIL

| No. | Type | Watts | Impedance Ohms | Mtg. | Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6N1764 | A. 3882 | 25 | $\begin{aligned} & \text { Pri-500, 333, } 250 \ldots . . . . \\ & \text { Sec-15, } 8,4 . \end{aligned}$ | D | 4.26 |
| 6N1765 | A-3883 | 25 | Pri-500... | J | 2.29 |
| 6N1595 | A-3837 ${ }^{\text {² }}$ | 15 | $\begin{aligned} & \text { Sec-15, 8, 6, } 4 \\ & \text { Pri-500....... }^{2} \end{aligned}$ | J | 2.94 |
| 6N1636 | A-7949 | 12 | $\begin{aligned} & \text { Sec }-8,4,2.65,2.35,2,1.5, \\ & \text { Pri, } 5,3,1,1,1,05,00,1 \mathrm{M}, 500 \ldots \ldots \\ & \text { Sec- } 6.8 . \end{aligned}$ | J | 2.03 |

*Designed to operate one or more speakers in parallel across a 500 ohm line. For line to line or line to V.C.

## INPUT TRANSFORMERS

Intercommunicator and Transceiver

| No. | Type | Impedance | Mtg. | $H \times W \times D$ | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6N1693 | A-4744 | Pri-4, Sec-25,000 <br> 6N1643 <br> A-3833 | VE <br> Pri-200 and 5,000 <br> Sec-60,000 | $18 / 8 \times 28 / 8 \times 11 / 2^{\prime \prime}$ | 1.44 |
|  |  |  |  |  |  |

## INTERSTAGE TRANSFORMERS

PUSH-PULL INPUT. Single Plate ( 7,000 to 20,000 ohms) to push pull class "A" grid. All pri. are rated at 10MA-DC except A-4206 which is 15MA.

| No. | Type | Mtg. | Ratio | HxWxD | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6N1619 | A-52-C | A | 2:1 | $13 / 8 \times 28 / 8 \times 18 / 8$ | 1.44 |
| 6N1651 | A-53-C | A | 3:1 | $18 / 8 \times 28 / 8 \times 188^{\prime \prime}$ | 1.44 |
| 6N1690 | A-63-C | A | 3:1 | $15 / 8 \times 278 \times 1 \frac{1}{5 \prime}$ | 1.56 |
| 6 N 1654 | A-73-C | A | 3:1 | $2 \times 31 / 4 \times 184^{\prime \prime}$ | 1.88 |
| 6N1589 | A.4206* | C | 3.25:1 | $31 / 8 \times 25 / 8 \times 2 \frac{1}{8}{ }^{\prime \prime}$ | 4.41 |

*Has a pie-wound split secondary.

Most popular sizes and ratings of 2.5 and 6.3 volt types are represented below. All high voltage secondaries are CT.
Combination Plate and Filament Supply, Type "M" mounting.

| No. | Type | Plate |  | Rec. Fil. |  | Amp. Fil. |  | Mtg. Area | Wt. Lb. | E8. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $V$ | DC ma | V | Amp. | $V$ | Amp. |  |  |  |
| 6N1706 | P-6001 | 650 | 40 | 5.0CT | 2.0 | 2.5 CT | 4.0 | $3 \times 2$ | 3 | 3.53 |
| 6N1715 | P-6005 | 700 | 70 | 5.0CT | 3.0 | 2.5CT | 9.0 | $33 / 8 \times 41 / 4$ " | 5 | 4.56 |
| 6N1714 | P-6004 | 700 | 90 | 5.0CT | 3.0 | 2.5 CT | 3.5 | $3^{3} \times 1$ | 4 |  |
| 6N1716 | P-6006 | 700 | 120 | 5.0CT | 3.0 | 2.5 CT | 12.5 | $3^{3} /{ }^{1} \times 35 / 8^{\prime \prime}$ | 6 | 6.23 |
|  |  |  |  |  |  | 2.5 CT | 3.5 |  |  |  |
| 6 N 1785 | P-6 | 4 | 40 | 5.0CT | 2. | 6.3 CT | 2.0 | 23/4x | 3 | 4.12 |
| 6N1735 | P-6297 | 480 | 40 | 5.0 CT | 2.0 | 6.3CT | 2.0 | $3 \times 31 /{ }^{\prime \prime}$ | 3 | 3.97 |
| 6N1720 | P-6010 | 650 | 40 | 5.0CT | 3.0 | 6.3CT | 2.0 | $3 \times 2{ }^{3 / 1}$ | 2 | 3.38 |
| 6N1786 | P-6119 | 600 | 55 | 5.0CT | 2.0 | 6.3 CT | 2.7 | $3 \times 27{ }^{7 \prime}$ | 3 | 4.06 |
| 6N1746 | P-6348 | 480 | 60 |  |  | 6.3CT | 2.75 | $2^{11} 16 \times 284^{\prime \prime}$ | 2 | 3.50 |
| 6N1787 | P-6120 | 630 | 70 | 5.0CT | 3.0 | 6.3CT | 3.5 | $38 / 8 \times 37 / 8^{\prime \prime}$ | 4 | 4.53 |
| 6N1721 | P-6011 | 700 | 70 | 5.0CT | 3.0 | 6.3CT | 2.5 | $3 \times 388^{\prime \prime}$ | , | 4.29 |
| 6N1741 | P-6312 | 580 | 90 | 5.0CT | 3.0 | 6.3CT | 2.8 | $33 / 8 x^{3} / 8^{\prime \prime}$ | 4 | 4.94 |
| 6N1722 | P-6012 | 700 | 90 | 5.0 CT | 3.0 | 6.3CT | 3.5 | $33^{3} \times 38{ }^{\prime \prime}$ | 4 | 4.53 |
| 6N1723 | P-6013 | 700 | 120 | 5.0 CT | 3.0 | 6.3CT | 4.7 | $33 / 4 \times 3 / 8{ }^{\prime \prime}$ | 5 | 5.03 |
| 6N1743 | P-6313 | 580 | 125 | 5.0CT | 3.0 | 6.3 CT | 4.5 | $41 / 8 \times 33^{\prime \prime}$ | 6 | 5.59 |
| 6N1724 | P-6014 | 750 | 150 | $\overline{5.0 \mathrm{CT}}$ | 3.0 | C.3CT | 5.0 | $33 / 4 \times 34^{\prime \prime}$ | 6 | 6.17 |
| 6N1744 | P-6314 | 700 | 200 | 5.0 CT | 3.0 | 6.3CT | 5.5 | $41 / 2 \times 378^{\prime \prime}$ | 8 | 7.23 |
| 6N1726 | P-6165 | 800 | 200 | 5.0 CT | 4.0 | 8.3CT | 5.5 | $41 / 2 \times 41 / 8{ }^{\prime \prime}$ | 9 | 7.38 |
| 6N1745 | P-6315 | 740 | 275 | 5.0 CT | 3.0 | 6.3CT | 7.0 | $41 / 2 \times 41 / 4^{\prime \prime}$ | 9 | 9.41 |

## FILAMENT TRANSFORMERS

A. wide range of voltage and current ratings is available for use with the commonly used types of receiving and transmitting tubes. Each ranstormer is designed to provide the best voltage regulation commensurate with its secondary current ratir.g and physical size. All Primaries 115 Volts 60 Cycles. All are 2500 volt insulation except *7500 V., $\ddagger 10,000 \mathrm{~V} ., \ddagger 5000 \mathrm{~V}$.

| No. | Type | Secondary |  | DimensionsHxWxD | Mtg. | Lbs. | Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | V | Amps. |  |  |  |  |
| 6N1728 | P.6133* | 2.5 CT | 5 | $21116 \times 3556 \times 21 / 41 "$ | S | 1.5 | 2.65 |
| 6N1711 | P. 4083 | 2.5 CT | 6 | $350 \times 25 \times 23{ }^{3}$ | C | 2 | 3.82 |
| 6N1707 | P-3024 | 2.5 CT | 10 |  | C | 2.5 | 3.67 |
| 6N1774 | P.3060t | 2.5 CT | 10 | $31 / 2 \times 27 / 8 \times 21 / 2$ | B | 2.5 | 3.35 |
| 6N1708 | P-3026 | 5 CT | 3 | $3^{3} 16 \times 25 / 8 \times 25 / 8^{\prime \prime}$ | C | 2 | 3.53 |
| 6N1790 | P-4088 | 5 CT | 3 | 31/8×21/2x ${ }^{1 / 3} 3^{\prime \prime}$ | B | 2 | 2.82 |
| 6N1709 | P-3062 | 5 CT | 6 | 31/8x21/2x21/2" | B | 2 | 3.23 |
| 6N1730 | P-6135 | 5 CT | 10 | $31 / 8 \times 21 / 2 \times 27 / 8$ | N | 3 | 3.53 |
| 6N1729 | P. 6134 | 6.3 CT | 1.2 |  | A | 1 | 1.56 |
| 6N1719 | P-5014 | 6.3 CT | 3 | $31 / 8 \times 21 / 2 \times 21 /{ }^{\prime \prime}$ | B |  | 2.65 |
| 6N1710 | P-4019 | 6.3 CT | 4 | $3^{3}$ 价 $\times 25 / 8 \times 25 / \%^{\prime \prime}$ | C | 3 | 3.38 |
| 6N1775 | P. 3064 | 6.3 CT | 6 | 31/8 $\times 21 / 2 \times 278^{\prime \prime}$ | B | 2 | 3.23 |
| 6N1788 | P-4089 | 6.3 CT | 6 | $35 / 8 \times 3 \times 31 / 8^{\prime \prime}$ | C | 3.5 | 3.82 |
| 6N1740 | P-6308 | 6.3 CT | 10 | $31 / 2 \times 27 / 8 \times 234^{\prime \prime}$ | N | 3.5 | 3.76 |
| 6N1780 | P-5015 | 7.5 CT | 4 | $31 / 8 \times 21 / 2 \times 278^{\prime \prime}$ | B | 3 | 2.65 |
| 6N1782 | P-6138 | 7.5 CT | 8 | $37 / 8 \times 31 / 8 \times 27 / 8^{\prime \prime}$ | N | 5 | 4.47 |
| 6N1789 | P-4093 $\ddagger$ | 7.5 CT | 24 | $51 / 8 \times 41 / 4 \times 10^{\prime \prime}$ | FB | 21 | $14.7 \overline{0}$ |
| 6N1732 | P.6139 | 10 CT | 8 | $37 / 8 \times 31 / 8 \times 31 / 8{ }^{\prime \prime}$ | N | 5 | 4.38 |
| 6N1725 | P-4097 | 10 CT | 8 | $4 \times 31 / 4 \times 35 / 8{ }^{\circ}$ | C | 5 | 5.00 |

## DC FILTER CHOKES

All are Type A Mtg. except *-L, †-TD.

| No. | Type | Hys. | Ma . | Ohms | HxWxD | Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6N1856 | C-1515 | 20 | 15 | 900 | $15 / 8 \times 27 / 8 \times 11^{\prime \prime}$ | 1.06 |
| 6N1699 | C-1707 | 7 | 50 | 550 | $18 / 8 \times 23 / 8 \times 13 / 8{ }^{\prime \prime}$ | . 94 |
| 6N1623 | C. 1003 | 16 | 50 | 580 | 2x314x18/ ${ }^{\prime \prime}$ | 1.26 |
| 6N1700 | C. 1708 | 13 | ${ }^{5}$ | 500 | $2 \times 31 / 4 \times 184^{\prime \prime}$ | 1.38 |
| 6N1852 | C.1355* | 8 | 3 | 290 | 21/6x $\times 2^{3} 10 \times 1 / /^{\prime \prime}$ | 1.47 |
| 6N1624 | C-1002 | 15 | T | 400 | 21/4x38/4x21/4" | 1.73 |
| 6N1701 | C-1709 | 8 | 85 | 250 | 2×31/4x ${ }^{\prime \prime}$ | 1.62 |
| 6N1585 | C-2305 $\dagger$ | 5 | 100 | 300 | $2^{11} 16 \times 23 / 4 \times 2^{3}$, $6^{\prime \prime}$ | 2.35 |
| 6N1625 | C-1001 | 10.5 | 110 | 225 | 25/8x4×21/" | 2.18 |
| 6N1584 | C-2304 | 2.3 | 1.50 | 60 | 2×31/4×18" | 1.53 |
| 6N1586 | C-2309 | 3 | 150 | 90 | $21 / 4 \times 38 / 4 \times 24^{\prime \prime}$ | 1.65 |
| 6N1702 | C-1710 | 7 | 1.50 | 200 | 25/8x $4 \times 214^{\prime \prime}$ | 2.06 |
| 6N1694 | C-1080 | 3.5 | 50 | 200 | $15 / 8 \times 27 / 8 \times 1 /{ }^{\prime \prime}$ | 1.00 |
| 6N1696 | C-1279 | 8.5 | 50 | 400 | 15/8×278811/2" | 1.03 |
| 6N1813 | C-1333 | 8 | 50 | 450 | $15 / 8 \times 27 / 8 \times 113^{\prime \prime}$ | 1.06 |

Free Stancor Catalog lists over 400 items, including audio ans power transformers and reactors, power packs, radio transmitter kits and television components, for replacement and general purpose work. FREE 23N19969

## TELEVISION REPLACEMENT PARTS

## GENUINE <br>  <br> PARTS



RCA TELEVISION IF AND VIDEO COIL KIT
Contains all coils necessary to build the picture, sound, and video circuits of a high quality television receiver. Shown below in tabula 12N10156

| No. | $\begin{aligned} & \text { RCA } \\ & \text { Type } \end{aligned}$ | $\begin{gathered} \text { No. in } \\ \text { Kit } \end{gathered}$ | Description | Each |
| :---: | :---: | :---: | :---: | :---: |
| 12N10157 | 201 K 1 | 2 | Sound IF Transformer | 1.29 |
| 12N10158 | 202K1 | 1 | Converter Transformer | 1.29 |
| 12N10159 | 202K2 | 1 | 1 st PIX IF | 1.38 |
| 12N10160 | 202 K 3 | 1 | 2nd PIX IF | 1.06 |
| 12N10161 | 202K 4 | 1 | Cathode Trap | 1.29 |
| 12N10162 | 203K1 |  |  |  |
| 12N10163 | 202LI | 2 | 3rd and 4th PIX IF | . 38 |
| 12N10164 | 203 Ll | 1 | Video Series Peakıng Coil | . 26 |
| 12N10165 | 203 L 2 | 1 | Video Shunt Peakıng Coil | . 26 |
| $12 N 10166$ | 203L3 | 2 | Video Series Peaking Coil | . 26 |
| 12N10167 | 203L4 | 2 | Video Shunt Peaking Coil | . 26 |

Deflection Yoke Type 201D1 for use with direct viewing kinescopes requiring $50^{\circ}$ magnetic deflection, such as RCA 7DP4 and 10BP4 Performance checked to close linearity limits. Provides required retrace time when used with typical deflection circuits using RCA Horizontal output transformer $211 \mathrm{T1}, 204 \mathrm{~T} 3$ or 204 Tl and Vertical output trans ormer 204 T 2.

## 6N5971

Each 4.41
Focus Coil Type 202Dl for magnetically focused kinescopes having deflection angles up to $50^{\circ}$ such as the RCA 10BP4. Large conductor size for corrosion-free operation
4.4

Horizontal Output Transformers Type 211T1 for use with deflecton yoke type 201 Dl and with direct viewing tubes such as 7DP4 and 10BP4. Auto-transformer primary provides voltage for pulse rectifier to supply kinescope anode potential. Filament winding for pulse rectifier is includ
$6 N 5975$.
ach 5.59

## TV PARTS FOR TRANSMITTING STATIONS

## TYPE $201 D 11$ DEFLECTING YOKE. For us

 CR tube and SWP11 Transcriber Kinescope.10.29

TYPE 201 D 75 DEFLECTING YOKE ASSEMBLY. includes keyed Jumbo Annular 7-pin socket. For use with Image Orthicons, types 5655, 2P23 and 5769.
6N6014
182.77

TYPE $201 D 76$ DEFLECTING YOKE. For type 1850 -A 6N6015
94.57

TYPE 201D77 DEFLECTING YOKE. For lype $2 F 21$ Monosc
6N6016
80.36

TYPE 202D79 FOCUSING COIL. For Image Orthicons $\mathbf{8 0 . 3 \text { ypes } 2 \text { 2P33. }}$ 5655 and 5769
104.37

6N6017
48.51 lypes 2P23, 5655 and 5769
6N6018
TYPE 204T1 HORIZONTAL OUTPUT TRANSFORMER. For deflection circuits using RF operated high voltage supplies. For RCA Image Orthicons (2P23, 5655, 5769), Flying Spot CR Tube (5WP1S), and Transcriber Kinescope (5WP11). Used with RCA Deflecting Yokes 201D1, 201D2 or 201D3.
6N5985
11.76

Ion-trap Magnet Type 203D1. A necessity wherever kinescopes with on-trep guns are used. Construction is fool-prool-only lwo coils and a padded mounting yoke. Prevents ions from bombarding the sensitive 6N5984 screen.
6N5984
Each 3.82
Write for full in

| No. | RCA Type | Description | Each |
| :---: | :---: | :---: | :---: |
| 6N5978 | 201D2 | Deflecting Yoke | 7.64 |
| 6N6002 | 201 D3 | Deflecting Yoke | 8.76 |
| 6N6003 | 201D12† | Deflecting Yoke | 4.41 |
| 6N5979 | 201 Rl | Width Control | 41 |
| 6N5980 | 201 R 2 | Width Control | 1.29 |
| 6N5981 | $201 R 3$ | Horizontal Linearity Control | . 47 |
| 6N5877 | 201R4* | Width Control | . 59 |
| 6N5878 | 201R5* | Horizontal Linearity Control | 71 |
| 6N6004 | $20176 \dagger$ | Power Transformer (30-tube) | 15.29 |
| 6N6005 | 20177 $\dagger$ | Power Transformer (24-tube) | 12.35 |
| 6N6006 | $20178 \dagger$ | Power Transformer (21-tube) | 11.17 |
| 6N6007 | 201T9* | Power Transformer (27-tube) | 12.35 |
| 6N6008 | 201710* | Power Transformer (27-tube) | 12.35 |
| 6N5982 | 201 Xl | Yoke Mounting Hood | . 76 |
| 6N5876 | 202D2* | Focus Coil | 6.47 |
| 6N6009 | 203D3 $\dagger$ | Ion-Trap Magnet (PM type) | 1.23 |
| 6N6010 | 203R1 $\dagger$ | Hor. Osc. \& Sync. Control Coil | 1.06 |
| 12N10168 | 204Ll | Filament Choke | . 12 |
| 6N5986 | 204T2† | Vertical Output Transformer | 2.94 |
| 6N5970 | $204 T 3$ | Horizontal Output | 7.06 |
| 6N6011 | $204 \mathrm{T9} \dagger$ | Vertical Defl. Output Transf. | 2.65 |
| 6N5971 | $208 \mathrm{Tl} \dagger$ | Horizontal Block, Osc. Transf, | 2.29 |
| 6N5972 | 208T2 $\dagger$ | Vertical Block, Osc. Transf. | 1.62 |
| 6N5973 | 20813 | Horizontal Block, Osc. Transt. | 1.62 |
| 6N5974 | $20878 \dagger$ | Horizontal Sync-Disc. Transf. | 1.35 |
| 6N6012 | 208T9 $\dagger$ | Ver. Blocking Osc. Transformer | 1.47 |
| 6N5976 | 21112 | Horizontal Output Transformer | 11.17 |
| 6N6013 | 21173 | Hor. Dell. Output \& HV Transf. | 5.39 |
| 6N5875 | 211T5* | Hor. Deil. Output \& HV Transf. | 7.35 |

* For $16^{\prime \prime}$ set using l6AP4 TV Tube
+ Used with both 16AP4 and 10BP4 Tubes.


## RCA FRONT END TUNER

Type 201E1. Designed eepecially for use with stagger tuned IF's. Handles all 12 TV channels and selects desired picture and sound carriers. Tuner includes RF amplifier stage, converter stage, oscillator stage, fine tuning control. channel switch, converter transformer and all their aligning adjustments. Units are mounted andaligned. Mountson $4^{\prime \prime}$ chassis. 31N24437-With Tubes, Wt. 4 lbs.
37.63

## RCA TV DATA BOOK



Advanced study guide for TV servicing. Authoritative, easy to follow alignment procedures, circuit and service data. Diagrams, photos, parts hist. Includes RCA 63015 \& 648 PTK drawings. 23N19904-Approx. 100 pages
1.50

## RCA TELEVISION COMPONENTS BOOK

32 page booklet gives complete technical, installation and applioation data on RCA TV components for use with 16AP4. Includes schematic diagram and parts list of deflection and HV circuit fully described in 4 page section
23N19903
.25


# ANTENNA-IF-RF-OSCILLATOR COILS 

## MEISSNER COILS

## "PLASTIC" IF TRANSFORMERS

Trimmer base and coil form are moulded in one piece. Trimmers "floated" away from the base with an air gap between the bottom plate and the plastic base. Wide range Frequency adjustable etther side of Pre-set frequency, double-tuned. Metal shield can and Litz wire. Únaffected by temperature or humidity. Size $11 / 4^{\prime \prime}$ square by $21 / 2^{\prime \prime}$ high.

| INPUT |  |  | OUTPUT |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type | Set at | Type | No. |  |
| 12N10373 | 16-6649 | 175 KC | 16-6651 | 12N10375 |  |
| 12N10376 | 16-6652 | 262 KC | 16-6654 | 12N10378 | 826 |
| 12N10382 | 16-6658 | 456 KC | 16-6660 | 12N10384 |  |

HI Q IRON CORE "PLASTIC" IFs

| 12N10152 | Type 16-6662 | Input, peaked at 455 KC... ...1. 23 |
| :---: | :---: | :---: |
| 12N10153 | Type 16-6663 | Output. peaked at 455 KC. 1.23 |

## "TWEET" FILTER OUTPUT IF

Type 16-6670. New output transformer with built-in "tweet" filter in secondary circuit. For replacement use in late model receivers that have "tweet" filter enclosed in IF output shield. Plastic, air-core construction. Shield can $11 / 4 \times 11 / 4 \times 21 / 2^{\prime \prime}$. Spade bolt mig. on $13 / 16^{\prime \prime}$ centers. 12N10154.
1.32

FM IF AND DISCRIMINATOR TRANSFORMERS
Model 16-6665 IF Transformer. For the new ultrahigh FM frequencies. Permeability tuned to 10.7 MC. Mounted in rectangular shield can measuring $17 / 16^{\prime \prime} \times 7 / 8^{\prime \prime} \times 129 / 32^{\prime \prime}$ with screw type mtg. lugs.
Model 17-3484 Discriminator Transformer. Permeability tuned to 10.7 megacycles. For use on New FM range. Same size as above.
12N10333-Shpg. wt. 8 oz.

## STANDARD ANTENNA AND RF COILS

Designed to cover the BC band from 545 to 1580
 KC ( $190-550$ meters) with a 365 mmfd tuning condenser. High impedance primaries, wound with Litz wire. Shielded coils are in black crackle finished non-magnetic can. $17 / 8^{\prime \prime}$ dia., $21 / 2^{\prime \prime}$ high. 12N10046.-Ant UNSHIELDED 12N10047-RF Coil type 14-1011

12N10044-Ant. Coil type 14-1004
12N10045-RF Coil type 14-1005
; 73 c


## "UNIVERSAL ADJUSTABLE" UNSHIELDED COILS

Replace BC band coils in most receivers, accurately track other coils when adjusted. Matches inductance of burned out coil with screwdriver adjustment. Osc. Coil adjustable from 175 to 520 KC . For use with either cut plate or padding condenser circuits.
12N 10007 -type 14-1026 ant
12N10007-type 14-1026 ant
12N 10008-type 14-1027 RF..
2N10009-type 14-1028 Osc.
\}1.03

## OSCILLATOR COILS

## FOR 190-550 METER BC BANDS

Used with 365 mmid . condensers. IF xformers and RF and antenna coils. Shielded type is $13 / 4^{\prime \prime} \times 11 / 2^{\prime}$ Padders not supplied.

| No. | Type | Freq. KC | Padder Mmfd. | Each |
| :---: | :---: | :---: | :---: | :---: |
| -12N10029 <br> *12N10031 | $\begin{aligned} & 14-4242 \\ & 14-4243 \end{aligned}$ | $\begin{array}{r} 175 \\ 456 \end{array}$ | $\begin{array}{r} 900 \\ 350 \\ \hline \end{array}$ | 79 |
| $\begin{array}{r} \text { \#12N10028 } \\ \# 12 N 10030 \end{array}$ | $\begin{aligned} & 14-3732 \\ & 14-4034 \\ & \hline \end{aligned}$ | $\begin{aligned} & 175 \\ & 456 \end{aligned}$ | $\begin{aligned} & 900 \\ & 350 \\ & \hline \end{aligned}$ | 2 c |

Shielded
\# Unshielded

## PHONO OSC. COIL FOR WIRELESS RECORD PLAYERS

Type 17-9373 knob adjustment permits selection of clear freq. in BC band
12N10010- $\mathrm{d}^{\prime \prime} / 8^{\prime \prime}$ square by $31 / 2^{\prime \prime}$ high.
1.65

## 456 KC OSC. COIL

Type 14-1033. For type 6SA7. Unshielded, 456 KCIF . Requires 350 mmfd. padder cond. 365 mmfd. tuning cond.
12N10332.

## BFO COIL

Type 17-6753. To supply beat note necessary for CW reception. Range, $290-650 \mathrm{KC}$; peaked at $456 \mathrm{KC} .13 / 8^{\prime \prime}$ sq. $\times 31 / 2^{\prime \prime}$ high. 12N10171

STANWYCK COILS

## MIDGET IF COILS

Iron core 455 KC midgets. Compression tuned, ex ceptionally high gain due to specially designed powdered iron cores. For general replacement use and new set construction of small AC-DC receivers, auto radios and poriables. Overall dimensions of can $3 / 4^{\prime \prime}$ square $\times 1 / 8^{\prime \prime}$ long.
12N10350-Wt. 2 oz.
97 c
Midget AM Coil similar to abova but with the addition of a plastic base with luc terminals and addition of a plastic base
12N10358-Wt. 2 oz.
$97 c$


## MIDGET FM COILS

Newly designed slug tuned FM coils. High quality iron cores assure maximum " Q " and gain when tuned to 10.7 MC . Band width 200 KC peak to peak. Symmetrical response curve. Polystyrene base, lightweight alumınum can $3 / 4$ square by $17 / 8$ high. Spade bolt mounting.
12N10355-Shpg. wt. 2 oz.
FM Discriminator. Tunes to 10.7 MC Bandwidth 330 KC peak to peak (plus or minus 165 KC . Output 9 volts with input of 2 volts. peak (plus or minus 165 KC ). Output
12N10356-Shpg. wt. 2 oz.
FM Ratıo Detector. For new FM Eircuits which eliminate limiter tube. 10.7 MC , band width 330 K .
12N10357-Shpg. wt. 2 oz.

## FM IF AND DET. COILS

Newly designed Slug Tuned FM coils, maximum "Q" and gain at 10.7 MC . Low loss ceramic and quality iron cores. Response curve symmetrical, extreme stakility. Aluminum case. $13 / 8^{\prime \prime}$ square by $3^{\prime \prime}$

## 12N10351

1.91

FM Discriminator same as above electrically and mechanically. Electrically centered secondary gives perfect symmetry between peaks. For 10.7 MC .

12N10352
2.15


FM Ratio Detector coil, same const, as above.
12N10359-Wt. 3 oz .
2.26

## CARRON COILS

## UNSHIELDED 456 KC OSCILLATOR COIL

Color coded, dowel type wound with cotton covered enamel wire, dehydrated, treated, flash-dipped 12N10238-Padder value $360-470 \mathrm{mmid}$.

50c


UNSHIELDED UNTVERSAL ADJUSTABLE COILS
Exact inductance of replaced coil covering 550-1715 KC matched easily. Oscillator coil adjustable from 175 to 520 KC . Universa. mtg. facilities.
12N10307-Antenna. 12N10309-RF, 12N10310—Osc.
Any Type Above, Each. plugs and mig. brackels.
12N10315-Antenna. 12N10316-RF. Each SIC


## RF CHOKES

All purpose RF chokes wound on steatite dowels. Both winding and dowl impregnated, sealed permanently against h'micity. Mounted on 6/32" screw placing lugs in easy connecting position.

| No. | Induct. | Each | No. | Induct. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 12N10208 | 2.5 mh |  | 12N10211 | 10.0 mh | 40 c |
| 12N10209 | 5.5 mh | 7 | 12N10212 | 30.3 mh | 44 c |
| 12N10210 | 7.5 mh |  | 12N10213 | 60.0 mh | 51 c |

## LITZ WOUND ANTENNA AND RF COILS

New type bank winding for prcctically constant gain and selectivity over BC band. High impedance primaries. Tune $540-1500 \mathrm{KC}$ with 356 mmfd. condenser. Unshielded type have univ. b=acket, stand-off mtg. $13 / 4^{\prime \prime}$ centers. Size: $17 / 8 \times 21 / 4^{\prime \prime}$

SHIELDED TYPE
12N10317-Antennc .........................................
;68c
UNSHIELDED TYPE
12N10319-Antennc.
12N1032D-RF.
\}50c

## MALLORY \& CENTRALAB SWITCHES

## MALLORY GANG SWITCHES



Contact members heavily silver plated, and given a smooth hard finish. Contact shoe, of the self-cleaning type, is of silver alloy. Switches provided with one permanent stop and one adjustable stop. Bushings $8 / 8$ and extend $8 / 8$ ". Pointer type, Bakelite knob is supplied also.

| Shorting |  | Non-Shorting |  | Gangs | Total No. Circuits | Positions Per Cir. | Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type | Stock No. | Type |  |  |  |  |
| 9N6248 | 1211 L | 9N6264 | 1311L | I | , | 11 | . 91 |
| 9N6249 | 1215L* | 9N6265 | 1315L* | 1 | 2 | 5 | . 97 |
| 9N6250 | 1213L* | 9N6266 | 1313L* | 1 | 3 | 3 | 1.06 |
| 9N6251 | 1212L* | 9N6267 | 1312L* | 1 | 4 | 2 | 1.12 |
| 9N6253 | 1221L | 9N6269 | 1321L | 2 | 2 | 11 | 1.35 |
| 9N6254 | 1225L* | 9N6270 | 1325L* | 2 | 4 | 5 | 1.53 |
| 9N6253 | 1223L* | 9N6271 | 1323L* | 2 | 6 | 3 | 1.65 |
| 9N6256 | 1222L* | 9N6272 | 1322L* | 2 | 8 | 2 | 1.73 |
| 9N6258 | 1231L | 9N6274 | 1331L | 3 | 3 | 11 | 1.82 |
| 9N6259 | 1235L* | 9N6275 | 1335L* | 3 | 6 | 5 | 1.94 |
| 9N6261 | 12411 | 9N6277 | 1341L | 4 | 4 | 11 | 2.32 |
| 9N6262 | 1245L* | 9N6278 | 1345L* | 4 | 8 | 5 | 2.70 |
| 9N6281 | 1261L | 9N6283 | 1361L | 6 | 6 | 11 | 3.41 |
| 9N6286 | 1266L | 9N6287 | 1366L | 6 | 12 | 6 | 4.35 |

* Provided with OFF position.
" 3100 " SERIES SINGLE-GANG SELECTOR SWITCHES


| Shorting Stock No. | Type | Non Short'g Stock No. | Type | No. of Circuits | Contacts per Cir. | Base Diam. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9N6878 | 31151 | $9 N 6888$ | 3215 | One | 5 | 114" | . 68 |
| 9N6879 | 31112 J | 9 N 6889 | 32112 J | One | 12 | 11/4" | . 68 |
| 9N6990 | 3122J | 9 N 6890 | 3222J | Two | 2 | $11 / 4{ }^{\prime \prime}$ | . 68 |
| 9N6991 | 3123J | 9N6891 | 3223J | Two | 3 | 11/4* | . 68 |
| 9N6880 | $3126 J$ | 9N6892 | 3226J | Two | 6 | 114" | . 68 |
| 9N6881 | 3134 J | 9N6893 | 3234J | Three | 4 | 11/4" | . 71 |
| 9N6882 | 3142 J | 9 N 6894 | 3242J | Four | 2 | 11/4" | .71 |
| 9N6883 | 3143J | 9N6895 | 3243J | Four | 3 | 11/4* | . 71 |
| 9N6884* | 31117 J | 9N6896* | 32117 J | One | 17 | 111/16" | 1.06 |
| 9N6885* | 3129 J | 9N6897* | 3229J | Two | 9 | $111 / 16^{\prime \prime}$ | 1.06 |
| 9N6886* | $3136 J$ | 9N6898* | 3236 J | Three | 6 | $111 / 16^{\prime \prime}$ | 1.15 |
| 9N6887* | 3163 J | 9N6899* | 3263J | Six | 3 | $111 / 16^{\prime \prime}$ | 1.15 |

## hard aluminum etched plates

Numbers in white. Fit $8 / 8^{\prime \prime}$ bushings. $30^{\circ}$ spacing for all switch types $1200 \mathrm{~L}, 1300 \mathrm{~L}$ and $11 / 4^{\prime \prime}$ base 3100 J and 3200 J . $20^{\circ}$ apacing for all type $3100 \mathrm{~J}, 3200 \mathrm{~J}$ switches with $111 / 16^{\prime \prime}$ base.

| Marking | $30^{\circ}$ Space Cat. No. | $20^{\circ}$ Space Cat. No. | Marking | $30^{\circ}$ Space Cat. No. | $20^{\circ}$ Space Cat. No. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1, to 2 | 9N6224 |  | Volume | 9N6244 |  |
| 1 to 3 | 9N6225 | 9N6303 | Off-1 to 3 | 9N6235 | 9N6313 |
| 1 to 4 | 9N6226 | 9N6304 | Off-1 to 4 | 9N6236 | 9N6314 |
| 1 to 5 | 9N6227 | 9N6305 | Off-1 to 5 | 9N6237 | 9N6315 |
| 1 to 6 | 9N6228 | 9N6306 | Off-l to 6 | 9N6238 | 9N6316 |
| 1 to 7 | 9N6229 | 9N6307 | $\bigcirc$ | 9N6239 | 9N6317 |
| 1 to 8 | 9N6230 | 9N6308 | Off- 1 to 8 | 9N6240 | 9N6318 |
| 1 to 9 | 9N6231 | 9N6309 | Off-1 to 9 | 9N6241 | 9N6319 |
| 1 to 10 | 9 N 6232 | 9N6310 | Off-I to 10 | 9N6242 | 9N6320 |
| 1 to 11 | 9N6233 | 9N6311 | Any above, each. 9N6223-"0-100". Each..... 15 |  |  |
| 1 to 12 | 9N6234 | 9N6312 |  |  |  |
| 1 to 15 |  | 9N6243 |  |  |  |

MALLORY PUSH-BUTTON SWITCHES
Non-locking types with black bakelite knob. For mounting in $7 / 6^{\prime \prime}$ hole, paneis up to $\mathrm{y}^{4}$ "

| No. | Type | Contacts | Cost |
| :---: | :---: | :---: | ---: |
| $9 \mathrm{MN6460}$ | 2001 | SPST* | .76 |
| 9N6461 | 2002 | SPST | .76 |
| 9N6462 | 2003 | SPDT | .82 |
| 9N6457 | 2004 | DPST* | .94 |
| 9N6463 | 2006 | DPDT | 1.15 |



Normally open.


No. $1400 \mathrm{~L}-12$ positions; opens one line at a time while maintaining circuit through others. $18 / 4 \times 21 / 2^{\prime \prime}$ wide. $8 / 8^{\prime \prime}$ bushing $2^{\prime \prime}$ notched shaft. Complete with knob \& dial plate. 9 . 47

24 POINT TAP SWITCH


No. 13124L-Suitable for use in test circuits, tube checkers, analyzers. Special single-circuit 24 point non-shorting switch. $8 / 8^{\prime \prime}$ plete with dial plate and bar-type knob.
9N6371

## CENTRALAB ALL-PURPOSE SWITCHES

MOMENTARY PUSH TYPE
For light duty applications. I amp. at 110 v .
a.c. Silvered contacts. Insulated $8 / \mathrm{m}^{\mathrm{m}}$ bushing a.c. Silvered contacts. Insulated $8 / 8^{\prime \prime}$ bushing,
$3 / 8^{\prime \prime}$ long. Button extends $\% /^{\prime \prime}$ from end of bushing. Available with contacts normally closed or open.
9N12867-Type 1471—Norm. open.... .24d 9N12862-Type 1470-Norm. closed... . . 24 e

"POSITIVE" AND "SPRING RETURN"
Lever Action. With knob. Plates available for vertical mounting singly or in groups up to five. $17 / 8^{\prime \prime}$ high, $5 / 8^{\prime \prime}$ wide, $11 / 2^{\prime \prime}$ deep behind panel.
Mtg. centers $15 / 8^{\prime \prime}$.


Any Type Above. . . . . . . ......................... 7 3

## MOUNTING PLATES FOR LEVER SWITCHES

Black trackle finished steel.

| Stock No. | Gangs | Dimensions | Each |
| :---: | :---: | :---: | :---: |
| 9 N 12794 | 1. | $25 / 8 \times 8 / 8$ | 21 |
| 9N12795 | 2 | $11 / 2 \times 8{ }^{\prime \prime}$ | 244 |
| 9 912796 | 3 | 214x11/2" | 296 |
| 9N12797 | 4 | $3 \times 214^{\prime \prime \prime}$ | 35 ¢ |
| 9N12798 | 5 | $33^{3} \times 3^{\prime \prime}$ | 44 d |

## TONE SWITCHES

Rotary action shorting type (except those marked $\dagger$ ); have $3 / 4^{\prime \prime}$ dia. bushing with $1 / 4^{\prime \prime}$ insulated steel shaft, $21 / 4^{*}$ long. No knobs or plates.


No. 1465. Single pole, fout pos. selector sw. with single pole, single throw AC line sw. attached. Three active pos. and one "off". Pos. index. Shorting contacts. 9N12807.

73

## UNIVERSAL FLAT SWITCHES

Use many ways, from single pole single throw to
4 pole double throw. Bakelite insulation, non4 pole double throw. Bakelite insulation, non-
shorting teeth. Requires $5 / 8^{\prime \prime}$ depth for mounting. With $21 / 4^{n}$ shaft and bar knob.
9N12764-Type 1450.


MALLORY 170 C CERAMIC SELECTOR SWITCHES
For radio receivers and low power transmitter circuits. "Snap" indexing assembly with adjustable stop. Heavy silver, plated contacts. With knob.


| No. | Type | angs | Cir. | Pos. | Ea |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 9N6625 | 1:2C | 1 | 1 | 11 | 32 |
| 9N6626 | 173 C | 1 | 2 | 5 | 1.32 |
| N6627 | 174C | 1 | 3 | 3 | 1.32 |
| 9 N 6628 | 176 C | 2 | 1 | 11 | 2.06 |
| 9N6629 | 177C | 2 | 2 | 5 | 2.06 |
| 9N6630 | 178 C | 2 | 3 | 3 | 2.06 |
| 9N6631 | 180C | 3 | 1 | 11 | 2.94 |
| 9N6632 | 181C | 3 | 2 |  | 2.9 |

## MALLORY 160.C CERAMIC SWITCHES



Low loss ceramic insulation, wide contact spacing, improved heavy silver plated contacts. For transmitters with power up to 100 watts. 4 contacts per circ. With knob.

| No. | Type | Gangs | Cir. | Each |
| :---: | :---: | :---: | :---: | :---: |
| 9N6642 | 161 C | 1 | 1 | 1.32 |
| 9N6643 | 162 C | 2 | 2 | 2.06 |
| 9N6644 | 163 C | 3 | 3 | 2.94 |
| 9N6645 | 164 C | 4 | 4 | 3.53 |
| 9N6646 | 165 C | 5 | 5 | 4.41 |

9N6647-Special dial plate for above numbered from 1 to 4. Each....................... 124

## SWITCHES FOR EVERY PURPOSE



## CUTLER-HAMMER NEW DESIGN SWITCHES

Approved type with nickel-plated metal parts. Fast action-excellent for appliances, radio receivers, etc. Underwriters Appr. Stem length, fig. 1 and $2,15,{ }^{2}$; tig. 3 and 4, ${ }^{11 / k \text {. }}$.

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | Type | Fig. | Poles | $\begin{aligned} & \text { Amps (a3) } \\ & \text { 125v. } \end{aligned}$ | Each | $\text { Lots / } 101$ <br> Each | $\begin{aligned} & \text { ots } / 21 \\ & \text { Each } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9N12836 | 8280 K 16 | 1 | SPST | 6 | . 29 | . 26 | . 23 |
| 9N12834 | 8282K14 | 1 | SPDT | 3 | . 35 | . 31 | . 28 |
| 9N12833 | 8363K7 | 1 | DPDT | 6 | . 59 | . 53 | . 48 |
| 9N12817 | 8360K7 | 1 | DPST | 6 | . 55 | . 50 | . 45 |
| 9N12813 | 7321 K3 | 2 | SPST | 12 | . 69 | . 62 | . 56 |
| 9N12814 | 7320K3 | 2 | DPST | 10 | . 69 | . 62 | . 56 |
| 9N12837 | 8097K3 | 3 | SPST | 3* | . 20 | . 18 | . 16 |
| 9N12832 | 7140K6 | 4 | SPDT + |  | . 26 | . 23 | . 21 |

*Midget Rated AC tWith Dead Center Position
5. On-Off switch plate for toggles. With locating projection. 9N12818-Each
$36 \quad 10$ for.
.27t

## HEAVY DUTY SWITCHES

Underwriters approved. Nickel-plated metal parts. Fast action. Handles


| Stock No. | Type | Pole | $\begin{aligned} & \text { Amps (a) } \\ & 125 \mathrm{v} . \end{aligned}$ | $\begin{gathered} A \mathrm{mps}(1) \\ 250 \mathrm{v} . \end{gathered}$ | Each | Lots/ 1.0 Each | Lots /21 Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9N12815 | 7361 K 5 | SPST | 15 | 10 | 1.10 | . 99 | 9 |
| 9N12816 | 7360 K 8 | DPST | 15 | 10 | 1.10 | . 99 | . 89 |



## H \& H ROTARY PANEL SWITCHES

Rated 3 amps., 125 volts. Approved type. With locknuts. Shaft extends $1^{\prime \prime}$; bushing $3 / 8^{\prime \prime}$ in diameter. With lug terminals.

| No. | Type | Each | 10For | No. | Type | Each | or |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9N12779 | S.P.S.T. $\dagger$ | . 28 | 2.52 | 9N12782 | D.P.S.T.* | . 63 | 5.67 |
| 9N12693 | S.P.S.T. | . 35 | 3.15 | 9N12783 | D.P.D.T. | . 56 | 5.04 |
| 9N12780 | S.P.S.T.* $\dagger$ | . 35 | 3.15 | 9N12784 | D.P.D.T.* | . 64 | 5.76 |
| 9N12781 | D.P.S.T. | . 52 | 4.68 |  |  |  |  |

## ROTARY SWITCH PLATE

"Off-On" switch plate. Etched aluminum and black. Size: 1 "xl1/4. Clean cut lettering. 9N9851-10 for 85ф. Each......... 9 \& "Off-On" Switch Plate. Etched aluminum,



## H \& H TWO CIRCUIT PUSH SWITCHES

In normal position, with plunger out, one circuit is "on," and the other "off." When plunger is depressed, circuits are reversed: Slow make, quick break momentary contacts. Rated 1 amp. at 125 V . AC. Bushing $13 /$ q." $^{\prime \prime}$ dia., $5 / 8^{n}$ long.

METAL PLUNGER


Used on Supreme instruments and other popular makes. 9N12774-Your Cost.

# BAKELITE TIP <br> 9N12777—Red. <br> 9N12778-Black. <br> Each.......... 57 5 

10 For

BAKELITE BUTTON
9N12775-Red.
N12776 -Black. Each
Specify Color)

## BAKELITE KNIFE SWITCHES

Heavily plated metal parts, bakelite base. Single pole types $11 / 2^{\prime \prime}$ long; double pole $21 / 2^{\prime \prime}$. Excellent for use for switching high and low sections of television antennas

|  | No. | Type | Each |
| :---: | :---: | :---: | :---: |
|  | 9N16830 | S.P.S.T. | . 50 |
|  | 9N16831 | S.P.D.T. | . 59 |
| cossunish | 9N16832 | D.P.S.T. | . 68 |
| grexstios | 9N16833 | D.P.D.T. | . 79 |
| mamers. | 9N16834 | 3-P.S.T. | 1.09 |
|  | 9N16835 | 3-P.D.T. | 1.18 |
|  | 9N16836 | 4-P.S.T. | 1.47 |
|  | 9N16837 | 4.P.D.T. | 1.76 |



## UNIMAX NEW PRECISION SWITCHES

Actuators attached to removable, interchangeable "adaptaplates". Operating pressure, appro. 8 oz. All units SPDT, except MXO-1, which is SPST. Ratings: 15 amps, 125 vons; 5 amps, 250 volts; 60 cyc. Units vary only in style of actuator.
9N12653-MX.1 Basic Pin Type (A*
9N12654-MXL-1 Leaf Spring Type (C)
9N12654-MXL-1 Leat Spring Type (C) . . . . . . . . . . . . . . . . . . . . . . . . . . 1.10 9N12655-MXO-1 Top Reset, Pluncer Type (B) . . . . . . . . . . . . . . . . 1.10 9N12656-MXU. 1 Bottom Reset, Plinger Type (B) 9N12657-MXT-1 Hinged Leat Spring Type. 9N12658-MXW-l Leat Spring Roller Type (D) ... 9N12659-MXO-1 Plunger, Small Spring Type (E) 9N12660-MXA-1 Hinged Arm, Ro ler Iype... 9N12661-MXY-1 Reverse-Acting. Hinged 1ype..................... 1.25 9N12662-MXF-1 Rever:ie-Acting, Hinged Roller Type. . . . . . . 1.60 9NI 2663 -MXI-1 Plunger Type. For Panel.

## UNIMAX DESIGN KIT

Fills many needs in the drafting room, mociel shop and maintenance dent. Makes available diversihed switch types for quick determination of size, shope, mounting and method of actuating, for particular application. Complete with two MX-1 SFDT base switches, one MXT-1 base switch with direct acling hinge arm. Adaptaplates, one style "J" spring plunger with threaded bushing for one hole panel mtg., one "W" leaf spring with steel roller, two "L" standard leaf springs, one " $T$ " direct acting with leat, one " $T$ " style direct action with roller, roller assembly to fit " $L$ " and " $T$ " adaptaplates. Screws and rivets for attaching a laptanlates 9N12758-Complete
3.00

FEDERAL ANTI-CAPACITY SWITCHES

Springs are phosphor bronze silverplated, actuated by a cam roller. Dimensions: $21 / 2 \times 5 \times 3 / 4^{11}$.

| No. | Type | Each | No. | Type |
| :---: | :---: | :---: | :---: | :---: |
| 9N12852 | D.P.S.T. | 1.90 | Ench |  |
| 9N12851 | D.P.D.T. | 1.90 |  | (2850 |
| D.P.D.T. | 2.25 |  |  |  |

## CANOPY SWITCH

Rotary type, composition top. Very shallow. Wire leads. Rated 3 amp. at 125 volts.
$9 \mathrm{~N} 13342-10$ for $1.35 . . . . .$.


## SLIDE SWITCHES



Compact elide silver plated switches in cadmium steel housings. All ratos at 125 V . AC-DC. $11 / \mathrm{s}^{\prime \prime}$ mtg. ctrs.

| No. | Type | Amp | Term. | Ea. | No. | Type | Amp. | Term. | Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9N12842 | SPST | .75 | 2 | .16 |  | 9N12844 | DPST | .50 | 4 |
| 9N12843 | SPDT | .75 | 3 | .19 | 9N12840 | DPDT | .50 | 6 | .28 |

STANDARD MU-SWITCH THERMOSTAT-TYPE SWITCH


Light pressure, quick action procision units. Require only 4 oz pressure and .001 of movement to operate. Underwriters approved. Rated 15 amps. at 123 volts $A C$ : $1 / 2 \mathrm{H} . \mathrm{P}$. inductive loads at 125-460 V. AC. Screw termi nals with lugs. $1^{15} /{ }_{18}{ }^{11} x^{11} / 6^{\prime \prime} x^{13} / 16^{\prime \prime}$. \begin{tabular}{l|l|l|l|}
No. \& Type \& Normal \& Each <br>
\hline 9N12725 \& SPST \& Closed \& .90 <br>
9N12726 \& SPST \& Open \& .90 <br>
9N12727 \& SPDT \& \& 1.08

 

\hline 9N12726 \& SPST \& Open <br>
9N12727 \& SPDT \& <br>
\hline
\end{tabular}

MU switch designed for automatic control of temperature in electrically heated brooders and incutrically heated brooders and incubators, or wherever an antomatic electric heat control is desired. Maximum eificiency between $80^{\circ}$ and $120^{\circ} \mathrm{F}$. Has double ether filled wafer and adjusting screw. Rated $15 \mathrm{amps} .125 \mathrm{~V} . ; 5 \mathrm{amps}$. 250 V . AC only. Non-inductive loads.
9N12753
1.35

## AMPHENOL AND JOHNSON SOCKETS

AMPHENOL 78 SERIES STANDARD TUBE SOCKETS


3）：RECEPTACL
1）：Type RS，for replacement work．Steel adaptor，plate for mounting centers from $1 / 2^{\prime \prime}$ to $17 / 8^{\circ}$ ．（2）：Type $S_{\text {，for }}$ new work．Single $13 / 16^{\prime \prime}$ hole；firmly hold by simple retainer ring． 9 and 11 prong sockets for Amphenol connec－ tors． 7 C fits small \＆large base tubes．


| $\begin{aligned} & \text { Fig. I } \\ & \text { Type RS } \end{aligned}$ | $\begin{aligned} & \text { Fig. }{ }^{2} \\ & \text { Type } \end{aligned}$ | Pronge | Ea． |
| :---: | :---: | :---: | :---: |
| 13N13057 | 13N13207 | 4 |  |
| 13N 13058 | 13N13208 | 5 | 8 |
| 13N 13059 | 13N13209 | 6 | 8 |
| 13N 13060 | 13N13210 | 75 | 8 |
| $13 N 13061$ | 13N13211 | 7 L | 8 |
| 13N 13056 | 13 N 13237 | 7 C | 10 |
| 13N13050 | 13N13212 | 80 Oct | 104 |
| 13 N 13040 | 13N13045 | 8 lok | 13¢ |
| 13N13041 | 13N13213 |  | 12 ¢ |
| 13N13042 | 13N 13214 | 11 | 17 | 13N13L10 13N13110－Amphenol 23－1S Receptacle Shell．．．．．．．．．．．．．．．．．．．．

AMPHENOL＂T7－MP＊SERIES SOCKETS Molded from high－dlelectric black bakelite， Molded from high－dielectric black bakelite，
with molded－in plate for $1 / 2$ mtg．centers． Superior quality，strong and dependable． Firmly held．Won＇t rattle or come loose．

| No． | Prongs | Each | No， | Prongs | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 13N13164 | 4 | 74 | 13 N 13168 | 7 L | 84 |
| 13N13165 | 5 | $7 ¢$ | 13N13169 | 8 Oct | $8 ¢$ |
| 13N13166 | 6 | 78 | $13 N 13223$ | 9 | 134 |
| 13N13167 | 7 S | $7 \pm$ | 13N13224 | 11 | 144 |

MIDGET＂MIP＂SOCKETS：Smaller，with $15 / 16 \mathrm{mtg}$ centers． 13N13225－Octal，8－prong Type 88－8 124

## AMPHENOL MINIATURE TUBE SOCKETS

Type 78－7p for all 7－pin miniature tubes．Mounts In $5 / 8^{\circ}$ hol $a_{0}$ Retainer ring included．Black bake－ ilte．Requires no mounting screws，nuts，orwashers； permits compact layouts．
13N13173－Miniature Tube Socket．
13申
For Photo Celis：Fits RCA．Pee－Wee and the Cetron CE－5BB， 13N11599－3 prong socket Type 78－535．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．io


MINATURE 7 AND 9 PIN SOCKETS
Newest miniature sockets for use with tele－ vision．FM，auto radios，portables and other installations． 147 Series mount in $5 / 8^{\prime \prime}$ chas－ sis hole mounting centers $7 / 8^{\prime \prime}$ ．screw holes $1 / 8^{\prime \prime} .59$ Series mount in 3 ＂chassis hole； mounting centers $11 / 8{ }^{\prime \prime}$ ．Top mountings have base shield．

| Number | Pins | Mat＇l | Type | Mtng． | Ea． |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 13N 12576 | 7 | Bakelite | $147-500$ | Bottom | $14 \nmid$ |
| $13 N 12577$ | 9 | Bakelite | $59-409$ | Bottom | $23 \phi$ |
| 13N12578 | 7 | Mice－ | $147-913$ | Top | $24 \$$ |
| 13N 125.79 | 9 | filled | $59-407$ | Top | $34 \varphi$ |

Tube Shields and Spring Assomblies for Above
13N12580－ior 7 －pin вocket．Ht． $13 / 8^{\circ} \ldots . . . . . . . .$. ．$\$ 4$
$\qquad$ 13N12581－for 7 －pin socket．Ht． $13 /{ }^{\prime \prime}$ ．． $\qquad$ 13N 12582－for 9－pin socket．Ht． $11 / 2^{m}$ ．．．． $\qquad$ 13N12583－for 9－pln socket．Ht． 1 15／16

AMPHENOL＂49－RSS＂STEATITE SOCKET For high temperatures．Won＇t absorb moisture．Low losses，Silver－plated， phosphor－bronze，low－resistance contacts．

| No． | Prongs | Each | No． | Prongs | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 13N13194 | 4 | 284 | $13 N 13197$ | $7 S$ | 284 |
| 13N13195 | 5 | 28 | 13N13198 | 7 L | 35 |
| 13N13196 | 6 | 284 | 13N13199 | 8Oct | 284 |

AMPHENOL FLOATING OCTAL SOCKETS


Live rubber grommets ift into mounting holes－cushion－socket for vibration－free oper－ ation．Black bakelite dielectric．Mounts in $1 / \mathrm{m}^{3 / 16^{\prime \prime}}$ hole above or below chassis．Two $1 / \mu^{\prime \prime}$ screw holes on $1 / 2^{\prime \prime}$ centers．Complete with 4 rubber grommets， 2 mtg ．screws，plus nuts and washers；nothing elise needed for assembly．Type 77－MIP－8FK
13N13158－F゙loating Octal Socket，．．．．．．．．．234 Kit for making floating connections using MIP type sockets． Contans＇ 4 groamets， 2 mounting screws，nuts and washers． 13N13159－Floating Octal Kit，．

## AMPHENOL POLYSTYRENE SOCKET

For extremely low losses at Ultra－ High－Frequencies．Molded polystyrene base．Requires $1 / 8^{\prime \prime}$ hole．Mounting centers $1 / 2^{\prime \prime}$ ．Sharp nibs on mounting plate for perfect ground to chas－ plate
$13 \mathrm{~N} 13170-$ Octal，Type $54-8 . \ldots . . .2$ ： 4
13 N 13160 －Loktal，Type $54-8 \mathrm{~L} . . . . .32$ ．


## AMPHENOL TV SOCKETS

Extremely efficient，low－loss sockets for TV and cathode－ray tubes．Magnol Type CR socket has 11 sllver－plated contacts；substantial barriers to reduce leakage losses，prevent voltage break－ downs．Duodecal．Diheptal sockets have individu－ al contact wells．

| No． | Amphenol Type | Size | Each |
| :---: | :---: | :---: | :---: |
| 13 N 13185 | 49－SS11L | Magnal Type CR | 714 |
| 13N13190 | 59－402 | Duodecat－Circle Dia．1．063＊ | 924 |
| 13N13191 | 59－415 | Diheptal－Small for $2.050^{\circ} \mathrm{Base}$ | 984 |
| 13N13192 | $59-417$ | Diheptal－Med．for 2．250＂Base | 984 |

## JOHNSON SOCKETS

 MINIATURE SOCKETS AND SHIELDSSturdily constructed miniature sockets for use with all 7－pin miniature tubes．Contacts are of phosphor－bronze，heavily silver－plated－self－ abgning type．Unusual construction insures exceptionally low losses，with minimum ca pacitance and leakage between contacts． 13N13186－Miniature Socket Type 267．．．．．． 29
STEATITE SOCKET WITH SHIELD BASE：Includes metal ring which extends upward to form a shield 领
base．
13N13219－Shield Base Socket Type 277B．
13N13220－Shield Base Only Type 277 S


13N13220－shield Base Only．${ }^{2}$ ype 277 S ． 7 ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 94 13N13222－1 3／4\％Shield 278B for types 277B or S．．．．．．．．．．．．124

## STEATITE UHF SOCKET 122－101

7－pin wafer socket with base shield，retainer spring，provision for mounting mica capacitors on socket for short leads．Small grid coils may be mounted on terminal ends． 4 mtg ．holes $2.312^{\prime \prime}$ bet．centers．For tubes 826，829，832，
13N14159－Shipping Weight $1 / 2$ Lb．．．．．．．．．．．．．． 7.76

## 122．237 SOCKET FOR 813 \＆HK257 TUBES

Low loss steatite socket excellent for use at high and ultra high frequencles．Cadmium plated contacts reinforced with recessed cadmium plated steel springs． 1 7／8＂mounting centers．
13N14158－Size： $25 / 8^{\circ}$ S quare．Each．．．．．．．．．．．．．．．．．．．．．．．．．．．． 5 5
LOW－ABSORPTION BASE SOCKETS
Ceramic base with cadmium－plated heavy phosphor－bronze contacts．Double fila－ ment springs；hadvily nickeled brass shells．Very low losses．


13N14160－UX 4－prong Base Socket，type 123－210．．．．．．．．．88\％ 13N14161－50－watt Base Socket，type 123－211．．．．
 Glant 5－prong Type 123－216，for 803，RK 28，etc．
13N14157．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1.09 1.76 122－275 STEATITEINSULATED SOCKET For Elmac type 4－125A and 4－250A tubes． Contacts cadmium－plated，reinforced with cadmium－plated springs．Metal parts counter－ sunk：mounting holes－bossed for panel mount－
 ing． 5 prong， 22 square，with 32 sin mounting holes on $21 / 4$ centers．Ideal for high frequencies， and high－temperature operation．
13N14156－Each．．
${ }^{108}$

## 122－247 STEATITE WAFER SOCKET

7 －pin socket for 829，826，etc．Alum．base shield． 13N13187－Each．

MIDGET WAFER SOCKETS
Laminated Bakelite．Heavily plated，self－ aligning，onepiece rugged，floating con－ facts． $1 \frac{1}{2}$＂mig．centers．
13N13114－4 prongs
3N1 13 N13125－7，large 3N13121－6 prongs 13N13127－8，octal

Your cost．．．．． 10 for 54 t．．．．．Each．．．．．．．．．． 6 ．


MINIATURE WAFER for compact glass tubes（3／8＂dia， meter），7－pin type．Mounting centers are 7／8＂apart．
13N13097．．．．．．．．．．．．．．．．．．．．．．．．．．．8\＆ 10 for．．．

## PLUGS-CONNECTORS-TERMINAL STRIPS

AMPHENOL MINIATURE SHIELDED CONNECTORS


Fig. A. Shielded miniature connectors. Molded bakelite in cadmium plated brass shells. For cables up to $1 / 4^{*}$. Shield can be soldered to shell where shielded cable is used. $11 / 10^{2}$ dia.; $1^{3}, 66^{"} \mathrm{~L}$. Fig. B. Shielded miniature chassis receptacles and plugs for use with shielded miniature connectors. Mount in $7 / 8^{*}$ dia. hole on $11 / 4^{\prime \prime}$ centers.

Miniature Connectors Fig. (A)

| Male | Type | Female | Type No. | Cont | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }_{1}^{13 N N 13335}$ | 91.MPM-3L | $13 N 13337$ 13 N 1339 | 91-MPF-3L | ${ }_{4}^{3}$ | ${ }_{24 \mathrm{c}}^{21 \mathrm{c}}$ |
| ${ }_{13 N 13338}$ | 91.MPM-6L | 13N13340 | 91-MPF-6L | ${ }_{6}^{4}$ | ${ }_{26 \mathrm{c}}^{24}$ |

## Shielded Sockets Fig. (B)

| Female | Type No. | Male | Type No. | Co | Fach |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 13N12704 | 78.PCG-3F | 13N12696 | 86-PCG-3M |  |  |
| 13N12705 $13 N 12707$ | 78.PCG-4F | 13N12697 | 86-PCG-4M | ${ }_{6}^{4}$ |  |

## MINIATURE PLUGS AND SOCKETS

Interchangeable with miniature type connectors. Sockets have push-on mounting rings: Excellent for speaker connections


| Sockets | Type No. | Pluqs | Type No. | Contacts | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 13N11599 | 78-S3S | 13N12708 | 71-3S | 3 | 9 c |
| 13N12701 | 78-S4S | 13N12709 | $71-4 \mathrm{~S}$ | 4 | 9 c |
| 13N11542 | 78-S6S | 13N12711 | 71-6S | 6 | 12c |

## CABLE CONNECTORS

Shielded cap, rubber grommet end opening. Consists of " S " type tube sockets and "CP" plugs

| $\cdots$ | Cont. | Each |
| :--- | :--- | :---: | :---: |
| No. | Con |  |
| -4 | 4 | $18 c$ |
| -5 | 5 | $18 c$ |
| -6 | 6 | $18 c$ |
| $-7 S$ | $7 S$ | $18 c$ |
| -8 | 8 Oct. | $21 c$ |
| -9 | 9 | $23 c$ |
| -11 | 11 | $28 c$ |

Amphenol Type 79-CC4. Cable-clamp used with above connectors to relieve strain on soldered connections. 13 N12712.

## AMPHENOL RECEPTACLES AND PLUGS



Molded black bakelite insulation. 2-pole receptacles with one elongated hole. May be used with either standard or polartzed type plugs. Underwriters Laboratory ap proved. Ratings: 15A-125V sions: (A) Holes-1.172*: (B) Mounting Centers-1 $1 / 2^{\circ}$ to $17 / 8^{\circ}$ : (C) Hole-l3/8", Mounting Centers $13 / 4$ ".

Retainer Ring Type (A)

| Stock No. | Type No. | Pole | Type | Each |
| :---: | :---: | :---: | :---: | :---: |
| 13N11502 | $61 . \mathrm{F}$ | 2 | Receptacle | 18 c |
| 13N11503 | $61 . \mathrm{M}$ | 2 | Standard plug | 18 c |
| 13N11624 | 61-MP | 2 | Polarized plug | 18 c |
| 13N11625 | 60-F | 3 | Receptacle | $25 c$ |
| 13N11626 | 60-M | 3 | Polarized plug | 25 c |
| With Plate (B) |  |  |  |  |
| 13N11500 | 61.F1 | 2 | Receptacle | 20c |
| 13N11501 | $61-\mathrm{Ml}$ | 2 | Standard plug | 20c |
| 13N11627 | 61-MPl | 2 | Polarized plug | 20 c |
| 13N11640 | 60-F1 | 3 | Receptacle | 27c |
| 13N11641 | $60-\mathrm{Ml}$ | 3 | Polarized plug | 25 c |
| Flush Type (C) |  |  |  |  |
| 13N11504 | 61.F10 | 2 | Receptacle | 28 c |
| 13N11505 | 61-M10 |  | Standard plug | 28 c |
| 13N11635 | 61 MP10 |  | Polarized plug | 28 c |
| Shielded Cable Connectors (D) |  |  |  |  |
| 13N11546 | $61 . F 11$ | 2 | Receptacle | 32c |
| 13N11545 | 61-M11 | 2 | Standard plug | 32 c |
| 13N11647 | $61-\mathrm{MPl1}$ | 2 | Polarized plug | 32 c |
| 13N11648 | 60-F11 | 3 | Receptacle | 39c |
| 13N11649 | 60-M11 | 3 | Polarized plua | 39 c |

## TERMINAL STRIPS

Superior quality bakelite terminal strips. Solder
ugs mounted on 1/10" thick insulation. Available

with 2, 3,4 or 6 solder terminals. Single 6-32 mounting hole.

| Stock No. | Term. | Ea. | 10 for | Stock No. | Term. | Ea. | 10 for |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $13 N 13145$ | 2 | $6 c$ | $54 c$ | $\frac{13 N 13112}{13}$ | 4 | $11 c$ | .99 |
| $13 N 13123$ | 3 | $9 c$ | 81c | $13 N 13113$ | 6 | $16 c$ | 1.44 |



JONES PLUGS, SOCKETS
Multiple contact - " 400 " series heavy duty (25 ampere) and " 300 " series standard duty (5 ampere) sizes. Cable type have clamps. Chassis type have at ends, standard type at sides.


Plugs Fig. (A)

| Standard Duty |  |  | Heavy Duty |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Contacts | Stock No. | Type No. | Cost Each | Stock No. | Type No. | Cost Each |
| 2 | 13N12460 | P-302-CCT | 31 c | 13N12400 | P-402-CCT | . 52 |
| 3 | 13N12418 | P-303-CCT | 34 c |  |  |  |
| 4 | 13N12461 | P-304-CCT | 36 c | 13N12401 | P-404-CCT | 64 |
| 6 | 13N12462 | P-306-CCT | 40 c | 13N12402 | P-406-CCT | 74 |
| 8 | 13N12463 | P-308-CCT | 44 c | 13N12403 | P-408-CCT | . 85 |
| 10 | 13N12464 | P-310-CCT | 49 c | 13N12404 | P-4 10.CCT | 96 |
| 12 | 13N12465 | P-312-CCT | 54 c | 13N12405 | P-412-CCT | 1.08 |

## Sockets Fig. (B)

| 12 | 13 | S-302-CCT |  | 13N12412 | S-402-CCT | . 56 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 13N12419 |  | ${ }^{35} \mathrm{C}$ |  |  |  |
|  | 13N12467 | S-304-C | 37e | 13N12413 | S-40 | 1 |
|  | 13N12468 | S.306-CC | 42 c | 13N12414 |  | 16 |
|  | 13N12469 | S.3 | 49 | 13N124 |  | 1 |
|  | 13N12470 |  | 55 c 62 c | 13N1 |  | 6 |
| Chassis Type Plug (C) |  |  |  |  |  |  |
|  | 13N12472 | P.302-AB | 14 c | 13N124 | P.402 |  |
| 3 | 13N1242 |  |  |  |  |  |
| 4 | 13N12473 | P-30 | 19 c | 13N12427 | P-404-AB | 40 c |
|  | 13N12474 | P-306 | 23 c | 13N124 |  |  |
|  | 13N12475 | P-308-A | 26c | 13N12429 | P-40 |  |
| 10 | 13N12476 | P-310-A | 30 c | 13N12430 | P. 41 | c |
| 12 | 13N1247 | P.312.AB | 34c | 13N12431 |  |  |
| Chassis Type Socket (D) |  |  |  |  |  |  |
|  | 13N12 | S. | 15c | 13N1 | S-402-AB |  |
| 3 | 13 N 12421 |  |  |  |  |  |
| 4 | 13N12479 |  | 20 c | 13N12407 | S-40 | 49 c |
| 6 | 13 N 12480 | S-306-AB | 24. | 13N12408 | S-406 |  |
|  | 13N12481 | S-308-AB | 30 c | 13N12409 | S-408-AB | 71 c |
| 10 | 13N12482 | S.310-AB | 36 c | 13N12410 | S-4 10-AB | 82 c |
| 12 | 13 N12483 | S-312-AB | 42 c | 13N12411 | S-412-AB |  |

## JONES HEAVY BAKELITE STRIPS

Type 140: "/8" wide, ${ }^{13} / \mathrm{mg}$ " high. Terminals are mounted on $4-4 \operatorname{cij}$ 3/8 centers, $1 / 4$ metal to metal spacing over bakelite body. Type 141 : $1 / 8{ }^{\circ}$ wide, $1 / 2$ high. Terminals mounted on $7 / 6^{\prime \prime}$ centers with $3 / 8^{\circ}$ metal to metal spacing over bakelite. Type 142: 15/6" wide, 5/8 "high. Terminals mounted on 9 价" centers, $3 / 8$ " metal to metal spacing over bakelite.

| Term. | No. 140 |  | No. 141 |  | No. 142 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Stock No. | Each | Stock No. | Each | Stock No. | Eac |
| 2 | 13N12527 | 14 c | 13N12539 | 18 c | 13N12714 | 22 |
| 3 | 13N12528 | 20 c | 13N12540 | 24 c | 13N12715 | . 31 |
| 4 | 13N12529 | 25c | 13N12541 | 31 c | 13N12716 | . 39 |
| 5 | 13N12530 | 30c | 13N12542 | 38 c | 13N12717 | . 46 |
| 6 | 13N12531 | 34 c | 13N12543 | 44 c | 13N12718 | . 54 |
| 7 | 13N12532 | 40c | 13N12544 | 52 c | 13N12719 | . 63 |
| 8 | 13N12533 | 45 c | 13N12545 | 58 c | 13N12720 | . 71 |
| 9 | 13N12534 | 51 c | 13N12546 | 65c | 13N12721 | . 78 |
| 10 | 13N12535 | 56 c | 13N12547 | 72 c | 13N12722 | . 87 |
| 11 | 13N12536 | 61 c | 13N12548 | 78 c | 13N12723 | . 95 |
| 12 | 13 N12537 | 66c | 13N12549 | 84 c | 13N12724 | 1.03 |

BAKELITE MOUNTING STRIP
Mounts parts on chassis.


| Stock No. | Lugs | Each | 10 for | Stock No. | Lugs | Each | 10 for |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $13 N 13124$ | 1 | $2 c$ | $14 c$ | $13 N 13135$ | 4 | $4 c$ | $31 c$ |
| $13 N 13133$ | 2 | $3 c$ | $16 c$ | $13 N 13137$ | 6 | $5 c$ | $45 c$ |
| $13 N 13134$ | 3 | $3 c$ | $19 c$ |  |  |  |  |

SCREW COLLAR TERMINALS


## PHONE PLUGS-CONNECTORS

MALLORY JUNIOR JACKS


Compact, extend only $13,10^{*}$ behind the panel. Equipped with heavily-plated springs.
No. 701 -Open Circuit
13N6450-Each
$32 c$
13N6451-No. 7 O 2 2 . "Circuit clos. 13N6449-No. 702A. Two circuit. 13N6435-No. 702 B . Three circuit microphone jack.
Each, any type 13 N 6452 No. 703 C 13N6452-No. 703. Single cir-13N6459-No 703A
13N6459-No. 703 A. cir. reverse. 13N6466-No. 703B. 3 circuit
 Each, any type.
13N6453-No. 704. Interstage.
13N6478-No. 704A. Two circuil 13N6478-No. 704A. Two circuit filament control.
$59 c$
Each. 13 N6479-No. 70. Two-circuit filament lighting.
Each 68c 13N6448-No. 70̈6. interstage, filament control.

73c

## MALLORY MIDGET JACKS



Extremely compact. Mount in者 "hole. Type A.I "Infant" jack is not illustrated.

| No. | Part | Type |  |
| :---: | :---: | :---: | :---: |
| 13N6182 | A. 1 | Open circuit | 18c |
| 13N6183 | A. 2 | Cir. closing | c |
| 13N6184 | A-2A | 2 |  |

## LONG FRAME JACKS


Extend $31 / 8$ " behind panel. Have pure silver contacts as well as pure silver contacts os well as oakelite separators. No. 1 Open Circuit.

38c
13N6400-Each. CBi...... Closing. 13N6401-No. 2 Circuit Closing. 13N6402-No. 2A. Two Circuit
long frame jack.
Either type, Each.......... 47 c

## SIGNAL CORPS TYPE JACKS <br> 

Phone Jack: Type SClA. Like Sig. Corps type JK-34A. Open ircuit. Takes Mallory 75; W. E. 77A. 47B; Sig. Corps No. PL-47, PL-48, PL-55, PL-148, PL-155.
13N6300-Each..........32c Mike Jack: Type SCA2B. Three circuit. Like Sig. Corps No. JK-33A. Takes W. E. 109; Sig. Corps No. PL-46, PL-68, PL-168.
13N6301-Each.
$38 c$
FLAT PLUG


Ulira-compact type for use where space is limited. Molded bkit. body. 11 ". dia.. $1 / 4$ " thick. 38 c

MALLORY PLUGS, JACKS

## 

No. 75. Two way. Bakelite shell. Tie cord anchor included. 13N6295-Each
.38 c No. 75N. As above, but nickel shell, With tie cord anchor
13N6293-Each...... 13N6293-Each....... with built in
No. 75A. As above, cable clamp included.
13N6346-E.ach.... 97c No. 100. 2-Way Extension jack Is equipped with fibre shell.
13N6348-Each........... 76c
No. 100N. As above, but comes with nickel shell.
13N6342-Each
No 100A. As above but with nickel shell and cable clamp.
13N6349-Each.

Microphone Plugs
No. 76. 3-way mike plug. Bakeite shell.
13N6296-Each....... .. 59c No. 76A. Same, but with nickel shell.
13N6347-Each..
1.15

MIDGET JACKS


Fine grade bakelite insulation and tempered nickel silver springs: Mounts in 3 有" dia. hole in panels up to 3 , ro $^{\text {" thick. With }}$
13N6548-Closed cir. jack . 16c 13N6549-Open cir. jack 13c mproved short jack. Fits standard 3-circull mike plug. .24c
13N6550-Each.......

POPULAR PHONE PLUGS


For 1 or 2 phone or speaker cords. Mclded bakelite shell $23 / 4$ " ong, $3 / 4$ diameter. With screw connections.
$\left.\begin{array}{l}\text { 13N14974-Black. Ea... } \\ \text { 13N14971-Red. Ea... }\end{array}\right\} 27$ c 10 for 2.43

## Metal Shell Type

Same with nickeled brass shell. Dimensions: $33 / 6 \times 3 / 4$
$49 c$
13N14970-Each...
4.41

## "Stubby" Metal Shell

As above but with short metal shell. $21 / 4^{*}$ overall. 13N14959-Each.
$42 c$
10 for.
.. 3.15

## Midget Bakelite Plug

Bakelite shell. $21 / 4^{\prime \prime} x$ "/4" dia. Solder lug connections.
13N14960-Black. Ea... \} 2 /c


## Midget Metal Shell

Same with metal shell. 21/4" overall $x^{\circ}$ " " diameter. 3? 13N1495
10 for............................ . . 3.40

CANNON TYPE XL CONNECTORS


Designed for use on all types of mikes, PA systems, standard radio equipment and for electrical installations requiring up to 3 wires with 15 amps. capacity. Patented latchlock device permits easy and positive insertion and removal. * Zinc shells- 1 steel shell

STRAIGHT PLUGS

| Stock No. | Type | Illust. | Description | Each |
| :---: | :---: | :---: | :---: | :---: |
| 13N13321 | XL-3-12* | 1 | Male (pin insert) | . 71 |
| 13N13322 | XL-3-11* | 1 | Female (socket insert) | .73 |
| CLAMP TYPE PLUGS |  |  |  |  |
| 13N13345 | XL-3-1 2S | 4 | Male (pin insert) | 1.62 |
| 13N13346 | XL-3-11S | 4 | Female (socket insert) | 1.65 |

## WAIL RECEPTACLE

| 13N13323 | XL-3.14** | 2 | Male (pín insert) <br> Female (sockel insert) | .59 |
| :--- | :--- | :--- | :--- | :--- |

## PANEL RECEPTACLE

| 13N13343 | XI.-3.! $4 \mathrm{~N}^{*}$ | 3 | Male (pin insert) | .68 |
| :--- | :--- | :--- | :--- | :--- |
| 13N13344 | XL-3-13N* | 3 | Female (socket insert) | .73 |

## ADAPTER RECEPTACLES 4 ( 8 ones for use with Cannon plugs.

Adapts microphones for use with Cannon plugs.

| 13N13347 | XL-3-50* | For Universal D20A mike, etc. | .62 |
| :--- | :--- | :--- | :--- |
| 13N13348 | XL-3.50T* | For Turner 211 mike, etc. | .68 |
| 13N13349 | XL-3-50N* | For Shure, Astatic, E.V, etc. | .76 |

## AMPHENOL 83 SERIES UHF CONNECTORS

UHF low-loss single contact connectors and adaptors for use with RG type cables. Small and large sizes for coax and twinax cables. Constructed of die cast zinc and machined brass shells, silver plated. Made for all practical applications.
2-pc. straight plug with iow-loss mica-filled insert.

> 13N11550-Straight Plug 83-1SP
$82 c$


Receptacle chassis or box type. Low-loss mica-filled insert.
1.21

Angle plug adapter. Polystyrene insert, pin and sockel.
1.46


Junction for use with straight plug above. Double contact.
contact. 13 N11554-Junction 83-1 J.
1.14


Feed Thru Connector, similar in appearance to Junction above but



Hood for RG cables $8 / \mathrm{U}, 10 / \mathrm{U}, 11 / \mathrm{U}, 22 / \mathrm{U}, 63 / \mathrm{U}$, 65/U. 13 N11556-Hood 83-1H.
$14 c$



WALSCO MINIATURE PLUG AND JACK
Two-Conductor precision army type. Needs no screws; molded plastic case cements together. Ideal for hearing aids, speaker exlensions, etc. Plug only (type PL-291). Each 13 Ne 13N14962-Jack only (type JK-48). Each 4 AE


## PL-54, PL-55, PL-68 PLUGS

Meet exacting government require. ments. Will fit all standard jacks. PL54-Short 2-way plug. 13N14965-Each........ 75c PL55-Long 2-way plug. 13N14966-Each.............. 39 C PL68-3-way Mike Plug. ..... 25 C

# BINDING POSTS-PHONE TIPS=PLUGS 

| PHONO TIP PLUG AND JACK |
| :--- | :--- | :--- |
| Single prong shielded plug used |
| extensively for mike or phono |
| pickup, other connections. Phono |



EBY BINDING POSTS NON-REMOVABLE TOPS
Specially designed for use on metal chassis. Post has hole for wire or phone tip. unior
long. 13 Ni 0 B -Each Ensig
long.
13 Ni 13NGi3083-Each Commander Post. Has 8-32 23 c $7 / / 2$ long.
13 N13084-Each......... 29 e

## EBY TWIN POST UNITS

Two binding posts molded into a heavy Bakelite base. 13N13062.
$42 c$


INSULATED POSTS
Red or Black composition lop. Plated ferrule. Specify color. 13 N13163-Each. . T1e

PLAIN TIP JACKS
For test equipment. Powerul spring. $1 / 4^{\prime \prime}$ mounting hole. 3 N12918-Each 6 0 for.................. . 54 c

## ALL INSULATED

 TIP JACKCountersunk $1 / 2^{\prime \prime} \mathrm{d}$. head. $3 / 4$ " overall. Fits 3 . " hole. Bronze spring.
13N12934-Red.
13N12935-Black
15c


SPRING CLAMP BINDING POSTS
Insulated top. Spring clamp holds wire. Overall length 1 .

13N13046-Each
$15 c$


## BINDING POST

WITH
BANANA JACK TOP
Hole in top takes banana slug. Hole in stem for Specify color. 13 Sc 10 for. 135


Plug is $11 / 8^{\prime \prime}$ long. Jack is $5 /{ }^{\prime \prime}$ long and fits $1 / 4^{"}$ hole in panels
up to 13 N12919-Plug. Each.... $7 \mathbf{C}$ 10 tor ..... 60 c 100 for ..... 5.40
13N12923-Jack. Each. 4C 10 for.... 35 c 100 for ...... 3.25

## CINCH STAND-OFF TERMINALS

insulated; for TV and other high voltage electronic equipment. Mica-filled low loss bakelite. Mounts in s/s" diameter hole. Provides excellent insulation for passing HV wires through chassis.

| Stock No. | Type | Length | Each |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { 13N12965 } \\ & \text { 13N12966 } \end{aligned}$ | $\begin{aligned} & 16 S \\ & 16 \mathrm{~L} \end{aligned}$ |  | 446 |



ALLIGATOR CLIPS

## —o

Powerful grip. $2^{2}$ clip is $1 / 4$ " wide,
$14 c$
13N13036-Each.
1.26

## ALLIGATOR PHONE TIP JACK



Alligator clip fitted with standard phone tip jack. Fits test prods equipped with phone tip ends. RedorBlack-specifycolor 13N12880-Each. $25 c$
. 2.24
$23 / 4^{\circ}$ clip is 3 , $10^{"}$ wide. Steel nonrusting finish.

| No. | Length | Each |  |
| :---: | :---: | :---: | :---: |
| N12955* |  | Sc |  |
| 13N129 | $23 / 4$ | 12c | 1.08 |

*End takes banana plug. Copper with bronze spring. For RF work. Set screw 2 " long. 9 C 10 for.

## INSULATED BANANA JACKS AND PLUGS



Plug has set screw for solderless wire connection. Jack fits $1 / 4$ " hole and panels up to $3 /$ a $^{\text {" thick. }}$ Red or Black insulation on bott.. Specify color desired. - 12c
13N12915-Plug. Each... 10 for.... 1.08 (100 for.... 9.70 13N12916-Jack. Each.....9C 10 for.... 81 c 100 for..... 7.60

## BERYLLIUM BANANA PLUGS <br> 

Signal Corps approved. Used on all government equipment. Made f Beryllium copper. Rivet shank of plug can be turned over without splitting. Shank $1 / 4$ long. out splitting. Shank $1 / 4$ diam. Overall size: $13 / 16$.
13N13183-Each...........9c 13N13184-Overall size: $11 / \mathrm{e}$ "
Same but with 6.32 threaded Same but with 6-32 threaded
stud $3 / 8$ "long.
Each.............................

TIP JACKS


Mounted on ${ }^{3} / 3_{3}$ " Bakelite. Contact prings grip cord tips securely. Double jack type.

9 C 0 for.
Same as above. Iriple jack.

MOLDED BAKELITE INSULATED TIP JACKS
Large diameter molded Bakelite heads take all phone tips. Phosphor bronze springs. With insulating washer.
$12 c$


COMBINATION JACK
New type, takes both phono tips and banana plugs. Fully insulated, with insulated wosher.
color desired.
10 for

INSULATED TIP JACKS
Have new type springs which provide sure grip contact. In Red or Black. Specify color. 10 for.


## AMPHENOL PHONE TIP JACKS

Type 78-1P. Bakelite body. Takes standard plain or solderless phone tips. Mounts securely by means of snap ring. Requi-es 3/8" hole. Red or Black-specify color desired 13N12765-Each.
$5 c$

SOLDERLESS INSULATED PHONE TIP PLUGS


Solderless type: fit all standard tip jacks. Used on test leads. In Red or Black
13N12973-2 * long ... .
13N12974-1 long Iong .... \} 10 c
Either type, 10 for . .......... . . 90c


INSULATED ALLIGATOR CLIPS

| Eunco |  |  |  |
| :---: | :---: | :---: | :---: |
| Plated metal grips with insulated handles that take banana plugs. Handles in Red or Black; specify Steel non-rusting finish. |  |  |  |
| No. | Length | Ea. | 10 for |
| 13N12911 | $21 / 4 "$ | 8 c | 78 c |
| 13N12909 | $31 / 2$ " | 15 c | 1.35 |
| 13N12949* | . | 12 c | 98 |
| *Copper-with bronze spring. |  |  |  |
| STANDARD PHONE TIPS |  |  |  |
|  |  |  |  |
| Heavily plated. Takes up to No. 18 wire. 1" long. <br> 13N14881-10 for. |  |  |  |
|  |  |  |  |

PHONO NEEDLE PLUG

Insulated sleeve fits banann plug, and makes contact with prod. Tip holds replaceable phono Black.
13N12917-Each.
12c

PHONE TIP AND LUG
ADAPTERS FOR PRODS


For use with any banana plug. Fits tip jacks or binding posts. Red or Black
$\left.\begin{array}{l}\text { Red } 12913 \text {-Phone tip end } \\ \text { 13N12914-Spade lug end }\end{array}\right\}$ Oc


## PLAIN SOLDERLESS

PHONE TIP PLUGS

## (1) $=\square$

All metal tip plug for tip jack use. Solderless connection. 1 s/8" long. 13N12943-10 for 54c As above but $11 / 8$ long. 13N12944-10 for 54c Each.

## AMPHENOL BAKELITE JACKS AND PLUGS



Mount in $3 / 8$ " hole with retain 9 r ring included. Contacts recessed $1 / 8$ ". Body may be used as a feed-taru. State choice, Red or Black.

| JACKS |  |  |  | PLUGS |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type | For Plug | Each | Stock No. | Type | For Juck | Each |
| 13N12920 | 78.15 | $3 /{ }^{2}$ | 5 c | 13N12900 | 71-1S | 351" | $31 / 2 \mathrm{c}$ |
| 13N12921 | 78-1L | 5\%" | $5 c$ | 13N12901 | 71.11 |  | 312 c |
| 13N12922 | 78.1M | 1/8" | Sc | 13N12903 | 71-1M | 1,8* | $31 / 2 \mathrm{c}$ |

## CLIPS=KNOBS



MUELLER CLIPS AND RUBBER INSULATORS
Spring-actuated clips Type 27 and 27C are laboratory types with mesh teeth on three sides, others have teeth in front only. Insulators listed opposite proper size clips. Clips marked + and - ( 5 each, 10 to a box). Insulators come 5 red and 5 black.

|  | Clips |  | Insulators |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type\| Sizel | Farh | 10 For | No. | Type | liach | 10 For |
| 17N16029* | 45 11,21 | 6 c | 44 | 17Ni6031 | 47 | 11 c | . 73 |
| 17N16030 $\dagger$ | 450: $11{ }^{\prime \prime}$ | 8 c | . 69 | 17N16631 | 47 | 11. | . 73 |
| 17N16032* | $48132^{\prime \prime}$ | 6 c | . 49 | 17N16033 | 49 | 11e | . 73 |
| 17N16034* | $24.43^{\prime \prime}$ | 11 c | . 93 | 17N16035 | 21 | 23c | 1.57 |
| 17N16026* | 27 21/2" | 8 c | . 68 | 17N16028 | 29 | 17c | 1.18 |
| 17N16027 $\dagger$ | $22^{( }{ }^{\prime} 21 / 2^{\prime \prime}$ | 1.4 c | 1.22 | 17N16028 | 29 | 17c | 1.18 |
| 17N16018† | $21.14^{\prime \prime}$ | 16 c | 1.47 | 17N16019 | 23 | 32 c | 2.25 |

- Cadmium plated steel. $\ddagger$ Lead coated steel. † Solid copper.

No. 85T CROCODILE TIP CLIP
For connecting Bridges, Voltmeters, or anything having binding posts with non-removable heads.
17N16023-12c each
10 for 108 No 8. As above, less phone tip. 17N16020-06c each 10 for 49c Plastic insulator for either of the above No. 87 . for $\mathbf{6 5 c}$
17N16021-10c each....................... for

MUELLER WEE-PEE-WEE CLIP
कीवित
Non-ferrous R.F. Clin. Will not heat in high frequency circuits. Ideal for tapping coils. Length 111 if ${ }^{\circ}$. Completely insulated No. 88 -98).
17N16022-10 for 1.47
Each 16e


MUELLER "TWIN-CLIP"
Special type clip-has jaws on both ends. Makes a quick splice, reconnects a broken lead, etc. Can be used lor holding or racking parts
articles for display. $17 N 16025-10$ for 69 c .

Each 8 c


## FAHNESTOCK CLIPS

Grips wire with right pressure for good electrical contact without injury to wire. All are nickel-plated brass except t which are nickelStock No. $\mid$ Fig. $\mid$ Lgth. Max. Wire $\mid$ Mtg. Hole

| Stock No. | Fig. | Lgth. | Max. Wire | Mtg . Hole | 10 F | r |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 17N14824 | B | 1 " | No. 10 | No. 8 | 8 c | 6.40 |
| 17N14828 | C | 11晌" | No. 10 | No. 8 | 14 c | 9.40 |
| 17N14826 | A | 13/4* | No. 10 | No. 8 | 36 c | 29.00 |
| 17N14823*** | B | 3/4" | No. 14 | No. 6 | 7 c | 5.60 |
| 17N14825** | A | " | No. 14 | No. 6 | 30 c | 24.80 |
| 17N14820 + | D | 15\% | No. 10 | Copper lug | 44 c | 34.20 |
| 17N14821 | F | 3/4" | No. 12 | No. 6-32 | 13 c | 8.50 |

## SCREEN GRID CLIPS



100 For.

## $2 c$ <br> $10 c$ $.15 c$

 where fingers alone could not reach. 18N15584-Shpg. wt. 2 oz.. 18N15594-For 9-pin tubes.BATTERY CLIPS

| Heavily plated steel body.Strong spring. <br> 17N16061-2" long. Each. <br> 17N16062 $\qquad$ Each. $21 / 2$ long 17N16063-37/ long. Each. |
| :---: |

## G-C AMO MINIATURE TUBE PULLER

Designed to prevent tube breakage and burned fingersspeeds servicing of radios using miniature type tubes. Easily removes or inserts miniature tubes such as 6AG5, 50B5, etc. Works on suction and vacuum principle-gets into places

MINIATURE TUBE PIN STRAIGHTENER
Precision constructed steel die. Ouickly straightens and aligns pins on types such as 50B5, 35W4, etc. Can be carried in tool box or fastened to bench. 18N15261-For 7-pin Miniature Tubes


## BAKELITE KNOBS

Molded and polished walnut bakelite knobs for $1 / 4$ " shafts. Al are set screw type except those marked with which are brown push-button knobs; $\dagger$ is knurled hole mitg.; "* have recessed tops.

| No. | Type | bia. | Ea. | 10 |
| :---: | :---: | :---: | :---: | :---: |
| -11N9655 | 1 | $1^{\prime \prime}$ | 8 c | 72 c |
| 11N9693 | $2 \dagger$ | 7/8" | 4 c | 33c |
| 11N9736 | 3 | 34" | 5 c | 44 c |
| 11 N9737 | 3 | $7 /{ }^{\prime \prime}$ | 6 c | 54c |
| 11N9692 | 4 | $3_{1 / 1}{ }^{\prime \prime}$ | 5 c | 44 c |
| 11N9694 | 5* | $7{ }^{17}$ | 3 c | 27 c |
| 11N9695 | 5** | 7/18 ${ }^{10}$ | 3 c | 27 c |
| 11 N9661 | $6^{*}$ | 1364" | 4 c | 33 c |
| 11N9696 | $\mathrm{fi}^{* *}$ | 31/6" ${ }^{1}$ | 4 e | 33 c |
| 11 N9657 | 7 | $3{ }^{3}{ }^{\text {4, }}$ | 7 c | 63 c |
| 11N9660 | 8 | $13 / 10^{*}$ | 7 c | 63c |

Pointer and Lever Knobs Polished Black bakelite. All have filled pointers except " $M$ ' has ridged top). For $1 / 4$ shaits.

| No. | l,gth. Ht. | T'ype | Ea. | 0 |
| :---: | :---: | :---: | :---: | :---: |
| 11N13027 | $2^{\prime \prime} 5{ }^{\prime \prime}$ | 9 | 9 c | 72 c |
| 11N13028 | $11 /{ }^{\prime \prime} 5{ }^{\prime \prime}$ | 9 | 6 c | 54. |
| 11N13053 | 11/4"910" | 10 | 5 c | 44c |
| 11N13024* |  | *10 | 7 c | 63c |
| 11 N9650 | $15.819 \%$ | 11 | 9 c | 81 |
| 11 N9651 | $21 / 2^{\prime \prime} 5 / 9^{\prime \prime}$ | 11 | 11 e |  |

MIDGET KNOBS
12. With and without the pointer illustrated. For small sets. "1/6" dia. Set screw. 1/4 " shaft.

| Color | With Pointer | Without Pointer | Fa. | 10 <br> For |
| :---: | :---: | :---: | :---: | :---: |
| Walnut | 11 N9676 | 11 N9680 | 6 c | 54 c |
| Ivory | $11 N 9677$ | 11 N 9681 | 6 c | 54 e |
| Red | 11 N9678 | 11 N9682 | 6 c | 54 c |
| Black | 11N9679 | 11N9683 | 6 c | 54 c |

## KIT OF 50 KNOBS

13. Assorted sizes and colors in new, modern designs as used on the latest post-war sets. Al standard shaft size openings. Four each of 12 different designs, two each of one design. Kit con sists of 12 set screw type, 18
knurled shaft type and 20 flatted shaft spring type. ......2. 48

## G.C. KNOB PULLER

14. Knobs that are hard to grip can be easily removed with this
knob puller. Simply slip the G-C puller behind the knob and pull puller behind the knob and pull and the knob.

24c

## TV KNOBS FOR RCA 630TS CHASSIS

Exact replacements for the RCA 630TS chassis

| Stock No. | RCA Type | Description | Each |
| :---: | :---: | :---: | :---: |
| 11 N9669 | 71598 | Fscutcheon Dial for Channel Sel. | 1.00 |
| 11 N9670 | 71534 | Station Selector.... | . 32 |
| 11N9671 | 71535 | Picture, Brightness or Ver. Hol | . 21 |
| 11N9672 | 71537 | Dummy Brightness...... | 18 |
| 11N9673 | 71533 | Fine Tuning. | . 24 |
| 11N9674 | 71536 | Horiz. Hold or Volume Control | . 18 |



TRANSMITTER KNOBS FOR $1 / 4$ IN. SHAFTS

| No. | Type | Size | Ea. | $\begin{gathered} 10 \\ \text { For } \end{gathered}$ | No. | Type | Size | Ea. | $\begin{aligned} & 10 \\ & \text { For } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11N13022 | 1 | $11 / 2^{\prime \prime} \mathrm{d}$. | 30c | \$2.70 | 11N13005 | 3 | $18 / 8{ }^{\prime \prime} \mathrm{d}$. | 20 c | \$1.80 |
| 11N13018 | 1 | $13 / 8{ }^{\prime \prime} \mathrm{d}$. | 12c | 1.08 | 11 N13013 | 3 | $18 / 8$ "d. | 21c | 1.89 |
| 11N13004 | 1 | $13 / 4{ }^{\prime \prime} \mathrm{d}$. | 31c | 2.79 | 11N13012 | 3 | ${ }^{23} 6^{\prime \prime} \mathrm{d}$ d. | 26 c | 2.34 |
| 11N13011 | 1 | $21 / 16{ }^{\prime \prime} \mathrm{d}$. | 32c | 2.88 | 11 N9885 | 4 | $11 /{ }^{\prime \prime}{ }^{\prime \prime} \mathrm{d}$. | 11 e | . 99 |
| 11N13010 | 1 | $3^{\prime \prime} \mathrm{d}$ d. | 41 c | 3.69 | IIN9886 | 4 | $11 / 2 \mathrm{md}$ d. | 12 c <br> 19 c | 1.08 |
| 11 N9896 | 2 | $11 / 2{ }^{\prime \prime} \mathrm{d}$ d | 44e | 1.96 | 11 N13008 | 5 | $15 / 8{ }^{\text {che d }}$. | 24c | 2.16 |
| 11N13014 | 3 | $11 / 8^{\prime \prime} \mathrm{d}$. | 13 c | 1.17 | 11N13009 | 5 | $2 \% / 8 \mathrm{~d}$. | 32 c | 2.88 |

G-C AUTO RADIO KNOBS


Fig. 1. ${ }^{13} /$ 体 $^{\prime \prime}$ dia., 7/8" high. For either $1 / 4$ " or $3 / 6_{0}$ shafts; bushing included.
Pearl Gray
11N9667-io for 1.62. Ea... 18c Maroon
11N9668-10 for 1.62. Ea... 18c


Fig. 2. Chrome plated knob. Set screw mounting 1/4 Shaft.
11N9665-10 for 1.62. Ea... 18c 11N9866-10 for 1.62. Ea... 18 c


## KIT OF 100 KNOB SPRINGS

A handy kit for every serviceman. 12 different type knob springs and wedges to take care of all replacements. Made of tempered spring steel. 11 p9675-Kit of 100 Springs

DELUXE HARDWARE ASSORTMENT Our most popular hardware assortment conveniently boxed. Contains over 1000 pieces of the most frequently used hardware: assorted machine scr
ets, etc. ets, etc.
$17 \mathrm{~N} 14831-\mathrm{Wt} .4 \mathrm{lbs}$
$97 c$
PICKUP CARTRIDGE MTG. SCREWS
Contains smallmachine and self-tap-
 ping screws of various lengths, sizes, styles for fastoningcartridge to pickup arm. Pkg. Contains approx. 30 screws, 17N15483 ....24e
RADIO HARDWARE IN JARS


Most convenient way to keep your small hardware-glass jars with screw-on caps.
Any jar below..
336
17N14675-Jar only
....6c
Round Head Machine Serews (A)

| No. | Quantity | Size |
| :---: | :---: | :---: |
| 17N14650 | 100 | $4-36 \times 1 / 4$ " long |
| 17N14651 | 100 | 4-36x1/2" long |
| 17N14652 | 75 | 4-36x ${ }^{3 / 4}$ " long |
| 17N14653 | 90 | 6-32x $1 / 4^{\prime \prime}$ ' long |
| 17N14654 | 80 | $6.32 \times 1 / 2^{\prime \prime}$ long |
| 17N14655 | 70 | $6.32 \times 3 / 4{ }^{\text {" }}$ long |
| 17N14656 | 75 | $8-32 x^{3 / 8 "}$ long |
| 17N14657 | 70 | $8-32 \times 1 / 2^{\prime \prime}$ long |
| 17N14658 | 65 | $8-32 \times 3 / 4{ }^{\prime \prime}$ 'long |
| 17N14659 | 60 | 10-32x $1 / 2^{\prime \prime}$ ' long |
| 17N14660 | 50 | 10-32x ${ }^{3 / 4} 4^{\prime \prime}$ long |

P-K Top Screws (C)

| No. | Quantity | Size |
| :---: | :---: | :---: |
| 17N14665 | 50 | No. $4 \times 1 / 2^{\prime \prime}$ " |
| 17N14666 | 50 | No. $6 x 1 / 4^{\prime \prime}$ " |
| 17N14667 | 45 | No. 6x3/9", |
| 17N14668 | 40 | No. $7 \times 1 / 2^{\prime \prime}$, |
| 17N14669 | 35 | No. 10x3/4", |
| 17N14670 | 45 | No. $10 \times 3 /{ }^{\prime \prime}$ |

Hexagon Nuts (B)

| No. | Quantity | Size |
| :---: | :---: | :---: |
| $17 N 14661$ | 110 | $4.36 \times 1 / 4^{\prime \prime}$ |
| $17 N 14662$ | 110 | $6-32 \times 1 / 4^{\prime \prime}$ |
| 17N14663 | 90 | $6.32 \times 5 / 16^{\prime \prime}$ |
| $17 N 14664$ | 90 | $8-32 \times 5 / 16^{\prime \prime}$ |

Washers (D)

| 17N14671 | 150 | No. 6 Plain |
| :--- | :--- | :--- |
| 17N14672 | 150 | No. 8 Plain |
| 17N14673 | 100 | No. 6 Lockwasher |
| 17N14674 | 100 | No. 8 Lockwasher |

## ESCUTCHEON PINS

Fastens any type of escutcheon
or nameplate. $5 / 16^{\prime \prime}$ long. 146
17 N 14811 -Per $100 . \ldots \ldots . . . . . .$.

## RIVET AND EYELET ASST.



Special assortment of 55 pop. ular size rivets and eyelets to asten sockets, etc. 17 N 14840.

BUMPER FEET


Felt, with No. 6 P-K screw for mounting. Felt is permanently clamped into place by metal ring $3 / 4^{\prime \prime}$ in dia
17N14757-Each.
10 For $\qquad$
4 C
35c


CABLE CLAMPS
Heavy gauge steel. No. 6 mounting hole. Plated.
17N14951-1/4"....Gross 90c 4 for 3C 17N14952—1/2"....Gross 1.953 for $5 c$
"1000 PLUS" HARDWARE KIT


Here is a hardware kit to fill the needs of service men and home constructors. 100 and one tiems needed for different jobs every day. Each item is conveniently separated into its own compartment box. Over 1000 assorted pieces are included in the kit. There are 125 assorted lengths of $6-32$; $100,8-32$ and $25,10-32$ machine screws. Also included are 100 each ot $6-32$ and $8-32$ nuts, 100 assorted wood screws, 150 assorted rivets and eyelets, 10 each assorted lugs, flat washers and 100 grommets and fibre washers. 1.49
17 N 14815 -Shpg. wt. $4 \mathrm{lbs} . . . . . . . . . . . . . ~$


1/4" METAL SPACERS


Raise components above chassis, etc. Pass Nos. 4, 6,8 screws.

| Stock No. | Height Inches | $\begin{aligned} & \text { For } \\ & \text { Ten } \end{aligned}$ | $\begin{gathered} \text { Lots of } \\ 100 \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| 17N9868 | $1 / 4$ | 21 c | \$1.89 |
| 17N9869 | 1/2 | 25c | 2.25 |
| 17N9870 | 3/4 | 29 c | 2.01 |
| 17N9871 | 1 | 32 c | 2.88 |

## ASSORTED FIBRE WASHERS

Contains 100 plain and shoulder type to 14 No. 6 . 8,10 screws, and $1 / 4^{\prime \prime}, 3 /{ }^{3}$ and $1 / 2^{\prime \prime}$ holes. 17N14832

36c
ASST. SELF-TAPPING SCREWS


40 mos! often used sizes. No nuts needed-start hola and dive through. 17N1:687. 35c

## RUBBER GROMMET KITS

Kit "A" contains 12 asst. cirommets in 4 sizes: $3 / 16$ $1 / 2$ ". " $B$ " has 30 in same sizes.
17N14794-Asst. "A" 2lc 17N14795-Ass!. "B" 43c


RUBBER GROMMETS
Insulato holes in 1/16" motal panols, chassis, electrical appliances, otc.

| Stock No. | $\begin{aligned} & \text { Fits } \\ & \text { Hole } \end{aligned}$ | Inside Diam. | Per <br> Doz. | $\begin{aligned} & \text { Per } \\ & 100 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 17N14765 | $1 / 4^{\prime \prime}$ | 1/8" | 9 c | 60e |
| 17N14766 | 5/16" | 3/16" | 16 c | 65 c |
| 17N14768 | 7/16 ${ }^{\prime \prime}$ | 5/16" | 20 c | 70 c |
| 17N14769 | $1 / 2^{\prime \prime}$ | 3/8' ${ }^{\prime \prime}$ | 22 c | 75 c |

## RIGHT ANGLE BRACKETS

Made of heavy metal. Width $3 / \mathrm{a}^{\prime \prime}$


17N12925-6-32 17N12928-10-32 17N12927-8-3217N12929-1/4-20 Per 10

316


Plated MACHINE SCREWS
Available in three types for all needs.
6/32 Round Heod Screws

| Stock No. | Length | Gross |
| :---: | :---: | :---: |
| $17 N 11750$ | $3 / 6^{\prime \prime}$ | $39 c$ |
| $17 N 14751$ | $12^{\prime \prime}$ | $42 c$ |
| $17 N 14752$ | $3 / 4^{\prime \prime}$ | $46 c$ |
| $177 N 14753$ | $1^{\prime \prime}$ | $53 c$ |
| $17 N 14754$ | $11 / 4^{\prime \prime}$ | $68 c$ |

8/32 Round Head Screws


6/32 Flat Head Machine Screws

| $17 N 14760$ | $3 / 8^{\prime \prime}$ | $38 c$ |
| :---: | :---: | :---: |
| $17 N 14761$ | $1 / 2^{\prime \prime}$ | 41 c |
| $17 N 14762$ | $3 / 4^{\prime \prime}$ | 46 c |
| $17 N 14763$ | $1^{\prime \prime}$ | 53 c |
| 17 N 14764 | $11 / 4^{\prime \prime}$ | 68 c |


|  | ANTIQUE FINISHED MACHINE SCREWS |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| No. | Size | Lqth. | Doz. | Gr. Lots |
| 17N14680 | 6-32 | $3 / 4^{11}$ | 9 c | 95 c |
| 17N14681 | 6-32 | 1 ' | 10c | \$1.02 |
| 17N14682 | 6-32 | 11/2' | 11 c | 1.18 |

Round Head Wood Serews

| Slock No. | Size | Length | Gross |
| :---: | :---: | :---: | :---: |
| $17 N 14780$ | 4 | $3 / 8^{\prime \prime}$ | 48 c |
| 17 N 14781 | 5 | $32^{\prime \prime}$ | 50 c |
| 17 N 14782 | 5 | $3 / 4^{\prime \prime}$ | 54 c |
| 17 N 14783 | 5 | $1^{\prime \prime}$ | 60 c |

NUTS \& WASHERS—POPULAR SIZES


17N $14804-6 / 32 \times 1 / 4^{\prime \prime}$ hez nuts. Gr. 48 e
17N $14805-8 / 32 \times 1 / 4^{\prime \prime}$ hex nuts, Gr. 17N $14806-6 / 32 \times 5 / 16^{\prime \prime}$ her nuts. Gr. 50 e 17N14803- $10 / 32 x^{3} 3^{\prime \prime}$ her nuts. Gross 60 c 17N $14808-6 / 32 \times 11 / 32^{\prime \prime}$ knurled nits. Fer 100
... 1.10 17N14809-No. 6 Washers 17N14810-No. 8 Washers ... 100 for 16 c
(A) LOCKING WASHERS
17N14758-\#6 washer.
(B)

206

## KNOB SET SCREWS

(B) Case-hardened headless sel screws.

 17N14789-1/4' ${ }^{\prime} \times 8 / 32^{\prime \prime} \ldots \ldots . . \mid 50$ for $75 E$


## SOLDERING LUG5

In five types to fit all your solder-
2 ing requirements
\%)
(7N14812-No. 1
(\%) 17N14813-No. 2
417 N 14814 -No. 3, solderless type
17N14816-No. 4, 5/8" long
17N14818-No. 5, 7/8" long
Any above, per 100......... 346
Per 1000 3.08


TAPERED LUGS
(6) Fits over all screws up to No. 10; shank fits banana plugs. $11 / 4^{\prime \prime}$ long. $1 / 2^{\prime \prime}$ wide. $1 / 2$ Wide.
17N12954-

HEAVY DUTY SPADE LUGS
(7) Designed for battery terminals, etc. 1 inch long. No. 10 slot. 17N14912-Per 10.
Per 100.

## RADIO CHEMICALS

CEMENT SOLVENT AND THINNER


Used for loosening cement on speaker cones, voice coils and other parts where cement has been applied previously. Recommended also for thinning radio cement, plastic cement and fabric cement.
17N15821-4-oz Bottle
38c
17N15822-8-oz. Bottle.

## WALSCO CONTACTENE INJECTOR

Injector needle permits application of contact chemicals to most volume controls
 without unsoldering connections or taking control apart. This tool is made with highest quality surgical type needle, and an oil resistant rubber bulb. 17N15823.


## G-C STRIP-X

Makes it easy to strip enamel rom magnet wire. Simply dip the ends of the wire in Strip-X and the enamel will be removed: wire is then ready for soldering 17N15826-2-oz. Bottle........ 35

## G-C MAGIC SCRATCH REMOVER POLISH

## Dark Shade

Something new! Polish contains the proper stains and other ingredients to eliminate scratches on cabinets while polishing to a gloss. Excellent for radio cabinets, furniture and woodwork. 17N15827-2-oz. Bottle. 17N15828-8-oz. Bottle.


18c .29c

## NEW LIGHT SHADE SCRATCH REMOVER POLISH

For blonde maple, mahogany and all light woods. Removes scratches and makes the wood like new. Polishes at the same time.
17N15829-2-oz. Bottle............................ ${ }^{\text {I }}$ e
17N15830-8-oz. Bottle.

## CARBON TETRACHLORIDE

An excellent all around cleaner for terminals and controls. Dissolves dirt and grease.
17N15831-8-02. Bottle.
17N15832-16-oz. Bottle 59 c
17N15833-Quart Can.

2in

## RADIO SERVICE CEMENT

For cementing replacement cones and repairing torn cones. Used on glass to hold wires in place. Vibra-thon-proof, waterproof, fast-drying. 17N15314-2-oz. bottle, brush attached to cap. Each

29c
17N15315-4-oz. Bottle........................................ 59 c
17N15316-8-oz. Bottle............................... 1.03
17N15317-1-pt. Bottle.................................. 1.94

## LUMINOUS LITE-KOAT KIT



Long-life, non-poisonous coating that absorbs light in daytime and glows in dark. Ideal to coat or stripe dials, knobs, switch plates, meter boxes, key holes, panels, instruments, hallways, staircases, etc. Contains generous quantity of Lite-Koat powder, Mix-Koat Top-Koat to protect finish, handy small brushes and thinner. Complete instructions and suggestions. 17N15834-De luxe kit. $\qquad$ 1.76
 metal.


LUBE-REX CONTACT CLEANER
Ideal for attenuators, push button switches, etc., as well as Philco Mystery Controls. Cleans contacts and prevents corrosion. Moisturerepellant, rust preventing-clings to

17N15533-2-oz. Bottle
35c
17N15534-Pint Bottle
.. 1.47

Especially designed for noisy controls, switches, and wire wound controls. Merely apply to equipcontrols. Merely apply to equip- $x=2,0$
ment and noises cease. 17N15535 7N15535-2oz. Bollle

## AIR DRYING FINISHES

Here's good news for servicemen! Now you can get truly professional-looking finishes in either ctystal, wrinkle or smooth with these new, efficient air-drying finishes.Easy o handle-simply apply and let dry. Gives durable and lasting finish at a reasonable price. Air-dry or bake on metal or wood. Comes in handy 2 -ounce or 8 -ounce sizes.

| Wrinkle <br> 2-Ounce |  | Lacque | (Crystal) 8-Ounce |  |
| :---: | :---: | :---: | :---: | :---: |
| No. | Each | Color | No. | Each |
| 17N15259 |  | Black | 17N15309 |  |
| 17N15319 | 354 | Gray | 17N15387 | 0.13 |
| 17N15320 |  | Brown | 17N15388 |  |
| 17N15380 |  | Red | 17N15389 |  |



## RADIO CHEMICAL KIT

 A complete kit of 8 chemical necessities for servicemen in leatherette pocket case. Service cement, Rubber Drive Cement, Carbon-X, GrafoSlip Compound, Dial Oil Scratch Polish, NonCleaner. Applicator attached to cap of each container for ease in use.17 N 15529
.1.94

## COIL DOPE KIT

Has a polystyrene base and its power factor loss is negligible even if used for high frequency work. Will render articles moisture proof. May also be used for cementing parts made of polystyrene. Kit contains 2 oz, bottle of coil dope, 2-oz. bottle of spe$17 N 15313$ and two brushes.

## FELT-KOAT KIT

A "must" for every serviceman! Complete Flock Finish Kit for applying soft felt-like flock to pho soft felt-like flock to pho-
no turntables, displays, no turntables, displays,
tool chests, lamp bases, professional velvet-like flock jobs. Conteins spray gun, ivory and brown felt flock, undercoats to match, thinner, brush. 17N15489-Outfit. Shpg. wt. 3 lbs......... 6.17 17N15490-Spray Gun Only $11 / 2$ oz. can felt flock.
17N15479—Brown 17N15481-Ivory 17N15480-Red 17N15482-Green 59e
Any above, each EXTRA CONTAINERS of felt flock, $31 / 4 \mathrm{oz}$. each ( oz. covers $11 / 2$ to 2 square feet). 17N15491-Brown 17N15492-Ivory Any above, each 17N15494-Green ©7e EXTRA UNDERCOATS--acts as colorbase, otc. $1 / 2$ pint cans cover appr, 10 sq. ft . 17N15495-Brown 17N15496-Ivory
17N15497-Red Any above, each ......................... 97 c
EXTRA THINNER-use to clean brush and thin out undercoat. $1 / 2$ pint can. 32 e.
17N15499-Thinner........................

## BAKELITE CEMENT

For cementing bakelite to bakelite and to other material. 17N15310-2-oz. size ......... 35c 17N15311—8-oz. size ............ 1.29
$17 \mathrm{~N} 15312-1$-pt. size........... 2.45


## WALSCO PLASTIC CEMENT

Cements plastics, metal، wood, glass, etc. Dries fast. Strong bond. Waterproof and heat resisting. Especially made to repair broken plastic cabinet parrobs, grid caps, etc. Brush atknobs, grid caps, etc. Brush attached to cap. Walsco No. 42 ,
2 -oz. bottle. 17N15321...

35

## 'WALSOLUB B" <br> New chemical lubricant that instantly eliminates noise on bandswitches, controls and other air exposed contacts. Superior to graphite. Comes in convenient dispenser tube. <br> 32c

## Excellent for repairing speaker cones, cementing grille cloths, etc. 17N15257-Each <br> 21c

DUCO CEMENT

Lots of 12 ..
ea. 19c

## CONTACT CLEANING FLUID

Prepared to clean tuning condenser springs, volume controls, band switches, etc. Prevents corrosion of contacts. With brush. 17N15377-2-oz. bottle.

29
17N15824-4-oz. Bottle..............44c
 tool chests, lamp bases, and wire mesh on speaker, grilles, etc. Produces heavy soft velvet-like coat that pre-
vents scratching. Easy to apply. Deluxe vents scratching. Easy to apply. Deluxe
Kit containing Brown flock, applicator, Kit containing Brown flock, applicator, undercoat, thinner and brush. 17N15528
1.76

COLOR CODING ENAMEL


For color coding coils, terminals, etc. Green, blue, red, yellow and a bottle of thinner included, as well as two brushes. Employ your own system of coding-adds I7N15258......................................50

## CARBON-X FOR CONTROLS

Useful both as an electrical conductor and as a practical method of touching up worn and noisy spots on carbon controls. 17N15531-l oz. Bottle...........-4E
17N15532-2 oz. Bottle.........


# SPEAKER AND CABINET REPAIR NEEDS DIAL CABLE-SPRINGS 



## PLASTIC CABINET CEMENT

Quickly and easily repairs all Bakelite or Plaskon molded radio cabinets. Produces bond almost as strong as cabinet. Dries quickly and holds securely. 2-oz. bottle complete with brush attached to bottle cap.
17N15273.
35c


## SCRATCH STIK

Handy pocket stick for servicemen, removes scratches from radio cabinets in a jiffy. Contains filler and scratch polish. 17N15520-Each.

241
10 for..
2.16


## SCRATCH REMOVER KIT

Combination kit of 6 colors, popular shade of wood Scratch-Stik fillers and 2 bottles scratch remover liquid-walnut and clear. Works on all light and dark wood. 17N15530.

82c

## CABINET REPAIR KIT



CABINET REPAIR KIT
andy kit that may be used with excellent results in radio shops, stores, trucks, etc. Small brushes in caps of all bottles make quizk patching of damaged cabinets easy. Kit contains bottle each of Ivory spirit enamel, light and dark; dark brown Iacquer enamel, walnut spirit stain, polish renewer, French varnish; 3 sheets garnet finishing paper, steel wool, and cloth. 17N15527-Shpg. wt. 3 lbs
1.76

## CABINET TOUCH-UP KIT

For use on plastic, bakelite or wood cabinets 9 shades of shellac sticks, bottles of light and dark oil stain, bottle of metal shading lacquer. Magic Scratch Remover, alcohol lamp, spatula, brushes, steel wool,

17N15521—Shpg. wt. 3 lbs.

3.20



## DRIVE RUBBERS

Kit of 24 contains eight different types of friction drive rubbers for replacement in popular receivers.
11N9400-Drive Rubber Kit.
88
DIAL CABLE ADJUSTER
Handy aid for replacing slipped-off dial
 cable over dial drum.
18N15061-Each
44c
DIAL LIGHT COLORING KIT
Red, Green, Blue and Amber, and a boltle of solvent. Each in screw top, wide mouth bottle. Dries in 1 minute. Color permanent. 18N15185-Cost, per Kit.

50

## JFD RADIO DIAL BEET KITS

Assortments of the most popular sizes in use today. 11N9911-Asst. of 100.........14.70 11N9910-Asst. of 25..........3.94 For individual belts give JFD belt No. and 11N9909

WALSCO ORNAMENTAL GRILLE
Heavy perforated grille, beautifully "brushed brass" plated and lixcquered with gold finish effect. For use cver cloth or screening in custom built racios, P.A. Speakers and juke boxes. 22N19493-Size $12^{\prime \prime} \times 18^{\prime \prime}$
. 1.62
22N19494-Size $18^{\prime \prime} \times 24^{\prime \prime}$
2.94

## FLOCKED GRILLE SCREENING

Protective grille for radio, interzom, etc. Won't tear, fray.

| Stock No. | Size | Color |
| :---: | :---: | :---: |
| $22 N 19487$ | $8 \times 11^{\prime \prime}$ | Each |
| $22 N 19489$ | $18 \times 24^{\prime \prime}$ | Brown |
| 20e |  |  |

## SPEAKER GRILLE CLOTH

Handsome frieze, $50^{\prime \prime}$ wide, cut to your specified length. 22N20949-Per Yard..............1.85 22N19496-12" $\times 12^{\prime \prime}$.
$25 c$


## SPEAKER SHIMS

Non-Magnetic Monel shims. 4 each . $004^{\prime \prime}$, with pencil clip. 22N19649-Each

35

## VOICE COIL DUST FIELTS

Felt discs used on voice coils to keep dust out. Can be glued to any cons. Comes in a package of 25 .
22N14745-Pkg. of 25.
24c

## WALSCO SPEAKER CONE PATCHES

Specially fabricated material and adhesive for repairs. 22N19647-12 Assorted Patches..

## SCOTCH TAPE DISPENSERS

1. Desk Dispenser. Takes $1 / 2^{\prime \prime}$ or $3 / 4^{\prime \prime}$ tapes.
18N15035-Shpg. wt. 5 lbs.............. 1.69 2. Plastic Hand Dispenser. $1 / 2^{\prime \prime}$ tape. 18N15033-Shpg. wt. 6 oz

TRANSPARENT SCOTCH TAPE
$1 / 2^{\prime \prime}$ size. 792" long. Fits both zbove. 18N15046-Each 50c 6 for 2.70


FRICTION TAPE, $3 / 4$ " WIDTH Rolls come packed in individual boxes. 18N1482s-2 Oz. each 12 c 18N14842-4 Oz, each 22c 18N14843-8 Oz, each 39c


## DIAL DRIVE SPRING ASSORTMENT



Handy kit for servicemen. Box contains 25 springs of six different sizes of hard-to-get tension springs. Offered to you now at an unusual low price!
11N9892-Shpg. wt. 1 lb .

## DIAL DRIVE SPRINGS

High grade steel wire rust-proof springs. Kits offer five sizes to take care of all necessary requirements
11 N9890-Kit of 10 Assorted. Shpg. wt. 2 oz. IN9891-Kit of 10 Small Sizes. Shpg. wt. 2 oz


## WALSCO UNIBELT

Replercement for any dial belt. Cut to size -join ends with simple zipper-like con nectar. Breaking strength over 60 lbs 5 -foot spool with 10 connectors. 11N9888-Shpg. wt. 1 lb .
1.62

DETROLA DRIVE SPRINGS
Exact replacements for $1^{1+3} 46-47$ DetrolaUtah Expansion spring with inserted core. 11N9893-Shpg. wt. 2 oz...

24c


## BLACK NYLON DIAL CABLE

Dia.; Special Thin .025"; Standard .032"; Medium .042"

| Length | Spec. Thin | Each | Standard | Each | Medium | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Envelope* | 11N9930 | 24 c | 11N9945 | 24c | 11N9931 | 24c |
| 25-feet | 11 N 9889 | 73 c | 11N9943 | 73c | 11N9928 | 73 c |
| 100-1 | 11N9927 | 2.65 | $11 N 9944$ | 2.65 | 11N9929 | 2.6 |

## DIALS AND VARIABLE CONDENSERS

## MIDGET SINGLE GANG CONDENSERS

Firmly staked rotor and stator plates. Low-loss bakelite insulation. Ball bearing. Counter clockwise motion. $1 / 4^{" 4}$ shaft. $13 / 4 \times 18 / 4 \times 13 / 6^{\prime \prime}$ deep.

| 11N10189* | 15 mmfd |  | \|1N10194 | 100 mmfd . |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 11N10190* | 25 mmid |  | 11N10195 | 150 mmid |  |
| 11N10191* | 35 mmfd | $50^{\circ}$ | 11N10196 | 250 mmfd |  |
| IIN10192* | 50 mmmfd |  | 11N10198 | +10mmfd |  |
| 11N10193* | 75 mmfd |  | 11 N 10199 | 450 mmfd |  |

*Double spaced


420-160 MMFD DEFIANCE GANG CONDENSERS
Two gang, 420, and 160 mmfd. condensers for use with 456 KC IF superhets. Counterclockwise rotation, with trimmers buit onto frame. Total length $2^{3} / 6^{\prime \prime}$. Shpg. wt. 1 lb.
11 N9775-Two Gang. 420 and 160 mmid .
11N9776-Three Gang. Two 420 and one 160 mmid.
MICA TRIMMER CONDENSER
Base of low-loss ceramic with India Ruby mica. Moisture resistant. Lugs bend easily.

| 1) | No. | Plates | Range | Each |
| :---: | :---: | :---: | :---: | :---: |
|  | 11N9537 | $11 / 2$ | 2-30 MMF | 12e |
| d | 11N9536 | 2 | 4-80 MMF | 126 |
|  | 11N9535 | 3 | 9-180 MMF | 168 |
|  | 11N9534 | 4 5 | 25-280 MMF $45-380 \mathrm{MMF}$ | 18\% |
|  | 11 N9532 | 6 | ${ }^{\text {70-380 }} \mathbf{4 8 0} \mathrm{MMF}$ | 204 |
|  | 11 N9531 | 7 | $100-580 \mathrm{MMF}$ | 248 |

##  <br> 1

## BRASS SHAFT COUPLINGS

 AND BUSHINGS


## Brass \& Fibre Shaftings

For extensions. 1/4" dia
11N15010-6" Brass.
11N15011-6" Fibre.
Each.
11N15012-12* Brass.
11N15013-12 Fibre.
Each.................

124
$2 \cdot 4$

## Panel Bearing Assembly

4. Use with rigid or -exible coupling when mounting. For up to s, "" panels.
11 N9563-3" long. $1 / 4^{\prime \prime}$ Shaft. 20d 11 N9562-6" long. $1 / 4{ }^{\prime \prime}$ Shatt 26 d 11N9564-Bearing onty.......6e

## CROFLEX TUNERS AND CALIBRATIONS



Tuners are flexible-may be adapted to any chassis. Condensers clockwise or counter clock wise-may be located in various positions relative to tuner. Choice of 5 different knob locations. All with horizontal double channel calibrations, broad cast band 55 to 170 and short wave 6 to 18 . Models 234 and 236 have third scale reading reverse, arbitrary 0 to 100. All have " 3 dimension" edge lighted glass dial scales. Smallest size has one lamp socket, all others have two. Hubs $8 / 8^{\prime \prime}$ dia. with $1 / 4^{\prime \prime}$ adaptors.
Fully Adaptable-Choose for Size Only

| Stock No. | Model | Escutcheon Overall | Panel Cutout | Pointer Travel | Cost |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 11N9818 | 231 | $21 / 4 \times 43 / 4{ }^{\prime \prime}$ | $17 / 8 \times 43 / 97$ | 315 15" | 2.79 |
| 11 N9819 | 232 | $2^{9}{ }_{16} \times 6{ }^{16}{ }^{\prime \prime}$ | $1^{13} 16 \times 58 / 81$ | $4{ }^{11}{ }^{16}{ }^{\prime \prime}$ | 2.94 |
| 11 N9820 | 233 | 35 , $2 \times 65 / 8$ | $21 / 4 \times 6^{\prime \prime}$ | 51/" | 3.15 |
| $11 N 9821$ | 234 | $3{ }_{15} \times 8^{7}{ }_{6}^{\prime \prime \prime}$ | $2^{5}$ i6 $\times 7{ }^{9} 16{ }^{\prime \prime}$ | 6\%" | 3.53 |
| 11 N9800 | 236 | $4 \times 111{ }^{\prime \prime}$ | $3^{\text {a }}{ }_{16 \times 9}{ }^{11_{16}{ }_{16}{ }^{\prime \prime}}$ | $9^{\prime \prime}$ | 4.56 |

Stock Calibrations: The glass dial scales may be removed and replacements put in easily.

AM Broadcast Short-
wave, double channel $\qquad$ AM Broadcast only, single channel

$\dagger$ All Horizontals supplied with respective dials.
Stock calibration as above.
Each 44\$
Crowname Horizontal Scales for Model 236 Dial
11 N9801-Dial Scale, AM/FM Broadcast
11 N9802-Dial Scale, AM Broadcast
11N9803-Dial Scale, FM Broadcast
Esch 59\&


6 prong type requires 6E5 or 6G5 tube for 6.3 volt sets; 2E5 for 2.5 -volt sets. 8 -prong type takes all octal base magic eye tubes. All types are easily installed. Complete with escutcheon. Instructions included. 13N12645-8-prong type. MEA. 8.
$.89 t$


## PERMEABILITY TUNERS AND DIALS

Complete assembly, includes dial. coils, knob shaft, cable, slug carriage, two High Q slugs, and clear plastic dial cover. Tunes RF and Oscillator coils. Superheterodyne circuit components pre tracked at factory. Use as the basis for compact receivers, no tuning gang capacitor needed. Gold, buff and brown finished dial scale. Covers 540 to 1600 KC .
11N10450 - Fig. B-With rectangular dial.
2.85

11N10451-Fig A-With slide rule dial and window. 4.05 Regenerative Tuner: Ideal for experimenters and hobbyists. Replaces single gang variable condenser. Tunes from 540 to 1600 KC . Pre tracked at factory. Complete with coil, 3 color dial scale. Same as Fig. B, but with center knob. 11N10452.
1.44

Fig. C-FM Dia.Tuner Head: Desioned for use as tuning control and dial. For FM reception in the 88108 MC band. Includes converter cir cuits necessary for changing VHF carrier freq. to 10.7 meg. intermediate amplifier ireq.
4.17

11N10454-Antenna Coupler for Tuner Head.... . . . . . . . . . . . . . . . . . 05
IIN10455-V.H.F. Choke, 4.5 Microhenry for Tuner Head. ....... . . . 51

# PHOTO ELECTRIC EQUIPMENT \& KITS 

## WORNER FOTOELECTRIC ANNOUNCER

Model 61 A . Complete light
 source and sensitive photo cell unit in one compact metal case. Mirror supplied for reflecting light beam back into photo cell window when placed up to 10 feet from the unit. Equipped with optical system to arrest unwanted light. Breaking of light beam activates.chime or other warning device announcing entrance of persons through doors, passages, drlveways, etc. Operates from 115 -volt, 60-cycle A.C. source. 20.14
$21 \mathrm{NI5654-Wt:} 7 \mathrm{lbs..2}$

## DE-TEC.TRONIC SMOKE ALARM

Model AP-4 15 . Low cost photo ectric smoze density passing through the ilue of a boller. Indicating meter and lights on front panel show when density of the smoke exceeds a predetermined value. Insures as keeping within limits of local smoke ordinances. Accessory warning devices such as bell may be connec ted to relay circuit. Ideal for hotels hospitals, factories. etc. © where breeching of boller doen not exceed 10 -ft. In width. $15-\mathrm{V} .850 / 60$ cycles. List Price $\$ 90.00$.
21N15723.
67.50


YORNER BURGLAR ALARM SYSTEM Model 5100. Light source projects beam of invisible infra-red light to condensing lens of recelver. Interruption of light beam or disconnection of power to the unit operates a relay which may be connected to any audible or visible alarm device. Alarm is continuous and can only be silenced by the possessor of key to pick-proof switch lock on the receiver. Mirrors can be used to project the light beam around a room to protect several entrances simultaneously. Operates with light beam up to 100 feet. For 110 volts, $60 \mathrm{cy}-$ cles AC.
2IN 15659 -Shpg. Wt: 10 ibs. 55.12
DETECT.O.RAY ELECTRICEYE A labor-saving, life-saving device. provides periect burglar protec in addition to its numerous industrial applications such as safety devices on machines, conveyor controls, electric door openors and counters. Projects a light beam which is reflected by a smal extrenal mirror to the photo cell
 in the unit. Any object coming within the path and breaking either beam, instantly activates an alarm, bell, camera, safely device, or sets into action any other unit you may wish to perform work automatically. Effective range of the white beam is 60 feet; range of the "unseen" beam is approximately 35 feet. Switch oflers selection of beams, depending on type of operation desirable. Sensiilvity dial regulates reaction of unit to purpose and condltions for which it is employed. Also includes signal selector for cholce between Continuous Action from one break-in beam untll shut off-or Single Action with each break. For 110 V . 60 cycles AC. Steel case with black wrinkle finish. Dinenslons: 5 " $\times 61 /{ }^{\text {" }} \times 7$ ".
21N15725-With Outside Mirror. Wt: 7 lbs................
27.78

## DETECT-O-RAY L-205 POWER RELAY



Corries 1000 watts, at 110 volts AC. For controlling most motors, machinery, etc. Input plugs into socket, output into motor, etc. Shpg. Wt. 2 lbs.
2 IN 15724 $\qquad$ . 6.8


CETRON PHOTOTUBES FOR USE IN WORNER UNTTS Type CE-23-C-Gas. 160 ma average sensitivity. .2 .84
Type CE-1-D-Gas. 100 ma cavarage sensitlvity. 2.55

## PORTABLE *PLUG-IN" TIME SWITCH

AEMCO. Model 110. Designed espe clally for use with most electrical appliances such as refrigerators, fans, radios, electric cookers, etc. Removable dial for easy setting of trip levers. Self-starting synchronous motor vers. Self-starting synchronous to 200 below zero. Settings as close as 15 minutes between on and off positions. minutes between on and off positions. vance. Attractive, compact steel cabivance. Attractive, compact steel cabi-
 net; visible dials and trip levers. ramper-proor cabinet can be padension aod ed. Equipped win ive-rol exind with cord connection to the nearest convenient outlet, and with receptacle into which appliance can be plugged. 115 -volt, 60-cycle A.C. 21 N15722-List price $\$ 11.50$ $\qquad$

## TORK ELECTRIC TIME SWITCHES



Has innumerable applications in the home, on the farm, or in industry. Mory be used to turn on chicken brooders, oll or gas burners, any installation that may be turned on or off through the delivery or withdrawal of current. Self storting type, for automatic control of solenoid valves, signs, stokers, etc. Shown with cover off. Operates on I10 volts 60 cycles AC current. Model 191 B has $21 / 2$ minute ratchet dial. Capacity of 20 amps, 2000 watts. Designed for general use. Overall size: $81 / 2 \times 5 \times 3 \%^{\text {º }}$. Comes complete with single-pole on-off switch.
21N15600-Shpg. Wt: 8 lbs. .
9.10

Model 962B-Double Pole. Capacity $4000 \mathrm{~W} ., 20 \mathrm{amp}$, per pole. 21N15601......................................................................... 10.50 Model 191BP-Poultry House Lighting Timer. For morning and evening operation. Bright light circuit 2000 W.; dimmer 800 W.
21N15602. $\qquad$
$\qquad$
Personal Model similar to Model 191 B but in portable case, fitted cord and plug and a clock controlled receptacle. Automatic control at $15-\mathrm{min}$. Intervals of fans, heaters, bedside radios. Minimum setting of 45 minutes between on and off positions.
1N15603.
.8 .40
$21 N 15604-$ Same as above but 1320 watt capacity...........9.45

## ELECTRIC EYE AMPLIFIER KIT

Burglar alarm, door announcing, counting and sorting are just a few of the many applications of this easy-toassemble photo electric eye amplifier. Operates with any light source. Kit contains all necessary parts, inKit contains all necessary parts, in-
cluding case and easy-to-follow including case and easy-to-rollow insituans: $51 / 2 x 41 / 2 \pi 2^{1 / 2} 2^{\text {. }}$. Operates on 115 sions: $51 / 5 \times 41 / 2 \times 2{ }^{1 / 2}$.
$21 N 15672$-Shpg. Wt: $21 / 2 \mathrm{lbs} . .9 .75$


PHOTO ELECTRIC LIGHT KIT
Dependable light source for above amplifier kit. Projects a beam of light 25 feet long. Light source kit includes light bulb, socket and all necessary parts including carrying case and simplified easy to follow instructions. Designed to operate on 115 volts, AC or DC current.
$21 \mathrm{~N} 15673-\mathrm{Shpg}$. Wt: $21 / 2 \mathrm{lbs} . .5 .53$

## IRIS ELECTRIC EYE PHOTOCELL

Self-generating, barrier-layer type, mounted on plastic window. Develops several hundred microamperes depending on intensity oircuit. No external battery circuit. No external battery required. Standard model sensitivity 15 microamperes, Jumbo 100 micromperes using 100 watt frosted tungsten lamp at 1 ft . Soldered pigtall leads.




## SELENIUM PHOTO-CELL

Burrler layer, self-generating type-11ght siriting upon cell generates current sufficlent to operate relays directly without the use of auxiliary power. Lifetime of cell is unlimited. 600 microcmperes output at 100 foot candles. 2 inches in dia. mounted in handsome plastic housing. 2INL0576-Photo Cell. Wt: 8 oz

# JFD TELEVISION ANTENNAS 

## STRAIGHT LINE ALL BAND FOLDED DIPOLE



Model TA150. Here's a now TV array covering channels $2-13$ and broad frequency response. Untbroad frequency response. Unidirectiona antenna characterback and front-to-side rontoback and front-to-side ratios over all channels. Two broadband folded apoles and low band reflector operate off common $300-0$ hm transmission line. All elements constructed of cor-rosion-resistant aluminum alloy tubing. Exclusive crossarm clamp provides 4-point support; U-bolt clamp permits unlimited adjustment of elements for poIarlzed and directed reception. Complete with $5-\mathrm{ft} 11 /{ }^{\prime \prime}$ steel mast, twin lead jumper and all-angle base mount. Shipping Welght: $83 / 4 \mathrm{lbs}$.
28N21827-List Price $\$ 15.30 . . . . . . . . .$. Net
9.00

## DOUBLE STRAIGHT LINE FOLDED DIPOLE

No. TA151. High gain, $1 / 4$ wavelength stacked array covers all TV channels and FM band. Duoorienting bays seperate overlapping signals and eliminate station interference. Gives more signal strength at greater distances, especially in fringe areas. Component parts include exclusive crossarm clamp providing 4-point support for mast and crossarm, and special Ubolt clamp permitting unlimited adjustment of elements for polarized and directed reception. Complete antenna includes 10 ft . (two 5 -ft sections) $11 / 4^{\mathrm{w}}$ cor-rosion-resistant steel mast, twin lead jumpers and $1 / 4$ waveliength aluminum jumper bars, and allangle base mount. Shipping Weight $163 / 4$ lbs.
28N21828-List Price $\$ 32.10$
18.87

## $\qquad$ <br> "RANGER" DUO-ORIENTING <br> FOLDED DIPOLE ARRAY

No. R5. TV antenna covers channels 2-13 and FM band. Consists of two separate units: a high frequency and a low frequency folded dipole with reflectors. Each antenna section can be oriented individually for maximum periormance on high and low TV bands. Supplled pre-assembled, ready for installation. Includes $5-\mathrm{ft}$ mast, allstallation. Includes b-it mast, mount and twin lead angle base mount and

"RANGER" DUO-ORIENTING STRAIGHT DIPOLE ARRAY No. R3. High and low band dipoles with reflectore provide greater gain on all TV channels and FM band. 5-it rugged steel mast set in newly designed allangle base mount assures maximum durability under adverse weather conditions. Elements constructed of corrosion-resistant alumlnum alloy tubing connected to mast with U-bolt clamp. Preassembled, ready for installation...no hardware necessary. Shpg. Wt: 71/2 lbs. 28N21832-List 11.05. Net
6.50

INDOOR TV/FM ANTENNA
NO.TA132. New! Superb performance on all TV channels and FM. Attractively designed and constructed "tip-proof base of crystal glazed porcelain harmonizes beautifully with living room inteiors. Felt pad protects furniture from scratches. The 3-section, polished brass telescopic dipoles extent to $44 \mathrm{~m}_{\text {; }}$ each measures $14^{\prime \prime}$ collapsed. Fully adjustable; orients simply and quickly in any direction. Unusually compact, portable antenna supplied complete with 10 feet of 300 -ohm polyethylene twin lead. Shipping Weight: $15 / 4 \mathrm{lbs}$.
28N21833-List Price $\$ 4.25$..Net 2.50


## ALL BAND CONICAL TV ARRAYS

No. TA160. Fine, blconlcal all band array gives excellent broadband and high gain response on all TV chennels and FM. Lightweight, all aluminum construction - non-corrosive. Features a 200 broadside tuning angle and good front-to-back ratio on all TV frequencies. Low standing wave ratio permits direct coupling to 72,150 or 300 -ohm transmission lines with minimized energy transfer loss. Unique element bracket securely grips dipoles and reflectors which are completely pre-assembled for speedy installation. New crossarm clamp provides 4 -point support for crossarm and mast; permits easy counter-balancing for antenna rotors. Shipping Weight: $61 / 2$ lbs. Supplied less mast.
28N21829-List Price $\$ 13.95$
..Net.
8.20

## DOUBLE ALL BAND CONICAL

No. TAl61. Stacking of TA160 TV array provides exceptionally high db galn on both bands. Particularly adaptable to fringe areas. Conical antenna design results in minimum noise, less fading and reduced multi-path reflections. $20^{\circ}$ broadside tuning angle. In addition to other features described above for the TAl60, this unit also includes $1 / 4$ wavelength aluminum jumper bars. Shipping Weight: $111 / 21 \mathrm{bs}$. Supplied less mast.
28N2 1830-List Price $\$ 29.25$
.Net
17.20

## ECONOMY MODEL CONICAL

No. R60. Identical to No. TA 160 except for galvanized steel crossarms and element brackets with aluminum elements. Has quick rig feature for easy assembly. Less mast.
$\qquad$ 6.64 No. R61. Same as above except stacked array with jumper bar. Less mast.
28N2 1971-List Price $\$ 24.00 . . . . . . .$. . Net.


## DOUBLE STACKED CONICAL ARRAY

No. TA164. Double stacking of TA16l arrays offers unsurpassed db gain for pulling in weak signals from long distances. Especially engineered conical antenna design reduces noise, fading and multi-path reflections to a minimumi gives flections to a minimumi gives excellent high gain, broadband, and produces clear, steady picand produces clear, Steady pictures with full brilliance. $1 / 2$
wavelength stacked bays; wavelength stacked bays; $/ 2$
wavelength stacked sections. wavelength stacked sections. Low standing wave ratio peror 300 -ohm transmission lines with minimized energy transfer loss. Element brackets completely pre-assembled. Antenna includes dipole and reflector brackets, crossarm clamps, jumper harness, and aluminum jumper bars. Shipping Weight: 25 lbs. Supplied less mast. List \$61.80. 28N21831....Net.......33.34
5.FT. EXTENSION ANTENNA MAST

New, corrosion-resistant steel mast made to fit all JFD antennas. One end is tapered. Specially designed "Jam Fit" construction with locking key. Fit readily into each other. $11 /{ }^{\prime \prime}$ outside diameter. List Price $\$ 1.40$.
28N21978... 10 for 7.38
82c


# TELEVISION ANTENNAS 

QUAD-LOOP ANTENNA BY SQUARE ROOT
Quadrature-phasing antenna, $\alpha$ chieves all the advantages of mechanically rotated antennas without any moving parts. Electrically controlled at the recelver by a single knob. Selects maximum gain for each channel regardless of the geographical location of the transmitting station. Requires no orientation. 90\% assembled before delivery. Can be set up and installed in a short time. Sturdy all-metal construction has no moving parts to wear out or become defective. Constructed of two loops and four dipoles. Loops are used for high frequency reception and the dipoles for low frequency. When used on lower frequencies the loops act as resonated sections for the dipoles. Requires 4 conductor lead (two 300 ohm lines) from antenna. Less lead-in. Shpg. Wt. 00 lbs.
28N21821-List Price 27.50.
16.17

TACO DOUBLE DOUBLEI TV ANTENNA WITH REFLECTOR


A rigid, all-metal, all-weather system that gives improved of the most dependable TV omtennas on the market today Broadband and with a very good gain. Uni-directional-has high gain. Uni-directional-hastigh and reflector or each have two and reflector or each have two 60 ft. 300 -ohm transmission 60 ft .300 -ohm transmission hardware. Wi. is lbs. mounting
28N21990-List Price $\$ 24.50$..

## VEE-D-X TV ANTENNA

New, highly directional antenna provides increased gain and steadier, clearer reception from steadier, clearer reception as 100
stations as far away as miles. Consists of 4 phased antenna elements, 4 reflector elements, 4 cross-arms, a $10 \frac{1}{2}$ ' ments, a cross-arms, a parts mast, and all necessary parts and mounting hardwara, aluminum used throughout. grade aluminum used throughout. Matching stub will match any impedance from 50 to 600 ohms Less transmission ${ }^{\text {linstructions included. }}{ }^{\text {Wt. }}$. 28 instructions included. lbs. List
28N21992.

### 76.15



## TRICRAFT TELEVISION \& FM ANTENNA



Model 300-Designed to satisfy need for an allpurpose, all-wave antenna. Complete coverage of both television bands, as well as the per manent FM band. Comes complete with 65 feet of 300 -ohmtransmission line and all accessories for installation. Universal mounting bracket at base of 8 -ft. mast for mounting on any roof or wall angle.
. .11 .61 28N22036-Wt. 9 1bs. List Price 17.95...... Auxiliary Kit. Converts above into two element ultra-high gain antenna.
28N21985-Wt. 5 1bs. List Price 15.80..10.88

## SLIDE RULE INDOOR ANTENNA

Dipole antennc arm calibrated with cll TV channel numbers plus FM band. Simply extend one arm to desired channel....other
 arm extends automatically. Cor-
rect match for standard 300 -ohm twin-lead transmission line minimizes "ghosts", inter-channel interference, etc. Instant push button closing retracts dipole arms into compact 41/2 $x$ 21/2" case
28N21966~List Price 9.95. $\qquad$ Each.
5.85


ICA ALL CHANNEL INDOOR TV ANTENNA
Ideal for apartments. Can be placed under rug, on molding, in attic, etc. Polythyelene insulation. Complete with $10-\mathrm{ft}$. lead-in, $300-\mathrm{hm}$ twin lead transmission line. Shpg. Wt. 11 b .
1.73 28N21984-List Price 2.95 300.OHM TWIN LEAD.IN

Special low-loss 300 ohm twin lead
 transmission line ideal for use with on this page.
Insulated line is water, acid, alkali and oil proof.
19N17130-Cost per foot...... $2^{1 / 2} / 2$ Per 100
2.06


AMPHENOL BROADBAND TELEVISION ANTENNA
Fig. A. Model 114-009. Provides higher, more uniform gain and broader response on all chamels. Gives excellent picture brightness and assures the best TV enjoyment. Single direction radiation pattern throughout entire TV spectrum. High front-to-back and front-to-side ratios. Matches 300 -ohm input circuit. All aluminum construction except for heavy, rust resisting mast. With swivel mounting plate, guy clamp, stand-off insulators. Less twin-lead. Shpg. Wi. 9 lbs. 28N21817-List Price $\$ 17.00$... $\qquad$ .. Net....
.10 .90 Same as above, but with 75-ft. Amphenol 300-ohm Twin-Lead. 28N22044-List Price $\$ 19.50 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .11 .47$

## AMPHENOL TWO-BAY ANTENNA

Fig. B. Model 114-302A. Provides added high forword directive gain and a single directional pa*tern over both upper and lower television channels, 2 to 5 and 7 to 13. Television set owners who live in fringe and outside areas can now get the same brilliant reception as set owners within the TV broadcasting areas. High front-to-back and front-to-side ratios. Efficient operation on all channels. High strength aluminum and aluminum alloy construction with rust-resistant stee mast. Complete with top and bottom bay connecting rods and two 5 -ft. lengths of $11 /{ }^{\prime \prime}$ mast. Without lead-in. Shpg. Wt. 17 lbs.
28N21818-List Price $\$ 35.00$.
20.58

## AMPHENOL "TELESTAR"

 INDOOR ANTENNAModel 114-024. Spectally designed to fill the needs of those television owners who are unable to erect an outdoor antenna. Unique all-channel television cross-over network. Can be rotated for highest efficiency and "ghost" elimination. Rods are cut to pre-tuned lengths, long rods for low band, short rods for high band stations. Base-weighted against tipping, Rubber feet prevent marring of finished surfaces. Fabricated of light weight aluminum rods with a low-loss wood finish polystyrene base; comes with 5 -feet of natural color polyethylene low-loss 300-ohm twin-lead. Shipping weight 4 lbs .
28N21819-List Price 4.95.
2.91

## RCA REVERSIBLE BEAM ANTENNA ARRAY

Model 212A1. Eliminates co-channel interference where stations are $180^{\circ}$ apart. Also eliminates adjacent channel interterence where receiver lacks selectivity. "Ghost" pictures coused by line mismatches are absorbed in diplexer. High overall front-to-back ratio. Reversible anddirectional beam. Flick of switch on diplexer reverses antenna directivity. Easily oriented for maximum directional gain. Uniformly directional on alt channels. Aluminum construction throughout. Complete with 4 sets of dipole elements with $11 /{ }^{\prime \prime}$ día heavy-wall aluminum tubing; 2 crossams; 2 guy rings; 12 harness standofis; 10 lead-in standoffs; I diplexer: installation instructions. Shpg. Wt. 12 lbs . 28N21822-List Price 59.50.

## RCA "V" ATTACHMENT

Recommended for use in those locations where all stations are in the same general direction. Provides improved reception on all channels when mounted on low band dipole and dipole reflector antennas. Directional characteristics of such antennas will be uniform for all 12 channels. No adjustments are necessary except usual antenna orientation for maximum signal usuangth Easily assembled and mounted on an. strengt
tenna.

76


## TELEVISION AND FM ANTENNAS RELIANCE TV ANTENNAS



3 CHANNELS
A new low price for this feature value: Excellently designed dual antenna receives all 12 television channels, plus the FM band. Range on the low frequency array: 44-108 MC. 1 14-220 MC on the high trequency array, Average gain 2.5 db on low frequency array, 1.5 db on high frequency above tuned dipole. Each unit can be rotated individually for 28N21983-Shpg. Wt 14 the bs.. HIGH BAND ADAPTOR


Precision engineered high frequency array consisting of a folded dipole with reflector. Covers 174-220 MC range. Can be stacked with your present low band antenna to provide all-charnel coverage or used individually as a high band antenna. Constructed of durable tempered aluminum alloy which resists damage due to adresisis acmage aue to adverse atmospheric condiwith $18{ }^{\circ}$ masplied which camplete easily attached to your present antenna mast.
28N21994-Shipping Weight 5 lbs
2.49

FM ANTENNAS
IN-LINE ALL BAND ANTENNA
Here's an efficient antenna especially designed for fast assembly and installation Developed for those ation. where both low and areas where boin low and high bame direction has ine goun on both hands high excelieni for low signal excelient tor low slgna construction for Al metal construction for durable Supplied complete with 5 -fit
 Supplied complete with
mast; high and low band antenna sections with low band refatector; mast swivel bracket and mounting hardware and instlators.
28N21954-Shipping Woight 6 Ibs.
6.35

## AMAZING WIND.O-LOOP ANTENNA

If the "Iandlord problem" is the only thing that stands between you and television pleasure-listen. Here is the ideal all-channel TV and FM antenna it at taches to the window pane by means ot two suction cups, or pane by means of screws. Constructed of a single rectscrews, Constructed of a single rectangular loop and one dipole. 25 of wire is permanentiy attached to antenna for convenence of installation.
5.90

## RCA FM FOLDED-DIPOLE ANTENNA AND REFLECTOR




TACO FM FOLDED DIPOLE
Directional front and rear. With 60 -ft. coll of $300-o h m$ transmission line, antenna with terminal block, $5-\mathrm{ft}_{0}$ wood mast. With hardware.
28N22024-Wt. $6^{1 / 2}$ lbs.
.6.47
Reflector Assembly for above-makes antenna unidirectional. 28N22025-Shpg. Wit. 3 lbs
3.23

## TACO TRANSFORMER FOR FM ANTENNA

Permits use of FM-antenna on either FM or AM without switch. ing. Matches either band to antenna.
6N5968-Shpg. Wt. $11 / 2 \mathrm{lbs} .$. . 91


## FLEXIBLE FM DIPOLE



Consists of two folded dipole elements spliced to 300 ohm twin lead transmission line. Flattened end insulators permit use indoors under carpet, on peomit molding, etc. Losses in in ine measure only'. 85 db per 100 feet at measure
100 MC . 28N22038-Shpg. wt. 1 lb...........

88 e

## AMPHENOL FOLDED DIPOLE AND REFLECTOR

For suburban and long distance, wide band, troublefree reception. Rigld low loas insulators and twinlead transmission line prevent loss of signal. Swivel bracket permitsinstallation on flat or peoked roofs. With $75 \mathrm{ft}^{2} 300 \mathrm{ohm}$ twin-lead line and complete instal lation instructions.
28N21998-Wt. 5 lbe.. 9.55


## BELDEN FM

## POL Y-POINT ANTENNA

Model 8322. Double-folded dipole that provides an essentlally circular radiation pattern. it. re elves signals from all directions without turning. Corefully matched quarter-wave phasing stub provides high efficlency over the entire FM band, Strong, lightweight aluminum construction withstands severe ice loading and high winds. Easy to install. Special adjustable mounting base for flat or sloping surfaces. Factory assembled, ready for mounting. Complete with 65-feet of Belden 300-ohm Transmission line, 5 ft . mast and 4 three-inch Standoff Insulators. List Price 12.65 .
28N21815-Shippling Weight 5 lbs.
AMPHENOL 300 OHM TWIN LEAD-IN
TwiN3(O) Special low-loss 300 ohm transmission lead-In line is ideal for use with all TV and FM antennas show on this page. Prevents loss of signal between antenna and receiver. Oil, acid, alkall and weather resistant. 28N17130-Per $100 \mathrm{ft.}$.2.06 Perft.
$21 / 2 c$

# TV BOOSTERS-MOUNTS-LENSES-FILTERS 



## ADJUSTABLE MAGNIFYING LENSES

This remarkable new lens reduces glare, improves contrast, intensifies black and white and enlarges the screen as well. Filtered models contain no blue tinted oil like ordinary lenses. Made of special perfected material which erilarges and clarifies picture with brilliant intensity. Brackets fit any set-either console or table model-and adjustable for focusing and enlarging. Contact lens have cords. 31N24383-Adj. Filter Lens-7" Tube. List 19.95.
11.73

31 N24384-Adj. Clear Lens-7" Tube. List 19.95
31N24385-Adj. Filter Lens-10 and $12^{\circ}$ Tube. List 29.95
31N24386-Adj. Clear Lens-10" and 12" Tube. List $29.95^{\circ}$
31N24386-Ad. Contact Fitter Lens-10"Tube. List 19.95.
31N24388-CContact Clear Lens-10" Tube. List 19.95 .
.11 .73
17.61

31N24388-Contact Clear Lens-10 Iube. List 19.95

## FLAT ENLARGING LENS

Increase your TV picture three times with this new magnifier. Lighter, because it's plastic without liquid filler. Flat surface makes it easier to look at. suspended by its brackets or mounted under the set.


31N24427-8×10. List 13.95
31N24428-9x12*. List 15.95.
31N24429-12×16. List 19.95
9.30
.10 .63

SIG-MAX GIVES BETTER TV PICTURE


An amazing device for improving TV reception. Produces clearer, more noise-free pictures in low signal areas on higher channels. Clips easily to lead-in line. 31N24404-Per Set

59c

## GENUINE POLAROID FILTERS

You can now enjoy a full evening of TV without eye strain. The famous polaroid principle eliminates glare, "soltens" the TV imuge and yet gives better definition. Darks come out sharper, lights easier to lok at. Easily musuted with special adhesive strip.

31N24422 For 7' Screen
List 6.50

$31 N 24423$ For $10^{*}$ Screen
List 10.00
 $31 N 24425$ For $12^{*}$ Screen List 13.50

## LUMARITH FILTERS

Low cost lumarith filters eliminate eye strain
31N24488
31N24489
31N24490
31N24432
31N24414
31N24491
31N24413 With adhesive strip 7* Screen 49c
31 N24488 10" Screen With adhesive strip 31N24490 With adhesive strip 12 . Screen With adhesive strip 16" Screen .59
.98 3IN24491 With adhesive strip 7" Round. .1 .69 With adhesive strip

O" Round.

## SUCTION CUP FILTERS

Provides improved contrast, reduced glare. Held in place by four suction cups. Finest grade plastic.
31N24486-10 size
1.15

31N24487-12* size.
1.91

CHIMNEY AND WALL ANTENNA MOUNTS


Adjustable mounting brackets to fit any chimney, Can be installed without tools in 5 to 10 minutes. Overial $30,000 \mathrm{lb}$. tensile strength. Complete with strapping. (A) Made of corrosion-resistant aluminum"alloy. 28N21940
(B) Made of heavy plaled steel.
3.95

28N20046.


Holds pole from 1" to $11 / 2$ in diameter. $6^{*}$ clearance between mast and woll. Heavily plated steel. With directions and hardware. 28N21942 2...


Constructed of heavy galvanized
 masi to woill Holds any pole fom " to $11 / 2$ " in diameter.
2.94

## POWER-PACKED ANCHOR BOOSTER

Model ARC-101-50. Recommended by tamous consumer research organza-tions-gives $21 / 2$ times more gain in signal strength across all chanmels! Eliminates noise and snow patternsmakes an outdoor antenna unnecespary in many cases. Features exclusive im. pedance matching of its output to input
 of set. List Price $\$ 37.50$. 22,15
31 N 24438 -Shpg. wt. 6 lbs,

## NEW 2-STAGE ANCHOR BOOSTER

Same as above except two stages of amplitication for extreme fringe areas. $11 / 2$ to 2 times gain of simgle stage.


## LAFAYETTE BOOSTER

Way ahead of the booster lield in its dollar-value performance! Greatly increases signal strength of all 13 channels where signals are weak. Iust plug intio any 115 volt outlet and attach between the antenna and receiver. No internal connections are necessary. Ideal combination of economy and performance. 31 24403 List Price 35.00. .
19.95

## MASCO 13-CHANNEL TELEVISION BOOSTER

Sensitive, all-channel booster that gives sharper, clearer reception in fringe and weak signal areas. Easy to instali and operate-works on any receiver without internal connections. Shpg. wt. 6 1bs. 31 N24448--List 35.00 .. .. . 20.58
 JERROLD TV-FM BOOSTER New model with Match-A-Tran variable step-impedance transformer, assuring best possible piclures on eack channel. It pulls in weak stations in tringe areas and amplifies signals 20 to 30 times; the result is sharper, clearer pictures and brilliant FiM sound. Helps eliminate interference and reduce "ghosts" and connect between antenno and set.
22.05

## JERROLD MATCH-A-TRAN

Variable step-impedance transformer improves TV reception wherever standing waves cause signal lose. Switch arrangement gives correct lead lenath for each channel. Attach to any booster. 31N24396-Shipping Weight 2 liss.-List 4.95

## TV INTERFERENCE

 ELIMINATORDual absorption type wave trap that removes such complaints is FM and adjacent channel interferences, phase-shift, standing waves, and ghosts due to antenr.a mismatch. plus sound in pictures due to external causes. Has knob tuning, clips, and twin lead input. 31N24444—Wi. 2 lbs..... 5.88


## SHUR ANTENNA MOUNT

Supports any standard FM or Television antona array Fits roof tops and sloping sidry, Fits sides-lits anywhere. Mounting sides-lits anywhe. Mounting brackets are easily adjustable to any angle. Sustains weight of fixed standard array without need of guy wires. Rugged, cast aluminum mounting base fits antenna poles up to $146^{\circ}$ in
diametar. Complete with atl
6waing hardware and iull instruktions..
5.25

SEE PAGE 88 FOR TELEVISION WAVE TRAPS

## ANTENNA TOWERS-ROTATORS-ACCESSORIES

## ALLIANCE BEAM ROTATOR

 diameter. Supports up to 20 lbe. System includes Rotator, Remote Control and instructions. Less'4-wire connecting cable.
28N21960-List Price 39.96. . . Wt. 12 lbe....... . . . . . . NET . . . 23.49 New improved unit similar to above, except control unit hasbuilt-in meter to indicate position of antenna.
28N21852-List Price 49.95.
4.Cond. flat cable for above.
18N1 $10064-$ Per $100-\mathrm{ft} .2 .70$.

Remote control mechaniam for rotating amateur beam and TV antennas directiy to signal. Compact, low cost unit that's easy to install and operate. Provides $360^{\circ}$ rotation at 1 RPM. Instant Start-Stop or Reverse at any point. Automatically stops after completion of $360^{\circ}$ rotation. Heavy duty, AC motor and gear mechanism duty, AC motor and gear mechanism mounted in waterprool housing. Has special
.NET 29.37


## MAGNE-ROTOR

Improved TV reception with a motorized push-button control unit (not an electric motor) that connects directly to any antenna. Sit in your living room and rotate your antenna for perfect peak reception on all channels. Locks at any point, cannot be turned by wind. Makes a complete $360^{\prime}$ turn in either direction. Automatic signal light goes off when cycle is completed. Plugs into any 110 volt AC source.
28N21981-Ship. Wt. 8 lbs. List 29.95. . . NET 17.97 Three Conductor flat cable for above. 19N16081-Per 100 ft . 1.80. .Por ft. . 08


## SOUND-POWERED PHONE

Self-powered system for inexpensive 2 -way talking Ideal when installing radio and TV antennas-the antenna itself may be used as the line. Use at home or office as an intercom. Provides excellent tidelity up to 25 miles.
3aN14015-Liat 12.50 . $\qquad$


## TELEMIRROR

Plate glass mirror gives non-distorted reflection of picture tube exactly where you want it. Permits one man to do and efficient service job. Sturdy and Hightwelght 8x10" mirror with nickel plate steel frame. Handy slide on $44^{\prime \prime}$ stand provides quick and easy means of adjusting mirror to desired angle. Non-tip base in black crackle finish.
$31 \mathrm{~N} 21864-S h p g . ~ W t . ~$
7

## STEEL GUY WIRE



Six strands of No. 20 high tensile strength, galvanized steel wire.

28N21927-50-Ft. Roll... 394
38N21928-100-Ft. Roll.
.69
28N21820-500-Ft. Spóol. . . . .2.93

## TWIN LEAD

TRANSMISSION LINE


300 -ohm flat twin lead transmission line for all TV installations.

19N17140-100 Ft.... 25 1000-Ft. .11 .25

## 5.FOOT

## ANTENNA MAST

> New, corrosion resistant
steel mast. One end is stapered: Specially desigered: "Jam Fit" construction with locking key. Fit readily into each other. $13 / 6^{\prime \prime}$ outside dia meter. 28N21978 10 For. . . . . . . . . . . 1.38

## MAST EXTENDER

 BRACKETThis practical brackel makes it easy to add another mast to your present antenna installation. Vise-type clamps hold any 2 masts of equal or unequal diameter ( $1 / /^{\prime \prime}$ o 23/2"). Permits $4^{\prime \prime}$ bite on each mast. Long-life solid steel with 6 guying points. 28N21945. 8 For.

## TV MAST COUPLER BRACKET



Versatile unit for extending and adjusting antenna poles to most efficient position. Flexible and easy to install. Fits all poles up lerent diameters. $1 /{ }^{\prime \prime}$ "thick alum With zinc plated $1 / /^{\prime \prime}$ bolts, nuts and washers, ready to use.
28N21946.......Per Pair $8: 8$
STEEL TURNBUCKLES


Takes up guy-wire slack. Rustprool galvanized ateel. Size: 7\%/" open, $51 / 2^{\prime \prime}$ closed.
28N21939.........Each E\& 10 For............................

## STEEL ANTENNA TOWERS

Strong, durable towers for TV antenna installations that require plenty of height. Mast collars acc ommo. date up to $1 / 3{ }^{\prime \prime}$ lubing. Mast adoptor at the top and lower adaptor $24^{\prime \prime}$ below may be used for elther loct. ing the mast in directional position or as a bearing ing the mast in directional position or as a bearing bracket for rotators. All towers are complete with Self-supporting types include feet; guyed tower in. cludes guy wires.

## SELF-SUPPORTING TOWERS

## 5.Ft. Tower. 4 posts.

28N21988-Shipping Weight 28 lb
10.Ft. Tower, 4 posts.

28N21956-Shipping
15-Ft. Tower, 3 posts
28N21951-Shipping Weight 75 lbe. $\qquad$
-
$\qquad$ .22.40


## CUYED TOWERS

3215-F. Guyed Tower. May be increased to approximately-79 feet by adding 5 -ft. sections listed below.
2siv21986-Shipping Weight 160 lbs
5-Ft. extra eections for $323 \mathrm{~h}-\mathrm{tt}$. Guyed Tower 28N21959-Shipping Welght 18 lbs.
.6 .13


## ANTENNA COMPASS

Speeds up TV installations. Permits one man orientation of TV antenna. Pockel meter clipe orientation of IV antenna. Pocket meter clips connecting an extension cord, compasa can be conried to antenna site. With tost pattern luned in on woakest station, morely rotate antenna for maximum defloction of compass. Idantifies "ghosts" and permits peaking of RF mixer and oscillator sections. Cable and clipe included. 4 $1 / 41 / 2 \times 11 / 4$.
2SN21742-Shpg. Wt. 1 lb..
.16.3;

## TELECOUPLER <br> FOR TV ANTENNAS

A low-cost solution to multiple installation of TV and FM receivers in radio stores, hotela and apartment houses. Small, newly designed electronic circuit, easy to install. Each one serves up to 8 TV sets, 3 units may be connected together for simultaneous operation of 24 TV recelvers from one antenna. Provides of 24 IV receivers irom one antenna. Provides
greatear iselion of each antenna outlet completely independen either 300 or 75 -ohm sets in various combinations. either 300 or 75 -ohm sets in various combinations.
 28N21989-Shipping Weight 6 lbs.
58.50

## SIGNAL KLEER WAVE TRAP

Especially designed to eliminate FM image interierence and amateur harmonic interference. Does not decrease TV signal received by set. Installation is simple.
Model 300-10-30. Eliminates harmonic interference from 14 and 28 MC bands.
12N12442.
Model $300-80$ - 1 iO. Eliminates FM image interference
12N12443.... . . . . . . . . . . .......... . . . . . . . . .
INTERLOCK TY LINE CORD


Replacement cord for RCA, Philco, GE, Admiral and others. It has regular molded plug on one end and special rubber plug on other to fit TV sels. U/L approved. 33N13319-6 FI. Brown Cord. . . $3 \%$

## VEE-D-X LIGHTNING ARRESTOR

For TV and FM sets. High frequency, low loss unit that does not vary impedance. Unnecessary to cul transmission line or change spacing for installation. Made of low-loss plastic 28N24442-Shipping Weight 1 lb .


## RCA LIGHTNING ARRESTOR

Specially designed to protect TV and FM recetvers. Attaches to 300 -ohm twin lead
 without soldering or strapping. May be mounted on any indoor water pipe from $3 / 2^{\prime \prime}$ to $2^{\prime \prime}$ diameter. 28N24443-Shipping Weight 502 66;

## JFD LIGHTNING ARRESTOR

No. AT102. Twin lead type. Grounds lightning and all other stalic charges. Can be attached anywhere. No wire stripping necessary. Made of high quality glazed porcelain. U. L. app.
1.32


# J.F.D. ANTENNA ACCESSORIES 

## INSULATORS

These economically priced insulators save time and effort on every TV/FM antenna installation. Mast lead-in and stand-oft types keep cable lines secuie and well anchored.

## MAST LEAD-IN



## FOR $1^{\prime \prime}$ MAST

38N16962-31/2" screw eye. Ea. 9e 10 for 81 c 50 tor 3.85 38N16969-51/2" screw eye. Ea. 12 e 10 for 1.0850 for 5.13 38N16970-71/2" screw eye. Ea. $12 \frac{1}{2}$ e 10 for 1.1350 for 5.37

## FOR $11 / 4$ " MAST

3N16963-31/2" screw eye. Ea. 9c 10 for sle 50 for 3.85 3aN $16964-51 / 2^{\prime \prime}$ screw eye. Ea. 12 e 10 for 1.0850 for 5.13 30N16965-71/2" screw eye. Ea. 121/2c 10 for 1.1350 for 5.37

## FOR $11 / 2^{\prime \prime}$ MAST

38N16966-31/2" scraw eye. Ea. lle 10 for 99 c 50 tor 4.70 38N 16967 - $51 / 2^{\prime \prime}$ screw eye. Ea. 12 c 10 tor 1.0850 for 5.13 38N16968-71/2" screw eye. Ea. 13c 10 for 1.1750 for 5.58

## TWIN LEAD STAND-OFF



First choice for fast, secure anchoring of transmission lines. Single screw eye.
38N16957-31/2".......... Ea. 31/2c 38N16990-51/2".............. 10 for $45 \mathrm{c}^{\prime \prime} \quad 100$ for 4.27
38N $16960-71 / 2^{\prime \prime}$.............. $51 / 2 \mathrm{Ca}$ $\begin{array}{ccc}8 N 16960-71 / 2^{\prime \prime} & \text {............a. } & 51 / 2 \mathrm{c} \\ 10 \text { for } 50 \mathrm{c} & 100 \text { for } & 4.75\end{array}$

## DRIVE-IN TYPE

Made of galvanized steel. For Twin Lead
38N16994-31/2"….......Ea, 31/2c 10 for 32c 100 for 3.04 For Coaxial Cable.
$38 \mathrm{~N} 16995-31 / 2^{\prime \prime}$
38N16995-31/2"…...... Ea. 31/2c 10 for 32 c 100 for 3.04

## : PIPE STRAP



Fastens masts to walls, roofs, cornices, etc. Quickly securely, made of galvanized steel. 28N21938...Ea. 5 c 10 for 45c


## U-BOLT

Made of galvanized steel. Supplied with nuts and washers in place.
28N21931...Ea. 15 cc 10 for 1.35

- COAXIAL STAND-OFF


Single screw eye for coaxial cable up to $1 / 2^{2 \prime}$ diameter. Anchors cable lines securely. 38N16959-34/2"….......Ea. 31/2c 10 for 32 c ......... 100 for 3.04 38N16991-51/2"….......Ea. 5 c 38N16961-71/2".......... Ea. $51 / 2 c$ 10 for 50 c 100 for 4.75

## DOUBLE MAST LEAD-IN



FOR 1" MAST
38N16974-31/2" screw eye Ea. 21 c 10 for 1.8950 for 8.98 38N16975-71/2" screw eye. Ea. 24 c 10 for 2.1650 for 10.26

## FOR $11 / 4^{\prime \prime}$ MAST

38N16980-31/2" screw eye. Ea. 21 c 10 lor 1.8950 for 8.98 3anic9el- $71 / 2^{\prime \prime}$ screw eye. Ea. 24c 10 for 2.1650 for 10.26

## FOR $11 / 2^{\prime \prime}$ MAST

38N16982-31/2" screw eye
Ea. 24 c 10 for 2.1650 for 10.26 3日N $16983-71 / 2^{\prime \prime}$ screw eye. Ea. 26 c 10 for 2.3450 for 11.11

## DOUBLE SCREW EYE

 STAND-OFFSame as above, but less clamp.
38N21850...3" $\ldots . . . . . . . . . . E a . ~ 14 c$ 10 for $1.26 \quad 50$ for 5.98 38N21851 .. $51 / 2^{\text {n }}$.......Ea. 16 c 10 for $1.44 \quad 50$ for 6.84 38N21852 ... 7•1/2" …..Eq. 17c 10 for 1.53 50 for 7.27

$31 / 2^{\prime \prime}$ screw eye.
$38 \mathrm{~N} 16992-1$ screw ${ }^{\text {eye }}$ Clamp... Ea. 6c 10 for $54 \mathrm{e} \quad 100$ for 4.86 $31 / 2^{\prime \prime}$ screw eye. 38N16993-11/4" Clamp Ea. 6e 10 for .54100 for 4.86

## MAST CLAMP

Notched retaining Noiched retaining
clamp holds two clamp holds two masts firmly to-
gether in sturdy gether in sturdy
U-bolf. Made of U-bolt. Made of
galvanized steel.
20N21922 .. Ea. 26c 10 for 2.34

## FLEXIBLE STRAPPING



Serves many uses in antenna installation work. Good for mounting masts on chimneys, posts, etc. Perforated steel. 28N21947-12-Ft.................... 44c 28N21948-25-Ft.......................... 91c 28N21949-100-Ft..................... 2.91


Acts as dependable anchor for guy wire when hammered in at an angle. Made of galvanized steel.
28N21930-
10 for 45 c 100 for 4.27

ALL-ANGLE MOUNT
Permits setting of $1 / 2^{\prime \prime}$ to $11 / 4^{\prime \prime}$ masts at most suitable angle for maximum reception. Made of rustresistant steel. W/. hdwe. 4.75 dz . Ea. 14e


Solves almost all antenna mast mounting problems. Perforated flange permits setting of mast at any angle. Mounts any-where-on walls, flat or slanted roofs. Pre-assembled with hardware in place. Heavy gauge steel.
$28 N 21843$.
4.41


## U-BOLT BRACKET



One of the most popular and practical antenna mounts. Sturdy U.bolt securely grips all masts from l" to $2^{\prime \prime}$ OD. Made of rust-resistant steel. Supplied with hardware.
28N21837- $3^{\prime \prime}$ " size .........Pr. 1.06 28N21838--4", size.........Pr. 1.23 28N21839-7" size .........Pr. 1.47

## RING CLAMPS

 ant steel.
For $3 / 4^{\prime \prime}$ to $1^{\prime \prime}$ masts.
28N21917. Ea. 6e 10 for 54e For $11 / 4^{\prime \prime}$ to $11 / 2^{\prime \prime}$ masts.
20N21918.. Ea. 6c 10 for 54c

## "FLOATING" GUY RING



Free-floating. Will not bind. Retains guy wire securely. Made of galvanized steel.
for $1^{\prime \prime}$ mast.
a. 12c 10 for 1.08 For $114^{\prime \prime}$ mast.
28N21920 ...Ea. 12 C 10 for 1.08



Anchors guy wire securely and permanently. Made of galvanized steel.
28N21923...
10 for $45 \mathrm{e} \quad 100$ for 4.27

CHIMNEY MOUNT


Can be erected in minutes. withou erected in minules.. without special tools or drillIng. Adjustable, two-section design permits unlimited spacing belween brackets for maximum support of masts $1 / 2^{\prime \prime}$ to $11 / 2^{\prime \prime}$ OD Complete with two 12 -it. Jengths of $3 / 4{ }^{\prime \prime}$ galvanized steel bands and hardware. 28N21834 ................................ 1.55

## WALL BRACKET



Anchors $7 / 8^{\prime \prime}$ to $11 / 4^{\prime \prime}$ masts salely and securely. Adjust. able $6^{\prime \prime}$ to $15^{\circ}$ from walls. Heavy gauge rust-resistant Heary
sleel. steel.
28N21835
4.41

## EXTENSION BAR



Extension bar for above wall bracket. Extends range of wall clearance to $24^{\prime \prime}$.
28N21836
1.76

## VERTICAL BRACKET



Extends masts $6^{\prime \prime}$ from wall. Grips masis $1 / 2^{\prime \prime}$ to $11 / 2^{\prime \prime}$ OD Mrips masis $1 / 2$ to $11 / 2$ corrosion-resistant calMade of corrosion-resistant gal-
vanized steel. With hardware. Vanized steel. With hardware.
28N21840............................... 2.12

## MAST CONNECTOR



Joins masts quickly and securely. Made of rust-resistan steel.
For 1'" to $11 \mathrm{~B}^{\prime \prime}$ masts.
28N21815................................
For $11 / 4^{\prime \prime}$ to $136^{\prime \prime}$ masts.

## AM ANTENNAS AND ACCESSORIES



## RELIANCE WINDOW MAST

Enjoy the benelits of an outside aerial without the inconvenience of a rool installation. This fast, easy window mast antenne improves reception on both standard broadcast and shor borme Easily installed in only thre wave. Easily installed in only three minutes. Atrach lead-in strap. screw bracket down on sill, and the job is done. 3 -section rod extends to 80 inches, telescopes to 40 inches. Cadmi um plated steel construction. Includes mitg. screws, hardware and instruc tions.
28N22006-Shpg. wt. 11/2 lbs..... 1.73
LOW-COST AERIAL KIT
Has 100-ft. 7/26 aerial wire, 40 ft .
 wrulated lead-in, 25 ft . ground in strip, 2 insulators, nail knobs.
28N16476-Shpg. wi. 6 lbs T. 09
ECONOMY KIT: $100 \mathrm{ft} .7 / 26$ cerial wire, 25 ft . lead-in, lead-in strip, ground clamp, 2 insulators, nail knobs.
28N16478-Shpg. wt. 2 lbs.
69

## ICA TENNA-SCOPE



New, bull-in tuned radio antenna eliminates the use of an outside aerial and ground. Gives better selectivity and hagher signal-tonoise ratio. May be connected to any radio without the necessity of making any circuit changes
28N16452-Shpg. wt. 1 lb
1.76

## ANTENNA LOOP



For battery and midget sets. Replaces antenna conl, bigh inductance permits removal of turns for adjustment. $43 / 4^{\prime \prime} \times 8^{\prime \prime}$
28N16450-Each
$48 c$
Lots of 10 ........................................................ 3.95
ICA 3-IN-I RADIO TUNER
Antenna tuner, wave trap, aerial elim-
nator all in one instrument, depend ing on the manner of its connect:ons to the radio set. Cperates on any make or model set-enhancing performance. 32N12678-Each

49c
 4.50

## PLASTIC INSULATOR

Low-loss polystyrene insulator for use with 300 ohm twin-lead. Holds line securely but will not pinci and change impedance. Attaches with a single wood or metal screw. 38 N16958 ... 100 for 4.50

Each 5 E


## WARD STAND-OFF INSULATOR

Unique plastic design holds any flat transmission line securely, but absolutely cannot pinch line or change impedance. Does not have to be strung on line. One screw attachment. Clear plastic sheds waler.
38N16956-Each

## MUELLER TWIN LEAD ANTENNA CLAMP

Here is c new standoff type insulator that clamps on masts, crossarms, pipes, beams, etc. up to $13 / 8^{\prime \prime}$ thick. Easy to use; grips mast securely. It rigidly supports the twin lead transmission line load-in $21 / 2^{\prime \prime}$ from the mast or pipe. All metal parts are completely weatherproofed. Shipping weight 6 oz .
38N17107-For Twin Lead. 10 for 1.37
Each 15

## VERTICAL HOME ANTENNA

Eliminates dangerous horizontal wires, insures clear, noise-free reception. Includes special 12 -ft. 4 section antenna mast of rust-proof, flexible sieel, $40-\mathrm{ft}$. lead-in wire, $10-\mathrm{ft}$. ground wire, arrester, insulators, screws, 2 pipe straps, one strap mig. assembly.
28N21824-Shpg. wt. 4 lbs.
3.70


3/8" PLATED GROUND RODS
Use if pipe ground is notavailable Heavy steel yoke for head.
28N17187 4 ft. 48c 10 for 4.56 28 N 171886 ft . 66 c 10 for 6.27


SINGLE LEAD-IN STRIP
Clip terminal each end 28N17101-Each 5c 10 for. 45c

GRIP" GROUND CLAMP
a vise-like grip on pipe. Sharp pointed screws make perfect contac

10c



## PIPE GROUND STRIPS

Broad ground clamp adjustable to fit any slze prpe up to $2^{\prime \prime}$ in diameter. Provided with clip for attaching ground lead. 28N17102
$5 c$
SAVL MORE! 10 for........................................45c

## BRACH NEON DUPLEX ARRESTER



PORCELAIN ARRESTER
(A) Housed in brown glazed porcelain; approved. 28N16753-Each 19c 10 For. 1.70

## ARRESTER FOR DOUBLETS

(B) An approved arrester for the doublet type of antenna. Aur-gap type, insulated from ground. Porcelain case.

(B) 28N16950.

43c

## AERIAL INSULATORS

Dependable porcelain insulators. " C " is screw in type for holding lead-ins or grounds off walls; " $D$ " is standard nail-knob; " $E$ " is strain insulator.

| No. | Type | Size | Each | 10 | 100 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $28 N 16972$ | C | $3^{\prime \prime}$ | $51 / 2 \mathrm{c}$ | 50 c | $\mathbf{4 . 5 0}$ |
| 28 N 16986 | C | $7^{\prime \prime}$ | 5 c | 45 c | 4.05 |
| $28 N 16977$ | D | $2^{\prime \prime}$ | 4 c | 35 c | 3.15 |
| 28 N 16802 | E | $21 / 2^{\prime \prime}$ | 5 c | 38 c | 3.45 |

## GLASS INSULATORS

(F) Special tempered glass, unaffected by heat or cold. Has a high tensile sirength and gives long, dependable service. Choice of 2 sizes, $3^{\prime \prime}$ and 33/4" long.
28N16850-3" long.
5c
10 _16.....45c 100 .................... 4.05


## TWIN-LEAD SPLICE

 Speeds splicing without the need for twisting or soldering. 28N16954. 11 c 10 For.MOSELY DIPOLE CONNECTOR For center connecting 300 -ohm line type folded dipole. Positive connection without soldering. Hardware included 28N16953-Wt. 2 oz.
$34 c$

## ANTENNA MOUNT

New "Universal" type for speedy installation. Fits pipes, masis, up to $11 / 4^{\prime \prime}$ diameter. Allows complete rotation and adjustment affor installation. Cast aluminum base. Shpg. wt. $21 / 2 \mathrm{lbs}$. 28N22045
3.96

## CHIMNEY MOUNT BRACKET

Pair heavy plated stool brackets with sufficient binding to fit average chimney. Set up in 5 minutes without special tools.
28N22046-Shpg. wt. 2 lbs.
1.59


# AUTO ANTENNAS, VIBRATORS, AND ACCESSORIES 



## MALLORY REPLACEMENT VIBRATORS

Mallory replacement vibrators for auto radios and battery operated household receivers. Precision made, Mallory vibrators are noted for their long lite and trouble-iree service. W246 are rated at 4 volts and T4000, T4002 and T4003 are rated at 2 volts.

| Stock No. | Type | Each | Stock No. | Type | Each | Stock No. | Type | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 27N6114 | 222 | 4.88 | 27N6136 | 294 | 2.62 | 27N6084 | 852 | 22 |
| 27N6096 | 245 | 4.12 | 27N6137 | 298 | 3.38 | 27N6085 | \$53 | 2.62 |
| 27N7278 | 245A | 4.12 | 27N6093 | 505P ${ }^{\text {P }}$ | 2.62 | 27N6086 | 80.4 | 2.62 |
| 27N6088 | 245 C | 4.12 | 27N7285 | 506 P | 3.38 | 27N7276 | $\times 59$ | 2.62 |
| 27N7280 | W245A | 4.12. | 27N6077 | 509P | 2.20 | 27N6076 | 860 | 2.62 |
| 27N6097 | 246 | 4.12 | 27N6073 | 514 | 4.12 | 27N7293 | 870 | 2.62 |
| 27N7281 | 246 A | 4.12 | 27N6074 | 716 | 4.12 | 27N7287 | 903 M | 2.20 |
| 27N7283 | W246 | 4.12 | 27N6062 | 725 C | 4.56 | 27N6079 | 952W | 4.12 |
| 27N6169 | 247 | 4.12 | 27N6107 | 742 | 4.12 | 27N6080 | 953 W | 4.12 |
| 27N6098 | 248 | 4.12 | 27N7289 | 743 | 4.12 | 27N | 954 | 4.12 |
| 27N6171 | 249 | 1.12 | 27N7277 | 748 | 4.12 | 27N7275 | 1100 | 2.62 |
| 27N6130 | $273{ }^{\circ}$ | 4.88 | 27N6063 | 8256 | 3.67 | 27N7273 | 1501 | 3.38 |
| 27N6167 | 273 D | 4.88 | 27N6108 | 826 C | 3.38 | 27N7271 | T4002 | 5.70 |
| 27N6135 | 292 | 3.38 | 27N7292 | $\times 3.3$ | 3.38 | 27N7272 | T400 | 5.23 |

MALLORY REPLACEMENT GUIDE
Includes alphabetical listing of radio and vibrator power supplies by ridg. and model number. Gives Mall 23N19993

## MALLORY VIBRATOR DATA BOOK

A complete Technical manual on the operation and application of 23N19992

98c


## CORNELL-DUBILIER VIBRATORS

C-D, known to servicemen as one of the largest manufacturers of quality condensers, now offers a line of popular replacement vibrators built to the same rigid standards of quality for which they are famous. Now "micro-metric" equipment permits easy production maintenance of high tolerances. New type pole coil and new type mounting. Completely enclosed in sponge rubber. Hermetically sealed

| Stock No. | $\begin{aligned} & \text { C-D } \\ & \text { Type } \end{aligned}$ | Mallory Equiv. | Each | Stock No. | $\begin{aligned} & \text { C-D } \\ & \text { Type } \end{aligned}$ | Mallory Equiv. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 27N6023 | C00 | 294 | 2.62 | 27N6031 | C31 | 294SW | 2.62 |
| 27N6024 | COI | 510 P | 2.62 | 27N6032 | C35 | 851 | 2.62 |
| 27N6025 | C03 | 294C | 2.62 | 27N6033 | C42M | $859 \dagger$ | 2.20 |
| 27N6026 | C14 | 1100 | 2.62 | 27N6034 | DOO | 248 | 4.12 |
| 27N6027 | C20P | 505P | 2.62 | 27N6035 | D06 | 249 | 4.12 |
| 27N6028 | C21 | 654 | 2.62 | 27N6036 | D25 | 273C | 4.88 |
| 27N6029 | C23P | 507P | 2.20 | 27N6037 | D26 | 716 | 4.12 |
| 27N6030 | C26P | 859* | 2.20 |  |  |  |  |

* For Philco sets.

27N19728
CORNELL-DUBILIER VIBRATOR GUIDE
FREE
RELIANCE AUTO RADIO SUPPRESSORS


Quality black molded cases. No Type Description 27N5283 A Standard Spark Plug 27N5246 A Special for Ford V8 27N5278 B Compact Spark Plug 27 N5247 B Compact Spark Plug Type for Ford VS 27 N 5253 C Cable Type for Buick 27N5285 D Fibow Cable Type 27N5279 E Standard Distributor 27N5293 F Distributor Type for Ford 1936 and carlier 27N5272 F Distributor Type for Ford 1937-38-39-40 Plymouth 1 Ac Each
Per 10 Assorted
*like " 1 " with "II" connector

WIRE WOUND UNITS G
Efficient type, do not impair motor efficiency. Low d.c. resistance. high inductance. Acts as r.f. choke. Extra rugged.
27N5296-Spark Plug Type. 27N5297-Distributor Type. Each 35c; 10 for
3.15

## MASTER DISTRIBUTOR UNIT



Aermetically sealed; imperviC. resistance is and heat. D.C. resistance 10,000 ohms. 39 e 27N5284.

39 c

## ANTENNA CONNECTOR

Eliminates front wheel noise. Easy to install. Place in each hub proof. proof.
?
$8 c$
$.22 c$

27N5294-Each. . 10 for.

.

RELIANCE "UNIVERSAL TYPE" AUTO RADIO ANTENNAS

# $\overbrace{4}^{8}$ 

## ADJUSTABLE <br> TELESCOPIC

3 section, $56^{\circ}$ type. Single hole mount on any conour. Ball swivel with lock ing point permits adjustment to any angle and positive lock. Has excellent pickup with minimum noise. Permanently at tached shielded moistureproof $36^{*}$ lead-in and bayonet adapter. Rust proof chromium plated 27N22007...... 2.19
Lots of S............. . . 1.95


For Buicks and other cars using similar windshield mount type an tennas. 3 sections, $36^{\prime \prime}$ maximum length. Easy to install-set rod in socket and tighten set screw. Triple chrome plated brass with słatic tip.
27N21997-For Buicks. .49
 27N21967-For Ford Cars... 1.49


## SIDE COWL MOUNT

3 section, 62-inch, 2 stanchion mounting. Has rustproof triple chrome plated finish and streamlined insulators. Fits the Iatest streamlined bodies as well as older models. Complete with 36 -inch moisture proof lead-in and bayonet type adapter Shipping weight 2 lbs .

## 27N22000.

1.79

Lots of 5 .
1.59

Same features described above, except 106-inches long, 4 section.

27N22001
2.98

Lots of 5


## AUTONE AUXILIARY SPEAKER

## Large 6"PM Speaker mounts in shelf behind rear seat,

 enables passencjers to enjoy clear reception without distracting driver. 3-way control switch mounts on dash, permits operation of front and rear speakers separately or together. May be used with home re. ceivers22N19106-Shrog. wt. 3 lbs.
5.88

## TIRE STATIC

 NEUTRALIZER POWDERConsists of simple injector and kags t ant1-static powder. When injected into tire it eliminates car radio staxtic.
door handle shocks, and spark bites in inner tubes. Powder is packed in individual bugs, one for each tire, including spare. Tire need not be completely dellated.
27N15586-Injector only.
78c
27N15581-Powder only for 5 tires


## ICA ADAPTERS

A. 27N16715-No. 2372-Lead-in Adapter-Converts Delco to TC Motorola Fitting.
B. 27 N16716-No. 2375 -Motorsla Pin Plug.......
D. 27N16718-No. 2396-Adapter-Converts Motorola Pin Plug to

## GENERATOR CONDENSERS

Standard auto radio condensers designed to eliminate generator noise.


| Stock Nb. | Mid. | Each | 10 For |
| :---: | :---: | :---: | :---: |
| 27N14220 | .25 | 25 c | 2.25 |
| 27N14215 | .5 | 27 c | 2.43 |
| 27N14216 | 1.0 | 39c | 3.50 |

# WIRE \& CABLE 



8209


8205


8452


8453


8664

8423


TRANSMISSION LINE CABLES
8204: 72 ohm twisted pair. No. 18, stranded ( $7 \times 26$ ) No. 26 tinned; cotton wrap, rubber ins. 2 cond. cable weather-resistant white cotton braid overall; . $190^{*}$ O.D. $21 \mathrm{mmt} / \mathrm{ft}$ VP $61 \%$ Atten./C' .53 db at $1 \mathrm{mc}, 12.3 \mathrm{db}$ 1N20860
9N20860--Bulk. Cost per it.
. 38 19N16174-500 ft. spool
10.88

8209: 72 ohm shielded twisted pair, conductors and outer cotton like 8204, but cabling includes paper wrap and tinned copper braid; $235^{\hbar}$ OD. $32 \mathrm{~mm} / \mathrm{ft}$. be ween conductors, VP $57 \%$ Atten./C' db at $1 \mathrm{mc}, 149 \mathrm{db}$ a 100 mc Atten. 1. 9N20861-Bulk Cost per t. 19N16162-500 tt. spool
2.68

8205: Twisted pair, No. 22, stranded ( $7 \times 30$ ) inned, rubber ins. Cabled with weather resistant cotton braid; .175" O.D. For use with extension speaker and control circuits. 19N20862-Bulk. Cost per ft. 9N16171-500 ft. spool
7.79

Rubber Jacketed Portable Cord
No. 18, stranded (41x34) bare copper; cotton wrap, $1 / 6^{\prime \prime}$ rubber ins. Cabled with fill ers, cotton wrap, $1 /{ }^{2}{ }^{n}$ rubber overall.

| $\begin{gathered} \text { Mfr's } \\ \text { No. } \end{gathered}$ | Cond. OD. | Stock No. | Cost l't. | Stock No. | Cost <br> 100 Ft . |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8452 | 2-245* | 19N20910 | $4{ }^{4}$ | 19N20909 |  |
| 8453 | 3-275 ${ }^{\prime \prime}$ | 19N20880 | 5d | 19N20879 | 3.97 |
| 8454 | 4-265" | 19N20881 | $6{ }_{6}$ | 19N20882 | 4.56 |

## SHIELDED AUTO \& AIRCRAFT RADIO WIRE

8664: No. 26 solid tinned, copper shield polyethylene ins., tinned copper braid vinyl cover; $.245^{\prime \prime}$ OD., $15 \mathrm{mml} / \mathrm{ft}$ 19N20863-Bulk. Cost per ft.
.86 19N20884-100 ft. spool. 4.93

Flex. stranded tinned copper, cellophane wrap, rubber ins., lacquered cotton braid, lacquer coating, tinned copper braid shield. 170", $195^{\prime \prime}, .225^{\prime \prime} \mathrm{OD}$.

| $\begin{array}{\|l} \text { Mfr's } \\ \text { No. } \end{array}$ | Gauge | Per Ft. |  | 100 Ft . Spool |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Cost |  | Cost |
| 8656 | No. 16 | 19N16219 | $5 ¢$ | 19N20864 | 3.67 |
| 8655 | No. 14 | 19N16218 | $6{ }_{6}$ | 19N20865 | 4.41 |
| 8654 | No. 12 | 19N16223 | $7 ¢$ | 19N2086 | 5.14 |

## Shielded Cable, Rubber Overall

No. 20, stranded ( $26 \times 34$ ) tinned copper cotton wrap, rubber ins. Cabled with cotton braid, tinned copper braid, cotton wrap, rubber overall.

| Pkg. | 8423, 3 -cond.* |  | 8424, 4-cond. $\dagger$ |  |
| :---: | :---: | :---: | :---: | :---: |
| Per ft. | 19N20869 | 08 | 19N20870 | 10 |
| 50 ft . | 19N20843 | 2.94 | 19N20878 | 3.67 |
| 250 ft . | 19N20845 | 15.47 | 19N20877 | 19.84 |

LITZ WIRE, FOR RF COILS
19N16065-8817: 7 No. 41, 2 nylon wraps-100 ft. spool. . . . . . . . . . 24

## TINNED BUS BAR, 100-ft. COILS

19N16111-8012, No. 14....81\& 19N16112-8011, No. 12.... 1.14



8943
GENERAL USE HOOK-UP WIRE

Tinned conductor, cellulose acetate yarn wrap, cel. acet. braid, lacquer coating. 1000 V . breakdown. OD's from $.072^{\prime \prime}$ to $.087^{\prime \prime}$ Choice of black, blue, green, red, yellow. 8941 -No. 20 solid 8943-No. 20 stranded Pkg. No. Each No. Each 25 ft. 19N16066 26e 19N16068 28d 1000 ft . $19 \mathrm{~N} 16067 \quad 7.87 \quad 19 \mathrm{~N} 160698.82$ $8945-$ No. 18 solid 8947 -No. 18 stranded | Pkg. | No. | Each | No. |
| :---: | :---: | :---: | :---: |
| $25 \mathrm{ft}$. | 19 N 16070 | 294 | 19 Nl 16073 | $\begin{array}{lllll}100 & \mathrm{ft} \text {. } 19 \mathrm{~N} 16071 & 1.12 & \text { 19N16074 } & 1.23\end{array}$ 1000 ft . $19 \mathrm{~N} 16072 \quad 9.55 \quad$ 19N16075 10.66 8938: No. 14 stranded, red and black only.

19N16158-25 t. coil. . . . . . . . . . . . . . . 43 e
19N16082-100 ft. spool. . . . . . . . . . . . . . . 1.70


## LOW-LOSS RF PUSH-BACK WIRE

Tinned conductor two cellulose acetate yarn braids, wixed. 1000 volts breakdown. OD's from .067" to $095^{\prime \prime}$. Black, blue, green, red, yellow. Specify colo
8841 -No. 20 solid $8839-N o .20$ stranded ${ }^{25 \mathrm{fkg} \text { f. } 19 \text { N16246 Each } 29 \text { No. }}$ Each $\begin{array}{cccc}25 & \mathrm{ft} \text {. 19N16246 } & .29 & 19 \mathrm{~N} 16249 \\ 100 \mathrm{ft} .19 \mathrm{~N} 16247 & 1.09 & 19 \mathrm{~N} 16248 & 1.21\end{array}$ $\begin{array}{lllll}1000 & \mathrm{ft} \text {. } 19 \mathrm{~N} 16245 & 8.97 & \text { 19N16248 } & 10.21\end{array}$ 8861 -No. 18 solid $8844-$ No. 18 stranded Pkg. No. Each No. Each 25 ft . 19N16199 . 31 19N16208 . 35 $\begin{array}{lllll}100 \mathrm{ft} \text { 19N16204 } & 1.21 & 19 N 16205 & 1.32\end{array}$ $\begin{array}{lll}1000 & \text { ft. 19N16203 } 10.00 \quad \text { 19N16209 } 11.02 \\ 8863-N o . ~ & 6 \text { solid } \\ 8862-N o . ~\end{array} 6$ stranded $8863-N o . ~$
Pkg. No.
Nold Each
$8862-N o . ~$
No. stranded
Each
 100 ft . $19 \mathrm{~N} 16221 \quad 1.43$ 19N16231 1.55 1000 ft . $19 \mathrm{~N} 16222 \quad 12.57 \quad$ 19N16232 13.90


## 8885

Rubber-Insulated Push-Back Wire No. 20 timed, colton wrap, unvulcanized rubber ins., yarn braid, lacquer coating. 2000 volts breakdown. Solid type has $.075^{\circ}$ outer diameter. Stranded type has .080" outer diameter. Green, blue, red, yellow, and black. Specify color.
8837-Solid 8838-Stranded
Pkg. No. Each No. Each

$\begin{array}{rrrrr}25 & \mathrm{ft} \text { 19N16258 } & .29 & \text { 19N16261 } & .32 \\ 100 & \mathrm{ft} \text { 19N16259 } & 1.15 & \text { 19N16262 } & 1.21\end{array}$ 1000 ft . $19 \mathrm{~N} 16260 \quad 9.93 \quad 19 \mathrm{Nl} 6263 \quad 10.29$ Shielded Hook-Up for Grid Leads, ete.
8885: No. 20, 10 No. 30 tinned; rubber ins, yarn braid, lacquer coat, tinned copper braid overall; . $110^{\prime \prime}$ OD. 4000 volts breakdown.
19N16293-25 ft coil.
19N16294-100 ft. spool

# BELDEN QUALITY 

CABLE FOR INTERCOMMUNICATION AND PUBLIC ADDRESS SYSTEMS

INTERCOM AND SOUND SYSTEM CABLE

|  |  |  | 8740.42. 22 gauge solid copper; Formvar enamel coating; wased cotton braid; color coded; conductors cabled in pairs; overal brown cotton braid; lacquer coating. 8743-45. As above but vinyl plastic insulation. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Type | No. Cond. | Diam. | Stock No. | Per <br> Fool | Stock No. | $\begin{aligned} & \text { Per } \\ & 100 \mathrm{ft} \text {. } \end{aligned}$ |
| 8740 | 2 | 130 | 19N16134 | $2 t$ | 19N16133 | 1.76 |
| 8741 | 4 | . 180 | 19N16136 | $4{ }^{\text {e }}$ | 19N16135 | 3.23 |
| 8742 | 6 | . 220 | 19N16138 | 5 c | 19N16137 | 4.12 |
| 8743 | 12 | . 255 | 19N16140 | 7 c | 19N16139 | 5.14 |
| 8744 | 18 | . 280 | 19N16142 | 94 | 19N16141 | 7.50 |
| 8745 | 30 | . 360 | 19N16144 | $15 ¢$ | 19N16143 | 11.91 |

SHIELDED INTERCOM AND SOUND SYSTEM CABLE

8734. 3-conductor; 22 gauge. Tinned copper, flex. stranding; vinyl ins:; waxed cotton braid; color coded; one conductor tinned copper braid shield; two conductors unshielded; brown cotton braid; lacquer coat.
19N16147-Per ft 19N16146-Per 100 tt.

PA CABLE - AMPLIFIER TO SPEAKER

8799. 18 gauge 2 conductor bare copper: flexible stranding; Formvar enamel coat; colton wrap; colton braid; color coded; conductors cabled; tinned copper braid shield 9 N 20 Cl -Per ft.
2.49 9N20914-Per 100 ft. spooi
13.9

19N20911-Per 500 ft . spooi........... 13.96 vinyl plastic insulation; color coded; conductors cabled. 19N16148-Per ft... $11 / 2 \mathrm{f}$ Per $100 \mathrm{ft} . .1 .26$


## COAXIAL CABLE

8229. 72 ohm. 22 Gauge solid. For use with television antenna. Bare copper; polyethylene plastic insulation; tinned copper braid shield; black vinyl plastic jacket. Breakdown voltage 2,000.

## VOICE COIL LEAD WIRE

8127. AWG No. 25. Bare copper wire braided. Stranding $32 \times 40$. Dia. . $024^{\prime \prime}$. 10 ft to a card
19N16153.................................... 14\&
Test Prod Wire, Flexible and Limp No. 18, 65 No. 36 tinned; cotton wrap, rubber overall; red or black. Specify color. 8899: 5000 volts ins., , $140^{\prime \prime}$ OD.
19N16336-14' pkg. (7' red \& blk.).. 294 19N16336-14 pkg. (7' red \& blk.) 19N16337-1000 it spool
19N16337-1000 ft. 8pool 230 OD 12.05

8898: 19 N 16332 - Bulk. Cost per ft. .36

## HEAVY RUBBER CORD

Type SJ. The thick belt of flexible rubber that covers the conductor


PARALLEL RUBEER LAMP CORD
Both conductors sheathed in coating of tough live rubber. Groove between conductors a.lows easy separation without fear of ruining insulation. In Black and Brownspecify color desired.
19N20920-18 Gauge. Per Foot
Per 100 Feet...1.90 Per 500 Feet 24

## MICROPHONE \& TRANSMISSION CABLE

## TWIN LEAD TRANSMISSION LINE


band operation. For use
300 ohm Amphenol 14-056 represents the latest design in RF transmission line. Provides proper match of antenna to all standard 300 ohm input FM and television receivers. 300 ohm recommended by RMA or use with television receivers in broad indoors or outdoors. Low-loss Polyethylen insulation is efficient, tough and weather resistant. Will withstand severe weather conditions.
19N17130--Per foot
Per 100 feet

## 300-OHM TUBULAR TWIN LEAD



## AMATEUR TRANSMITTING TWIN LEAD

75-ohm Amphenol 14-023. For amateur transmitting antenna systems. Conservatively rated at 1000 watts, at 30 MC or lower frequency. $7 \$$. . . . . . . . . . . . . . . . . . . . . . . . . . . .
19N17132-Per foot. . . . Per 100 feet
300-OHM TUBULAR TRANSMISSION LINE: Type 14-076. For use up to 1 KW . Overcomes moisture effects on twin lead. $1 / 2^{\prime \prime}$ outside
diameter. 19 N17133-100.ft. Coil.......6.48 Per foot..... $7 \$$

## SILICONE COMPOUND

Offers protection for radio transmission lines. Causes surface moisture to break up into isolated drops. Maintains high surface resistivity of line. 17 N 15361 - 1 oz. tube

* Wire strippers can be found on page 68.


## FEDERAL SHIELDED 300-OHM LINE



Type K-111. Minimizes noise, "snow" and "ghosts" due to transmission line pick-ups. Also offers excellent protection against ignition, street cars, fluorescent lights, diathermy machines, etc. 19N17136

Per ft. $121 / 2 \mathrm{c}$

## AMPHENOL LOW-LOSS H F COAXIAL CABLE



Dielectric is a solid flexible low-loss mechanically stable thermoplastic of Polyethylene proven most efficient in high frequency transmission circuits. All cables listed below are impervious to acids, alkalis, oils and gasoline. All have a woven copper shield braid over the Polyethylene dielectric with a heavy Vinyl outer covering overall. Many other conductor types available.

| Stock No. | Amphenol No. | Ohms Imped. | $\begin{gathered} \text { Cap. } 1 \\ \text { ft. } \\ \text { mmf. } \end{gathered}$ | Wire Size | Dielectric O.D. | $\begin{aligned} & \text { Cable } \\ & \text { O.D. } \end{aligned}$ | Cost Per Ft. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 19N17120 |  |  |  | 7 | . 28 | , | 13 c |
| 19N17121 | RG/11U | 75 | 20 | $7 \times 26$ | .285" | 405" | 136 |
| 19N17124 | RG/22U | 95 | 16 | No. 20 | .116" | .184" | 146 |
| 19N17122 | RG/58U | 53.5 | 28 | No. 20 | . $116^{\prime \prime}$ | .195* | 78 |
| 19N17123 | RG/59U | 73 | 22 | No. 22 | . 146 " | 242" | 8 |

## Single Cond. Crystal Mike Cable



Flexible stranded tinned copper with tinned copper braid shield; cotton wrap and lacquered braid. Rubber overall. 19N20842-Dia. .280N. Per foot $5 \frac{1}{2} \$$ 50-Foot Roll

## Crystal and Veloc. Mike Cable



Low impedance, 2 conductors, color-coded, in abrasion-proof tinned copper shielding with outer covering rubber.
19N16079....................... Per ft. $\mathbf{S}_{3}^{\mathbf{1}} \boldsymbol{2} \phi$ 50-Foot Roll
3.07
5.49

## 3 Conductor Shielded Cable

Three color-coded stranded conductors in tightly woven tinned copper shield. $1 / 8^{*}$ outer covering of rubber.
19N16145-Per foot.
84
50-Foot Roll. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 7.00

# WIRE-CABLE AND SPAGHETTI 

## PUSH BACK WIRE

## SOLID TINNED <br> COPPER CORE TYPE

No stripping is necessary. Just push back the double cotton - covered moisture proofed braid No. 20 wire. 4 colors for circuit identification. Weight 2 lbs. per 100 fif.

## STRANDED TINNED

 COPPER CORE TYPEFLEXIBLE PUSHBACK HOOK-UP 25 FEET

Very flexible wire of multi. strand tinned copper; equiv. alent to No. 20. Cotton braid pustes back easily. Avail able in 4 colors. Weight, 2 lbs. per 100 feet.

19N16350-Red 19N16352-Black 19N16351-Grn. 19N16353-Yel. Your Cost (10 ior 2.25), Per Coil.
50-Foot Coils

19N16358-Red 19N16360-Black 19N16359-Grn. 19N16361-Yel. Your Cost ( 10 for 4.23), Per Coil. .

> 100-Foot Coils

19N16366-Red 19N16368-Black 19N16367-Grn. 19N16369-Yel. Your Cost (10 for 8.19), Per coil.
1000-Foot Spools

19N16374-Red 19N16376-Black 19N16375-Grn. 19N16377-Yel. Your Cost, Per Spool. . . . . . 6.95

## MULTI-CONDUCTOR CABLE



A high grade, heavily insulated cable. Each lead has a different colored rubber jacket for easy identification. 20 gauge, stranded tinned copper wire. Cotton braid overall.

| No. | Wires | Per Ft. | 100 Ft |
| :---: | :---: | :---: | :---: |
| 19 N 16089 | 3 | $4{ }^{\text {c }}$ | 3.60 |
| 19N16090 | 4 | 5\% | 4.50 |
| 19N16091 | 5 | 6 d | 5.40 |
| 19N16092 | 6 | 78 | 6.30 |
| 19N16093 | 7 | $8{ }^{6}$ | 7.20 |
| 19N16094 | 8 | $9{ }^{1}$ | 8.10 |
| 19N16095 | 9 | 10é | 9.00 |
| 19N 16096 | 10 | 11. | 9.90 |

## bell Wire



Excellent grade No. 18.
19N16338 - $1 / 2 \mathrm{lb}$. roll. Your Cost. . . . . 38 6 19N16051 - 25 ft .
roll. Your $15 \phi$

## 25-Foot Coils

19N16354-Red 19N16356-Black
19N16355-Grn. 19N16357-Yel. Your Cost (10 for 2.43),
Per Coil. .
50-Foot Coils
$27 \$$
19N16362-Red 19N16364-Black 19N16363-Grn. 19N16365-Yel. Your Cost (10 for 4.68),
Per Coil...
100-Foot Coils
19N16370-Red 19N16372-Black 19N16371-Grn. 19N16373-Yel. Your Cost (10 for 8.91). Per Coil.

1000-Foot Spools
19N16378-Red 19N16380-Black 19N16379-Grn. 19N16381-Yel. Your Cost, Per Spool....... . 7.95

## COLORED RUBBER WIRE

Stranded and tin. ned 18 gauge copper wire covered with a live rubber flexibla. easy to flrip. Solders to stantly Available in three colors


> 25-Foot Coils

19N16272-Red |Your cost ea. $\left.\begin{array}{l}\text { 19N16273-Black } \\ \text { 19N16274-Green }\end{array}\right\} \begin{aligned} & 5 \text { for } 224 \\ & 1.00 \\ & 224\end{aligned}$

## COPPER BUS BAR

Round tinned copper bus bar No. 14- $24^{\prime \prime}$ lengths.
19N15965- 10 lgths. 100 laths. Your Cost. . . . . $19 \mathrm{k} \quad 1.80$

## SPAGHETTI TUBING



Highest grade cambric tubing. Red, yellow, green and black. No. 12.
19N15960-Specify Color
Per 30-Inch Length.....
$7 \$$
Your Cost 10 Lengths
$.63 e$


## FINEST GRADE MAGNET WIRE

## Highest qual.

 ity copper wire. Excellent for rewinding power trans formers and chokes, winding coils or any other radio and electrical purpose. Ideal for use in shops, schools, laboratories, etc.
## Double Cotfon

Popular with amateurs and ez. perimenters. Highest quality.

| No. | $B \& S^{1}$ | Per |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 20 | 16 | 22 | \$0.27 | . 46 |
| 19N20974 | 18 | 192 | . 27 | 50 |
| 19N20975 | 20 | 298 | 30 | . 57 |
| N20976 | 22 | 464 | . 37 |  |
| N20977 | 24 | 711 | 43 | 73 |
| 19N20978 |  | 1080 | 46 | . 80 |
| 19N20979 | 28 | 1630 | . 55 | 97 |
| 19N20980 | 30 | 2420 | . 60 | 1.14 |
| 19N20981 | 32 | 3500 | . 80 | 1.37 |
| 19N20982 | 34 | 4920 | 8 | 1.77 |
| 19N2098 | 36 | 6660 | . 27 |  |

Plain Enameled

| Stock No. | $\left\lvert\, \begin{aligned} & \text { Slize } \\ & \mathbf{B} \& S \end{aligned}\right.$ | $\begin{gathered} \text { Ft. } \\ \operatorname{PerLb} . \end{gathered}$ | Your Cost |  | $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Size } \\ & B \& S \end{aligned}$ | FerLb. | Your Cost |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1/4 Lb | 1/9Lb |  |  |  | $1 / 4$ | 1/2 Lb . |
| 9N20950 | 16 | 125 | \$0.23 | \$0.38 | 19N20956 | 28 | 2030 | . 33 | . 55 |
| 19N20951 | 18 | 202 | . 23 | . 40 | 19N20957 | 30 | 3220 | . 36 | . 59 |
| 19N20952 | 20 | 319 | . 25 | . 43 | 19N20958 | 32 | 5100 | . 41 | . 64 |
| 19N20953 | 22 | 506 | . 25 | .44 | 19N20959 | 34 | 8080 | . 46 | . 78 |
| 19N20954 | 24 | 804 | . 27 | . 46 | 19N20960 | 36 | 12800 | . 59 | . 91 |
| 19N20955 | 26 | 1280 | . 30 | . 50 | 19N2096 | S | 20300 | . 78 |  |



19N16155
Multi-strand flexible copper wire covered by a brown mercerized cotton braid. For indoor or AC-DC antenna use. 25-ft, hank $17 e^{19 N 16167-100-f t . ~ C o i l ~}$

53 4
TRANSMISSION CABLE
Consists of twisted rubber-covered conductors covered by a black weatherproof cotton oute braid. 19N17152-Per Foot.
$2 \frac{1}{2} \phi$ Per 100-Ft. Coil. Wt. 4 lbs
2.00

## COTTON TWISTED PAIR



18 gauge, ${ }^{1} \xi^{\prime \prime}$ R.C. wire with a cotton co vering. Yellow and green mizture. 19N20902-Per Foot

## TELEPHONE WIRE

For general use and inter-com. phones. 2 Conductor No. 19 Gauge $1 /{ }^{\prime \prime}$ R.C. ......... 34
19N20895-Per Foot. .............. 45 Per 100 Feet . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2.45 19N20896-3-Conductor No. 19. Per Ft. 41/20

## SHIELDED LEAD-IN, HOOK-UP WIRE

10 -strand wire covered with live rubber, waxed cotton braid and woven tinned shield 19N16240-
50-Foot Roll 35 100-Foot Roll
THERMOPLASTIC HOOK-UP WIRE
New thermoplastic insulation strips clean-is oil and acid resistant. Will withstand 180 F. Underwriters approved.
10,000 volt breakdown test. For use where high conductivity and low loss is essential Available in Black, Red, Blue, Green, and Yellow. Specify color. Shipping wt. per 25 feel: 4 ounces.
19N16382-25 ft. No. 20 Solid.
19N16383-100 ft. No. 20 Solid.
19N16384- 25 ft . No. 20 Stranded
19N16385-100 tt. No. 20 Stranded

## COPPER AERIAL WIRE

Made of the finest copper obtainable. All rolls guaranteed to be full length and standard gauge as specified. Fits any type aerial.

BARE STRANDED-75-FT. COILS

| No. | Size | Per Coil | 10 Coils |
| :---: | :---: | :---: | :---: |
| $19 N 16041$ | $7 / 26$ | 32 c | 3.14 |
| $19 N 16042$ | $7 / 24$ | 42 c | 3.99 |
| $19 N 16043$ | $7 / 22$ | 59 c | 5.60 |

ENAMELED STRANDED-100.FT. COILS

| No. | Size | Per Coil | 10 Coils |
| :---: | :---: | :---: | :---: |
| $19 \mathrm{~N} 161 \overline{17}$ | $7 / 22$ | 1.08 | 10.26 |

SOLID ENAMELED-100-FT. COILS

| No. | Size | Per Coil | 10 Coils |
| :---: | :---: | :---: | :---: |
| 19 N 16118 | No. 14 | 81 c | 8.70 |
| 19 N 16119 | No. 12 | 1.17 | 11.15 |

## INSULATORS

## Johnson Thru-Panel Insulators



White glazed porcelain non-hygroscopic. Specifi cally designed for high RF Jack types have terminals for connection above and below panel-take standard banana plugs. All have longest possible leakage paths. Nickel-plated brass pardware.

| Stock No. | Type No. | Top Ht. | Hot. 11t. | Hole | ware | a. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 38N16736 | 135-10 | $11 /{ }^{\text {n }}$ | 1/" | , | 10 | 1 |
| $38 N 16737$ | 135-40.J |  | 1/2 | $1 / 2$ | Jack | 268 |
| 38N16738 | 135-42 |  |  |  | 10/32 | 18 |
| 38N16739 | 135-12.J |  |  | 7 | Jack | 24 |
| 38N16740 | 135-4 |  |  | $5 / 16{ }^{\prime \prime}$ | fi/32 | 15 |
| 38N16741 | 135-45 |  |  | is | 10/32 | 264 |
| 38N16742 | 135-15J | $18 / 8{ }^{\prime \prime}$ | 11 | $9{ }^{\prime \prime}{ }^{\prime \prime}$ | , Jack | 35 |

Johnson Stand-Off Insulators


All-purpose stand-offs of white glazed porcelain. Supplied with nickel-plated hardware as listed below.

| Stock No. | Type No. | Fig. | Ht. | Hardware | Fach |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 38N16746 | 135-22 | 1 | $1^{\prime \prime}$ | 8/32 | 114 |
| 38N16748 | 135-22.5 | 4 | $1^{\prime \prime}$ | Jack | 144 |
| 38N16745 | 135-20 | 1 | 1916" | 10/32 | 12 |
| 38N16744 | 135-20J | 4 | $1918{ }^{\prime \prime}$ | Jack | 15 |
| 38N17024 | 135-65 | 3 | $13 / 8{ }^{\prime \prime}$ | 10/32 | 18¢ |
| 38N17025 | 135-86 | 2 | 23/4" | 1/4-20 | 414 |
| 38N17026 | 135-6" | 2 | 41/2" | 1, -20. | 504 |

JOHNSON LEAD-IN BUSHINGS


For use where insu lated mountings are needed. Type 5 of white glazed porce. lain, Type 6 of Alsimag 196. All have long leakage path. Cushion washers and necessary hard ware furnished

| Stock No. | TypeNo. | Fig. | Dimensions | Fach |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Ht. Dia. Lht. |  |
| 38 N 17020 | 135-50 | 6 | $1 / 2^{\prime \prime}$ 3/4" $2^{\prime \prime}$ | 214 |
| 38N17021 | 135-51 | 6 | 13/16" $11 /{ }^{\prime \prime}{ }^{\prime \prime} 27 / 8{ }^{\prime \prime}$ | 294 |
| 38 N17022 | 135-52 | 6 | $11 / 8^{\prime \prime} 1^{3} 4^{\prime \prime} 4^{\prime \prime} 4^{1 / 4}$ | $47 \%$ |
| 38N17023* | 135-55 | 5 | $1 / 4{ }^{\prime \prime} 3^{\prime \prime} 11$ | 18 |

Made of Alsimag 196.

## JOHNSON FEEDER SPREADERS

Ideal for receiver and transmitter leadins. High grade, low absorption, unglazed porcerepellent characteristics. Type 136-122 is provided with notches for $11 / 2^{"}$ line spacing. All have $3 / 8 \times 11 / 2^{\prime \prime}$ cross section

| Stock No. | Type No. | Lgth. | Each |
| :---: | :---: | :---: | :---: |
| 38N17027 | $136-122$ | $2^{\prime \prime}$ | .10 |
| 38N17028 | $136-124$ | $4^{n}$ | .14 |
| 38N17029 | $136-126$ | $6^{n}$ | .18 |

## JOHNSON CONES



Made of ultra stealite insuring minimum loss at high frequencies. Threads tapped directly into ceramic. Ideal for mtg. condensers, coils, tube sockets, other HF apparatus. Complete with mtg. hardware.

| Stock No. | Type N | Ht . | B. Dia. Thread Pan. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 38N17005 | 135-500 |  |  |  | . 18 |
| 38 N 17006 | 135-501 |  |  | 18/32 | . 21 |
| 38 N 17007 | 135-502 | 11 | $1{ }^{\prime \prime}$ | 8/32 | . 38 |
| 38N17008 | 135-503 | 1 | 11/8" | 10/32 | . 44 |

## ICA STAND-OFF INSULATORS



Made of white glazed insulex. 38N16730-1" high. 38N16731-18/8 high 38N16732-13/4" high

NATIONAL ISOLANITITE PLUG AND SOCKET



## NATIONAL STEATITE "CONES"

GS-6 and GS-7 tapped 10/32; all others tapped $8 / 32$.

| Stock No. | Type | Ht . | Ea. |
| :---: | :---: | :---: | :---: |
| 38N14493 | GS-10 | 8 | 9 |
| 38N14483 | GS-5 | 1/4" | 304 |
| 38N14484 | GS-6 | ${ }^{\prime \prime}$ | 42\% |
| 38N14485 | GS-7 | 3 " | 75. |

National Isolantite Stand-Offs
Metal mounted top, bottom.


| Stock No. | Type | Dia. | Ht. | Ea. |
| :---: | :---: | :---: | :---: | :---: |
| 38N14479 | GN-1 | 1/2" | 13 |  |
| 38N14480 | GN-2 | 1/2" | 27 | . 3 |
| 38N14481 | Gs-3 | 3\%" | $27{ }^{\prime \prime}$ | . 6 |
| 38N14482 | GN-4 |  |  | . 75 |
| 38N14475 | GS4A | 3\% ${ }^{\text {\% }}$ |  |  |

## STRAIN INSULATOR

A $11 / 2^{\prime \prime}$ glazed porcelain strain insulator for an tenna quy wires. 5\&
38N17175-Each

## BIRNBACH

X-MITTER LEAD-IN INSULATORS


Glazed porcelain $23 / 4^{\prime \prime}$ high. With hard ware and washers for water tight seal.

| Stock No. | Rod | Bushing | Each |
| :---: | :---: | :--- | :--- |
| 38N17037 | $10^{\prime \prime}$ | Metal | 1.03 |
| 38N17038 | $15^{\prime \prime}$ | Metal | 1.18 |
| 38N17039 | $10^{\prime \prime}$ | Porcelain | 1.32 |
| 38N17040 | $15^{\prime \prime}$ | Porcelain | 1.68 |

## SMOOTH COIL FORMS

Special value for servicemen Blank bakelite forms, suitable for winding coils to any specificaion you require. 4, 5, and 6 prong types.
29N10060--4 prong type.
29N10061-5 prong type. 29N10062-6 prong type.
Any Above, Each
214
RELIANCE RIBBED COIL FORMS


Made of high quality low-loss bakelite. Ribbed for airspaced winding. Knurled flanges for ease in handling. grooved for wave band index. Eight ribs.

## Medium Size

Undrilled. $15 / 8^{\prime \prime}$ diameter. $35 / 8^{\prime \prime}$ high
29N9630-4-Prong
29N9631-5-Prong
Each 354
29N9632-6-Prong
.38

## Small Size

Undrilled. $18 / 8^{\prime \prime}$ diameter. $21 / 4^{\prime \prime}$ high. 29N9988-4-Prong
29N9989-5-Prong . . . . . . . . . Each . 23 .
29N9990-6-Prong. .
Each 254

## AMPHENOL MINIATURE POLYSTYRENE FORMS



Undrilled. $3 / 44^{n}$ dia., $1^{9}{ }^{16} 6^{\prime \prime}$ long. Permanent mtg , form has raised hole in center for
self tapping screws.
29N11577-Permanent Mig. . . . . . . . . . . . . 10 .
29N 9629 - 6 -Prong Form . . . . . . . .

## AMPHENOL "'912" PLASTIC RODS

 SHEETS-TUBING-STRIPS
'912-A" POLYSTYRENE RODS
Expertly molded from pure low-loss poly. styrene. Available in $12^{\prime \prime}$ lengths for machining special coil forms and low loss parts.

| Stock No. | Dia. | Type No. | Each |
| :---: | :---: | :---: | :---: |
| 38N8015 | $1 /{ }^{\prime \prime}$ | 19R125 | .021/2 |
| 38N8067 |  | 19R250 | . 08 |
| 38N8068 | 右 | 19 R 375 | . 17 |
| 38188069 | 1/2" | 19 R 500 | . 30 |
| 38N8016 | \%" | 19 R 625 | . 48 |
| 38N8017 | 8/4 | 19R750 | . 68 |
| 38N8070 | $1^{*}$ | 19R1000 | 1.26 |

"912-A" SHEETS
Made of low-loss Polystyrene. $12^{\prime \prime}$ x $16^{\prime \prime}$ size ideal for use when a window pane lead-in is desired.

| Stock No. | Type No. | Dimensions | Each |
| :---: | :---: | :---: | :---: |
| 38N8025 | 19-0628 | $4 \times 8 \mathrm{x}^{1 / 160}$ | . 16 |
| 38N8028 | 19-0938 | $4 \times 8 x^{3}, z_{2}^{\prime \prime}$ | . 20 |
| 38N8108 | 19-093 | $12 \mathrm{x} 16 x^{3} / z^{\prime \prime}$ | 2.18 |
| 38N8026 | 19-1258 | $4 \times 8 \times 1 / 8{ }^{\prime \prime}$ | . 24 |
| 38N8019 | 19-125 | 12x16x ${ }^{1 / 8}$ | 2.71 |
| $38 \mathrm{N8027}$ | 19-2508 | $4 \times 8 \times 1 / 4^{\prime \prime}$ | . 39 |
| 38N8020 | 19-250 | 12x16x1/4" | 5.44 |

## '912-A" TUBING

Polystyrene tubes $12^{\prime \prime}$ long with 1 借" wall thickness. For coil forms. Extremely low RF loss.

| Stock No. | 1 Type No. | Dia. | Each |
| :---: | :---: | :---: | :---: |
| 38N8029 | 19T3-062 | $5 / 16{ }^{\prime \prime}$ | . 09 |
| 38N8030 | 19T4-062 | $3{ }^{3}$ | .11 |
| 38N8032 | 19T5-062 | $1 / 2^{*}$ | . 14 |
| 38N8031 | 19T6-062 | 5/8" | . 19 |
| $38 N 8033$ | 1977.062 | 3/4" | . 23 |
| $38 N 8034$ | 19T8-062 | " | . 30 |

## "912-B" STRIPS

A synthetic resin having transparency greater than most glass and with good in sulation characteristics. Can be shaped (when heated), drilled, cut, etc. For coil (when heated), driled, cut, etc. For coll supports, line spreaders, trimmer bases or $12^{\prime \prime}$ long stript.

| Stock No. | Type No. | Width | Thickness | Ea. |
| :---: | :---: | :---: | :---: | :---: |
| 38N8064 | 65151-500 | 1/2" | 1,16" | . 18 |
| 38N8066 | 65 TS1-1000 |  | 1/10" | . 30 |
| 38N8085 | 65TS2-500 |  | $1 /{ }^{*}{ }^{*}$ | 22 |
| 38N8086 | 65TS2-1000 | ${ }^{\prime \prime}$ | $1 / 8$ | . 33 |
| 38N8087 | 65TS4-500 | $1 / 2^{\prime \prime}$ |  | . 30 |
| 38N8088 | 65TS4-1000 |  |  | . 53 |
| 38N8089 | 65TS8-500 |  |  | . 58 |
| 38N8090. | ,65T58-1000\| |  | 11/3" | . 0 |



## AMPHENOL POLYWELD "912*

Colorless, transparent and ready to use. Pure polystyrene in solution. Matchless tor doping" coating, impregnating or sealing. Used as an adherent, Polyweld jojns two section of polystyrene. It contains solvents that acpoly "weld' surfaces into a single unit Will not disturb circuit constants when used Will not disturb circuit constants when used commended for VHF, UHF and general electronic applications. Applied by dipping. or with a brush. Dries sufficiently in 4 to 8 minutes leaving a hard transparent coating of pure polystyrene. Non-hygroscopic
17N15362-2 oz. bottle
17N15383-4 oz. bottle.
17N15364-2 oz. bottle with brush........ . 15

## FLUORESCENT FIXTURES FOR THE HOME

## ALL ADAPTOR TYPES SUPPLIED WITH CORD, PLUG AND 4" CUPS



## DRAKE FLUORESCENT FIXTURES

Gracefully rounded, rich modern styling makes these fluarescent fixtures ideal for kitchen, bedroom, hall or office. Scientifically designed and engineered for maximum lighting efficiency plus outstanding beauty. Steel reflector has baked-on white enamel inish. Streamlined, high-polish aluminum ends with choice o trim. Uses $2-20$ watt lamps. Dimensions: $26 \times 83 / 4 \times 23 / 4^{\prime \prime}$. For $115-120$ volts, 60 cycles $A C$. Shipping Weight 8 lbs . U/L approved. Less lamps.

| Stock No. | Trim | Each, Lots of 3 | Each |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { 33N25594 } \\ & \text { 33N25596 } \\ & \text { 33N25598 } \end{aligned}$ | Chrome Chinese Red Blue | $\begin{aligned} & 5.37 \\ & 5.67 \\ & 5.67 \end{aligned}$ | 5.85 6.17 6.17 |
| FLUSH TYPE |  |  |  |
| $\begin{aligned} & \text { 33N25595 } \\ & \text { 33N25597 } \\ & \text { 33N255999 } \end{aligned}$ | Chrome Chinese Red Blue | $\begin{aligned} & 5.97 \\ & 6.27 \\ & 6.27 \end{aligned}$ | 6.50 6.83 6.83 |



## FLUORESCENT KITCHEN UNIT

Maximum light without shadows or qlare. End pieces completely cover body and sockets for protection, yet permit removal o lamps without disassembling unit. White baked-on enamel Uses 2-T12 20 watt lamps. For $110-120$ volt 60 cycle AC. $24 \%$. Uses Less lamps.
33N25551-Shpg. wt. 7 lbs. Each
5.35

Each, in lots of 3


## NEW FLUORESCENT KABNIT-LITE

Scientifically designed to throw soft, glare-free fluorescent light all over the top of your range, sink or other work crea. Has convenience outlet for plugging in other appliances. Finished in gleaming white, chip-proof, baked-on enamel with brilliant chrome trim. Matches the most modern kitchen. Non-static plastic shield won't crack and can be cleaned easily with soap and water. Shipping Weight $41 / 2$ ibs. For 110 volts, 60 cycles AC. Less lamps.
33N25592-15-Watt $181 / 2^{\prime \prime}$ Long. List 7.95......................Net 5. 59 Each, in lots of 3.
33N25593-20-Watt 241/2" Long. List 8.95
...8.85
Each, in lots of 3 .
5.37


## DELUXE DESK LAMP

1. Lights entire desk area. Shade and base of one-plece pressed steel, baked wrinkletaupe finish. Uses 15 W . lamp. 133/4" H., 191/4" shade. Less lamp. List 8.35.
33N25550-Wt 8 lbs
Each
5.60

Each, lots of 3......................... 4.98

ATTRACTIVE FLUORESCENT DESK LAMPS
FOR HOME \& OFFICE
Fine quality lamps of durable construction and rich finish. Give excellent light coverage over work area.

## EXECUTIVE DESK LAMP

2. Blends with any decorative scheme-heavy cast base and column, bank bronze finish Base has large pen and pencil well. Uses 15 W . lamp 110 V 60 cyc. AC. Less lamp. 33N25563-Wt. 11 lbs. List 14.60, Each. 9.54 Each, in lots of 3.................8.76

CIRCULAR FLUORESCENT LIGHT
Artistically designed fluorescent unit of heavy gauge steel. White baked-on enamel, chrome center trim. Flush type or adaptor type mounting. With glareless 32 watt circline lamp. $110-$ 125 volt, 60 cycle AC. $12^{\prime \prime} \times 33 / 4^{\prime \prime}$. Shpg. wt. 7 lbs. Fed. Excise Tax included.


| Stock No. | Type | Ear. Lots of 3 | Each |
| :---: | :---: | :---: | :---: |
| 33N25556 | Flush | $\mathbf{7 . 0 2}$ | $\mathbf{7 . 6 4}$ |
| 33N25586 | Adaptor | $\mathbf{7 . 0 2}$ | $\mathbf{7 . 6 4}$ |



## DELUXE CIRCLINER

Fixture of unrivaled elegance-new circular fluorescent light adds beauty to any room. "Neptune" model features attractive etched glass center ornament with polished brass finial. Available in flush or adaptor type mountings. With lamp. 110 volts 60 cycles. AC White baked on onamel cycles. AC. White baked-on enamel. $12^{\prime \prime}$ x $33 / 4^{\prime \prime}$. Wt. 7 lbs. Fed. Excise Tax

| Stock No. | Type | Ea. Lots of 3 | Each |
| :---: | :---: | :---: | :---: |
| 33N25580 | Flush | 9.87 | 10.75 |
| 33N25581 | Adaptor | 9.87 | 10.75 |

## SHIELDED CIRCLINER

New, unusual lighting unit! Shielded fluorescent Luminaire finished in White baked enamel with becutiful etched design glass bowl. Available for flush or adaptor mounting. With lamp. $110-125$ V. 60 cycle AC. $141 / 2^{\prime \prime} \mathrm{x}$ 5". Wi. 8 lbs. Fed. Excise Tax included. List 20.90.


| Stock No. | Type | Ea. Lots of 3 | Each |
| :---: | :---: | :---: | :---: |
| 33N25582 | Flush | 12.54 | 13.65 |
| 33N25583 | Adaptor | 12.54 | 13.65 |

## PIN-UP MIRROR LIGHT

Novel effect with excellent illumi-nation-for homes, hotels and institutions. Finest 8 -inch plate glass mirror circled with fluorescent light With 12 -inch diameter 32-watt Glare less circline and 6 -ft. cord and plug. Buffers on back allow air circulation Buffers on back allow air circulation
between wall and fixture 110 V .60 cycles. AC. Shpg. wt. 9 lbs.


33N25558-List 19.95. Federal Excise Tax included. Each 13.03 Each, in lots of 3


## ALL-PURPOSE PIN-UP OR BED LAMP

Ideal for every room in the house . . . under kitchen cabinets over mirrors, desks, on any wall. Perfect for reading or sewing in bed. One lamp is sufficient for a double bed. Plastic shield assures glare-free light. Has U.L. app. cord and plug. 14-watt size. Complete with detachable clamps for headboard. Overall dimensions: $2 \times 25 / 8 \times 21^{\prime \prime}$. Shipping weight 4 lbs . Less lamp. 33N25590--Ivory Trim...................Ea. Lots of 3 4.17. Singly 4.54 33N25591-Grained Walnut Trim Ea. Lots of 3 4.17 Singly 4.54

## LAMPLIGHTER FLUORESCENT LANTERN

Provides brilliant flood light at the flick of a switch-wherever you want it, indoors or out. No connections necessary-operates on standard portable 45 voit " $B$ " batteries. An deal lantern for comping hunting fishing home or industrial use Contains shatte proof plexi-glass window for absolute safety. rotom is hings window for absolute satety. teries and tubed for easy replacement of bateries and tube. Comes complete with standard 6 -watt fluorescent type tube and two batteries. List 10.95 .


33N25564-Lantern Size: $41 / 8^{\prime \prime} \times 77 / 8^{\prime \prime} \times 9^{\prime \prime}$
8.21

## FLUORESCENT FIXTURES FOR STORES, OFFICES

A good fluorescent light installation in commercial and industrial establishments increases the efficiency of workers. Better light and brighter work areas reduce eye strain and create pleasanter working conditions.

Power requirements are lower: :00, because fluorescent light gives Illumination of greater intens:ty for the same wattage. Listed here are several industrial umits attractively designed and carefully engineered to meet your needs.

## INDUSTRIAL UNITS FOR 105-125 V. 50-60 CYCLE AC OPERATION



## INDUSTRIAL PLUG-IN FIXTURE

Constructed for convenience-plugs into any socket. Adaptable for home or industrial use-provides intense glareless light where you need it. Engineered for continuous row lighting over benches and machines; knockouts at each end of steel channel makes it possible to mount units end to end in continuous rows of light. Latest type ballasts fully enclosed, with starters easily accessible on side. Uses 2-20 watt lamps. Cray steel housing, with high gloss Sno-white reflector. Complete with 6 ft . cord and plug, less lamps. Overall size: $41 / 2^{\prime \prime} \times 24^{\prime \prime} \times 91 / 2^{\prime \prime}$. Shipping weight 8 lbs . 33N25567-List Price 8.90......................... Each in lo's of 3 . 34 Each, singly

## ALL-PURPOSE STRIP LIGHT-U. L. APPROVED

Ideal lighting units for stores, store windows, show cases, or homes and offices. Multiple knockouts for single unit or end-toend mounting. Channel and cover White baked enamel. Supplied less lamps.

| Cat. No. | Lay | Wt. | Size | Lots/3 ea. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 33N25572 | 1-15 W | 3 lbs . | $19 \times 25 / 8 \times 17 / 8^{\prime \prime}$ | 2.01 | 2.19 |
| 33N25573 | 1-20 W | 31/2 lbs. | $25 \times 25 / 8 \times 178^{\prime \prime}{ }^{\prime \prime}$ | 2.07 | 2.25 |
| 33N25574 | 1-40 W | 9 lbs . | $491 / 4 \times 25 / 8 \times 17 / 8^{\prime \prime}$ | 3.54 | 3.85 |



CHROME BRACKET FIXTURE-U. L. APPROVED
For home or commercial use! Handsome, practical design is adaplable anywhere. Uses 15 watt lamp. Rustproof chrome finish on copper plated steel. Size: $191 / 2 \times 31 / 4 \times 31 / 2^{\prime \prime}$ high, less reflector; 41/2" high with reflector. Supplied less lamps.

| Cat. No. | Description | Wt. | Lots/3 ea. | Each |
| :---: | :---: | :---: | :---: | :---: |
| 33N25576 | Bracket alone | 3 lbs. | 2.64 | 2.87 |
| 33N25577 | With convenience outlet | 3 lbs . | 2.85 | 3.11 |
| 33N25578 | With reflector | $31 / 2 \mathrm{lbs}$. | 3.48 | 3.79 |
| 33N25579 | With reflector and outle: | $31 / 2 \mathrm{lbs}$. | 3.69 | 4.02 |



## DELUXE HEAVY DUTY FIXTURE-U. L. APPROVED

Quality high power factor fixture for high intensity lighting. Flush, chain or stem mounting. Double knockouts, at each end n top. Pressed steel housing and reflector of "glazenamel." $2-40$ watt lamps. $48 \times 131 / 2 \times 53 / 4^{\prime \prime}$. Less lamps. 33N25565-Wt. 27 lbs. Each, lots/3 ... ......... 7.68 Each. 8.36 33N25566-For 3.40 W. lamps, lots/3.................. 12.57 Each.... 13.69 33N25690-U/L Approved cord and Plug Set, 6 ft. long............. 54c 33N25691—Levolier Switch with Pull Chain ....................................75e 33N25692-8 ft. Galv. Tenso Chains with S Hooks, Pr........ 64c


ALL-STEEL LUMINAIRE FIXTURE-U. L. APPROVED
Engineered for uniform rich lighting, yet distinctively designed for decorative effect. All-steel baked enamel fixture is constructed for flush mounting. Uses two 40 watt lamps. Attractive end plates inished in durable white baked-on enamel. $491 / 2^{\prime \prime} \times 10^{\prime \prime} \times 6^{\prime \prime}$. Fixture supplied less lamps.
33N25568-Wt. 21 lbs . Each, lots $/ 39.60$......... Each. 10.46 Same as above, but for four 40 watt lamps. Less lamps.
33N25569—Wt. 35 lbs. Each, ldts/3 14.34 ........................Each... 15.61

FLEXO ADJUSTABLE FLUORESCENT LAMPS
(A) Generai Model. Versatile industrial siyle fluorescent fixture with clamp-on base. Ideal for factory benches, tables and drafting boards. Two bolts clamp base securely to ary surface up to $3^{\prime \prime}$ thick. Spring-controlled swivel joints and double arm action permst easy maripulation of fixture to give you ligh. in eny desired position. Arm extends $36^{\prime \prime}$. Uses two ${ }^{-8}$, $15-W_{\text {W }}$ lamps. For $110-125 \mathrm{~V}$., 60 cycles AC. Shpg. Wi. 15 lbs . Statuary bronze finısh, baked-or. enamel.
33 N 25560 -Less lamps .............................. 6.75

## For Home or Office

(B) Portable Desk Model. Has all the features of the model described above except for the difference in the base. This unit has a weighted base with fen and pencil grooves, for desks and tables where screw clamp cannot be used. Shpg. Wt. 23 lbs. 33N25561-Less lamp
22.50

MAZDA FLUORESCENT LAMPS

| White Cat. No. | Daylight Cat. No. | $\begin{aligned} & \text { G.E. } \\ & \text { No. } \end{aligned}$ | $\text { L. Size } \mathrm{D} .$ | Watts | Each | Lots of | Each | Lots of | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 33N25533 | 33N25534 | T5 | $9 \times 1 / 8{ }^{\prime \prime}$ | 6 | . 75 | 7 | . 68 | 24 | . 64 |
| 33N25527 | 33N25528 | T5 | $12 \times 5 / 8^{\prime \prime}$ | 8 | . 85 | 7 | . 77 | 24 | . 73 |
| 33N25496 | 33N25497 | T8 | $18 \times 1$ " | 15 | . 62 | 8 | . 56 | 24 | . 53 |
| 33N25525 | 33N25526 | T12 | $18 \times 11 /{ }^{\prime \prime}{ }^{\prime \prime}$ | 15 | . 75 | 7 | . 68 | 24 | . 64 |
| 33N25529 | 33N25530 | T12 | $15 \times 11 / 2^{\prime \prime}$, | 14 | . 75 | 7 | . 68 | 24 | . 64 |
| 33N25535 | 33N25536 | T12 | $24 \times 11 / 2^{\prime \prime}$ | 20 | . 75 | 7 | . 68 | 24 | . 64 |
| 33N25537 | 33N25538 | T8 | $36 \times 1{ }^{\prime \prime}$ | 30 | . 75 | 7 | . 68 | 24 | . 64 |
| 33N25539 | 33N25540 | T12 | $48 \times 11 / 2^{\prime \prime}$, | 40 | 1.00 | 5 | . 90 | 24 | . 85 |
| 33N25531 | 33N25532 | T17 | $60 \times 21 /{ }^{\prime \prime}$ | *85 | 2.30 | 3 | 2.08 | 12 | 1.96 |
| 33N25541 | 33N25542 | T10 | 121/4" ${ }^{\prime \prime}$ Od. | 32 | 1.85 | 3 | 1.67 | 12 | 1.56 |

[^1]
## MODERN, LOW COST ELECTRICAL APPLIANCES

All the products listed below are high quality, low cost items designed to bring you the utmost in dollar value. Their smart appearance and precision construction is usually found only in more expensive ap.
pliances. Heavy duty type elements....chip-proof, baked-on enamel finish....heavy chrome plate are a few of the features that assure you of many years of faithful and dependable service.

## KORD ELECTRIC STOVE



For quicker, cooler cooking. Offers $\alpha$ choice of four different heats. "Drip tray" catches grease, pulls out for easy cleaning. Maximum power drain 1650 watts. Attractive white baked-on-enamel finish with nickel trim. For operation from 115 volt AC-DC. $19 \times 10 \times 51 / 2 n$. U.L. approved. Shipping Weight: 13 pounds. List Price \$11.85. 33N25409-E Ech, Lots of 3.
7.94

Each, Singly.
. 8.89

## GRILL AND WAFFLE JAKER



Combination grill and waffle baker toasts sandwiches, grills meats, and bakes waffles. Top and bottom grill plates turn over easily to form grids for two $4 \frac{1}{2^{\prime \prime}}$ square waffles. Dial indicator. Heavy chrome finish. For $110-115$-volt AC-DC. U.L. approved. Shpg. Wt: 9 Ibs. List Price $\$ 14.10$. 33N25423-Each, Lots of 3. 9.85

Each, Singly
.10 .55

## RAINBOW WAFFLE IRON



Equipped with dial indicator in top to show when proper temperature is reached to pour batter. Expanding hinges for even baking. Waffles will not stick to grids. Heavy chrome finish. Underwriters Laboratory approved. For 115 -volt AC-DC. Shipping Weight: 5 lbs . List Price $\$ 10.45$.
33N25428-Each, Lots of 3. 7.25

Each, Singly.
7.85

## KORD COMBINATION <br> FAN-HEATER

Provides fan blown heat in winter and fan only for summer use. 2-position switch offers choice of fan only or combination of $f$ an and heater. Rated at 1320 watts, 115 -volt AC. Ton finish. Size: $111 / 2 \times 91 / 2^{\prime \prime}$. Shpq. Wt: 8 lbs . List $\$ 14.95$ 33N25421-Each, Lots of 3..9.95 Each, Singly ........................ 11.20


Fan Blown Heater only. List $\$ 10.95$ 33N25422-E ach, singly...... 8.20

## INFRA.RED HEAT LAMP

Lamp for heat therapy or general use where concentrated heat is desired. May be employed as well for drying clothes, freshly painted surfaces - an excellent therapeutic aid for aches, pains, or soreness. Needs no involved installationjust screw into ordinary socket. Operates on 110 volts AC-DC, 250 watts.
1.25


# ELECTRICAL ACCESSORIES 



1. SINGLE SURFACE OUTLET. Brown bakelite. Wood mounting screw. 10 for 72 C
2. BAKELITE PLUG. Sturdy prongs. 33N13306-Ea, 6c

10 for 54c 3. CORD SWITCH. For ceiling fixtures and home appliances. 33N13275-Ea., 24c $\qquad$ 10 for 2.16


4


5


6
4. 3-WAY SURPACE OUTLET. Brown. Pin type terminals, wood screw. 33N13279-Ea., 15c

10 for 1.35
5. CUBE TAP. Brown. 3 outlets. Shipping weight 2 ounces.
33N13282-Ea., 10c $\qquad$ .10 for 90 c 6. HANDLE PLUG. Of soft rubber. Shipping weight 1 ounce.
33N13301-Ea., 6e
10 for $54 c$

7. 3-WAY SURFACE OUTLET. Brown plastic. With wood mounting screw. 33N13280-Ea., 15c....................... 10 for 1.35 8. CURRENT TAP. Bakelite. Straight socket with 2 plug outlets. 33N13278--Shpg. wt. 4 oz
9. DUPLEX FLUSH RECEPTACLE

33N13329-Ea., 13c
10 for 1.17


10
10. WALl PLATES. Dual outlet. Ripple design stamless stee.
33N13326-Ea., 7c
10 for 63c

11.MIDGET CORD CONNECTOR. Flat twopiece. Underwriters listed. 33N13276-Ea., 20c

10 for 1.80
12. POWER CORD AND PLUG. 6ft. rubber cord, brown bakelite plug.
33N13285—Shpg. wt. 6 oz. Ea...............15c

13.CUBE TAP EXTENSION. Trio tap, 9 f rubber cord, AC plug. Brown. 33N13318-Brown..... Ea., 37c 10 for 3.33

14. HEATER CORD SET. AC plug. 7 ft . heater cord and screwless plug.
33N13317-Shpg. wt. 7 oz . $\qquad$ .. 49 c

## 15

15. FLUORESCENT BALLASTS. Underwriters' Listed. High power factor 90 to $100 \%$. Normal 55 to $63 \%$. For $105-125$ volts 60 cycle AC operation. Normal Power Factor
 3NN25617-20W $41 / 2 \times 2 \times 13 / 8^{\prime \prime}-1 \mathrm{lb}$
$33 \mathrm{~N} 25618-30 \mathrm{~W} 85 / 8 \times 23 / 8 \times 13 / 8^{\prime \prime}-3 \mathrm{lbs}$
3NN25619-40W $85 / 8 \times 23 / 8 \times 13 / 8^{\prime \prime}-3 \mathrm{lbs}$.
$33 N 25620-(2) 20 \mathrm{~W} 57 / 8 \times 2 \times 13 / 8^{\prime \prime}-2$ lbs.
$33 \mathrm{~N} 25621-32 \mathrm{~W} 85 / 8 \times 23 / 8 \times 13 / \mathrm{P}^{\prime \prime}-3 \mathrm{lbs} . .$.
$33 N 25621-32 \mathrm{~W} 85 / 8$
High Power Factor $\times 23 / 8 \times 13 / 8^{\prime \prime}-4 \mathrm{lbs}$.
$33 N 25615-40 \mathrm{~W} 131 / 4 \times 23 / 8 \times 13 /{ }^{\prime \prime}-41 / 2 \mathrm{lbs}$
33N25615-40W-(2) $40 \mathrm{~W} 171 / 8 \times 23 / 8 \times 15 / 8^{\prime \prime}-5 \mathrm{lbs}$.

|  | 54 c | lots/10, | Each.......49c |
| :---: | :---: | :---: | :---: |
|  | 54 c | lots/10, | Each..... 49c |
|  | 2.10 | lots/10, | Each..... 1.89 |
|  | 2.10 | lots/10. | Each..... 1.89 |
|  | 1.06 | lots/10, | Each.......96c |
|  | 2.10 | lots/10, | Erch..... 1.89 |
|  | 3.89 | lots/10, | Each...... 3.49 |
| lbs | 3.89 | lots/10, | Each..... 3.49 |
| lbs | 4.15 | lots/10. | Each...... 3.75 |

23

23. PLUG FUSES. U/L approved. 5 per bcix. 39N13201-10 amperes 39N13202-15 amperes 39N13203-20 amperes 39N13234-30 amperes Box of 5 , either of above

26. INSULATED STAPLES. No. 5. $1 / 4^{\prime \prime} x^{5} \beta^{\prime \prime} 8^{\prime \prime}$ 17N15950-Package of 100 ......................14c 10 packages for.
27. PEARL PUSH BUTTON. $5 / 8^{\prime \prime}$ diameter clip mount
33N13313-
Each... 20c 10 For.
1.80
28. MIDGET PUSH BUTTON. Brown. $15 / 16^{\prime \prime}$ diame:er
33N13311-
Each... 14 c 10 For.

29. NO BLINK INSTANT STARTERS.
U. L. approved. Eliminates blinking. Starter ceases to function and is not affected by deactivated lamp. When l.mp is replaced, starter again functions normally. Starts within 1 second.
Cat. No. Type Lamp Ea. 13 for 33N 13825-FS2NA $15-20 \mathrm{~W}$. $36 \mathrm{c} \quad 3.24$ $33 \mathrm{~N} 13826-\mathrm{FS} 4 \mathrm{NA} \quad 30-40 \mathrm{~W} . \quad 36 \mathrm{c} \quad 3.24$
30. STANDARD FLUORESCENT STARTER.

New, fast reliable starter switch. Urderwriters' approved. Starts in one second or less. Lamps light in a flash.
Cat. No. Type Lamp Ea. 10 for 33N13802—FS-5 $\quad 4,6.8 \mathrm{~W} . \quad 30 \mathrm{c} \quad 2.70$ $33 \mathrm{~N} 13810-\mathrm{FS}-2 \quad 15,20 \mathrm{~W} . \quad 18 \mathrm{c} \quad 1.62$ $\begin{array}{llll}33 N 13810-F S-2 & 15,20 \mathrm{~W} . & 18 c & 1.62 \\ 33 N 13811-\mathrm{FS}-4 & 30,40 \mathrm{~W} . & 18 \mathrm{c} & 1.62\end{array}$ $\begin{array}{llll}33 N 13811-F S-4 & 30,40 \mathrm{~W} . & 18 \mathrm{c} & 1.62 \\ 33 N 13813-F S-6 & 85,100 \mathrm{~W} . & 49 \mathrm{c} & \mathbf{4 . 4 1}\end{array}$ $\begin{array}{lllll}33 N 13813-F S-6 & 85, \\ \text { 33N13827-FS-12 } & 32 & \text { W. Circ.....22c } & 1.98\end{array}$ 31. FLUORESCENT SOCKETS.

For T8, T12 lamps. Heatproof plastic.
33N13803-*Black. Ea. 20c......... 10 for 1.80 33N13804—"White. Ea. 21c.......... 10 for 1.89 33N13805- Black. Ea. 12c 10 for 1.08 33N13805- Black. Ea. 12c......... 10 for 1.08 33N13806- White. Ea. 13c........ 10 101 1.17 33N 13807- Starter. Ea, 12c................... 10 65
33N13808- Black, for T5. Pr......... ${ }^{33 N} 13808$ - Comb. starter socket and lampholder.


Durable, good looking. Many differ- ent switch and pilot light combinations are possible. Easily mounted. Supplied complete with all necessary hardware.

| Brown Alloy | Each | White Alloy | Each | Description | Fig. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 33N12350 | $6 c$ | $33 N 12351$ | $7 c$ | 1 cut-out | 16 |
| 33N12352 | $6 c$ | $33 N 12353$ | $7 c$ | 2 cut-outs | 17 |
| 33N12354 | $6 c$ | $33 N 12355$ | $7 c$ | 3 cut-outs | 18 |

24, CONE ELEMENTS. 110 V heaters. 33N13304-600 W. Ea., 42c...... 5 for 1.89 33N13305-1000 W. Eq. 69c.... 5 for 3.11 25. FITSALL IRON ELEMENTS. 110 V. 33N13270-Ea., 45c.


Gentle pressure snaps device quickly and securely into wall plate Nos, 19, 20, and 21 rated at 15A. 125 volts; 10A., 250 volts. No. 22 rated at 125 V., $1 / 2$-watt.

## CRYSTAL SETS - MIKES - SPECIAL ITEMS



## MICROVOX MICROPHONE

Talk through your radio speak er with this battery-powered microphone. No wires necessary. Take it to any room in the house up to 75 feel from your radio. Broadcasts between 1020 and 1700 K C . Merely tune your radio and 1700 -incumerely tune your radio to anon-interfering point on the dial within this frequency range. Lightweight plastic unit is entirely selicontained, with power supplied by one flashilight cell and a Minimax $\mathrm{B}^{\prime \prime}$ battery. Uses, a IL. 4 type tube with extremely low power drafn. Rubber rimon base protects furniture against scratching. Dimensions: $6 \frac{10}{\prime \prime}$ high $x 5^{\prime \prime} /^{\prime \prime}$ deep $\times 5^{\prime \prime}$ base. Supplied complete with batteries and tube, ready for immediate use. Enjoy hours of real fun and entertainment.
32N22620-Shipping Weight 3 lbs.........................
4.64

Microphone with Sound Effects Kit listed below.
. .6 .61
Add a professional touch to your next party with a prepared radio program including script and sound effects. Sounds Effects Kit designed for use with the above mike includes 15 items for producing various sound effects. The kit also has three scripts (western, detective and historical), keyed to these sound effects.
32N22622.
2.63


## DESK MICROPHONE

Permanent magnet type mike equipped with $18^{\prime}$ cable. Bullet shaped design finished in black and nickel. Has exceptional capabilities for amplifying sound with minsmum distortion and moximum of fidelity. Size: $4 \times 3 \mathrm{z} 3 \mathrm{~m}$. Shipping Wt. 9 oz. 32N13380.

## HANDY MICROPHONE

A handy mike any youngster will enjoy. Works through speaker of any radio set. Does not interfere with reception. Push-button switch for instant ON-OFF use. Handsomely finished.
32N13831-With cord.
.9 .47
ELECTRIC MOTOR KIT \& BOOK The fascinating story of electricity told plctorally in 6 beautiful colors. 32 pages of the drama, history and principles of electricity in easy-to-understand language. Permanent metal binding and hard covers. 33 precision made parts and wire to assemble an electric motor that really runs, It's safe. Operates from flash light batteries.
32N 24455.
2.95

20N20622-Batteries (2req.) Ea....61/24
DETECTORS, CAT WHISKER, CRYSTAL


4

1. Glase Enclosed Detector, Dustproof. With supersensitive mineral \& cats whlsker. 2 ac 2. Fixed Crystal Detector. Supersensitive point found by meters. Bakelite case with screws.
32N13913-Each.......................................464
2. Cat Whisker. Finest wire-correct tensionholds that sensitive spot. 32N13921-Envelope of 3.
3. Supersensitive Crystal. 5. Crystal Detector. Includes Extremaly sensitive crystal ball and soctet survel am assures picking up more stations and gats them louder. Each crystal is meter tested after selection.
-32N13901-Each.
.12c
' 10 for............................... 1.08
ball and crystal with holder, base and clips.
32N13917-Each
22 32N13906-Same aa above,
loan base and cryetal..... 12 t
32N 13900-Crymtal oniy....6f


## CONNECTICUT DUPLEX TELEPHONE SET

Hondsome green finished all 'motal phone casies with built-in bell ringers and black bakelite mouthpleces. Separate earphone with black bakelite earpiece. Uses 2 ar dinary No. 6 dry cells at each station for lines up to 1000 ctis at each station for to 2000 ft . in length may be run by adding more batteries. Ideal for house to garage basement to upstars, farm-house to outbasement to upstars, farm-house to outbuidangs, Complete with 160 ft. of 19 wire, 2 phone stations and necessary hardwhre, 2 phone stations and
ware for wall mounting.
32N14002-Per set les. batteries... 6.25 Lots of 3. Each..



## SUPERTONE CRYSTAL SET



A blg seller and there is'plenty of good reason for its popularity. Remarikable results have been obtained and its scientific construction gives loud, clear, distortion-free reception. A supersensiitive crystal is utilized which is mounted in a glass enclosure.
32N13888-Supertone Crystal. Shpg. wt. 11 b .
.26
As above, without enclosed detector, Bakelite Housing.
32N13889-Little Wonder Crystal Set. Wt. 1 1b................. 1.04

## SUPERTONE RADIO KIT

An interesting, educational, ready-to-assemble radio kit that is ideal for beginners. Includes molded bakelite base with contact slider, single headphone, and Supersensitive crystal as shown above. Complete directions for assembly and oper-
ation.
.1 .95

## TEE-NEE RADIO-NO TUBES, BATTERIES, CURRENT



No fussing with batteries, tubes or plugging into power lines-new Tee-Nee radio needs only an aerial and a ground. Housed in a beautifully finished manogany crack le finished steel case. Tee-Nee radio is supplied complete with single headphone with head band, but without $4 \%^{\text {a }} \times 3^{\text {m }}$.
32N13880-Model 250. Shpg. at. 11/2 lbs
3.92

## 4-IN-1 RADIO KIT

An electronickit that combines in a single unit almost every basic function performed in radio. Combines an amplifier, code practice
oscillator radio reoscillator radio receiver and miniature ra-
dio transmitter. Ideal for dio transmitter. Ideal for use at home or school. The code practice oschbe used to help obtain a
 radio operator's incense.
The amplifier input is for any high impedance mike or phono pickup. The radio receiver is a five tube set using the following tubes: $35 Z 5,50 \mathrm{~L} 6,12 S L 7,12 S K 7,12 S A 7$. A loop antenna is used for both transmitting and receiving; no outside derial is necessary. Kit supplied complete with tubes, Alnico $V$ dynamic speaker and all necessary parts, pius detailed step-by-step instructions, Pict-o-Graphs, block diagram and schematic.
32N24364...
19.11

HIGH QUALITY TEN-WATT AMPLIFIER KIT
Conservatively rated unit with negligible distortion-employs exceptional bass reproduction method which eliminates booming tones. c utputsia se resistance push-pull. Circuit includes phase Tubes: 6C5, 6N7, 2-6A3, 5U4G. Less speakerand tubes. 32N24512-Shipping Weight: 24 lbs .
20.65

## 4-TUBE AM SUPER BROADCAST TUNER KIT

Unusually compact and efficient AC-DC AM broadcast-band tuner kit for use with PA systems, industrial sound Installations, or as a remote tuner for any radio recelver equipped with phono input jacks, or standard audio cmmplifier units. Superhe terodyne circuit consists of converter stage employing 12SA7 tube in an elec-tron-coupled oscillator circuit
$12 S K 7-I F$
12SO7-Det 35 ZSGT -Riect. Complete with all necessary parts including 2 -gang variable condenser, CroFlex dial assembly, and cadmium plated punched chassis. Less Tubes.
32N24532-Shipping Weight: 4 lbs.
.13 .35


PERCO FM BASIC TUNER KIT Inexpensive $F M$ tuner utilizes a new FM circuit that does away with limiters, discriminators, ratto detectors and the diff:culty of peaking and tracking such circuits. Uses $14 F 8$ and $35 W_{4}$ tubes for earphone vol-ume-or may be connected to any high impedance input audio amplifier or the audio circult of any table or console radio. Complete basickit consists of: punched chassis base; ware and tie lugs; full instructions. 32N24475-Shipping Weight: 3 lbs .
5.50 Special Four-Inch PercoDial Plate for the above tuner.
32N24476-Shipping Weight: 1 1b....................................
$.47 \$$


TWO-TUBE "POCKET" PORTABLE KIT Operates on flashlight cells. Slips into your coat pocket with just enoughextending out the top to tune. Built-in anterma, self contained batteries. Very good volume on local stations. Covers the broadcast band with additional range on each side of the dial. Uses two 1S4 miniature tubes in a standard regenerative-detector circult transformer coupled to AF output stage. Case is easily made from cigar box. Less tubes, batterles, headset. 32N24516-Shpg. Wt: 5 lbs..
.5 .85


## "WIRELESS" OSCILLATOR KIT

One-tube oscillator when used with 1 to 1.5 volt output crystal pickup suppiies suficlent modulated power to play records through radio receivers in other rooms at full volume without wired connections! Employs one 117N7-GT tube as both osclllator and rectifier. Easy-to-assemble kit includes all parts for oscillator, but less tube. For pickups, etc., see index. Shipping Weight: 4 lbs.
32N24531
3.65

## PRINTED CIRCUIT KIT

Stondard Basic Kit (4-25 ce bottles) for experimenting with printed circuit methods. Resistors of definfte resisan insulating base by using these conducting and resistance paints. Printed
circuits are electrically the same as those using individual circuits are electrically the same as Paits take full advantage of small size of miniature and subminiature tubes. Fast drying. Packed in durable, aftractive box including copper drying. Packed in durable aitracive box including copper and manual "Design and Repair of Printed Circuits". 32N24365.
4.10

Super Kit for professional worker. Includes paints, lacquer and solvent needed to build and repair printed electroniccircuits quickly. Same as above plus 4 oz. bottle silver conducting paint, insulatling lacquer, and solvent and brush cleaner.
32N24366.
.7 .12
4. TUBE HI.FI MUSIC AMPLIFIER KIT


AC-DC amplifier, includes a built-in equalization network and pre-amp, for use with GE Reluctance or similar pickups. Separate low gain input for FM-
AM tuner. Two 12 SC 7 tubes used as preamp, and audio driver tubes. Continuously variable tone control. 2-50B5 beam power ampliflers in push-pull provide audio output of over 4 watts with frequency responso over $12,000 \mathrm{cps}$. Phase inverter circuit. Selenlum rectifier power supply.
32N24535-Less tubes. Shpg. Wt. 5 lbs.
12.95

FM TUNER KIT


Easy-to-build, Inespensive FM (frequency modulation) kit based (requency modulation) kit based s!gn that makes possible the sign that makes posisible the single evening! Circult employs single evening Modyne FM detector using dual high freq. triode (14F8) with one section as HF local oscillator, the other as a converter, IF amp. and detector. Excellent for use in Metropolitan areas. Supplied complete with pre-formed, punched cadmium plated chassis, large easy to read Cro-flex illuminated dial, all necessary mount:ng hardware, etc., with fubes 14 F 8 and 35 W 4 .
32N24534-Shpg. Wt: 3 lbs
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29.95

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Includes fully wound tuning slide-coil, crystal detector, and "cats whiskers". No sol-dering-needs only screwdriver. Shpg. Wt: 11 b .
32N24465
88

## RADIO KITS AND TRAINING SETS



## MEISSNER FM TUNER KIT

Model 8 CK. The famous Model 8C In kit form. Covers 88 to 108 MC FM band. Recommended for use with Melissner model 4AK amplifier or any high quality amplifier which has on input of 100,000 ohms or greater and which produces full output with ${ }^{3}$ volts R.M.S. audio input. Response is flat within $\pm 2 \mathrm{db}$ from 50 to 15,000 put. Silde rule dial, $51^{\prime \prime} \times 1-3 / 8^{\prime \prime}$. calibrated in MC and channel numbers. Uses (2) 6AU6, (2) 6BA6. (2) 6 C 4 6ALS and 6X5GT/G. Easily assembled from detalled plctorial diagram and simplifled schematic. Front end and IF coils factory assembled and aligned. Complete with tubes, wire, hardware and solder. For $105-125 \mathrm{~V}$. AC operation.
32N24355-Shipping Welght: 6 lbs .
29.37

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Model 4AK. High fidelity audio power amplifier with a response from 45 to 20,000 cps, flat within $\pm 2 \mathrm{db}$. 20 -watt output. Used with model 8 CK above, it provides excellent FM reception. 500,000 ohm input. 4,8,15,250 and 500-ohm output impedance. Uses 6SN7GT, (2) 6L6G and SY3GT. Easily assembled from detalled diagram and schematic. $110 \mathrm{~V} .50 /$ 60 -cycle AC. $10 \times 83 / 10^{\prime \prime}$. Complete with with tubes, wire, hardware, solder. Shipping Welght: 20 lbs.
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 ly assembled from pictorial diagram and schematic. 32N24358-Shipping Weight: $21 / 2 \mathrm{lbs}$.
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.6 .15 32N24541..

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| 75 90 | 6NO75 6 6N090 | $16 N 14403$ $16 N 14417$ | $115 N O 75$ $115 N 090$ | $16 N 14407$ |
| 120 | 6NO120 | 16 N 14404 | 115 NO 120 | $\begin{aligned} & 6 \mathrm{~N} 14418 \\ & 16 \mathrm{~N} 14408 \end{aligned}$ |
| Any Type, Each . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2.2 .35 |  |  |  |  |

## W.L. REMOTE CONTROL HEAVY DUTY MIDGET



Type 507-549. Single-Pole, double-throw, single break. 110 volt AC operation. Silver-to-silver self-cleaning contacts. Rating: 20 amps. AC normally open, 15 amps. AC normally closed. 16N14124-Weight 1 lb .

## ADVANCE 300-OHM LINE RELAY

K1504. RF Efficient, D.P.D.T. midget type AC transmitreceive relay is well insulated for RF applications. Silicone glass material is used for insulation on armature and stationary contact assemblies. Line spacing maintoined by solder lugs. 500 watt RF input. Overall: $17 / 8 \times 1919 \mathrm{ib}^{15} / 16^{\%}$. Up to 115 V . AC or 40 V . DC. Consumption 4 VA.

## POTTER-BRUMFIELD RELAYS

## TYPE "PR" HEAVY DUTY

 POWER RELAYSWill start motors up to 1 HP , high heater loads, etc. Cont. duty type-will not overheat because coils take only 2 watts on DC and SVA on AC. Larger copper shaded pole-piece prevents AC chatter. Heavy con-
 tact pressure. Sturdy return spring and screw term nals. Metal parts heavy plated; coils impregnated with varnish. Contacts of double break types rated at 20 amps. and single break types at 15 amps., 110 volts AC non-induztive load. All ratings are for coninous duty

| No. | Type | Contacts | Coil Volts | Each |
| :---: | :---: | :---: | :---: | :---: |
| 16N14254 | PR3A | SPST-DB-NO* | $6 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | \$3.10 |
| 16N14255 | PR3A | SPST-DB-NO* | 110/60cy AC | 3.10 |
| 16N 14100 | PR3A | SPST-DB-NO* | 220V/60cy AC | 3.10 |
| 16N14256 | PR4A | SPST-DB-NC* | 6V/60cy AC | 3.15 |
| 16N14257 | PR4A | SPST-DB-NC* | 110/60cy AC | 3.15 |
| 16N14258 | PR5A | SPDT | 6V/60cy AC | 3.20 |
| 16N14262 | PR5A | SPDT | 110/60cy AC | 3.20 |
| 16N14101 | PR5A | SPST | 220V/60cy AC | 3.20 |
| 16N14263 | PR7A | DPST-NO | 6V/60cy AC | 3.65 |
| 16N14264 | PR7A | DPST-NO | 110/60cy AC | 3.65 |
| 16N14102** | PR7A | DPST-DB-NO* | $220 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | 3.65 |
| 16N14244 | PR11A | DPDT | $6 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | 4.90 |
| 16N14245 | PRIIA | DPDT | 110/60cy AC | 4.90 |
| 16N14103 | PR11A | DPDT | 220V/60cy AC | 4.90 |

"MR" SERIES FOR LIGHTER LOADS
Double break contacts rated at 10 amps: Single break at 8 amps 110 V A.C. 60 cycle non-inductive oad. AC coils require approx. 2 watts; DC $11 / 2$


| No. | Type | Contacts | Coil Volts | Each |
| :---: | :---: | :---: | :---: | :---: |
| 16N14104 | MR1A | SPST-NO | 6V/60cy AC | \$2.00 |
| 16N14109 | MRIA. | SPST-NO | 110V/60cy AC | 2.00 |
| 16N14110 | MR3A | SPST-DB-NO | 6V/60cy AC | 2.30 |
| 16N14111 | MR3A | SPST-DB-NO | 110V/60cy AC | 2.30 |
| 16N14271 | MRSA | SPDT | $6 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | 2.15 |
| 16N14272 | MR5A | SPDT | $110 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | 2.15 |
| 16N14112 | MR7A | DPST-NO | 6V/60cy AC | 2.60 |
| 16N14144 | MR7A | DPST-NO | 110V/60cy AC | 2.60 |
| 16N14273 | MRIIA | DPDT | $6 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | 2.80 |
| 16 N 14274 | MRIIA | DPDT | $110 \mathrm{~V} / 60 \mathrm{cy} \mathrm{AC}$ | 2.80 |

## PLATE CIRCUIT RELAYS

Armature spring adjustable for applications requiring closing or opening on specified currents or voltages. Table below shows standard factory adjustments for current to energize, also minimum after readjustment of spring. (A) LS series. (B) LM series.



## * Denote SPDT

## AUTOMATIC LOCK RELAY ELECTRIC RELEASE

 return position
ELIIA-DPDT contacts, 110 volt, 50 cycle coils 16 N14142
16N14143-ELSA-SPDT contacts. Shpg. wt. 2 lbs
3.75

## ADVANCE COUNTING RELAY

24 positions step relay. For "wired music," Has SPST switching applications. Manual reset. Has SPST switch for an indicato: light; switch closes on first impulse. Coil voltages 110 V. AC. $11 / 4$ ". Size: $11 / 8 \times 111 / 6 \times 3$ ? $/ 5^{\circ}$. 16N14145.

## ADVANCE TIME DELAY RELAY

Type 304B. For preheating tube filaments and similar uses. Relay provides an adjustcble delayed make 10.60 sec.) for the controlled circuit which remains closed until the initial circuit is broken. $1 / 4$ " pure silver contacts: 10 amps at 115 V. AC (non-inductive). 16N14146-DPDT.

## STURDY RACKS, PANELS AND ACCESSORIES



STEEL CHANNEL RACKS For standard $19^{\prime \prime}$ long panels. Universally drilled. Base 16x20". $1 / 8$ " steel with spot-welded corners. Holes tapped for 10-32 screws. Black ripple. $73{ }^{\prime \prime}$ " high, $713 \mathrm{~S}^{\prime \prime}$ panel space. $24 \mathrm{~N} 22150-$
17.05


## ENCLOSED RACKS

Deluxe all-steel enclosed racks, streamlined and finished in slate gray with trimmina at top and bottom. (Black ris ple also avail-able-pipecily on order.) Universally drilled for all standard panels. Panel width $19^{\prime \prime}$. Models are 2216" 2 wide. $161 / /^{\prime \prime}$ derp. Hinged wack,

| Stack No. | Height in. | Panel Space | Weight, Lbs. | Cost, Each |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { 24N22145 } \\ & \text { 24N22146 } \\ & \text { 24N22148 } \end{aligned}$ | $\begin{aligned} & 42^{\prime \prime} \\ & 66^{\prime \prime \prime} /{ }^{\prime \prime} \\ & 821 / 4^{\prime \prime} \end{aligned}$ | $\begin{aligned} & 3688^{\prime \prime \prime} \\ & 61^{\prime \prime}{ }^{n} 7^{\prime \prime} \end{aligned}$ | $\begin{aligned} & 100 \\ & 150 \\ & 175 \end{aligned}$ | 27.93 41.45 49.39 |



## 1/16' STEEL TABLE RACKS

Universal drilling accommodates dill standard panels. Tapped lor $10-32$ screw:s $25^{\prime \prime}$ high rack has panel space $21 \times 19^{\prime \prime} ; 32^{\prime \prime}$ high rack has
pinel space $28 \times 19^{\prime \prime}$. Both $20^{\prime \prime}$ widu, $12^{\prime \prime}$ deep. pinel space $28 \times 19$
Blick ripple finish.
24N22102-25" Wt 3311
5.29

24N22103-32". Wt. 36 lbs.
6.76

## RADIO PANELS

Suitaible for lest instruments and radio applications.

| 1/16" Black | STEEL PANELS Wrinkle Finish |  |  | 3/16" BAKELITE PANELS Black Polished Finish |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| -5iock No. | Size | Lbs. | Each | Stock No. | Size | Lbs. | Each |
| 24N22218 | $7 \times 10^{\prime \prime}$ | 2 | . 47 | 24N19600 | $7 \times 10^{\prime \prime}$ | $3 / 4$ | 1.32 |
| 24N22219 | $7 \times 12^{\prime \prime}$ | 2 | . 53 | 24N19601 | $7 \times 12^{\prime \prime}$ | 1 | 1.62 |
| 24N22220 | $7 \times 14^{\prime \prime}$ | 3 | . 71 | 24N19602 | $7 \times 14^{\prime \prime}$ | , | 1.91 |
| 24N22221 | $7 \times 18^{\prime \prime}$ | 4 | . 81 | 24N19603 | $7 \times 18^{\prime \prime}$ |  | 2.41 |

deluxe steel cabinets for rack panels


- Standard Mounting
- Built-in Louvres

Heavy-duty cabinets built of $1,16^{\prime \prime}$ steel, fin ished in Black ripple. Welded construction, streamlined design. Neatly rounded corners. Universally drilled to fit all standard 19" rack panels. All have louvres, hinged doors with snap locks, and take chassrs $13^{\prime \prime}$ deep. Also avarlable in slate gray finish on special order.

| Stock No. | Overall Dimensions | Panel Space | $\begin{gathered} \text { Door } \\ \text { Location } \end{gathered}$ | Wt. Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 24N22188 | $101 / 2 \times 21 \times 131 / 2^{\prime \prime}$ | $83 / 4 \times 19^{\prime \prime}$ | Top Only | 22 | 9.70 |
| 24N22071 | $14 \times 21 \times 131 / 2^{\prime \prime}$ | $12^{1} \times 19^{\prime \prime}$ | Top Only | 29 | 11.76 |
| 24N22191 | 191/4×21×1.31/2" | 171/2×19" | Top \& Rear | 34 | 16.32 |
| 24N22198 | $28 \times 21 \times 131 /{ }^{\prime \prime}$ | 261/9 $\times 19^{\prime \prime}$ | Rear Only | 69 | 18.82 |
| 24N22199 | 368/4x21x131/2" | $35 \times 19^{\prime \prime}$ | Rear Only | 73 | 20.87 |

## RECESSED METER PANELS



Meters can be recessed from front of panel and ere protected by plate glass insert allowing 3/4" clearance m back of panel. Blank bakelite subpanel provided. Accommodates 4-3"meters.
24N22204-Black $51 / 4 \times 19^{\prime \prime}$
4.70


## CHROME HANDLES

For cabinets, amplifiers, chassis, etc. Mtg. screws included. 24N14563-51/4" Long Chrome Handles. Mtq. Centers $413,10^{\prime \prime}$ 444

## CHROME VENTILATING LOUYRES

Adds a distinctive touch to any receiver, amplifier, transmitter, or any other installation. Polished, chrome-finished steel "Air-Gate" made up plates: 3/6". Distance between mounting hole centers: 427 $\mathbf{f o n}^{\prime \prime}$. Diameter of hollew; ${ }^{3} / \mathbf{/ 2}^{\prime \prime}$. Length of louvres: $41 / 4^{\prime \prime}$. Size: $5^{7}$ 伯 $\times 3^{\prime \prime}$
24N22834-Shpg. wt. 8 oz.
534


## HEAVY STEEL RACK PANELS

1. Heavy duly $1 / 8^{\prime \prime}$ steel panels for all standard $19^{\prime \prime}$ racks. Available with either black ripqle or commercial slate gray ripple finishes.

| Black | Gray | Hght. | Lbs | ch | Black | Ciray | Hght. 1 n. | Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 24N22169 | 24N22118 |  | 2 | . 65 | 24N221 | 21N22124 |  | 12 | 1.59 |
| 24N22170 | 24N22119 | 31: | 5 | . 73 | 24N22164 | 21N22125 | 14 | 13 | 1.82 |
| 24 N 22171 | 24N22120 | 51/4 | 7 | . 85 | 24N22165 | 24N22126 | 153/4 | 14 | 2.12 |
| 24N22160 | 24N22121 |  | 8 | . 91 | 24N22166 | 24N22127 | 1712 | 15 | 2.26 |
| 24 N 22161 | 24N22122 | $83 / 4$ | 9 | 1.15 | 21N22167 | 24N22128 | 191/4 | 16 | 2.44 |
| 24N221 | 24N22123 | $10^{1} 2$ | 10 | 1.29 | 24N22168 | 24N22129 | 21 | 17 | 2.76 |

## 1/16" STEEL MOUNTING BRACKETS

2. Panels must be at least high. Mountıng holes drilled. ${ }^{2}$ Pair $68 \$$ 24N15272-Black Ripple Finish, Base Size: 11 " ${ }^{\text {n }}$. . . . . . . . . . . . . . . . Pair Pair 1.00 24N15269-Black Ripple Finish. Base Size: $13^{\prime \prime}$. . . . . . . . . . . . . . . . Pair Pair 1.21

## GRIRLE PANELS

Modern type ventalalanq arille panel made of "ي" thick steel, 19" wide. Grille work is actually stomped unto the natnel; not a pieced assembly. Uniformly slotted.


| Stock No. Black | Stock No. Grey | Pane! Height | $\begin{aligned} & \text { Grille } \\ & \text { Size } \end{aligned}$ | Each |
| :---: | :---: | :---: | :---: | :---: |
| 24N22420 | 24N22421 | $51{ }^{\prime \prime}$ | 33/8x143/8" | 2.26 |
| 24N22422 | 24N22423 | $7{ }^{\prime \prime}$ | $47 / 8 \times 143 /{ }^{\prime \prime}$ | 2.41 |
| 24N22424 | 24 N 22425 | 88/4" | *37/8x $143 / 8{ }^{\prime \prime}$ | 2.65 |
| 24N22426 | 24N22427 | 101/3" | *57/8×143\% | 2.94 |
| 24N22428 | 24N22429 | 1214" | *7308143\% | 3.38 |

## RACK SHELVES

Designed to be mounted in side the rack, with side bolt mounting. 1" hich1, inished iri black ripple an 24N22157-12.21316" ... 2.21 $24 \mathrm{~N} 22158-15 \times 21^{16}{ }^{\prime \prime}{ }^{*} \cdots 2.79$

Chassis Supporting Angles
For hervy weicht: encountered in chassis construction. Distributes weight on sides of rack and relieves panel. $1 / 8 "$ thick black 24N22159-Per Pair. . .... 1.47

STEEL AND ALUMINUM CHASSIS
Four solid sides, welded corners. Bottom edges tlanged in and drilled for plates. ripple finish; Aluminum chassis .055" thick. Unfinished.

| $\begin{gathered} \text { Size } \\ \text { D. L. H. } \end{gathered}$ | Steel |  | Aluminum |  |
| :---: | :---: | :---: | :---: | :---: |
|  | No. | Each | No. | Each |
| $43 / 4 \times 81 / 2 \times 15{ }^{\prime \prime}$ | 24N22391 | . 62 |  |  |
| $5 \times 91 / 2 \times 11 /{ }^{\prime \prime}$ | 24N22211 | . 67 | 24 N 22237 | . 76 |
| $7 \times 7 \times 2$ "' | 24N22212 | . 82 | 24N22238 | . 95 |
| ${ }^{7 \times 9 \times 2} \times$ | 24 N 22213 | . 88 | 24N22239 | 1.06 |
| 7x11×2"' | 24N22214 $24 N 22215$ | . 97 | 24N22243 | 1.14 |
|  |  |  |  |  |
| $7 \times 15 \times 3$ " | 24 N 22216 | 1.26 | 24 N 22245 | 1.47 |
| $7 \times 17 \times 3^{\prime \prime}$ | 24N22217 | 1.26 | 24N22246 | 1.47 |
| $10 \times 12 \times 3^{\prime \prime}$ | 24 N 222226 | 1.38 | 24 N 22247 | 1.64 |
| $10 \times 17 \times 3^{\prime \prime}$ | $24 N 22227$ | 1.29 | 24N22248 | 1.79 |
| $11 \times 17 \times 3^{\prime \prime}$ | 24N22393 | 1.94 | 24N22395 | 2.35 |
| $13 \times 17 \times 3^{\prime \prime}$ | 24N22394 | 2.44 | 24N22396 | 2.62 |

## BLACK RIPPLE STEEL BOTTOM PLATES

| No. | Size | Wt. | Cost | No. | Size | Wt. | Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 24N22228 | 5x91/2" | 1 Lb . | . 38 | 24N22260 | $7 \times 17^{\prime \prime}$ | s. | 65 |
| 24N22233 | 51/2x10" | 1 Lb . | . 41 | 24N22261 | $8 \times 12^{\prime \prime}$ | 2 Lbs. | . 65 |
| 24N22241 | $7 \times 7$ " | 1 Lb. | . 44 | 24N22265 | $10 \times 12^{\prime \prime}$ | 2 Lbs. | . 68 |
| 24N22242 | $7 \times 9$ " | 1 Lb . | .44 | 24N22262 | 10x14" | 3 Lbs. | . 71 |
| 24N22249 | $7 \times 11^{\prime \prime}$ | 1 Lb . | . 53 | 24N22266 | 10x17" | 3 Lbs. | . 82 |
| 24N22256 | $7 \times 13^{\prime \prime}$ | 2 Lbs. | . 56 | 24N22397 | 11x17" | 3 Lbs. | . 82 |
| 24N22258 | $7 \times 15^{\prime \prime}$ | 2 Lbs | . 62 | 24N24398 | $13 \times 17^{\prime \prime}$ | 4 Lbs. | . 03 |

STEEL CHASSIS WITH BOTTOM COVER PLATES
Heavy-duty 1-pc. $1,16^{n}$ steel. Reinforced corners. Ends drilled to fit standard mounting bracket. Black wrinkle linish.

| No. | W. L. D. | Lbs | Ea. | No. | W. L. D. | Lbs. | Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 24N22155 | $8 \times 17 \times 2^{\prime \prime}$ | 9 | 2.18 | 24N22156 | $11 \times 17 \times 3^{\prime \prime}$ | 12 | 2.85 |
| 24N22229 | $8 \times 17 \times 3^{\prime \prime}$ | 10 | 2.47 | $24 N 22230$ | $13 \times 17 \times 2^{\prime \prime}$ | 13 | 2.94 |
| 24N22231 | $11 \times 17 \times 2^{\prime \prime}$ | 11 | 2.59 | 24N2232 | $13 \times 17 \times 3^{\prime \prime}$ | 14 | 3.18 |

## FOUNDATION CABINETS, CHASSIS \& METER CASES



B

DE LUXE HINGED STEEL CABINETS
A. Attractive streamlined cabinets, with full-lengith piano hinged top and removable front panel. Slate cray tinish with chrome trim molding. ventilators an side. All without chassus.

| No. | 1 x L. $\times$ D. | Pancel | For (\%hmes | Each |
| :---: | :---: | :---: | :---: | :---: |
| 24 N 22087 | $8 \times 10 \times 8{ }^{\prime \prime}$ | $8 \times 8{ }^{\prime \prime}$ | $7 \times 1 \times 2$ " | 4.26 |
| 24N22083 | $8 \times 1 . \times 8{ }^{\prime \prime}$ | $8 \times 10$ " | $7 \times 14{ }^{\prime \prime}$ | 4.41 |
| 24N2208s | $8 \times 14 \times 8{ }^{\prime \prime}$ | $8 \times 12$ " | 7 $\times 13 \times 2$ " | 5.29 |
| 24N22091 | $12 \times 2.17 \times 12^{\prime \prime}$ | $12 \times 18{ }^{\prime \prime}$ | 11) $\times 1 / 7 \times 3^{\prime \prime}$ | 8.23 |

STANDARD HINGED STEEL CABINETS
Sumbar to above, le a chrome trum; with ventulumi louvres.

| N \%. | $\mathrm{H} \times \mathrm{L} \times \mathrm{x}$ ) | Parnal |  | $1 \cdot \%$ \%h |
| :---: | :---: | :---: | :---: | :---: |
| 24N22200 | 4*1) $\times 8$ " | $8 \times 8$ " | /8'/x) ${ }^{\prime \prime}$ | 2.94 |
| 24N22201 | $8 \times 12 \times 8{ }^{\prime \prime}$ | $8 \times 11^{\prime \prime}$ | $7 \mathrm{x}^{\prime \prime} \times \mathrm{x}^{\prime \prime}$ | 3.23 |
| 24N22202 | $8 \times 14 \times 8{ }^{\prime \prime}$ | $8 \times 12{ }^{\prime \prime}$ | $7 \times 13 \times 2$ " | 4.12 |
| 24N22203 | $12 \times 2 \times 12^{\prime \prime}$ | 12x18" | 1 $\times 1.7 \times 3$ " | 7.64 |

## GENERAL UTILITY STEEL CABINETS

B. Streamlined, sturdily made steel cortmets desmoned for use in radio or other allied tields. All are made of sheet steal, constrineted with spot welded reinforced corners. Tons and bolloms are easaly rumovathle and held firmy in place hy menns of self-tappluid srrews which are elhadent aprearance. Avalakle in 10 sizes to fit all requirements.

| No. | Size | Shig J. Wt. | F..11 |
| :---: | :---: | :---: | :---: |
| 24N22209 | $4 \times 2 \times 4$ " | 2 lbs | . 76 |
| 24N22210 | $4 \times 3 \times 5$ " | 3 lmm | . 82 |
| 24 N 22174 | $6 \times 6 \times 6$ " | 3 hm | . 97 |
| 24 N 22175 | $9 \times 5 \times 6$ " | 5 lts | 1.47 |
| 24N22173 | $1 \times 8 \times{ }^{\prime \prime}$ | 611 s | 1.85 |
| 24 N 22176 | $10 \times 8 \times 10 "$ | 7 lts | 2.35 |
| 24N22177 | $11 \times 12 \times 8^{\prime \prime}$ | $911 \%$ | 2.53 |
| 24 N 22181 | 12x'1x0'" | 5 krs | 1.82 |
| 24N22182 | $\left.15 \times 9 x^{\prime}\right]^{\prime \prime}$ | $10 \mathrm{lbs}$. | 2.56 |

## Miniature Utility Cabinets with Attached Chassis



Indispensable when bulding electronic devices using miniature tubes. Front and rear panels are removable and fastened with self-tapping screws, permitting easy accessitulty. Useful for HF converters, TV amplifters and power supplies. Black wrinkle finish

| Stocik No. | H.xW.xD. | Chassi. Size | 5.ah |
| :---: | :---: | :---: | :---: |
| 24N22430 | $4 \times 4 \times 2$ " | $1 \times 3{ }^{1} \times \mathrm{x}^{7}{ }^{\prime \prime}$ | 93 |
| 24 N 22431 | $4 \times 5 \times 3$ " | $1 \times 410 \times 2{ }^{1 / \prime \prime}$ | 1.03 |
| 24 N 22432 | $5 \times 4 \times 3$ " |  | 1.03 |
| 24 N 22433 | $6 \times 15 \times 4 \prime \prime$ | $18 / 4 \times 41, \times 37 \mathrm{~mm}$ | 1.13 |
| 24N22434 | $5 \times 0 \times 4 \prime \prime$ | $1{ }^{1} \times 5 \times 1 / 4 \times 17{ }^{\prime \prime \prime}$ | 1.13 |
| 24N22435 | $6 \times 6 \times 6$ " | $18 / 4 \times 48 \times 55^{7} x^{\prime \prime}$ | 1.18 |



AMPL. CHASSIS \& COVERS
Chassis stamped irom 1 -pc. cold rolled steed, with black rupple timish. $6^{\prime \prime}$ de ep covers are slate uray. 3 hagh chassis arinfor bottorn plates (root supard, but include chromam mollding and handles.

| Standard Models |  |  |  | DeLuxe Models |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Size | Wt. | Each | No. | Size | Wt. | Ench |
| 24N22132 | $51 / 5 \times 10 \times 9$ " | 9 lbs . | 2.20 | 24N22183 | 5 $3 / 2 \times 10 \times 9^{\prime \prime}$ | 9 Jbs . | 3.62 |
| 24N22138 | $8 \times 12 \times 9^{\prime \prime}$ | 10 lbs | 3.23 | 24N22139 | $8 \times 12 \times 9^{\prime \prime}$ | 11 lbs . | 4.70 |
| 24N22135 | $7 \times 17 \times 9^{\prime \prime}$ | 11 lbs . | 3.38 | 24N22185 | $7 \times 1 / \times 9^{\prime \prime}$ | 11 lbs . | 4.85 |
| $24 N 22136$ | $10 \times 14 \times 9^{\prime \prime}$ | 11 lbs | 3.67 | 24N22186 | $10 \times 14 \times 9^{\prime \prime}$ | 11 lbs. | 5.29 |
| 24N22137 | $10 \times 17 \times 9^{\prime \prime}$ | 13 lbs. | 3.82 | 24N22187 | $10 \times 17 \times 9^{\prime \prime}$ | 13 ths. | 5.59 |



## PORTABLE STEEL CABINETS

For oscillators, trangceivers, etc. Removoble front and back panels. Leather handle. Black ripple finish.
24N22273-Size: $12 \times 78 / 4 \times 7$ "
2.50

24N22274--Size: $15 \times 73 / 4 \times 7^{\prime \prime} \ldots 2.91$

MINIATURE ALUMINUM CHASSIS
Open end chassis of hard aluminum. Has $1 / 4^{\prime \prime}$ thange on bottom to permit fastening down of chassis, or attaching it to a bottom plate. Extremely useful for small receivers, outboard uses such as narrow hand FM adaptors or where space is lim-


| Stock Nó. | Dimensrons ( $4 . \times$ W.xD.) | Each |
| :---: | :---: | :---: |
| 24N22436 | $2^{5} \times 23 / 4 \times 1 / 4^{\prime \prime}$ | 29 |
| 24N22437 | $18 / 4 \times 3{ }^{1} \times 1{ }^{\prime \prime}$ | 32 |
| 24N22438 |  | 35 |
| 24 N 2439 | $2 \pi / 4 \times 41 / 4 \times 1$ " | .35 |
| $\begin{aligned} & 24 \mathrm{~N} 22440 \\ & 24 \mathrm{~N} 22441 \end{aligned}$ | $33 / 4 \times 41 / 8 \mathrm{x} 11 /{ }^{\prime \prime}$ | . 35 |
| 24 N 22442 |  | 44 |
| 24N22443 | $4 \times 31$ ¢ ${ }^{\text {a }}$ | 35 |
| 24 N 22444 | $4 \times 4{ }^{1} \times \times 1^{\circ}$ | 38 |
| 24N22445 | $4 \times 5^{1 \times 1} \times 1$, | 41 |
| 24N22446 | $4 \times 6{ }^{1} \times 1^{\prime}$ | . 44 |

HINGED COVER CABINETS
Ruggend steel cabimet: with piano hingree lad:s so irranged that lattom, front or back paresl may be rmmoved for circuit wiriua. Altractively fimshed in black ripple enamel.


| Strmk No. | Dimensions (W.xD.xH.)\| | Uses Chatsis | Each |
| :---: | :---: | :---: | :---: |
| 24N22385 | $9 \times 5 \times 6 "$ | $81 / 2 \times 4^{3}{ }_{4} \times 11 / 2^{\prime \prime}$ | 2.35 |
| 24N22386 | $10 \times 83 \times 7$ " | $9 \times 1 \times 2^{\prime \prime}$ | 2.94 |
| 24N22387 | $12 \times 8 \times 7^{\prime \prime}$ | $11 \times 7 \times 2^{\prime \prime}$ | 3.38 |
| 24N2.2388 | $19 \times 1!\times 8^{\prime \prime}$ | $11 \times 10 \times 3^{\prime \prime}$ | 4.03 |
| $24 N 22389$ | $1.4 \times 8 \times 7$ " | $13 \times 7 \times 2^{\prime \prime}$ | 4.03 |
| 24 N 22390 | $18 \times 1.5 \times 1$ | $17 \times 11 \times 3^{\prime \prime}$ | 5.06 |



## SLOPING PANEL STEEL CABINETS



24 N 22098 -Dinemsions: $714 \times 412 \times 41^{2}$ " Shipg. wt. 5 ibs...
.26

## deluxe meter Cases

B. For $2^{\prime \prime}$ and $3^{\prime \prime}$ melers. Marıne aray ripgle finish, chrome trim 24N22.080- $41, \times 4^{3} 1 \times 413^{\prime \prime}$. Meter Hole $2131^{\prime \prime}$

1.32


## SfANDARD SPEAKER CABINETS

A. Louvsed bark cover with slots for wall hanaina. Made of durable sheet ale al with blark ripple enamel fini th.

| 24N22140 | $6^{\prime \prime}$ |  | W | , |
| :---: | :---: | :---: | :---: | :---: |
| 24N22141 | 8" Sy eaker | Cribinet Sige: $12 \times 12 \times 7^{\prime \prime}$ | Wi. 91 l | 3.59 |
| 24N22142 | 17" Spraker | Cabinet Size: $14 \times 14 \times 8{ }^{\prime \prime}$ | Wt. 15 lbs | 4.70 |
| 24N22143 | $12^{\prime \prime}$ Sperker | Catinet Size: $16 \times 16 \times 8{ }^{\prime \prime}$ | Wt. 20 lbs | 6.3 |

## SLOPING FRONT CABINETS

B. Front pariel removable. Rear openinas for leads and ventilation Slate gray ripple fintsh with rod-striped trim. Less chassis.

| 24N22092 | $8 \times 8 \times 83^{\prime \prime}$ | For Chassis. | $7 \times 1 \times 2$ | Wt. $9 \mathrm{lts}$. | 3.88 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 24N22093 | $8 \times 110 \times 8{ }^{\prime \prime}$ | For Chassis | $7 \times 9 \times 2$ " | Wt. 10 lbs. | 4.26 |
| 24N22094 | $8 \times 14 \times 8{ }^{\prime \prime}$ | For Chassis | $7 \times 13 \times 2{ }^{\prime \prime}$ | Wt. 111 lbs . | 5.59 |
| 24N22096 | $12 \times 18 \times 12^{\prime \prime}$ | For Chassis | $10 \times 17 \times 3^{\prime \prime}$ | Wt. 17 lbs . | 7.50 |

# TRANSMITTING KEYS-PHOTOFLASH EQUIPMENT 



## Linguaphone Code Lesson Records

Learn code this easy way at your own con venience. Speed progresses from 2 to 15 words per minute. Operate on any 78 RPM phonograph or record player, Includes lextbook and 5 dou ble-faced $10^{\prime \prime}$ discs in album.

29N21895-Shpg, wt. 6 lbs.. .
9.80

Gardiner Automatic Tape Sender Model "S", with silent 110 volt $A C$ motor Variable code speed from 4 to 60 words per minute. Three controls: motor switch, contact switch and speed control. Terminals for oscillator or buzzer. Comes with 10 rolls double perforated tape ${ }^{29 N} 14060$
24.00

## VIBROPLEX TRANSMITTING KEYS

 "CHAMPION"$\qquad$ nexpensive, yet exceptional sending qualities assure speed and ease of operation. Single lever, two pairs of contact points (one for dots and one for dashes). Bright finish perts with conlrasting black

9.95

## 'ORIGINAL'

For communications work where speed and perfect Morse are essential. Single lever. Two pairs of contact points: one or dots, other for dashes. Unlimited sending possibilities. Polished parts, black base. Complete wedge.
15N14051-_Shpg. wt. 5 lbs . 5.95
orced corners lock and key. Size: $6 \frac{3}{1} \times 38 / 4 \times 41 /$orced corners, lock and ke


SPEED-X KEYS AND CODE SETS
CODE PRACTICE SET MODEL 450
Constant frequency adjustable buzzer and a standard hand key with $1 / 8^{\prime \prime}$ silver contacts, mounted on a brown bakelite base $6^{\prime \prime} \times 4^{\prime}$ ses $2-13 / 2$ volt cells (not inc
15N14027-Shipping weight 2 lbs.
2.65

20N20622-1 $1 / 2$ volt cell for above

## BUZZER WITH BAKELITE BASE AND CAP

Model 400. Operates on 2-lV. cells or "C" battery 15N14021-Adjustment on vibrator
1.18

20N20622-11/2 V. cells $61 / 2 \dot{2} 20 \mathrm{~N} 19867$ - " C " Batt. 57 ¢


## CODE PRACTICE KEYS

Model 300: provided with two adjustments. Has bakelite base, silver contacts, and machined parts. 15N14041-Shpg. wt. 1 lb . 15N1 4053--Model 305. As above, with metal base.


ICA DELUXE SIGNA-TONE
Audio Osaillator with 3 output frequencies and a continuously variable volume control. A number of phones and keys may be connected for classroom or radio club instruction. Will follow "bug" at all speeds. With ube and self-contained speaker. For 110 V AC-DC. $71 / 2 \times 41 / 2 \times 4^{\prime \prime}$.
Shpg. wt. 4 lbs.
11.76

## KEY WITH SWITCH


M- 100 Telegraph key with switch to close contacts. Lacquered brass base.
15Ni 4017 -Wt. I lb. .............. . . 2.90 15N14017-Wt. I lb....
15N14005-Less switch.

# Photoflash Power Supplies-Lamps-Capacitors 

## CONDENSER PROD.

## HI.VOLTAGE POWER SUPPLY TYPE PS-1



Completely enclosed and sealed-in housing provides safe, trouble-free service. Simple to use only three terminals to connect. Large porcelain stand-off insulator on high voltage output terminal. Input 117 volt 60 -cycle AC. Output will charge capacitors to 2500 volts DC. Maximum load 50 mid. Size: $4^{9} 16 \times 2 \frac{8}{4} \times 51 / 2^{\prime \prime}$ $21 \mathrm{~N} 1989-$ Shipping weight 3 lbs.
Type PS-2. High voltage. 117 V .
11.14 ype PS-2. High voltage. $117 \mathrm{~V}, \mathrm{AC}, 60$ cycles inpu;t
2400 V . DC maximum output. .005 amps DC maximum. RC filter, 50,000 ohms, $2 x .1$ mfds.
15.14

## AMGLO PHOTOFLASH LAMPS



Light intensity 100 times sunlight. 10,000 flashes per bulb, each $1 / 10,000$ second. High color temperature of $6500^{\circ}$ Kelvin with standard circuits. Mounts in standard 4-prong radio tube socket.

Type S4R4X-60-200 watt sec. 18 to 36 MFD . 36N10585-Shipping weight 1 lb.
Type 48U4X-100-600 watt sec. 50 to 300 MFD . 36N10586-Shipping weight 1 lb .
Type 68N9T-200 watt sec. 100 to 400 MFD .

Type 78M9T-300 watt sec. 100 to 600 MFD .

$$
\text { Type } 88 \mathrm{M9T}-300 \text { watt sec. } 100 \text { to } 600 \text { MFD. }
$$

36 N 10589 --Shipping weight 1 lb .

## POTTER-BRUMFIELD PHOTO-FLASH RELAYS

New alloy contacts discharge capacitor through lamp, handle hundreds of amps during flash. 2500 volt insulation.


| Stock No. | Mig. No | Coil |  | Contacts | Each |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | 16N14150 | FR1A | 6VAC | SPST, NO | 3.00 |
| 16N14151 | FRSA | 6VAC | SPDT | 3.25 |  |
| 16N14152 | FR11A | 6VAC | DPDT | 4.25 |  |
| 16N14153 | FR1D | 2VDC | SPST, NO | 3.00 |  |
| 16N14154 | FR5D | 2VDC | SPDT | 3.25 |  |
| 16N14155 | FR11D | 2VDC | DPDT | 4.25 |  |



CORNELL.DUBILIER PHOTO FLASH CAPACITORS
Type HKGT. For use in high-speed photographic equipment. Compact and light-weight. Heavy duty internal leads connected to bakelite cup insulated terminals.

| Stock No. | C-D No. | Cap. Mid. | Watt Sec. | Size, Inches $L \times W \times H$ | Wt. Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2000 Volt DC Peak |  |  | 21/4 | 10.00 |
| 5N3040 | HKGTI A00 | 15 | 30 |  |  |  |
| SN3041 | HKGTlAOI |  |  |  |  | 11.17 |
| 5N3042 | HKGT115 |  |  | 33/4 $\mathrm{x}^{49} 16848 / 4$ | 41/4 | 18.23 |
|  |  | $15^{2500} 50$ |  | $38 / 1 \times 24 / 2 \times 65$ |  | 10.00 |
| 5N3043 | HKGT1A02 |  |  |  |  |  |
| 5N3044 | HKGT103 | 25 | 80 |  | $38 / 4 \times 49.6 \times 65 / 8$ | $53 / 4$ | 13.52 |
| 5N3045 | HKGT104 | 32 | 100 | $38 / 8 \times 49$ \% $665 / 8$ | 6 | 21.56 |

## MALLORY PHOTOFLASH CONDENSER

EP240. For those photoflash lamps designed to operate in the 900 to 1000 volt range such as GE-FT220 and Arnglo 68N9T, 78M9T and 88M9T. Made up of two separate capacitors of 50 mid each, enclosed in one can. 450 volts DC rating. Two must be connected in series to withstand the 900 volts required for photoflash tube.
5N3046-Shipping Weight $1 / 2 \mathrm{lb}$.
2.65

## Thordarson Photoflash

## Transformers

1. Type 22R42. Designed for use in 117 VAC operated photoflash in power packs. Provides 2250 VDC
 when used with 2 X 2 rectifier. Application note and circuit diagram of a typical power pack supplied Size: $31 / 8^{\prime \prime}$ wide, $25 / 8^{\prime \prime}$ high, $25 / 8^{\prime \prime}$ deep, on $31 / 2^{\prime \prime}$ mounting centers. Shipping weight 3 lbs.
6N2140
Type 22R43. Same as above, but for 117 VACC or 4 volt battery vib ( 180 cycles). Secondary 1100 volt AC at 1.5 ma . Size: $31 / 4^{\prime \prime}$ wide, $2^{11} /$ r $^{"}$ high, $2 \frac{8}{8} 8^{\prime \prime}$ deep, $2^{13}$ 作 mtg . centers.
6N2141-Shipping weight 3 lbs .
2. Type 22R44. Supplies the high voltage ionizing pulse necessary to fire high pressure three electrode photoflash tubes. Primary is condenser discharge ( 26 to .5 mfd at 200 VDC). Secondary 15,000 volts peak, $21 / 4^{n}$ wide, $11 / 2^{\prime \prime}$ high, $11 / 8^{\prime \prime}$ deep. Single hole mounting. 6N2142-Shipping weight $1 / 4 \mathrm{lb}$.
Thordarson Photo-Flash Brochure. Theory, operation and construction of photo flash power packs and ignition circuits. 23N19670.

15\$

# HEADPHONES AND ACCESSORIES 



RELIANCE DX TYPE SINGLE \& DOUBLE HEADPHONES

1. Powerful bi-polar magnets, featherweight shells, adjustable cloth covered headband.
15N 13892-2000-Ohm Headset. Each
1.42

15N13893-3000-Ohm Headset. Each.
... 1.56
2. SINGLE UNIT HEADSETS. With clock-steel band attached.

15N13896-1000-ohm single set. $41 / 2$-ft. cord.................... $90{ }_{4}$
15N13897-1500 ohm single set. 41/2ft. cord..................... 984
Caps and diaphragms fit all above phones.
15N 13894 -Cap............
15N 13895 -Diaphragms.
124

## ACME DE LUXE LIGHTWEIGHT HEADPHONES

1. Chrome steel magnets. Extremely light-weighs only 6 oz . complete with 2 units, $41 / 2$ - ft . cord, metal headband. 15N13904-Double Headset. 2000 ohms DC resistance
.. 1.48 15N13905-Single Headset. 1000 ohms DC resistance......95 ${ }_{\$}$

## BRANDES "ADMIRAL" HEADPHONES

1. Powerful magnets. With 5 ft . cord, adjustable clips. ${ }^{15}$. $13928-2000$ ohms........................................... 5

15N 13929-3000 ohms.
2.30

15N13930-5000 ohms ........................................................... 2.75

## BRANDES "SUPERIOR" HEADPHONES

Similar to above but with exposed screw terminals.
15N13925-2000 ohm Headset.......................................
1.99

15N13936-Bakelite Cap-fits all models. Each................ 18
15N13935-Aluminum Cap-fits all models. Each............... 18 \$
15N13937-Diaphragm only-fits all models. Each.
. 5 \$

## BRUSH "HUSHATONE"

7 Small, streamlined, modern, thoroughly dependable extension loud speaker designed to end "radio irritation" in your home. Provides individual listening choice by merely slipping it under bed or sofa plllows or under the puff of a loose, pillow-back chair. Hushed tone allows listener to enjoy radio' withoutannoying others. Hushatone is made of molded plastic with attractive chromium trim. Compactly styled-measures With attractive chromium trim. Compactly styled-measures comes complete with convenient detachable extension comes complete with convenient detachable extension
cord.
15N13911.
9.55


## HEARING AID FOR RADIO

New headphone type hearing device increases radio enjoyment for persons who find it difficult to hear radio programs properly, also for private listening without disturbing others. QuickIy and easily attaches to any radio in 10 or 15 minutes; it can be wired into the set by a maintenance man or yourself, if you're handy with a few simple tools. The headset is supplied with a three-way switch device that permits you to listen with the speaker only, the phones only or both at the same time. Specially constructed low resistance headphone matches voice coil of the speaker.
15N13865.
4.32

15N13866-Same as above, but with single phone...........3.37 15N13867-3-Way Switch Adaptor only.............................. 1. 85


## TELEX TWINSET

Model 3725. An entirely new way to hear with a headset! Never before such comfort, lightness, all-day-long ease of use. Actual sound is piped directly into ear through a slender, directly sound arm mounted on a locking ball-and-socket joint. Fully adjustable to fit any head shape, any adjustable to it any head shape, any ear size. Plasground nolse. Ruggedly built, chrome-plated receivers are ground noise. Ruggedly built, chrome-plated receivers are seased in Tenite plastic. Excellent sensitivity combined with cased in tenite plastic. Excellent sensitivity combined with superb full range high-fidelity makes the Twinset perfect for communications and experimental installations, 10 as
well as transcribing, theatre work, etc. Impedance: 1000 ohms. Supplied with single 5-foot Monocord which plugs into onms. Supplied with single 5 -foot Monocord which plugs into 15N 13868.
8.82

Mode1 3735.-Same as above, but 64 ohm impedance
MSN 13869........................................................................

## ANTENNAS-MOUNTS-DIALS

## PREMAX MOBILE ANTENNAS \& MOUNTS

Designed to meet the most rigid transmission and reception requirements for police, fire, municipal, public utility, transportation commercial, governmental and amateur services. Carefully designed and engineered to withstand the hard usage and trouble free periformance these services demand.

## GRADUATED DIAMETER STEEL RODS

Stainless steel rods of varying diameters are joined securely and permanently into a single graduated length which provides high flexibility, minimum wind resistance and long life. "Whip" type with a $1 / 4$-inch, plain base.
28N21845-Model AS-172. 72* long.
28N21846-Model AS-178. $78{ }^{\circ}$ long.
28N21847-Model AS-184. 84 long.
28N21848-Model AS-190. $90^{\circ}$ long 3.00

28N21849-Madel AS-196. 96 (long. 3.09

## MOBILE ANTENNA MOUNTS



Type NA. Insulated Bumper Mounting. Plates are heavily cad-mium-plated steel: white glazed ceramic cones.
3.53 28N21811
Type K. Insulated Bumper Mounting. Antenna rod fits into section in heave in tubing attached to the insulator and permits 10 antenna into place. White glazed ceramic insulator.
4.12 28N21812.
Type TA. Trunk or Panel Mounting. For Premax Style $\bar{A}$ or any $1 / 4^{"}$ anterna. Fastens to car body or trunk or to any horizontal surface such as a roof. Lower support is solid brass rod joined to a $12^{*}$ brass tube carrying antenna. Upper support is 24 brass rod adjustable on antenna tule and also in insulator eissemblies ustment. Cadmium-plated.
9.70 28N21813 Type R. Insulated universal mounting of "split-ball" type. Solid cust bronze, which bolts directly to car panel or other surface
through heavy plastic disc insulation with water-proof gasket and through heavy plastic disc insulation with water-proof gasket and
steel back-plate. Baked black enamel finish. Fits style A or any $1 / 4 "$ antenna
$28 N 21814$.
6.76

## 2-METER BEAM ANTENNA



Model 200-EA. Designed especially for use on 2 Meter amateur band. Unit is a hi-gain, broad band parasitic array. Precut ar he midale of the 144 to 148 MC band. Uses a folded di-pole driven element with three directors and one reflector. Directors spaced 11 wavelength, reflector spaced . 15 wavelength. Furnished with standard Elincor swivel bracket, can be mounted either in the vertical or horizontal plane. Designed to be fed with RG8/U 52 -ohm coaxial cable. Boom is l" aluminum tubing, all elements are $/ 88^{\circ}$. Complete with hardware and instructions.
28N21977-Shipping weight 3 lbs.
8.23

AMATEUR FOLDED DI-POLE ANTENNAS


## NATIONAL TYPE "ACN" DIAL

Designed for E. C. oscillator or U.H.F. receiver. 5 -range scale for hand calibration, 0-100 linear scale as guide. 2 extra scales, lucite dial and pointer. $5: 1$ vernier. $1 / 4^{\prime \prime}$ shafts. Frame: $5^{*} \times 71 / 4^{*}$.


11N14474-Weight 1 lb.
3.30

11N14473-Shpa. weight 1 .
3.00

NATIONAL TYPE 'ICN" ILLUMINATED DIAL
2 dial lights provide illumination on all bands. Dial window blanked out in semi-circular shape to prevent shadow casting. scales same as ACN. $5^{18} \times 11^{\circ}$.
6.00

## NATIONAL "MCN" SMALL SCALE DIAL

Ideal for mobile installations, small converters, tuners, and $3 \frac{1}{2^{\prime \prime}}$ rack panel mounting. Provides three calibrating scales and a 0-100 logging scale. Mechanism extends $1 / 4^{"}$ below the dial frame. Size: $23 / 4^{\circ} \times 37 / 8^{\circ}$. 1iN14478-Shpg. wt. I lb..

## MILLEN 10039 PANEL DIAL

Compact panel dial with completely selfcontained operating mechanism to eliminate back of panel interference. Ratio 8 to 1. Extremely compact for ensy mounting. Features include finger-tip knob, $0-100$ logging scale plus 5 blank scales. Handsome black art | metal finish. $4 \times 31 / 4 "$. |
| :--- |
| 11N8080-Shpg. wt. $1 \mathrm{lb} . . . . . . . . . .$. |
| 10 |

## NATIONAL "B" VERNIER DIAL

Fatio variable from $6: 1$ to $20: 1$. Black Bakelite chell. 4* diameter.
IIN14367-Clock $200-0$ in $360^{\circ}$. Each 11 N14368-0-100-0: $180^{\circ}$. $\}$ ? 7 Type "BM"-Without variable ratio. 3 " dia $\left.\begin{array}{l}\text { 11N14371-O-100-0: } 180^{\circ} . \\ \text { 11N14372-Clock, 200-0;360 }\end{array}\right\}$

ICA MINIATURE DIALS
Chrome silver dials with black etched numerals. Equipped with finger-tip black knol. Only $15 / 8{ }^{\prime \prime}$ aver 180 and $270^{\circ}$. $180^{\circ} \ldots . . . . . . . . .$. Se
IIN14234-0-10.......... INN14235-0 $10.180^{\circ}$
.50 c

## PRECISION VERNIER DIALS

Have etched calibrations graduated from zero to 100 . Large flanged knob has bushing for
 IIN14236-4" Dia. $325^{\circ}$ Rot........... . . . . . 1.23 $\begin{array}{lll}11 N 14237-23 / 4 & \text { Dia. } 325^{\circ} \text { Rot. ............... } 1.23 \\ 1 \text { IN14238-4 } & \text { Dia. } 180^{\circ} \text { Rot............. } 1.62\end{array}$ 11N14239-23/4" Dia. 180 * Rol.................... . . . . 1.23

## NATIONAL R \& O DIALS

Type 0-31/2" Dial. Nickel silver. Marked C-100. $180^{\circ}$ counter-clockwise. Large easy-togrip central knob. For $1 / 4$ shalt.
11N14567
1.00

Type R-i $5 /{\text { B D Dial. Enched nickel silver. } 180^{\circ} .}^{\circ}$ Narked 0.10. 1/4" shaft. 11N14568.
.60 c

## ICA CHROME DIAL PLATES

Elack Etcho-Engraving on Chrome Silver kackground. Grain satin finish. Calibrations Q-100.



## ETCHED METAL DIAL PLATES

Elack dial plates, calibrated $0-10$ in $300^{\circ} .21 / 4 \times 111 / 1_{6}^{\prime \prime}$, Wecord Gain Mike. Record, - Each
$15 c$
MILLEN PANEL TRANSFERS
1, ${ }^{\text {² }}$ Block letters for all rigs.
11N8012-Black on White. . . . . . . . . . . . . . . . 1.25
11N8013-White on Black. . . . . . . . . . . . . . 25

## transmitting variable condensers-CRystals



Small and sturdy with high mechanical and electrical efficiency. Insulation used is Steatute. Rotor and Stator plates are brass and are elec-tro-soldered to their respective rods. All metal both front and rear bearings, with either midline type plates (straight line wave length). or semi-circular plates (straight line capacity).

Semi-Circular Type-Double
Bearing MMFD

| Stock No. | Type | 'Max. Min. ${ }^{\text {Gap }}$ |  |  | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 11N10827 | MC1861 | 15 | 4 | .060" | 1.31 |
| 11 N10828 | MC1862 | 35 | 5 | . 060 * | 1.71 |
| 11N10829 | MC1863 | 50 | 7 | . 060 | 1.89 |
| 11N10830 | MC1864 | 75 | 9 | . 060 " | 2.20 |
| 11N10831 | MC1865 | 100 | 12 | .060" | 2.60 |

## Two-Gang Variables

 | IIN10832 MC1884A | 20 | 4 | .060 | 2.69 |
| :--- | :--- | :--- | :--- | :--- | 11N10833 $\mid$ MC1885A

## HEAT RADIATING GRID AND PLATE CAPS

Use at terminals of transmitting tubes. Pro-36N14377-For HK-24
36N14378-For 35-T, HK-54 36N14388-For 866, T-125

## MILLEN PLATE CAPS

Steatile covered cap, for fransmitting tubes.
 Type 36
38. for 807, etc. 29N8056
$21 c$
Type 36011 . Extra tight. Snap action top but ton to qrip release

60c

## NATIONAL GRID CLIPS

Easily removed. Tinned grip end for soldering. For transmitting tubes, 866, T20, 809, 812, etc. ${ }^{9} 16$ " diameter 29N14441 Ceramic safety arip ${ }^{1 / 10}$ " diameter for 866 , 120, 809, 812, elc. 29N14598.
29N14599-Ceramic as above but $3 / 8$. 1 for 807, etc.

A. "ST" types $180^{\circ}$ straight-line wave-length P plates.
" "SE" types $270^{\circ}$ rotation straight-line fre-

| Stock No. | Type | Mmid. | Plates | Each |
| :---: | :---: | :---: | :---: | :---: |
| 11N14300 | STHS15 | 15 | -3 | 1.65 |
| 11N14299 | ST35 | 35 | 9 | 1.85 |
| 11N14291 | ST50 | 50 | 11 | 1.90 |
| 11N14293 | ST100 | 100 | 20 | 2.10 |
| 11N14295 | ST140 | 140 | 27 | 2.30 |
| 11N14294 | ST150 | 150 | 29 | 2.30 |
| 11N14296 | STH250 | 250 | 32 | 2.70 |
| 11N14303 | ST D-50 | 50-50 | 11-11 | 2.30 |
| I1N14280 | SE-50 | 50 | 11 | 2.30 |
| 11N14282 | SF. 100 | 100 | 20 | 2.60 |
| 11N14287 | SEH335 | 335 | 43 | 3.50 |

BUD TINY-MITE CONDENSERS
Designed for u.h.f. circuits. Extremely compuct. Have rigid construction, close fitting bearings, Steatite insulation. Soldered brass plates are bright cadmium plated. 3-way mounting. Shaft on single units permits gang. ing. Panel space $1 / 2 \times 1 / 4$

SINGLE-GANG CONDENSERS

| Stock No. | Mmid. | Plates | Frich |
| :---: | :---: | :---: | :---: |
| 11N9539 | $3-15$ | 5 | 1.13 |
| 11N9540 | 4.25 | 9 | 1.18 |
| 11N9541 | 5.35 | 13 | 1.32 |
| 11N9542 | $6-50$ | 19 | 1.42 |
| 11N9543 | 9.100 | 37 | 1.69 |
| $11 N 9545^{*}$ | 4.10 | 7 | 7 |
| 11N9546* | $5-15$ | 11 | 1.16 |
| 11N9547* | $5.5-25$ | 17 | 1.25 |
| 11N9548* | $6-35$ | 21 | 1.47 |

2-GANG CONDENSERS

| Slock No. | Mmid. | Plates | Each |
| :---: | :---: | :---: | :---: |
| l1N9512 | $3-15$ | 5 | 2.30 |
| 11N9513 | 4.25 | 9 | 2.55 |
| 11N9514 | $6-50$ | 19 | 2.67 |
| 11N9515 | 9.100 | 37 | 2.89 |
| 11N9516* | $4-10$ | 7 | 2.20 |
| I1N9517* | $5-15$ | 11 | 2.45 |
| 11N9518* | $5.5-25$ | 17 | 2.60 |
| 11N9519* | 6.35 | 21 | 2.84 |

NATIONAL LOW POWER UNITS


TMS" Alum num plates and Irames; lsolan tite insulation: long: both panel mounting and 2-hole base mounting; ad Justable rear $026^{\circ}$ air gap TMSA units, $065^{*}$. 13 ha 23/ All 100 C Peck Volts, except ll N1 4555 and 11 N14556 are 2000 Peak Volts

| Stock No. | Nat': No. and Cap. | No. of Plates | Each |
| :---: | :---: | :---: | :---: |
| 11N14550 | TMS-100 | 9 | 2.60 |
| 11N14551 | IMS-150 | 14 | 2.80 |
| 11N14552 | TMS-250 | 22 | 3.30 |
| IIN14553 | 7MS-50D* | 5-5 | 4.40 |
| 11N14554 | TMS.100D* | 9-9 | 3.20 |
| 11N14549 | 7MS-300 | 27 | 3.80 |
| 11N14555 | TMSA-35 | 7 | 3.90 |
| 11N14556 | TMSA-50 | 11 | 4.40 |

## NATIONAL NEUTRALIZING

 CONDENSERSNC600. For uie with 6L6s and similar outpu tubes. Thumb screw adjustment for varying capacity .5 to 4 mmfd . Isolantite insulation, NC800A. High voltage disc type for RCA 800 35T, HK54, etc. Screw adjustment; 3-hole mouting.
STN. For $10,45,47$, etc. $3000 \mathrm{VP;} 18 \mathrm{mmld}$

| Stock No | Type | Application | Each |
| :--- | :--- | :--- | :--- |
| IlN14252 | NC600 | For 6L6s, etc. | .32 |
| I1N14259 | NC800A | For 800 , etc. | 3.00 |


| $11 N 14476$ | STN | For 10, 45, etc. | 2.07 |
| :--- | :--- | :--- | :--- |

BUD SINGLE BEARING MIDGET CONDENSERS
al to Midget Con densers with the ex ception that these condensers have a front bearing only $.024^{*}$ air gap.
Semi-Circular Type-Single Bearing

| Stock No. | TyFe | MMFD. |  | $\left\|\begin{array}{c} \text { No. } \\ \text { Plates } \end{array}\right\|$ | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 11N10835 | MC-1870 | 15 | - | - | 88 |
| 11N10836 | MC-1872 | 33 | 4 | 5 | 98 |
| N10837 | . 187 | 50 | 5 | 7 | 1.08 |
| 11N10838 | MC-1375 | 100 | 7 | 14 | 1.23 |
| 1N10839 | MC-1976 | 140 | 8 | 19 | 1.37 |

## BLILEY CRYSTALS

CF3 single signal tilter crystal for IF filter. Frequency 29N 13855

SMC 100 dual frequency crystal provides either
100 kc .or 1000 kc . source. $1000 \mathrm{kc} . \pm .05 \%$, 100 kc . can be adjusted to zero beat. For aligninent of receivers. 29N13856.
8.75

TYPE AX2 FOR AMATEUR USE
29N13849-160 Meter $\pm 1 \mathrm{KC}$ specified frequency. 3.75 29N13851-80 Meter $\pm 2 \mathrm{KC}$ specified treq. $\}$ 29N13850 $40 \mathrm{Meter}+2 \mathrm{KC}$ specified freq. 2.80 29N13852-20 Meler $\pm 30 \mathrm{KC}$ specified freq. . . . . . 3.95

$29 N 8057$
 29N8051

CRYSTAL SOCKETS

Amphenc
CRYSTAL HOLDER ADAPTORS


Mosley 5-75 adapts $1 / 22^{\prime \prime}$ spaced holder to $3 / 4$ " spacing 29N8054
$34 c$
Mosley 7
$1 / 2$ spacing or to octal socke 29N8059.
$34 c$

## NATIONAL SHAFT COUPLINGS

## NATIONAL FLEXIBLE SHAFT COUPLINGS



Isolantite insulation, short length of flex. shafting Drives $1 / 4$ " shaft any angle to $90^{\circ}$


Flexible Coupler for $1 / 4$ " shafts haft at an offset angle. Insulated. 11N9751--Bakelite.
11N9750-Ceramic.

## TEKNI-CALS DECAL LABELS

Provides the custom-set builder, the amateur the manufacturer, and the experimenter with an ideal assortment of decal labels. Each set contains a wide variety of markings with ample duplicates. May be cut off, cambined, or rearranged. Tekni-Cals are easy to apply, handsomely made and give long, satisfactory service.
11N19885-Television Markings. Se: of over 11N19888
11N19888-Audio Markings. Set of over 1,000.
11N19889-Dial Markings. Set of over 50
11N19890-Transmitter Markings. Set of over 1,000
11N19891-Recejver Markings. Set of over 1,000.


# HAM COILS \& CHOKES 

## BARKER AND WILLIAMSON

Type A


Type B

## JUNIOR AND TYPE B INDUCTORS

Type A. Juniors for powers up to 75 watts input with plate voltages up to 850 . Fitted with standard 5 -prong steatite base.

Type 8 for powers up to 150 watts input with plate voltages up to 1500. Steatite base and plug-in jack mounting. Overall dimensions: $31 / 2 \times 25 / 8 \times 4^{*}$. Capacities shown (in mmf) to resonate the L.F. end of the band can actually be 5 to 20 mmf less because of tube and wiring capacities.

| JUNIORS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Band | Mmp. <br> Map. | Stock No. | Each | TYPE B |  |  |


| END LINKED |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | JEL |  |  | BEL |  |
| 6 | 15 | 12N10460 | 1.38 | 14 | 12N10479 | 2.41 |
| 10 | 22 | 12N10461 | 1.38 | 21 | 12N10480 | 2.41 |
| 20 | 34 | 12N10463 | 1.38 | 33 | 12N10482 | 2.48 |
| 40 | 47 | 12N10464 | 1.38 | 36 | 12N10483 | 2.83 |
| 80 | 60 | 12N10465 | 1.38 | 36 | 12N10484 | 3.16 |
| 160 | 105 | 12N10435 | 1.38 | 105 | 12N10438 | 3.44 |


| CENTER LINKED |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | JCL |  |  | BCL |  |
| 6 | 15 | 12N10466 | 1.38 | 14 | 12N10485** | 2.41 |
| 10 | 16 | 12N10467 | 1.38 | 20 | 12N10486** | 2.41 |
| 20 | 16 | 12N10469 | 1.38 | 34 | 12N1048,3* | 2.48 |
| 40 | 33 | 12N10470 | 1.38 | 37 | 12N10489* | 2.83 |
| 80 | 53 | 12N10471 | 1.38 | 39 | 12N10490* | 3.16 |
| 160 | 100 | 12N10436 | 1.38 | 120 | 12N10440 | 3.44 |

VARIABLE LINK

|  |  | JVL |  | BVL |  |  |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 | 15 | $12 N 10472$ | 1.38 | 15 | 12N10491* | 1.93 |
| 10 | 22 | $12 N 10473$ | 1.38 | 14 | $12 N 10492 *$ | 1.93 |
| 20 | 21 | $12 N 10476$ | 1.38 | 25 | $12 N 10494 *$ | 2.00 |
| 40 | 31 | $12 N 10477$ | 1.38 | 29 | $12 N 10495 *$ | 2.28 |
| 80 | 46 | $12 N 10478$ | 1.38 | 46 | $12 N 10496 *$ | 2.61 |
| 160 | 95 | $12 N 10437$ | 1.38 | 110 | $12 N 10444$ | 2.88 |

center tap.
Steatite Jack Bar Assembly for end or center link Type B inductors (former type A56).
12N10497.
85c
Jack Bar and Swinging Link for variable link Type B inductors.
12N10498............................................. 3.44 12N10498.

## B \& W TYPES T AND HD

Type T: Up to 500 watts input. Link for variable center-linked models hinged on jack base-sume link for plug-in coils on all bands. Matches load imp. of 72 ohms. Mig. $71 / 2 \times 61 / 4 \times 5^{\circ}$.
Type HD: Heavy duty, up to 1000 watts input. Similar to type T. Heavy steatite plug bar and jumbo banana plugs. Both types center fapped. Mtg. space $11 \times 9 \times 7^{\prime \prime}$.
Capacities: Can be 5 to 20 mm less than shown, because of tube and wiring enpacities.

| TYPE T |  |  |  | TYPE HD |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Band | Cap. Mmf. | Stock No. | Cost <br> Frich | Crp. Mmf. | Stock No. | Cos: <br> Each |
| CENTER LINKED |  |  |  |  |  |  |
|  |  | TCNL | 2.89 | 20 | HDCL |  |
| 20 | 21 | 12 N 10501 | 2.96 | 20 | 12N10513 | 5.85 6.54 |
| 40 | 34 | 12N10502 | 3.30 | 20 | $12 N 10514$ | 6.88 |
| 80 | 55 | 12N10503 | 3.65 | 34 | 12N10515 | 7.56 |
| 160 | 100 | 12N10445 | 3.93 | 105 | 12N10447 | 8.60 |
| VARIABLE LINK |  |  |  |  |  |  |
|  |  | TVL |  |  | HDVL |  |
| 10 | 17 | 12N10504 | 2.20 | 16 | 12N10516 | 4.48 |
| 20 | 22 | 12N10506 | 2.28 | 18 | 12N10518 | 5.16 |
| 40 | 29 | 12N10507 | 2.61 | 33 | 12N10519 | 5.50 |
| 80 | 39 | 12N10508 | 2.96 | 41 | 12N10520 | 6.19 |
| 160 | 85 | 12N10446 | 3.10 | 90 | 12N10448 | 7.23 |

Steatite Jack Bar Âssembly for center link Type Tinductors (old type AS4).
12N10509. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 25 Base Assembly and Swinging Link for variable-link Type T Inductors.
Jack Bar Assembly for center link Type HD Inductors.
5.50 jack Bar 1.75

Base Assembly and Swinging Link for variable-link Type HD nductors.

## BARKER \& WILLIAMSON TURRETS

Fast, positive bandswitching for amateur rigs. Shorts unused coils, eliminates absorption effects. Cover 80. 40. 20. 15. 10 meter bands by shaft rotation. 3/6" mtg. hole.

## BAND HOPPERS

For up to 75 -watts. Uses same coil design as Juniors. Tunes with 50 mmf variable capacitor For interstage coupling between 2 beampower tubes or beam-power tubes and triodes. 12N10523-Type 2A. Mig. space $3^{13} / 6^{\circ} \times 2^{\circ}$. Depth $3^{\circ}$

## 75 AND 150 WATT TURRETS

75 -watt for link coupling single-ended or push-pull low-power stages with tubes at voltages up to $850.65 /^{\prime \prime}$ dia. $4^{\prime \prime}$ deep. 150 watt for single double-ended circuits, voltages to 1000 .
12N10524-75-wott JTCL center linked, center tapped..... $\}=.38$ 12N10526-15.watt ITEL, end linked, untapped. ...................... 11.69 12N10527-150-watt BEL, end linked, untapped, Each...............11. 69

## TURRET DIAL PLATES

Sturdy aluminum with baked enamel finish. $21 / 4^{\prime \prime}$ dia. For use with turrets and band hoppers listed above. 12N10449.
$25 c$
JOHNSON SPRING CLIP FOR INDUCTOR COILS
Takes No. 20 to No. 10 wire. Lock screw adjustment.
12N16749-Spring Clip. Each .................................... . . . 9 e


## NATIONAL HI-FREQUENCY COILS

High $Q$ permeability tuned RF coils, tune with capacities from 100 to 10 mmfd . Inductive
winding replaceable. 12 NC 14382 to 220 MC . . . 1.77 12N14383-AR-5. 37 MC to $110 \mathrm{MC} . . . . .1 .46$ Hi-Frequency Coil Form. Winding length AR-2 AR-5 XR-50 12N14384-XR-50...............

## RELIANCE RF CHOKES

4 pie-wound sec. on Isolantite form. 12N10106- 2.5 ohm; 150 ma .50 ohms. 22 c 12N10109-2.1 ohm; 250 ma. HD type..... 25c


## PARASITIC SUPPRESSOR

Non-inductive 50 ohm resistor with choke of 12 mh .003 ohms DC.
12N10021-Each
OHMITE POWER LINE CHOKES


BUD HF AND UHF R.F. CHOKES


12N10108-Fig. 1.
$5.7 \mathrm{mh}, 750$ ma. 1.4 ohms DC...2TC
12 N 10124 Fig. 2 .
2.5 mh .250 ma . 6 ohms DC...... 65 c

## NATIONAL CHOKES

12N14429-R100-21/2 inh, SO ohms 35 c DC res. 125 ma. wire leads (A) .. 12N14421-R100U-As above, chas. 12N14422-R3OO-1 mh, 10 ohms DC res. 300 ma . wire leads (A) 12N14423-R300U-As above, chäs. mitg. (B). .


## MILLEN HASH FILTERS

Eliminates interlerence from mercury vapor rectifiers. Type $\AA$ for 82 or 83 tubes; Type B for 866's. Connect in plate leads, close to tube. 12N8060-Type A. 12N8061-Type B. Per Pair. .

## OHMITE RF PLATE CHOKES

Single layer wound on low power lactor steatite or plastic core. Non-magnetic mtg. brackets with 2-7.

| Stock No. | Mod. | Range | M.H. | Dimen. | Cost |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 12N10084 | 2.460 | 320 to 520 MC | 0.20 | 1/2x | 19c |
| 12N10097 | 2.235 | 160 to 350 MC | 0.84 |  | 19c |
| 12N10086 | 2-144 | 80 to 200 MC | 1.8 |  | 19c |
| 12N10087 | Z-50 | 35 to 110 MC | 7.0 |  | 19c |
| 12N10092 | 2-28 | 20 to 60 MC | 21.0 | $13 / 4$ | 25c |
| 12N10093 | 2-14 | 7 to 35 MC | 44.0 | $2 x^{2}$, is $^{\circ}$ | 40 c |
| 12N10094 | 2-7 | 3 to 20 MC | 84.0 | $6 x^{3}$ | 92 c |



## LATEST LOW-COST HAM EQUIPMENT

## STANCOR 125-WATT TRANSMITTER KIT



Mode1 ST-202-A. Build your own com pact desk type transmitter to cover the 80 , $40,20,15,11$ and $10-$ meter bands. Crystal controlled CW. AM
and FM modulator and FM modulator
units easily added if desired. Cabinet has built-in chassis, mark ed panel and bottom plate, plus all circult and construction components, and instruc tion manual. The only extras needed are milliammeter, five tubes, crystals and set of
150 watt $B$ \& dard PA tank-coils. Simplified band-switching exciter circuit. Has adjustable link coil antenna coupling. Simultaneous screen keying of both exciter tubes. Break-in operation. Uses 6V6, 6LG. 5R4GY, 5Y3G7. For PA you can use a 35T, 35TG, HK54, 5514, 81 or 812 (wide range neutralizer provided). Terminals provided at rear of cabinet for key, antenna feed line, AM modulator and remote standby switch. Gray wrinkle finish case measand remote standby switc
29N2 1020-Shipping Weight: 55 lbs
92.80

## STANCOR MOBILE TRANSMITTER KIT



Model ST-203A. 25 watts plate power input. For mobile and fixed location phone, "Press-to-talk" operation. Covers 27 to 32 MC band. Tubes used: GV6 harmonic oscillator working from 7 MC crystals, $2 E 26$ Class C amplifier, 6 J 5 grounded-grid speech amplifier, 6VG's push-pull Class A modulator. Accessories needed: Tubes, crystals, single bution mike with push-to-talk switch, dynamotor or vibratorpack to demotor or vibrator pack to de200 MA, 6.3 volts AC/DC at 2.8 amps, quarter wave whip antenna system and remote control componenis (SPST switch, mike jack, cables, etc.). Case measures $8-5 / 8 \times 7-3 / 8 x$ $6-3 / 4 "$. Supplied with punched chassis, transformers, coils, sockets, switches, metal cover and mounting base. instructions included. Shipping Weight: 11 lbs.
29N21024-Transmitter Kit only, not wired. $\qquad$ 44.70

29N21034-As above, wired and assembled. $\qquad$ -4.7

## SPERTI TWO.WAY HAND TRANSCEIVER



New, exclusive design stable oscillator and recelver. Covers 144-148 MC (2-meter band). Ideal for transmitter hunts, emergency work, boating, flying or racing. Maximum performance has been packed into the smallest possible size and welght. Push-to-talk switch. in band un is set at the factory Slide-rule dial can be locked. Folding dipole antenna. Case measures $10 \times 3 \times 2^{\prime \prime}$. Shpg. Wt: 5 lbs .
29N22450-Per unit, less batteries 33.8 T 20N20627-(2) "B" Batt. for above. E a. 1.74 20N20622-"A" Batt. (2 required) Ea... 61/2 4

## HARVEY WELLS 50-WATT

## PHONE \& CW TRANSMITTER

No plug-in colls! Covers 8 bands from 80 to 2 meters at the flick of a switch. Crystal controlled on all bands. No oschllator or multiplier tuning necesFory except to resonate the antenna. for ixed siaion or moblle operation from AC, Vibrapack or dynamotor. Use as exciter when increasing output. Includes the following tubes: 6AQS crys807 oscillator, 6 AQS buffer-multiplier, 807 final amplifier, (2) 6L6 Class B modulators. Controls include: band switch, excitation, antenna loading. amplifier tuning, power-on, carrier-on, meter switch and phone-CW switch. Dimensions: $123 / 4 \times 73 / 4 \times 9^{n}$. Shipping Weight: 20 lbs .
20N21038-With Tubes..
99.50 30N21039-Power supp. for above. 39.50

MEISSNER SIGNAL SHIFTER KIT


Amaleurs, save money! Build this newly designed precision signal precision signal
shifter. Features shifter. Features
built-in $10,11,15$, 20, 40 and $80^{\circ}$ meter turret mounted colls: 6-position band switch, no coils to change.
ECO or crystal $6 V 6$ ECO or crystal 6V6
oscillator, 807 oscillator 807
doubler amplifier. Eye tube key and tuning indicator. Factory assembled shielded turret unit. Voltage regulation. Bullt-in power supply uses VR150, VR75, (2) 5 Y3 and delivers 6 watis output. Vernier dials. With instructions, tubes and all necessary parts including solder and wire. Over-all dimensions: $13-13 / 16 \times 13-1 / 4 \times 8-3 / 4 \mathrm{~m}$. Shpg. Wt: 23 lbs. 29N2 1042
64.75
 $\qquad$ .99 .50
29N10394-6-meter coil strip for above kit..................... 4.00 29N10384-160-meter coil strip for above kit...................4.00

## MEISSNER FMX PHASE MODULATOR

Designed exclusively for use with Model EX signal shifter. Combination of two gives amateur a complete low power phone and CW transmitter at a low price. Deviation contral of modulator allows a swing of 5 to 10 KC at 28 MC . Input for high impedance crystal or dynamic mike is provided. Any Class C amplifier the signal shifter can
 drive becomes a phase modulated amplifier. Fits in place of power supply. Plate and filamne vcltages are secured from signal shifter power supply. Tubes required: 6SL7, 6SG7 and VR-150.
29N2 1099-Shipping Weight: 4 lbs . Less tubes....... 12.00

## SILVER ABSORPTION WAVEMETER

Model 903. 1600 KC to 500 MC . Lowloss tuning capacitor, inductor socket, resonance-indicating lamp. Wide fre-quency-two tuned circuits. On sixranges inductor is paralleled with capacifor, seventh ( $400-500 \mathrm{MC}$ ) is quarterwave transmission line with series
tuning (nolamp coil). Size: $31 / 2 \times 31 / 2 \times 33 / 4$. Less inductors.
29N21291-Shpg. Wt: 1 1b........ 3.30
Plug-In Inductors-Each 654


| MC |  |  | MC |
| :---: | :---: | :---: | :---: |
| 29N21292..1.6-3.7 | 29N21296... $40-100$ |  |  |
| 29N21293.. $35-8$ | 29N21297..100-300 |  |  | 29N21294.. 8-15 29N21298..400-500 $29 \mathrm{~N} 21295 \ldots . .17 .40 \mathrm{MC}$



SILVER FIELD STRENGTH METER Model 903A. Converts the Model 903 Absorption Wavemeter described above to a field strength meter by adding a 1 N34 rectifier, $0-1$ milliammeter sensitivity control and phone jack to the unit. Shpg. Wt: 2 lbs .
29N2 121290.
14.50


SIMPSON MODEL 240

## HAMMETER VOM



Complete, wide range AC-DC VOM to check high volicges and components of transmitters and receivers. No external multipliers needed. Sensitivity: 1000 ohms/vols. Rugged, accurate 3 meter. Ranges: $0.15150 / 750 / 3000 \mathrm{AC}$ volis; 0 . $15 / 75 / 300 / 750 / 3000 \mathrm{DC}$ volts; $0-15 / 150 /$ 750 DC MA: 0-3000/300000 ohms. Size: $3 \times 5-7 / 8 \times 2-1 / 2^{\prime \prime}$. Shipping Weight: $3^{\text {libs }}$ Supplied with, test leads and attached alligator clips. 29N21579....
.24.11

HI-FI FM-AM RECEIVER
This model combires in one superbly engineered unit, a top-flight standard and VFH communications recelver covering all frequencles from 540 KC to 110 MC . The tremendous frequency range is made possible by "split-stator" tuning sysare available on bands 5 and $6(27$ to 110 MC$)$ to permit reception of FM sía nals. True high fidelity is assured by the powerful 8 -watt audio system with flat response from 50 to 15,000 cycles. Controls are arranged for maximum convenience and simplicity of operation. Freedom from drift and maximum stability are provided by temperature compensation and the use of Type VH-150 voltage are provided regulator. crystal inter circult combined with iariable dial calibrated for 3.5 , 7 six 14 and 28 MC bands plus logaing scale. Crystal phasing, CW pitch, sensi'ivity and 28 MC bands plus logging scale. Crystal phasing, CW pitch, sensitivity, four-position tone control for low, medium, Hi-rland bass are an conveniently located on the front panel. External connections inciude 500 and $5000-$ ohm speaker outputs, phone lack, phono input jack, socket for external power, doublet and single wire antenna and remote control connections. Red dot markgeneral use, Tubes; (2) 6AG5,7F8, 6SK7, 6SG7, (2) 7H7, 6H6, 7A4, 6H6, 6SL7. (2) $6 \mathrm{~V} 6, \mathrm{VR}-150,5 \cup 4 \mathrm{G}$ rectifier.

Attractive, modern styled cabinet harmonizes with the most luxurious surroundings. Finished in a rich, deep gray with satin chrome trim. Top opens on piano hinge for easy accessibility to tubes and chassis. Dimensions: $20 \times 101 / 4 \times 16{ }^{\circ}$ deep. Shipping Weight 71 lbs . Complete with tubes. For $105-125$ volts, 50/60 cycles AC.
30N21070-Model SX-42, Less Speaker and Adjustable Base...Net.. 275.0.
30N21069-Model SX-42U. As above but $115-250$ v., 25-60 cyc.............287.50

Outperforms any ordinary broadcast recelver on any frequency-standard broadcast, short-wave or FM. It represents an outstanding achievement inall-wave recelver engineering. Simplicity of operation combined with superb reception
 the widerer found in this type of equipment. A single tuning control covers crystal calibration . Onllatore band lights up at a time. In adartion a sointer for pin-point accuracy. The SX-62 gives you continuous coverage from 540 KC to 109 MC on 6 bands. Push-pull output delivers a full 10 watts of audio power flat from 50-15,000 cycles. A bass-boost circuit and 4-position tone controi permit enough voriation of tone to please the most critical listener. Two IF and two tuned RF stages assure maximum sensitivity and improved signal-tonolse ratio on VHF. A 6-position selectivity switch with crystal filter operates nolserauen between 540 KC and 30 MC Other features include separate on trequencies between 540 KC and 30 Mc . Other features include separate cillator 500 and 5000 ohm outputs, 300 -ohm antenna input and a special socket for external power. Piano hinged, gray steal cabinet with sap chrome kim ior external power, Piano hinged, gray steel cabinet with satin chrome trim measures $20 \times 101 / 4 \times 16^{*}$ deep. Shipping weight 70 lbs. Tubes: (2) 6AGS, 7 F8 6SK 7 for $105-125$ volis, $50 / 60$ cycles AC . 2 (2) $6 \mathrm{~V} 6,6 \mathrm{C} 4$, VR-150, SU4G rectifier. For 105-125 volts, $50 / 60$ cycles AC. 30N2 1079-Model SX-62. With Tubes, but less speaker $\qquad$ Net. 269.50
Model SX-62U. Same as above except for $110 / 220$ volis, $25 / 60$ cycles AC.
30N21105.............................................................................................. 282.00


Here is all you would expect from a truly fine communications receiver plus extra coverage to include the 6 -meter and FM broadcast bands. Offers continuous coverage trom 540 KC to 55 MC with an additional band from 86 to 109 uous coverage trom 540 KC to 55 MC with on additional band from 86 to 109 good siqnal-to-noise ratio. Dual IF transformers provide a 455 KC IF channel for operating frequencies below 44 MC , and a 10.7 MC IF channel for the VHF bands. Audio response to 10,000 cycles. Switching of IF frequencies is automatic. Separate electrical bandspread dial is accurately calibrated for the amateur 3.5, 7, 14, 28 MC bands. Other important pertormance features include emperature compensation for freedom from drift, series type noise limiter permeability-adjusted inductances in the RF circuits, separate RF and AF gain controls, and adjustment on rear for " $\mathrm{S}^{\prime}$ meter. Speaker output is tapped for 500 and 5000 ohms. Uses the following tubes: 6BA6, 7F8, 6SG7, (2) 6SH7. 6H6, 6AL5, 6J5, 6SQ7, 6V6, 5Y3GT rectifler. Handsome gray steel cabinet with satin chrome trim and piano hinge top, fits into any surroundings. Dimensions: $18 \frac{1}{2} \times 87 / 8 \times 12^{*}$ deep. Shipping weight 44 lbs. For $105-125$ volts, $50 / 60$ cycles AC.
30N21064-Model SX-43. With Tubes, but less speaker......NET........ 59.50
Model SX-43U. Same as above except for $110-220$ volts, $25-60$ cycles AC.
30N21065.......................................................................................
169.50

R-42 and R-44
MATCHING SPEAKERS
 MODEL R-42 SPEAKER. Features the bass reflex principle of sound repro-
duction in a sleek, highiy functional design cabinet to match the SX 42 and SX-62 receivers shown above. An $8^{\prime \prime}$ heavy duty PM speaker gives excellent full range response. Two-position tone switch on front panel permits rapid ful fange response, Two-position tone switch on ront panel permits rapia for 500 -ohm input. Satin-finish, gray metal cabinet measures $17 \times 11 \frac{1}{4} \times 121 / \mathbf{N}^{\prime \prime}$ deep.
30N21072-Shipping Weight 30 Ibs . $\qquad$ ...етт. 34.50
MODEL R-44 SPEAKER. Large oval size in a professional style cabinet with ample bafling, gives excellent low frequency response. Especially designed as a companion unit for SX-43 receiver shown above. Heavy duty, PM speaker in $6 \times 9^{\prime \prime}$ size. Two-position tone switch. Dimensions of rich satin-gray finish cabinet: $18^{1 / 3} \times 8^{1 / 2} \times 95 / 8^{\prime \prime}$ deep.
30N21066-Shipping Weight 19 tbs.

Superior performance at moderate cost. Frequency range in 4 bands, continuous from 540 KC to 43 MC . Variable pitch BFO and 3 -step tone control. "Microset" permeability tuned RF colls for high sensitivity. Special break-in terminals operate to cut out receiver when your transmitter is in operation. Has latest sertes noise limiter, AVC, CW-Phone switch, phone jack, RF sensitivity and volume controls. Bandspread control with full electrical bandspread. For either single wire or doublet antenna. 7 tubes plus rectifier and ballast tube: 6SG7 RF Amp. 6SA7 Convo, 6SA 7 Ist. IF Amp., 6 SK 7 2nd. IF Arno 6 H 52 nd : Det., 6SC7 EF'O and AF Amp., 25L6GT Output, $25 Z 6 \mathrm{GT}$ Rectifler and Band. tube. Attractive satin black steel cabinet with brushed chrome trim. Top opens on piano htnqe. Size: $181 / 2 \times 9 \times 91 /{ }^{*}{ }^{\prime \prime}$ deep. Complete with speaker. 115 V .25 -60-cycle AC-DC.
30N21087-Shipping Weight 30 lbs .
79.95

S. 53

Employs new 2 MC IF for improved image rejection. Positively eliminates amateur images or repeat points within the amateur bands. Incorporates the latest series type noise limiter circuit. Voltage stabilized oscillator, iron core IF transformers. Built-in PM dynamic speaker, $21 / 2$-watts output. Slide rule type dial. Separate bandspread control and scale for fine tuning with full electrica! bandspread. Frequency tange: 5 bands from 540 KC to 54.5 MC . External connectlons for phone tips, phono input, single wire or doublet antenna, 7 tubes plus rectifler: 6C4 Osc.: 6BA6 Mixer, two 6BA6 IF Amps, 6 H 6 Det., AVC, ANL, 6SC7 BFO and lst Audio, 6 K 6 GT Audio Output, $5 Y^{\prime} 3$ Rectifier. Sat in' black steel cabinet with brushed chrome trim. Top opens on piano hinge. Size: $127 / 8 \times 7 \times 74^{\circ}$ deep. 115-volt $50 / 60$ cycle AC.
30N21063-Shipping Wt. 19 lbs.
69.95

Model S53U same as above but 115/220-volt, 25-60-cycle operation.
30N21104.
same as above but 115/220-volt, 25-60-cycle operation.
78.95

A specially designed and constructed receiver with built-in speaker. Components ore made to withstand the elfects of sea alr and humidity. Temperature compensation assures drift-free reception. Permeability adjusted "microset" inductances in the RF circuits add to the stability and high quality. Besides the four tuning ranges, from 132 KC to 13 MC there are three pre-tuned channels for lixed trequency operation. Has a 1020-cycle range filter for better voice reception on ranges. Equipped for 110 -volt AC operation; provision is also made for the addition of power supply combinations listed below permitting operation from either 6, 12 or 32 -volt batteries. 9 tubes plus rectilier: 6SS 7 RF Amp., 7AB Conv., two 6SS7 IF Amp., 7 C 6 Det., 7 A6 ANL, 6SS 7 BFO, 3SL6GT Output and 35 Z 5 GT Rect. Functionsl gray steel cabinet with plano hinge top. With doublet or single wire antenna connection, phone jack and 6, 12 or 32 -volt sockets. Size: $18 \frac{1}{2} \times 8 \frac{1}{2} \times 95 / 8^{\prime \prime}$.
30N21059-Shipping Weight 31 lbs.
149.50

30N21060-6-valt Vibrapack for above......................................................... 22.50
30N21061-12-volt Vibrapack for above.................................................... 22.50
30N21062-32-volt Vibrapack for above.................................................................. 22. 22.50
"SEA FARER" RECEIVER
7 TUBE AC RECEIVER


MASTER OSCILLATOR


125 WATT TRANSMITTER


## MODERATELY PRICED NATIONAL RECEIVERS

## NC. 33 COMMUNICATIONS RECEIVER



A top performer in National's fine line of quality receiverspacked with expensive set features yet priced within the modest budget. Four tuning bands provide continuous coverage
from 500 KC to 35 MC. Main tuning and bandspread capacities connected in parallel on all bands for bandspread operation at any frequency within tuning range. Fully calibrated dial-stations can be readily separated and logged. Amateur, police and foreign broadcast bands switch. Other big set features include Automatic Noise Limiter, CW oscillator and pitch control for adjustment of Limiter, CW oscillator and pitch control for adjustment of output circuits, $5^{\prime \prime}$ PM Speaker. Phone-Jack cuts out built-in output circuits, speaker when headphones are in use. Antenna input designed speaker when headphones are in use. Antenna input designed for any single wire or doublet antenna. Tunes to ship calibrating and international SOS band, font-panel mounted controls include: Main tuning, band selector switch, beat oscillator pitch contr
New superhet circuit uses latest type high efficiency tubes: 12SA7, 12SG7, 12H6, 12SL7, 35L6GT, 35ZSGT, Rectifler, For $105-125 \mathrm{~V}, 50-60$ cycles AC or $105-125 \mathrm{~V}$ DC. Cabinet has Gray enamel finish. $16 \frac{1}{2^{\prime \prime}} \times 8 \frac{1}{1 \prime \prime} \times 8 \frac{1}{2}{ }^{\prime \prime}$.
30N21267-With Tubes. Shpg. wt. 24 lbs.
57.50

## NC. 57 RECEIVER



Sets a new high for performance in the moderate price field! Provides Phone and CW reception over the entire frequency spectrum of 5 in 5 Kands to 5 MC in 5 bands. Built-in power supply, PM speaker and front panel mounted controls assure accurate, stable operation. Voltage
stabllized oscillator circuit holds short wave signal steady when voltage changes. Controls include Main Tuning Bandspread Tuning, Band Switch, RF Gain, RF Trimmer, BFOMVC-AVC, ANL Switch, AF Gain, BFO Pitch, Tone Conirol and On-Off'Switch.
Superhet uses: 6SG7RF amp., 6SB7Y convo 2-6SG7 IF amp. 6H6 Det., AVC, ANL, 6SN 7 Audio amp., BFO, 6V6GT Audio amp., 5 Y'3GT rect., VR- 150 voltage rect. Antenna terminals for single, double or co-ax antenna lead-in. Provision made for single, double or co-ax mitenna lead-in. Provision made $105-120 \mathrm{~V}, 50-60$ cyc. AC. Gray enamel finish, $161 / 2 \times 113 / 4 \mathrm{x}$ $83 / 4 \%$. Wt. 33 lbs . Complete with tubes.
30N21266-NC-57 Receiver
89.50

30N21274-"S" Meter Wt. 2 lbs......................................... 14.95

## NC- 173 COMMUNICATIONS RECEIVER

Appearance identical to NC-183 at right. Latest model for amateur and commercial use, with complete coverage 540 KC to 31 MC, plus 48-56 MC for Amateur 6-meter band. Separate bandspread tuning knob and dial for $80,40,20,10$ and 6 meter amateur bands. New "double-action" type noise limiter with variable threshold control for both CW andphone signals. Separate AVC amplifier permits using AVC on phone and CW. New wide range crystal IF filter offers six positions to meet all receiving conditions.
Other features include "S" meter in AVC circuit for use witt phone and CW signals, continuously variable tone control headphone and phono jacks on front panel. 3.5 watts audic headphone and phono jacks on front panet. output at 8 or 500 ohms for speaker operation. Anterna ind circuit equipped with panel trimmer for maximum per formance with anyamtenna. Superhet circuit With 11 tubes and rectirierdiode 2nd det., AF limiter, AVC amp., stabilized BFO, 2 AF stages. For 1io-120 or 220-240 vo, 50-60 cycles. Gray metal cabinet, $193 / 4 \times 101 / 8 \times 121 / 2^{\prime \prime}$. Complete with tubes -30N21254-Table Model Receiver. Wt. 70 Ibs........ 189.59 30N21256-Rack Mounting Receiver. Shpg. wt. 70 lbs.. 189.50 30N2 1255-Table Model Speaker. 8 ohms imp. Wt. 12 1bs.... 10.00 30N21257-Rack Mntg. Speaker. 8 ohms imp. Wt. 12 lbs.. 10.00 30N21279-NBFM Adaptor for Receiver above. Wt. 3 lbs.... 17.95

HRO-7 COMMUNICATIONS RECEIVER


Ultra-modern HRO receiver with many new features! Widefange adjustable selectivity with 6 -position switch for crystal filter operation. Calibrated dial for complete coverage plus maximum bandspread on amateur bands. Plug-in coil sets for $1.7-30 \mathrm{MC}$-adjust for radio range, communications, marine and broadcast-band frequencies by adding coil sets for $50-430$ KC and 480-1700 K C. Automatic notse limiter clips nolse on both positive and negative peaks, provides AVC for code reception. Two new miniature tubes, high frequency oscillator and voltage regulator for extreme oscillator stability. Accessory socket gives 6.3 volts AC, 150 volts DC requlated, and 240 volts DC unregulated for FM adaptor, crystal calibrator or HF converter.
Radio-Phono switch, 2 tuned RF, 2 IF staqes, manual and AVC, calibrated "S"' meter, micrometer-type dial with 20-to-1 precision gear drive, receiver disabling terminals for transmlting. llitube plus voltage regulator circuit assures high signal-to-noise ratio, image rejection, sensitivity. Requires power supply listed below. Gray enamel cabinet. $191 / 2 \times 10 \times$ $10^{\prime \prime}$.
30N21253-HRO. 7 Rec., tubes, coils. Wt. 60 1bs... 292.59 30N21252-Matching MCR Speaker. Shpg. wt. 10 lbs....... 12.00 30N21265-Power Supply for Receiver above. Wt. 15 lbs. (Operates from 115-230 volts 50-60 cycles).................... 20.36 30N2 1280-NBFM adaptor for Receiver above. Wt. 3 lbs... 16.95

DELUXE NC- 183 COMMUNICATIONS RECEIVER


Latest enqineering and radio circuit developments in a modern high gain superhei circuit. Complete frequency coverage 540 KC to 31 MC plus 48 to 56 MC anateur bands. Two tuned RF stages provide extremely high sensitivity and Image rejection. Minimum drift for phone or CW reception assured by voltage requlated oscillator and BFO. Separate main tuning and bandspread dials, calibrated directly in frequency and with sepa-rate-logging scales. Six-position crystal filter ranging from "Broad" to "Sharp" permits reception of phone or CW signals "Broad to sharp" permits reception of phone or Cw signals atmaximumlevelof intelligibilitydespitechannelinterference. Noise limiter
Illuminated signal strength meter with adjustable sensitivity, Output circult uses two 6 V 6 tubes providing undistorted output of 8 watts, with 11 watts maximum. Output terminals for 8 -ohm speaker or 500 -ohm line. Provision for connecting highimpedance record-player pick-up plus Narrow Band FM adaptor unit. Highly-efficient low-drain tubes include: 2-6SG7 RF 1-6SA7 del., $1-635$ oschlator, 2-6SG7 [F's, 1-6H6 2nd det. $1-6 \mathrm{SJ} 7 \mathrm{BFO} 1-6 A C 7$ AVC cmplifier, $1-6 \mathrm{H} 6$ noise dimiter, $1-6 S J 7$ AF, $1-6 \mathrm{~J} 5$ phase inverter, ${ }_{2}-6 \mathrm{~V} 6 \mathrm{GT}$ audio output, 1-VR-150 and 1-5U4G Rectifier. For 110-120 or 220240 v . $50-60$ cycles AC. Smooth Gray enamel steel cabinet. $19 \% \times 101 / 8 \times 15^{\prime \prime}$.
30N21268-Receiver with Tubes. Wt. 80 lbs.....
268.00

30N 21269-Matching $10^{\prime \prime}$ Speaker. Shpg. wt. 12 lbs........ 14.00 30N $21270-$ Narrow Band FM Adaptor. Shpg, wt. 3 lbs.... 16.95

## other national receivers \& accessories available

30N2 1271-HFS Keceiver/Converter. Wt. 25 lbs.... 142.00
30N21272-Power Supply for above. Shpg. Wit. $15 \mathrm{lbs} . . . .22 .43$
30N21259-NC-46 Receiver. Shpg. Wt. 50 lbs..................97.50
30N21258-Speaker for above, in cabinet. Wt. 9 lbs......... 9.90

30N21273-NC108T FM Receiver-Tuner. Wt. 24 lbs .99 .50
30N21275-Tilt Base for NC-57. Wt. 5 lbs
.3 .95
30N21276-Tilt Base for NC-33, NC 108, HFS, HR07....... 3.95
30N21277-Tilt Base for NC-173. Wt. 5 lbs....................... 3.95

# LAST MINUTE SPECIALS <br>  <br> TWO-WAY INTERCOM SYSTEM <br> Complete two-way system! ldeal for nurserles, restaurants, 

## JUST RELEASED! NEW GARRARD "TRIUMPH" 3.SPEED CHANGERS

The famous Garrard changer-"Bullt like a batlleshlp with the precision of awatch"-now with three speeds. Too late for inclusion in the regular section of our catalog. Ploys all records of all sizes and all speeds, automaticaliy (78-45-33-1/3 RPM in $7-10-12^{\prime \prime}$ sizes). No records of any type need be play ed manually. Features a fully cutomatic stop regardless of the type of record being played. The motor is heavy-duty, quality engineered to assure constant speed with no wows, wavers or variations. Record may be rejected at any time. True-tangent pickup with minimum tracking error. Specially designed tonearm eliminates disturbing resonance. Mounting dimensions: $15 \frac{1}{2 n} \times 13^{1 / 2 " ;}$ requires $51 / 2^{\prime \prime}$ clearance above base plate and $21 / 2^{\prime \prime}$ below.
Model C. 100-130-volt, 60-cycle AC. With turnover crystal cartridge and needles.
34 N22604-Shipping Weight: 21 lbs ,
49.50

Model E. As above but supplied with two GE pluq-in profes sional series variable reluctance cartrides
34N22605., ........................................................................... 59.50 Model P. As above, but with two Pickering high fidelity cariridqes. $\qquad$
NOTE: Models E and P require preamplifiers. See page 48.


TRIONIC 16* TRANSCRIPTION ARM
New type slide cartridge holder allows instantaneous mounting. Any cartridge not over $14^{\prime \prime}$ wide may be used with the arm. Leaf spring clamp connects the plckup to ground. Quick twist of the thumbscrew and the cartridge is held securely until released. Com be used with all records up to $17^{\text {sect. Instal- }}$ lation of cartridge is simple and efficient, silver-plated, lation of cartridge is simple and efficient, silver-plated, spring loaded plungers maintain positive electrical contact. Helate. Welght adjustment from 5 grams up. Arm rest. Grey prate. Weight adjustment frome trim. 34N13516.
22.05


## LIVINGSTON "UNIVERSAL" PICKUP ARM

New curved reproducer arm accommodates praclically any cartridge, including LP types that use a 1 mal stylus. For use with new Columbla LP records plus regular or studio recordIngs. Tracks well on $12^{\prime \prime}$ or $16^{\prime \prime}$ table. Complete with iwo sliding counterwelghts-one to vary stylus weight to 6 or 8 grams pressure for LP records, other for regular records. 34N13484-Shipping weight 3 lbs........................
14.95

## QUANTITY LIMITED!



SPECIAL VALUE
RECORD CHANGER
Improved automatic record changer. Jam proof and child proot-tone arm can bo moved at any time without jamming unit or changing adjustments. Plays records manually or automaticallyplays ten $12^{\prime \prime}$ or twelve $10^{\prime \prime}$ records at one setting. Single control for simplified operation. Lightwaight crystal tone arm assures hi-fidelity reproduction. Constant-speed 110 volt 60 cycle AC motor. Base plate $111 / 2 \times 131 / 2^{\prime \prime}$. Requires $6^{\prime \prime}$ above and $2^{\prime \prime}$ ' below panel board. 99N95s3-Shpg. wt. 12 lbs..
10.95
factories and homes. Units quickly installed without special tools. Remote stations can be placed up to $2,000 \mathrm{ft}$. from Master stations. Uses 50L6 and 12537 audio amplifiers plus selenium rectifie:. Plastic cabinet. $81 / 3 \times 6 \times 4 \frac{1 / 2 "}{}$. With tubes, AC cord and plug and 50 ft . of hookup wire.
99N9582-Shipping Weight: 8 lbs.
12.95

19N16013-Extra wire.
Per ft.
11/24

## MICROGROOVE DUAL SPEED ADAPTER

## Adapt your standard 78 RPM rec

 ord player to play the new $33-1 / 3$ and 45 RPM LP records. Complete $k$ It, including a speed reducing table which rests on top of the reqular turntable. Has a simple planetary mechanism to reduce rotation. Special pickup assembly with switching arrangement to engage or release the speedreducing mechulsm. Comystal pickup. 34N22619-Shipping Welght: 5 lbs.

## LOUDNESS CONTROL

Livingston Model MB. A new superb tone-compensated unit that will increase your listening pleasure. Combines the best features of conventional tone and volume controls to provide the proper cural balance at all levels. Compensated for 22 intenslity levels. Designed for chassis or panel mounting; Ehlelded, compact and requires a mounting space of only $21 / 2^{\mathrm{m}}$ deep by $2-1 / 8^{\circ}$ in diameter. 34 N 13517

## PORTABLE RECORD CHANGER CASE

Lightwelght, compact portable changer case with convenient, easy-opening cut-away top. Handsomply styled in Tan and Brown simulated leather fabrikold over all-wood construction. Attractive I vory plastic trim throughout. Insides covered with Tan simulated leather fabrikoid. Bright contrasting metal ittings and dusable plastic handle. Arople room for mounting 3 or 4 tube amplifier and up to 8 -inch speaker. Takes the Webster 156,256 , and 356 changers. Motor and amplifier boards uncut. $191 / 1 / 15 \times 9{ }^{1 / 2}$. 22N22063-Portable Changer Case. Shpg. Wt: 15 lbs. 11. 95

## DELUXE RECORD CHANGER CASE

Handsomely styled, lightwelght and compact lightwelght and compact Rugged construction with covering of extrafine simulated alligator fabrikoid. Strongly sewn edges reinforced with sturdy leather. Nickeled locking snaps with key included. Blank covered motor board. Inside dimenslons: $17 \times 141 / 2 \times 11^{\prime \prime}$.

22N22064—Wt. 10 lbs..

13.95

PORYABLE AMPLIFIER CASE
Covered with handsome Tan simulated rawhide leather to match reflex speaker enclo sure. Top can be completely removed for easy access to cmplifeer. Two sturdy simulated leather handles. All comers protected by metal shields. Bottom is equipped with metal bumper slides. Overall Size: $15 \times 151 / 2 \times 20^{\circ \prime}$ wide. 22N22057-Wt. 17 lbs..
9.75

# MORE FOR EVERY DOLLAR 



## 20 WATT DELUXE HIGH FIDELITY AMPLIFIER

You can save up to $\$ 30$ on this 20 -watt deluxe amplifier, with the assurance that you are getting a quality amplifier of reputable make. Lafayette had a chance to buy these fine amplifiers from a well known manufacturer at a remarkably low price and we are able to pass the saving on to you. Here is a unt capable of superb reproduction of both voice and music with a frequency range of 50 to 15,000 cycles. It's ready for rack installation or use as an individual unit. Equipped with a master gain control to requilate all channels without reset ting individual controls. Output tmpedances 2, 4, 8 and 500 ohms. The dual tone controls provide independent adjustment of base and treble. All connections are easily made at the rear of the ampliffer. Convenient ON-OFF switch located on front panel. Screw-in type fuse easily replaced. Tubes used ore two 12SJ7, 6SJ7, 6SL7, two 6L6G and a 5Z3 rectifler. Sturdy functional type cabinet with side mounted carrying handles, is made of heovy-quage steel finished in handsome handies, fimade of heavy-guage steel inished in handsome black crackle. The amplifier $1 / 1^{\circ}$ wide by $171 /$ deep by $^{21 / 4}$ high. Operates Dimensions: $19 \%^{\circ}$ wide by $105-125$ volts, 60 cycles AC only. Underwriters Laboratory An 105-125
2N410-Shpg. Wt. 60 1b:
47.50


## 25. WATT AMPLIFIER WITH

 RECORD CHANGER TOPTake advantage of these terrific buys or excellent quality ampliflers and record players. They're compact, and light in weighto..ideal for either fixed or portable P.A. use in or chestros, churches, schools and carnivals, where rellable performance at a low cost is 1 mportan Check the se important extra features: Two microphone inputs with separate volume controls; two phono Inputs with 2-way with separate volume control; and illuminated pamel. Four speaker outputs volume control; and illuminated pelector switch; tone control.
25-WATT AMPLIFIER with efficient, smooth-operating automatic record changer for 10 and $12^{\prime \prime}$ records. Dimensions: 14 = 14 114".
2N407-Shipping Weight 45 lbs..................................44. 50 As above, excepi 16 -WATT AMPLIFIER with automatic record changer. Dimensions: $14 \times 14 \times 111 / 4{ }^{\text {c. }}$.
2N409-Shipping Weight 36 1bs.. $\qquad$ .37 .50

## LAFAYETTE HI FI AMPLIFIER AND

 ROLL-OFF CONTROL A 10-watt Hi-Fi amplifier, specially designed to handle even the critical requirements of wite reconders and as an amplifier for GE and Pictering plifier for GE and Piczering plckups. Frequency response $\pm 2$ db. Oniy $5 \%$ distortion. Output impedances; 4, 8, 15, Find $\pm 2$ db. Oniy $5 \%$ distortion. Output impedances; 4, 8, 15, Find 500 ohms. Special features include separate high and low
qain inputs; base and treble tone controls; bult-in wire reqain inputs; base and treble tone controls; bult-in wire re-
cording erase and blas ascillator and a Neon recording level cording erase and blas ascillator and a Neon recording level
indicator. A separate, high frequency rolloff conirol is avallable for switching from microphone to GE reluctance pickup; 6-step compensation. Sturdy burgundy crackle chassis. For 115 -volt, 60 -cycle AC operation only. Dimensions: $105 / 8=14 \times 7^{*}$.
2N190-Shipping Weight 25 lbs...................................... 5 . 50
Roll-Off control for above.
2N192-Shipping Weight 3 lbe


## AIRCRAFT COMMUNICATIONS SET TRANSMITTER-RECEIVER-INTERCOM <br> BRAND NEW!

Pilots the world over realize the great safety value in maintaining "two-way" radio communication during cross-country flight. Through a spectal purchase, Lafayette is able to offer flight. Through a spectal purchase, Latayetie is able to offer also fumishes broadcast reception and intercommunication within the plane itself. This is a brand new set...inot surplus within the plone itself. This is a brand new set...not surplus, made to sell originally for $\$ 200$. The receiver and combination transmitter and power supply are divided into two separate units and joined by an interconnecting cable for easy installation. Equipment operated from controls located on the receiver: 3-position control for Tower-Volce-Range; ON-OFF switch ind volume control, tuning control and band switch.
The recelver has a choice of two bands, controlled by a positive interlocking bond switch with positions "A" (aircraft) and "B" (broadcast). "A" covers the transmission frequencles from 195 KC alloted to aircraft radio range and tower stations. "B" covers the standard broadcast band from 550 to 1600 KC enabling pilots to "home" on broadcasting stations, in addition to receiving entertainment procrams. Sensitivity rating 3 microvolts, or better, at 50 milliwatts, A tuned RF section produces high selectivity. Undistorted output 300 milliwatts, maximum output 500 milliwatts, provides strong volume for any number of headphones in the alrcraft. Tubes: (2) 14A7, $14 \mathrm{Q}^{7}$ 14B6, 14 A 4 Overall dimensions: $33^{\circ} \mathrm{H} \mathrm{X}$ $511 / 32^{\circ} \mathrm{W}^{2} \mathrm{~S}^{5} 23 / 32^{\circ} \mathrm{D}$. Tronsmitter is crystal controlled, power ampliffed and employs high level modulation 10 wati output. Operates on any single frequency between 2 and 7 mo making it applicable for marine and ham use as well as alrcraft. Side tone and automatic changeover relay are provided. Power supply utilizes a vibrator and is completely shielded. Overal dirmensians of transmitter and power supply: $55 / 8^{\circ} H=71 / 8^{\circ} W \times 8 y^{\circ} \mathrm{D}$.
Complete set includes the following: Recelver, Transmitter, 3105 KC Crystal, Power Supply, Loading Coll, Interconnecting Cable anterna Lead ana Cable, Headphone and Microphone Cable, Tubes, Fized Wire Antenna Kit and Shockmount .
For 6 -volt operation-requires 10.25 amps . Transmitter uses (3) 7C5 tubes.

99N9613-Shpg. Wt. 11 Ibs.....List $\$ 200.00$
49.50

As above except for 12 -volt operation-requires 5.2 amps. Transmitter uses (3) 14C5 tubes.
49.50

As above except for 24 -volt operation-requires 2.5 amps. As above except for 24 -volt op
99N9615-With tubes....................
49.50


NEWI MODEL APN-1 AL TIMETER MEETS CAA REGULATIONS

An invaluable aid for pllots making blind landings. ConAn invaluable aldirements of Feb. 1949. Made to seli origforms to CAA requirements of Feb. 1949. Made to sell origelectronic altimeter consisting of a receiver, transmitter, altitude meter, altitude 1 imit switch, two $11^{\prime \prime}$ antennas, plugs and sockets. Measures absolute altitude from 3 ft . to 4000 ft . and also qives an alarm if the height of the plane varies more than ten leet from the setting on the altitude limit switch. Has indicator zero, outer-low range, inner-high range, limit indicator, and calibration adjustments. Range ond ON switches on altitude meter. Altitude limit switch has 11 positions in 25 ft . steps from 50 to 300 ft . Provision is also made for connection to control an qutomatic pilot. Other sockets include limit switeh, limit indicator, battery input, transmitter antenna and recelver antenna. 3 mmp . fuse with spare mounting. Front and chassis can be easily removed by releasing locking screwe for easy inspection and maintanence. Measures only $18^{\prime \prime} x g^{\prime \prime x} x 7^{\prime \prime}$. Shipping Weight: 32 lbs.
99N9616-For 24 to 28 -volt DC operation.
32.50

# SUPER SPECIAL VALUES 

## 4-TUBE AM SUPERHET TUNER



A miniature type tuner ( $540-1600 \mathrm{KC}$.) with big unit design. Here's an easy way to add an AM radio to your P.A. system, portable amplitier, record player with built-in amplifier, wire recorder, etc. Measures only $5^{\prime \prime}$ W. $x^{\prime \prime} 4^{\prime \prime}$ D. $\times 41 / 2^{\prime \prime} H$. Selfcontained 115 V AC-DC, hum-free power supply with approximately 10 V . high supply with approximately Permeability impedance audio output. Permeability tuned If transformers. Maximum output
adjustable in 3 steps: $10-5-1$ volts. Supadjustable in 3 steps: 10-5-1 volts. Sup-
plied complete with 4 tubes (12BE6, 12BA6, 12AT6, 35W4), operating instructions, circuit diagram, attached $5-\mathrm{ft}$ anienna and $21 / 2 \cdot \mathrm{ft}$ shielded output coble. Tested and aligned 30 N 2479 -Shipping weight 6 lbs .
12.85
 output pickups. Has single circuit panel. Dimensions: $712^{\prime \prime}$ high $9^{\prime \prime}$, and replaceable fuse on fron 60-cycle AC. Shipping weight: 10 pounds.
99N9604-Less Tubes
8.95


## 4-TUBE AMPLIFIER

Push-pull output circuit designed for use with crystal pick-up. 4-tube amplifier wired on righ: angle metal chassis includes volume control, pilot light, shielded lead and power line cord and plug. Tubes used (2) $35 \mathrm{AS}, 14 \mathrm{B6}, 35 \mathrm{Y} 4$. Shipping weight 3 lbs . 99N9608-Less Tubes
2.95

2-TUAE PHONO OSCILLATOR
Play music from your record player through your radio without connecting wires. Recorded music is sent by radio waves to radio. Aluminum chassis, (2) EF-50 tubes. Wi. 2 lbs 99N8006
3.75

## SINGLE SPEED PHONO MOTOR

New low price on this sim-driven phono motor, complete with turntable. Constant single speed (78 RPM). Self starting. Forced draft air-cooling. 110 V., 60 cycles, A.C. $99 N 8003-S h i p p i n g$ weight 6 lbs .

## 3-SPED PHONO MOTOR

Feature bargain! Plays 33 1/3, 45 and 78 RPM records. Has 9" turntable and external speed requiating lever.
99N8009-Shipping weight 6 lbs .

## TONE ARM AND HEAD

Replacement for $95 \%$ of all nonelectronic reproducers. Takes stanords. Black and nickel tinish 34N13415-Head only.

98
34N13416-Arm only
. 1.25


## MLPI CARTRIDGE

Crystal. Wide frequency range; . 75 99NB010


Low-priced acoustic phonograph with fine tone and plenty of volume. Improved type mechanical reproducer requires no tubes Constant speed 78 RPM motor Cerates on 110 volls 60 cyclos AC and plays all size cycles AC and plays $12^{\prime \prime}$ Fully records ncluding 12 Fully enclosed motor. Housed in sturdily constructed, easy-to-carry case tinished in attractive blue, bakedon enamel. Size: $141 / 2 \times 12 \times 7^{\prime \prime}$ Shipping weight 14 lbs . 34N 22668
9.75

Lots of 6 , each 9.25

## ELECTRIC

## KIDDY PHONO

Thrill any youngster with this colortul electric phono with acoustic tone arm. Plays all size records including $12^{\prime \prime}$ with good, clear tone. Constant good, clear tone. Constan! speed 78 RPM motor with 9 " turntable, plugs into 110 V., 60-cycle AC. Attractive pink motorboard equipped with ON.
 OFF switch and needle cup. Sides finished in bright blue with decorative front. Has $6-\mathrm{ft}$ cord and plug. Dimensions: $13^{\prime \prime}$ wide, $12^{\prime \prime}$ deep, $61 / 4^{\prime \prime}$ high overall. 34N22693-Shipping weight 7 lbs .
5.95

HI-FI CARTRIDGE AND PREAMP


Now, the famous $\mathrm{H}_{1}-\mathrm{Fi}$ variable reluctance cartridge is yours, at a fraction of the usual cost. A The FREAMP permits the use of the cartridge in any phono that has a crystal pick-up. High impedance outpul connects to any phono input. 2-position switch for higis or average frequency response. With tube. B - The CARTRIDGE gives $H_{1}-F i$ response, $50-10,000 \mathrm{cps} .80$ millivolt output; force of $15-30$ grams. Refractable sapphire stylus with replaceable, felt, record cleaning pad.
34N13478-Cartridge. Wt. 2 oz...
2.95

34N13479-Preamp. Wl. 2 lbs. ....-............................................. 4.85

## THREE TUBE PHONO AMPLIFIER

Build your own hi-fidelity record player or changer. Variable tone conirol 2 walts outpul 5016, 12SQ7 3575 tect Phono motor connects 10 3525 rect. Phono motor connects to former. Shpg. wt. 2 lbs. 99N9584
2.98


## L.P. PICKUP

A Long Playing pickup for the 33 1/3 and 45 RPM, ong-playing records. Excellent ife quency response. Approximately 1 voll output. Low tracking force. 99 N 3577 -Shipping weight 12 oz .
1.99

## STANDARO PICKUP

Standard crystal phono pickup for playing the conventional 78 RPM records. Curved arm for best tracking.


99N8002-Shipping weight 1 lb .
1.79

# dOLLAR-SAVING VALUES 

## Beautifully Finished Cabinets at Sensational Prices



## WALNUT CABINET

A Really Terrifte Buy! Handsome walnut cabinet, heavy construction. Dirnensions: $20^{\prime \prime}$ wide $x$ $133 / 4^{\prime \prime}$ high x $9^{\prime \prime}$ deep. Ornamental brass strip around escutcheon panel. Ideal for replacing old siyle cabinets and for kats. Supplied with bumper feet to protect furniture. Made to house a truly fine set. Parel drilled and cut out 99N7087-Shipping Weight 14 lbs
1.59

## ROSEWOOD CABINET

Handsome rosewood cabinet. 15" wide $\times 91 / 4^{\prime \prime}$ high $\times 7$ " deep. Slidewide dial opening. Ideal for re rule dial opening. Idea for re placing old style cabinets and for kits. Hazdsomely finished. Supplied complete with three holes drilled
ing controls.
99N7088-Shipping Weight 4 lbs .
1.19


## INTERCOM CABINET

Handsome wainut cabinet. Excellent for use as a master intercom station Sturdily constructed of fine seasoned woods. Dimensions: $1214^{\prime \prime}$ wide $\times 714^{\prime \prime}$ high $\times 73 / 4^{\prime \prime}$ deep. Cabinet is slotted for speaker. Holes for switches and on'rols have already been drilled. 99N7086-Shipping Weight 5 lbs ...

99c


Beautiful walnut or mahogany cabnet (please specify type). Dimen sions: $19^{\prime \prime}$ wide $\times 101 / 2^{\prime \prime}$ high $\times 8^{\prime \prime}$ deep. Dual grilles for use with one or two speakers. Heavy tlocked wire mesh grille. Supplied complete with four holes drilled for tuning and volume controls 99N7089-Shipping Weight 6 lbs.
1.95


SPECIAL VALUE! FM FRONT END
Newly designed with latest circuit developments for extremely stable and sensitive operation. Ideal for use with PA systems or for remodeling AM recervers. or for remodeling AM receivers. Frequency coverage from 88 to slide-rule dial for fast tuning. Antenna provision for 300 ohm. Antenna provision for 300 ohm line. If frequency is 10.7 MC . Tubes used: 6 AK6 RF amplifier, 616 oscillator, mixer, detector, 6US tuning eye indicator. Dimensions: $8^{\prime \prime} \times 5^{\prime \prime} \times 3^{\prime \prime}$. Supplied complete with tubes, dial and instructions. 30N22484-Shipping Weight 10 lbs.
14.95


## PERMEABILITY TUNER

For use in standard broadcast receivers to replace variable condensers and assaciated coils with a single unit. All are simultaneously slug tuned. Each can be individually adjusted for tracking alignment. Complete with antenna coil, oscallator, padder coil and schematic diagrams for building 5 and 6 -tube superhet receivers. $4^{\prime \prime} \times 21 / 2^{\prime \prime} \times 21 / 4^{\prime \prime}$. Dial drum $21 / 2^{\prime \prime}$. 99N3574-Shpg. Wt. 2 lbs.
1.09

## LOOP ANTENNA

Matches input impedance of permeability tuner above. Finest copper wire on sturdy fibre board.
99N3575-Shpg. Wt. 1 lb .

## RECORD CHANGER MOTOR



Heavy duty record changer motor. Exact replacement for Seeburg Model L record changer. 4. pole motor is vibrapole molor is vibramon 180lated from mounting bracket by three live rubber grommets. Motor turns at approx. 1700 RPM: heavy rubber covered idler wheel at 318 RPM. Bracket has flange holes on $2^{\prime \prime} \times 5^{\prime \prime}$ centers for mounting 12 " insulatad leads.
2.25 99N7082-Shpg. Wt. 5 lbs..

## RCA ISOTAP TRANSFORMER



Permits speedier servicing of AC-DC receivers, provides greater safety in servicing and many other advantages. Has and secondary-primary and secondary-primary 18 set to power line velltacles give choice of $117 \mathrm{~V}, 105 \mathrm{~V}$, or 130 V supply. 6N1600-Shpg. Wi. 15 lbs.
8.95

## SPECIAL FEATURE! <br> THROAT MICROPHONE



Carbon mike works into any 200 ohm impedance input circuit. Adjustablo strap its any neck. Full freedom of hands and head. Ideal for uitra-high frequency mobile work. With strap, $10^{\prime \prime}$ cord, plug. 99N7060-Shpg. Wt. 1 lb lb... plug. $1 \%$ 10 for.


0-150 AC VOLTMETER
Black bakelite case. Has $23 / 4^{\prime \prime}$ panel opening. $31 / 2^{\prime \prime}$ ilange. White scale with black lettering. Range: 0 150.
4.75


O-20 DC MILIIAMMETER
Black bakelite case. $2 \mathrm{~N}^{\prime \prime}$ flange mounting type. Range: 0-20. Hardware in cluded. 99N4122-Wt. 1 lb
2.39


Indicates voltage of available power lines, warns of voltage drop due to faulty equip. ment, checks for blown fuses, grounds, Iransformer and capacitor breakdowns, open choke coils, etc. For use on AC from 65 to 660 volts. UC voltage readings use simple conversion factor. GE neon lamp indicates AC or DC power supply. Insulated plastic case and dial panel. Furnished with $12^{\prime \prime}$ test prods and leads 25N12982-Shpg. Wt. 1 lb
1.83

## $671 / 2$ VOLT BATTERY

Big value- $671 / 2$ volt " $B$ " batieries for personal port-
 able radios. Replaces Bur gess XX45, etc. Fully quaranteed. Size: $13 / 8 \times 211 / 16 \mathrm{x}$ $311 / 6^{\circ}{ }^{\prime \prime}$
99N6599.
1.45

## BEST BUYS OF THE YEAR

225 OHM 5" DYNAMIC SPEAKER


For replacement in radio receivers, intercommunicalion and paging systems. 225 ohm 5" dynamic heavy pot, hum bucking con and double shielded transformer to match output impedance of 50L6. Excellent for voice and music.
m9N7013
$\%$
99N7032-Same, less transt...........69\$

## 3" 450 OHM SPEAKER



A quality speaker for general replacement. In call systems, hearing ands, small radios. Has 450 ohms field coll. Fla bafted from 100 to 4500 c.p.s. Formed 1 pc. cone. Less transformer
$99 \mathrm{~N} 7029-W t .3 \mathrm{lbs}$
1.19

## 5" 3000 OHM SPEAKER

5" dynamic speaker for general replacement. Flat response covering from 100 to 4500 c.p.s. Formed one piece cones, 3000 ohm field. Less transformer. $99 \mathrm{~N} 7031-\mathrm{Shpg}$. Wt: 3 lbs

95c

## 5" 450 OHM SPEAKER

For general replacement purposes in radios, record players, paging, intercom systems. Response 100 to 4500 cps . Rated $21 / 2$ watts. Field coll 450 ohms.
99 N 7030 -Shpg. Wt: 3 lbs..
99N7030-Shpg. Wt: 3 lbs...
1.39


Ruqgedly buili, $6 \times 9^{\prime \prime}$ oval PM speaker. Deslgned to riged specifl cations, with perma nently allgned cone and coll construction. Seamless, felted cone; dustproof. Volce coll impedance 3.4 ohms. Rectangular mount with $61 / 2 x$ 4 $1 / 4$ mtg. centers
2.39

OUTPUT TRANSFORMERS


Single 1DS, 1LB4, 1J5, ITS, 12A7, 38 10 volcé coll. Prt. 16,000 ohms 10 ma . DC max. Sec. $2_{2}^{3.2}$ ohms, 2 watts. Mtg. 99N6591.

39c

## OUTPUT TRANSFORMER

$\operatorname{cic}_{\rightarrow 0}$
Single ended secondary, with impedance of 4 ohms. Unshlelded strap yype mounting. Color coded leads. 2000 -ohm is for 50L6.
99N5151-2000 ohms. 99N5152-7000 ohms.
99N5 153-10000 ohms.


RCA SPEAKER Genuine RCA replacement speaker gives top quality reproduction of bass and treble frequen. cy range. Homdles up to 15 watts, Uses strong 6.8 oz . Alnico V magnet volce coll impedance 3.2 ohms. Also ideal for new installations requiring quality at low cost. Precision enatneering and parts have been bullt into this speaker to give it years of trouble-free service.
99N7023.
4.75

## 12" ALNICO "V" SPEAKER



Replacemont for FM-AM receivers 12" PM dyncmic speaker with AI. nico $V$ permanent magnet. Magnet welght of 6.8 oz is equal to 20 oz of conventional magnets l $^{\prime \prime}$ voice magnets. 18 voice coll with 6-8 ohms pacity is 14 to 18 pacity is 14 to 18
watis. watis. 99N7010. 5.95


10* PM SPEAKER
Here's an excellent replacement speaker at placement cost. Rugged, dustproof construction. 6.8 prool construction. 6.8
$o z$. Alnico $V m a g n e t . ~$ Oz. Anico $V$ magnet. Voice co
3.4 ohms.
99N7019.
3.15


## OUTPUT TRANSFORMER



500-ohm line, 8-ohm volce coll output transformer. Multiple taps. 18 watts. Colcr coded leads. Mouniing center $2-7 / 16^{*}$. 99N5 154........69e

PLATE TRANSFORMER
 Fuily cased, electrostatically shielded plate rectifler transformer. Heavy duty model with 117 V., 50/60cycle primary. Secondary: 625 V. CT at 160 MA and and SV. at 3A. Color coded leads. Mounting centers $2 \% \times 2-7 / 8$. 99N5 157.
2.69

## POWER TRANSFORMER



A real bargain special power transformer. Single shell mounting, electro statically shielded. Has extruded shell tor two-hole mounting. Primary 117 V ., 50/60 cycles. Secondary outputs: 600 V. at $2 \mathrm{~A}, 5 \mathrm{~V} . \mathrm{CT}$ at 2 A . Color coded leads. 99N5156
1.39

## 15 HENRY, 50 MA. TOTALLY ENCLOSED CHOKE



## 30 MENRY CHOKE

So ma. 450 ohms DC resistance. Un shielded, strap type mic. Size $21 / 2 x 1 \% x$ 2-1/8".
98N246-Shpg. Wt: 2 lbs.
$5 \%$

## 4 HENRY 500 MIL. CMOKE



Heavy duty. 500 ma .12 ohms DC resistance. Wax coated to withstand effects of moisture. Overall size: $3 \mathrm{l} / \mathrm{B}^{\prime \prime}$ $\times 31 / 2^{\prime \prime} \times 4^{\prime \prime}$. M!g. centers


## 25 HENRY FILTER CHOKE



Excellent quality 25
Henry Filter Choke; 60 Henry Filter Choke; 60
MA, 200 ohms DC resistance. Unshielded, strap type mounting . Overall dimensions: $2-3 / 8 \times 2 x$ 1-5.8". Mtg.center 2-7/8'.
99N5 155
49c


SPECIALI TVREPLACEMENT
Vertical Outpup Transformer


Equivalent to RCA Type No. 204 T2. Couples output tube to defiection yoke. Specially impregnated. Strong, rigid nated. Strong, rigith $2 \times 2-3 / 8^{n}$ mounting cen$2 \times 2-3 / 8^{n}$ mounting cen-
99N5 $158 . . . . . . . . . . .1 .29$

## "LIMITED

HANDY TERMINAL STRIP KIT


Kit of 10 assorted terminal strips with from 2 to 28 terminals. Hi-quality phenolic insulation with either screw or solder lug terminals. Mounting holes or brackets on each strip. brackets on each strip. 9N6975-Kit of $10 . .$. ........... 29c

## KIT OF 25 MICA CONDENSERS

Kit of most popular size bakelite mico capacitors for servicemen, amateurs, and experimenters. Unmarked, but all guaranteed perfect. High quality paits at an unusually low price. 99N277

49


## KIT 25 TUBULAR CONDENSERS

Top quality brand tubular condensers at a real bargain price. Wax impreg nated, non-inductively wound. Stand ard working voltages and capacities range from .002 mfd to .5 mtd . With long flexible pigtail leads. Individually tested to meet RMA standards. 97 C
$99 \times 278$-Shpg. wt. $11 / 2 \mathrm{lbs} . . . . . .9$


KIT 100 ASSORTED RESISTORS
An exceptional resistor value for the radio serviceman, experimenter and amateur. Kit contains 100 assorted popular resistor sizes with wattage ratings from $1 / 3$ to 2 watts. All resistors are RMA color coded 99N155-Shpg. wt. 1 lb
7. 19


## VITREOUS ENAMEL RESISTOR KIT

Bargoin ossortment of 20 high quality vitreous enamel and cement coated wire wound resistors. From 5 to 25 watts. Wide assort, of values.
1.59


99N245.

KIT CERAMICON CONDENSERS
10. Kit of 25 popular sizes. All condensers color coded. Flexible pigtail leads. Shpg. wt. 1 lb.
99N279
69

## BAKELITE RADIO KNOBS

Molded and polished walnut bakelite knobs for $1 / 4$ " shafts, "A" is "pring is for push on type, $17 /{ }^{\prime \prime}$. dia. | $\frac{\text { No. }}{}$ | Type | Each | 10 for |
| :---: | :---: | :---: | :---: |
| $98 N 9625$ | $\frac{A}{A}$ | 46 | $30 c$ |
| 098200 | 200 |  |  |


KNOB KIT of sizes. 99N6984

20 assorted popular knobs in avarlety 39c

BURGLAR-PROOF CABINET LOCK
Threaded stud; sultable for wooden or metal cabinets. Strong construction; chrome plated. 2 keys and necessary hardware. 99N300.


## CATHODE-RAY TUBE SOCKET

Bakellte television tube socket especially made for 10BP4, 12KP4 and 7JP4 picture tubes. 5 tinned colored leads. 99N 301.

## TELEVISION ION TRAP

Prevents ions from bombarding sensitive TV iube screen. Fool-proof construction. Only two colls and padded mounting yoke. 99N5 160.

69

## TELEVISION FOCUS COIL

For magnetically focused kinescopes having deflection angles up to $50^{\circ}$ such as the RCA 10BP4. Large conductor size for cor-rosion-free operation.
99N5159


BELDEN 60-WATT SOLDERING IRON Here's a nationally known make iron of excellent quality; for rapId, light duty soldering.
Has $1 \%{ }^{\prime \prime}$ long copper


## STEATITE NEUTRALIZING CONDENSER

Variable from 3 to 11 mmfd. by plunger action. For neutralizing low power amplifter stages. Mounts in $3 / 8^{\circ}$ hole.
99N3171-10 for 45 f. $\qquad$ ..Each 5c

4-SECTION CONDENSER FOR FM-AM


Two FM sections, each 18.5-1.2. AM RF section, 420 maximum; AM osclilator section 162 maximum. Each section has a trimmer; also featured are aluminum plates, bal! bearings, $1 / 4^{\prime \prime}$ shaft and low-loss insulation.
99N3579
$98 c$

## SINGLE SECTION CONDENSER



Capacity 500 mmid . Ideal for low or medium power tronsmitters, and test equipment. Steatite insulation. $2 \times 1-7 / 8 \times 6-5 / 8^{*}$. 99N3571-Shpg. Wt. 2 lbs.... ${ }^{\text {Se }}$

## APC AIR PADDER CONDENSERS

Ceramic insulated air padder condensers ideal for oscillator circuits, IF transformers, fixed tuned circuits, etc, which require constant capacity. Screwdriver slot adjustrents.
99N3511-25 mmid. $\qquad$ 146 99N3206-35 mmid.

JOHNSON VARIABLE CONDENSER
Rugged compact unit for use in medium, low power tronsmitters. .032" thick aluminum plates. Steatite insulation. Heavy phosphor bronze contact springs. Capacity 12 mmfd . to 244 mmfd .045 mg spacing. Approximate breakdown voltage is 2000 volts. Slotted shaft $1 / 4^{\prime \prime}$ dia. $1 / 4^{" l}$ long. 99N3572-Shpg. Wt. 2 lbs.

79c

## SPECIAL FOUNDATION ASSEMBLY

For transmitter or recelver. Metal frame, 10 contact female receptacle. 140 mmid. variable condenser at top. Coll socket, dual crystal socket, male contact. Spring locking clip. Size: $4 \times 11 / 4$ $\mathbf{x} 21 / 4$
99 N 3553 -Shpg. Wt. $1 \mathrm{lb} . . .22 \mathrm{c}$


WIRT VARIABLE REGULATOR
 Use with any 110 volt AC instrument to compensate for irregular line voltage. 65 watt unlt adjustable to five positions. 98N12521-65 Watt.

59c

## VOLTAGE DIVIDER KIT

Kit contains 10 wire wound resistors with moulded bakelite cases. Metal mounting strap conducts heat from unit without shorting. Thls kit will fill your need for voltage dividers at a low price.
99 N265.
$66^{\circ}$


# HARD-TO-BEAT BARGAINS 



Rated at .3 amps for radios, phonograph oscillator, etc. 3912938 - 135 ohms............................. 99N2939-180 ohms ..................................................................................................

220 TO 110 VOLT LINE CORDS


Standard plug and receptacle. 300 ohm for sets using 3 amp tubes, 50 ma plate supply. Total capacity 350 ma . 89N294!
99N2942_-Same but foreign plug.... \} : 560 ohm for sets using . 15 amp tubes, 50 ma plate supply. Total cap. 200 ma. 98 e

## ATTACHMENT PLUG BASE

Brown bakelite in the usual strong Rodale construction. "Female" type. Screws into standard socket. 99N299-..............Each, Se 10 for


## AC RECEPTACLE



Quality standard single AC. receptacle. Fits 13/'" dia hole. Metal
 10 for. 1.08

## SUPER SAVINGS

Octal Base Tube Sockets


COMPOUND TYPE


CERAMIC SOCKET
Heavy-duty, octal socket.
$11 / 2^{\prime \prime}$ mounting centers. Silver-plated cylindrical pin contacts. Ceramic lugs. \$8Ni3109--Each........... 7 ?


10 for.............................63c

## TUBE SHIELOS

Highest quality all aluminum tube shields for use with 1S4, IRS, 1T4, etc. Has relainer spring inside. $3 / 4^{\prime \prime}$ dia. $\times 13 / 4^{\prime \prime}$ deep. 99N7020--Each
10 tor



## ANTENNA CABLE

Heavy phosphor bronze antenna cable at special bargaín price. Approz roll of 42 strand cable with strong linen core.
99N5140-5 for 3.00
Each
69c

UNIVERSAL 6 VOLT VIBRATOR Popular brand name vibrator. Replacement for Mallory 294, 4-4, Radiart placement for Mallory 294, 4-4, Radiart $5.052,378$ and Meissner EOI $, 040,000$, 99N3950

88s

## VIBRATOR REPLACEMENTS

|  |  |  |  |
| :---: | :---: | :---: | :---: |
| 99N3969 |  |  |  |
| Stock No. | Replaces |  | Each |
|  | Mallory | Radiart |  |
| 99N3951 | 854 | 5331 |  |
| 99N3952 | 505P | 5320P |  |
| 99N3953 | 249 | 5406 |  |
| 99N3954 | 246 | 5411 |  |
| 99N3958 | 245 | 5409 |  |
| 99N3971 | 1100 |  |  |

## 12-VOLT VIBRATOR

Amazing value in a vibrator replacement brought to you by Lafayette's tremendous purchasing power. 12 -volt, 4 -prong nonsynchronous. Replaces the Mallory G826 or equivalent. Can size, $11 / 2^{\prime \prime}$ dia., $31 / 4^{\prime \prime} h t$. 99N3970. 19c

## 24-VOLT VIBRATOR

Here's the celebrated Mallory vibrator at a give-away price! M561C replacement vibratoi. S-prong base, 24 -volt battery synchronous vibrator. Long-life and trouble-free service. Can size: $11 / 2 \times 31 / 2^{\prime \prime}$. 99N3967.

19c

AUTO SPEAKER SPECIALS
These speakers are ideal tor auto replacement. Field coil type, 6 v . Shpg. wt., $21 / 2 \mathrm{lbs}$. 99N7024-6" Speaker 2.-77 99N7026-8' Speaker...... 2.25


## AUTO RADIO ANTENNA

Bargain special, three section, triple chrome-plated side cowl auto antenna. Stainless steel rod section and solid brass tubing. Brass tubes tapered to keep moisture and dust out. Extends from 25 -inches to 66 -inches. High quality bakelite mounting insulators prevent signal shorting to car body. Complete with 32 -inch foolproof low loss shielded cable and necessary mounting hdwe. 99N9598
1.49

AUTO RADIO SUPPRESSORS
High quality, elbow cable type, spark plug noise suppressor. In black moided case
99N302-10 for 72c..................... Each 8e


50-FT. ROLL CABLE
Durable plastic insu lated 4 conductor in rercom cable. Color codea conauctors are of No. 22 solid wire Can be easily unstranded and used as radio hookup wire.
99N5139-Shpg. Wt. 11
$9 \%$

## TERMINAL STRIP



High quality Pho nolic insulation with two screw type lug terminals. Terminals marked Gnd and Phono.
$99 \mathrm{~N} 280-10$ for 35 c ...................Each Re

TWIN TJP JACK
High-quality twin tip jack on laminated strip 99 G 4231 Each 5t 10 for

## OPDT SLIDE SWITCH

Double pole, double throw slide switch with spring retum. Spring may be easily removed if desired.
99N4230-Fach
10 for 101

## Z.O TWO METER CHOKE



High frequency sole noid choke. Designed to prevent resonance in the 2 meter band. Rated at 2 mh . and 1 amp . DC resistance 0.19 ohms. $13 / 4^{\prime \prime} \mathrm{lg}$. and $1 / 4^{\prime \prime}$ dia. Pigtail leads $11 / 2^{\prime \prime}$ long. Insulated and protected by moisture proof coat ing.
99N3576-6 for 25 c . ing.

## SPRING LID LIFT



Heavy duty spring type lid lift. Spring tension adjustable to counter-balance any type lid. For righ hand cabinet mount ing. 99N8995

99c

## SELENIUM RECTIFJER



No warm-up period Saves space. Only $11 / 4$ 11/4x1-1/16". Fits where tubes won't. Two rectifiers may be connected fiers may be connected
as a voltage doubler to as a voltage doubler to
supply 250 V . at 80 ma supply 250 V . at 80 ma
from 117 V . AC power supply.
98N10560 ...............65

## INTERMEDIATE FREQUENCY TRANSFORMER

High gain, permeability tuned. 375 KC normal peak, salisfactory operation at 455 KC peak. Screwdriver slot adjust-ments-one on top, one on bottom. 5 solder lug terminals on bottom. $11 / 2 \times 11 / 2 \times 21 / 4^{\prime \prime}$. 2 spade mounting studs $6-32 \mathrm{x}$ 7/8" on $13 / 8^{\prime \prime}$ mounting centers. 99NSI29-Each.

39
10 for

# OUTSTANDING BARGAINS 

DELCO VOLUME CONTROLS
Uitra compact controls featuring quiet composition elements, attachable switches and plug-in type shafts. All are $1 / 2^{\prime \prime}$ thick, $1 / 1 / 16^{*}$ dia. Complete with $4^{*}$ shaft.

DELCO VOLUME CONTROL TAPERS
(1) For cudio or contenna shunt circuits.
(2) For serles circuits.
(4) Linear tapar; for volt. div. circuits.

| Stock No. | Delco Type | Ohms | Taper | Each | Lots/6 Ea |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 99N2150 | 8101 | 12,000 | 1 |  |  |
| 99N2151 | 8104 | 15,000 | 1 |  |  |
| 99N2152 | 8106 | 25,000 | 1 | 226 | 8 |
| 99N2153 | 8108 | 25,000 | 4 |  |  |
| 99N2154 | 8109 | 45,000 | 1 |  |  |
| 99N2155 | 8110 | 50,000 | 2 |  |  |
| 99N2156 | 8112 | 75,000 | 1 | 246 | 22 |
| 99N2157 | 8116 | 100,000 | 4 | 24 | 2 |
| 99N2159 | 8119 | 250,000 | 1 |  |  |
| 99 N 2161 | 8114 | 500,000 | 1 |  |  |
| 99N2162 | 8124 | 600,000 | 4 |  |  |
| 99N2164 | 8123 | 750,000 | 1 | 27 |  |
| 99N2165 | 8128 | 1 Meg . | 1 | 27 | 34 |
| 99N2167 | 8130 | 2 Meg . | , |  |  |
| 99N2168 | 8075 | 3 Meg . | , |  |  |

TAPPED CONTROLS

| No. | Delco | Ohms | Tapped at | Each | Lot/6 Ea. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 99N2170 | 8151 | 250,000 | 50,000 |  |  |
| 99N2172 | 8156 | 500,000 | 100,000 |  |  |
| 99N2173 | 8159 | 500,000 | 150,000 |  |  |
| 99N2175 | 8162 | 1 Meg. | 50,000 | 29 |  |
| 99N2176 | 8163 | 1 Meg. | 100,000 | 29 |  |
| 99N2178 | 8165 | 1 Meq. | 250,000 |  |  |
| 99N2179 | 8168 | 1 Meg. | 500,000 |  |  |
| 99N2180 | 8173 | 2 Meg. | 250,000 |  |  |

## SWITCHES FOR ABOVE

99N2181-SPST Snap Switch ..... lots of 6,7c ea. Each 8c 99N2182-SPST With Tie Luig Switch lots of 6 7e ea. Each 8c 99N2183-DPST Snap On Switch ... lots of 6, 7c ea. . Each 8c

Following Delco controls are same as above except that they have fixed covers-and do not take the attachable switch.

| No. | Delco | Ohms | Tapped at | Taper | Each | Lots/6 Ea |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 99N2158 | 8117 | 125,000 |  | 1 |  |  |
| 99N2160 | 8121 | 300,000 |  | 1 | 2 | 19 |
| 99N2163 | 8125 | 600,000 |  | 1 | 1 | $1 \%$ |
| 99N2168 | 8129 | 1 Meg . |  | 1 |  |  |
| 99N2169 | 8154 | 150,000 | 80,000 |  |  |  |
| 99N2171 | 8164 | 350.000 | 50,000 |  |  |  |
| 99N2174 | 8161 | 500,000 | 200,000 |  | 276 | 246 |
| 99N2177 | 8166 | 1 Meg. | 200,000 |  |  |  |



## DUAL POTENTIOMETER

Enclosed smooth action carbon type controls, Front section 2 megohms, rear section 40,000 ohms. $3 / 8^{\prime \prime}-32$ threaded bushing. 99N8137—Lots/10 Ea. 19c Each, Singly 15 e

## POPULAR SIZE VOLUME CONTROLS



Servicemen, experimenters stock up now on these popular size volume controls at these unbelievable low prices. Standard $1 / 4^{\prime \prime}$ dia. shatts, approx. $11 / 2^{\prime \prime}$ long.
99N2114-500 ohms
99N2118-75,000 ohms
99N2117-100,000 ohms
$99 \mathrm{~N} 2118-200,000$ ohms 99N2119-Dual 600 ohms

## Each

## 25-WATT POWER RHEOSTAT

Popular brand power rheostat at a special bar gain price. Ceramic and glazed porcelain construction throughout. $3 / 2^{\prime \prime}$ dia. buching. $1 / 4^{\prime \prime}$ dia. $x$ $1 / 2^{\prime \prime}$ shaft.
99N2122-50 ohm
4\%
99N2121-5000 ohm


## SPECIAL FEATURE!

rellance volume controls

| Less Switeh | With Switch | Res. Ohms | Taper |
| :---: | :---: | :---: | :---: |
| 8 N8112 | 8N8123 | 25,000 | Linear, for voltage-divider |
| 8N8115 | 8N8119 | \$0,000 | Linear, for voltage-divider circuits. |
| 8N8114 | 8N8129 | 100,000 | Lineas, for voltage-divider circuits. |
| 8N8116 | 8N8120 | 250,000 | Linear, for voltage-divider circuits |
| 8N8117 | 8N8121 | 500,000 | Linear, for voltage-divider circuits |
| 8 N 8113 | 8N8126 | 500,000 | For audio or antenna shunt circuits |
| 8N8118 | 8N8122 | 1 megohm | Linear, for voltage-divider circuits. |
| 8N8105 | 8N8127 | 1 megohm | For audio or antenna shunt circuits |
| 8N8111 | 8N8133 | 2 megohm | For audio or antenna shunt circuits. |
| Less Switch-Each |  |  |  |
| With Swith-Each |  |  |  |



## WIRE WOUND VOLUME CONTROL

1. Smooth acting wire wound $1000 \mathrm{ohm}, 4$ watt. $3 / \mathrm{B}^{\prime \prime}$ - 32 threaded bushings, $1 / 4^{\prime \prime} \times 3 / 8^{\prime \prime}$ shafts. Body dia. $15 / 8^{\prime \prime} \times 5 / 9^{\prime \prime}$ 99N 2096 -Each, 18c

Each, Lots of 10 ,
17

## POTENTIOMETER

2. Fully enclosed carbon type control. $3 \mathrm{~s}^{\prime \prime}-32$ threaded bushing. 13,000 ohms, $11 / 8^{\prime \prime}$ dia. $x 1 / 2^{\prime \prime}$. Shaft $1 / 4^{\prime \prime}$ dia, $x 1 / 2$ 98NB158-Each, 10 c

Each, Lots of 10

## POTENTIOMETER WITH SWITCH

3. 160 ohm 4 watt, insulated rotor and switch. Straight taper. $3 / 8^{" A}$, Ahr. bush. $1 / 2^{\prime \prime}$ shaft. 5/8" bush. Snap-on switch 98N8142-Each, 15 c

Each, Lots of 10 ,
$12 c$

## CARBON VOLUME CONTROL

1. Compact $11 / 8^{\prime \prime}$ dia. $1 / 2^{\prime \prime}$ deep. 1 Megohm, less switch. $1 / 2^{\prime \prime}$ shaft $11 / 2^{\prime \prime}$ lg. Potentiometer taper. Requires $1 / 2^{\prime \prime}$ behind pane 99N2041-Each, 19e

Each, Lots of 10, 17e


## 9 WATT POTENTIOMETER

4. Smooth acting 185 ohm control,
with S.P.S.T. switch. $21_{8}^{\prime \prime \prime}$ dia. $\mathbf{z} 1^{\prime \prime \prime}$ Shaft $1 / 4{ }^{2}$ lg. $3 / 8-32$ threaded mount. ing oushings.
98N8143-Ea. 12c; Lots/10. Ea. 10 C

(b)

## 1000 OHM POTENTIOMETER

5. Fully enclosed smooth action carbon type control. Body $1^{\prime \prime}$ diameter $\times 4 / 2^{\prime \prime}$ deep. Shaft $1 / 4^{\prime \prime}$ diameter $\times 13 / 4^{" 1}$ long 98N8108-Each 18 c ................................ of 10 , Each

## 1000 OHM POTENTIOMETER

6. Nationally known. With S.P.S.T. switch, $3 / /^{\prime \prime}-32$ threaded mounting bushings, solder lug terminals. Body $1^{\prime \prime}$ dic. $\times 7 / 6^{\prime \prime}$ Shaft $1 / 4^{\prime \prime}$ dia. $\times 13 / 4^{\prime \prime}$ long.
98N8124-Ea. 25c; Lots/10, Ea.22e


## WIRE WOUND POTENTIOMETER

7. Smooth actung control. 200 ohm, 2 watt wire wound poten tiometer. Body size: $11^{\prime \prime} 4^{\prime \prime}$ diameter $x$ 5/8" deap. Shaft: $3 / 4^{\prime \prime} \times 1 / 4^{\prime \prime}$ diameter. Standard $38^{8 "}-32$ threaded mounting bushing. 98N6350-Each 10 e

## 3 WATT RHEOSTAT

An exceptional value, sinooth acting 20 ohm wire wound control., $1 / 4^{\prime \prime}$ dia. $\times 3 / 4^{\prime 4}$ long flatted shadt. 14, " dia. x 3/8"
98N8163-Each 6e Lots 10\%. Each Se


# MORE FOR EVERY DOLLAR 



Recelves all TV channels plus FM. Range 44-108 MC on LF Array; 174-220 MC on HF Array. Average gain 2.5 D.B. on LF Array; 1.5 D.3. on HF Array aove tuned dipole. Arrays electronically separated by patented divider network, and individuclly rotable for maximum signal strength. Lightweight tempered aluminum alloy.
99N9612-Wt. 14 lbs
6.45

## SENSATIONAL

 PRICE SLASH!STRONGER TV SIGNAL WITH "TELEMATCH" Now 1.95
Was 5.559
Gives the maximum transfer of television signals by matching the antenna to the receiver. Simple to inslall. Just fasten to antenna pests on back of your set and rotate control knob for most satisfactory 98N24439-New Low Price
1.95


## THREE-CONDUCTOR CABLE

3-circuit mike plug PL-68 connected to rubber-covered 3 -conductor $4^{\prime}$ cord. Terminates in two connecting lugs, tinned ground lead, and tie cord fastened to eyehole lug. Flexible and durable. 99N5145

## LOW-COST JACK BOX

 Consists of one 3 -circult jack, one 150 M potentiometer and 5 position rotary switch enclosed in aluminum case $41 / 2^{\prime \prime}$ long, plete with knobs. 99N3959-Shpg. wt. 2 lbs.
25c

## SHIELDED PHONO CABLE

High quality
!lexible \#24 shielded phono pickup cable. Colton braid overall.
98N5161-1.50/100 ft............... Per Ft. 2t


## TRANSMITTING KEY

Gene:al purpose trans mitting key on a heavy die cast base, all mounted on a swinging brackel thigh clamp. $1 / 8^{\prime \prime}$ pure silver contacts. Key can be easily removed from clamp. Adjustable bearings. Supplied with 5 -foot cable and PL-55 phone plug.
99N4034-Each
39c


POWER WIREWOUND RESISTORS
Excellent quality; include famous brand names. Some cement coated; others vitreous enameled.

| No | Watts | Ohms | Each | Lots 10:ea |
| :---: | :---: | :---: | :---: | :---: |
| 99N135 | 5 | 1,000 | . 06 | . 05 |
| 99N268 | 8 | 10,000 | . 08 | . 06 |
| 99N122 | 10 | 10 | . 69 | . 07 |
| 99N123 | 10 | 100 | . 09 | . 07 |
| 99N310 | 10 | 400 | . 09 | . 07 |
| 98N311 | 10 | 500 | . 09 | . 07 |
| 99N312 | 10 | 1.000 | . 09 | . 07 |
| 99N 124 | 10 | 4,000 | . 09 | . 07 |
| 99N313 | 20 | 500 | . 15 | . 13 |
| 99N314 | 20 | 2,250 | . 15 | . 13 |
| 99N315 | 20 | 5.000 | . 15 | . 13 |

50-WATT ADJUSTABLE RESISTORS


Vitreous enameled on porcelain cores with a strip of wire exposed to form contact. With slider and mig. brackets. 99N316-2 Ohms
$99 \mathrm{~N} 317-1000$ Ohms
59c

## INSULATED CARBON RESISTORS



Insulated. RMA color coded. Guaranteed 10\% tolerance

| Stock No. | Watts | Ohms | $\begin{gathered} \text { Lots } 10 \\ \text { Each } \end{gathered}$ | Lots 100 |
| :---: | :---: | :---: | :---: | :---: |
| 99N318* | 1/2 | 470 | 02 c | 1.50 |
| 99N319* | 1/2 | 33000 | 02 c | 1.50 |
| 99N320 | $1 / 2$ | 1 Meg. | 02 c | 1.50 |
| 99N321 | 1 | 1000 | 03 c | 2.25 |
| 99N322 | 1 | 12000 | 03 c | 2.25 |
| 99N323+ | 2 | 68 | 08c | 7.00 |

KOOL OHM 120.WATT RESISTOR


Heavy duty, $10,000 \mathrm{ohm}, 120$-watt wire wound resistor. Large surface area for heat dissipation $11 / 16^{\circ \prime}$ dia $\times 815 / 16^{\prime \prime}$ With rod and mounting hardware. 99N269

UNSHIELDED R. F. CHOKES
All-purpose chokes. Universal wound


PUSH BUTTON SWITCHES

7. Solder lug term. Leak spring momentary action. Requires 5/8" behind panel. T7C
$29 c$ 99N4181-DPDT 8. Mounts on surface. $13 / 4^{\prime \prime} \mathrm{mig}$. centers $21 / 8 \times 3 / 16 \times 7 / 8^{\prime \prime}$ high screw terminals 99N4176--Shpg. wt. 2 oz

## MINIATURE SOCKET

Molded bakelite; for 7 pin miniatures. Fits 1RS, ITS, IS4. 1S5. Metal mig. shell, 22 -mitg. holes on $7 / 8^{\prime \prime}$ ctrs. 99N282-Each 7 c
10 for
.63 c
CERAMIC SOCKETS

| Low loss. Top and sides glazed. Reenforced springs 21/4" long, $158^{\prime \prime}$ wide. Centers 1 $27 / 32^{\prime \prime}$. |  |  |  |
| :---: | :---: | :---: | :---: |
| No. | Prongs | Each | 10 for |
| $\begin{aligned} & 98 N 13065 \\ & 98 N 13067 \end{aligned}$ | $5$ | $\begin{aligned} & 9 c \\ & 9 c \end{aligned}$ | $\begin{aligned} & 80 e \\ & 80 e \end{aligned}$ |



PILOT LIGHT SOCKET


Two-contact bayonet-type socket. Requires 3,4" dia. hole for mounting flange. With retaining ring, 2 solder lugs. 99 N 247 - Each 10 for

### 1.35

## NEON GLOW LAMP

$1 / 4$ watt. Two-contact bay-onet-type base. Resistorless type for $105-125 \mathrm{~V}$. AC-DC. AC starting voltage $65, \mathrm{DC}, 90$. For test instruments.

10 c 99N303-Ea=h


## ARGON BLUE GLOW LAMP

Blue glow $21 / 2$ watt lamp. Used in newest photographic contact printers, useful as nite-lite. Start ing voltage AC 65, DC 90. For Edison tupe socket.
98N12279
19

## 1/4" SHAFT FLEXIBLE

 COUPLINGFour coupling two $1 / 4^{\prime \prime}$ dia. shafts or for making shaft extensions. Insul. 18 $99 \mathrm{~N} 246-\mathrm{Ea}$
10 for 1.60

DIAL SCALE
$21 / 2 \times 31 / 4^{\prime \prime}$ rectangular dial scale for right hand closing broadeast band condensers. Figures from 55 to 170. For AC-DC sets small portables.
10 for

## DIAL CRYSTAL



Formed and stamped one-piece dome type plas'ic crysta! for above dial scale. Waterwhite with. $3 / 4^{\prime \prime}$ space for pointer.
$99 N 146-10$ for $40 c$


## SOLAR CONDENSERS UP TO 95\% DISCOUNT



TYPE DY "TWIST PRONG" MOUNTING
A standard metal cased unit. Hermetically sealed base assures long life, proper vent ing and great rigidity. Idea! for many types of service. Light in weight, compact. They save assembly space and time. Terminal codes clearly stamped on case.

| No. I | Cap. Mid. | 1 Volts | Each |
| :---: | :---: | :---: | :---: |
| 99N3400 | 15000 | 1.5 |  |
| 99N3401 | 2000 | 6 |  |
| 99N3402 | 100 | 50 | c |
| 99N3403 | 15 | 1250 |  |
| 99N3404 | 80 | 1350 | 10 For |
| 99N3405 | 20-20 | 25 | 25 |
| 99N3406; | 40-40 | 25 |  |
| 99N3407 | 20-10 | 150 | $1 \cdot$ |
| 99N3408 | 30-20 | 150 | 1 |
| 99N3409 | 50.50 | 150 | or |
| 99N3410 | 40/20 | 150/2S |  |
| 99N3411 | 40-40 | 1200 |  |
| 99N3412 | 20-20 | 1350 |  |
| 99N3413 | 30-30 | 1350 |  |
| 99 N 314 | 15-15 | 1400 |  |
| 99N315 | 20/20 | 1400/25 |  |
| 99N3416 | 40/50 | 1400/300 | 221 |
| 99N3417 | $16-16$ $30-30$ | 450 |  |
| 99N3419 | 40-15 | 4 |  |
| 99N3420\| | 40-40 | 1450 |  |
| 99 N 3421 | 20/25 |  |  |
| 99N3422 | 15/15 | \|450/350 |  |
| 99 N 342312 | 20-20-20 |  |  |
| 39 N 3424 | 20-20-20 | 1150 |  |
| 99N325 | 40-20-10 | 150 |  |
| 99N3426 | 40-20-20 | 150 |  |
| 99N3427 | 40-40-40 | 150 | 10 For |
| 99N3288 | 60-40-20 | 150 | 2.25 |
| 99N3429 | 10-10-10 | 1450 | $1 \cdot 1$ |
| 99 N 3430 | 20-10-10 | 450 |  |
| 99N3431 | 20-20-20 | 1450 | 25 |
| 99N3432 | 15-15/1200 | 150/1.5 |  |
| 99N3433 | 40-20/100 | 150/10 | 10 for |
| 39N3434 ${ }^{\text {39N3435 }}$ | 10-10/10 | 150/25 |  |
| 39 N 3451 | 10-10/20 | 150/25 |  |
| 98N3436\|2 | 20-10/10 | 150/25 |  |
| 99N3437 | 20-10/20 | 150/25 | 25 |
| 99N3438' | 20-20/20 | 150/25 |  |
| 99N3439 ${ }^{\text {99N }} 3440$ | 30-20/10 | 150/25 |  |
| 99N3440 | 30-20/20 | 150/25 |  |
| 99N34413 | 30-50/100 | 150/25 |  |
| 99 N 34424 | 40-20/100 | 150/25 |  |
| 99N3443 | 40-40/20 | 150/25 | 9 |
| 99 N 3444 | 50-50/20 | 150/25 |  |
| 99 N 344515 | 50-50/40 | 150/25 | 10 For |
| 99N3446 ${ }^{\text {99N }} 3447$ | 60-40/10 | 150/25 | 25 |
| 99N3447170 | 20-30/150 | 150/25 | 1.25 |
| $99 \mathrm{NH4} 4815$ | 50-50/40 | 200/25 |  |
| 99 N 34493 | 30-20/5 | 250/200 | 25 |
| 99N3450 ${ }^{\text {99N }}$ | 30-30/2S | 300/25 |  |
| 99N3451 9 | 80-40/20 | 300/25 | 10 for |
| 99N3432 | 10-15/20 | 350/25 | 2.25 |
| 99N3453\|1 | 0-20/20 | 350/25 | 2.25 |

TYPE DY (continued)

| No. | Cap Mid. | Volts | Pric |
| :---: | :---: | :---: | :---: |
| 99N3454 | 15-15/20 | 350/25 | 25 |
| 99N3455 | 20-20/20 | 350/25 |  |
| 99N3456 | 30-30/20 | 350/25 | 10 |
| 99N3457 | 30-30/30 | $350 / 25$ | 10 |
| 99N3458 | 10-10/20 | 400/25 | or |
| 99N3459 | 20-10/20 | 400/25 | 2.25 |
| 99N3460 | 20-20/20 | 400/25 |  |
| 99N3461 | 30-10/20 | 400/25 |  |
| 99N3462 | 15-15/20 | 450/25 |  |
| 99N3463 | 15-15/40 | 450/25 | 0 for |
| 99N3464 | 20-20/20 | 450/25 |  |
| 99N3465 | 30-30/20 | 450/25 |  |
| 99N3466 | 40-40/40 | 450 | 25 |
| 99N3467 | 20-20/60 | 450/350 | 25 |
| 99N3468 | 8-8/8 | 475/100 |  |
| 99N3469 | 30/20/20 | 350/300/250 |  |
| 99N3470 | 15/20/20 | 400/300/25 | (or |
| 99N3471 | 40/20/20 | 400/350/50 | 2.25 |
| 99 N 3472 | 10/40/16 | 450/400/350 | 5 |
| 99N3473 | 40-40-20-2 | 150. |  |
| 99N3474 | 10-40-40-30 | 150. | 10 |
| 99N3475 | 30-15-15-15 | 300 | for |
| 99N3476 | 40-40-20/200 | 150/10 | for |
| 99N 3477 | 60-40-20/200 | 150/10 | 2.25 |
| 99N3478 | 40-30/100-40 | 150/25 | 25 |
| 99N3479 | 30-20-20/100 | 150/25 |  |
| 99N3480 | 75-75-75/30 | 150/25 | 10 |
| 99N3481 | 80-40-30/100 | 150/25 | 10 |
| 99N3482 | 30-50/20/100 | 150/50/10 | for |
| 99N3483 | 40-40/20/200 | 150/50/10 | 2.25 |
| 99N3484 | 50-50-50/25 | $200 / 25$ |  |
| 99N3485 | 60-40-20/50 | 300/25 |  |
| 99N3486 | 30-30-15/30 | 300/50 |  |
| 99N3487 | 50-30-10/20 | 350/25 | - |
| 99N3488 | 40-40-20/20 | 350/25 | 5 |
| 99N3489 | 10-10/10-10 | 350/300 |  |
| 99N3490 | 30-30-15/20 | 450/50 |  |
| 99N3491 | 30-30-15/30 | 450/50 |  |
| 99N3492 | 40-40/5/20 | 350/250/25 |  |
| 99N3493 | 30-30/15/20 | 350/300/25 | for |
| 99N3494 | 10-10/10/20 | 450/350/25 | 2.25 |
| 991 | 30/20/10/20 | 350/300/250 |  |



## "MINICAP" DRY ELECTROLYTICS

Small hermetically sealed metal cased. Units have axial bare wire leads. Dual units have common negative. Same less paper insulating tube.

| No. | Mfd. $\mid$ Volts | Each | 10 for |  |
| :---: | :---: | :---: | :---: | :---: |
| $99 N 3341$ | 25 | 25 | $12 c$ | 1.08 |
| $99 N 332$ | 6 | 25 | $10 c$ | $90 c$ |
| $99 N 3343$ | 10 | 25 | $10 c$ | $90 c$ |
| $99 N 3344$ | 2 | 50 | $08 c$ | $72 c$ |
| $99 N 3345$ | 10 | 50 | $12 c$ | 1.08 |
| $99 N 3346$ | 25 | 50 | $12 c$ | 1.08 |
| $99 N 3347$ | 50 | 50 | $12 c$ | 1.08 |
| $99 N 3348$ | 100 | 50 | $11 c$ | 1.08 |
| $99 N 3349$ | 8 | 100 | $10 c$ | $90 c$ |
| $99 N 3350$ | 10 | 150 | $12 c$ | 1.08 |
| $99 N 3351$ | 250 | 150 | $12 c$ | 1.08 |
| $99 N 3352$ | 4 | 250 | $12 c$ | 1.08 |
| $99 N 3353$ | 5 | 250 | $12 c$ | 1.08 |
| $99 N 3354$ | $10-10$ | 450 | $19 c$ | 1.70 |

WAX IMPREGNATED CONDENSERS


Single, dual and triple section condensers. Wax impregnated coated cardboard tubes. 5 " long colorcoded leads.

| No. | Cap. Mid. | Volts | Each | 10 for |
| :---: | :---: | :---: | :---: | :---: |
| 99N3310 | 16 | 1450 | 29 c | 2.50 |
| 99N3311 | 30-30 | 1300 | دyc | 3.50 |
| 99N3312 |  | 450 | 3yc | 3.50 |
| 99N3313 | 40-40-12 | 1150 | 39 c | 3.50 |
| 99N3314 | 80-40-20 | 150 | 39c | 3.50 |
| 99N3315 | 100-20/200 | 150/10 | 39c | 3.50 |
| 99N3316 | 80-20/100 | $150 / 15$ | 39 c | 3.50 |
| 99N3317 | 20-10/5 | 150/25 | $25 c$ | 2.25 |
| 99N3312 | 40-20/20 | 150/25 | 39 c | 3.50 |
| 99N3320 | 40-40/50 | 150/25 | 39 c | 3.50 |
| 99N3321 | 50-20/10 | 150/25 | 39c | 3.50 |
| 99N3322 | 50-50/20 | 150/25 | 39 c | 3.50 |
| 99N3323 | 60-30/150 | 150/25 | 39 c | 3.50 |
| 99N3324 | 20-16/10 | 200/25 1 | 29 c | 2.60 |
| 99N3325 | 8-8/25 | 450/25 | 39 c | 3.50 |
| 99N3326 | 40-40-40-10\| | 150 | 39 c | 3.50 |
| 99N3327 | 30-20-20/25 | 150/25 | 39 c | 3.50 |
| 99N33 | 20-10-5/50 | /450/25 | 29 c | 260 |

PUUG-IN DRY ELECTROLYTICS
Type DO. Plugs into octal socket. Aluminum internal construction. Replaces wet electrolytics providing surge voltage does not exceed 525 volts.

| No. 1 Cap. Mid. $\mid$ Volts | Each |  |
| :---: | :---: | :---: |
| 99 N3329/15-15/20 | $1450 / 25$ | 25 S |
| $99 N 3330 \mid 10-10 / 20$ | $1450 / 25$ | 2.25 |



TYPE D DRY ELECTROLYTICS
High quality, metal cased units. Insulated can unit with flexible loads. Provides excellent protection against humidity. Mounts in $7 / 8^{\circ \prime}$ hole. Less Palnut.

| No. | Mid. | Volts | Each | 10 for |
| :---: | :---: | :---: | :---: | :---: |
| 99N3331 | 4 | 600 | 39 c | 3.50 |
| 99N3332 | 8 | 475 | 49 c | 4.40 |
| 99N3333 | 8 | 600 | 59 c | 5.30 |
| 99N3334 | $8-8$ | 450 | 59 c | 3.30 |



TYPE DT ELECTROLYTICS
Extremely small size units for use where space is limited.

| No. | Mid. | Volts | Each | 10 for |
| :---: | :---: | :---: | :---: | :---: |
| $98 N 3335$ | 50 | 25 | $10 c$ | $90 c$ |
| $99 N 3336$ | 100 | 25 | $10 c$ | $90 c$ |
| $99 N 3337$ | 8 | 50 | $8 c$ | $72 c$ |
| $99 N 3330$ | 10 | 50 | $10 c$ | $90 c$ |
| $99 N 3338$ | 16 | 100 | $8 c$ | $72 c$ |
| $98 N 3340$ | 4 | 150 | $8 c$ | $72 c$ |

## SILVER MICA CONDENSERS

Molded bakelite silver mica condensers. All individually tested for accuracy of capacity, voltage breakdown and leakage. All rated at 500 volts DC working are 1000 volt test, those tested at 300 volts
DC working are 600 volt test.


MOLDED BAKELITE MICA CONDENSERS

# OUTSTANDING BARGAINS 



SOLAR DY CONDENSERS
Outstanding values at give away prices. Twist Prong type. Hermetically sealed.
Other values listed on page 154

| Stock No. | Cap <br> MFD | Volt. | Price |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Each | 6 For |
| 99N3355 | 30-30 | 150 | . 19 | 1.75 |
| 99N3356 | 40-20 | 150 | . 19 | 1.75 |
| 99N3357 | 20-10/50 | 450/50 | . 25 | 2.25 |

## ELECTROLYTIC CONDENSERS



Top quality electrolytic condensers. Twist prong 50 working volts DC. Rated at $\times 21 /{ }^{\prime \prime}$
$99 N 3216$
Each se
Lots of 10 .................. 79e
16 mfd . electrolytic. 500 working volts $D C$ Can $11 / 8^{\prime \prime}$ dia. $\times 2^{\prime}$ Can $991 / 8$

Each 29c


## HI-FREQUENCY ANTENNA

Hi-Frequency Antenna. Dasigned tor use with Signal Corp SCR-522 transmitter-receiver. Ideal for use with high irequency ( $100-156 \mathrm{MC}$ amateur equipment. Overall length is approximately 30 inches. 99N9581-Shpg. wi. 4 lbs.

MIDGET INPUT XFORMER
$6-8$ ohms to single grid. Un shielded, with 4 color coded leads. For small PM speak
 er used as mike. $1^{3 / 6} \times 1 / 8 \times 1 / 4^{\prime}$ $9 c$
Lots of 10
10.....

TYPE 3 AG FUSES
For Radios and Amplifiers
 Any type...

100 for 89 c

HAMMARLUND RF CHOKE
$250 \mathrm{mh}, 60 \mathrm{ma}, \mathrm{DC}$ res, 420 ohm . In heavy plastic case. Type RFC $250.11 / 4^{\prime \prime}$ dıa. $\times 13 / 4^{\prime \prime}$. 98N8526.

39c


## AIR PADDER CONDENSERS

Ideal for circuits requiring con stant capacity under all conditions. $9-100 \mathrm{mmid} .17 / 8^{\prime \prime}$ deep. Fits $11 / 2^{\prime \prime}$ dia. forms. 23
Lots of 10....................................... 1.95


## MOTOR REPLACEMENT CAPACITOR

Oil filled. 3.5 mtd .330 V . AC. Solder lug. S8N2981-2 ${ }^{\prime \prime} \times 13 / 4^{\prime \prime}$ $\qquad$ 39c


## OIL FILLED STANDOFF

 TRANSMITTING CONDENSERSAn oxcellent buy for Hams. Rectangular metal case. Oil filled and impregnated. Parcelain standaff insulators with solder lugs and locknuts. Hermetically sealed.

| Stock No. | MFD | Working Votts | Dimensions $\mathrm{H} \times \mathrm{W} \times \mathrm{D}$ | Fig. | Shpg. Wt. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 98N2316 | 25 | 1000 | $3 \times 33 / 4 \times 1$ " | d | 8 oz . | 19 c |
| 98N3288 | 4 | 600 | $33 / 8 \times 11 / 4 \times 21 / 2^{\prime \prime}$, | A | 1 lb . | 69 c |
| 93N3289 | 10 | 600 | $51 / 2 \times 23 / 4 \times 11 / 4^{\prime \prime}$, | A | 2 lbs | 1.20 |
| 99N3290 | 16 | 600 | $51 / 4 \times 21 / 4 \times 21 /{ }^{\prime \prime}$ | A | 3 lbs . | 1.95 |



OIL IMPREGNATED PAPER CONDENSER
Cylindrical type can, solder lugs. 2 mfd .


## BARGAINS IN PAPER TUBULARS

Excellent quality paper by-pass condensers at new, unbelievably low prices. Sizes are those most used by servicemen and exlow prices.

| Stock <br> No. | Cap. <br> MFD | Wkg. <br> Volts | Each | 10 For |
| :---: | :---: | :---: | :---: | :---: |
|  | 99N3284 | .001 | 600 | .08 |
| 99N3297 | .01 | 400 | .04 | .34 |
| 99N3285 | .25 | 600 | .09 | .81 |

## SPECIAL CONDENSER VALUES

A great opportunity to save money on condensers. Midgets have bare wire leads. Can types hermetically sealed, spade mounting lugs. Polarity indicated.

| Stock No. | MFD | Volts | Each | 10 For |
| :--- | :---: | :---: | :---: | :---: |
| 99N3222 | 16 | 450 | .29 | 2.70 |
| 99N3302 | 10 | 50 | .15 | 1.35 |
| 99N3308 | 8 | 150 | .12 | 1.08 |
| 99N3307 | 12 | 150 | .12 | 1.08 |
| 99N3306 | 16 | 150 | .15 | 1.35 |
| 9923305 | $5-5$ | 50 | .15 | 1.35 |
| 99N3304 | $10-10$ | 50 | .15 | 1.35 |
| 99N3223 | 20 | 150 | .19 | 1.70 |
| 99N3225 | 40 | 150 | .28 | 2.50 |
| 99N3224 | $20-20$ | 150 | .27 | 2.50 |
| 99N3300 | $30-20$ | 150 | .38 | 3.50 |
| 99N3301 | $40-20$ | 150 | .40 | 3.60 |
| 99N3302 | $40-40$ | 150 | .44 | 3.90 |
| 99N3226 | $50-30$ | 150 | .39 | 3.50 |



## 25 MFD 25Y. METAL TUBULAR CONDENSER



Low volage, low capacitance condensers for use as filters in low voltage power supplies and in cathode bias circuits. Capacity 25 Mid.


## CERAMIC CONDENSERS

98N3558- 60 mmf $98 N 250$ - 20 mmfd . V. 500 DCWV. Leakage resistance 10 M megs. 98N3559-50 mmfd. $\pm 20 \%$. Size $.45^{\prime \prime} \times .21^{\prime \prime}$.......................... 10 for 25 c
G.E. 12-VOLT DYNAMOTOR


Excellent for aircraft, mobile transmitters, farm use, etc. 12 -volt input at 2.2 amps. 250-volt output at .05 amps. Dimensions: $23 / 4^{\prime \prime}$ dia. $\times 41 / 2^{\prime \prime}$ long. $37 / 16^{\prime \prime} \times 7 / 16^{\prime \prime}$ mounting centers. Complete with $8^{\prime \prime}$ wire leads.
99N9599-Shipg. Wt. 5 lbs.

# AM-FM CHASSIS VALUES 



## LOW-PRICED DELUXE AM CHASSIS

Save money-install it yourself! Here is a superb-performIng radio chassis at a dollar-saving priçe-a supersensitive superhet radio with $10^{\prime \prime}$ speaker for maximum volume and tonal range. Automatic volume control eliminates atmospheric fading and volume rises, maintans listening level you set with manual control. Continuously variable tone control adjusts from deep-throated bass to clear-tone treble. Latest push-pull audio circuit brings you 3 watts output for glorious realism to your radio reception. Built-in loop antenna eliminates tranling wire or outside antennas-provision made for outside antenna should you desire one. Large easy-to-read slide rule dial tunes entire braadcast band. Tubes used: 6SA7, 6SF7, 6SL7, 2-25L6 plus two $25 Z 6$ zectifiers. Overall size: $8^{\prime \prime} \times 113^{\prime \prime} \times 7^{\prime \prime}$
IN701-Shipping weight 10 pounds.
24.95


NEW FM-AM CHASSIS AND SPEAKER
Here's a powerful, deluxe FM- AM chassis that brings in both your favorite regular broadcast programs plus brilliant, staticless FM-a two-band receiver for the price of one! This is a complete unit, including a bullt-in power supply and $10^{\prime \prime}$ heavy-duty speaker...ready for installation in an existing cabinet or one of your own choosing. Latest type FM-AM circuit of high senslifity and selectivity. Covers 550 to 1600 KC and 88 to 10 MC bands. Large easy-to-read slide rule dial makes tuning simple and fast. Other features include a built-in loop for standard broadcast reception and connector for external FM antenna. Also has a 3-position tone control and FM AM bandewitch An input iact is pro tone control and FN- AM bandswitch. An input jack is pro6 , (2) $6 \mathrm{BA}, 6 \mathrm{AQ5}, 6 \mathrm{AT}, 6 \mathrm{AL} 5$ and $6 \times 4$. For $110 \mathrm{~V}, 6 \mathrm{G}$ cycle AC.
1N820-Shipping Weight 20 lbs.
47.50

## dOLLAR SAVING TUBE SALE!!



DOLLAR SAVING TUBE SALE!!
Some are baxed, some are bulk, but they are all name brards, fully quaranteed tubes such as GE, RCA, Sylvania, etc. Quantities limited.

| Type | Each |
| :---: | :---: |
| 155 | 59 |
| 304 | 49 |
| 6AG5 | 89 |
| 6AL5 | 81 |
| 6AT6 | 674 |
| 6116 | 49 |
| 6 K 7 | 59 |
| 6SA7GT. | 67 |
| 6SC7 | 67 |
| 6SG7 | 67 |
| $6 \mathrm{SJ7}$ | 62 |
| 6SQ7GT | 62 |
| 6V6GT. | 59 |
| 12 A 6 | 7 |
| 12SA7GT | 69 |
| 12SG7GT | 62. |
| 12SK7GT | 63. |
| 12SQ7GT | 63 |
| 1486 | 6\% |
| 3585 | 67 |
| 35L6GT. | 67 |
| $35 Y 4$ | 59 |
| 35 ZSCT | 49 |
| 50B5 | 67 |
| 50L6 | 69 |

SPECIAL PURPOSE TUBES 99N2905-0D3/VR150... Lot 10/Ea. 39¢ 99N2903-954................ Lot 10/Ea. 264 99N2904-Einiac 15E... Lot 10/Ee. 294 99N2902-7193 E. E. $89{ }_{4}$ 99N2902-7193............ Lot 10/Ea. 16\&


## IF TRANSFORMER

 SPECIAL!Air core, condenser tuned, shielded IF. 456 KC normal peak. Stand ard spade mtg. lugs. Can size: $13 / 8^{4} \times 13 / 8^{4} \times$ 98N10069-Input.
98N10070-Output $\qquad$ 39c ................... AC-DC COILS
Hi-gain, unshielded. 175550 meters. Hi-impedance pri., 4 bank Litz wound pri.. Tunes with .000365 mfd. cond. 98N10012-Antenna Coil.. 32c 98N10095-R. F. Coil. 14 TRIMMER ASSORTMENT 20 Assorted Trimmers. Padders. Most are standard reramic.
$98 \mathrm{Ni} 10203 .$. (5i.) $\left({ }_{4}\right.$ andersion

## 29 <br> 296

 5-PUSH-BUTTON SWITCH Each button DPDT: all common in normal position. Shafts extend $31 /{ }^{\prime \prime \prime}$.. Eg. SC MIDGET KNIFE SWITCH DPST panel mount. $1 \%$ " $\times 1$ ". With mounting nuts. 99 N 4232. ..... .. 55 As above, except SPDT. 99N4233......................... 12
## Plato Load Relay

 Heavy-duty 6000 ohms SPST. Normaly open. Rated 10 amps at $110^{\circ}$ centers $25 / 8^{M}$ 99N3978.89
ALL-AMERICAN TUBE KIT Popular replacement kit of ive standard brand tubes. Includes one each of 50L6, 35Z5, 12SQ7. and $125 K 7$ tubes. A real barandn in replacement tubes. W.: Gainin replacement
99N9549..
2.96

ADJUSTABLE S.P.D.T. RELAY


Sensitive relay, 2000 ohm coil. For plate circuits, photocell applications. Min. pull-in current only 2.5 ma . 2 -mtg. holes. $33 / 8 \times 21 / 8 \times$ $21 / 8^{\prime \prime}$. 99N4033
1.49

SPECIAL RELAY


45 V DC relay. 2000 ohm coll. Contacts: one set ol SPDTrated 50 amps at 6 volts to 20 amps, at 110 volts, and one set of SPST normally open contacts rated 5 amps at 6 volts 102 amps . at 110 V . Excellent for tube carcuits, photocell alarm systems, hosts of other applications. $31 / 2 x$ $21 / 4 \times 35 / 6^{\prime \prime}$. Dust cover, mounting screws, and wiring diagram.
99N3983.
89 c

## 4 P.D.T. 24 VOLT RELAY

1/8" pure silver conlacts rated at 3 amps. 110 volts AC. 250 ohms DC coil for 24 volt operation. 6.32 threaded mounting holes on $17^{7}{ }^{\prime \prime}$ mounting centers. Size: $2 \times 15 / 8 \times 15 / 8$ 99N3996.

49

## S.P.D.T. RELAY

SPDT contacts of ${ }^{31}{ }^{\prime \prime}$ diameter fine silver, rated at 550 watts non-inductive lood at 60 cycles. Coil operates on 19 to 29 volts $50-60$ cycle AC, DC resistance of 50 ohms, 1500 volt insulation. $21 / 4 \times 15 / 8 \times 11 / 8^{\prime \prime}$. 98N5950.

6\%

# PACKAGED HARDWARE 

## ASST. MACKINE SCREWS

All standard sizes used in electronic and similar work in handy inerpensive assortment. Contains opproximately 40 Nos. 6, 8, 10 screws $1 / 4^{\prime \prime}$ to $1^{\prime \prime}$ long.
17N15456-Assortment.
17N15457-6-32x3/6, pkg. of 35 .
17N15458-6-32x1/2, okg. of 35 .
17N15459-8-32×1/2, pkg, of 30 .

## SMALL SCREWS AND NUTS

Spectal assortment of extra small scrows and nuts Nos. 2 and 4 needed in electronic and experimental work; for fastening small parts, and for replacing rivets. Approximately 30 assorted screws and 30 ass.orted nuts.
17N15455-

## SELF TAPPING SCREWS

Cut their own thread in either metal or piastic. Ideal for mounting parts on chassis, replacing rivets and eyelets. Package of approx. 30 assorted sizes.
17N15450-Assortment
17N15451-Pkg. app. 25, size $6 \times 3 / 8$. 17N15452-Pkc. app. 25, size $8 \times 3 / 8$.

PHONO PICK-UP SCREWS
Knurled head steel screws, antique bronze. For popular pick-ups and recording heads. Approx. 10 asst. 17N15409-


WOOD SCREW ASSORTMENT
Handy assortment for workshop or home. Contains approximately 30 round and ilat-head screws of popmeet all your requirements.
$17 \mathrm{~N} 15453-$

## ORNAMENTAL SCREWS

Real valuel Antique bronze tinished rosette head screws for mounting speakers and other radio installations. Pkge. contains 15 asst. sizes. 17N15449-

## SPADE BOLTS

Indispensable for attaching condenser coils, If cans, for Experimenters, Servicemen and manulacturers. Stud size 6-32. Holo size No. 6. Package of approx. 25 assorted lengths. 27N15443-

SMALL SCREW ASSORTMENT


Handy assortment for home or work, shop. Contains approx. 30 small shop. \& steel wood sctews sizes 1 to 3 up to ${ }^{3}$ " $8^{\prime \prime}$ tor name plates and escutcheons.

## RUBEER FEET

Made of oll resistant synthetic rubber for racio phonograph and ampliffer bases. Screw or tack type. package of 12 assorted 17N15407-
Pkge. of assort. tack typo. 17N15408-

SNAP-IN TRIMOUNTS
To fasten dial scales, loop amtennas and backs on plastic cabinets, etc. Pkg. of 30 asst. 17N14839-


## HOLE PLUGS

10 assorted slze snap button hole plugs up to $1 / 16$ " thick. Per. 10 asst.
17N14837-
VENTILATING PLUGS


Forchassis, amplifiers, racks, transmitters, eic. Snaps into 1' $^{\prime \prime}$ hole. Pkg. of 2 plugs. 17N15460-


TERMINAL LUGS
Available in 6 popular sizes for radio and electronic worl. Tinned brass.

| Stock No. | Fig. No. | Approz. No. |
| :---: | :---: | :---: |
| $17 N 15419$ | Asst. | 40 |
| $17 N 15420$ | 1 | 30 |
| $17 N 15421$ | 2 | 25 |
| $17 N 15422$ | 3 | 25 |
| $17 N 15423$ | 4 | 25 |
| $17 N 15424$ | 5 | 25 |
| $17 N 15425$ | 6 | 40 |

RADIO KNOB SPRING


SPECIAL MOUNTING NUTS


Various kinds of Various kinds of nuts used on vol-
ume controls... ume controls . ic.
Cadmium or nickel plated. App. $155^{\circ} 8^{\prime \prime}$. 17N15445-


## SPACERS



Assortment of metal and insulating spacers. Accommodates No. 6 and No. 8 screws. 17N15402-App. 12 asst. insula: 17N15403-App. 12 asst. metal

SMALL COTTER A HAIRPINS
Assortment of most popular sizes of cotter and hairpins, Valuable ald in radio and phonograph repair Package of approx. 50. 7Nis408-

## STEEL SET SCREWS



Hardened steel set screws, for radio knobs, record changers, otc. Approximately 15 assorted sizes. 17N15400

## METAL WASHERS

Cadmium plated. Steel washers. Approx. 80 assorted small sizes. 17N15433-

## RINGS AND "C" WASHERS



Standard types and sizes for ervicing of volume controls and record changers. Sizes or shafts $1 /$ /h $^{\prime \prime}$ to $5 / 16^{\prime \prime}$ diam. Description Ayprox. No. 17N15427 Rings and Washors
7N15429 C washer $1 / 4^{\prime \prime}$ shaft 17 N15430 C washer $3 / 16^{\prime \prime}$ shaft 25

SPRING WASHERS
For record changer, automatic tuning assemblies. Assortment of approx. 15 assorted phosphor-bronze and stoel friction washers. 17N15404-

EXPANSION SPRINGS
Handy for sadio, electrical shops, laboratories. Assortments contain various sizes for record changers and dial drives.
17N15434-10 Asst. large springs. 17N15435-10 Asst. small springs.

PUSE CIIPS


Made of nickel plated spring brass for sirgle hole mounting. Pkg. 10 assorted.
17N15428-


MACHINE SCREW NUTS
"Small Pattem" nuts for electric trades. Cadmium plated.

| 17N15446 | Asst. | 35 |
| :---: | :---: | :---: |
| $17 N 15447$ | $6-32$ | 35 |
| $17 N 15448$ | $8-32$ | 30 |

## ACORN NUTS

Im.proves appearance on panel assemblies and cabinets. Pal iype steel nuts, self locking. Cadmium plated. Pkg. of 12 assL. 17N15444-

## CHASSIS MOUNTS

Long lasting resilient synthetic rubber. To give chassis floating effect. Pkg. of 10 assorted. 17515432-


PHONO MOTOR DRIVES
Precision-made replacements for standard motor drives. Made of abrasionresistant synthetic rubber to insure long, serviceable wear.

| No. | I.D. | O.D. | Thick | Per pkg. |
| :---: | :---: | :---: | :---: | :---: |
| 17N15412 | $2^{\prime \prime}$ | $2^{3,} \mathrm{~B}^{\prime \prime}$ | 5/32" | $2-$ |
| 17N15414 | $112^{\prime \prime}$ | 13/4" | 3/16" | 2 |
| 17N15415 | 7/8" | $11 /{ }^{\prime \prime \prime}$ | 3/16" | 3 |
| 17N15416 17N15417 | 53/4" ${ }^{1 / 3}$ |  | 1/4** | 4 |

## CORD STRAIN RELIEFS

Provides a grommet and strain Proviel in one plece. For use on appliance, radio and amplifier power cords. Will prevent insuaition of wire from boing cul or damaged. Package of 4.
17N15431-


## ANGLE BRACKETS

Handy brackets of various lengths and shapes. Pre cision made of steel, or brass and plated. Pkg. of approximately 15 assid. 5410-


Three assortments of key wrenches to fit all standard Hex and spline socket screws used in radio and electronic equipment. A "must" for the servicemanl Asst. of 4 small Hex wrenches to fit set screws No. 4 to $1 / 4^{\prime \prime}$, cap screws No. 2 to 8. 17N15410
Assortment of 3 medium Hex wrenches to fit set screws $3 / 4^{\prime \prime}$ to $7 / 16^{\prime \prime}$ and cap screws No. 8 to $5 / 16^{\prime \prime}$.
17N15411-
Asst. of 4 small spline wrenches to fit set screws $1 / 4^{* *}-7 / 16^{\prime \prime}$; cap scws. No. 8 to 5/16". 17N15412-


## B

| Baffles, Speaker. |
| :---: |
| Ballast Tubes |
| Batteries |
| Combination Packs |
|  |
|  |
| Plugs ${ }^{\text {d }}$ Terminals 52 |
| Portable Radio 52.53 |
| Standard D |
| Batter |
| Battery Elimino |
| Batter |
|  |
| Bias Cells |
| Binding Posts |
| Blades, Hack |
| anks, Reco |
| oks |
|  |
| Amateur |
| anuals $\delta$ |
|  |
|  |
| Rad |
|  |
| Boosters, TV......... 111 |
| rackets. |
|  |
|  |
|  |
| Bul |
| Fluorescent ....... 121 |
| Pilot .................37, 53 |
|  |
|  |

## SPECIAL FEATURES

Latest Television Receivers
High Fidelity Section
Sound Systems
Last Minute Bargain Section
How To Otder

Hack Saws
Ham Gear.
Chokes 6 Coils.
Hand Drills.................... 70
Hardware ....................... 103.157
Headphones ................ 137
baing Aid
Batterie
Tubes
Heater, Cord...................... 123
Hig̣h Fidelity....................15-21
Amplifiers ............... 18, 19
Cabinets ..............42, 43
Packages.............20, 21 Phono
Speakers.
42.43
16.17

Hobby Tools
Home Recording
Accessories............ .12
Disc
Tape
13.47
$\ldots .13$

Wire
.12
Horns ........................................ 41

Earphones ................... 137
Electrical Accessories 123
Electrical Appliances 122
Electric Eye Units....... 107
Electric Saw.
Electronic Switch.............. 61
Electroplaters ................. 66
Eliminators ...................... 53
Enamel, Coding............ 104
Engraving Kits
Equalizers,
Exciter
Exciter, Transmitter.... 143
Exciter Lamps............... 36
Extension Cords.......... 123
Extension Mast.
Antenna..............108, 112
Jacks
101
Jewel Pilot Brackets ..... 37

Keys, Telegraph,$\ldots \ldots . . .136$ $\ldots 2,105,114,125,126$
Aerial … 114, 12. 126
Amplifler ....................... 125
Broadcast
Tuner .............125. 126
Broadcast
Receiver
126
Chemical
104
Crystal
FM Receive
.125
Photoelectric
Equipment .............. 107
Pre-Amplitier 125
Printed Circult ......... 125
Speaker \& Cabinet
Repair ..................... 105
Test Equipment........ 62
Wireless Oscillator 125
nobs
Springs
102
Knob Puller........................ 102

| Lacquers .................... 109 |
| :---: |
| Lamps ... 37, 53, 121, 136 |
| Flashlight ............... 53 |
| Flujrescent ............. 121 |
| Neon ......................... 37 |
| Photoflash .............. 136 |
| Pilot .......................... 37 |
| Lamp Cord ................... 117 |
| Lathe Outfit.................. 72 |
| Lead-In, Aerial........... 119 |
| Lenses, TV Filter.........111 |
| Lights, Panel............... 37 |
| Lightning |
| Arrestors...........112, 114 |

## M

Machine Screws 103, 157
Magic Eye
Assembly
Magnet Wire. 45
Manuals
$110,114,115,120,121$
Mast Extension 108, 112 Master Oscillator ....... 143 Meters

64
Cases ........................... 64
Fial Scales ... 106. 138
Fuses \& Mounts........ 75 Rectifiers
$\begin{array}{r}84 \\ \hline 85\end{array}$
Mica Condensers... 84, 85
Microgroove
Changers.
5. 146

Needles
5. 14

Pickups
Pre-Amplifier
Microphones ......... 38, 39 Accessones

## Recorder

Accessories 12. 13, 50
Disc .................12, 13, 47
Tape
Wire
Toy
Light
Mobile Electric 122
Moble PA Svstems 27, 30
Mou
Multitesters ... 59, 61, 141
N


0

Ohmmeters
Ohms' Law Calculator 78
Oscillator Coils ......... 95
Oscillators
Code Practice............ 136
rit
Tran
Transmitting ........ 143
$\begin{array}{ll}\text { Oscilloscopes .........60, } & 61 \\ \text { Outlet. Electrical }\end{array}$


82
Paint. Radio 104
Panels
Panel Light Assembly 37
Panel Meter
Penlites 69 hone Plugs
E Jacks .............100, 101
honographs
3, 14, 32, 147
Amplifiers ...18, 19, 147
Carridges
Dynamic
Noise Suppressor 90

Needles

Recording Discs...

## SPECIAL FEATURES

Radios and Phonographs
TV-Radio-Phongraph Custom Furniture
10, 11, 22
TV and Radio Test Equipment.
Tool Section
Radio \& Test Equipment Kits..................................................... 124-127

| Photo-Electric |
| :---: |
|  |
| Photolact |
| Photoilash Su |
| Pickups |
| ilot Light |
| Bulbs |
| Inta |
| Jewel Bra |
|  |
| lastic Rod, |
|  |
| ng Outfit ............. 66 |
| Pliers |
| Pug Adapto |
| Plug-In Coils ...... 126, 140 |
| Plugs |
| AC |
| Banana |
| Battery |
| Cable |
| Microphon |
| one |
|  |
| PA Syste |
| Radios |
| Speaker Cases 45 |
| Phonos ..........14, 147 |
| osts, Binding ......... 1 n1 |
| otentiometers |
| Power Controls |
| Rheostats |
| Transiormers 89-93, 149 |
| Units ........ ....... 90 |
| ower Level |
| Indicator |
| Power Supplies ...... 51 |
| Pre-Ampliffers 13, 48, 147 |
| Probes -.... 58, 61 |
| rods, Test |
| Projectors, Speaker |
| ublic Address |
| Equipment -.. 23-33 |
| Punches, Metal 66 |
| ush-Button Switches |
| Drill |

## R

| RF Chokes \& Coils . |
| :---: |
| Racks, Steel |
| Chrome Handles ... 134 |
| Shelves |
| Ventilating |
| Louvres |
| Radio Service |
| Encyclopedia .............. 80 |
| Radio Sets .......... 2, |
| Auto |
| Cabinets ............ 22, 148 |
| Kits ............. 125, 126 |
| Phono |
| ombinations 5 |
| FM/AM Chassis ... 155 |
| Reamers 71 |
| Receivers, Communications 142, 143, 144 |
| Receiving Tubes 34, 35 |
| Recoptacles, |
| Record |
| Albums ..................... 47 |
| Blanks |
| Cases |
| Change |
| Changer Bases.......... 46 |
| Code Lesson............. 136 |
| Holder |
| Needle |
| Players ..... .... 14, 147 |
| Plaver Switch ........... 47 |
| Renewer |
| cording Supplies |
| 12. 49 |
| 3. |

Relays
Reluctance
Microphones 38
Resistance Wire............ 116
Resistors .....................75-79
Resistors $.75-79$
Rotators,
TV Antenna 112

## s

Sander 6
Polisher KIt ............... 70.
Sales Promotion Aids.... 35
School Sound System .. 32 Scotch Tape

Dispenser
Scratch Remover............ 105
Screw Drivers ................. 67
Screws 103. 157
Selenium Rectifiers $\ldots . .35$
Service Monuals 129,130
Service Manuals 129, 130
Set Testers
Shaft Couplings ............. 139
Shielding . 102.15
Shields, Tube 98, 102, 151
Short Wave Receivers
$5,142,143,14$
Signal Generators ...56, 57
Signal Shifter Kit ........ 141
Signal Tracers............$~$
Sockets $35,98,99,123,153$
Socket Punches ........... 66 Socket
Wrenches 66, 67, 71, 72
Soldering Irons .......68, 69
Sound Systems .........23-32
Spaqhetti .................... 118
Speakers ...........41-45, 149 Accessories.......... 41,44
Bass-Reflex
Cabinets ............... 42,43
42 Cabinels ......22, 42, 43
Case .................... 45 Conn
Conrial $41,42,43,44$ Crossover
Network ............ 42, 43 43
Driver Units........ 41, 43 Grilles ......................... 105 PM Transformers ...... 41,44 Transiormers .......41, 44
Tweeters ................ 41 Sprayers.
Springs
Dial
Knob
…......................... 105
Stands, Mike ...................... 40
Stand-Off Insulators.... 119
Staples
Stapling Machine......... 73
Stove, Electric ............ 122
Strioners, Wire .............. 66
Stroboscopes .............. 4
tylus, Recording ....... 49
Suppressors, Ignition 115
Sweep Generators 56,57
Switches ............96, 97
Switch Plates................. 96

## T

Tape
Friction ...................... 105
Scotch 105
Tape Recorder................ 13
Telephones
Set
Television
Aligning To.............. 124
Antennas.................... 105

Accessories
Arrestors ............112, 113. 114
Ballasts .....112, 114 Books .130. 131
Boosters
$10,11,22$
Cabinets
10. 11. 22

Chassis
Kits
Magnifiers
Mounts 111 .........111
Recelvers 111, 113, 114
Receivers ............... 8, 112
Rotators................ .112
Speakers
Speakers .................. 45
Test Equipment .. 56,57
Towers
Tubes
Turntable
Cabinet
IV Encyclopedia ....... 81
TV Replacement Parts 94
Terminal Strips ........ .. 99
Test Instruments ... $54-63$
Test Leads \& Prods
Tips, Soldering Iron 68,69
Toaster, Electric ........... 122
Tone Arm Equilizer 48
Tools ........................66-74 69
Torches, Alcohol........ 69
Transceiver, Hand ... 141
Transtormers .. 89-93, 149 Audio ..... 90, 91. 92, 93 Constant Voltage -91 Filament ...89, 90, 92, 93 Output .......89, 91, 92, 93 Photoflash
Phototlash ..... 89, 92, 93
Transmitting .......... 99.90
Transcription Player.. 32
Transmitters ..................................... 136
Keys Keys ............................ 136
Transmitting Tubes ..... 36
Tubes ..................34, 35, 36 Bcllast
Cathode-Ray.......35, 36
Hearing Aid ............. 35
Photocell …........ 3436
Receiving
34,35
$\ldots . . . .35$
Transmitting ............ 36
Tube Ådaptors ............... 64
Tube Pin
Straightener ........... 102
Tube Puller... 102
102
Tube
Sockets 35, 98, 99, 153
Tube Shields 98, 102, 151
Tube Testers ............ 54, 55
Tubing . $\quad$.............. 119
Tuners, AM-FM........16-17
Tuning Eye
Assembly

| 4 |
| :---: |
| Vacuum Tube <br> Voltrneters |
| Variable |
| Condensers.......106, 139 |
| Variable |
| Inductors .................. 91 |
| Vibrapacks .................. 51 |
| Vibrators ...... ........51. 115 |
| Video Boosters.............111 |
| Vise ...... ................ 72 |
| Voltage Calibrator .... 61Voltage Divider Kit.... 150 |
|  |  |
|  |
|  |
| Volume Controls. $79,80,81$ |
| Accessories ............. 80 |
| Cabinet Deals.......... 80 |
| Plug-In Shaits.......... 81 |
|  |

## w

Waftle Iron 122
Wall Baffles
Wavemeter,
Absorption
Wave Traps ................... 88
Wire \& Cable 116, 117, 118
Wire Recorders
Wire Strippers ........... 66
Wrenches...66, 67, 71, 72

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Parcels up to 8 ounces may be shipped In length and girth combined, at widest anywhere in the United States for 64. Parcel post shipments to any zone must not exceed 70 pounds. The limit of size
not
on all parcel post packages is 100 inches $\mathrm{IC"}^{\text {and }}$ with, plus twice $5^{\circ}$ H.equals $65^{\prime \prime}$ ).

| ZONES |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Wt. } \\ \text { In } \\ \text { Lbs. } \end{gathered}$ | First <br> Up to <br> 50 Mi . | Second 50 to 150 Mi . | $\begin{aligned} & \text { Third } \\ & 150 \text { to } \\ & 300 \mathrm{Ml} . \end{aligned}$ | Fourth 300 to 600 Mi . | $\begin{array}{\|c\|} \hline \text { Fifter } \\ 600 \mathrm{to} \\ 1000 \mathrm{Mi} . \end{array}$ | $\begin{aligned} & \text { Sixth } \\ & 1000 \text { to } \\ & 1400 \mathrm{Mi} . \end{aligned}$ | $\begin{aligned} & \text { Seventh } \\ & 1400 \mathrm{to} \\ & 1800 \mathrm{MI} . \end{aligned}$ | Eighth Over 1800 Mi . |
| 1 | \$0.09 | \$0.09 | \$0.10 | $\$ 0.11$ | \$0.12 | \$0.13 | \$0.15 | \$0.16 |
| 2 | 11 | . 11 | . 12 | . 15 | . 18 | . 20 | . 24 | . 27 |
| 3 | . 12 | . 12 | . 14 | 18 | . 23 | . 27 | . 33 | . 38 |
| 4 | 13 | . 13 | . 16 | . 22 | . 28 | 34 | . 42 | 49 |
| 5 | . 14 | 14 | . 18 | . 25 | . 34 | 41 | . 52 | 61 |
| 6 | . 15 | 15 | . 20 | . 29 | .39 | . 48 | . 61 | 72 |
| 7 | . 16 | . 16 | . 22 | . 32 | . 44 | . 56 | 70 | . 83 |
| 8 | . 17 | . 17 | . 24 | . 36 | . 50 | . 63 | 79 | 95 |
| 9 | . 18 | . 18 | . 26 | . 39 | . 56 | . 70 | . 89 | 1.06 |
| 10 | .19 | . 19 | 28 | 43 | 61 | 77 | 98 | 1.17 |
| 11 | . 20 | . 20 | . 30 | . 46 | . 66 | . 84 | 1.07 | 1.29 |
| 12 | . 22 | . 22 | . 32 | . 50 | . 72 | . 92 | 1.16 | 1.40 |
| 13 | . 23 | . 23 | . 34 | . 54 | . 77 | . 99 | 1.26 | 1.51 |
| 14 | 24 | . 24 | . 36 | . 58 | . 82 | 1.06 | 1.35 | 1.63 |
| 15 | . 25 | . 25 | . 38 | . 61 | . 89 | 1.13 | 1.44 | 1.74 |
| 16 | . 26 | . 26 | . 40 | 65 | . 94 | 1.21 | 1.53 | 1.85 |
| 17 | . 27 | . 27 | 42 | . 68 | . 99 | 1.28 | 1.63 | 1.97 |
| 18 | . 28 | 28 | 44 | 72 | 1.05 | 1.35 | 1.72 | 2.08 |
| 19 | . 29 | . 29 | . 46 | . 75 | 1.10 | 1.42 | 1.81 | 2.19 |
| 20 | .30 | . 30 | 48 | 79 | 1.15 | 1.49 | 1.91 | 2.31 |
| Each Added lb. - Add | 1. | 1. | 24 | 4 ¢ | $6 \pm$ | $7 ¢$ | $9 \downarrow$ | 11\$ |

EXPRESS CHARGES
Express Charges are detsrmined by the weight of the shipment and distance of Destination Oifice from Originating Office. The following chart will enable you to

| Maximum Distance in Miles |  | $\begin{array}{r} 150 \\ \mathrm{Mi} . \\ \hline \end{array}$ | $\begin{aligned} & 300 \\ & \mathrm{M1} . \end{aligned}$ | $\begin{aligned} & 500 \\ & \mathrm{M1.} \end{aligned}$ | $\begin{array}{r} 750 \\ \mathrm{M1.} \\ \hline \end{array}$ | $1000$ | $\begin{aligned} & 1500 \\ & \mathrm{ML} . \end{aligned}$ | $\begin{aligned} & 2000 \\ & \\ & \hline 1 . \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cost up to 5 lbs . | \$0.78 | \$0.89 | \$0.91 | \$0.93 | \$1.00 | \$1.01 | \$1.09 | \$1.37 |
| " " 10 lbs. | . 86 | . 99 | 1.05 | 1.10 | 1.21 | 1.24 | 1.41 | 1.96 |
| $" .151 \mathrm{bs}$. | . 92 | 1.13 | 1.19 | 1.26 | 1.44 | 1.48 | 1.73 | 2.55 |
| " " 20 lbs , | 96 | 1.24 | 1.32 | 1.43 | 1.66 | 1.71 | 2.05 | 3.14 |
| " $\quad 25 \mathrm{lbs}$. | 1.01 | 1.37 | 1.47 | 1.59 | 1.88 | 1.96 | 2.37 | 3.74 |
| " 11353 bs , | 1.10 | 1.60 | 1.75 | 1.92 | 2.32 | 2.43 | 3.01 | 4.92 |
| " " $45 \mathrm{lbs}$. | 1.20 | 1.84 | 2.03 | 2.25 | 2.77 | 2.90 | 3.65 | 6.11 |
| " "1 55 lbs . | 1.28 | 2.08 | 2.27 | 2.58 | 3.21 | 3.38 | 4.28 | 7.29 |
| " $\quad 75 \mathrm{lbs}$ | 1.47 | 2.55 | 2.83 | 3.24 | 4.07 | 4.33 | 5.56 | 9.66 |
| $" \% 951 \mathrm{bs}$ | 1.66 | 3.04 | 3.38 | 3.90 | 4.98 | 5.27 | 6.84 | 12.03 |
| " "100 1bs. | 1.68 | 3.14 | 3.55 | 4.07 | 5.20 | 5.51 | 7.16 | 12.62 |

## INSURANCE

Parcel Post and Express insurance rates are based on declared value. ALL PAR CELS WE SHIP MUST BE INSURED

$$
\begin{aligned}
& \text { Valuation PARCEL POST Cost } \\
& \text { Up to } \$ 5.00 \ldots \ldots
\end{aligned}
$$

$$
\begin{array}{r}
\text { Up to } \$ 5.00 \ldots \\
\$ 5.01^{-}-25.00 . .
\end{array}
$$

$$
\begin{aligned}
& 25.01=50.00 . \\
& 50.01=200.00 .
\end{aligned}
$$

## EXPRESS

Up to $\$ 50.00 \ldots \ldots . . . . .$. . No Charge
 tion thereof, charge is $\$ 0.10$.

## EXPRESS \& FREIGHT

Express and frelght shipments are sent transportation charges collect. If your traspon has no aqent, please send suffisiation has no agent, please send suffiCharges are the same elther way. All Charges are the same elther way. All
over-payments are promptly refunded.
n length and girth combined, at widest point. Example: a package $35^{\circ}$ long, $10^{\prime \prime}$
wide and $5^{\prime \prime}$ hiqh measures $65^{\prime \prime}$ in length wide and $5^{\text {" }}$ high measures $65^{\prime \prime}$ in length and girth combined (length $35^{\prime \prime}$, plus twice
$10^{\prime \prime}$ width, plus twice 5" H.equals $65^{\prime \prime}$ ).

## d

## More howers

S-40F. THE RADIO MAN'S HOME SET
A complete, high quality communications receiver that offers superior performance in the medium price range. Handsomely designed and expertly engineered to give you the latest radic developments in a cabinet of functional beauty. Chassis of exceptional sensitivity and power, including built-in PM speaker. Tuning range covers 540 KC to 43 MC on four bands. Wide vision main tuning dial and separate electrical bandspread, dial for precision tuning. Settings for broadcast band marked in color for simplified use. One stage RF amplification uses 6SA7 converter mixer for best signal-to-noise ratio. RF coils
are permeability adiusted are permeability adiusted "micro-set" ype. Temperature. compensated oscillator. Audio response to 10,000 cycles. External controls for doublet or single wire antenna, phone jack and socket for external power supply. Other controls include 3 -position Tone, AF Pitch, Receive/Standby, Noise Limiter Switches, AF and RF gain. Tubes: $6 \mathrm{SG} 7,65 \mathrm{A7}$, (2) $6 \mathrm{SK7}$ 7, 6H6, 65SGT, 6SQ7, 6F6G, 5Y3GT rectifier. For 105-125 volts, $50 / 60$ cycles AC. Satin black steel cabinet with brushed chrome trim measures $181 / 2^{\prime \prime}$ wide, $9^{\prime \prime}$ high, $91 / 2^{\prime \prime}$ deep. Shipping Weight 32 lbs . 30N21094-Complete with Tubes \& Speaker 79.95 Model S.40AU. Same as above except for $115 / 250$ volts, $25-60$ cycles AC.
30N21085
the professional quality of

# hallicrafters 



## S-38 AC/DC RECEIVER

Exceptional performance in a communications recetver ct the lowest price. Cont:nuous AM reception from 540 KC to 32 MC on four bands. CW pitch control adiustable from front panel, automatic noise limiter and self-contained PM dynamic speaker are a few teatures that make this inexpensive sel a leader ir is field. Compact, functional der:gn and high performance on both short wave and stanaard broadcast, make it ideal for use in den, library or any room in the house where a good extra receiver is desired. Accurately calibrated main taning dial with separate elecrical banaspread dial. Conmols include Speaker/Phones AM/CW and Noise Limiter Switches AF gein and Peceive Standby. Tubes: 12SA7, 125K7, (2) 12SQ7, 35L6CT and 35Z5GT rectifier. For $105-125$ volts AC/DC operation. Steel cabinet in black wrinkle finish with brushed chrome trim measures $127 / 8^{\prime \prime}$ wide, $7^{\prime \prime}$ high, $71 / 4^{\prime \prime}$ deep. Sh.ipping We:ght 4 lbs
30N21081-Complete With Tubes \& Specker......... 39.95
7N 5245 -Line Cord for 220 -volt operation
. 1.41

## NEW SX-71

## COMMUNICATIONS RECEIVER

Designed expressly for superior Ham Band performance in the moderate price range. A new type of receiver, value-packed with features specifically asked for by Hams. Extra sensitivity, selectivity and stability, definitely superior image rejection with double superheterodyne circuit, plus built-in narrow band FM reception. Extra wide dials for main and bandspread tuning. Continuous AM reception from 538 KC to 35 MC and 46 to 56 MC . Has built-in limiter and balanced detector stages for hiss-free NBFM reception. Double conversion gives image rejection of better than 300 to 1 at 28 MC . One RF, two conversion and 3 IF stages yield high gain for sensitivity of 1 microvolt. Sharp selectivity as indicated by 14 KC band width even before cutting crystal filter into circuit. Audio peaked for communications frequencies, with 3 watts output. Bandspread dial calibrated for $80,40,20,10$ and 6 -meter bands. Othet controls BFO pitch, 3-position selectivity, crys tal phasing, AF and RF gain, Receive/Send. "S' meter control in rear. Has $500-\mathrm{hm}$ output for separate speaker. Tubes: 6BA6, 6BA7, 6BE6, (2) 6SK7, 6SH7, 6SN7, 6SC7, 6AL5, 6K'6GT, VR-150 and 5Y3GT rectifier. For $105-12 S$ volts, $50 / 60$ cycles AC. Gray steel cabinet with satin chrome trim measures $181 / 2^{\prime \prime}$ wide, $87 / 8^{\prime \prime}$ high, $12^{\prime \prime}$ deep. Shipping Weight 33 lbs . 30N21102-Complete With Tubes.
179.50 Speaker for above in matching cabinet.


FAMOUS S-47

## HIGH FIDELITY FM-AM RECEIVER

Here is a high precision, fine quality receiver. The chassis lends itself perfectly to custom installations of your own choosing. Specially designed cabinets, bookcases, end tables or builtin sound systems are a few suggestions you can adapt to meet your zequirements for high fidelity radio reception. A superb chassis that is all radio, made simple to operate with push-button controls and a wide, easily read dial. This is c: powerful 14-tube (plus rectifier) FM-AM set covering the stondard broadcast band- $540-1720 \mathrm{KC}$, the FM band88 to 108 MC and short wave band -5.9 to 18.2 MC . The short wave band has separate bandspread tuning ranges of 9-12 MC and $15-18 \mathrm{MC}$.
Automatic frequency control gives unprecedented ease of tuning on FM... with unequalled accaracy. Circuit electronically "locks in" selected stations and keeps it in perfect tune. The push-pull output stages provides 10 watts audio with a respanse of 30 to $15,000 \mathrm{cps}$ for rich, resonant tone. Separate bass and treble cortrols supply sufficient tone variations to satisfy the most discriminating listener. Any speaker with an impedance of 500 ohms can be usea. Receiver also has input jack for high impedance phono pickup. Uses the following tubes: 6BA6, 6BE6, 6J6, (3) 6SG7, 6SH7, 6AL5, (2) 655, (2) 6SQ7. ( 2 6V6GT and 5U4G rectifier.

The handsome gray steel case with satin chrome trim measures $20^{\prime \prime}$ wide $\times 10^{1} 4^{\prime \prime}$ high $\times 16^{\prime \prime}$ deep. Shipping weight 66 lbs . Operates on $105 \cdot 125$ volts, 50 ' 60 cycles AC. Supplied less speaker
30N21067-Complete With Tubes ....... 229.50
Model S-47U Same as above except ior 110/120 volts. $25-60$ cycles.
30N21iO1
245.50

30N21072-R42 Speaker (See Pg. 142-143) _...34.50

## NEV S-72

## ALL-WAVE PORTABLE RADIO

You'll be in touch with the outside world wherever you go with this extra-sersitive all-wave portable re ceiver, Super-powered for excellent performance on AC, DC or battery operation. Covers standard broadcast and three short wave bands: 540 KC to 30.5 MC on four tuning ranges. This includes all popular foreign and domestic short wave broadcasi bands, aircraft and police bands, plus six Ham bends. Circuit design includes one stage of tuned RF for extra sen sitivity and selectivitr, and an automatic noise limiter to aid reception in areas with heavy electrical noise. Operates from a built-in loop for broadcast stations and a $27^{\prime \prime}$ whip for short wave reception. Tubes: 1T4 1R5, (3) 1U4, (2) 1U5, 3V4, plus a long-life selenium rectifier. External connections include a phone jack on panel and provisions for attaching an extra antenna, if desired. Automatic changeover from battery to electric power to protect batteries. The sturdy plywood cabinet is finished in handsome brown leatherette with brass plated hardware and aitractive es. cutcheon finished in antique silver. Dimensions: $14 x$ $121 / 4 \times 7^{1 / 4 "}$ deep. Shipping Weight 16 lbs . Power cord for $105-125$ volts DC or 60 -cycle AC fits inside set when not in use.
30N21100-Less Batteries
79.95

20N19870-Battery Pack for above.
3.85


[^0]:    Fit "UM," "TM", "MR" and "MRT" Junior controls on this page 8N6968-Single Pole, Single Throw. Each. 8N6969-Double Pole, Single Throw. Each.
    8N6970-Single Pole, Double Throw. Each.
    8N6972-Four Pole, Single Throw. (Shorting Type).............. . . .

[^1]:    * 85 Watt lamp replaces old 100 Watt lamp.

