

New England's Oldest Amateur Distributor

CATALOG
48



THE RADIO SHACK CORP.

167 WASHINGTON ST. BOSTON, MASS., U.S.A.

Wholesale Distributors of Radio and Electronic Equipment

hallicrafters

S-35 PANORAMIC RECEIVER



One of the newest and most interesting applications of the cathode ray tube consists of a special panoramic adapter mounted as a unit with a standard SX-28A communications receiver and makes possible the visual monitoring of whole sections of the frequency spectrum, up to 100 kc. in width. All stations on the air, in the portion of the spectrum being monitored, are visible on the screen of the S-35; signals appear as upward deflections in the cathode ray base line and indicate relative amplitude, character of modulation, etc.; the indication for the station heard in the speaker or phones always appears in the center of the screen, appears in the center of the screen.

with stations of lower and higher frequency proportionately spaced on either side; tuning the receiver shifts the entire picture across the screen.

The panoramic adapter unit consists of a chassis and panel of approximately the same size as the SX-28A; it consists of the necessary power supplies, I.F. and video amplifiers, saw-tooth oscillator, reactance modulator, and cathode ray tube. Only one connection is made between the panoramic adapter and the mixer stage of the SX-28A; this does not in any way interfere with normal use of the receiver.

The S-35 Panoramic Adapter employs fourteen tubes: 1-6SG7 455 kc. input amplifier; 1-6SA7 first detector; 1-6SK7 100 kc. I.F. amplifier; 1-6SQ7 3rd detector and vertical amplifier; 1-6SN7GT sawtooth oscillator; 1-6SJ7 return tracer blanking tube; 1-6AC7 reactance modulator; 1-6J5 R-F oscillator; 1-6SC7 horizontal amplifier; 1-2X2/879 high voltage rectifier; 1-40 low voltage rectifier; 1-VR105 voltage regulator; 1-VR150 voltage regulator; and 1-5AP1 cathode ray tube.

The combination of Panoramic Adapter and SX-28A receiver is housed in a steel cabinet 20 1/4" wide by 18 5/8" high by 13" deep, and is furnished complete with tubes for both the Adapter and the Receiver. Production is currently restricted to high-priority orders; price and delivery will be quoted on request accompanied by full data on applicable priority rating.



THE SKY COURIER

Here's a portable with real short-wave performance; operated from self-contained batteries or 115 volts ac/dc; ranges of 550-1600 kc., 2.3-7.3 mc., and 7-19 mc.; accurately calibrated main dial and separate hand-spread dial; components impregnated for tropical use;

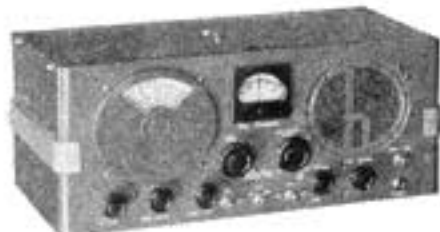
self-contained 5" PM speaker; recessed control panel; seven tubes; high-Q iron core inductances for maximum sensitivity; uses 2 Burgess 5308 and 4 Burgess 2370 batteries; steel cabinet is 10 1/2" by 15" by 8"; weight, including batteries, 30 lbs. This is truly an ideal receiver for those who demand the utmost in long distance performance.

Cat. No.
S23530
Net Price
\$94.00

hallicrafters

COMMUNICATION RECEIVERS

"Sky Champion" S-20R



Sky Champion! Winner for quality performance—A favorite with the Short-Wave DX fan and Amateur operator. Among its many features are: separate Bandspread dial, RF and AF gain controls, individual coils for each band, Inertia tuning mechanism, Beat Frequency Oscillator, AVC switch, Tune Band switch, phone jack, and others. Continuous tuning in four overlapping bands from 545 KC to 44,000 KC for dependable reception on Broadcast, Amateur, and Short-Wave bands. Nine tubes: 3-6BK7, 6K8, 6BQ7, 6F6, 6J5GT, 6H6, and 80—are arranged in a circuit which provides maximum gain, selectivity, and sensitivity. Speaker is built-in. Signal-to-noise ratio is surprisingly high. In fact, in every way, the Sky Champion is an efficient low-priced receiver that will put a thrill into Amateur operation. It offers professional styling, operating flexibility and performance that are truly outstanding. Has provisions for operating from batteries or from vibrator type power pack and 6 V. storage battery, thus making it an ideal unit for mobile-portable operation, or for emergency service at locations far removed from the 110 volt AC supply lines. For 110 V. 50-60 cycles AC.

Cat. No. S21004 Model S-20R

Net Price, complete with tubes . . . \$54.50

New . . .

FM-AM RECEIVER MODEL S-36

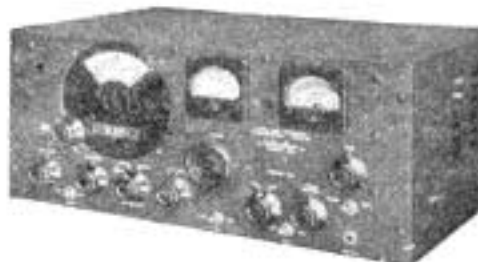
Designed for the reception of either amplitude-modulated or frequency modulated signals, this 15 tube ultra-high-frequency receiver is ideally suited to the requirements of municipal departments, airlines, broadcast relay systems, government services, amateurs, and all others interested in working the frequency spectrum from 28 to 145 megacycles.

This frequency range is covered in three overlapping bands which provide complete coverage. The tuning accuracy requisite for high-frequency work is provided by a flywheel operated gear-driven mechanism having a separate band-spread scale with 2,400 divisions for full rotation. Features contributing to the efficiency of this receiver's operation are: silver plated contacts on condenser gang, plate-tuned oscillator, shock-mounted RF assembly, and others listed at the right.

Tube layout is: RF amplifier—956; first detector—954; oscillator—955; first IF—1852; second IF—1853; third IF—6BK7; limiter—1852; frequency modulation detector—6H6; amplitude modulation detector and automatic noise limiter—6H6; audio amplifier and phase inverter—6C8G; beat oscillator—6J5; push-pull audio amplifier—two 6V6's; voltage regulator—VH-150; and rectifier—5Z3.

Controls are: tuning; RF gain; antenna trimmer; IF selectivity; BFO; BFO pitch; AVC; noise limiter; tone; standby switch; and FM-AM switch.

Metal cabinet 10" x 9" x 14" contains receiver and voltage regulated power supply for 110 volt 60 cycle operation



- ★ Receives both FM and AM signals
- ★ Zero-center "S" meter for easy FM tuning
- ★ Full limiter action on FM signals of 5 to 10 microvolts
- ★ Air-tuned, iron core I.F. transformers
- ★ Continuous coverage 28 to 145 M.C. in three bands
- ★ Flywheel-operated gear-driven tuning mechanism
- ★ Shock-mounted R.F. assembly

Cat. No. S21006 Model S-36 with tubes less speaker. Net Price . . . \$315.00

Cat. No. S21007 10" PM speaker in matching metal cabinet. Net Price . . . \$15.00

SUPER DEFIANT Model SX-25



One of the finest values that Hallicrafters has ever offered in the communications field. Many outstanding features! Extreme selectivity and more and better audio amplification. Automatic noise limiter, separate calibrated band spread dial for the 10, 20, 40 and 80 meter bands compensated ultra-stable oscillator, six-step variable selectivity control, "S" meter, 5-watt push-pull output stage, laboratory checked piezo quartz crystal filter, matched 10" heavy duty PM speaker in modern styled cabinet.

Four tuning bands cover the complete range from 540 kc to 42 mc. The tube lineup: 6BK7 1st r.f. amp.; 6BK7 2nd r.f. amp.; 6K8 1st detector-mixer-b.f. oscillator; 6BK7 1st I.F. amp.; 6BK7 2nd I.F. amp.; 6BQ7 2nd det.-AVC-1st audio amp.; 6BQ7 phase inverter; 2-6F6 p.p. output stage; 6H6 automatic noise limiter; 6J5GT beat frequency oscillator and 80 rectifier.

There are external provisions for: send-receive terminals, headphones, 5,000 ohm or 500 ohm output, single wire or doublet antenna. Both I.F. stages are expanded in the "Broad IF" position for high fidelity performance. The automatic volume control circuit keeps most signals at a uniform level. The automatic noise limiter reduces interference by as much as 70%. The extremely low noise level of the Super Defiant makes it sensitive to very weak signals.

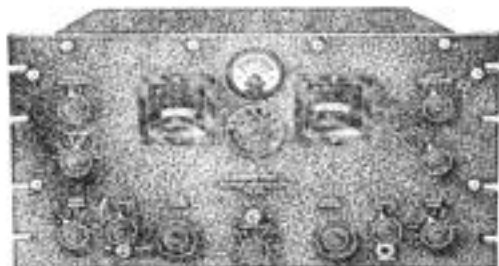
Cabinet dimen.: 19 1/2" long, 9 1/2" high and 11 1/2" deep. For 110 V. 50/60 cycle a.c. operation and a socket is provided for d.c. operation from either batteries or a vibra-pack. Weight 67 lbs.

Model SX-25 complete with tubes, crystal and speaker.

Cat. No. S21005 Net Price . . . \$94.50

Hammarlund "ASP Super-Pro" Receiver

- 18 Tubes
- 100 Kc to 40 Mc
- Calibrated Band Spread
- Noise Limiter
- AVC on Code and Voice



This improved Super-Pro is designed to meet Signal Corps specifications for operation in every conceivable climatic condition. Power supply transformers, filter chokes, and audio transformers are potted and sealed for moisture protection and all condensers are molded mica or oil-filled papers; no electrolytics are used. Variable I.F. selectivity with highly efficient variable crystal filter circuit gives almost continuously variable selectivity from a few hundred cycles to over 16 Kc for best reception with minimum interference. Extreme sensitivity results from careful circuit design, including shielded input for 115 ohm doublet antenna. Cam-operated band-switch works on shorting bar principle so that no moving part carries current and freedom from switch trouble is assured. Other important features are: efficient noise limiter, full band-spread, 8-meter calibrated in standard 8-units from one to nine, ten watts audio output at both 600 ohms (phones) and 8,000 ohms (speaker); standard relay rack mounting for both receiver and power supply. The ideal receiver for any application requiring precision operation over long periods, with minimum of attention.

Cat. No.	Model No.	Frequency Range	Net Price
S23493	ASP-200-X	540—20000 KC	\$416.50*
S23494	ASP-200-8X	1250—40000 KC	416.50*
S23495	ASP-200-LX	100—400 KC and 2500—20000 KC	416.50*
S23496	Table type metal cabinet for receiver only		14.70
S23497	10" PM speaker with matching transformer		19.60
S23498	Universal power supply 25/60 cycle 95-260 V.		24.50

*Complete with tubes and 105-120 volt 50/60 cycle power supply.

hallicrafters

COMMUNICATION RECEIVERS

SUPER-SKYRIDER MODEL SX-28

- New 15 tube circuit
- Two tuned RF stages
- Six bands
- 550 KC to 42 MC
- 2-microvolt sensitivity
- Micrometer tuning
- Calibrated band-spread
- Adjustable noise limiter
- Frequency meter tuning
- Crystal phasing
- Temperature compensation
- Six-step variable selectivity
- 8 watts output

Product of exhaustive research, including analysis of more than six hundred reports and specifications, the Hallicrafters Super-Skyrider receiver sets new standards for receiver performance. Every advance in electrical and mechanical design has been incorporated in this receiver—with outstanding performance an inevitable result.

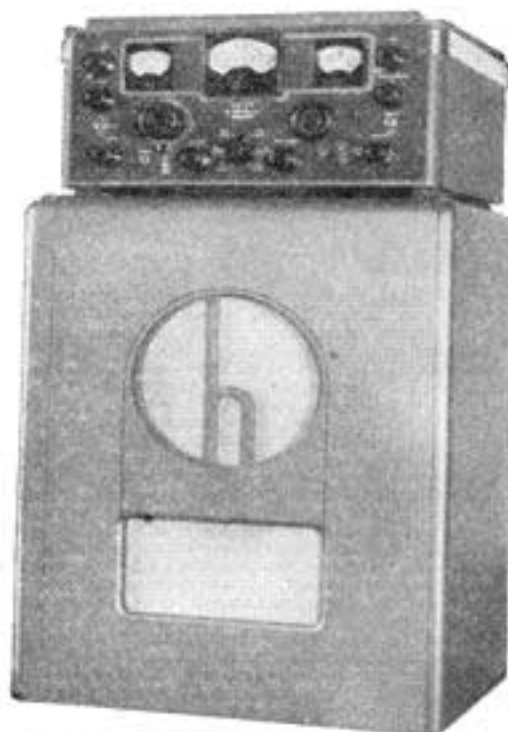
Tuning bands are 550 to 1620 KC—1.5 to 3.05 MC—2.9 to 5.86 MC—5.75 to 11.5 MC—10.4 to 21 MC—20.7 to 42 MC. Tube line-up and functions are: first RF amplifier—1S53; second RF amplifier—6BK7; mixer—6SA7; IF oscillator—6SA7; first IF amplifier and noise limiter—6L7; second IF amplifier—6BK7; AVC amplifier—6BS; noise amplifier—1S53; noise rectifier—6H6; second detector—6H6; push-pull audio amplifier—2, 6V6GT; rectifier—5Z3.

The panel is of 1/4" steel with etched markings for the following controls: main tuning—with meter-type indirectly lighted dial, dial lock, and inertia-controlled calibrated band-spread for 10-20-40-80 meter amateur bands; RF gain; AF gain; tone control; noise booster switch; BFO pitch control; noise limiter control; six-position selectivity control; AVC-BFO switch; antenna trimmer; band switch; crystal phasing; and standby switch. Tuning meter is calibrated in "S" units and DB above "80."

Rugged steel cabinet is finished in gray wrinkle. Operated on 110 volt 60 cycle service; has emergency power input plug for vibrator or batteries. Audio output at 5000 ohms for speaker match, and at 500 ohms for line match.

Cat. No. S21002 SX-28 complete with tubes and crystal \$179.50

Cat. No. S21003 SX-28 complete with tubes, crystal, and Hallicrafters-Jensen base-reflex enclosure with 12" speaker \$215.00



Sky Traveler
Model S-29

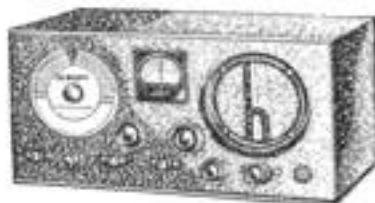


A portable receiver designed to communications receiver tolerances, the Sky Traveler is truly universal, operating from its self-contained batteries and on either 110 volt AC or DC lines. Four bands: 542-1490 kc., 1.43-4.35 mc., 4.12-11.9 mc., 11.25-30.5 mc. Average sensitivity on all bands, below 2 microvolts; electrical band spread; automatic noise limiter; self contained, collapsible antenna with high gain coupling. Nine tubes; one each 1T4 RF amp., 1R5 mixer, 1P5-GT 2nd IF, 1H5-GT 2nd det. AVC, 1st audio, 3Q5-GT output amp., 1G4-GT beat osc., 1G4-GT noise limiter, and 25Z5Q rectifier.

The Sky Traveler is contained in a rigid aluminum case 7" x 5 1/2" x 13 1/2" with black crackle finish and rounded corners. Weight including batteries is 18 pounds. Neon lamp shows when tubes are lighted, self-contained charging circuit prolongs battery life. Battery life is about 100 hours. Cat. No. S13609 Model S-29 Sky Traveler, complete with batteries and tubes.

Net Price \$69.50
Kit of replacement batteries for Sky Traveler.
Cat. No. S13610 Net Price \$2.60

Sky Buddy



*Six tubes. *Tunes 10 meter band.
*Electrical bandspread. *Coverage and bandspread from 545 KC to 44 MC. *DC operation socket—battery or vibrapack.

The new Sky Buddy is an amateur receiver in every respect, covering everything on the air from 44 mc to 545 kc, including the 10, 20, 40, 80 and 160 meter amateur bands. It now employs the same electrical bandspread system used in higher priced Hallicrafters models. Controls incorporated are: AF gain control, band switch; combined AVC and beat oscillator switch with AVC on, AVC off, and Beat oscillator on with AVC off positions; phone jack, mod-receive switch; pitch control. The speaker is an integral part of the receiver, nothing else to buy. Bandspread is better than A.R.R.L. Handbook recommendations for bandspread against scale calibration. Equipped for either Doublet or Marconi antenna. For 110-120 volt, 50-60 cycle, AC current. Dimensions: 17 1/2" long, 8 1/2" deep, and 8 1/2" high.

Cat. No. S11583 including tubes and speaker.
Net Price \$32.50

Skyrider Marine
Model S-22



An 8-tube receiver designed especially for the commercial frequencies that can be readily adapted for marine work. In its design, special emphasis has been placed on 600 meter and 700 meter operation. Tunes from 16.2 to 2,150 meters (18.5 MC to 140 KC) on 4 bands as follows: Band No. 1—2,150 to 645 meters (140 KC to 465 KC); Band No. 2—645 to 199 meters (465 KC to 1,510 KC); Band No. 3—177 to 83 meters (1.7 MC to 3.8 MC); Band No. 4—34.5 to 16.2 meters (5.8 MC to 18.5 MC). Sensitivity and selectivity are excellent. Improved image rejection at the higher frequencies is achieved through the use of 1,600 KC—IF transformers. The directly calibrated 338" main tuning dial eliminates the use of complicated charts and tables, and an efficient mechanical band spread with separate dial provides easy and simplified tuning. Mounted in sturdy metal cabinet finished in black. For operation on 110 volt AC or DC.

Tube complement—6K7, RF amplifier; 6L7, first detector; 6J5, high frequency oscillator; 6K7, IF amplifier; 6Q7, second detector; AVC and first audio; 25L6 power output tube; 25Z5, rectifier; 6J5, B.F.O.

Cat. No. S8209 Skyrider Marine, including tubes and speaker.
Net Price \$74.50

hallicrafters

TRANSMITTERS

HT-6—25 Watt Phone and CW Transmitter

You have a real thrill when you operate the Hallicrafters HT-6 transmitter. It is new in design principles and a quality unit throughout. Using an 807 or an RK-39 in the final stage the power output is 25 watts on most bands. Frequency range is 1.7 mc to 60 mc.

Coils for any three bands may be plugged in, pretuned, and then switched at will by a control on the front panel, which properly connects all circuits from crystal to antenna. It is only necessary to retune the final amplifier plate. Coils are available for any amateur band, 5 to 160 meters, with crystal control; or with ECO on the 160, 80, 40, 20 meter amateur bands.

A special form of oscillator keying gives a clean chirpless signal, providing for break-in operation on CW.

Any high level high impedance mlke may be used, such as an A-static type D-104. Excellent voice quality with 100% modulation is assured. Output circuit is adjustable to match any type of resistive load of from 10 to 600 ohms.

Tube complement: 1—6L6 Osc.-dbr., 1—RK 39 or 807 final RF amplifier; 1—6V3 microphone amplifier, 1—6J5 audio amplifier; 2—6L6G modulators and 2—5Z2 rectifiers. Power drain about 120 watts CW and 225 watts phone. Size—20" long, 9" high, 15" deep. For operation on 110 volts 50-60 cycle AC.

Model HT-6 transmitter with tubes, less coils and crystals.

Cat. No. 11576

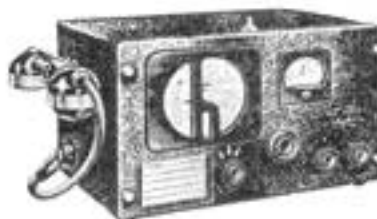
Net Price \$110.00



Accessories to HT-6 Transmitter

Coils for 160, 80, 40, or 20 meter operation. Cat. No. S11577 be sure to specify band. Net Price each	\$6.00
Set of coils for 5 or 10 meter operation on twice crystal frequency. Cat. No. S11578 be sure to specify band. Net Price each	8.50
ECO unit for 160, 80, 40, or 20 meter operation for corresponding coils listed above. Cat. No. S11579 be sure to specify band. Net Price each	4.50
Willey crystal for 160, 80, and 40 meter operation, supplied within 5 KC of desired frequency. Cat. No. S11580 specify frequency. Net Price each	4.50

12 Watt Marine Radiophone HT-11



- Three Crystal-controlled Frequencies
- Manual Tuning on Two Bands Broadcast and Marine
- Speaker and Phone Operation
- Directly Calibrated Dial
- Standby Switch

The Model HT-11 Marine Radiophone is a complete, moderately priced ship to shore radio transmitter and receiver. The transmitter is arranged for operation on three frequencies in the marine band of 2,000 to 3,000 kilocycles and is provided with crystal control on its three channels. The manually tuned receiver covers the standard broadcast band, on range No. 1, and the marine channels on range No. 2. Tuning dial is directly calibrated 550 to 1,700 kc. and 2,000 to 3,000 kc.

The tubes employed in the HT-11 are: transmitter section—1-6V6 oscillator, 1-807 power amplifier and 2-6V6G modulators; receiver section—1-6SK7 R.F. amplifier, 1-6K8 mixer, 1-6SK7 I.F. amplifier, 1-6SK7 2nd detector, AVC, and 1st audio, 1-6K6G audio amplifier, and 2-6X5G rectifiers.

Controls include transmitter channel switch, receiver band switch, receiver volume control and ON-OFF switch, receiver tuning, stand-by switch, speaker-headphone switch, and handset with send-receive push button.

The HT-11 is housed in a sturdy metal cabinet 14 1/2" wide, 8 1/2" high, and 9 1/2" deep. Rust-proofing and corrosion protection are used throughout. Separate, noiseless vibrapack power supply permits operation from 6 or 12 volt circuit. Other voltages may be used with suitable converter. Also available for 110 volt AC operation.

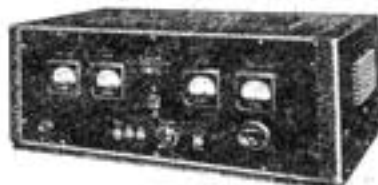
Cat. No. S13600 Model HT-11 Radiophone complete with tubes and 6-volt or 12-volt power supply—less crystals. Net Price . . . \$179.50

Cat. No. S13601 Model HT-11 same as above but for 110 volt AC operation. Net Price . . . \$235.00

Other Hallicrafters transmitters in larger sizes are available thru the Radio Shack. Write for details.

100 Watt HT-9 Phone and CW Transmitter

- Extremely Low Cost
- Any 5 Frequencies in Range 1.7 to 30 Megacycles
- Crystals and Tuning Units Plugged in and Tuned for Desired Channels
- Antenna Coil Matches Any Resistive Load 10-600 Ohms
- Flat Frequency Response—within 3 DB 100 to 7,000 CPS



Here is a complete, ready to use phone and CW transmitter that can be purchased for less than what you would have to pay for the parts alone. If you were to attempt to build it yourself. Despite its low cost, the HT-9 is a high quality job throughout—incorporating the design and structural features for which Hallicrafters equipment is noted.

The HT-9 is a 5-frequency phone and CW unit, rated at 100 watts on CW and 75 watts on phone—carrier output. Coils are available for all bands from 1.7 to 30 megacycles. Exciter coils for five bands can be plugged in, pretuned, and left in the transmitter. All controls, including band switch, and meters are on the front panel. Construction assures 100% modulation with low distortion; carrier hum is at least 40 db below 100% modulation. Any medium-level, high impedance microphone may be used.

The 14 tubes used in the HT-9 are: 1-6F6 oscillator, 1-6L6 doubler, 1-814 power amplifier, 1-6J7 audio input amplifier, 1-6J5 audio amplifier, 4-6L6G push-pull parallel modulators, 2-866 rectifiers, 1-5Z2 exciter rectifier, 1-5Z3 audio rectifier, and 1-80 audio rectifier. For 110 volt, 50-60 cycle AC operation.

Housing dimensions: 28" wide, 18 1/2" deep, 11 1/2" high.

Cat. No. S13602 Model HT-9, complete with tubes, but less coils and crystals. Net Price . . . \$225.00

Cat. No. S13603 Coils for operation on crystal frequency—160-80-40 meters. Be sure to specify band. Each set, Net Price . . . \$9.50

Cat. No. S13604 20-10 meter coils for operation on twice crystal frequency. Be sure to specify band. Each set, Net Price . . . \$10.50

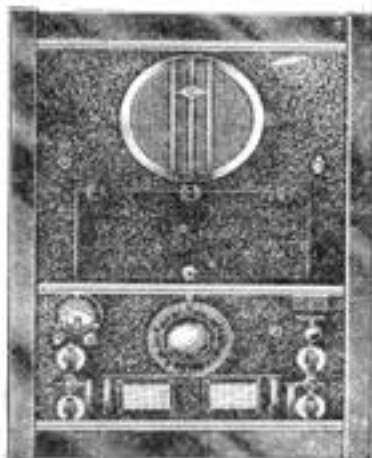
Cat. No. S13605 160 meter crystal } Net Price, each . . . \$3.35

Cat. No. S13606 80 meter crystal }

Cat. No. S13607 40 meter crystal }

Cat. No. S13608 20 meter crystal, for 10 meter operation } Net, each . . . \$5.75

National HRO



The world's finest communications receiver, available in styles to suit every requirement. The model illustrated here is the type HROC, complete with de luxe relay rack, power supply, speaker, and five-compartment coil storage cabinet. This assembly is a handsome and convenient unit for table or desk use. Chrome strips between the individual units and across the speaker grill match other new, streamlined features.

Here are the features that have established the HRO as pre-eminent in the field of radio communication: two preselector stages giving remarkable image frequency suppression, response to weak signals, and high signal-to-noise ratio; two high gain I.F. stages employing 112A vacuum coils and air tuning condensers; automatic as well as manual volume control; vacuum tube voltmeter calibrated in "8" units for carrier intensities; phone jack; Send-Receive switch; and Lamb single-signal crystal filter. This filter makes selectivity adjustable over a wide range, and the circuits are so precisely balanced that heterodyning signals may be completely phased out. The usable sensitivity and selectivity of the HRO are truly exceptional.

When standard HRO coils are used for general coverage, each of the 4 coils includes two amateur bands and the spectrum between. A simple switching device makes these same coils bandspread their respective amateur bands (except 160 meters) over a span of 400 dial divisions.

For those who require the high performance of the standard HRO, but do not need its extreme versatility, the HRO Junior has been made available. This receiver exactly duplicates the circuit and mechanical details of the standard HRO but is greatly simplified through the omission of the Lamb single-signal crystal filter and the "8" meter and by designing the coils for continuous band spread only.

HRO Styles and Prices

HRO Standard AC table model complete with tubes and four sets of coils covering from 1.7-4, 3.5-7.3, 7-14.4, and 14-30 MC.—less speaker and power supply.

Cat. No. S14309 Net Price \$197.70

HROC De Luxe Model as illustrated, complete with all equipment as described.

Cat. No. S14313 Net Price \$285.00

HRO Junior AC table model with tubes and one set of 14 to 30 MC. coils, less speaker and power supply.

Cat. No. S14314 Net Price \$118.80

Model NC-45



Superseding the famous NC-44, this newly designed 8-tube receiver covers the entire range from 540KC to 30 MC in four bands. Since it operates from any 110 volt line, either AC or DC, it meets the requirement for a universal type communications receiver giving high quality performance at low cost.

Accurate tuning is made easy by the combination of straight line frequency tuning condenser, separate band spread condenser, and slide rule type dial. The tubes and their functions are: 6K8 1st detector-HF oscillator, two 6L7 permeability-tuned IF stages, 68Q7 second detector-AVC and first AF, 6H6 self-adjusting series-valve noise limiter, 6J5 BFO, 25L6G beam power output, and 25Z5 rectifier.

Supplied in metal cabinet with gray wrinkle finish; speaker in matching cabinet.

Cat. No. S21001 NC-45 complete with tubes and speaker. Net Price \$57.50

National One-Ten



Designed chiefly for the experimenter, the One-Ten Receiver fulfills the need of the experimenter for an adequate receiver to cover the field between one and ten meters.

A four tube circuit is used, composed of one tuned R.F. stage, a self-quenching super-regenerative detector, transformer coupled to a first stage of audio which is resistance coupled to the power output stage. Tubes required: 954-R.F.; 955-Detector; 6C5-1st Audio; 6F6-2nd Audio.

Cat. No. 14306 Type 110 Receiver with 4 sets of coils; less tubes, power supply, and speaker. Net Price \$56.10

Cat. No. 14307 Type 5886 power supply with tube. Net Price \$19.50

Cat. No. 14308 Klt of tubes 4 for One-Ten. Net Price \$9.02

NC-200 Communications Receiver



The National NC-200 receiver with its many newly developed features represents one of the most outstanding developments of the famous National engineering staff. Tubes used are: 68K7 Tuned RF stage, 6K8 First Detector, 6J5 HF Oscillator, 68K7 1st IF, 68K7 2nd. IF, 6C8G Second Detector-Limiter, 68J7 AVC, 68J7 BFO, 6F8G Phase Inverter, 2-6V6 Push-pull Audio, and 5Y3G as rectifier.

A full-vision dial operated through a 30-1 gear drive is accurately calibrated on ten frequency ranges. Six of these ranges are for general coverage over the total tuning range from 490 to 30,000 KC; four additional ranges provide calibrated bandspread of the Amateur 80/40/20/10 meter bands. Automatic range-in-use indicator is built in the dial. Bandspread on amateur bands is extremely generous, covering most or the 180° dial scale; no resetting is necessary to return to any pre-logged station or frequency. Uniform bandspread is provided through a unique tapped coil arrangement similar to that used in the famous HRO receiver, and the same knob used for tuning is used to shift bands.

The sensitivity of the NC-200 is particularly high, with an input signal of only 1 microvolt providing 1 watt of audio output. Newly developed RF coupling circuits provide full sensitivity up to the extreme high end of the tuning range at 30 MC. All RF and IF coils are wound on molded polystyrene coil forms, assuring freedom from circuit losses caused by humidity. All critical components, such as tuning and trimming condensers, are insulated with Isolantite, to insure high stability at all frequencies.

Temperature compensation in the high frequency oscillator, RF stage, and first detector circuits reduces frequency drift to a negligible value. Six step selectivity is provided by a new type of crystal filter with equal utility for either phone or CW reception. Other important features are: Wide range adjustable series-valve-noise limiter, calibrated signal level meter, provision for battery operation in emergencies, Standby switch, separate 10" PM speaker in matching metal cabinet, attractive modern cabinet finished in two-tone gray and chrome, self-balancing phase inversion circuit, 8 watts undistorted audio output, image ratio of better than 30 db, separate high frequency oscillator and first detector tubes, absolute minimum of inherent circuit noise, and an attenuator type tone control.

All controls are conveniently grouped for maximum simplicity in operation. Controls include: Combination tuning and bandchange knob, RF and AF gain controls, BFO on-off and variable pitch, 3 position 6L plate-standby switch, Crystal selectivity, Crystal phasing. For the critical amateur and commercial operator, the high selectivity and sensitivity provide a type of overall performance never before available in a receiver so moderately priced.

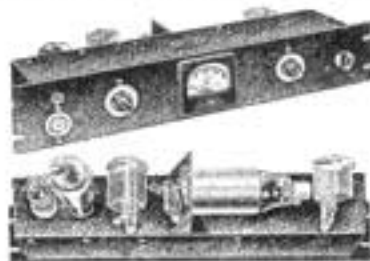
The NC-200 is supplied complete with tubes, crystal, speaker and instructions. For 110 volts 60 cycles.

Cat. No. S14300 National NC-200 Communications Receiver as described. Net Price \$174.50

TRANSMITTING EQUIPMENT

MILLEN - : - BROWNING - : - ABBOTT - : - MEISSNER

50-Watt Transmitter-Exciter



61.6 mm. size in compact relay rack mounting. Tri-tet circuit used to obtain harmonic output is reduced to simple tetrode circuit for output at crystal fundamental by shorting cathode tank. Output at 4th harmonic of crystal frequency is ample to drive 807 operated as straight amplifier or frequency doubler. This, with a single crystal of correct frequency 25 to 50 watts or more may be obtained in four bands.

Entire unit designed to work from one 250 ma. supply delivering up to the 750 volt maximum working rating of the 807. Fixed bias of 45 volts is required, and heaters consume 1.8 amp. at 6.3 volts. The 200 ma. meter may be switched to read plate current in either stage.

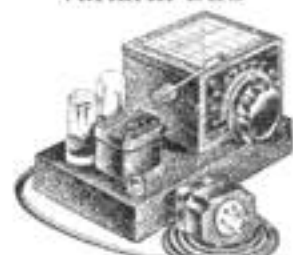
Because of the frequency multiplications obtainable in both oscillator and 807, several possible coil and crystal combinations will give the same output frequency.

Cat. No. S20117. Type 90900 less tubes, but including one set of coils. Net Price \$37.50

BE SURE TO STATE BAND IN WHICH CRYSTAL WORKS AND BAND IN WHICH OUTPUT IS DESIRED.

Cat. No. S20118. Extra coils, in sets of three. Net Price, per set \$3.00

Variarm ECO



The advantages of good performance in an electron-coupled oscillator — at low cost — are offered by this new unit for the amateur band.

Drift is extremely low, less than 0.05% from cold start, with most of the drift in the first 10 minutes of operation.

Special shock mounting of the oscillator, which is sturdily constructed, adds to the stability of the unit. This ECO is free from hand capacity and, with its constant loading of the power supply, chirpless keying is secured. The tuning range from 3500 to 3650 kc. is covered with a 100 division scale (180° rotation) with band spread secured through Variarm vernier tuning. Unit is supplied complete with vibrationless power supply, three tubes, and output coupling units.

Cat. No. S20115. Type 90700, for 50 and 40 meter output. Fundamental range 3500 to 3650 kc., convenient to change taps on amplifier and link coils. Complete with tubes, ready to use. Net Price \$32.50

Cat. No. S20116. Type 90701, for 160 and 80 meter output. Complete with tubes, ready to use. Net Price \$32.50

Midget Frequency Meters

These handy, absorption type meters can be poked into shield compartments, coil cans, chassis corners, etc., to check harmonics, parasitics, tank tuning, and a host of other applications. Quickly show what is going on in a circuit.

Cat. No. Range-mc. Cat. No. Range-mc. Any
90605 2.5—0.7 90607 20—65 Range
90606 0.0—25 90608 50—140 \$3.00
90609—Set of 4, in case 12.00



Abbott 2 1/2 Meter Transmitter-Receiver

Not a transceiver, this efficient radio-telephone unit for mobile or fixed station service provides independent transmitting and receiving circuits in a single case only 9 x 8 x 4 1/2". Since each unit has separately adjustable antenna coupling and ganged antenna switching, no retuning is needed when going from SEND to RECEIVE and a common antenna may be used. All controls, including variable inductive coupling, variable sensitivity, and audio volume are on the front panel, together with jacks for measuring oscillator and modulator plate current. Power required is 100 ma. at 300 volts DC and 3.5 amp. at 6.3 volts. Tubes used are: HY-615, super-regenerative detector; HY-75 oscillator; 7F7 audio amplifier; and 6L6 or 6V6 power audio and modulator. Any good single button mike may be used. A 5" P.M. speaker is self-contained. This unit has proved itself an outstanding piece of ultra-high-frequency equipment.

Cat. No. S21008 Model TR-4 Transmitter-Receiver with tubes. Net Price \$38.22

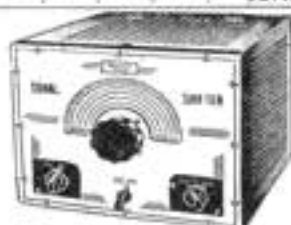
Cat. No. S21009 AC power supply for fixed station operation of TR-4; well filtered. Net Price \$29.50

Meissner Signal Shifter

An ECO with an enviable record, second to none! Allows you to put your signal in the clear on any of the amateur bands. The "Signal Shifter" is a variable-frequency exciter of remarkable stability. It may also be used as a CW Transmitter. It delivers 7 1/2 watts on the 1.7, 3.5, 7, 14-mc bands. Uses a 6BE6 oscillator, 6L6 doubler, VR150 and VR105 voltage regulators and a 5X4G rectifier. Ideal is new and designed to have no parallax, very positive in action. Key-click filter is incorporated in the circuit. The "Signal Shifter" may be linked to any existing transmitter. Positive keying of the oscillator or doubler stage is provided by the switching arrangement located on the back of the chassis. Perfect break-in operation is made possible by careful design of the oscillator stage. Operates on 110 volts, 60 cycles A.C. The "Signal Shifter" is a complete unit; it comes ready to operate. Tubes and one set of coils (specify band) are furnished.

Cat. No. 9-1058 Black Signal Shifter. Net Price \$51.20

Cat. No. 9-1057 Grey Signal Shifter. Net Price \$51.20



COILS FOR SIGNAL SHIFTER

Cat. No.	Band	Net Price
18-2915	160 M.	
18-2916	80 M.	\$2.69
18-2917	40 M.	Per Set
18-2918	20 M.	
18-2919	10 M.	

Meissner Signal Calibrator



A precision frequency standard. Will check any received signal. Gives 100-KC, 50-KC, 10-KC markers up to 60 MC. Uses 1852 output amplifier. Uses silver-plated 100-KC crystal. Positive accuracy. Identifies edges of all amateur bands. Delivers modulated or unmodulated signals as desired. Push-buttons on front panel select stand-by or desired frequency. Employs 2-1852, 2-6N7G, 1-6K8, 1-6SK7 and 1-6X5 tubes. The Meissner Signal Calibrator-Multi-vibrator comes complete ready to go into operation. Everything furnished, crystal, tubes, panel and cabinet, assembled and wired. Black finish, 9-1006 Complete Signal Calibrator.

Net Price \$43.12

Browning Frequency Meters

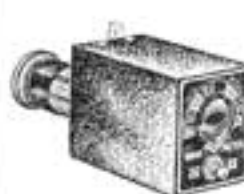
Accurately check frequencies in one to five specified bands (50 to 1000 KC wide, depending on location in spectrum); 5 1/2" vernier dial is accurately calibrated and overall accuracy of .01% is obtainable for the Model S-1 Meter and .005% for the S-2 Meter. Tuning eye facilitates zero beat adjustment and phone jack permits aural check. 100 KC crystal provides at least two check points in any band, from 1.5 to 60 MC. Operates on 110 volt DC or AC line and is practically independent of voltage variations up to 10%. Extremely rapid operation. Custom built and hand calibrated for specified frequencies; be sure to state frequencies for which meter is required.



Model S-1 Meter		No.	Model S-2 Meter	
Cat. No.	Net	Bands	Cat. No.	Net
S21011	\$110.00	One	S21012	\$125.00
S21013	150.00	Two	S21014	145.00
S21015	150.00	Three	S21016	165.00
S21017	170.00	Four	S21018	185.00
S21019	190.00	Five	S21020	205.00
S21021	200.00	General coverage 30-40MC		

Bud Wave Meter

One of the most useful adjuncts to the proper adjustment and operation of a transmitter; accurate calibration checks wavelength on which each stage in the transmitter is tuned; especially valuable in assuring correct adjustment of frequency multiplier stages.



Cat. No. S13404 Complete with indicator bulb. Net Price \$4.26

Millen Hetrofil



A device which provides means directly in the audio output of a communication receiver to reject or suppress an interfering signal or audio beat note. Effective on either phone or CW. When used with a receiver without a crystal filter, it has all the advantages of the phasing control of the crystal circuit. Will operate with TRF receivers also. Removes the interruption frequencies from the output of super-regenerative receivers. Further described in September '39 issue of QST.

Cat. No. 90721 Net Price \$4.00

Beginners 1-2-3 Tube Kits

Outstanding kits for the beginner, educational and practical; carefully designed; battery models have low drain tubes for longer battery life, 3-tube kit will operate a magnet or P-M speaker successfully; others use headphones. All kits have regeneration control and 3-tube kit has in addition an audio volume control. A plug-in coil covering the broadcast band is included in each kit.

Cat. No.	Net Price
10-1161	\$3.23
10-1162	3.88
10-1163	4.85

Cat. No.	Net Price
10-1180	\$.65
10-1181	1.18

Cat. No.	Description	Net Price
18-2940	70-200 Meter Coil	\$.41
18-2941	35-70 Meter Coil	.41
18-2942	17-35 Meter Coil	.41
18-2944	545 to 1500 Meter Coil	.97
S23601	1 1/2 v. A. Batt.	.29

Crystal Sets

The Selective
Designed to give the most efficient results and possessing unusual selectivity. Reception is loud and clear, without distortion.
Cat. No. S8535
Net Price \$2.35



The Blackbird

This receiving set is very effective and easy to operate. Housed in crystalline finish metal cabinet, with an enclosed crystal detector.
Cat. No. S8536
Net Price \$1.62



The Supertone

Ideal for receiving loud and clear signals. Very simple to operate. Glass enclosed detector. Supplied with crystal.
Cat. No. S8537
Net Price 69c



Single Headphone

Cat. No. S21010 Net Price \$1.18

Glass Enclosed Crystal Detector

A glass enclosed dust-proof crystal detector; fixed at factory but easily adjustable. Includes crystal.
Cat. No. S8538
Net Price 22c



Fixed Crystal Detector

The sensitivity is determined by accurate test equipment and is permanently fixed. Enclosed in a Bakelite case.
Cat. No. S11925
Net Price 43c



A.C.-D.C. models use type 76 tubes (one type 76 as rectifier). Tubes, batteries and headphones are not supplied with kits.

Cat. No.	Net Price
10-1192	\$4.12
10-1193	4.41

Add-on Kits

Cat. No.	Description	Net Price
10-1180	Converts 1 tube to 2 tube	
10-1181	Converts 2 tube to 3 tube	

Accessories

Cat. No.	Description	Net Price
S23602	45 v. B. Batt.	\$1.05
S23603	1 1/2 v. C. Batt.	.29
S23604	1E4G Tube	.67
S23605	1C5G Tube	.67
S23606	76 Tube	.46

One and Two Tube Battery and AC-DC Kit Sets

13-530 METERS
All wave kit sets 15 to 530 meters which includes police calls, amateurs, aircraft, code, short-wave, and regular broadcasting. For use in camp or farm. Easy to wire. Mounted on an attractive panel and chassis. Includes coils the broadcast coil, less batteries, tube and headset. Full instructions supplied. Available in wired form also.



ONE TUBE BATTERY KIT
Uses one type 30 tube, one 1 1/2 V dry cell, and one 45V battery.

Cat. No.	Net Price
S11912	Kit less tubes and batteries \$1.18
S11913	Wired kit less tubes and batteries 1.53
S11914	Raytheon 30 tube .34
S11915	Kit of 4 plug-in coils (13-240 meters) .72

TWO TUBE BATTERY KIT
Similar to the above kit except 2 type 30 tubes are used, and 1 stage of audio is included which gives a great deal more volume. Complete instructions supplied.

Cat. No.	Net Price
S11916	Kit, less tubes and batteries \$1.49
S11917	Wired kit, less tubes and batteries 1.89
S11918	Raytheon type 30 tube .34
S11919	1-1 1/2 volt and 2-45V Burgess batteries 2.77
S11920	Kit of 4 plug-in coils (13-240 meters) .72

TWO TUBE AC-DC KIT
The same kit as above, for operation on 110V AC or DC uses two type 76 tubes. Supplied with complete instructions.

Cat. No.	Net Price
S11921	Kit less tubes \$2.25
S11922	Wired kit, less tubes 2.65
S11923	Raytheon 76 tube .34
S11924	Set of 4 coils (13-240 meter) .72

For complete listing of headphones to use with above sets, see page 90

Model EC-1 Echophone "Commercial"

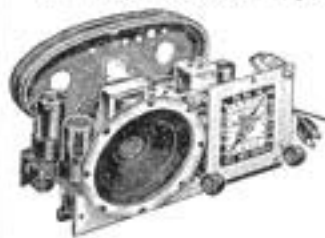
Just think, a 6-tube Communication Receiver at a price heretofore thought impossible! A complete Receiver—with tubes built-in speaker. Nothing else to buy. Manufactured by one of the leaders in the communication field, the EC-1 "Commercial" embodies nearly all of the features found in higher priced Receivers. Tuning range in 3 bands from 550 to 985 meters (545 kc to 30.5 mc). Electrical band spread. Main tuning dial is calibrated in megacycles with important service bands indicated; separate logging scale is for use with band spread tuning control. The Echophone "Commercial" is housed in a sturdy metal cabinet finished in attractive gray wrinkle lacquer, all controls easy to reach on the front panel. Controls are: Main tuning knob, Bandspread tuning knob, Band-switch, Audio gain, Standby switch, Speaker-headphone switch, and combined Beat Oscillator and AVC on-off switch. Antenna terminals at rear for doublet antenna. Separate tip-jacks at rear of set for headphone use. Tubes used are 12K5, 12SK7, 12SQ7, 35L6GT, 12Z5, 35Z5. Size 7 1/2" high, 10 1/2" wide, 7 1/2" deep. For 110 volts AC or DC. Shipping weight, 15 lbs. Completely assembled—ready to operate.



S14805 Echophone "Commercial" EC-1. Complete with tubes.

Net Price \$24.50

5 Tube AC-DC Superhet Kit



Loop Antenna
540 to 1600 KC
Built-in Speaker

Real performance with a minimum number of tubes makes this set an outstanding example of Meissner engineering. Unusually compact, with built-in loop antenna and built-in speaker, this efficient receiver covers the entire broadcast band—from 540 to 1600 kilocycles. Tuning dial is accurately calibrated in frequencies covered.

The tuning condenser, whose specially shaped plates eliminate need for padding condensers, tunes the loop and the oscillator. Mixer-oscillator is a 12SK7; 456 KC IF amplifier uses two, double-tuned transformers and a 12SK7; 12SQ7 is used for diode detector and first audio, with 35L6GT beam power output. Operates on 110 volts AC or DC; uses 35Z5GT rectifier.

Kit supplied complete with tubes and instructions for construction and operation. Order cabinet separately.

Cat. No. 10-1191 AC-DC kit with tubes \$21.55

Eimac Transmitting Tubes Type 304TL



This low-noise triode is used as modulator, oscillator, or amplifier; it delivers 300 watts class B or C and may be used at frequencies up to 40 megacycles. Characteristics are: filament volts 5 or 10; filament amperes 26 or 12; plate volts 3,000; plate milliamperes 1,000; grid volts 150; amplification factor 11.
Cat. No. S23442 Type 304 TL
Net Price \$50.00

Type 304TH

Similar to 304TL but has amplification factor of 20; plate volts 3,000; plate mills 900; grid mills 170; maximum plate watts 300.
Cat. No. S23443 Type 304TH Net Price \$50.00

TAYLOR TUBES



T-20
20 watts plate dissipation. Efficient performance on all bands from 5 to 160 meters. Fil. 7.5 volts, 1.75 amps. Plate 750 volts. 75 M.A. Amp. factor 20. Cat. No. S1502
Net Price \$2.25

TZ-20 Zero Bias

Same characteristics as T-20 except Amp. factor is 82. For class B audio and doubler service. Up to 60 watts audio output.
Cat. No. S1503 Net Price \$2.25

T-55

Fil. 7.5 volts, 2.75 amps. Plate 1,500 volts 150 M.A. Grid to plate 3.75 MMF. amp. factor 20. Extremely easy to drive.
Cat. No. S1506 Net Price \$6.00

T-40

40 watts plate dissipation, carbon anode. Efficient on all bands. Fil. 7.5 volts, 2.5 amps. Plate 1,000 volts, 115 M.A. Amp. factor 25. A sensational value.
Cat. No. S1510 Net Price \$3.50

TZ-40 Zero Bias

Same general characteristics as the T-40 except amp. factor is 62. Class B audio output 175 watts. Fine doubler.
Cat. No. S1501 Net Price \$3.50

T-200

200 watts plate dissipation. Over-size carbon anode. Fil. 10-11 volts, 4 amps. Plate 2,000 volts. 350 M.A. Grid to plate 7 mmf. Amp. factor 17. The easiest drive 1 KW type tube.
Cat. No. S24170 Net Price \$21.50

Eimac Transmitting Tubes

TANTALUM ELECTRODES

Type 35T has lowest interelectrode capacitance of any transmitting tube. Class C output 170 watts; Fil. V, 5; Fil. Cur. 4 amp; Amp. Factor 30; Max. Plate Cur. 150 Ma.; Max. Plate V. 3,000; Max. Plate Dis. 70 watts.
Cat. No. S10699
Net Price \$6.00



75T

Type 75T is radiation cooled triode used as Class C amplifier up to 200 watts or in Class B audio circuits up to 400 watts for 2 tubes. Fil. 6V. 6.5A; Plate 3,000 volts.
Cat. No. S10344 Net Price \$9.00

100TH

Type 100TH has low-loss grid and plate connectors. Ideal for ultra high frequencies. Class C output 300 watts; normal plate dissipation 100 watts; Max. Plate V. 2,000; Max. Plate Cur. 225 Ma.; Fil. 5V. 6.5A. Amp. Factor 30. Very easy to excite.
Cat. No. S8739 Net Price \$13.50

250TH

Type 250TH Hi-Mu Triode with low-loss grid and plate connectors. Minimum interelectrode capacity. Use as Class C amplifier, Class B audio, and frequency multiplier. Can be used at zero bias. Plate dissipation 250 watts; Max. Plate V. 3,000; Max. Plate Cur. 350 Ma.; Fil. 5V. 10.5A.; Amp. Factor 32.
Cat. No. S8740 Net Price \$24.50

T-21

Heater type beam power amplifier especially efficient as oscillator, amplifier or frequency multiplier, desirable for mobile and portable transmitters. Characteristics similar to 6L6G, 8ix prong Isolantite base. 21 watts plate dissipation, 6V fil. plate V. 400. Easy to drive.
Cat. No. S11999 Net Price \$1.95



203-Z Zero Bias

Will work with all standard 203A type transformers. 300 watts audio in Class B. Fil. 10 volts, 3.85 amps. Max. plate volts 1,250. Max. plate current 175 M.A. amp. factor 85.
Cat. No. S1511 Net Price \$8.00

805 Zero Bias

Standard type carbon anode zero bias 805. Up to 450 watts class B audio output. Fil. 10 volts, 3.85 amps. Max. Plate current 210 M.A. Amp. factor 50. Also is good I.F. tube.
Cat. No. S1510 Net Price \$13.50

T-125 Carbon-Tantalum Anode

125 watts plate dissipation. Low interelectrode capacity. Low impedance. Fil. 10 volts, 3.85 amps. Plate 2,000 volts 200 M.A. Grid to plate 4.5 MMF. Mu 25. Easy to drive.
Cat. No. S1509 Net Price \$13.50

Mercury Vapor Rectifiers

Half-wave; Multistrand filament construction.

Filament Inverse Maximum

Type Volts Amp. Peak Volts DCma
866 2.5 5 7,500 600
Cat. No. S1504 Net Price \$1.50
866 Jr. 2.5 2.5 1,250 250 (gr.)
Cat. No. S1505 Net Price \$1.00
872 A 5 6.75 10,000 5,000
Cat. No. S11120 Net Price \$16.50

Hytron Transmitting Tubes

Laboratory designed and built especially for use at high and ultra-high frequencies. Transmitting and clathrum tubes, I.F. ceramic base Bantams, Bantam Jrs. for ultra-compact units, ultra-high frequency tubes. All tubes have ceramic bases.



Type Tube	Cat. No.	Plate Dissip.	Net Price
HY-51A	S10345	65 watts	\$4.75
HY-51B	S10346	65 watts	4.75
HY-51Z	S10347	65 watts	4.75
HY-75	S12075	15 watts	3.95
HY-40	S10349	40 watts	3.75
HY-40Z	S10350	40 watts	3.75
HY-60	S10351	15 watts	2.75
HY-61	S10352	25 watts	3.50
HY-6L6GX	S10353	20 watts	1.25
HY-615	S10354	3.5 watts	2.25
HY-114	S10355	2.5 watts	2.00
866	S10356	.....	1.50
866 Jr.	S10357	.....	1.05

RECEIVING HIGH FREQUENCY BANTAMS WITH CERAMIC BASES

Type Tube	Cat. No.	Net Price
6ASGTX	S10363	\$.95
6J5GTX	S10358	.95
6J7GTX	S10359	.95
6K7GTX	S10360	.95
6K8GTX	S10361	1.30

CETRON Phototubes



For every application requiring sensitive, stable phototubes having long life under all service conditions. Specially recommended where heat might damage other tubes. Will replace other standard tubes as listed below. High ionization point of gas types provides increased efficiency.

GAS TYPE

Cat. No.	Type	No. Replaces	Net
S22986	CE-1	918	\$3.70
S22987	CE-2	WL-737	3.30
S22988	CE-3	WL-728	3.30
S22989	CE-21	920	5.75
S22990	CE-22*	924	2.50
S22991	CE-23	923	2.50
S22992	CE-25	927	3.50
S22993	CE-930	930	2.00

VACUUM TYPE

Cat. No.	Type	No. Replaces	Net
S22994	CE-IV	PJ-22	3.00
S22995	CE-IV	917	5.75
S22996	CE-29	929	3.00
S22997	CE-30V	925	2.00
S22998	CE-31V	919	5.75

*Takes 3-prong socket; all others standard 4-prong base.

Eby Photoelectric Cell



The EBY Electric Eye is a new type photoelectric cell designed for long life, ruggedness, and sensitivity. Can be used in suitable circuits to operate relays and other devices. Plugs into a standard 4-prong socket.
Cat. No. S2838 E12 Net \$2.65

The Electric Eye In Theory & Practice

This new Eby handbook gives the theory and practice of photo-cell operation as based on years of experience. Contains just what the student needs to know about phototubes—how they work and how they are applied in electronic control. 28 pages.
Cat. No. S22999 Net Price 44c

Isolantite Plate Cap

Made by Millen for use on 866's and transmitting tubes. Cat. No. 36001
Net Price .21c
Cat. No. 36002, for 807 tube. .21c



National Safety Cap

Molded R-39, fits 1/8" caps as on 866's, etc. Will take high tension (spark plug) cable.
Cat. No. S14425 Type SPG Net 24c



Grid Grips

Positive grip, yet easy operation to prevent loosening tube cap in removing.
Cat. No. Type Cap. Net Price
S14426 24 1/8" 3c
S14427 12 3/8" 6c
S14428 8 1/2" 3c



Grid Clips

No. S3849 for Metal Tubes. No. S3850 for Glass Tubes.
Net 10 for 8c 100 for 69c

Gammatron Transmitting Tubes

HK-54



The Type 54 Gammatron has such features as Tantalum plate and grid, large direct tungsten supports, a husky, well supported filament, and a Nonex glass envelope. Performs well in many forms of service. As a Class "C" radio frequency amplifier, a Class B audio frequency amplifier, a frequency multiplier, a crystal oscillator, and ultra-high frequency oscillator, the type 54 Gammatron does an amazing job. Max. plate volts 2,000 Class C. Max. output in watts 210. Normal plate dissipation 50 watts. Fil. V. 5. Fil. Cur. 5 amps.
Cat. No. S1513. Net Price. \$8.00

HK-24

General purpose triode can be operated as a Class C radio frequency amplifier or oscillator. Plate dissipation 25, amplification factor 81, V. 6.3, Fil. Cur. 3A. Plate and grid are made of tantalum. Filament is thoriated tungsten. Maximum plate volts 1,500. Maximum output 57 watts. Requires 3.6 watts unmodulated, and 5.7 watts modulated.
Cat. No. S10197 Type HK-24.
Net Price \$4.75



HK-354

May be used as a Class C radio frequency amplifier with exceptionally good results. High mutual conductance, low internal capacitance, and the ability to stand high plate voltages make it possible to operate the Type HK-354 Gammatron at high efficiencies with low power excitation. Max. plate volts 4,000 CW. Max. output in watts 830. Fil. V. 5. Fil. Cur. 10. Plate dissipation 150.
Cat. No. S1512
Net Price \$24.50

Heat Dissipating Caps

Heavy finned connectors dissipate heat at grid and plate connections of transmitting tubes for wire and cap type leads.
Cat. No. Type of Tube Net Price
S12010 HK-54, 35T 24c
S12011 HK-24 24c
S12012 866, T-125 42c
S12013 100, T-807 42c



866 Insulated Caps

With 12" leads, SR—soft rubber over spring bronze, RF—Black molded, RF—red molded.
Cat. No. Type Tube Ins. Net Price
S23000 866 SR 15c
S23001 866 RF 18c
S23002 866 RF 18c
S23003 Metal SR 12c
S23004 Glass SR 12c
S23005 Glass RF 15c
S23006 Glass RF 15c



Johnson 866 Clip

Large size grid cap to fit transmitting tubes and 866's.
No. 854 Net, each 6c



TRANSMITTING SPECIAL SERVICE

TUBES



Type No.	Description	Elec- trodes	W.	Fila- ment	Net Price
203-A	R.F. Pr. Amp., Osc., Class B, Mod.	3	100 F	10.0	\$10.00
204-A	R.F. Pr. Amp., Osc., Class B, Mod.	3	250 F	11	85.00
211	R.F. Pr. Amp., Osc., A.F. Pr. Amp., Mod.	3	100 F	10.0	10.00
800	R.F. Pr. Amp., Osc., Class B, Mod.	3	35 F	7.5	10.00
801-A	R.F. and A.F. Pr. Amp., Osc., Mod.	3	20 F	7.5	3.45
802	R.F. Power Amplifier Pentode	5	10 H	6.3	3.50
803	R.F. Power Amplifier Pentode	5	125 F	10.0	28.50
804	R.F. Power Amplifier Pentode	5	40 F	7.5	15.00
805	R.F. Pr. Amp., Osc., Class B, Mod.	3	125 F	10.0	13.50
806	R.F. Pr. Amp., Class B, Mod., Osc.	3	150 F	5.0	22.50
807	Transmitting Beam-Power Amplifier	4	21 H	6.3	3.50
808	R.F. Pr. Amp., Osc., Class B, Mod.	3	50 F	7.5	7.75
809	R.F. Pr. Amp., Osc., Class B, Mod.	3	25 F	6.3	2.50
810	R.F. Pr. Amp., Modulator	3	125 F	10.0	13.50
811	R.F. Pr. Amp., Class B Mod., Mu 100	3	55 F	6.3	3.50
812	R.F. Pr. Amp., Class B Mod., Mu 29	3	55 F	6.3	3.50
813	Transmitting Beam-Power Amplifier	4	100 F	10.0	28.50
814	Transmitting Beam-Power Amplifier	4	50 F	10.0	17.50
815	Push-pull Beam-Power Amplifier	7	25 H	6.3	4.50
825	Inductive Output Amplifier, Osc.	7	50 H	6.3	34.50
826	UHF Osc. R.F. Pr. Amp., Freq. Mult.	3	60 F	7.5	19.00
827R	Transmitting Beam Power Amplifier	4	800 F	7.5	135.00
828	Beam R.F. Pr. Amp., Class AB1 Mod.	4	80 F	10	17.50
829-B	Beam Push-Pull R.F. Pr. Amp.	7	40 H	6.3	19.50
830-B	R.F. Pr. Amp., Class B, Mod.	3	60 F	10	10.00
832-A	Push-Pull R.F. Beam-Power Amplifier	4	15 H	6.3	28.75
833-A	R.F. Power Amplifier, Oscillator	3	300 F	10.0	85.00
834	R.F. Power Amplifier and Oscillator	3	50 F	7.5	12.50
837	R.F. Power Amplifier Pentode	5	12 H	12.6	7.50
838	Class B, Modulator, R.F. Pr. Amp., Osc.	3	100 F	10.0	11.00
840	R.F. Pentode	5	1	2.0	6.00
841	R.F. Pr. Amp., Osc., A.F. Voltage Amp.	3	15 F	7.5	3.25
842	Class A Modulator	3	12 F	7.5	3.25
843	R.F. Pr. Amp., Class A Mod.	3	15 H	2.5	1.65
845	Modulator, A.F. Power Amplifier	3	75 F	10.0	10.00
849	R.F. Pr. Amp., Class A Mod.	3	400 F	11	120.00
850	R.F. Pr. Amp.	3	100 F	10	37.00
851	R.F. Pr. Amp., Class A B Mod.	3	750 F	11	160.00
852	R.F. Pr. Amp.	3	100 F	10	16.40
860	R.F. Pr. Amp.	4	100 F	10	32.50
861	R.F. Pr. Amp.	4	400 F	11	155.00
864	Low-microphonic Amplifier	3	1	1.1	1.00
865	R.F. Pr. Amp.	4	15 F	7.5	7.95
874	Voltage Regulator—Cold Cathode	2	—	—	1.50
880	R.F. Pr. Amp., Class B, Mod.	3	2000 F	12.6	600.00
887	R.F. Pr. Amp.	3	1000 F	11	140.00
954	Detector Amplifier Pentode (Acorn)	5	—	H 6.3	5.00
955	Amplifier, Detector, Oscillator (Acorn)	3	—	H 6.3	3.00
956	Super-Controls R.F. Amp. Pent. (Acorn)	5	—	H 6.3	5.00
957	Detector, Amplifier, Oscillator (Acorn)	3	—	F 1.25	3.00

Type No.	Description	Elec- trodes	W.	Fila- ment	Net Price
958	A.F. Amplifier, Oscillator (Acorn)	3	—	F 1.25	\$3.00
959	Detector Amplifier Pentode (Acorn)	5	—	F 1.25	5.00
991	Voltage Regulator—Cold Cathode	2	—	—	.70
1602	Amplifier Triode (Low-Microphonic)	3	15 F	7.5	2.75
1603	Amplifier Pentode (Low-Microphonic)	5	—	H 6.3	4.75
1608	Power Amplifier, Oscillator	3	20 F	2.5	4.00
1609	Amplifier Pentode (Low-Microphonic)	5	—	F 1.1	1.60
1610	Crystal-Oscillator Pentode	5	6 F	2.5	2.00
1612	Pentagrid Amp. (Low-Microphonic)	7	—	H 6.3	3.25
1613	R.F. Power Amplifier Pentode	5	10 H	6.3	2.75
1614	Transmitting Beam-Power Amplifier	4	21 H	6.3	3.50
1619	Transmitting Beam-Power Amplifier	4	15 F	2.5	4.75
1620	Triple-Grid Detector Amplifier	5	—	H 6.3	2.50
1621	Power Amplifier Pentode	5	—	H 6.3	2.50
1622	Beam-Power Amplifier	4	—	H 6.3	2.75
1623	R.F. Pr. Amp., Osc., Class B, Mod.	3	25 F	6.3	2.50
1624	Beam R.F. Pr. Amp., Class AB1 Mod.	4	25 H	2.5	3.50
1625	R.F. Pr. Amp., Class AB2 Mod., Freq. Mult.	4	30 H	12.6	2.25
1626	R.F. Osc.	3	5 H	12.6	1.60
1627	R.F. A.F. Pr. Amp., Osc. Mod., Class B	3	50 F	10	13.50
1628	UHF Osc. R.F. Pr. Amp., Freq. Mult.	3	40 F	3.5	32.00
1629	Electron-Ray (Similar to 6E5)	—	—	H 12.6	.75
1631	A.F. Beam Pr. Amp. (Metal)	4	—	H 12.6	2.00
1632	A.F. Beam Pr. Amp. (Metal)	4	—	H 12.6	2.00
1633	Twin-Triode Amplifier	—	—	H 25	1.50
1634	Twin-Triode Amplifier (Metal)	—	—	—	1.10
1635	Class B Twin Amplifier	—	—	4.5 H 6.3	1.25
1642	Twin Triode Amplifier	—	—	2.1 H 6.3	.95
1644	Twin Pentode Amplifier	—	—	2.5 H 6.3	1.50
1851	Television Amplifier Pentode	5	—	H 6.3	2.10
1852	Television Amp. Pentode (Single-End)	5	—	H 6.3	1.46
1853	Television Amp. Pentode (Single-End)	5	—	H 6.3	1.46
8000	R.F. Amp. Class B Mod. Self-Rect. Osc.	3	150 F	10	13.50
8001	Transmitting Beam Pr. Amp. and Osc.	5	75 F	5	27.50
8003	R.F. Pr. Amp., Class B Mod. Osc.	3	100 F	10	12.00
8005	R.F. Pr. Amp., Class B Mod. A.F. Pr. Amp.	3	85 F	10	7.00
8012	UHF Osc. Pr. Amp., Freq. Mult.	3	40 F	6.3	14.00
8025	UHF Osc. Pr. Amp.	3	40 F	6.3	14.50
9001	UHF Midget Det. Amp. Pentode	5	0.5 H	6.3	2.50
9002	UHF Midget Det. Amp. Triode	3	1.6 H	6.3	2.00
9003	UHF Midget Super-Cont. R.F. Amp. Pen.	5	1.7 H	6.3	2.50
9004	UHF Det. Mixer or Meas. Dev. (Acorn)	2	—	—	2.00
9005	UHF Det. Mixer or Meas. Dev. (Acorn)	2	—	—	2.20
9006	—	—	—	—	1.50
VR-75	Voltage Regulator (Glow Disch.)	2	—	—	1.25
VR105-30	Voltage Regulator (Glow Disch.)	2	—	—	1.25
VR150-30	Voltage Regulator (Glow Disch.)	2	—	—	1.25

*Per section.

RECTIFIER TUBES

Type No.	Description	Peak Inv. V. Max.	Max. DC Ma. Out.	Net Price
2V3G	Half-wave high-vacuum	16,500	2	\$1.30
2X2	Half-wave high-vacuum	12,500	7.5	1.05
5R4GY	Full-wave high-vacuum	2,800	—	1.00
217-A	Half-wave high-vacuum	3,500	200	20.00
217-C	Half-wave high-vacuum	7,500	150	20.00
816	Half-wave mercury-vapor	5,000	125	1.00
836	Half-wave high-vacuum	5,000	250	11.00
866	Half-wave mercury-vapor	10,000	250	1.50
866-A	Half-wave mercury-vapor	10,000	250	1.50
869-B	Half-wave mercury-vapor	20,000	2500	125.00
872	Half-wave mercury-vapor	10,000	1250	7.50
872-A	Half-wave mercury-vapor	10,000	1250	7.50
878	Half-wave high-vacuum	20,000	5	11.00
879	Half-wave high-vacuum	12,500	7.5	1.05
884*	Hot-cathode gas triode	350	3	1.30
885*	Hot-cathode gas triode	350	3	1.35
1616	Half-wave high-vacuum	5,500	130	5.75
2000	Half-wave gas rectifier	350	6000	6.00
2050†	Hot-cathode gas tetrode	1,300	100	1.35
2051†	Hot-cathode gas tetrode	700	75	1.15
8008	Half-wave mercury-vapor	10,000	1250	8.50
8013A	Half-wave high-vacuum	40,000	20	12.00
8016	Half-wave high-vacuum	10,000	2	2.75

*For cathode ray sweep control. †Grid-controlled.

PHOTO TUBES

No.	Type	Use	Net
868	Gas	Sound Reprod.	\$3.70
917	Vac.	Relays & Meas.	4.75
918	Gas	Sound Reprod.	4.50
919	Vac.	Relays & Meas.	4.75
920	Gas	Sound Reprod.	5.25
921*	Gas	Sound Reprod.	2.00
922*	Vac.	Relays & Meas.	2.00
923	Gas	Sound Reprod.	2.60
924	Gas	Relays & Meas.	2.00
925	Vac.	Relays & Meas.	\$2.00
926*	Vac.	Calorimetry	3.00
927	Gas	Sound Reprod.	3.70
928	Gas	Relays	2.00
929	Vac.	Relays & Meas.	3.00
930	Gas	Relays & Meas.	2.00
931	9-stage electron multi-plier	—	12.00
934	Vac.	Sound & facsim.	2.90
935	Vac.	UV-sensitive	18.00

*Cartridge mounted.

CATHODE-RAY TUBES

Type No.	Size	Screen Characteristics	Persist.	Color	Anode Volts	Base	Net Price
2AP1	2"	Electrostatic	Medium	Green	1100	Magnal-11	\$6.25
3AP1	3"	Electrostatic	Medium	Green	1650	Med. 7-pin	13.50
3AP4	3"	Electrostatic	Medium	White	1650	Med. 7-pin	18.25
3BP1	3"	Electrostatic	Medium	Green	2200	Dihedral	15.00
3EP1	3"	Electrostatic	Medium	Green	2200	Magnal-11	12.75
5BP1	5"	Electrostatic	Medium	Green	2200	Magnal-11	24.75
5BP4	5"	Electrostatic	Medium	White	2200	Magnal-11	27.50
5CP1	5"	Electrostatic	Medium	Green	4400	Dihedral	28.00
5HP1	5"	Electrostatic	Medium	Green	2200	Micanol	20.00
5HP4	5"	Electrostatic	Medium	White	2200	Micanol	21.00
7CP1	7"	Magnetic	Medium	Green	7700	Octal	40.00
9AP4	9"	Magnetic	Medium	White	7700	Med. 6-pin	62.50
9JP1	9"	Magnetic & static	Medium	Green	5500	Octal	42.00
12AP4	12"	Magnetic	Medium	White	7700	Med. 6-pin	75.00
902	2"	Electrostatic	Medium	Green	660	Octal	7.50
904	5"	Electro. & Mag.	Medium	Green	5500	Med. 6-pin	52.50
905	5"	Electrostatic	Medium	Green	2200	Med. 5-pin	45.00
906P1	3"	Electrostatic	Medium	Green	1650	Med. 7-pin	13.50
906P4	3"	Electrostatic	Medium	White	1650	Med. 7-pin	18.25
907	5"	Electrostatic	Short	Blue	2200	Med. 5-pin	48.75
908	3"	Electrostatic	Short	Blue	1650	Med. 7-pin	16.00
913	1"	Electrostatic	Medium	Green	550	Octal	4.00
914	9"	Electrostatic	Medium	Green	7700	Med. 6-pin	85.00
1802P1	5"	Electrostatic	Medium	Green	2200	Magnal-11	24.75
1802P4	5"	Electrostatic	Medium	White	2200	Magnal-11	27.50
1803P4	12"	Magnetic	Medium	White	7700	Med. 6-pin	75.00
1804P4	9"	Magnetic	Medium	White	7700	Med. 6-pin	62.50
1806P1	3"	Electrostatic	Medium	Green	2200	Magnal-11	12.75
1809P1	9"	Electro. & Mg.	Medium	Green	5500	Octal	42.00
1811P1	7"	Magnetic	Medium	Green	7700	Octal	40.00
1847	1"	Electrostatic defl. & focus			660	Octal	24.50
1898†	3"	Electrostatic defl. & focus			1650	Med. 7-pin	24.00
1899†	5"	Magnetic defl. & static focus			1650	Med. 6-pin	95.00

*Iconoscope for television camera.

†Monoscope for generating test pattern



TRANSMITTING - POWER - RECTIFIER & INDUSTRIAL CONTROL TUBES

PHANOTRONS -:- THYRATRONS -:- PILOTRODS -:- IGNITRONS



TRANSMITTING AND SPECIAL PURPOSE TUBES

Type No.	Use	Elec-Plate trodes watts	Cathode volts	Net Price
203A	RF Pwr. Amp., Osc., C.I.B. Mod.	3 100 F 10		\$10.00
204A	RF Pwr. Amp., Class B Modulator	3 250 F 11		\$5.00
211	RF Pwr. Amp., Osc., AF Pwr. Amp. Mod.	3 100 F 10		10.00
242C		3 100 F 10		12.00
276A		3 100 F 10		15.00
800	RF Pwr. Amp., Osc., C.I.B. Modulator	3 35 F 7.5		10.00
801	RF & AF Pwr. Amp., Osc., Mod.	3 20 F 7.5		3.45
802	RF Pwr. Amp. Pentode	5 10 H 6.3		3.50
803	RF Pwr. Amp. Pentode	5 12.5 F 10		28.50
804	RF Pwr. Amp. Pentode	5 40 F 7.5		15.00
805	RF Pwr. Amp., Osc., C.I.B. Modulator	3 125 F 10		15.00
806	RF Pwr. Amp., Osc., C.I.B. Modulator	3 150 F 5		22.00
807	Transmitting Beam-power Amplifier	4 25 H 6.3		3.50
808	RF Pwr. Amp., Osc., C.I.B. Modulator	3 50 F 7.5		7.75
809	RF Pwr. Amp., Osc., C.I.B. Modulator	3 25 F 6.3		2.50
810	RF Pwr. Amp., Modulator	3 125 F 10		13.50
811	RF Pwr. Amp., C.I.B. Mod., Mu 100	3 55 F 6.3		3.50
812	RF Pwr. Amp., C.I.B. Mod., Mu 29	3 55 F 6.3		3.50
813	Transmitting Beam-power Amplifier	4 100 F 10		22.00
814	Transmitting Beam-power Amplifier	4 65 F 10		17.50
815	P.P. Beam Pwr. Amp.	3 25 F 6.3		4.50
825	Inductive Output Amplifier	7 50 H 6.3		34.50
826	UHF Osc., RF Pwr. Amp., Freq. Mult.	3 60 F 7.5		19.00
827R	Transmitting Beam-power Amplifier	4 800 F 7.5		135.00
828	Beam RF Pwr. Amp., C.I.B. Mod.	4 80 F 10		17.50
829	Beam PP RF Pwr. Amp. (Dbl. Tetrode)	7 40 H 6.3		19.50
830B	C.I.B. Mod., RF Pwr. Amp., Osc.	3 60 F 10		10.00
832	PP RF Beam-power Amplifier	4 15 H 6.3		17.00
833A	RF Pwr. Amp., Oscillator	3 300 F 10		85.00
834	RF Pwr. Amp., Oscillator	3 50 F 7.5		12.50
835		3 100 F 10		15.00
836		2 — F 2.5		11.50
837	RF Pwr. Amp. Pentode	5 12 H 12.6		7.50
838	RF Pwr. Amp., Osc., C.I.B. Modulator	3 100 F 10		13.25
840	RF Pentode	5 — F 2.0		6.00
841	RF Pwr. Amp., Osc., AF Volt. Amp.	3 15 F 7.5		3.25
842	AF Pwr. Amp., Modulator	3 12 F 7.5		3.25
843	RF Pwr. Amp. C.I.A. Modulator	3 15 H 2.5		12.50
845	Modulator, AF Pwr. Amplifier	3 75 F 10		12.00
850	Screen-Grid RF Pwr. Amplifier	4 100 F 10		37.50
852	RF Pwr. Amp., Oscillator	3 100 F 10		16.40
860	RF Power Amplifier	4 100 F 10		32.50
864	Amplifier Triode (Low Microphonic)	3 — F 1.1		1.00
865	RF Power Amplifier	4 15 F 7.5		12.75
884	Gas Triode for sweep-circuit cont.	3 — H 6.3		2.00
885	Gas Triode for sweep-circuit cont.	3 — H 2.5		2.00

Type No.	Use	Elec-Plate trodes watts	Cathode volts	Net Price
954	Det. Amp. Pentode (Acorn)	5 — H 6.3		\$5.00
955	Det. Amp. Osc. Triode (Acorn)	3 — H 6.3		3.00
956	Super-control RF Amp. Pent. (Acorn)	5 — H 6.3		5.00
957	Det. Amp. Osc. Triode (Acorn)	3 — F 1.25		3.00
958	AF & RF Amp., Osc. (Acorn)	3 — F 1.25		3.00
959	Det. Amp. Pentode (Acorn)	5 — F 1.25		5.00
1602	Amp. Triode (Low Microphonic)	3 — F 7.5		2.75
1603	Triple-grid Det. Amp. (Low Micro.)	5 — H 6.3		4.75
1608	RF Pwr. Amp., Osc., C.I.B. Mod.	3 20 F 2.5		4.00
1609	Amp. Pentode (Low Microphonic)	5 — F 1.1		1.60
1610	Crystal-oscillator Pentode	5 6 F 2.5		2.00
1612	Pentagrid Amp. (Low Microphonic)	7 — H 6.3		3.25
1613	RF Pwr. Amp. Pentode	5 10 H 6.3		2.75
1614	Transmitting Beam Power Amplifier	4 21 H 6.3		3.50
1616	Diode	2 — F 2.5		5.75
1619	Transmitting Beam Power Amplifier	4 15 F 2.5		4.75
1621	Power Amplifier Pentode	5 — H 6.3		1.50
1622	Beam Power Amplifier	4 — H 6.3		1.40
1623	RF Pwr. Amp., Osc., C.I.B. Mod.	3 30 F 6.3		2.50
1624	Beam Power Amplifier	4 25 F 2.5		2.40
1625	Beam Power Amplifier	4 25 H 12.6		2.25
1626	RF Oscillator	3 5 H 12.6		1.60
1627	RF & AF Pwr. Amp., Osc., C.I.B. Mod.	3 125 F 5.0		13.50
1628	UHF Osc., RF Pwr. Amp., Freq. Mult.	3 40 F 3.5		32.00
1629	Electron-ray Indicator	— — H 12.6		.75
1631	Beam Power Amplifier	4 16 H 12.6		2.00
1632	Beam Power Amplifier	4 5.5 H 12.6		2.00
1633	Twin-triode Amplifier	— — H 25		1.50
1634	Twin-triode Amplifier	— — H 12.6		2.00
8000	Osc., Pwr. Amp., Modulator	3 125 F 10		13.50
8001	Beam Power Amplifier	5 75 F 5		27.50
8003	Osc., Pwr. Amp., Modulator	3 100 F 10		12.00
8005	Transmitting Triode	3 — F 10		7.00
9001	UHF Midget Det. Amp. Pentode	5 0.5 H 6.3		2.50
9002	UHF Midget Det. Amp. Triode	3 1.6 H 6.3		2.00
9003	UHF Midget Super-cont. RF Amp. Pent.	5 1.7 H 6.3		2.50
9004	UHF Det., Mixer, or Meas. Device	2 — H 6.3		2.00
9005	UHF Det., Mixer, or Meas. Device	2 — H 3.6		4.25

Cathode Ray Tubes

Type	Size	Deflection	Persistence	V. max.	V. cath.	Net Price
901	2"	Electrostatic	Medium	600	6.3	\$5.00
902	2"	Electrostatic	Short	1500	2.5	7.50
908	2"	Electrostatic	Short	1500	2.5	18.00
913	1"	Electrostatic	Medium	500	6.3	4.00

Ignitrons

High peak current, pool-cathode tubes for use in welding control; water-cooled; use at 600 volts RMS and below; igniter—200 volts, 40 amperes.

Type No.	Kva.	Max. Av. Anode Demand Current Amp.	Net Price
GL-415	300	22.4	\$33.00
EG-271	600	56.0	55.00
EG-235A	1200	140	110.00
EG-258A	2400	355	250.00

G-E Neon Glow Lamps



Brilliant red glow. Both electrodes glow on A.C., only one on D.C. Used in testers, as pilot lights, voltage regulators, night lights, and stroboscopes, 105-125 volts, A.C. or D.C.

Cat. No.	Watts	Bulb	Base	Leads	Net
S23444	1	G-10	Med. screw	2 1/2"	36c
S23445	1	G-10	Med. screw	2 1/2"	36c
S23446	2	S-14	Med. screw	3 1/2"	45c
S23447	2 1/2	S-14	Med. screw	3 1/2"	45c
S23448	3	S-14	Med. screw	3 1/2"	54c
S23449	1	T-4 1/2	Candelabra	1 1/2"	36c
S23450	1	T-4 1/2	Candelabra	1 1/2"	41c
S23451	1	T-4 1/2	Bayonet	1 1/2"	41c
S23452	1 1/2	G-10	Bayonet	2 1/2"	41c
S23453	1	G-10	Sk. Can. Ser.	2 1/2"	41c
S23454	1/2	T-2	Bayonet**	1 1/2"	14c
S23455	1/2	T-2	Unbased	1 1/2"	13c
S23456	1/2	T-2	Unbased	1 1/2"	13c
S23457	**	T-2	Unbased	1 1/2"	8c

*Argon—blue glow. **Needs 200,000 ohm res.
†Double contact. ‡Single contact.

Rectifiers

Type	Description	Inv. V.	Output	Net Price
866A	1-wave Mer. vpr.	10000	250 ma.	\$1.50
871	1-wave Mer. vpr.	5000	500 ma.	7.50
872	1-wave Mer. vpr.	7500	1250 ma.	9.00
872A	1-wave Mer. vpr.	10000	1250 ma.	11.00
878	1-wave high vac.	20000	5 ma.	11.00
2000	1-wave gas type	350	6 amp.	6.00

Phanotrons

Gaseous discharge rectifier tubes handling heavy currents in automatic battery chargers; half-wave rectification.

Type No.	Peak Peak Av. Cathode	Net Price
FG-32	1000 15 2.5 5	4.5 \$11.00
FG-166	1000 75 20 2.5 100	98.00

Thyratrons & Pilotrons

Grid-controlled gaseous discharge rectifiers for use in industrial control circuits; provide means of operating D.C. motors from A.C. lines, with step-less speed control.

Type No.	Volts Peak	Amps. Peak	Amps. Av.	Start Grid	Net Price
GL-2050	1300	.500	.100	Neg.	\$3.00
GL-2051	700	.375	.075	Neg.	2.50
FG-97	1000	2.0	.5	Var.	15.50
FG-17	2500	2.0	.5	Neg.	9.50
FG-27A	1000	10.0	2.5	Neg.	17.00
FG-33	1000	15.0	2.5	Pos.	16.25
FG-57	1000	15.0	2.5	Neg.	15.00
FG-95	1000	15.0	2.5	Var.	19.00
FG-105	1000	40.0	6.4	Var.	38.00
FG-172	1000	40.0	6.4	Var.	35.00
FG-41	10000	75.0	12.5	Neg.	92.00
GL-414	2000	100.0	12.5	Neg.	92.00

Grid-controlled high-vacuum tubes for use in electronic control circuits; plate dissipation 10 watts; plate volts 350; plate current 40 ma.; cathode 4.5 volts 1.1 amp.

Type No.	Mu	Net Price
PJ-7	30	\$5.50
PJ-8	8.5	5.50

Cold-cathode Glow Tubes

For voltage regulation in D.C. circuits.

Type No.	Volts	Ma.	Net Price
75-30	105	75	30 \$1.25
105-30	105	105	30 1.25
150-30	150	150	50 1.25
991	87	67-45	2 .90

Phototubes

For all applications in which reliable, sensitive photocells are required.

Type No.	Description	Anode Volts	Net Price
441	Vacuum type	200	\$7.50
868	Gas phototube	90	3.70
917	Vac. (anode term. cap)	500	4.75
918	Gas (high sensitivity)	90	4.50
919	Vac. (cath. term. cap)	500	4.75
920	Gas (twin type)	90	5.25
921	Gas (cartridge type)	90	2.00
922	Vac. (cartridge type)	500	2.00
923	Gas	90	2.60
924	Gas (end type)	90	2.00
925	Vac. (very short type)	250	2.00
926	Vac. (cartridge type)	500	3.00
927	Gas (small type)	90	3.70
928	Gas (non-directional)	90	2.00
929	Vacuum	250	3.00
930	Gas type	90	2.00
931			12.00
PJ401	Gas type	90	6.75
PJ-22	Vacuum	200	2.60
PJ-23	Gas type	90	2.60

Vacuum Switches

For A.C. or D.C. operation; single-pole double-throw contact arrangement.

Type No.	Volts	Amps.	Net Price
FA-6	440	500	10 \$7.25
FA-15	2000	2000	8 6.25



Receiving - Transmitting & Special Purpose Tubes



"G" and "GT" Types

Type	Net Ea.	Type	Net Ea.
0A4G	\$1.12	6J7G	.62
0Z4G	.91	6J8G	.91
1A5GT/G	.62	6K5G	.62
1A7G5	.91	6K6G	.62
1A7GT/G	.73	6K6GT/G	.56
1C5G	.73	6K7G	.62
1C5GT/G	.73	6K7GT	.56
1C7G	.73	6K8G	.73
1D5GP	.73	6K8GT	.73
1D6GT	.71	6L5G	.62
1D7G	.91	6L6G	1.12
1D8GT	1.12	6L7G	.91
1E5GP	.91	6N6G	1.35
1E7G	1.35	6N7GT/G	.91
1F5G	.73	6P5G	.47
1F7G	.91	6P5GT/G	.44
1G4GT/G	.73	6Q7G	.56
1G6G	.73	6Q7GT	.56
1G6GT/G	.91	6R7G	.62
1H4G	.56	6R7G	.91
1H5G	.73	6R7GT/G	.62
1H5GT/G	.62	6R7GT/G	.62
1H6G	.73	6R7GT	.91
1J5G	1.12	6R7GT	.73
1J6G	.73	6R7GT/G	.62
1N5G	.91	6T5G	.73
1N5GT/G	.73	6U7G	.56
1N6G	.73	6V6G	1.00
1P5GT	.91	6V6GT/G	.62
1Q5G	.91	6V7G	.73
1Q5GT/G	.91	6W7G	.91
1T5GT	.91	6X4GT/G	.56
2A4G	1.65	6Y6G	.91
2V3G	1.65	6Y7G	.91
2X2	1.35	6Z7G	1.12
2A8GT	1.35	6Z7G	.73
3Q5GT/G	.91	12A8GT/G	.47
5U4G	.56	12A8GT	.91
5V4G	.91	12B8GT	.91
5W4GT/G	.56	12P5GT	.56
5X4G	.62	12J5GT	.56
5Y3G	.38	12J7GT/G	.52
5Y3GT/G	.38	12K7GT/G	.47
5Y4G	.41	12L8GT	1.50
6A8G	.56	12Q7GT/G	.38
6A8GT	.56	12R7GT/G	.73
6AC5G	.73	12S7GT	.62
6AC5GT/G	.62	12R7GT/G	.62
6AD8G	.91	12S7GT	.91
6AD7G	.91	12R7GT	.73
6AE5GT/G	.73	12R7GT/G	.62
6AE8G	.73	25A6G	.62
6AE7GT	.73	25A6GT/G	.62
6AF6G	.91	25A7G	.82
6B4G	1.12	25C6G	1.12
6B6G	.62	25L6GT/G	.47
6B8G	.73	25Z6GT/G	.36
6C5G	.56	32L7GT	1.12
6C5GT/G	.56	35L6GT/G	.56
6C8G	.91	35Z4GT	.44
6D8G	.91	38Z5GT/G	.47
6F5G	.62	45Z5GT	.62
6F5GT/G	.47	50L6GT	.62
6F6G	.50	50Y6GT/G	.62
6F8G	.73	70L7GT	1.12
6G6G	.73	117L7GT	1.35
6H6GT/G	.62	117M7GT	1.35
6J5G	.56	117P7GT	1.35
6J5GT/G	.50	117Z6GT/G	.91

Standard

Glass Tubes

Type	Net Ea.
1A4P	.91
1A6	.73
1B4P	.73
1C6	.73
1P4	.73
1P6	.91
1V	.56
2A3	1.12
2A5	.56
2A6	.56
2A7	.62
2B7	.73
2E5	.73
5Z3	.62
6A3	1.12
6A4/LA	.91
6A6	.91
6A7	.56
6A7S	1.35
6AB5	.91
6B5	1.12
6D7	.73
6D7S	1.35
6C6	.56
6C7	1.35
6D6	.56
6E7	1.35
6E5	.62
6E6	1.12
6F7	.91
6G4	.73
6N5	.91
6U5	.73
6Z4	.62
12A5	1.35
12A7	1.12
12Z3	.56
15	1.12
19	.73
24A	.50
25Y5	1.35
25Z5	.56
26	.41
27	.38
30	.56
31	.56
32	.73
33	.73
34	.73
35	.56
36	.56
37	.47
38	.62
39	.56
41	.47
42	.47
43	.62
44	.56
45	.44
46	.62
47	.62
48	1.65
49	.73
50	1.35
51	.56
53	.91

Transmitting — Amateur — Industrial Tubes

Type No.	Use	Plate W.	Plate V.	Net Price
RK20A	RF Pent. Osc. Amp.	40	7.5	\$15.00
RK23	RF Pent. Osc. Amp.	10	2.5	4.50
RK24	Triode 5 meter Os.	1.5	2.0	2.25
RK25	RF Pent. Osc. Amp.	10	6.3	3.95
RK28A	RF Pent. Osc. Amp.	125	10	28.50
RK33/2C21	Twins Triode — Osc. RF Amp.	2.5	6.3	5.15
RK34	Dual-tri. Osc. C1.B Mod. RF Amp	10	6.3	3.50
RK38	Triode RF Amp. C1.B Mod. Osc.	100	5.0	13.50
RK39	Beam RF Tet. Osc. Amp. Dthr.	25	6.3	3.50
RK48A	Beam RF Tet. Osc. C1.BHF Amp.	100	10	27.50
RK49	Beam RF Tet. Osc. RF Amp.	21	6.3	1.25
RK59	Dual Triode Osc. C1.B Mod. RF Amp.	15	6.3	4.50
RK63	Triode Osc. C1.B Mod. RF Amp.	200	5.0	22.00
RK64	RF Pent. Osc. Amp.	4	6.3	3.50
RK65	Tetr. Osc. RF Amp.	215	5.0	34.50
RK75	Pent. Sup-Mod. Amp.	15	5.5	13.00
RK807	Beam Osc. RF Amp.	25	6.3	2.50
RK829	Twins Tetr. Beam Osc. RF Amp.	40	12.6	19.50
RK837	RF Pent. Osc. Amp.	12	12.6	7.50
954	RF Pent. Det. Amp.	0.5	6.3	5.00
955	Triode RF Amp. Osc. Det.	0.5	6.3	3.00
956	RF Pent. Amp. Mix.	0.5	6.3	5.00
957	RF Triode Amp.	0.5	6.3	3.00
RK1625	Beam RF Amp. Osc.	25	12.6	3.50

Rectifiers & Control Tubes

Type No.	Description	Max. Inv. V.	Output	Net Price
RK22/3B23	Full wv. high vac.	3500	200 ma.	\$ 7.50
RK60	Full-wave high vac. 750 v. RMS per anode, 61 volt drop		250 ma.	2.75
RK62	Gas triode det. thyratron		1.5 ma.	3.50
RX120	i-wave Mer. vpr.	150	20 a.	15.50
RX212	i-wave Mer. vpr.	1000	20 a.	24.00
RX215	Full wv. Mer. vpr.	500	15 a.	21.00
RX233A	Gas triode thyratron	2000	25 ma.	5.00
RK836	i-wave high vac.	5000	250 ma.	11.50
866A	i-wave Mer. vpr.	10000	250 ma.	1.50
872A	i-wave Mer. vpr.	10000	1.25 a.	11.00
CK1093/0Z4A	Full wv. gas-filled	800	110 ma.	1.90
CK1095	Full wv. gas-filled	450	70 ma.	3.80
CK1096	Full wv. gas-filled	1600	200 ma.	13.35
CK1097	Full wv. gas-filled	800	115 ma.	1.90
2050	Gas tetrode thyratron	1300	100 ma.	3.00
2051	Gas tetrode thyratron	700	75 ma.	2.50

Standard Glass Tubes

Continued

Type	Net Ea.
55	.62
56	.44
57	.50
58	.50
59	.91
71A	.50
75	.47
76	.50
77	.50
78	.50
79	.91
80	.38
81	1.12
82	.73
83	.73
83V	1.12
84	.62
85	.50
89	.56
183	1.12
483	1.12
485	1.12
874	1.50
884	2.00
885	2.00
900	1.12
BA	3.85
BH	2.94
BR	1.59

Loktal Tubes

Type	Net Ea.
1LA4	\$1.35
1LA6	1.35
1LB4	1.35
1LH4	1.35
1LN5	1.35
7A4	.73
7A5	.73
7A6	.73
7A7(LM)	.73
7A8	.73
7B4	.73
7B5(LT)	.73
7B6	.73
7B7	.73
7B8(LM)	.73
7C5(LT)	.73
7C6	.73
7C7	.73
7E6	.73
7E7	.91
7F7	.91
7G7	1.12
7H7	1.12
7J7	1.12
7Q7	.73
12B7	1.12
14A7	1.12
35A5(LT)	.73
35Z3(LT)	.73
12Z3	1.12
XXD	.91
XXL	.91

Miniatures

Type	Net Ea.
11A	.91
11B	.91
11C	.91
11D	.91
11E	.91
11F	.91
11G	.91
11H	.91
11I	.91
11J	.91
11K	.91
11L	.91
11M	.91
11N	.91
11O	.91
11P	.91
11Q	.91
11R	.91
11S	.91
11T	.91
11U	.91
11V	.91
11W	.91
11X	.91
11Y	.91
11Z	.91

Hearing Aid Tubes

Overall height, less metal base, only 1 1/2"; max. diam. .550"; fl. volts 1.25 at .033 amp.	Net Ea.
METAL SHELL BASE	
5-prong, fits Amphenol socket, tube extends 1 1/2" above socket.	
STAND. OCTAL BASE	
easily removed for use without socket with leads wired directly into circuit.	
Shell Base Octal	
Cat. No.	Cat. No.
CK501	CK501X
CK502	CK502X
CK503	CK503X
CK504	CK504X
Net ea.	\$3.00

Metal Tubes

Type	Net Ea.	Type	Net Ea.	Type	Net Ea.	Type	Net Ea.
0Z4	.91	0Z7	.62	68H7	.52	128F5	.62
5T4	1.12	6K7	.62	68J7	.62	128F7	.73
5W4	.62	6K8	.73	68K7	.56	128G7	.52
5Z4	.73	6L6	1.12	68Q7	.56	128H7	.62
6A8	.73	6L7	.91	68R7	.62	128J7	.62
6AB7	1.12	6N7	.91	68R7	.56	128K7	.56
6AC7	1.35	6Q7	.73	6V6	1.12	128Q7	.56
6AG7	1.35	6R7	.91	6X5	.91	128R7	.73
6B8	1.12	6R7	.91	12A6	.70	25A6	1.12
6C5	.62	6R7	.56	12C8	1.12	25L6	.91
6F5	.62	6R7	.73	12H6	.62	25Z6	.73
6F6	.62	6R7	.56	12K8	.91	1852	1.35
6H6	.62	6R7	.73	12A7	.56	1853	1.12
6J5	.50	6R7	.73	12C7	.73		



RCA RADIOTRONS

Type	Net Ea.	Type	Net Ea.	Type	Net Ea.	Type	Net Ea.
00A	\$1.35	*6A8	.73	*68G7	.73	24A	.50
0A4G	1.12	6A8G	.56	*68H7	.52	*25A6	1.12
*02A	.91	6A8GT	.56	*68J7	.62	25A6G	.62
024G	.91	6AB5/6N5	.91	*68K7	.56	25A6GT/G	.62
*1A3	.73	*6AB7/1853	1.12	68K7GT/G	.62	25A7G	.82
1A4P	.91	6AC5G	.73	68L7GT	.91	25C6G	1.12
1A5GT/G	.62	6AC5GT/G	.62	68N7GT	.73	*25L6	.91
1A6	.73	*6AC7/1852	1.35	*68Q7	.56	25L6GT/G	.47
1A7G	.91	6AD6G	.91	68Q7GT/G	.62	25Y5	1.35
1A7GT/G	.73	6AD7G	.91	*68R7	.62	25Z5	.56
1B4P	.73	6AE5GT/G	.73	*68S7	.56	*25Z6	.73
1C5GT/G	.73	6AE6G	.73	6T7G	.73	25Z6GT/G	.56
1C6	.73	6AE7GT	.73	6U5/6G5	.73	26	.41
1G7G	.73	6AF6G	.73	6U7G	.56	27	.38
1D3GP	.73	6AG5	1.35	*6V6	1.12	30	.56
1D6GT	.73	*6AG7	1.35	6V6G	1.00	31	.56
1D7G	.91	6AK6	1.10	6V6GT/G	.62	32	.73
1D8GT	1.12	6B4G	1.12	6V7G	.73	32L7GT	1.12
1E5GP	.91	6B5	1.12	6W7G	.91	33	.73
1E7G	1.35	6B6G	.62	*6X5	.91	34	.73
1F4	.73	6B7	.73	6X5GT/G	.56	35/51	.56
1F5G	.73	6B7B	1.35	6Y5	\$1.35	35A5(LT)	.73
1F6	.91	*6B8	1.12	6Y6G	.91	35L6GT/G	.56
1F7G	.91	6B8G	.73	6Y7G	.91	35Z3(LT)	.73
1G4GT/G	.73	6C4	1.12	6Z7G	1.12	35Z4GT	.44
1G5G	.73	*6C5	.62	6ZY5G	.73	35Z5GT/G	.47
1G6GT/G	.91	6C5G	.56	7A4	.73	36	.56
1H4G	.56	6C5GT/G	.56	7A5	.73	37	.47
1H5G	.73	6C6	.56	7A6	.73	38	.62
1H5GT/G	.62	6C7	1.35	7A7(LM)	.73	39/44	.56
1H6G	.73	6C8G	.91	7A8	.73	41	.47
1J6G	1.12	6D6	.56	7B4	.73	42	.47
1J6G	.73	6D7	1.35	7B5(LT)	.73	43	.62
1L4	.91	6D8G	.91	7B6	.73	45	.44
*1LA4	1.35	6E5	.62	7B7	.73	45Z3	.62
*1LA6	1.35	6E6	1.12	7B8(LM)	.73	45Z5GT	.62
*1LA8	1.35	*6F5	.62	7C5(LT)	.73	46	.62
*1LA8	1.35	6F5GT/G	.47	7C6	.73	47	.62
*1LN5	1.35	*6F6	.62	7C7	.73	48	1.65
1N3G	.91	6F6G	.50	7E6	.73	49	.73
1N5GT/G	.73	6F7	.91	7E7	.91	50	1.35
1N6G	.73	6F8G	.73	7F7	.91	50L6GT	.62
1P5GT	.91	6G6G	.73	7G7/1232	1.12	50Y6GT/G	.62
1Q5G	.91	*6H6	.62	7H7	1.12	51	.91
1Q5GT/G	.91	6H6GT/G	.62	7J7	1.12	55	.62
1R5	.91	*6J5	.50	7Q7	.73	56	.44
*1R4	.91	6J5G	.56	7Y4	.73	57	.50
*1R5	.91	6J5GT/G	.50	12A5	1.35	58	.50
*1T4	.91	6J6	1.85	*12A6	.70	59	.91
1T5GT	.91	*6J7	.73	12A7	1.12	70L7GT	1.12
1V	.56	6J7G	.62	12A8GT/G	.47	71A	.50
2A3	1.12	6J8G	.91	12AH7GT	.91	75	.47
2A4G	1.65	6K5G	.62	12B8GT	.91	76	.50
2A5	.56	6K6G	.62	*12C8	1.12	77	.50
2A6	.56	6K6GT/G	.56	12F5GT	.56	78	.50
2A7	.62	*6K7	.62	*12H6	.62	79	.91
2B7	.73	6K7G	.62	12J5GT	.56	80	.38
2C22	1.10	6K7GT	.56	12J7GT/G	.82	81	1.12
2E5	.73	*6K8	.73	12K7GT/G	.47	82	.73
2V3G	1.65	6K8G	.73	*12K8	.91	83	.73
2X2/879	1.35	6K8GT	.73	12K8GT	.73	83V	1.12
*3A4	.91	6L5G	.62	12L8GT	1.50	84/82A	.62
*3A5	1.65	*6L6	1.12	12Q7GT/G	.38	85	.50
3A8GT	1.35	6L6G	1.12	*12A7	.56	89	.56
*3Q4	.91	*6L7	.91	12A8GT/G	.73	117L7GT/117M7GT	1.35
3Q5GT/G	.91	6L7G	.91	*12B7	.73	117N7GT	1.35
*3B4	.91	6N6G	1.35	*12B8	.62	117P7GT	1.35
*5T4	1.12	*6N7	.91	*12B9	.73	117Z6GT/G	.91
5U4G	.56	6N7GT/G	.91	*12B9	.52	183/483	1.12
5V4G	.91	6P5G	.47	*12B9	.62	485	1.12
*5W4	.62	6P5GT/G	.44	*12B9	.62	874	1.50
5W4GT/G	.50	*6Q7	.73	12B9GT	.62	884	2.00
5X4G	.62	6Q7G	.56	*12B9	.56	885	2.00
5Y3G	.38	6Q7GT	.50	12B9GT/G	.62	950	1.12
5Y3GT/G	.38	*6R7	.91	12L7GT	.91	XXND	.91
5Y4G	.41	6R7G	.62	12N7GT	.73	XXL	.91
5Z3	.62	*6R7	.91	*12S7	.56		
*5Z4	.73	6R7G	.91	12S7GT/G	.62		
6A3	1.12	*6S7	.56	*12R7	.73		
6A4/LA	.91	6S7GT/G	.62	12Z3	.56		
6A6	.91	*6R7	.73	11A7/12B7	1.12		
6A7	.56	*6R7	.56	15	1.12		
6A7B	1.35	*6R7	.73	19	.73		

G—Glass Octal. *—Metal Tube. †—Miniature. ‡—Loktal. GT—Small Glass Octal. Replaces GT or O.

SHIELDS FOR TRANSMITTING AND RECEIVING TUBES

Tube Shields

FOR BANTAM & GT TYPE

One-piece construction; automatically grounds by contact to metal shell of base; style 1 has large cap for grid shielding; style 2 is without grid shield; both styles furnished with grounding clips.



Cat. No.	Style	Net Price
S11324	Style 1	12c
S11325	Style 2	12c

FOR 57, 58, 77, 78, etc.

T58 shield, cap, and mtg. base.

Cat. No. S14441 Net 27c

T78 shield, cap, and mtg. base.

Cat. No. S14442 Net 27c



STYLE 3: 3-piece shield fits 50, 57, 37, 6A7, etc. Base mtg. centers 1 1/2"; shield 1 1/2" diam. 4 1/2" high. Cat. No. S3740 Net ea. 27c 10 for \$2.59



STYLE 4: form-fitting; consists of two halves, cap, and base; 1 1/2" mtg. centers.

Cat. No. S3741 for short types, 2A7, 38, 75, etc.

Cat. No. S3742 for long types, 6C6, 57, 58, etc.

Cat. No. S3743 for short types without grid caps, 30, 50, 37, 76.

Net Price, each 15c

10 for \$1.45

CAP SHIELDS for metal tubes requiring grid shielding. Cat. No. S3744 Net 12c

Coil and Tube Shields



These shields are made of natural aluminum and equipped with spade bolts for mounting.

Cat. No.	D Size	Net	Cat. No.	C Size	Net
S8460	2x4	29c	S8463	2 1/2x4	19c
S8461	1 1/2x4	19c	S8464	1 1/2x4	19c
S8462	1 1/2x1 1/2x3 1/2	19c	S8465	1 1/2x3 1/2	19c
			S8466	1 1/2x2	19c

Transmitting Tube Shields

For use with tubes such as 802 and 807 to prevent oscillation in amplifier stages. Supplied for permanent or removable mounting.

Cat. No.	Size	Type	Net Price
S8467	2 1/2x2 1/2	B	44c
S8468	2 1/2x2 1/2	A	44c

Power Tube Shield

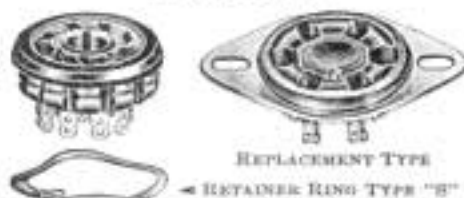


Designed for use with power tubes of the screen grid type. Increases stability and reduces feedback. Made in two sizes, "PT-8" for low powered tubes such as 807, RK-23, etc., and "PT-8-H" for large pentodes and tetrodes such as RK-20, 814, etc. Mounting centers 2 1/2".

Cat. No.	Part No.	Size	Net Price
S10024	PT-8	2 1/2"x3 1/2" high	24c
S10025	PT-8-H	2 1/2"x3 1/2" high	24c

UHF AND POWER TUBE SOCKETS

AMPHENOL SOCKETS



RING TYPE . . . Extremely compact, require minimum chassis area; firmly held by No. 4 Amphenol retainer ring; 51 panels .044 to .062" thick; body molded of high dielectric black bakelite; easily changed without damage to panel.

REPLACEMENT TYPE . . . Same socket ring-mounted in nickel-plated steel plate; slotted holes for mounting centers 1 1/2" to 1 3/4".

No. Pins	RETAINER RING	REPLACEMENT TYPE	Cat. No.	Net
4	S23007	6/c	S23017	7c
5	S23008	6/c	S23018	7c
6	S23009	6/c	S23019	7c
7 mm.	S23010	6/c	S23020	7c
7 lg.	S23011	6/c	S23021	7c
7 1/2	S23012	8c	S23022	9c
8 oct.	S23013	8c	S23023	9c
8 lok.	S23014	10c	S23024	11c
9	S23015	10c	S23025	11c
11	S23016	14c	S23026	15c

* Furnished with No. 4 ring.
† Fits both 7-small and 7-large.

Recessed Mounting Shell

For below-surface mounting of retainer ring sockets; also provides protective mounting for power or cable plugs; nickel-plated steel shell; 1 1/2" cts. Cat. No. S23027 Net ea. 9c

"MIP" Sockets

Bakelite body molded on steel mounting plate cannot loosen or vibrate; mounting cts. 1 1/2" chassis hole 1 1/2".

Cat. No.	Pins	Net	Cat. No.	Pins	Net
S1345	4	6c	S1350	8	7c
S1346	5	6c	S1351	9	9c
S1347	6	6c	S1352	11	12c
S1348	7S	6c	S23028	12	15c
S1349	7L	6c	S23029	20	29c

MIP Loktal . . . built as above but smaller; 1 1/4" mounting cts.; 1 1/4" panel hole.

Cat. No. S23030 Loktal Socket Net ea. 10c

MIP Octal . . . has all standard MIP features but is much smaller; mounts in 1 1/2" hole, on 1 1/4" centers.

Cat. No. S23031 Net ea. 7c

UHF Sockets

Molded of transparent Amphenol 912A (polystyrene); ultra-low-loss of UHF work; 1 1/2" mounting centers; positive contacts.

Cat. No. S1344 Octal Socket Net ea. 24c
Cat. No. S13380 Loktal Socket Net ea. 27c

Stentite Sockets

For high frequency and high temperature work in transmitters and amplifiers; slotted mounting holes 51 1 1/2" to 1 3/4" centers.

Cat. No.	Pins	Net	Cat. No.	Pins	Net
S1321	4	24c	S1324	7S	24c
S1322	5	24c	S1325	7L	29c
S1323	6	24c	S1326	8	24c

STENTITE PLUG . . . 6-prong, for cable connection. Cat. No. S23032 Net Price 24c

UHS-900 Acorn Socket



For RCA type 954, 955, and 956 tubes. Diam. 1 1/4", mounting centers 1 1/4". Silver-plated beryllium contacts; 180-0 base. Cat. No. 12191 Net Price 66c

Millen Acorn Sockets

Firm gripping contacts mounted on low-loss base; base diameter 1 1/4"; int. cts. 1 1/4".

Cat. No.	Insulation	Net
S3105	Quartz-Q	90c
S3205	Steatite	66c
S3305	Steatite*	66c

* Snap-edge contacts.

NATIONAL Sockets

XCA . . . low-loss, for acorn triodes, 8-pin grip contacts. Cat. No. S13592 Net. ea. 99c

XMA . . . for pentode acorn tube; copper base; built-in bypass condensers for stability. Cat. No. S13593 Net. ea. \$1.32

TYPE XC . . . low-loss water type receiving tube sockets; extra good contacts.

Cat. No.	Prongs	Net Price
S13594	4	36c
S13595	5	39c
S13596	6	42c
S13597	7 (Small)	45c
S13598	7 (Large)	45c
S13599	8 (Octal)	39c
S14400	6 (Square to fit National coils)	50c

TYPE CIR . . . have contact that grips full length of tube prong; metal ring for six-position mounting; octal socket has two metal stand-offs; glass type has stand-off allowing center mounting.

Cat. No.	Prongs	Cat. No.	Prongs
S14401	4	S14404	7 (Small)
S14402	5	S14405	7 (Large)
S14403	6	S14406	8 (Octal)

Net Price, each 27c

Hammarlund Isolantite Sockets

For lowest losses. Rustproof side gripping contacts. Sub-panel or base mounting. 2 1/4" long by 1 1/2" wide, standard 1 1/2" mount centers.

Cat. No.	Type	Net Price
S2425	8-4 (4 prong)	36c
S2426	8-5 (5 prong)	39c
S2427	8-6 (6 prong)	42c
S2428	8-7 (7 prong) Large	45c
S2429	8-7H	45c
S2430	(7 prong) Small	48c
	8-8 (8 prong)	48c

EBY Bakelite Sockets

One-piece bakelite for baseboard or sub-panel mounting 1 1/2" centers.

Cat. No.	Prongs	Net	Cat. No.	Prongs	Net
S1327	4	24c	S1330	7S	24c
S1328	5		S1331	7L	24c
S1329	6		S1332	8	

Wafer Sockets

Laminated bakelite sockets, sturdy and positive contact. New 8-prong metal tube socket can be used on all types of metal tubes. 1 1/2" Mtg. Centers.

Cat. No.	Prongs	Cat. No.	Prongs	Net Price
S1333	4	S1336	7S	Each
S1334	5	S1337	7L	7c
S1335	6	S1338	8	

RCA Sockets for 813 & 8001

Steatite insulation having top glazed and bottom waxed for protection against climatic conditions. Pincer type cadmium plated contacts have positive spring tension. Flange ring locates proper pins. Requires 2 1/2" mounting hole. Cat. No. S23433 Net Price 75c

RCA Socket for 826, 829, & 832

FOR USE ABOVE 60 MEGACYCLES: built-in RF bypass condensers for heater and screens; glazed Steatite and Mycalex insulation; heavily silvered beryllium-copper contacts; mounts in 2 1/4" diameter chassis hole.

Cat. No. S23033 Type UT-107 Net Price \$6.95

FOR USE BELOW 60 MEGACYCLES: glazed Steatite insulation; cadmium plated pincer-type contacts; shield ring extends 1/2" up around tube base; mounts in 2 1/2" hole.

Cat. No. S23034 Type UT-106 Net Price \$1.05

833-A Mounting Assembly

Polarized filament terminal connector and two grid/plate post connectors with heat-radiating fins; terminal posts and knurled set-screw knobs chrome plated and mounted on glazed Steatite base; flexible copper strips furnished for connecting to circuit.

Cat. No. S23035 Complete Assembly Net \$7.50

Millen Steatite Socket

A high quality steatite socket of new design. Better contact and higher voltage breakdown. 4 prong can be used for 866 rectifiers.

Cat. No.	Prong	Net	Cat. No.	Prong	Net
S3004	4	24c	S3007	7 large	34c
S3005	5	24c	S3008	8	24c
S3006	6	24c			

Socket Shield (A)

Fastens beneath socket No. 33008 to decrease coupling between leads.

Cat. No. S3888 Net Price 18c

Tube Base Clamp (B)

Positive snap lock grips base of 807 and similar tubes used with flush mounting sockets.

Cat. No. S3087 Net Price 29c

Johnson Power Tube Sockets

Heavy-duty phosphor-bronze contacts; nickel-plated shell; one-piece glazed white porcelain base.

Cat. No.	Base	Type	Net
S2940	50 watt	211	\$.73
S2941	UX-210	210	.50
S23036	"Elmac"	213	.88
S23037	RCA833	212	9.00
S23038	7-pin	247	1.03

JOHNSON ACORN TUBE SOCKET . . . with built-in by-pass condensers for acorn pentode.

Cat. No. S23039 Type 245 Net Price \$1.18

National Sockets

JX-1008 . . . wafer type, Isolantite, for power pentodes as HK-28 and RCA-803; as shown. Cat. No. S13589 Net. ea. \$2.40

JX-100 . . . same socket but without stand-off insulators. Cat. No. S13590 Net. ea. \$1.98

XM-50 . . . low-loss 50 watt metal shell type with side wipe contacts. Cat. No. S13591 Net. ea. \$1.20

Birnbach Transmitting Tube Sockets

Heavy, side-wiping double spring phosphor-bronze contacts; nickel-plated brass shell; low absorption white porcelain base.

Cat. No.	Watts	Net
S5014	50	73c
S5015	10	50c

National Steatite
Insulators

Cylindrical, low-loss stand-offs, nicked bases and caps.

Cat. No.	Type	Size	Net Price
S20137	GS-1	1" x 1"	.24
S20138	GS-2	1" x 2"	.30
S20139	GS-3	1" x 3"	.60
S20140	GS-4	1" x 4"	.75
S20141	GS-4A	1" x 6"	1.05

Cone type with tapped mounting hole each end.

Cat. No.	Type	Size	Net Price
S20142	GS-5	1 1/2" x 2 1/2"	.24c
S20143	GS-6	2" x 2"	.42c
S20144	GS-7	3" x 3"	.75c
S20145	GS-10	1 1/2" x 7 1/2"	

Lead-Thru
Bushings

Low-loss, high voltage steatite. Fits 1/8" hole; used in pairs.

Cat. No.	Type	Size	Net Price
S14429	Type X8-6		each 12c

Johnson
Stand-Offs

Finest white glazed porcelain—all wet process.

Cat. No.	Type	Height	Net Price
S2900	24	1"	4c
S2901	22	1 1/8"	6c
S2902	20	1 1/4"	8c

Jack Type

Same as above but with G.I. Jack instead of bolt and nut.

Cat. No.	Type	Height	Net Price
S2903	22J	1"	9c
S2904	20J	1 1/4"	11c

Complete listing of plugs to fit jack type standoffs will be found on page 85

Stand-Off Insulators



These highly vitrified low absorption porcelain insulators are supplied with complete hardware.

Cat. No.	Ret.	Hdw.	Type	Each	Ten
S5016	1	6-32	405	4c	38c
S5017	1	8-32	986	5c	44c
S5018	1	Jack	966J	7c	...
S5019	1	10-32	868	8c	...
S5020	1	Jack	866J	10c	...
S5021	1	Jack*	866RJ	24c	...

* Large Jumbo Type Jack. All others standard

Steatite Pillar Stand-Offs

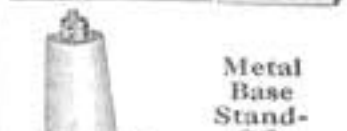
These steatite pillar insulators have a very high tensile strength with extremely low losses at very high frequencies and are glazed to decrease surface leakage. Tapped on both ends and are supplied complete with nickel-plated mounting base and top hardware. Available with Jack in the top.

Cat. No.	Type	Height	Hardware	Net
S11824	400	1"	6-32	21c
S11825	450J	1 1/8"	small Jack	24c
S11826	451	1 1/4"	6-32	24c
S11827	451J	1 1/4"	small Jack	26c
S11828	452	2"	6-32	26c
S11829	452J	2"	small Jack	32c
S11830	453	2 1/2"	1/4-20	44c
S11831	453J	2 1/2"	jumbo Jack	53c
S11832	454	4"	1/4-20	59c
S11833	454J	4"	jumbo Jack	65c

Corrugated Type

No. S2905—
Type 60, 5 1/2" high (body 4 1/2") base 2 1/2" square. Net Price .38c

No. S2906—
Type 62, 3 1/2" high (body 2 1/2") base 1 1/2" square. Net Price .24c

Metal
Base
Stand-
Offs

Breakage completely eliminated by use of drawn steel metal base, finished in cadmium plate. White porcelain glazed.

Cat. No.	Type	Body	Net Price
S2907	65	1"	15c
S2908	66	2"	24c
S2909	67	4"	35c

Metal Base Stand-Offs
With Jacks

Same as above except with Jack instead of bolt and nut.

Cat. No.	Type	Body	Net Price
S2910	65J	1"	18c
S2911	66J	2"	32c
S2912	67J	4"	47c

Metal Base Stand-Off Insulators

Corrugated insulators with metal bases give these insulators added strength, especially for use on rotary beams and outside applications. Breakage, a common fault, practically eliminated.

Cat. No.	Type	Body	Net Price
S11807	867	1 1/8"	13c
S11808	4176	2 1/4"	23c



Beehive Stand-Offs

Base measures 2" diameter with three holes on a 1 1/2" hole circle, for No. 6 screws. White glazed porcelain.

Cat. No.	Type	Net Price
S11844	Type 766	10c

Cone Insulators

Improved physical and electrical qualities of this ceramic make it admirably suited for use in the construction of these Cone Standoff Insulators. A complete range of heights having threaded holes and Jacks is available. Supplied with all hardware.

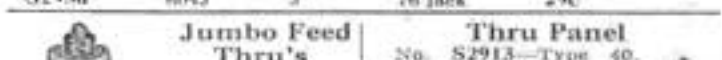
Cat. No.	Height	Bottom	Top	Type	Net Price
S5027	1	6-32	6-32	430	7c
S5028	1	8-32	8-32	431	9c
S5029	1	8-32	Jack	431J	12c
S5030	1 1/2	10-32	10-32	432	12c
S5031	1 1/2	10-32	Jack	432J	15c
S5032	2	1-20	1-20	433	18c
S5033	2 1/2	1-20	Jack*	433J	26c

* Large Jumbo Jack, others standard size.

Cone Insulators

The new cone shaped insulators have numerous applications in transmitter construction. The extremely low loss factor of this material makes them particularly useful in mounting coils, condensers, tube sockets, etc., for high frequency applications. They are threaded at both ends and take common machine screws.

Cat. No.	Type No.	Ht.	Thread	Net Price
S2928	600	1"	6-32	8c
S2929	601	1 1/8"	8-32	9c
S2930	601J	1 1/8"	74 Jack	13c
S2931	602	1 1/4"	8-32	12c
S2932	602J	1 1/4"	74 Jack	15c
S2933	603	2"	10-32	15c
S2934	603J	2"	74 Jack	18c
S2935	604	3"	10-32	21c
S2936	604J	3"	76 Jack	29c

Jumbo Feed
Thru's

No. S2918—
Type 46 Thru-Panel Ins. 1 1/2". Net Price .24c

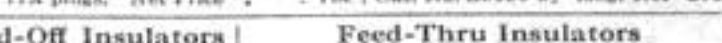
No. S2919—
Type 45J Jack-Type. Fits Johnson No. 75 plug. Net Price .26c

No. S2920—
Type 46 Thru-Panel Ins. 2 1/2". Net Price .38c

No. S2921—
Type 40J Jack-Type. Fits Johnson No. 77 and 77A plugs. Net Price .47c

No. S2922—
Type 47 Thru-Panel Ins. 4 1/2". Net Price .62c

No. S2923—Type 47J Jack-Type. Fits Johnson No. 77 and 77A plugs. Net Price .73c



Feed-Thru Insulators

Highly vitrified, low absorption porcelain is used throughout. Strength is achieved by the proper proportions. Long insulating sleeves on the lower part of the insulator contribute much to their performance on high voltages. Supplied with cork mounting washers.

Cat. No.	Height	Depth	Type	Hardware	Net Price
S5022	1	1 1/2"	458	6-32	9c
S5023	1	1 1/4"	478	10-32	13c
S5024	1	1 1/2"	478J	Small	16c
S5025	1 1/2	1 1/2"	4125	10-32	16c
S5026	1 1/2	1 1/2"	4125J	Small	19c



Corrugated Feed-Thrus

New corrugated type feed-thru insulators have more than twice the leakage path of the straight type because of increased surface of the corrugations and recommends itself where a straight side insulator of equal height is not satisfactory because of its shorter leakage path. Supplied with cork-mounting washers which permit a secure and shake-free installation. Brass nickel-plated hardware is supplied.

Cat. No.	Type	Dim.	Dim.	Hardware	Net Price
S11838	479	1 1/2"	1 1/2"	10-32	22c
S11839	479J	1 1/2"	1 1/2"	small Jack	25c
S11840	4276	2"	2"	1/4-20	38c
S11841	4276J	2"	2"	jumbo Jack	47c
S11842	4452	4"	4"	1/4-20	59c
S11843	4452J	4"	4"	jumbo Jack	71c

MICROPHONE CABLE

Crystal Microphone Cable



Single conductor braided copper extremely flexible. Cellulose acetate treated textile insulation, saturated in high dielectric lacquer. Closely woven tinned copper shield over which is heavy rubber jacket. No. S2106
Net, per ft. \$.06

Multi-Conductor Cable

RUBBER COVERED



A high quality rubber cable conductors No. 18 standard rubber jacket copper wire. Weatherproofed and very flexible. Ideal for connecting speakers outdoors.

Cat. No.	Wires	Per ft.	100 ft.
S2109	2	4c	\$4.20
S2110	3	5c	5.20
S2111	4	6c	6.20
S2112	5	11c	10.70
S20177	6	13c	12.70
S20178	7	15c	14.70
S20179	8	18c	17.70

SHIELDED RUBBER COVERED



Consists of individual flexible stranded No. 18 tinned copper conductors, each insulated with a heavy wall of colored rubber for easy identification. Tinned copper shield woven over all conductors and then cotton wrapped. Heavy tough rubber coat outside.

Cat. No.	Wires	Per ft.	100 ft.
S2173	2	7c	\$6.70
S2174	3	8c	7.70
S2175	4	11c	10.70
S2176	5	12c	11.70
S20175	6*	13c	11.70
S20176	7	13c	12.70

*Number 20 conductor.

BATTERY CABLE



Individual rubber insulated stranded conductors, cotton braided and color coded, twisted together, and with outer serving of brown cotton. Used for connecting dynamic speakers, public address systems, analyzers, etc.

Cat. No.	Wires	Per ft.	100 ft.
S2177	3	3c	\$2.70
S2178	4	4c	3.70
S2179	5	4 1/2c	4.20
S2180	6	5 1/2c	5.20
S2181	7	6c	5.70
S2187	8	7c	6.70
S20180	10	10c	9.70
S20181	12	12c	11.70

SHIELDED BATTERY CABLE

Flexible, stranded No. 20 conductors covered with quality rubber compound and color-coded cotton braid. Tinned copper shield is woven overall.

Cat. No.	Wires	Per ft.	100 ft.
S20182	3	7c	\$6.70
S20183	4	8c	7.70
S20184	5	9c	8.70
S20185	6	11c	10.70

Cabling Cord

Strong, waxed linen thread for tying wires into cable form.

Cat. No.	Cord Size	Net Price
S22917	No. 6	\$2.64 lb.
S22918	No. 12	2.64 lb.

★ ANTENNA WIRE ★

Enameled Aerial Wire Solid and Stranded

This antenna wire is ideal for all types of antennas. It is hard drawn and has a very heavy coat of enamel. Will stretch very little.

7 Strands No. 22

Cat. No.	Net Price
S2001—50 ft.	\$.28
S2002—100 ft.	.53
S2003—200 ft.	1.03

Solid No. 14, 12, 10

50-FOOT ROLLS			100-FOOT ROLLS			200-FOOT ROLLS		
Cat. No.	Size	Net	Cat. No.	Size	Net	Cat. No.	Size	Net
S2004	14	35c	S2007	14	\$.65	S2010	14	\$1.29
S2005	12	50c	S2008	12	.94	S2011	12	1.86
S2006	10	76c	S2009	10	1.47	S2012	10	3.75



Copperweld Enameled Wire

A copper clad steel core wire. Especially useful where its stretching can be allowed.

NO. 14 WIRE			NO. 12 WIRE			NO. 10 WIRE		
Size Roll	Cat. No.	Net Roll	Size Roll	Cat. No.	Net Roll	Size Roll	Cat. No.	Net Roll
100 ft.	S2013	\$.76	100 ft.	S2014	\$1.32	100 ft.	S2015	\$1.91
150 ft.	S2016	1.14	150 ft.	S2017	1.98	150 ft.	S2018	2.87
200 ft.	S2019	1.52	200 ft.	S2020	2.64			

Push Back Hook-Up Wire

Consists of push back non-fraying insulation, thoroughly saturated in moisture-proof compound. Effective in reducing leakage. Available in solid and stranded and in 5 colors—red, blue, yellow, black and green.



NO. 20 SOLID			NO. 20 STRANDED		
25 Ft.	100 Ft.	Color	25 Ft.	100 Ft.	Color
S2113	S2118	Red	S2123	S2128	Red
S2114	S2119	Black	S2124	S2129	Black
S2115	S2120	Green	S2125	S2130	Green
S2116	S2121	Blue	S2126	S2131	Blue
S2117	S2122	Yellow	S2127	S2132	Yellow
NO. 14 SOLID			NO. 14 STRANDED		
S2153	S2158	Red	S2163	S2168	Red
S2154	S2159	Black	S2164	S2169	Black
S2155	S2160	Green	S2165	S2170	Green
S2156	S2161	Blue	S2166	S2171	Blue
S2157	S2162	Yellow	S2167	S2172	Yellow

Birnbach Magnet Wire



Made of thoroughly annealed pure copper wire. Genuine Italian silk used on silk insulated and unbleached cotton for insulated wire. The enamel type has a coating of extra flexible enamel of high dielectric

strength. All come in continuous lengths on spools.

DOUBLE SILK COVERED			
Cat. No.	Size	No. Ft.	Net
S2097	18	49	\$.42
S2098	20	78	.48
S2099	22	120	.57
S2100	24	190	.60
S2101	26	310	.75
S2102	28	450	.85
S2103	30	775	.96
S2104	32	1207	1.29
S2105	36	3065	2.55

Solid Tinned Wire

For wiring transmitters and winding coils. Easily soldered.

Cat. No.	Size	25 ft.	100 ft.
S2202	10	\$.42	\$1.59
S2203	12	.77	.88
S2204	14	.19	.56
S2205	16	.16	.45
S23102	18	.13	.42
S23103	20	.12	.38

DOUBLE COTTON

Cat. No.	Size	No. Ft.	Net
S2086	14	36	.40
S2087	16	61	.42
S2088	18	96	.48
S2089	20	150	.53
S2090	22	234	.60
S2091	24	362	.71
1/2 Lb. Spools			
S2092	26	558	.45
S2093	28	842	.53
S2094	30	1321	.63
S2095	32	1850	.79
S2096	36	3801	1.50

PLAIN ENAMELED

Cat. No.	Size	No. Ft.	Net
S2075	14	36	\$.28
S2076	16	61	.36
S2077	18	101	.38
S2078	20	159	.50
S2079	22	253	.43
S2080	24	402	.45
S2081	26	640	.54
S2082	28	1013	.56
S2083	30	1602	.65
S2084	32	2543	.68
S2085	36	6410	.94

Bus Bar Wire

Made of hard drawn copper, tinned, straightened, and supplied in 2-foot lengths.

Cat. No.	Net per 5 lgths.
S11884	No. 10 round 36c
S11885	No. 12 square 28c
S11886	No. 12 round 25c
S11887	No. 14 square 22c
S11888	No. 14 round 19c

TRANSMISSION CABLE

A.C.-D.C. Antenna Wire

For indoor aerials, flexible, brown mottled covered.

No. S2196	25 ft.	Net	18c
No. S2197	100 ft.	Net	.68c

Rubber Covered Lead-In Wire



Copper No. 18 conductor — with special grade live rubber compound wall for outdoor use.

SOLID		STRANDED	
50 ft.	S2198 33c	S2200 33c	
100 ft.	S2199 65c	S2201 65c	

Shielded Wire



Stranded tinned copper conductor with wall of live rubber over which a tinned copper braid is woven. Single conductor No. 18. No. S2182 50 ft. Net \$1.09 No. S2183 100 ft. Net 2.06

DOUBLE CONDUCTOR

Same as above except two No. 18 conductors. Cat. No. S11530 Net per ft. 4c

Transmission Cable



Very efficient for doublet noise-reducing antenna. Low capacity—impedance about 75 ohms to match flat top. Twisted pair of stranded copper conductors with heavy wall of rubber and outer weatherproof braid. Net Price Cat. No. S2194 50 ft. \$1.86 Cat. No. S2195 100 ft. 3.53

EO-1 Transmission Cable



EO-1 miles insulated transmission cable. Very heavy (about 1/2 dia.) for high power transmitters. Low capacity—about 72 ohms impedance. Cat. No. S2107 Special Net Price, per ft. 10c

High Voltage Test Lead Wire



High flexible, kinkless, test prod wire with heavy wall of live rubber. Can be used in testing up to 3,000 volts, for tests of diathermy machines. Conductor consists of 64 strands of tinned copper wire. Cat. No. S18889 Red. Cat. No. S18890 Black. Net, per ft. 5c Net, 25-ft. coil \$1.11

Kinkless Test Lead Wire

Same as above, but lighter insulation. Cat. No. S2187 25 ft. Roll—Red. Cat. No. S2188 25 ft. Roll—Black. Net Price, each .56c

Microphone Cable Shielded and Rubber- sheathed



SINGLE CONDUCTOR

Low capacity rubber core and special stranding give extra flexibility plus unusual strength. Type 8401 for ribbon, crystal, or single button carbon mike—or low impedance transmission line; type 8411 for lapel mike; type 8431 for phono pick-ups.

Cat. No.	Type	Size	Net Price 100 ft.
S22895	8401	25	\$5.43
S22896	8411	35	3.69
S22897	8431	55	2.00

TWO CONDUCTOR

For double button carbon microphone circuits using shield as grounded connection; for low impedance transmission lines; or for coupling pre-amplifier to power amplifier.

S22898	8422	70	\$5.32
--------	------	----	--------

THREE TO SEVEN CONDUCTOR

Type 8423 for double button carbon microphones feeding mixer panel or circuits requiring mike diaphragm to be above ground, yet shielded; type 8424 for double button mike with attenuation control at mike and using two of the four cable wires; type 8425 for condenser mike line and power supply to head amplifier; type 8426 for condenser mike with remote control switch or pilot light at mike; type 8427 for auto-radio test instruments and acid-resisting analyzer cable.

Cat. No.	Type	Wires	100 ft.
S22899	8423	3	\$6.18
S22900	8424	4	7.60
S22901	8425	5	9.53
S22902	8426	6	12.43
S22903	8427	7	13.28

Microphone Cable without Rubber Sheath

For temporary indoor installations of low impedance or carbon microphone circuits; No. 20 conductors with paper wrap, $\frac{1}{16}$ " rubber, cotton braid, overall thinner copper shield.

Cat. No.	Type	Wires	100 ft.
S22904	8432	2	\$2.79
S22905	8433	3	3.54
S22906	8434	4	4.23

Extruded Plastic Tubing

Extremely flexible heat resistant; will not support combustion; softens at 300° F.; resists oil, acids, and alkalis; dielectric strength—10,000 volts; state color, black, red, green, white, or yellow; in 30" lengths.

Cat. No.	Size	I.D.	Net Price 100 ft.
S22911	20	.034"	10c
S22912	18	.042"	10c
S22913	16	.053"	11c
S22914	14	.060"	12c
S22915	12	.085"	12c
S22916	8	.135"	25c

Coated Sleeve

Withstands up to 2,000 volts; supplied in 30" lengths; be sure to specify color wanted.

Cat. No.	Inside Diam.	Net Price
S11862	$\frac{1}{16}$ "	9c
S11863	$\frac{1}{8}$ "	15c
S11864	$\frac{1}{4}$ "	24c

Lead-in Wire

ALL-RUBBER



Easy stripping, easy soldering, 7 strands of tinned copper with $\frac{1}{16}$ " rubber insulation.

Cat. No. S22858 100 ft. 90c net

Cellulose Acetate Push-back Wire



Tinned copper with heavy wrap of cellulose acetate and basket weave abrasion-proof rayon braid lacquered, in 500' rolls.

No. 20 Solid	No. 20 Stranded	
Net 1,000' \$5.26	Net 1,000' \$6.09	
Cat. No.	Color	Cat. No.
S24186	Green	S22859
S22860	Blue	S22861
S22862	Red	S22863
S22864	Yellow	S22865
S22866	Black	S22867
No. 18 Solid	No. 18 Stranded	
Net 1,000' \$6.16	Net 1,000' \$6.75	
S22868	Green	S22869
S22870	Blue	S22871
S22872	Red	S22873
S22874	Yellow	S22875
S22876	Black	S22877
No. 14 Stranded Net 500'	\$5.27	
S22878	Red	S22879
	Black	

Automobile Wire



For primary circuits and all low voltage wiring; stranded tinned copper conductor with cellophane wrap, rubber wall, and glazed cotton braid lacquered.

PLAIN					Net
Cat. No.	H886	Ins.	O.D.	100 ft	
S22887	12	.031"	.105"	\$2.94	
S22888	14	.027"	.165"	2.20	
S22889	16	.022"	.140"	1.62	
SHIELDED					Net
S22890	12		.225"	3.76	
S22891	14		.195"	3.03	
S22892	16		.170"	2.49	

Spark Plug Wires



Stranded copper conductor with Belden Pyro-Glaze high tension insulation; 7 mm. size.

Cat. No. S22893 Plain \$6.69

Cat. No. S22894 Shielded 8.09

Spaghetti

Highest quality; very flexible; glossy finish; fits up to No. 12 wire; 30" lengths; in red, black, blue, yellow or green.

Cat. No. S2038 Net per length 8c

Over-sized Spaghetti

Flexible varnished tubing stands 5,000 volts; supplied in 30" lengths; be sure to state color.

Cat. No.	Inside Diam.	Net Price
S11859	$\frac{1}{16}$ "	15c
S11860	$\frac{1}{8}$ "	27c
S11861	$\frac{1}{4}$ "	54c

*Black, red, green, yellow, or brown.
†Black or red only.

SHIELDED TYPE



For any audio or radio circuit; No. 16 stranded wire with $\frac{1}{16}$ " rubber and tinned copper shield.

Cat. No. S22880 100 ft. \$1.80 net

Shielded Grid Wire



Tinned copper stranded wire with $\frac{1}{16}$ " rubber insulation, rayon braid lacquered, fine tinned copper shield overall; OD .105".

Cat. No. S22881	per ft.	\$.02
Cat. No. S22882	500' roll	7.58

Test Prod Wire

EXTRA FLEXIBLE

Specially built for extreme flexibility and to withstand severe usage as test leads; No. 18 conductor made up of 45 tinned strands, cotton wrap, $\frac{1}{4}$ " rubber wall; .140" OD.

Cat. No. S22883 Red 2c per ft.

Cat. No. S22884 Blk. \$12.94 per M

High Voltage Test Prod Wire

Similar to above but with insulation for 10,000 volts.

Cat. No. S22885 Red 3c per ft.

Cat. No. S22886 Black

Either color \$11.33 per 500 ft.

High Tension Corona-resistant Wire

Number 18 conductor with special heat and corona resisting rubber compound, Pyro-Glaze seal, and Fiberglass braid; insulated for 15,000 volts A.C.; .200" O.D.

Cat. No. S22910 25 ft. \$1.50 net

Multi-wire Cable



RUBBER SHEATHED

Composed of rubber-insulated wires in cotton wrap with cord fillers and overall heavy rubber sheath. Type 8452, two No. 18 wires; Type 8453, three No. 18 wires; Type 8454, two No. 18 and two No. 20 wires.

Cat. No.	Type	O.D.	100 ft.
S22907	8452	.245"	\$2.95
S22908	8453	.265"	3.77
S22909	8454	.260"	4.84

Approved Center- Rip Lamp Cord



Twin No. 18 stranded copper wires cotton wrapped and separately insulated in tough rubber sheath that splits down the center when pulled apart.

Cat. No.	Net 100 ft.
S2108	\$2.50

7MM High Tension Cable



Standard 7 millimeter wire, with a lacquered braid overall covering.

No. S2192	\$.031
Net, per ft.	
No. S2193 100 ft.	3.00

Diathermy Cable

Specially designed for use with electro-therapy apparatus and insulated to withstand up to 20,000 volts at 60 cycles, this diathermy cable is extremely flexible and has a special grade of tough, live rubber jacket to stand up under the exacting service requirements.

Cat. No. S20189 100 ft. spool.

Net Price \$5.20

Heavy Conductor Lacquered Wire



Made with heavy, stranded, tinned copper conductor with a heavy wall of live rubber over which a cotton braid is woven. A high gloss lacquered finish covers the braid. Dielectric strength, 5,000 volts.

Cat. No.	Size	Per ft.	25 ft.
S11865	14	1 1/2c	35c
S11866	12	2 1/2c	54c
S11867	10	4c	87c

Light-Duty Lacquered Wire

Same construction as above except that the conductor is No. 18 with a smaller rubber wall, covered with a high gloss lacquered finish. Available in six colors.

Cat. No.	Color	25 ft.	100 ft.
S11868	Red		
S11869	Black		
S11870	Green		
S11871	Brown		
S11872	Yellow		
S11873	Blue		
Net Price, 25 ft.		24c	
Net Price, 100 ft.			90c

Filament Hook-Up Wire



A very high quality rubber-covered stranded wire for many applications to carry heavy current. Red or black in 25-ft. coils.

No. 14 Stranded Cor. Cap. 15 amps

No. 12

Cat. No. Color Net Price

S2029 Red 40c

S2030 Black 40c

No. 12 Stranded Cor. Cap. 20 amps

No. 12

S2031 Red 60c

S2032 Black 60c

Heavy-Duty Rubber Covered Line Cord



A fine rubber covered, weather-proof cable. Two conductors, each covered with an individual rubber covering. The very tough outside covering permits its use in the toughest of applications.

Cat. No.	Size	Net Price
S11853	No. 16	4c ft.
S11854	No. 14	7c ft.

CO-AXIAL CABLE • TRANSMISSION LINE • SHIELDING

Low-Loss Transmission Cables— Copolene B Solid Dielectric

50-OHM CO-AX CABLES
Designed for high frequency operation, television, frequency modulation, test equipment, and transmission lines. Seven strands of No. 21 bare copper with solid Copolene B dielectric. 200 "dia. Single or double copper braid with cotton or vinyl outer layer. Impedance 52 ohms ± 2 ; 32 mmf. per ft. High working temperatures are possible because dielectric has no sudden softening point.

Cat. No.	No.	U. S. Navy	British	Amphenol No.	Shield	Outer Layer	Net Per ft.
S21768	—	—	—	21B-290-7/21XB	One	Cotton	32c
S21769	—	—	—	21B-290-7/21XVB	Two	Cotton	41c
S21770	CA88F-50-1	PTAM/C	—	21B-290-7/21XV	One	Vinyl	35c
S21771	(XA-8897A)	—	—	21B-290-7/21XV	Two	Vinyl	50c

62-OHM CO-AX CABLES
Similar to above but dielectric is .335" diameter and conductor consists of seven strands number 22 bare copper wire; 26 mmf. ft.

S21772	—	—	—	21B-335-7/22XB	One	Cotton	47c
S21773	—	—	—	21B-335-7/22XVB	Two	Cotton	56c
S21774	—	PT7M/C	—	21B-335-7/22XV	One	Vinyl	44c
S21775	—	—	—	21B-335-7/22XV	Two	Vinyl	53c

72-OHM CO-AX CABLES
Made with seven strands of number 26 copper wire or solid No. 16 or No. 15 copper wire; dielectric diameter of stranded or No. 16 conductor is .290", of No. 15 conductor is .335"; impedance is 72 ohms ± 4 ; capacitance 22 mmf. per foot.

S21776	—	—	—	21B-290-7/26XV	Two	Vinyl	56c
S21777	—	—	—	21B-290-16CWXB	One	Cotton	32c
S21778	CA88F-70-1	—	—	21B-290-16CWV	One	Vinyl	35c
S21779	—	PT4M/C	—	21B-335-15CWV	One	Vinyl	44c

95-OHM TWINAX CABLES
Small-diameter flexible, two-conductor cable for UHF transmission and where a balanced line is required above ground. Each conductor is seven strands of No. 21 bare copper wire; dielectric diameter is .475". Impedance 95 ohms ± 5 ; capacity between conductors, with outer shield grounded, 18 mmf. per ft.

S21780	—	—	—	31B-7/21-XB	One	Cotton	59c
S21781	—	—	—	31B-7/21-XVB	Two	Cotton	68c
S21782	TC88F-95-1	BA4M/C	—	31B-7/21-XV	One	Vinyl	65c
S21783	(XA-8898A)	—	—	31B-7/21-XV	Two	Vinyl	73c

SPECIAL CO-AXIAL CABLES

In addition to the cables listed on these pages, Amphenol manufactures a complete line of ultra-low-loss cables, having a wide range of impedances and capacities. Send in complete details of use to which cable is to be put and the correct cable will be recommended.

COMPARISON BETWEEN AMPHENOL AND OTHER CABLES. LINE LOSS IN WATTS WHEN 1,000 WATTS ARE FED INTO 100 FEET
THESE FIGURES REPRESENT ACTUAL WATTAGE LOSS

Wave Length	Light Rubber	Twisted Pair	Heavy Rubber	72-12C	Amphenol
Meters	Co-Axial	Co-Axial	Co-Axial	Co-Axial	Copper Tubing
25	920	800	700	320	210
5	800	645	563	249	162
10	637	463	411	186	121
20	469	324	308	133	88
40	324	206	206	110	65
80	206	133	133	60	49
160	143	88	92	45	39

"Alsimag 35" Ball and Socket Type Bead Insulators

Made of Alsimag 35 which for years has met the requirements of engineers for a dense stellite body with low electrical losses and exceptional mechanical strength.

Cat. No.	Type No.	Dia. Inches	Length Inches	Wire Size	No. Per Lb. (approx.)	Approx. Ft. Covered by 1 Lb. per 1 lb.	Net Price per ft.
S11809	W-3641	.090	.125	20 A.W.G. (.032)	19,725	188.0	\$1.57
S11810	W-2602	.110	.150	17 A.W.G. (.045)	16,800	133.0	1.12
S11811	W-2496	.170	.170	14 A.W.G. (.064)	4,870	57.2	.54
S11812	W-2603	.200	.200	14 A.W.G. (.064)	3,200	43.7	.46
S11813	W-3577	.200	.525	14 A.W.G. (.064)	915	36.6	.37
S11814	W-2739	.260	.260	9 A.W.G. (.114)	1,275	23.0	.21
S11815	W-3576	.260	.400	9 A.W.G. (.114)	695	22.8	.20
S11816	W-2604	.260	.260	8 A.W.G. (.128)	1,595	30.0	.23
S11817	W-4571	.330	.330	9 A.W.G. (.114)	720	17.0	.17
S11818	W-2605	.400	.400	8 A.W.G. (.128)	350	9.4	.13
S11819	W-2920	.400	.400	6 A.W.G. (.162)	370	10.0	.13
S11820	W-4572	.510	.510	4 A.W.G. (.204)	195	6.4	.13
S11821	W-4573	.540	.540	3 A.W.G. (.229)	165	5.7	.13
S11822	W-4574	.540	.540	0 A.W.G. (.325)	215	7.4	.13

Flexible Co-axial Cable—72 Ohm



Handles 1 kilowatt up to 40 megacycles, 700 watts to 100 Mc. Number 12 solid, copper conductor strung with $\frac{1}{16}$ " diameter polystyrene beads; braided shield of tinned copper is covered with two separate cotton braids, each thoroughly impregnated against moisture; can be bent on 1" radius; operates safely up to 190° F. Capacitance 20 mmf. per foot.

Cat. No. S24185 Type 72-12 Flexible Co-axial Cable. Net per ft. . 29c

MOISTURE-PROOF CO-AXIAL CABLE
Same as above but with additional layer of $\frac{1}{16}$ " rubber outside.
Cat. No. S21764 Type 72-12T Net per ft. . 53c

HIGH-TEMPERATURE CO-AXIAL CABLE
Same as Type 72-12 but with beads of mica-filled bakelite; safe for operation at temperatures up to 285° F.
Cat. No. S21765 Type 72-12T Net per ft. . 48c

Small Flexible Co-axial Cable

FOR TEST INSTRUMENTS AND RECEIVER LEAD-INS



Outside diameter only $\frac{1}{8}$ "; ideal for leads inside transmitters and electronic apparatus, and for instrument test leads. Number 22 stranded or number 20 solid wire strung with $\frac{1}{16}$ " polystyrene beads and covered with layer of tinned copper braid and two layers of impregnated cotton braid. Cable bends on 1" radius; operates safely up to 190° F. Use No. 22 size for portable leads; No. 20 for lead-ins or where lower capacity is needed.

Cat. No. S21766 Type 72-12 No. 22 stranded wire. Net per ft. . 29c

Cat. No. S21767 Type 72-20 No. 20 solid wire. Net per ft. . 29c

Belden Transmission Line Cables



TYPE
EO-1

Two number 12 solid copper wires, individually cellophane-wrapped and covered with .035" rubber; twisted together and covered with weather-proofed cotton braid overall; 73 ohms; 29.7 mmf. per ft.
Cat. No. S22919 Net Price . . . \$3.93 per 100 ft.



72-OHM
TWISTED
PAIR

For all-wave receivers and half-wave dipoles; number 18 stranded tinned copper wires with cotton wrap, low capacity rubber, color coded, twisted together and with weather-proofed cotton braid overall.
Cat. No. S22920 Net Price . . . \$2.30 per 100 ft.



SHIELDED
TWISTED
PAIR

For lead-ins where interference is great; number 18 stranded tinned copper wires with cotton wrap and rubber insulation color coded; conductors twisted together, paper wrapped, shielded with tinned copper braid and with weather-proofed cotton braid overall.
Cat. No. S22921 Net Price . . . \$3.60 per 100 ft.

Braided Tinned Copper Shielding

Very flexible; closely woven. Ideal for interference shielding.

Cat. No.	Size	Pt. 50 Ft.	Cat. No.	Size	Pt. 50 Ft.
S20186	2c	\$.95	S2191	4c	\$1.95
S2189	2c	.95	S20187	5c	2.40
S2190	4c	1.40	S20188	9c	4.30

Polystyrene Beads

For transmission lines, test instruments leads, and for insulating high voltage leads; $\frac{1}{16}$ " size can be strung on No. 22 stranded or No. 20 solid wire; $\frac{1}{8}$ " size can be strung on No. 14 stranded or No. 12 solid wire; withstand heat up to 190° F.

Cat. No.	Dia.	Length	Hole	Beads per ft.	Net Price
S21761	$\frac{1}{16}$ "	$\frac{1}{8}$ "	.040"	35	\$2.06*
S21762	$\frac{1}{8}$ "	$\frac{1}{4}$ "	.080"	28	1.74†

High Temperature Beads

Moulded of mica-filled bakelite; withstand heat up to 285° F. For use wherever heat is too high for polystyrene beads. Excellent electrical characteristics. Same dimensions as S21763 listed above.

S21763 High temperature beads. Net. \$2.94†
*Box of 500 beads. †Box of 250 beads.

POWER & MULTIPLE CIRCUIT CONNECTORS



CO-AXIAL CABLE CONNECTORS

110-250 Volt Power Receptacles and Plugs



RETAINER RING TYPE

Receptacle and plug mount with No. 4 Amphenol retainer ring—no screws or rivets needed. Rated 15 amp, 110 volts/10 amp, 250 volts. Plug has screw terminals; receptacle has both screws and solder lugs, and taken either polarized or standard plug. Also supplied assembled to steel mounting plate with slotted holes for mounting on 1/2" to 1 1/2" centers.

Cat. No.	Circuit	Net Price
S9724	2-pole universal	15c
S21738	3-pole polarized	21c

Cat. No.	Circuit	Net Price
S9726	2-pole universal	17c
S21739	3-pole polarized	24c

Cat. No.	Circuit	Net Price
S21740	2-pole standard	15c
S21741	2-pole polarized	15c
S21742	3-pole polarized	21c

Cat. No.	Circuit	Net Price
S21743	2-pole standard	17c
S21744	2-pole polarized	17c
S21745	3-pole polarized	24c

Cord Connectors



Bakelite connectors with snap-on steel caps taking 1/4" cord through protecting rubber grommet. Can be supplied with cable clamp for strain relief (Cat. No. S1353).

Cat. No.	Circuit	Net Price
S10072	2-pole universal	21c
S21746	3-pole polarized	27c

Cat. No.	Circuit	Net Price
S10070	2-pole standard	21c
S10071	2-pole polarized	21c
S21747	3-pole polarized	27c

Recessed Connectors



Cat. No.	Circuit	Net Price
S10073	Receptacle	24c
S10074	Standard plug	24c
S10075	Polarized plug	24c

Cable Clamp

Gives strain relief on cords with connectors at left. Easily installed.
Cat. No. S1353 6c



Low-Loss Connectors for Solid Dielectric Coax and Twinax Cables

Extremely compact connectors with low-loss mica-filled bakelite or polystyrene insulation assembled so that there are no air spaces within the connector. Connectors are strong, zinc die-castings heavily silver plated. Connectors assemble to each other with practically no air space, hence constant characteristics are maintained. All connectors are fully assembled and ready for use.

CONNECTOR PLUGS... connect to single or twin conductor cables and fit receptacles of all strings listed below.

Cat. No.	Signal	Navy	Amphenol	Cable	Net Price
S22785	PL-259	CPH-49195	83-18P	Coax .410"	\$1.65
S22786	PL-284		83-228P	Twin .410"	2.06
S22787	PL-295	CPH-49188	83-28P	Twin .630"	2.73

ANGLE PLUG ADAPTERS... Copper alloy pin contact on one end; socket contact on other end assembled without solder; pure polystyrene dielectric.

Cat. No.	Signal	Navy	Amphenol	Cable	Net Price
S22788	M-359	CPH-49192	83-1AP	Coax .410"	\$2.15
S22789	PL-293		83-22AP	Twin .410"	2.38
S22790	PL-325	CPH-49198	83-2AP	Twin .630"	2.82

JUNCTIONS... Socket contacts on both ends fit contact pins of connectors; useful in joining cables or repairing damaged cables.

Cat. No.	Signal	Navy	Amphenol	Cable	Net Price
S22791	PL-258	CPH-49191	83-1J	Coax .410"	\$1.00
S22792	PL-285		83-22J	Twin .410"	1.27
S22793	PL-305	CPH-49189	83-2J	Twin .630"	1.62

"TEE" CONNECTORS... Provide convenient means of tapping off coax line; sockets for straight-through connection, pin for tap.

Cat. No.	Signal	Navy	Amphenol	Cable	Net Price
S22794	M-358	CPH-49109	83-1T	Coax .410"	\$2.29

CHASSIS OR BOX TYPE RECEPTACLES... One-piece construction for easy soldering to connectors within box or chassis; low-loss mica-filled bakelite insulation.

Cat. No.	Signal	Navy	Amphenol	Cable	Net Price
S22795	80-239	CPH-49194	83-1R	Coax .410"	\$1.29
S22796	80-204		83-22R	Twin .410"	1.18
S22797	80-265	CPH-49196	83-2R	Twin .630"	1.76

HOODS FOR BOX TYPE RECEPTACLES... Serve as shields for the wiring connection within the equipment; have holes for easy soldering to shield; silver plated brass.

Cat. No.	Signal	Navy	Amphenol	Cable	Net Price
S22798	M-360	CPH-49193	83-1H	Coax .410"	\$.32
S22799	M-365	CPH-49208	83-2H	Twin .630"	.44

JONES Shielded Multiple Cable Connectors

Polarized plugs for cord or chassis mounting; phosphor bronze "knife-switch" contacts give double contact area for high current rating; molded bakelite insulation; metal caps with fibre liner; cable grip furnished on all cord-type connectors; angle brackets on chassis units; nominal rating for "300" series, 45 volts 5 amperes.

Cat. No.	Contacts	Type	Net Price
S3712	2	8-302 C/C	22c
S3713	3	8-303 C/C	23c
S3714	4	8-304 C/C	25c
S3715	6	8-306 C/C	30c
S3716	8	8-308 C/C	34c
S3717	10	8-310 C/C	37c
S3718	12	8-312 C/C	44c

Cat. No.	Contacts	Type	Net Price
S3720	2	8-302-AB	10c
S3721	3	8-303-AB	12c
S3722	4	8-304-AB	13c
S3723	6	8-306-AB	18c
S3724	8	8-308-AB	21c
S3725	10	8-310-AB	25c
S3726	12	8-312-AB	30c

Series "300" connectors available up to 33 contacts. Prices on request.

Jones Heavy-Duty Cable Connectors

Series "400" connectors, similar to the series "300" but with heavier contacts; rated 110 volts 10 amperes.

Cat. No.	Contacts	Type	Net Price
S22761	2	8-402CCT	\$.44
S22762	4	8-404CCT	.56
S22763	6	8-406CCT	.68
S22764	8	8-408CCT	.79
S22765	10	8-410CCT	.91
S22766	12	8-412CCT	1.03

Cat. No.	Contacts	Type	Net Price
S22771	2	8-402AB	\$.29
S22772	4	8-404AB	.38
S22773	6	8-406AB	.47
S22774	8	8-408AB	.56
S22775	10	8-410AB	.65
S22776	12	8-412AB	.73

For microphone cable connectors - see page 91.

Co-axial Cable Connectors



Unbreakable shielded connectors for co-axial cables up to 1/2" diameter; may be reamed to fit cables up to 5/8"; screw type locking ring prevents accidental disconnections; insulation is ultra-low-loss Amphenol 912A.

Cat. No.	Type	Contact	Coupling	Mounting	Net Price
S20484	93M	Male	Ring	Cable	88c
S20485	93MI	Male	Threads	Cable	88c
S20487	93F	Female	Threads	Cable	88c
S20486	93FI	Female	Ring	Cable	88c
S20490	93C	Female	Threads	Chassis	73c
S20488	93CI	Male	Threads	Chassis	73c

Heavy Duty Power Connectors



Four heavy blades each able to carry 15 amp. at 125 volts or 10 amp. at 250 volts; brass shells keyed for polarity. Chassis unit fits 1/2" hole in any panel up to 1/2".

Cat. No.	Type	Net Price
S21748	Plug (cable)	\$1.47
S21749	Socket (cable)	1.47
S21750	Socket (chassis)	1.47

Antenna Cable Terminal End

Ideal for connecting co-axial cable to open wires; may be hung in air, assembled in 1/2" hole in bracket or insulator, or sweated to copper tubing type cable; body solder lug allows use with dipole and doublet.

Cat. No.	Net Price
S22800 93M5	88c
S22801 90-15	35c

"AN" Connectors

Amphenol "AN" connectors are now available for 1 to 42 circuits and for currents from 5 to 200 amperes. Every type shell, with fittings for rigid or flexible conduit, portable cords, or shielded cable can be supplied. Write us for details.

SOCKETS

AMPHENOL

CONNECTORS

Miniature Tube Sockets



Specially designed to maintain low resistance contact with the tiny prongs of modern miniature tubes used in timing aids and other compact electronic apparatus. Single hold mounting with retainer ring. All sockets occupy less chassis space than the tubes they support.

FOR HYTRON BANTAM JR.
Fit HY113, HY115, and HY125

Cat. No.	Type	Insulation	Price
S20465	78-511	Bakelite	10c
S20466	78-511T	Mica Filled	18c
S23179	54-5H	912-A	21c

FOR RAYTHEON
CK501, CK502, CK503, and CK504

Cat. No.	Type	Insulation	Price
S20467	78-5P	Bakelite	10c
S20468	78-5PT	Mica Filled	18c

FOR RCA
184, 185, and 185L; also 9000 etc.

Cat. No.	Type	Insulation	Price
S20469	78-7P	Bakelite	10c
S20470	78-7PT	Mica Filled	18c
S12220	54-7P	912-A	21c

UHF Miniature Sockets

Moulded of Amphphenol 912-A; for use with miniature coil forms and with Hytron Bantam Jr. tubes.

S20471	54-5H	5-cont.	21c
S20472	54-6H	6-cont.	21c

RCA Midget Sockets

Water type specially designed for UHF midget tubes such as 9001, 9002, and 9003; special mica-filled insulation for low loss; pin contacts have very low intercontact capacity.

Cat. No. S23180	Net Price	9c
-----------------	-----------	----

Johnson Midget Sockets

Self-aligning phosphor-bronze contacts heavily silvered; steatite insulation government grade G glazed top and sides, wax impregnated bottom; center shield grounds to chassis for 9,000 series and 184, 185, 1T4, 1RA, etc., tubes.

Cat. No. S23181	Type 276	Net Price	29c
-----------------	----------	-----------	-----

Amphenol Photocell Sockets

For RCA Pho-Wee and Cetron No. 5BB and No. 20 photocells; mounts in 1" round hole; held firmly by Amphenol No. 2-9 retainer ring; 3 contact style.

Cat. No. S23182	Net	8c
-----------------	-----	----

Hearing Aid Sockets and Plugs

For compact apparatus where minimum space is available for sockets and plugs. Sockets mount on 1/2" centers.

Cat. No.	Type	Contacts	Net
S23199	70-27	2 (plug)	6c
S23200	70-25	3 (plug)	8c
S23201	70-26	4 (plug)	9c
S23202	77-25	3 (socket)	14c
S23203	77-26	4 (socket)	15c

Miniature Cable Connectors



CHASSIS UNITS—
UNSHIELDED



Compact sockets and plugs suitable for connecting speakers, carbon microphones, doublet antennas, etc. Mount in 1/2" round hole with the No. 2-9 retainer ring furnished; use plugs with female MPF connectors; sockets take both shielded and unshielded plugs.

Cat. No.	Type	Con.	Net
S11624	78-83S	3	8c
S11625	78-84S	4	8c
S20453	78-83S	5	10c
S20454	78-84S	6	10c

Cat. No.	Type	Con.	Net
S10086	86-CP-3S	3	7c
S10087	86-CP-4S	4	7c
S20450	86-CP-5S	5	10c
S20451	86-CP-6S	6	10c

CHASSIS UNITS—
SHIELDED



Compact shielded units whose high quality dielectric and low contact resistance allow their use in photocell and other low-current circuits. To connect cables, use straight-shell connectors listed at right. Mfg. ctrs. 1/2".

Cat. No.	Type	Contacts	Net
S23183	PCG3F	3	18c
S23184	PCG4F	4	18c
S23185	PCG5F	5	20c
S23186	PCG6F	6	20c

Cat. No.	Type	Contacts	Net
S23187	PCG3M	3	18c
S23188	PCG4M	4	18c
S23189	PCG5M	5	20c
S23190	PCG6M	6	20c

Single Prong Plugs and Tip Jacks

These single prong plugs carry more current than ordinary cord tips. Prong is moulded into bakelite finger grip with deep recess to take insulation of wire.

Tip jacks mount in 1/2" round holes and are held by Amphenol No. 2-11 retainer ring. No screws or rivets required. Moulded bakelite body insulated for 10,000 volts.

Cat. No.	Type	Size	Net
S23204	71-1S	1/2"	3c
S23205	71-1M	1/2"	3c
S23206	71-1L	1/2"	3c

Cat. No.	Type	Size	Net
S23207	78-1P	.080"	5c
S23208	78-1S	1/2"	5c
S23209	78-1M	1/2"	5c
S23210	78-1L	1/2"	5c

*Fits standard phone tip.

UNSHIELDED CABLE PLUGS

Ideal for all plug-in connections where space is limited; recessed prongs avoid shorts in cable connections; molded finger grip; fit 83S sock.

Cat. No.	Type	Contacts	Net
S20455	71-3S	3	7c
S20456	71-4S	4	7c
S20457	71-5S	5	10c
S20458	71-6S	6	10c

CABLE PLUGS SHIELDED

For cables up to 1/2" O.D.; cad-plated shell 1/2" diam. by 1 1/2" long; male fits 83S sockets.

Cat. No.	Type	Contacts	Net
S11620	MPM3S	3	18c
S11621	MPM4S	4	19c
S11622	MPM5S	5	21c
S11623	MPM6S	6	21c

SHIELDED PLUG (FEMALE)

Cat. No.	Type	Contacts	Net
S23211	MPP3S	3	18c
S23212	MPP4S	4	20c
S23213	MPP5S	5	22c
S23214	MPP6S	6	22c

Shielded Miniature Cable Connectors



Straight-shell units (male or female) fit shielded chassis units listed at left; for connecting two cables, use flanged-shell female and straight-shell male. Connectors are moulded bakelite in cad-plated brass shells 1 1/2" long by 1/2" diam.; take cables up to 1/2"; cable shield can be soldered directly to shell. Male connector is adjustable for protruding or recessed prongs.

STRAIGHT-SHELL CONNECTORS

Cat. No.	Type	Contacts	Net
S23195	MPP3L	3	18c
S23196	MPP4L	4	21c
S23197	MPP5L	5	22c
S23198	MPP6L	6	22c

FLANGED-SHELL CONNECTORS

Cat. No.	Type	Contacts	Net
S23191	MPM3L	3	18c
S23192	MPM4L	4	21c
S23193	MPM5L	5	22c
S23194	MPM6L	6	22c

FLANGED-SHELL CONNECTORS

Cat. No.	Type	Contacts	Net
S24184	MPP3	3	18c
S10691	MPP4	4	19c
S20460	MPP5	5	21c
S20461	MPP6	6	21c

UHF Tip Jack

Insulated with 912-A. Fits standard phone tip. Mounts in 1/2" round hole, with 2-9 retainer ring.

Cat. No. S23215	54-1H	Net Price	15c
-----------------	-------	-----------	-----

Cable Connectors Standard Size



Standard socket and plug with black enameled metal cap that snaps on. Rubber grommet protects wire. Ideal for speakers and mikes. Takes cable up to 1/2".

Cat. No.	Female	Male	Prongs	Net Each
S1307	S1300	4		
S1308	S1301	5		
S1309	S1302	6		
S1310	S1303	7		
S1311	S1304	8		
S1312	S1305	9		
	S1306	11		

Fully Shielded Multiple Cable Connector



A new improved cable connector. A drawn brass shell protects the connector and carries threads and coupling ring. It will withstand rough usage and exposure. Positive contacts. The male connector shells have a key and the female connector shells have a keyway for pin alignment. Take cables up to 1/2" diam.

Cat. No.	Type	No.	Prongs	Net Price
S1368	04M	4		.73
S1369	05M	5		.73
S1370	06M	6		.73
S1371	08M	8		.73
S1372	012M	12		1.18

Cat. No.	Type	No.	Prongs	Net Price
S1371A	04F	4		.73
S1372A	05F	5		.73
S1373	06F	6		.73
S1374	08F	8		.73
S1375	012F	12		1.18

Cat. No.	Type	No.	Prongs	Net Price
S1376	P04F	4		.73
S1377	P05F	5		.73
S1378	P06F	6		.73
S1379	P08F	8		.73
S1380	P012F	12		1.18

Retainer-Ring-Mounted Plugs

Moulded of black bakelite; fit panels 19 to 16 gauge; furnished with No. 4 retainer ring.

Cat. No.	Type	Pins	Net Ea
S23216	CP4	4	7c
S23217	CP5	5	7c
S23218	CP6	6	7c
S23219	CP7	7	7c
S23220	CP7L	7L	7c
S23221	CP8	8	8c
S23222	CP9	9	10c
S23223	CP11	11	14c

Electrical and Mechanical Characteristics of Amphenol Insulations

Material	Dielectric Strength V. per MIL	Dielectric Constant		Power Factor		Loss Factor		Tensile Strength Lbs. per sq. in.	Softening Temp. F.	Moist. Absorp. %
		1 Mc	10 Mc	1 Mc	10 Mc	1 Mc	10 Mc			
Black bakelite	400-500	5.9	..	.035	..	.178	..	8300	302*	.2%
Mica-Filled Bakelite	475-600	5	..	.008	..	.040	..	6500	275*	.07%
Ultra-Low-Loss Steatite	300-500	6.0	5.8	.0006	.0004	.0038	.0023	8500	1420*	.1%
Amphenol "912-A"	500-700	2.6	2.6	.0002	.0003	.0005	.00078	7000	190*	.05%

Transmitting -:- R. F. CHOKES -:- Power Line

Millen 2.5 M.H. R.F. Choke

A highly efficient midge RF choke of original design; available in mounting styles and with connecting means for every installation need. Handles 250 Ma.



Cat. No.	Connection	Mounting	Net
34100	Wire leads	Stearite standoff	36c
34101	Wire leads	Threaded stud	30c
34102	Solder lugs	Threaded stud	36c
34103	Wire leads	Self support	30c
34104	Threaded studs both ends		36c

UNIVERSAL 1 M.H. 300 M.A. R.F. CHOKES			
34105	Wire leads	Stearite standoff	36c
34106	Wire leads	Threaded Stud	30c
34107	Solder lugs	Threaded Stud	36c
34108	Wire leads	Self support	30c
34109	Threaded studs both ends		36c

Millen Iron Core Xmitting Choke

Handles 500 Ma. in amateur band; especially effective at 14 Mc. Wound on iron core, with spun-glass insulated wire. Cat. No. 34150 Net Price \$1.75

Coto Transmitting Choke

Type C1-20—A heavy-duty choke for the power stage. Scaled to the 160, 80, and 40 meter bands. The effective impedance is high enough to make parallel plate feed practical. Current 600 mls. Inductance, 3.6 mh.; DC resistance, 11 ohms; Size, 3 1/2" x 1 1/2".



Type C1-21—Designed for maximum impedance in the 80, 40, and 20 meter bands. Stearite core, current 600 mls. Inductance, 1.1 mh.; DC resistance, 6 ohms; Size, 3 1/2" x 1 1/2".
Cat. No. S6410 C1-20
Cat. No. S6411 C1-21
Net each 73c

Heavy Duty Transmitting R. F. Choke

Designed for high power transmitters operating in the 20, 40, 80, and 160 meter amateur bands. Inductance 2.5 mh. Distributed capacity less than 1.5 mmf. DC resistance 8 ohms. Maximum recommended DC (continuous) 500 milliamperes. Overall size (without brackets) 1 1/2" diameter 2 1/2" long.
Cat. No. S2415—Type CH-500 Net \$1.05

Coto 250 Ma. Choke

Coto RF choke—Meets a demand for a choke capable of carrying more current than the popular 125 ma. type. Retaining all the features, it will pass 250 milliamperes without heating. Inductance 2.2 mh.; DC resistance, 18.5 ohms; size, 1 1/2" x 1 1/2". Cat. No. S6488 Type CH-12. Net Price 35c

2.1 M.H. R.F. Chokes

Small in size and so light in weight that it can be supported by its own leads.

The five universal wound pies are mounted on a 1" insulative core. Length across caps is 1 1/2"; diameter 1"; inductance 2.1 mh.; DC resistance 45 ohms; dist. capacity 1 mmf.; 125 milliamperes.
Cat. No. S2413—Type CH-X Net Price 30c

"CH 8" R.F. Chokes

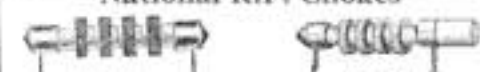
Designed particularly for short wave and ultra-short wave receivers and transmitters. Choke measures 1 1/2" x 1 1/2"; inductance 8 millihenries. DC resistance 70 ohms; distributed capacity 3 mmf.; current carrying capacity 125 milliamperes.
Cat. No. S2416—Type CH-8 Net Price 90c

National High Voltage Xmitting Choke

Suitable for parallel or series feed circuits in transmitters up to 3,000 volts modulated plate supply; without plate modulation, suitable up to 4,000 volts. Effective in 28 and 14 mc. bands as well as in 1.7, 3.5, and 7 mc. bands. Rated 6 dc ohms, 800 ma., 225 mh., 0.6 mmfd. dist. cap., 12,500 volts breakdown to metal base. Piv wound.
Cat. No. S24183 Type R-175
Net Price \$1.80



National R.F. Chokes



R-100 . . . for low powered transmitters and high frequency receivers; 2 mh.; 50 ohms DC resistance; 125 ma.; distributed capacitance 1 mmf. Four section continuous universal winding on insulative core; for partial or standard resistor clip mounting.
Cat. No. S13581 Net Price 30c
R-100U . . . same as R-100 but mounts on chassis by means of stand-off insulator at end.
Cat. No. S13582 Net Price 36c
R-300 . . . similar to R-100 but rated 1mh., 10 ohms, 300 ma., distributed capacity 1 mmf.
Cat. No. S13583 Net Price 30c
R-300U . . . same as R-300 but stand-off mounting.
Cat. No. S13584 Net Price 36c
R-201 . . . two-section, honeycomb-wound choke in moulded R-39 case; suitable for output circuit of 2nd detector in H.F. receivers (475 KC HF). Inductance 12 mh. approx., DC resistance about 120 ohms.
Cat. No. S13585 Net Price 82c

National Transmitting Chokes

R-152 . . . for 80 and 160 meters; honeycomb coils on insulative core; 4 mh.; 10 ohms; 600 ma. Cat. No. S13586
Net Price \$1.50
R-154 . . . for 20, 40, and 80 meters; 1 mh.; 6 ohms; 600 ma. Cat. No. S13587
Net Price \$1.50
R-154U . . . same coil and rather as R-154 but without small insulating pillar and 3rd foot. Cat. No. S13588
Net Price \$1.20



Shielded R.F. Chokes

Completely shielded to prevent stray coupling. Impregnated universal winding. Diameter 1 1/2". Inductance 16 M.H. DC Res. 45 ohms. Dist. Cap. 3 mmf. Current rating 100 M.A.
Cat. No. S19240—Type CH-10H Net Price 60c



Bud Lattice Wound R.F. Chokes

For general purposes. Silk covered enameled copper wire wound on white ceramic bobbin and impregnated against moisture. Mount by 6-32 screw through center. Soldering lug terminals.



Cat. No.	Type No.	M.H.	Ohms	M.A.	Net
S24179	CH-1212	2.5	28	125	26c
S21795	CH-1213	3.4	36	125	29c
S21796	CH-1214	5.5	46	125	32c
S21797	CH-1215	8	60	125	32c
S21798	CH-1216	10	85	125	35c
S21799	CH-1217	16	84	125	38c
S21800	CH-1218	30	190	100	41c
S21801	CH-1219	60	279	90	56c
S21802	CH-1220	80	332	80	59c

Special R.F. Chokes

Facilities are available at the Radio Shack to supply your special requirements for R.F. chokes in constructions not catalogued. Quotations on small or large lots will be promptly furnished on receipt of complete specifications of the chokes you need.

The Ohmite Dummy Antenna

The Ohmite Dummy Antenna is a special 100-watt resistor, constant in resistance and impedance at high radio frequencies. Used with an RF ammeter, it makes possible the measurement of output efficiency of a transmitter and for each stage.
Cat. No. S24180 73 ohm
Cat. No. S24181 600 ohm
Net Price, either impedance, \$3.82
250 Watt Dummy Antennas
Cat. No. S11743 73 ohm
Cat. No. S11744 600 ohm
Net Price, either impedance, \$7.64



Ohmite Power Line Chokes

Designed to suppress power line feedback interference of radio frequency from diathermy or transmitter.

Cat. No.	Type No.	Micro-Henries	Current Rating	Len.	Net Price
S7200	Z-20	13.5	5 Amp.	4"	\$.97
S7201	Z-31	14	10 Amp.	6 1/2"	1.62
S7202	Z-22	16.5	20 Amp.	8 1/2"	2.36

Ohmite R.F. Plate Chokes

These chokes are wound over ceramic tubes and coated with special moisture-resisting enamel.

Cat. No.	Type No.	Band Meters	Micro-Henries	Len.	Net Price
S7203	Z-1	5	5.4	1 1/2"	\$.15
S7204	Z-2	10-20	35	3"	.47
S24182	Z-0	2 1/2	..	1 1/2"	.15
S7205	Z-3	20-40	95	6"	.71
S7206	Z-4	20, 40, 80 and 160	220	6 1/2"	.97



Ohmite Parasitic Suppressor



An efficient combination of choke and vitreous enamel non-inductive resistor. Prevents parasitic oscillators when used in the grid leads of parallel or push-pull R.F. amplifier. Inductance .3 micro hys. Non-inductive res. 300 ohms, DC resistance of the res. .003 ohm. Maximum R.F. current 15 amps. 1 1/2" x 1 1/2".
Cat. No. S10187 Type P-300.
Net Price 88c

TRANSMITTING COILS - - COIL FORMS

National Ceramic Coil Forms



Consists of the NR-10A coil form (for 20 and 40 meters), the new Insulante plug-in base and socket. Plug has 5 prongs. Socket clamps on tie-bar of TMA units.

Coil form takes 26 turns $2\frac{1}{2} \times 3\frac{1}{2}$.
Cat. No. Type No. Net Ea.
S14448 NR-10A Coil Form \$.99
S14449 PB-15 Plug-In Base .99
S14450 NR-15 Socket 1.15

Buffer Coil Forms



Type NR-13 is $1\frac{1}{2} \times 3\frac{1}{2}$; type NR-13A is $1 \times 3\frac{1}{2}$. Both types drilled for leads and both fit PB-3 Plug-In Insulante.

Cat. No. Type No. Net Ea.
S14451 NR-13 Coil Form \$.75
S14452 NR-13A Coil Form .42
S14453 PB-3 Plug-In Base .51
S14454 NR-3 Socket .51
S14455 UR-12A Assembly of small coil form, plug, and socket 1.35
S14456 UR-13 Assembly of large coil form, plug, and socket 1.65

Polystyrene Coil Forms



Ultra-low loss winding forms of non-working polystyrene; specially suited to U. H. F. work.

Cat. No.	Type	O.D.	Length	Net Ea.
S14457	PRC-12	12c		
S14458	PRC-21	12c		
S14459	PRC-31	12c		
S14460	PRD-1	12c		
S14461	PRD-2	12c		
S14462	PRD-3	15c		
S14463	PRD-1	15c		
S14464	PRD-2	15c		
S14465	PRD-3	21c		
S14466	PRD-1	21c		
S14467	PRD-2	21c		

Plug-in Coil Forms

Made of low loss R-39, may be drilled and grooved as desired. Sizes are: NR-1 and NR-2, $1\frac{1}{2}$ diam. $1\frac{1}{2}$ long; NR-3, $\frac{1}{2}$ diam. $1\frac{1}{2}$ long; NR-4-5-6 $1\frac{1}{2}$ diam. $2\frac{1}{2}$ long.



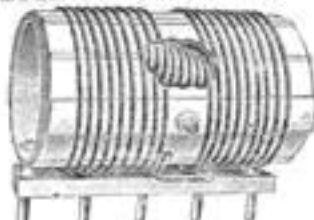
Cat. No.	Type	Prongs	Net Ea.
S14416	NR-1	4	33c
S14417	NR-2	same	24c
S14418	NR-3	same	21c
S14419	NR-4	4	51c
S14420	NR-5	5	51c
S14421	NR-6	6	51c



Combination shielded plug-in coil base, for mounting condensers and coils. PB10 complete with shield; PB10A without Type Prongs Price
PB-10 5 51c
PB-10 6 51c
PB-10A 5 27c
PB-10A 6 27c

Johnson Transmitting Coils and Coil Forms

"HI-Q" inductors, wire wound on ceramic forms, effectively resist temperature, atmospheric and mechanical conditions which damage coils supported by thermoplastic material. Dielectric losses are negligible, owing to the high quality porcelain employed, and its ribbed form. Featured is its rotating coupling coil at the electrical center of the inductor, enabling exact adjustment of coupling in interstate or output circuits. Available from 10 to 160 meters and in power ratings of 350 and 1000 watts, respectively. 10 to 80 meter inductors tuned with a 100 MMF. condenser; 160 meter tuned with a 150 MMF. condenser.



With or Without Rotating Link Coil

With Link Coil 350 Watts—Length 4 1/2"				Without Link Coil			
Cat. No.	Net Price	Band Meters	O. Dia.	Cat. No.	Net Price	Band Meters	O. Dia.
660	\$2.20	10	2"	670	\$1.15	10	2"
661	2.32	20	2 1/2"	671	1.23	20	2 1/2"
662	2.41	40	2 1/2"	672	1.29	40	2 1/2"
663	2.50	80	2 1/2"	673	1.35	80	2 1/2"
664	2.59	160	2 1/2"	674	1.41	160	2 1/2"

Coil Form only—for 10, 20 and 40 meter bands less link coil.
Cat. No. 666 Net Price .47
Coil Form only—for 80 and 160 meter bands less link coil.
Cat. No. 667 Net Price .50
Plug-in Strip—with plugs to fit above coil forms.
Cat. No. 668 Net Price .59
Jack Mounting Base—with jacks to fit above plug-in base.
Cat. No. 669 Net Price .59

With Link Coil 1000 Watts—Length 6 1/2"				Without Link Coil			
Cat. No.	Net Price	Band Meters	O. Dia.	Cat. No.	Net Price	Band Meters	O. Dia.
680	\$3.06	10	2 1/2"	690	\$1.76	10	2 1/2"
681	3.26	20	2 1/2"	691	1.91	20	2 1/2"
682	3.38	40	2 1/2"	692	2.00	40	2 1/2"
683	3.47	80	2 1/2"	693	2.06	80	2 1/2"
684	3.53	160	2 1/2"	694	2.15	160	2 1/2"

Coil Form only—for 10, 20 and 40 meter bands less link coil.
Cat. No. 686 Net Price .85
Coil form only—for 80 and 160 meter bands less link coil.
Cat. No. 687 Net Price .91
Plug-in Strip—with plugs to fit above coil forms.
Cat. No. 688 Net Price .88
Jack Mounting Base to fit the above plug-in base.
Cat. No. 689 Net Price .88

100 Watt Plug-In Coils with Link Coils and Ceramic Coil Forms



A series of small inductors for exciter and most power amplifier stages. Wound on ribbed, low-loss, low-absorption high grade porcelain, glazed all over, with roughened ribs to prevent wire slipping. Inductors are supplied complete with center or end links. Available for all bands from 10 to 160 meters. Rated at 100 watts. 10 to 80 meter inductors tune with 100 mmf. condenser. The 160 meter inductors tune with 150 mmf. condenser.



With Center Link				With Link			
Cat. No.	Net Price	Band Meters	Net Price	Cat. No.	Net Price	Band Meters	Net Price
640	97c	10	650 91c	646	97c	10	650 91c
641	97c	20	651 91c	647	97c	20	651 91c
642	97c	40	652 91c	648	97c	40	652 91c
643	97c	80	653 91c	649	97c	80	653 91c
644	97c	160	654 91c	650	97c	160	654 91c

Bud 50-Watt Oscillator and Buffer Coils

Air wound construction with acetate locking strips and ceramic mounting base designed to keep coil a reasonable distance from chassis. Base design permits easy removal without disturbing winding when changing coils. All coils fit standard 5-prong socket. 160 meter coils have special reinforcements for added winding support. End linked coils are not center tapped; center linked and adjustable link coils have main winding center tapped.



Mmf. to				Mmf. to			
Band Meters	End Linked	Center Linked	Low End Price	Adj. Ctr. Link	Tune Low End Price	Net	Low End Price
160	S14533	S14534	90 97c	S14545	95	97c	
80	S14535	S14536	75 88c	S14546	75	88c	
40	S14537	S14538	50 88c	S14547	50	88c	
20	S14539	S14540	33 88c	S14548	33	88c	
10	S14541	S14542	28 88c	S14549	21	88c	
5	S14543	S14544	18 73c				

Millen Quartz Q Coil Forms



Quartz Q coil forms are made of highly polymerized styrene which possesses remarkably low frequency losses. Quartz Q can be readily drilled, and winding may be imbedded into

form by the use of Quartz Q coil dope. Available in two sizes.

MIDGET COIL FORM

$1\frac{1}{2}$ " in diameter with plug and socket base. Cat. No. 43001
Net Price .90c
Cat. No. 40205 Plug base only 24c
41205 Socket base only 30c

INTERMEDIATE COIL FORM

Same coil form as above except $1\frac{1}{2}$ " dia., and large plug and socket.
Cat. No. 44001 Complete assembly \$1.20
40305 Plug base .45
41305 Socket base .45

Amphenol Coil Forms

Miniature Plug-in

Specially suited to use in transceivers, low-power transmitters, and receivers that work the ultra high frequencies. Only $1\frac{1}{2}$ " in diameter. Fit U.H.F. miniature sockets listed on page 81



Cat. No.	Type No.	Prongs	Net
S12232	24-5H	5	24c
S12233	24-6H	6	24c

Standard Plug-in

Coils wound on these forms will have same "Q" as those wound on air but are better because they may be sealed against losses due to gathering of surface dust. Prongs fit standard tube sockets.



Cat. No.	Type No.	Prongs	Net
S12229	24-4P	4	29c
S12230	24-5P	5	32c
S12231	24-6P	6	35c

Permanent Mounting Form

Same size and style as coil forms described above but with raised hole in center of base to take a self-tapping screw. Handy for mounting directly on wave band switch, tuning condenser, or chassis.



Cat. No. S12234 Net, each .90c

Polystyrene Coil Dope "912"

Does not affect electrical characteristics of coil winding. Prevents moisture absorption.



Cat. No.	Size Bottle	Net Price
S11025	2 ounce	29c
S10092	4 ounce	38c
THINNER FOR AMPHENOL "912"		
S21794	2 ounce	15c

TRIMMER--PADDER--NEUTRALIZING CONDENSERS

Centralab Silvered-Ceramic Trimmers

Interchangeable with air trimmers for most applications and giving definite advantages in space requirements and mechanical stability.

Type S22 and S23 have steelite base and may be mounted directly on metal with little increase in minimum capacity. Pure silver is fired on ground optically flat surfaces to form rotor and stator plates. Small mass and excellent balance of rotor make shaft lock unnecessary even at high vibration.

Full capacity range is covered on 180° shaft rotation; may be continuously rotated. Power factor at 1 Mc. is less than 0.2%; voltage rating 500 d-c.



Cat. No.	Type	Capacity Mmf.	Temp. Coef.	Net Price
S21803	S23-AN	20-125	Neg.*	
S21804	S23-BN	10-100	Neg.*	
S21805	S23-DN	8-50	Neg.*	
S21806	S23-EN	8-25	Neg.*	
S21807	S23-AZ	12-60	Zero	\$1.47 each
S21808	S23-BZ	10-50	Zero	
S21809	S23-DZ	6-25	Zero	
S21810	S23-EZ	5-12	Zero	
S21811	S23-HN	7-45	Neg.*	
S21812	S23-CN	4.5-25	Neg.*	
S21813	S23-DN	2-6	Neg.*	88c each
S21814	S23-AZ	4.5-25	Zero	
S21815	S23-BZ	2.5-13	Zero	
S21816	S23-CZ	2-7.5	Zero	

*Minus .0005 mmf./mmf./degree C.



Type S20 is similar to above but base is of thin ceramic high-dielectric material; variable plate is semi-circular metal spring-held against flat surface of insulating spacer.

S21817	S20-A	2.0-6	Neg.*	44c
S21818	S20-B	5-20	Neg.*	
S21819	S20-C	7-35	Neg.*	

*Minus .0005 mmf./mmf./degree C.

Hammarlund APC-B Micro Condensers

Occupy minimum space, yet afford constant capacity through wide range of temperature, vibration, or humidity. Ideal as air-dielectric trimmers for gang condensers, I.F. transformers, and for padding r.f. circuits.

1" shaft extends 1/2" from insulating base. Screw driver adjustment.



Cat. No.	Type	Max. Mmf.	Min. Mmf.	Net Price
S12060	APC-25-B	25	3.0	\$1.08
S12061	APC-50-B	50	3.0	1.12
S12062	APC-75-B	75	4.5	1.25
S12063	APC-100-B	100	5.5	1.38
S12064	APC-140-B	140	6.5	1.51

Air Padding Condensers

Air dielectric condensers for use wherever space is at a premium. Will maintain constant capacity under any conditions of temperature, humidity or vibration. Insulating base.



Cat. No.	Type	Max. Mmf.	Min. Mmf.	Net Price
S2476	APC-25	25	3.0	\$.78
S2477	APC-50	50	3.0	.90
S2478	APC-75	75	4.5	1.02
S2479	APC-100	100	5.5	1.14
S2480	APC-140	140	6.5	1.35

Cardwell Type "E" Fixed Air Condensers



Cat. No.	Type	Cap. Mmf.	Peak Volts	Net Price
S10521	EC-80-F8	84	6	\$1.06
S10522	EC-100-F8	116	8	1.18
S10523	EC-175-F8	185	12	1.21
S10524	EC-200-F8	223	14	1.32

Cat. No.	Type	Cap. Mmf.	Peak Volts	Net Price
S10525	EC-80-F8	57	6	1.09
S10526	EC-75-F8	80	6	1.15
S10527	EC-100-F8	100	10	1.21
S10528	EC-150-F8	153	14	1.44
S10529	EC-200-F8	209	20	1.85

Cat. No.	Type	Cap. Mmf.	Peak Volts	Net Price
S10530	EC-50-F8	50	8	1.32
S10531	EC-100-F8	100	15	1.56
S10532	EC-150-F8	150	22	1.97
S10533	EC-200-F8	203	30	2.26

Cat. No.	Type	Cap. Mmf.	Peak Volts	Net Price
S10534	EC-60-F8	60	18	2.24



Fixed Plug-In Air Condensers

Type "J" Plug-In Fixed Air Condensers for boosting a tank circuit designed for 20 and 40 meters to 80 and 160. Just plug-in proper "J" unit into jack base and load tank to proper "C" for the lower frequencies. Insulation is alsmag 196.

Cat. No.	Type	Cap. Mmf.	Peak Volts	Net Price
S10515	JCO-50-08	50	7500	\$4.09
S10516	JCO-25-08	25	7500	2.97
S10517	JD-80-08	80	4700	4.09
S11341	JD-100-08	100	4700	4.82
S10518	JD-50-08	50	4700	2.97
S10519	JD-25-08	25	4700	2.09

Type JB-Jack Base for "J" fixed units shown above. Alsmag 196 insulation—21" x 21" x 1/2". Complete with nut, posts, screws, and nuts. Cat. No. S10520—Type JB Net Price 73c

Hammarlund Midget Padder Condensers



Range 3 to 30 mmf. Mounted on insulating base. Size 1" x 1". Min. dielectric. Cat. No. S2512. Net Price 18c

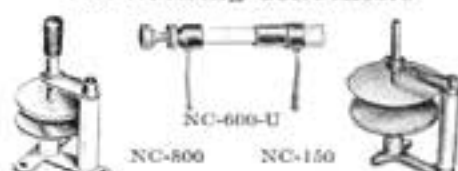
Eimac Vacuum Condensers



Satisfies the need for a more compact, highly efficient tank condenser for radio transmitters that utilize the more efficient modern circuits. Fills the entire capacity of a tank circuit into a space about one cubic inch, thereby eliminating much difficulty from stray capacity and inherent inductance in other types of circuit. Although this condenser is only 6 1/2 inches long by 2 inches in diameter, it has a peak radio frequency voltage rating of 32,000 volts, — a result of the extremely high vacuum attained by the exhaust methods developed by Eimac engineers; the I.F. current ratings of these units are from 20 to 50 amperes, depending upon the frequency.

Cat. No.	Type	Cap. Mmf.	Peak RF Volts	Net Price
S23506	VC6-20	6	20 KV	\$10.00
S23507	VC12-20	12	20 KV	11.30
S23508	VC25-20	25	20 KV	14.00
S23509	VC50-20	50	20 KV	16.70
S23510	VC6-32	6	32 KV	12.00
S23511	VC12-32	12	32 KV	13.30
S23512	VC25-32	25	32 KV	16.00
S23513	VC50-32	50	32 KV	18.70

National Neutralizing Condensers



NC-800 . . . disk type for RCA-800, HK54, etc. Micrometer adjustment and clamp; 2 to 10 mmf.

Cat. No. S13538 Net Price \$1.80

NC-150 . . . disk type, for HK354, RK36, 300T, and 852. Screw adjusting, 2 to 14 mmf.

Cat. No. S13539 Net Price \$4.35

NC-600 . . . largest disk type neutralizer suitable for W1-251A and similar tubes. Screw adjustment 4 to 14 mmf.

Cat. No. S13540 Net Price \$8.25

NC-600U . . . for beam power tubes; adjusts .5 to 5 mmf. As shown, with insulator for vertical mounting.

Cat. No. S13541 Net Price 36c

NC-600 . . . same as NC-600U but without insulator.

Cat. No. S13542 Net Price 30c

RTN . . . shown below, maximum capacity 18 mmf. at 3,000 volts; suitable for use with 10, 40, 47, and similar tubes. Supplied with 2 stand-off insulators.

Cat. No. S13543 Net Price \$1.20

Air Dielectric Padding Condensers



Have very low temperature coefficient; contained in aluminum shield 1 1/2" diam. Type W75, 75 mmf. 1 1/2" high.

Cat. No. S13544 Net Price \$1.50

Type W100, 100 mmf. 1 1/2" high.

Cat. No. S13545 Net Price 1.65

Experimenter Type Condensers

Brass plates, easily removable for capacitance change; bakelite insulate, slug bearing rotor; single hole mount.

Cat. No.	Type	Cap. Mmf.	Gap	Plates	Net Price
S13546	EX-15	15	.045"	5	57c
S13547	EX-25	25	.045"	7	57c
S13548	EX-35	35	.045"	10	66c
S13549	EX-50	50	.017"	6	60c
S13550	EX-100	100	.017"	12	66c
S13551	EX-140	140	.017"	15	84c

--- SPECIALS ---

Erie Molded Mica Condensers

Cat. No.	Type	Mmf.	Net Price
S23514	J	22	
S23515	J	27	
S23516	J	47	
S23517	J	56	
S23518	J	68	
S23519	K	100	
S23520	J	120	
S23521	J	150	
S23522	J	180	
S23523	J	270	
S23524	J	330	
S23525	J	390	
S23526	J	470	
S23517	K	500	

Air Padders

Ceramic base; 1" shaft 3 1/2" long; capacity 0.5 to 0.6 mmf.

Cat. No. S23528 Net Price 29c

BUD TUNING CONDENSERS

Double Bearing Midget Condensers



SEMI-CIRCULAR PLATES

These straight-line capacity midgets have Alsmag 196 insulation, double spring rotor contact, and bright cadmium finish.

Cat. No.	Type No.	SINGLE SPACING		Net Price
		Min. Range	Air Gap	
S22374	MC-1850	4-15	.024"	\$1.03
S22375	MC-1852	5-35	.024"	1.15
S22376	MC-1853	6-50	.024"	1.25
S22377	MC-1855	7-100	.024"	1.47
S22378	MC-1857	8-150	.024"	1.70
S22379	MC-1858	9-200	.024"	1.88
S22380	MC-1859	10-250	.024"	2.06
S22381	MC-1860	12-320	.024"	2.26

Cat. No.	Type No.	DOUBLE AND TRIPLE SPACING		Net Price
		Min. Range	Air Gap	
S22382	MC-1861	5-15	.060"	1.21
S22383	MC-1862	7-35	.060"	1.41
S22384	MC-1863	8-50	.060"	1.50
S22385	MC-1864	10-75	.060"	1.85
S22386	MC-1865	13-100	.060"	2.06
S22387	MC-1866	9-25	.095"	1.62
S22388	MC-1867	10-50	.095"	1.85
S22389	MC-1868	14-74	.095"	2.15

Tiny Mite Air Padders



For use where constant padder capacity is required under all temperatures and humidity conditions. Suitable for I.F. transformers, fixed-tuned exciter circuits, ganged coil padding, and plug-in coil padding, as they fit inside standard 1 1/2" coil forms. Adjustable by screw driver or hex wrench. Insulation and assembly similar to regular Tiny Mites.

Cat. No.	Type No.	Mmf. Range	Air Gap	Net Price
S22390	LC-1650	3-15	.017"	.76
S22391	LC-1651	4-24	.017"	.76
S22392	LC-1652	6-50	.017"	.88
S22393	LC-1653	7-75	.017"	1.00
S22394	LC-1654	9-100	.017"	1.12
S22395	LC-1655	4-10	.037"	.79
S22396	LC-1656	5-20	.037"	.94
S22397	LC-1657	3.5-30	.037"	1.12

Tiny Mite Dual Condensers

Similar to regular Tiny Mites but with ends held by insulated rods. Separate round plate on rotor shield sections.



Cat. No.	Type No.	Metal Range*	Air Gap	Net Price
S22398	LC-1659	2.5-8	.017"	\$1.53
S22399	LC-1660	3-15	.017"	1.70
S22400	LC-1661	4-24	.017"	1.85
S24000	LC-1662	6-50	.017"	2.08
S24001	LC-1663	9-100	.017"	2.26
S24002	LC-1664	4-10	.037"	1.62
S24003	LC-1665	5-25	.037"	1.76
S24004	LC-1666	5.5-25	.037"	1.91
S24005	LC-1667	6-35	.037"	2.06

*Per section.

Bud Beam Tube Neutralizing Condenser

The increased use of beam tube tubes in transmitters make this item particularly welcome. Constructed with two 1" disc plates. Insulation is Alsmag 196. Cap. 5 to 9 mmf. For 614's, 807, and 8K-42. Cat. No. S6344.



88c

While priority regulations remain in force, orders must be accompanied by applicable certification in order to ensure shipment on schedule.

"CE" Double Bearing Midgets



Electro-soldered brass rotor and stator plates, bright cadmium finish; Insulante end pieces insulate mounting bushings and angles from plates; front cone bearing and rear ball bearing for smooth action; noiseless spring rotor contact in separate from bearings.

Unit mounts on either base or panel; 1 1/2" dia. rotor plates.

Cat. No.	Type No.	Mmil. Range	Air Gap	Net Price
S24006	CE-2000	4-15	.030"	\$1.26
S24007	CE-2001	6-35	.030"	1.41
S24008	CE-2002	7-50	.030"	1.56
S24009	CE-2003	8-75	.030"	1.76
S24010	CE-2004	9-100	.030"	1.97
S24011	CE-2005	10-150	.030"	2.26
S24012	CE-2006	11-200	.030"	2.56
S24013	CE-2007	12-250	.030"	2.82
S24014	CE-2008	15-300	.030"	2.94

DOUBLE AND TRIPLE SPACING				
S24015	CE-2001	5-15	.060"	1.44
S24016	CE-2012	7-35	.060"	1.62
S24017	CE-2013	8-50	.060"	1.97
S24018	CE-2014	10-75	.060"	2.41
S24019	CE-2015	13-100	.060"	2.65
S24020	CE-2016	9-25	.090"	1.76
S24021	CE-2017	10-50	.090"	2.20
S24022	CE-2018	14-75	.090"	2.62

"CE" Single Bearing Midgets



For portable and mobile applications. Similar to units described above but with rotor locking nut, slotted shaft, and removable shaft extension.

S24023	CE-2020	4-15	.030"	\$1.00
S24024	CE-2021	6-35	.030"	1.09
S24025	CE-2022	7-50	.030"	1.21
S24026	CE-2023	8-75	.030"	1.35
S24027	CE-2024	9-100	.030"	1.41
S24028	CE-2025	10-150	.030"	1.62
Details: SPACING				
S24029	CE-2028	5-10	.060"	1.15
S24030	CE-2029	7-35	.060"	1.23
S24031	CE-2030	8-50	.060"	1.35

DOUBLE SPACING

Cat. No.	Type No.	Mmf. Range		Air Gap	Net Price
S24029	CE-2028	5-10	.060"		1.15
S24030	CE-2029	7-35	.060"		1.23
S24031	CE-2030	8-50	.060"		1.35

"CE" Dual Midgets



Similar to double-bearing units described above, but with wiping rotor contact at center for maximum efficiency in split stator transmitter plate or grid circuits.

air grid circuits				
S24091	CE-2032	6-35*	.030"	\$2.09
S24092	CE-2033	7-50*	.030"	2.26
S24093	CE-2034	8-75*	.030"	2.59
S24094	CE-2035	9-100*	.030"	2.82
S24095	CE-2036	10-150*	.030"	3.35
S24096	CE-2039	7-35*	.060"	2.41
S24097	CE-2040	8-50*	.060"	2.79
S24098	CE-2041	10-75*	.060"	3.06

*Per section.

Tiny Mite Tuning Condensers

Used where size and weight are important and for efficient UHF tuning. Rigid construction, close fitting bearings, positive rotor contact, electro-soldered plate assembly, Alsmag 196 insulation; rear shaft extension for gangster units may be mounted by single hole in panel, insulated from panel, and insulated from base; panel space 1 1/2" x 1 1/2".

Panel space 1" x 1"				
S24099	LC-1640	2.5-8	.017"	\$.68
S24100	LC-1641	3-15	.017"	.76
S24101	LC-1742	4-24	.017"	.88
S24102	LC-1843	5-35	.017"	.94
S24103	LC-1644	6-50	.017"	1.00
S24104	LC-1645	7-75	.017"	1.18
S24105	LC-1646	9-100	.017"	1.24
S24106	LC-1648	4-10	.037"	.82
S24107	LC-1649	5-15	.037"	1.08
S24108	LC-1650	5.5-25	.037"	1.09
S24109	LC-1651	6-35	.037"	1.29
S24110	LC-1652	8-50	.037"	1.53
S24111	LC-1653	3.5-6	.073"	.88
S24112	LC-1854	5.5-15	.073"	1.09
S24113	LC-1855	9-25	.073"	1.47

*Double bearing type.

Bud Midget Condensers



A real value! Rotor and stator of hard drawn brass. Soldered to shaft. Assures low R.F. resistance and permanent alignment. Insulation is of Insulante.

Cat. No.	Type No.	Cap. Range		Net Price
		Min. Range	Max. Range	
S6379	MC-324	2-10		70c
S6380	MC-325	3-15		70c
S6381	MC-326	3-20		70c
S6382	MC-327	4-25		76c
S6383	MC-145	5-50		82c
S6384	MC-301	6-80		99c
S6385	MC-321	6-100		1.00
S6386	MC-396	7-140		1.09
S6387	MC-320	7-150		1.18

Dual Spaced Condensers

The same construction as above, but wider spacing (.060"). Max. DC voltage unmodulated 800; Max. DC voltage modulated 600; peak volts 2,500.

Cat. No.	Type No.	Cap. Range		Net Price
		Min. Range	Max. Range	
S6388	MC-327	2-8		70c
S6389	MC-311	4-15		86c
S6390	MC-319	6-35		1.03
S6391	MC-312	7-50		1.12

Double Gang Midgets

Plate construction and finish are identical with other Bud midget condensers but unit is mounted on sturdy, glazed ceramic base that permits condenser to mount on metal chassis while remaining wholly insulated. Also has single-hole panel mounting provision. Shield plate between stator sections.

Cat. No.	Type No.	Mmf. Range*	Air Gap	Net Price
S24114	MC-911	6-100	.024"	\$2.50
S24115	MC-912	7-140	.024"	2.80
S24116	MC-913	5-35	.060"	2.50
S24117	MC-914	4-20	.060"	2.35
S24118	MC-329	9-25	.095"	2.82
S24119	MC-330	7-50	.060"	2.82
S24120	MC-331	8-75	.060"	2.82

*Per section.

Bud Neutralizing Condensers

A popular series of neutralizing condensers as specified in several circuits in the Taylor Tube manual. A soldered process is used after assembly of rotor and stator plates to insure very low R.F. resistance. Insulation is Alsmag 196. May be either chassis or single hole panel mounted. Double bearings. Can also be used for band spread or tuning in ultra-high frequency receivers.

Cat. No.	Type No.	Range Mmf.	Air Gap.	Net Price
S11288	MC 567	3-8	.200"	\$1.27
S11289	MC 568	3.5-10	.130"	1.27
S11290	MC 565	4-15	.060"	1.27
S11291	MC 566	7-35	.095"	1.68

Double and Triple Spaced Condensers

Similar in construction to the neutralizing condensers described above. Ideal for low-powered transmitters and excitors.

S11293	MC807	6-35	.060"	\$1.47
S11294	MC808	7-50	.060"	1.56
S11295	MC809	8-75	.060"	1.91
S11296	MC811	10-100	.060"	2.06
S11297	MC805	9-25	.095"	1.68
S11298	MC806	11-50	.095"	1.91
S11299	MC807	14-75	.095"	2.21

Space does not permit listing the entire BUD line but we are in a position to fill orders for any BUD item. Write us for your copy of the latest BUD catalog.

HAMMARLUND CONDENSERS

Single and Dual Variable Condensers



Specially adaptable to police, amateur, aircraft, and marine work; 1" shafts arranged for ganging; all plates of brass .0225" thick; Isolantite insulation; double bearings on all units ensure perfect alignment and dependability.

Single Condensers MIDLINE PLATES

Cat. No.	Type No.	Max. Mmf.	Min. Mmf.	Net Price
S2442	MC-325-M	320	12	\$2.40
S2443	MC-250-M	250	11	2.16
S2444	MC-200-M	200	10	1.98
S2445	MC-140-M	140	8	1.80
S2446	MC-100-M	100	7	1.68
S2447	MC-75-M	80	6.5	1.56
S2448	MC-50-M	50	6	1.44

SEMI-CIRCULAR PLATES

S2449	MC-140-S	140	9	\$1.88
S2450	MC-100-S	100	7.5	1.68
S2451	MC-75-S	80	7	1.56
S2452	MC-50-S	50	6	1.44
S2453	MC-35-S	35	5	1.38
S2454	MC-20-S	20	4.5	1.32

DOUBLE-SPACED SINGLE CONDENSERS MIDLINE PLATES (Air Gap .0715)

S2455	MC-50-MX	50	9	\$1.68
S2456	MC-35-MX	32	7	1.56
S2457	MC-20-MX	20	7	1.44

SEMI-CIRCULAR PLATES (Air Gap .0715)

S2458	MC-50-SX	50	9.5	\$1.68
S2459	MC-35-SX	32	7.5	1.56
S2460	MC-20-SX	20	6.5	1.44

Dual Condensers MIDLINE PLATES

Cat. No.	Type No.	Max. Cap. Mmf.	Min. Cap. Mmf.	Net Price
S2463	MCD-140-M	140	7	\$3.24
S2464	MCD-100-M	100	6	3.00
S2465	MCD-50-M	50	5	2.76

SEMI-CIRCULAR PLATES

S2466	MCD-140-S	140	8	\$3.24
S2467	MCD-100-S	100	6.5	3.00
S2468	MCD-50-S	50	5.5	2.76

DOUBLE-SPACED DUAL CONDENSERS (Air Gap .0715)

S2469	MCD-50-MX	50	6	\$2.88
S2470	MCD-35-MX	32	6.5	2.88

"MX"—Midline Plates.

"SX"—Semi-Circular Plates.

Micro Condensers



A new series of ultra-high frequency single and dual variable condensers with features affording the

highest efficiency. Cadmium plated soldered brass plates and Isolantite insulation insure rigidity, stability, and lowest losses. Noiseless in operation. Single hole or base mounting.

SINGLE CONDENSERS

Cat. No.	Type No.	Max. Cap. Mmf.	Min. Cap. Mmf.	Net Price
S2485	HF-15	17.5	3.0	\$.84
S2486	HF-35	35	5.6	.96
S2487	HF-50	50	4.1	1.02
S2488	HF-100	100	5.6	1.26
S2489	HF-140	140	6.7	1.44

DUAL CONDENSERS

S2491	HF-50	50	3.7	\$2.16
S2492	HF-100	100	5.2	2.46
S2493	HF-140	140	6.2	2.70
S2494	*HF-200-X	200	5.0	2.28

* Double speed.

"HFA" Low Power Transmitting Condensers

Ideal for low-power and portable transmitters and receivers. Type HFAD has open rotors and stators for perfect counter-balancing; HFA has single Isolantite end plate.



GENERAL SPECIFICATIONS: Shaft extension, 1 1/2". Plate thickness, .025". Single hole mounting. "B" types have base mounting brackets. Other features similar to HFB.

Cat. No.	Type No.	Per Section Gap Mmf.	Plates	Net Price
S12151	HFA-75-A	75	15 .020	\$1.44
S12152	HFA-100-A	100	19 .020	1.56
S12153	HFA-140-A	140	27 .020	1.80
S12154	HFA-10-B	10	3 .030	1.20
S12155	HFA-15-B	15	5 .030	1.26
S12156	HFA-25-B	25	7 .030	1.32
S12157	HFA-35-B	35	10 .030	1.38
S12158	HFA-50-B	50	14 .030	1.44
S12159	HFA-100-B	100	27 .030	1.92
S12160	HFA-150-B	150	39 .030	2.22
S12161	HFA-15-E	15	9 .070	1.32
S12162	HFA-30-E	30	17 .070	1.50

BALANCED, SPLIT-STATOR CONDENSERS

S12163	HFA-75-A	75	15 .020	\$3.00
S12164	HFAD-100-A	100	19 .020	3.18
S12165	HFAD-140-A	140	27 .020	3.54
S12166	HFAD-25-B	25	7 .030	2.34
S12167	HFAD-35-B	35	9 .030	2.46
S12168	HFAD-50-B	50	13 .030	2.64
S12169	HFAD-100-B	100	27 .030	3.24
S12170	HFAD-150-B	150	39 .030	3.84
S12171	HFAD-15-E	15	9 .070	2.40
S12172	HFAD-30-E	30	17 .070	2.76

† Use rear Isolantite panel.

"HFB" Transmitting and Receiving Condensers

This new line of transmitting and receiving condensers embodies features that contribute largely to the personal safety of the operator. Control shafts are insulated for use in circuits having high voltage connected directly to the rotor. Isolantite end plates insulate the rotor from the mounting brackets. Style "G" can be used with 2,375 volts to tube plates, 100% modulated; style "F", 2,000 volts; style "E", 1,600 volts.

GENERAL SPECIFICATIONS: All shafts, 1" diam. Plates, semi-circular .025" thick; solid brass, cadmium-plated, and soldered. Rear bearings, single ball thrust. Shaft extension, 1 1/2". End plates, 1 1/2" Isolantite.

Cat. No.	Type No.	Per Section Gap Mmf.	Plates	Net Price
S12173	HFB-50-C	50	11 .050	\$2.76
S12174	HFB-100-C	100	23 .050	3.06
S12175	HFB-150-C	150	33 .050	3.36
S12176	HFB-50-E	50	15 .070	2.94
S12177	HFB-100-E	100	29 .070	3.18
S12178	HFB-50-F	50	19 .100	3.00
S12179	HFB-100-F	100	39 .100	4.14

BALANCED, SPLIT-STATOR CONDENSERS

S12180	HFBD-35-C	35	8 .050	\$1.68
S12181	HFBD-50-C	50	11 .050	4.20
S12182	HFBD-100-C	100	23 .050	4.98
S12183	HFBD-200-C	200	43 .050	6.60
S12184	HFBD-35-E	35	11 .070	3.72
S12185	HFBD-50-E	50	19 .070	4.26
S12186	HFBD-100-E	100	29 .070	5.40
S12187	HFBD-35-F	35	14 .100	3.96
S12188	HFBD-50-F	50	26 .100	4.95
S12189	HFBD-35-G	35	17 .125	4.35

* Rounded Plates.

Neutralizing Condensers

A new type high-voltage neutralizing condenser offering the advantages of horizontal adjustment. Type N-10 suitable for tubes similar to 755, 35T, RK35, 808, HK54. Type N-20 a heavy-duty condenser for such tubes as HK354, 100T, RK36, and T200.

Cat. No.	Type No.	Cap. Range Mmf.	Net Price
S2510	N-10	2-10	\$2.76
S2511	N-20	2-20	5.88

Heavy-Duty Transmitting Condensers

A new, modern, sturdy priced, heavy-duty transmitting condenser, featuring heavy aluminum end plates, Isolantite cross-bars, non-inductive self-cleaning beryllium contacts, full floating rotor bearing, polished heavy aluminum plates accurately spaced. Available in a wide variety of capacities and working voltages, these condensers are ideal from modern up-to-date transmitters with power outputs ranging from 200 watts to 1 kw.



SINGLE CONDENSERS

Cat. No.	Type No.	Cap. Mmf.	Peak Volts	Overall Lgth.	Net Price
S2519	TC-220-L	220	2,000	4 1/2	\$3.78
S2521	TC-90-K	95	3,750	2 1/2	3.42
S2522	TC-165-K	170	3,750	4 1/2	3.90
S2523	TC-220-K	225	3,750	4 1/2	4.80
S2525	TC-320-K	340	3,750	6 1/2	6.00
S2526	TC-240-J	250	4,250	8 1/2	6.12
S2527	TC-25-H	25	6,000	2 1/2	3.06
S2528	TC-50-H	53	6,000	4 1/2	3.60
S2529	TC-110-H	115	6,000	6 1/2	5.40
S2531	TC-40-G	45	6,750	4 1/2	4.20
S2532	TC-65-G	72	6,750	5 1/2	5.28
S2533	TC-100-G	110	6,750	7 1/2	6.72
S2534	TC-150-G	165	6,750	10 1/2	8.88
S2535	TC-55-F	60	7,500	5 1/2	4.80

SPLIT-STATOR CONDENSERS

S2537	TCB-80-L	88	2,000	4 1/2	4.98
S2538	TCB-210-L	215	2,000	5 1/2	6.24
S2539	TCB-90-K	95	3,750	4 1/2	5.64
S2540	TCB-165-K	170	3,750	6 1/2	6.96
S2541	TCB-325-K	335	3,750	11 1/2	12.30
S2542	TCB-240-J	250	4,250	11 1/2	11.40
S2543	TCB-50-H	53	6,000	6 1/2	5.88
S2544	TCB-110-H	115	6,000	11 1/2	9.60
S2545	TCB-40-G	48	6,750	7 1/2	6.30
S2546	TCB-75-G	82	6,750	11 1/2	8.70
S2547	TCB-55-F	60	7,500	11 1/2	8.22

Medium Power Single and Dual Transmitting Condensers

A new popular series of transmitting condensers for high frequency and ultra-high frequency medium and low powered units. Plates are of aluminum.



Isolantite insulation and silver-plated Beryllium contact wiper assure lowest losses and lowest series resistance. Small size and light weight specially recommended for use in aeroplane and mobile or portable units.

GENERAL SPECIFICATIONS — Voltage ratings are 5500 V for "A" types, 3000V for "B" types, and 1000V for "C" types.

"MTC" SINGLE CONDENSERS

Cat. No.	Type No.	Capacity Mmf.	Plates	Net Price
S2499	*MTC-35-A	35 mmf.	15	\$3.60
S2500	*MTC-20-B	20 mmf.	5	2.46
S2501	*MTC-35-B	35 mmf.	7	2.58
S2502	*MTC-50-B	50 mmf.	11	2.56
S2503	*MTC-100-B	100 mmf.	21	3.18
S2504	*MTC-150-B	150 mmf.	31	3.66
S2505	*MTC-50-C	50 mmf.	5	2.46
S2506	*MTC-100-C	100 mmf.	11	2.64
S2507	*MTC-150-C	150 mmf.	15	2.88
S2508	*MTC-250-C	250 mmf.	25	3.18
S2509	*MTC-350-C	365 mmf.	35	3.48

* Polished round edged plates—.040" thick.

† Polished round edged plates—.025" thick.

‡ Standard type plates—.025" thick.

"MTCD" DUAL CONDENSERS

Cat. No.	Type No.	Cap. Per Sec. Mmf.	Cap. Range Mmf.	Net Price
S2491	*MTCD-20-B	20 mmf.	5	\$3.36
S2492	*MTCD-35-B	35 mmf.	7	3.60
S2493	*MTCD-50-B	50 mmf.	11	3.90
S2494	*MTCD-100-B	100 mmf.	21	5.15
S2495	*MTCD-50-C	50 mmf.	5	3.30
S2496	*MTCD-100-C	100 mmf.	11	3.60
S2497	*MTCD-150-C	150 mmf.	15	3.90
S2498	*MTCD-250-C	265 mmf.	25	4.50

* Polished round edged plates .025" thick—.070" plate spacing.

† Standard type plates .025" thick—.031" plate spacing.

CARDWELL CONDENSERS

Midway Featherweight Condensers

Straight line capacity type. Light in weight, compact (panel space only 3" x 2 1/4"), adapted to all receivers and 25 watt or lower CW transmitters, also portable equipment. Extremely rugged and rigid. The air gap between plates is .031" Shaft diameter 1/8". Insulation material is Mycalex.

*Air Gap .050

SINGLE CONDENSERS

Cat. No.	Type	Max. Cap.	Min. Cap.	Peak Voltage	Net Price
S2600	MR-25-B8	25	5	1,000	\$2.45
S2601	MR-50-B8	50	5	1,000	2.53
S2602	MR-70-B8	70	7	1,000	2.62
S2603	MR-105-B8	105	8	1,000	2.70
S2604	MR-150-B8	150	10	1,000	2.94
S2605	MR-200-B8	200	11	1,000	3.23
S2606	MR-305-B8	305	14	1,000	3.53
S2607	MO-165-B8*	165	15	1,000	2.47

DOUBLE CONDENSERS

Cat. No.	Type	Max. Cap. Each	Min. Cap. Each	Peak Voltage Each	Net Price
S2608	MR-25-BD	25	5	1,000	\$3.23
S2609	MR-50-BD	50	5	1,000	3.47
S2610	MR-70-BD	70	7	1,000	3.65
S2611	MR-100-BD	100	8	1,000	3.79
S2612	MR-150-BD	150	9	1,000	3.91
S2613	MR-200-BD	200	11	1,000	4.41
S2614	MO-180-BD*	180	15	1,000	5.94

Transmitting Condensers

A very popular condenser in the amateur experimental and commercial fields. The air gap is .070" and is especially suitable for use in CW transmitters up to 100 watts power or phone transmitters of 50 watts carrier with 100% modulation. The insulation is Mycalex.

SINGLE CONDENSERS

Cat. No.	Type	Max. Cap.	Min. Cap.	Peak Voltage	Net Price
S2615	MT-20-G8	20	5	3,500	\$2.44
S2616	MT-35-G8	35	5	3,500	2.62
S2617	MT-50-G8	50	8	3,500	2.91
S2618	MT-70-G8	70	10	3,500	3.32
S2619	MT-100-G8	100	12	3,500	3.65
S2620	MT-150-G8	150	16	3,500	4.47
S2621	MG-35-N8	35	12	3,500	4.47

DOUBLE CONDENSERS

Cat. No.	Type	Max. Cap. Each	Min. Cap. Each	Peak Voltage Each	Net Price
S2622	MT-20-GD	20	7	3,500	\$4.12
S2623	MT-35-GD	35	7	3,500	4.47
S2624	MT-50-GD	50	9	3,500	4.73
S2625	MT-70-GD	70	10	3,500	5.20
S2626	MT-100-GD	100	13	3,500	5.94

Standard Transmitting Condensers

(G.E. MYCALEX INSULATION)

These condensers have heavy rotor and stator plates with rounded edges which are buffed and polished insuring minimum corona losses and maximum peak breakdown voltage. A self cleaning phosphor bronze contact spring accomplishes a perfect rotor connection offering very low R.F. contact resistance.

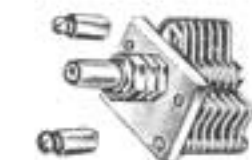
SINGLE CONDENSERS

Cat. No.	Type	Max. Cap.	Min. Cap.	Peak Voltage	Net Price
S2627	XT-220-P8	220	20	3,500	\$3.70
S2628	XT-440-P8	440	40	3,500	5.70
S2629	XP-90-K8	90	10	3,750	3.35
S2630	XP-165-K8	165	22	3,750	4.82
S2631	XP-290-K8	290	35	3,750	7.06
S2632	XP-330-K8	330	37	3,750	8.06
S2633	XE-240-X8	240	30	4,250	8.06
S2634	XG-25-X8	25	8	5,750	2.62
S2635	XG-50-X8	50	15	5,750	4.82
S2636	XG-110-X8	110	20	5,750	7.20
S2637	XK-25-X8	25	20	6,750	7.45
S2638	XG-18-X8	18	8	6,250	3.35
S2639	XG-40-X8	40	15	6,250	4.82
S2640	XG-100-X8	100	28	6,250	7.82
S10509	XE-120-X8	120	19	4,800	4.47
S10510	XD-160-X8	160	28	5,500	6.70

DOUBLE CONDENSERS

Cat. No.	Type	Max. Cap. Each	Min. Cap. Each	Peak Voltage Each	Net Price
S2643	XR-500-PD	500	15	1,000	\$7.06
S2644	XR-80-PD	80	11	3,500	4.70
S2645	XT-210-PD	210	22	3,500	6.47
S2646	XP-90-KD	95	15	3,800	5.59
S2647	XP-165-KD	165	23	3,800	8.17
S2648	XP-275-KD	275	38	3,800	16.38
S2649	XE-240-XD	240	32	4,200	15.61
S2650	XG-30-XD	50	14	5,750	7.94
S2651	XG-110-XD	110	27	5,750	13.38
S2652	XP-40-XD	40	14	6,250	8.56
S2653	TJ-200-UD	200	30	5,750	26.80
S2654	TL-50-UD	45	13	8,200	18.62
S2655	TL-100-UD	94	26	8,200	25.70
S10511	XE-120-XD	120	19	4,800	7.44

Trim Airs



Cat. No.	Type	Max. Cap.	Min. Cap.	Peak Volt.	Net Price
S2656	ZU-75-A8	75	2.7	750	\$1.27
S2657	ZU-100-A8	100	3	750	1.29
S2658	ZU-140-A8*	140	5	750	2.32
S2659	ZU-10-A8	10	1.2	1,000	.94
S2660	ZU-15-A8	15	1.5	1,000	.94
S2661	ZU-25-A8	25	2	1,000	1.06
S2662	ZU-35-A8	35	2.5	1,000	1.12
S2663	ZU-50-A8	50	2.8	1,000	1.18
S2664	ZV-5-T8†	5	1.8	2,000	.94
S2665	ZT-15-A8	15	3	2,500	1.15
S2666	ZT-30-A8	30	4	2,500	1.38
S2667	Z8-4-88	4	1.5	4,500	1.38

Cardwell Disc Type Neutralizers



Net Price \$3.00

Trim-Air Bracket

A specially designed bracket for trim air condensers which permits mounting on the chassis insulated from rotor. Very sturdy.

Cat. No. S2687
Net Price .6c

"M" Mounting Brackets

Made to fit the "N" or "M" types on left page. Buffed finish aluminum. Supplied with hardware. Cat. No. S10537
Net Price, each 12c

Neutralizing Condensers

For new low capacity tubes. Mycalex insulation.



Cat. No.	Max. Cap.	Min. Cap.	Net Price
NA-4NR†	4	2.5	\$2.68
NA-6NR†	6	4	2.68
NA-10NR*	11	6	3.35
NA-16NR*	16	7	3.74

*Peak voltage 6,000.

†Peak voltage adjustable.

Ultra-High Frequency Transmitting Condensers



A complete series of efficient, medium-powered transmitting condensers for 5, 10, and 20 meters. No frame or tie-rods. Aluminum end plates. Tang brass, nickel-plated front bearing with ball-thrust rear bearing. Insulation is Isolantite. Single hole mounting, or can be mounted on brackets listed on next page.

SINGLE CONDENSERS

Cat. No.	Type	Cap. Range	Net Price
S10501	NP-50-D8†	50-9	\$2.62
S10502	NP-75-D8†	75-11.0	3.06
S10503	NP-100-D8†	100-12	3.47
S10504	NP-150-D8†	150-19	4.51
S10505	NG-35-D8†	35-11	3.85

DOUBLE CONDENSERS

Cat. No.	Type	Cap. Range	Net Price
S10506	NP-50-GD†	50-7	4.47
S2689	NP-35-ND†	35-5	4.47
S2690	NP-35-DD†	35-5	4.00
S10507	NP-50-DD†	50-9	4.47
S10508	NP-75-DD†	75-11	5.35

* Air gap .070" — 3,000 volt peak.

† Air gap .084" — 4,200 volt peak.

‡ Air gap .171" — 6,000 volt peak.

Flexible Coupling



Fits 1/8" shafts. Isolantite insulation with reversed brass hubs. Minimum space required.
Cat. No. S2688—Type A.
Net Price 44c

Dual Trim Airs



Incorporates all of the excellent features of the single trim-air. Ideal for push-pull exciter unit, portable ultra H.F. gear and laboratory equipment.

Type ES-4-SD1 for neutralizing push-pull 35T and T55 type tubes.

Cat. No.	Type	Max. Cap.	Min. Cap.	Peak Volts.	Net Price
S2674	EU-75-AD	75	2.7	750	\$2.44
S2675	EU-100-AD	100	3	750	2.53
S2676	EU-140-AD	140	5	750	4.47
S2677	ER-10-AD	10	1.2	1,000	1.94
S2678	ER-15-AD	15	1.5	1,000	1.94
S2679	ER-25-AD	25	2	1,000	1.97
S2680	ER-35-AD	35	2.5	1,000	2.20
S2681	ER-50-AD	50	2.8	1,000	2.29
S2682	ET-15-AD	15	3	2,500	2.24
S2683	ET-30-AD	30	4	2,500	2.68
S2684	ET-30-AD† (With insulated coupling)				3.02
S2685	ES-4-SD1	4	1.5	4,500	2.68
S2686	ES-4-SD1 (With insulated coupling)				3.03

James Millen Products

Transmitting Condensers Dual Section



CENTER DRIVE
A new, different, and more efficient transmitting condenser permitting symmetrical circuit arrangement with consequent better neutralization. Center fed rotors for better R.F. current distribution.

Rounded and polished semi-circular plates of heavy-gauge aluminum; rigid cast-aluminum frame; right angle drive with 16:1 worm gear reduction, no backlash. Conveniently located. Millen terminals; inductance socket may be mounted on stator and R.F. choke on frame; 3,000 volt rating; Isolantite insulation.

Cat. No.	Type	Mmf./Sec.	Plate No.	Max. Min. Tks.	Air Gap	Net Price
S22098	11035	36	4.8	.040"	.077"	\$6.90
S22099	11050	51	6.5	.040"	.077"	7.14
S22100	11070	74	9.5	.040"	.077"	7.80

Transmitting Condensers Dual Section

END DRIVE

Similar to above but assembled with heavy pressed aluminum frame and with drive direct on end of rotor shaft. For single-ended applications, connect sections in parallel to obtain advantage of center feed and elimination of shorted frame loops. Plate diam. Series 13,000—2"; Series 14,000—3".

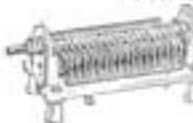


Cat. No.	Type	Mmf./Sec.	Plate No.	Max. Min. Tks.	Air Gap	Net Price
S22101	13005	35	4.9	.040"	.077"	\$4.56
S22102	13050	45	6.3	.040"	.077"	5.20
S22103	13070	71	7.3	.040"	.077"	5.88
S22104	14200	204	10.7	.050"	.077"	7.80

Cat. No.	Type	Mmf./Sec.	Plate No.	Max. Min. Tks.	Air Gap	Net Price
S22105	14050	50		.050"	.171"	7.12
S22106	14100	90.5	12.9	.050"	.171"	12.00

Cat. No.	Type	Mmf./Sec.	Plate No.	Max. Min. Tks.	Air Gap	Net Price
S22107	14060	69		.050"	.265"	12.00

Transmitting Condensers CONVENTIONAL TYPE



Fills the need for a well engineered variable condenser of the conventional type for use as a replacement in existing equipment. Plates 2" diam. .040" thick. Isolantite insulation.

Cat. No.	Type	Mmf./Sec.	Plate No.	Max. Min. Tks.	Finish	Net Price
S22108	12935*	37	9	Pol.		\$4.32
S22109	12936*	37	9	Platin.		3.90
S22110	12536	43	6	Platin.		2.40
S22111	12531	55	7	Platin.		2.70
S22112	12578	76	9	Platin.		3.00
S22113	12510	101	12	Platin.		3.60
S22114	12515	131	18	Platin.		4.50

Cat. No.	Type	Mmf./Sec.	Plate No.	Max. Min. Tks.	Finish	Net Price
S22115	12035	43	6	Pol.		4.32
S22116	12036	43	6	Platin.		3.90
S22117	12050	55	7	Pol.		5.10
S22118	12051	55	7	Platin.		4.32
S22119	12075	76	9	Pol.		5.61
S22120	12076	76	9	Platin.		5.40

*Air gap—.176"; all others—.077".

Cat. No.	Type	Mmf./Sec.	Plate No.	Max. Min. Tks.	Finish	Net Price
S22121	16035	35	Dual	6,000		\$7.50
S22122	16050	50	Dual	6,000		8.00
S22123	16100	100	Dual	6,000		10.00
S22124	10960	60	Single	9,000		8.00

Right Angle Dial

This small drum dial, supplied with 2 1/2" square, molded bakelite methacron plate, matches the appearance of the popular square meters and contributes to well balanced panel layout. Front plate mounts easily in round hole. Primarily designed for use with Series 11000 and 13000 condensers, this dial has many other uses as a remote indicator connected by flexible couplings. Rotation 180°; dial graduated 0 to 100.

Cat. No. S22130 Type 10001 Net Price \$1.85

Geared Drive
Right angle, worm drive assembly as used on condensers listed at left above; 16:1 reduction, with spring loaded split gears to prevent backlash; cast aluminum frame provides for base or panel mounting; 1/2" shaft connects to driven unit by flexible couplings (not included).

Cat. No. S22129 Type 10000 Net Price \$3.75

Receiving Condensers

Double bearing construction provides improved rigidity while Isolantite insulation makes these units especially suited to high-frequency service. Single-hole panel mounting. Aluminum plates.

Cat. No.	Type	Mmf.	Net Price
S22125	18050	50	\$1.85
S22126	18100	100	2.00
S22127	18140	140	2.25
S22128	18550	50 (2 sec.)	2.00

Double-bearing, brass plate condensers for marine, aircraft, police, and amateur service; 1/2" shafts arranged to allow spacing of two or more condensers.

Cat. No.	Type	Mmf.	Net Price
S22131	19020	20	\$1.35
S22132	19035	35	1.40
S22133	19050	50	1.50
S22134	19075	75	1.65
S22135	19100	100	1.80
S22136	19140	140	1.90
S22137	19200	200	2.00
S22138	19250	250	2.15
S22139	19300	300	2.50
S22140	19935*	35	1.50

*.064" air gap; all others .022".

Air Padders

Stearite base, air dielectric variable condensers; extremely compact; soldered plate construction; brass plates, cadmium plated; stubby shaft slotted for screw-driver adjustment.

Cat. No.	Type	Mmf.	Net Price
S22141	26025	25—3.2	\$0.90
S22142	26050	50—4.0	1.08
S22143	26075	75—4.3	1.20
S22144	26100	97—5.0	1.32
S22145	26140	140—6.5	1.60
S22146	26220*	20—4.5	1.40
S22147	26235*	36—3.5	1.50

*Air gap .012". 1A/2 air gap .040".

Neutralizing Condensers

In these compact units, extreme efficiency results from the elimination of all external supporting structures. Style A units have Quartz Q dielectric; Style B units, for higher heat conditions, have air dielectric and Isolantite insulation.

Cat. No.	Type	Mmf.	Fig.	Volts	Net Price
S22148	15001	2—10	A	4,000	\$0.90
S22149	15002	2.5—12	A	4,000	1.05
S22150	15003	1.5—8.5	A	4,000	.90
S22151	15001	2.5—12	B	6,000	2.00
S22152	15006	3.5—13	B	6,000	3.00

Receiving Condensers Dual Midget Condensers

SINGLE & DOUBLE SPACED
Ultra-high frequency dual condensers for small transmitters and receivers; metal parts aluminum or cadmium plated brass; Quartz Q insulation.



Cat. No.	Type	Mmf./Sec.	Spacing	Net Price
S22153	24035	35	Double	\$2.75
S22154	24100	100	Single	2.75

Ultra Midgets

Extremely compact; ideal for small receivers; steatite insulation; single bearing.

Cat. No.	Type	Mmf.	Spacing	Net Price
S22155	20015	15	Single	\$0.75
S22156	20035	35	Single	1.00
S22157	20050	50	Single	1.20
S22158	20100	100	Single	1.50
S22159	20140	140	Single	1.70
S22160	20920	20	Double	1.20
S22161	20935	35	Double	1.40

DOUBLE BEARING MIDGETS

Same size as units listed above but with double bearings and rear shaft extension.



Cat. No.	Type	Mmf.	Spacing	Net Price
S22162	21050	50	Single	\$1.75
S22163	21100	100	Single	1.90
S22164	21140	140	Single	2.10
S22165	21035	35	Double	1.90

SERIES 22,000

Similar in appearance to the midgets listed above, but slightly larger and with longer air gaps; steatite insulation.

Cat. No.	Type	Mmf.	Spacing	Net Price
S22166	22015	15	Double	\$1.20
S22167	22035	35	Double	1.30
S22168	22050	50	Double	1.50
S22169	22075	75	Single	1.32
S22170	22100	100	Single	1.38
S22171	22140	140	Single	1.62

DUAL MIDGETS

Two-section condensers similar to (above); much used in commercial transmitter designs.

Cat. No.	Type	Mmf./Sec.	Spacing	Net Price
S22172	23925	25	Double	\$2.25
S22173	23950	50	Double	2.50
S22174	23975	75	Single	2.60
S22175	23100	100	Single	2.50

SERIES 28,000-29,000
Same features and general construction as Series 23,000, but larger.

Cat. No.	Type	Mmf.	Spacing	Net Price
S22176	28035	35	.064"	\$2.50
S22177	28050	50	.064"	2.75
S22178	28075	75	.064"	3.00
S22179	28200	200	.022"	4.00
S22180	28250	250	.022"	4.50
S22173	28300	300	.022"	5.00

Cat. No.	Type	Mmf.	Spacing	Net Price
S22181	29050	50	.022"	4.00
S22182	29100	100	.022"	4.50

Cat. No.	Type	Mmf.	Spacing	Net Price
S22183	29525	25	.022"	2.50
S22184	29550	50	.022"	2.75
S22185	29575	75	.022"	3.00

SERIES 17,000

Similar to Series 22,000 shown above, but with round, ceramic end plate and locking nut to hold rotor wherever desired.

Cat. No.	Type	Mmf.	Air Gap	Net Price
S22186	17100	100	.022"	\$2.00
S22187	17140	140	.022"	2.40
S22188	17925	25	.062"	1.80
S22189	17950	50	.062"	2.00

NATIONAL

Receiving Condensers



Single hole mounting, double bearing units with front bearing insulated for noise prevention. Rotor contact through constant impedance plate. Air gaps are .018" for SS, ST, and SEU; .026" for SS, ST, and SEU; .055" for SEU.

Type SS	STRAIGHT-LINE CAPACITY	180°
Cat. No.	Type No.	Min. Plates
S13447	SS-20	30 4
S13448	SS-30	30 6
S13449	SS-50	30 9
S13450	SS-75	30 13
S13451	SS-100	100 17
S13452	SS-150	150 24
S13453	SS-200	200 31
S13454	SS-250	250 36
S13455	SS-300	300 41
S13456	SS-350	350 46

Type ST	SPLIT STATOR MODELS	180°
Cat. No.	Type No.	Min. Plates
S13457	SSD-30	50-50 9-9
S13458	SSD-100	100-100 10-10
S13459	SSD-150	150-150 10-16

Type FT	SPLIT STATOR MODELS	180°
Cat. No.	Type No.	Min. Plates
S13460	FT-35	35 9
S13461	FT-50	50 11
S13462	FT-75	75 15
S13463	FT-100	100 20
S13464	FT-150	150 28
S13465	FT-200	200 37
S13466	FT-250	250 47
S13467	FT-300	300 57
S13468	FT-350	350 67

Type FT	SPLIT STATOR MODELS	180°
Cat. No.	Type No.	Min. Plates
S13470	FTD-50	50-50 11-11
S13471	FTD-100	100-100 14-14



Type UM	STRAIGHT-LINE CAPACITY	270°
Cat. No.	Type No.	Min. Plates
S13472	SEU-15	15 6*
S13473	SEU-20	20 8*
S13474	SEU-25	25 9*
S13475	SEU-30	30 11
S13476	SEU-35	35 13
S13477	SEU-40	40 15
S13478	SEU-50	50 20
S13479	SEU-75	75 29
S13480	SEU-100	100 37
S13481	SEU-150	150 52
S13482	SEU-200	200 67
S13483	SEU-250	250 82
S13484	SEU-300	300 97
S13485	SEU-350	350 112

* Thick plates with rounded polished edges, suitable for high voltage service.

Type SEU - straight-line capacity, for ultra high frequency use; 180° rotation; shaft extensions each end of rotor for easy ranging; angle fast for mounting; air gaps .017" all models except SEU-25 which is .05".

Type SE	STRAIGHT-LINE CAPACITY	180°
Cat. No.	Type No.	Min. Plates
S13486	SE-15	15 6
S13487	SE-20	20 8
S13488	SE-25	25 9
S13489	SE-30	30 11
S13490	SE-35	35 13
S13491	SE-40	40 15
S13492	SE-50	50 20
S13493	SE-75	75 29
S13494	SE-100	100 37
S13495	SE-150	150 52
S13496	SE-200	200 67
S13497	SE-250	250 82
S13498	SE-300	300 97
S13499	SE-350	350 112

Type SE	SPLIT STATOR MODELS	180°
Cat. No.	Type No.	Min. Plates
S13499	SED-50	50-50 11-11
S13500	SED-100	100-100 14-14

Rotor Shaft Lock



A secure and convenient lock for rotors of transmitting condensers types TMA and TMC. Cat. No. S13552 Type RSL. Net Price \$7c

Transmitting Condensers



Type TMR - for transmitter use in low power stages; compact and rigid; mounts on panel, chassis, or two stand-off insulators; Isolantite insulated. Air gap .028"-1000 v, TM9A air gap .055"-3000 volts.

Cat. No.	Type No.	Min. Plates	Price
S13490	TMR-100	100 10	\$1.65
S13491	TMR-150	150 14	1.80
S13492	TMR-250	250 23	1.98
S13493	TMR-300	300 27	2.40
S13494	TMR-35	35 8	1.98
S13495	TMR-50	50 11	2.16

Cat. No.	Type No.	Min. Plates	Price
S13496	TMR-50D	50-50 5-5	2.55
S13497	TMR-100D	100-100 9-9	3.00
S13498	TMR-250D	250-250 11-11	2.64

Type TMC - for use in power stages up to 3,000 volts; mounts on panel, chassis, or stand-off insulators; aluminum plates have buffed edges; Isolantite insulated; gap .077".

Cat. No.	Type No.	Cap. Min. Plates	Price
S13499	TMC-50	50 7	\$2.64
S13500	TMC-100	100 13	3.00
S13501	TMC-150	150 21	3.45
S13502	TMC-250	250 32	3.96
S13503	TMC-300	300 39	4.35

Cat. No.	Type No.	Cap. Min. Plates	Price
S13504	TMC-50D	50-50 7-7	4.35
S13505	TMC-100D	100-100 13-13	4.95
S13506	TMC-250D	250-250 32-32	6.60



Type TMA - similar to TMC but larger. Peak voltage vs. air gap: .077"-9,000 v, .171"-6,000 v, .265"-9,000 v, .359"-12,000 v.

Cat. No.	Type No.	Cap. Min. Plates	Price
S13507	TMA-300	300 .077"	\$7.20
S13508	TMA-30A	30 .171"	3.90
S13509	TMA-100A	100 .171"	6.00
S13510	TMA-150A	150 .171"	7.20
S13511	TMA-300A	300 .171"	9.60
S13512	TMA-100B	100 .265"	8.10
S13513	TMA-150B	150 .265"	10.20
S13514	TMA-300C	300 .359"	11.10
S13515	TMA-100C	100 .359"	8.70

Cat. No.	Type No.	Cap. Min. Plates	Price
S13516	TMA-200D	200-200 .077"	9.00
S13517	TMA-80DA	80-80 .171"	6.60
S13518	TMA-100DA	100-100 .171"	10.50
S13519	TMA-60DB	60-60 .265"	11.10
S13520	TMA-80DC	80-80 .359"	8.10

Type TML - a 1-KW job with Isolantite insulation, self-cleaning rotor contact, and rounded, polished plate edges. Gap ratings: .719"-20,000 v, .469"-15,000 v, .344"-10,000 v, .219"-7,500 v. Universal mounting.

Cat. No.	Type No.	Cap. Min. Plates	Price
S13521	TML-75E	75 .719"	\$17.25
S13522	TML-150D	150 .469"	17.40
S13523	TML-100D	100 .469"	15.60
S13524	TML-50D	50 .469"	10.80
S13525	TML-245B+	245 .344"	18.90
S13526	TML-150B+	150 .344"	17.25
S13527	TML-100B+	100 .344"	16.50
S13528	TML-75B+	75 .344"	12.00
S13529	TML-300A+	300 .219"	23.10
S13530	TML-350A+	350 .219"	18.45
S13531	TML-250A+	250 .219"	17.25

Cat. No.	Type No.	Cap. Min. Plates	Price
S13532	TML-30DE	30-30 .719"	17.40
S13533	TML-60DD	60-60 .469"	18.90
S13534	TML-100DD+	100-100 .344"	21.00
S13535	TML-60DB+	60-60 .344"	18.00
S13536	TML-200DA+	200-200 .219"	23.00
S13537	TML-100DA+	100-100 .219"	18.90

New Xmitting Condensers



Type TMR - new transmitting condenser of compact construction, for panel or stand-off mounting with provision for swivel coil mount at top or rear. Uses AR-16 coils or XR-16 forms. Low loss construction, aluminum plates, .047" air gap.

Cat. No.	Type No.	Cap. Min. Plates	Price
S22142	TMR-35	35	\$2.16
S22143	TMR-50	50	2.31
S22144	TMR-75	75	2.41
S22145	TMR-100	100	2.64
S22146	TMR-150	150	3.00
S22147	TMR-200	200	3.30
S22148	TMR-250	250	3.60

DOUBLE SECTION UNITS

Cat. No.	Type No.	Cap. Min. Plates	Price
S22149	TMR-35D	35-35	3.45
S22150	TMR-50D	50-50	3.90
S22151	TMR-100D	100-100	4.80

ADDITIONAL FOR SWIVEL HARDWARE .09

Type TMR - popular commercial type transmitting condenser now released for amateur use. Very compact construction—polished edge, aluminum plates .047" thick—air gap .083". Isolantite insulation—long leakage path—panel or stand-off mounting.

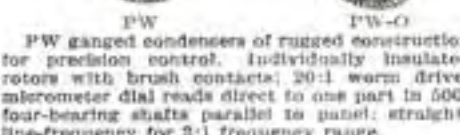
Cat. No.	Type No.	Cap. Min. Plates	Price
S22141A	TMR-50	50	\$2.31
S22142	TMR-75	75	2.64
S22143	TMR-100	100	3.15
S22144	TMR-150	150	3.96
S22145	TMR-200	200	3.45

* Air gap .350"

DOUBLE SECTION UNITS

Cat. No.	Type No.	Cap. Min. Plates	Price
S22146	TMR-35D	35-35	3.60
S22147	TMR-50D	50-50	3.96
S22148	TMR-75D	75-75	4.35

Precision Condensers and Drives



PW ganged condensers of rugged construction for precision control. Individually insulated rotors with brush contacts; 20:1 worm drive; micrometer dial reads direct to one part in 500; four-bearing shafts parallel to panel; straight-line frequency for 2:1 frequency range.

Cat. No.	Type No.	Cap. Min. Plates	Price
S13420	PW-100	100 mmf.	\$9.90
S13421	PW-200	200 mmf.	
S13422	PW-300	300 mmf.	
S13423	PW-400	400 mmf.	

PW-1 Single Section Units

Cat. No.	Type No.	Cap. Min. Plates	Price
S13424	PW-100	100 mmf.	\$13.20
S13425	PW-200	200 mmf.	15.90
S13426	PW-300	300 mmf.	18.00

PW-O Drive Unit with Micrometer Dial

Cat. No.	Type No.	Cap. Min. Plates	Price
S13430	PW-O	100 mmf.	\$7.20

NPW Precision Condensers are similar to PW except rotor shaft is perpendicular to panel, 3-section unit with micrometer dial.

Cat. No.	Type No.	Cap. Min. Plates	Price
S13431	NPW-100	100 mmf.	\$12.30
S13432	NPW-200	200 mmf.	14.40
S13433	NPW-300	300 mmf.	16.50

NPW-O Drive Unit with Micrometer Dial

Cat. No.	Type No.	Cap. Min. Plates	Price
S13434	NPW-O	100 mmf.	\$7.20

A complete listing of NATIONAL dials will be found on page 31. Other NATIONAL condensers, for neutralizing, etc., are listed on page 25.



DIALS - NAME PLATES

Type ACN Dial

For direct calibration. Bezel size 5" by 7 1/2"; five blank scales; one scale graduated 0-100; Velvet Vernier drive; easy to mount. Cat. No. S20134 Net Price \$3.60



Type K Dial

Etched nickel silver, graduated 1-100, rim drive, 3 1/2" diameter. Cat. No. S20135 Net Price 99c



Type M Dial

Like Type K but 5" diameter. Cat. No. S20136 Net Price \$1.65

Type R Dial

Etched nickel silver with bar knob; graduated 0-10 for clockwise rotation; 1 1/2" diameter. Cat. No. S20152 Net Price 51c



All above dials for 1/2" shafts.



NW DIAL... 6-inch engine-divided scale and flush vernier of solid nickel silver; powerful variable-ratio drive; scales 1, 3, 5, 5. Cat. No. S13434 Net Price \$9.90

N DIAL... 6-inch engine-divided scale and flush vernier of solid nickel silver; 5 to 1 planetary drive; scales 2-3-4-5. Cat. No. S13435 Net Price \$4.50

B DIAL... smooth trouble-free variable ratio drive; black bakelite case; scale shows through window; scales 1 or 5. Cat. No. S13436 Net Price \$1.80

B DIAL with Illuminator. Cat. No. S13437 Net Price \$2.21

BM DIAL... similar to B but smaller and with fixed ratio drive; scales 1 and 5. Cat. No. S13438 Net Price \$1.65



O DIAL... 3 1/2" nickel silver scale insulated from hub; metal brush grounds scale; mounts directly on 1/2" shaft. Scale 2 only. Cat. No. S13439 Net Price 99c

ODD DIAL DRIVE... friction type, for O dial. Cat. No. S13440 Net Price 42c

ODL DIAL LOCK... thumbscrew control clamps type O dial; ideal for transmitter use. Cat. No. S13441 Net Price 33c

HEK KNOB... as used on Type O Dial; milled edge gives comfortable grip; fits 1/2" shaft. Cat. No. S13442 Net Price 57c

HRO DIAL... 1 1/2" etched nickel silver dial fits 1/2" shaft; marked 0-10 over 180°; metal dial is not insulated from shaft. Cat. No. S13443 Net Price 51c

HRP KNOB... like that on HRO dial; 1 1/2" x 1". Cat. No. S13444 Net Price 18c

A DIAL... exceptionally smooth; no backlash; self-contained 3:1 drive; 4" diam. with scale 2-4-5; 3 1/2" diam. with scale 2. Cat. No. S13446 Net Price \$1.98

BE SURE TO SPECIFY SCALE WANTED

DIAL SCALE CODE

Scale	Divisions	Rotation	Rotation
1	0-100-0	180°	Either
2	0-100	180°	Counter-clock
3	100-0	180°	Clockwise
4	150-0	270°	Clockwise
5	200-0	360°	Clockwise

Laboratory Dials with Finger Grip Knobs



A direct drive supplied with decimal indicators or markers, which permit accurate reading to 1/10 of one division. Beautiful, chrome silver dials accurately engraved with black numerals. The large fluted and flanged bakelite knobs have

accurate bushings and set screws for 1/2" shafts.

Cat. No.	Degree	Divisions	Size	Net
S8500	180	0-100	4"	\$1.62
S8501	180	0-100	2 1/2"	1.23
S8502	270	0-100	2 1/2"	1.23

Chrome Silver Dial Plates

Same as above except less knobs.

Cat. No.	Degree	Size	Divisions	Net
S8512	180	2"	0-100	47c
S8513	325	2"	0-100	47c
S8514	180	3 1/2"	0-100	73c
S8515	325	3 1/2"	0-100	73c
S8516	180	4"	0-100	82c
S8517	325	4"	0-100	82c

Finger Grip Knobs



The same type of knobs as used on the above dials, but of various sizes. For 1/2" shafts.

Cat. No.	Dia.	Fit	Net Price
S1737	1 1/2"	A	18c
S1738	1 1/2"	B	24c
S1739	1 1/2"	A	24c
S1740	1 1/2"	B	29c
S1741	1 1/2"	C	27c
S1742	2 1/2"	A	35c
S1743	2 1/2"	B	41c
S1744	2 1/2"	C	45c

Vernier Dials

Spun chrome finish, graduated in black; single line indicator; rim drive has spring washers for smooth vernier action; large black knob; dials fit 1/2" shafts.



Cat. No.	Dial Divisions	Size	Net Price
S8525	0 to 100	2 1/2"	\$1.32*
S14550	0 to 100	4"	1.62
S14551	100 to 0	4"	1.62

*Without drive knob.

Miniature Dials 1 1/2" Diam.

Beautiful chrome silver dials with black etched numerals, 1 to 10. Harmonize well with the large dials used on instruments, amplifiers, and receivers. Finger grip black knob for easy adjustment. Fit 1/2" shaft.



Cat. No.	Net Price
S12008 180°	59c
S12009 270°	59c

Planetary Drive

A 7-1 vernier and 1-2 direct drive action. If used on another vernier dial its ratio is multiplied by the ratio of the dial. Furnished complete with two knobs.



No. S8520 Net Price \$1.32

One-piece Chart Frames

Solid nickel-silver—corner mounting holes—celluloid window.

Cat. No.	Size*	Net Price
S14422	2 1/2" x 3 1/2"	33c
S14424	3 1/2" x 4"	46c

*Dimensions are outside edges.



Gordon Nameplates



Made of brass with chromium characters, supplied with self-tapping screws.

Oscillator	Antenna
Oscillator Tank	Antenna Tuning
Crystal	Ground
Crystal Osc. Plate	Neut. Condenser
Crystal Osc. Grid	Plate Voltage
Triet Osc.	Filament Voltage
Tripler Plate	Key
Tripler Grid	Screen Current
Cathode Tun. Cond.	Phone—CW
Transmitter	Off—On
Buffer	Send
1st Buffer Plate	Receive
1st Buff. Pl. Tank	Send—Receive
1st Buffer Grid	Speech Amplifier
1st Buff. Gr. Tank	Class B Modulator
2nd Buffer Plate	Class A Modulator
2nd Buff. Pl. Tank	Microphone
2nd Buffer Grid	Microphone Cup
2nd Buff. Grid Tank	Gain Control
1st Buff. Dblr. Plate	Volume
1st Buff. Dblr. Pl. Tank	Monitor
1st Buff. Dblr. Grid	Beat Oscillator
1st Buff. Dblr. Gr. Tank	A.C. Input
2nd Buff. Dblr. Plate	A.C. Output
2nd Buff. Dblr. Pl. Tank	Regeneration
Power Amp. Plate	Speaker
2nd Buff. Dblr. Pl. Grid	Radio
2nd Buff. Dblr. Gr. Tank	Tune
Doubler	Input
Amplifier	Output
P. A. Plate Tank	300 Ohm Input
Power Am. Grid	500 Ohm Output
P. A. Grid Tank	

Be sure to specify markings.
No. S8503—2 1/2" x 3 1/2" Net. ea. . . . 10c
No. S8504—1 1/2" x 1 1/2" Net. ea. . . . 6c

Vernier Dial

Black polished bakelite. Size 3" x 3 1/2". Universal scale 0-100. Has lock bushing for 1/2" shaft—no screws. No. S8519 Net Price 54c



Johnson Handle Indicators

Professional type controls with molded bakelite handles. Scales are etched and finished in black and silver 0-100 divisions.

No. S8518 For 1/2" shafts. Net 59c



Coto Control Wheel

A dial and indicator for radio transmitter and commercial applications, two sizes available with choice of name plates listed below.

Cat. No.	Size	Net Price
S1730	2 1/2"	\$1.00
S1731	3 1/2"	1.18



One name plate for the above wheels supplied in oscillator, oscillator plate, buffer, buffer plate, doubler, doubler plate, buffer doubler plate, grid, plate, tank, neutralize, power amplifier grid, power amplifier plate, antenna. Specify by name.

JEWELS FOR DIAL LIGHTS

One-Inch Jewels

Screw Type

Standard or torpedo style; mount in 1" diameter hole on panel up to 1/8" thick; furnished with nut, lock-washer, and gasket washer for water-tight assembly. Brass holder finished in bright chrome, other finishes special. Lens colors: red, green, amber, blue, yellow, opal, white, clear; be sure to specify color.
Cat. No. S22263 Torpedo jewel
Cat. No. S22264 Smooth, half-round
Cat. No. S22265 Faceted, half-round

Friction Type

Similar to above but with friction holder allowing lamp to be removed from front of panel. Standard size for 1/8" panel; any other size, up to 2" panel thickness, on special order.
Cat. No. S22266 Torpedo jewel

Protruding Jewel

Screw Type

Extends 1/8" beyond face of panel; 1/8"-27 thread to screw into panel; nickel-plated finish; all standard colors.
Cat. No. S22267 Smooth lens
Cat. No. S22268 Faceted lens
Cat. No. S22270 Flat lens
*Can be supplied with etched numbers, letters, or words on special order.

Half-Inch Jewel

Mounts in 1/2" hole; nickel-plated holder; mounting nut; smooth or faceted jewel; red, green, blue, amber, opal, and clear.
Cat. No. S22271 Smooth jewel
Cat. No. S22272 Faceted jewel
*Can be furnished with etched numbers, letters, or words on flat or half-round lens, special.

3/8" Jewel

Like above, mounts in 3/8" hole.
Cat. No. S22273 Smooth
Cat. No. S22274 Faceted

Half-Inch Push-In Jewel

Slotted shank gives firm grip when pushed into 1/2" hole; bright nickel finish; all standard colors; shank lengths .085", 1/8", and 1/4"; be sure to specify shank length and color.
Cat. No. S22275 Smooth jewel
Cat. No. S22276 Faceted jewel

Marine Water-Tight Jewel

Surpasses naval requirements; absolutely water-tight; unscrews from front of panel; smooth lens in all standard colors; nickel-plated brass holder and bushing for 1/2" panel; other finishes or panel thickness on special order.
Cat. No. S22277 1" Marine jewel
Cat. No. S22278 1/2" Marine jewel

Self-Luminous Bull's-Eye

Glow brightly in dark; uses no power; nickel-plated brass holder 1/2" O.D.; smooth lens 1/2" d.
Navy Type No. 98-5012L
Cat. No. S22279

ENCLOSED PILOT LIGHT ASSEMBLIES

"Lock-Tite" Assembly—Underwriters' Approved

Designed for ruggedness and never-failing service under trying conditions, this single-unit socket and lens assembly is unaffected by heat.

Std. Lens	Lamp Group A	Cand. Screw Base	Cat. No. S22280 Type 9300
-----------	--------------	------------------	---------------------------

Torp. Lens	Lamp Group A	Cand. Screw Base	Cat. No. S22281 Type 9000
------------	--------------	------------------	---------------------------



"Lock-Tite" Assembly—with Bayonet Socket

Widely used in the armed services, this rugged unit is built to withstand excessive vibration; recommended for heavy duty applications.



Std. Lens	Lamp Group B	Sin. Cont. Bayonet	Cat. No. S22282 Type 9200-BC
		Doub. Cont. Bayonet	Cat. No. S22283 Type 9200-DC

Torp. Lens	Lamp Group B	Sin. Cont. Bayonet	Cat. No. S22284 Type 9100-BC
		Doub. Cont. Bayonet	Cat. No. S22285 Type 9100-DC

These handsome, ruggedly constructed pilot light assemblies are designed for the services in which quality can not be compromised. Available in a wide variety of styles, to meet specific requirements, each assembly embodies these valuable features:

1. Single hole mounting—in 1" diameter hole
2. All lamps removable from front of panel—spring ejector in all assemblies facilitates bulb removal
3. Heavy, universal terminals—for soldering or screw connection
4. Terminals do not loosen or turn under severest operating conditions
5. Screw base bakelite housing meets Navy Specification 17-P-4CFG Bayonet base bakelite housing meets Navy Specification 17-P-5BFG
6. Metal parts of brass—ST-17 aluminum on special order
7. Choice of seven finishes—polished chrome is standard; dull white nickel, black nickel, satin chrome, anodized, Ebonol, or U. S. Signal Corps 800c. lusterless olive drab anodized on special order

Sockets accommodate lamps in three popular styles—candelabra screw base and single or double contact candelabra bayonet base. Eight colors are available for the lenses—red, green, amber, blue, yellow, opal, white, and clear. Lenses are furnished in the modern, torpedo shape or in the standard, half-round shape; the latter may be had in either smooth or faceted surface; smooth lenses are regularly supplied in clear color but, on special order, can be furnished with sand-blasted finish on back or all over. All assemblies supplied complete with mounting nut, spacer washer, and lock washer. Order lamps from list on page 33.

Marine Water-Tight Assembly

Tested under pressure of 15 pounds per square inch, these units are recommended for all marine applications and locations where moisture is excessive. Lens cap screws on from front of panel, affording water-tight seal. Available in screw and bayonet base and with standard and torpedo lens. Always use bayonet base where severe vibration may be encountered.

Std. Lens	Lamp Group A	Cand. Screw Base	Cat. No. S22286 Type CS-9000A 1" lens
			Cat. No. S22287 Type CS-9001 1 1/2" lens

Torp. Lens	Lamp Group A	Cand. Screw Base	Cat. No. S22288 Type CS-9000AT
------------	--------------	------------------	--------------------------------

Std. Lens	Lamp Group B	Sin. Cont. Bayonet	Cat. No. S22289 Type CS-9005
		Doub. Cont. Bayonet	Cat. No. S22290 Type CS-9003

Torp. Lens	Lamp Group B	Sin. Cont. Bayonet	Cat. No. S22291 Type CST-9005
		Doub. Cont. Bayonet	Cat. No. S22292 Type CST-9003

Lamp Group A—For pilot light assemblies having sockets for candelabra screw base lamps: Mazda 655 and 11A/T4C; Neon T4 1/2 watt; Navy T8-2, T8-19, T8-37, T8-49, T8-51, and VG-7.

Lamp Group B—For pilot light assemblies having sockets for candelabra single or double contact bayonet base lamps: Mazda 63, 64, 82, 90, 81K, G-6 and 8-6 110 volt DC; Neon T4 1/2 watt; Navy T8-20, T8-23, T8-42, T8-43, T8-71, and T8-72.

See page 60 for complete description and prices of above lamps.
Color-Spotter Jewels—for any of the one-inch pilot light assemblies listed on this page. Jewel looks white when light is off; shows red, green, amber, blue, yellow, or opal when light is on. Color is blown on the back of the lens; not a separate disc. Furnished at no extra charge with assemblies 9300, 9200, CS-9000A, CS-9005, and CS-9003.

"VARI-DIM" SIGNAL LIGHTS



For use where variable light intensity is required—as in aircraft, naval vessels, etc. 60° turn of built-in shutter (wholly independent of electrical circuit) cuts light from full brightness to blackout. Shutter stays where it is set regardless of vibration. Unit mounts in 1/2" hole; sockets for screw and bayonet type miniature base lamps, all voltages. Terminals, finishes, and colors same as 9000 Series. Lenses are "standard" type; flat lenses with special markings supplied on special order.
Cat. No. S22293 min. screw base
Cat. No. S22294 min. bay. base

Polaroid "Vari-Dim"

Similar to above but providing light control by rotation of two polaroid discs; smooth control from full on to nearly zero.
Cat. No. S22295 min. screw base
Cat. No. S22296 min. bay. base

"Vari-Dim" for 5/8" Mounting

Interchangeable with AC-42B-359318. Identical with units listed above except for smaller hole mounting.

MECHANICAL SHUTTER TYPE
Cat. No. S22297 min. screw base
Cat. No. S22298 min. bay. base
POLAROID DISC TYPE
Cat. No. S22299 min. screw base
Cat. No. S22300 min. bay. base

Special "Vari-Dim" Assemblies



Low-cost, mass-production, open type units for use where not subject to excessive vibration or severe shocks; not designed for military applications; 1/2" hole mounting; other features as above.

MECHANICAL SHUTTER TYPE
Cat. No. S22301 min. screw base
Cat. No. S22302 min. bay. base
POLAROID DISC TYPE
Cat. No. S22303 min. screw base
Cat. No. S22304 min. bay. base

Approved 110 Volt Pilot Light

Porcelain and brass construction; mounts in 1" diameter hole; polished chrome holder for red, green, amber, blue, opal, white, or clear jewels in smooth or faceted surface; Mazda 6-6 or neon T-4 candelabra base lamp removable from front of panel. Be sure to specify color and type of jewel and whether for Mazda or neon lamp.
Cat. No. S22304

Vibration Resisting Assembly

Similar to unit described above but designed for bayonet base single or double contact lamps.
Cat. No. S22305 single contact
Cat. No. S22306 double contact

Prices on these pilot light assemblies and components are competitive, and will be quoted on request. Please be sure to specify type and catalog numbers, finish, size, base, lamp voltage, and style; also jewel style, color, and finish

PILOT LIGHT SOCKETS - LAMPS - FLASHLIGHT BULBS

Miniature Screw-Bulb Socket

For use where space is limited; mounts in $\frac{1}{8}$ " hole with bulb protruding in front of panel; furnished with standard coupling for shielded wiring; spring tension holds bulb tightly in place; phosphor-bronze spring and soldering pin are silver plated; bakelite insulation meets Fed. Spec. 71-4841; use TL-3 bulb; assembly made of brass.

Cat. No. S22190 Grounded socket @
Cat. No. S22191 Ungrounded unit @

Aircraft Miniature Screw-Bulb Socket

Similar to above but made of ST-17 aluminum to meet Fed. Spec. QQ-A-351; order lamp extra. Cat. No. S22192 AAC No. AC40A7419G Grounded Cat. No. S22193 AAC No. AC40A7419-A Ungrounded @

$\frac{3}{8}$ " Pilot Light

Mounts in single $\frac{3}{8}$ " hole; nickel-plated brass jewel holder; for miniature screw or miniature bayonet base lamps; jewels smooth or faceted, red, green, amber, yellow, blue, opal, or clear; specify color and style.

Cat. No. S22194 Miniature screw base @
Cat. No. S22195 Miniature bayonet base @

Navy Specification Sockets @



Made of molded bakelite, to Navy specifications; base mount; screw terminals; take miniature bayonet, candelabra bayonet, and candelabra screw base lamps.

Cat. No.	Type No.	Base	Fig.
S22196	9-8-4031-1	90 Min. Bayonet	A
S22197	9-8-5038-L	46 Cand. Screw	D
S22198	9-8-5038-L	40 Cand. Screw	C
S22199	9-8-4634-L	46 Cand. Bay.*	B

*Double contact only.

Pilot Light Socket Assemblies @



Assorted styles to meet every service, replacement, and production need; brackets cadmium plated; timed terminal lugs; highest grade insulating washers; approved coil spring construction in bayonet type sockets; be sure to specify mounting style by number.

Cat. No. S22200 Miniature screw base
Cat. No. S22201 Miniature bayonet base
Cat. No. S22202 Candelabra screw base—110 volts.

*Candelabra screw base only.

@ PRICES ON ALL ABOVE ITEMS QUOTED ON REQUEST

Jewel Mounting Nut

No.	Color	Net Ea.
No. S1768	Clear	
No. S1769	Red	
No. S1770	Green	9c
No. S1771	Amber	

Pilot Light Jewel and Bracket

Ruggedly made. Take standard bulbs. Mounts in $\frac{1}{2}$ " hole on panels up to $\frac{1}{4}$ ".

Cat. No.	Color	Net Ea.
S1764	Clear	
S1765	Red	
S1766	Green	18c
S1767	Amber	

See page 11 for Neon pilot lamp.

Bulb Remover

Rubber tool speeds removal and installation of miniature and candelabra bulbs.

Cat. No. S22699 Net Price 24c

Pilot Lamps in Miniature and Candelabra Base

Volts	Amps.	Base	Bulb	Dia.	Len.	Cat. No.	Type	Ea.	Box 10
2.0	.06	MS	T-3	$\frac{1}{8}$ "	1"	S22205	48	15c	\$.88
		MB	T-3	$\frac{1}{8}$ "	1"	S22206	49	15c	.88
2.5	.50	MS	T-3	$\frac{1}{8}$ "	1"	S22207	41	9c	.54
		MB	T-3	$\frac{1}{8}$ "	1"	S22208	43	9c	.54
3.2	.35	MS	T-3	$\frac{1}{8}$ "	1"	S22209	42	12c	.71
		MB	T-3	$\frac{1}{8}$ "	1"	S22210	45	12c	.71
	.15	MS	T-3	$\frac{1}{8}$ "	1"	S22211	40	9c	.54
	.15	MB	T-3	$\frac{1}{8}$ "	1"	S22212	47	9c	.54
	.25	MS	T-3	$\frac{1}{8}$ "	1"	S22213	46	9c	.54
	.25	MB	T-3	$\frac{1}{8}$ "	1"	S22214	44	9c	.54
6-8	.25	MS	G-3	$\frac{1}{8}$ "	1"	S22215	50	10c	.59
	.25	MB	G-3	$\frac{1}{8}$ "	1"	S22216	51	7c	.59
	.45	MB	G-4	$\frac{1}{8}$ "	1"	S22217	55	7c	.41
	.04	SCB	G-6	$\frac{1}{8}$ "	1"	S22218	63	7c	.41
	.04	DCB	G-6	$\frac{1}{8}$ "	1"	S22219	64	11c	.65
	.10	MS	G-3	$\frac{1}{8}$ "	1"	S22220	52	20c	1.18
	.10	MB	G-3	$\frac{1}{8}$ "	1"	S22221	53	20c	1.18
12-16	.22	MB	G-4	$\frac{1}{8}$ "	1"	S22222	57	15c	.88
	.41	SCB	G-6	$\frac{1}{8}$ "	1"	S22223	67	12c	.71
	.41	DCB	G-6	$\frac{1}{8}$ "	1"	S22224	68	12c	.71
	.20	MB	T-3	$\frac{1}{8}$ "	1"	S22225	1815	9c	.53
14	.15	MB	T-3	$\frac{1}{8}$ "	1"	S22226	1488	15c	.88
	.17	MS	T-3	$\frac{1}{8}$ "	1"	S22227	1474	35c	2.06
	.17	MS	T-3	$\frac{1}{8}$ "	1"	S22228	1476	40c	2.35
18 or 22	.11	CS	T-4	$\frac{1}{8}$ "	1"	S22229	11A/T4C	30c	1.76
18-24	.19	SCB	G-6	$\frac{1}{8}$ "	1"	S22230	71	30c	1.76
		DCB	G-6	$\frac{1}{8}$ "	1"	S22231	72	30c	1.76
24	.17	MS	T-3	$\frac{1}{8}$ "	1"	S22232	1477	40c	2.35
24-28	3 CP	SCB	G-6	$\frac{1}{8}$ "	1"	S22233	1251	30c	1.76
		DCB	G-6	$\frac{1}{8}$ "	1"	S22234	1252	30c	1.76
28	.17	MB	G-3	$\frac{1}{8}$ "	1"	S22235	356	40c	2.35
		MB	T-3	$\frac{1}{8}$ "	1"	S22236	313	30c	1.76
115	6 W.	CS	S-6	$\frac{1}{8}$ "	1"	S22237		15c	.88
	3 W.	CS	S-6	$\frac{1}{8}$ "	1"	S22238		25c	1.47
1.1	.22	MS	TL-3	$\frac{1}{8}$ "	1"	S22239	112	9c	.53
2.2	.25	MS	TL-3	$\frac{1}{8}$ "	1"	S22240	229	9c	.53
2.3	.27	MS	TL-3	$\frac{1}{8}$ "	1"	S22241	243	9c	.53

CS—Candelabra screw. MS—Miniature screw. MB—Miniature Bayonet.

SCB—Single Contact Bayonet. DCB—Double Contact Bayonet

FOR NEON GLOW LAMPS SEE PAGE 11

Mazda Flash-Light Bulbs

Dependable, long-life, American made bulbs for use in five cell applications.

Cells	V.	Amp.	Cat. No.	Type	Ea.	Box 10
1	1.1	.22	S22250	112	9c	54c
1	1.3	.60	S22251	136	10c	59c
2	1.0	.45	S22252	105	15c	90c
2	2.3	.25	S22253	222	9c	54c
2	2.3	.35	S22254	223	9c	54c
2	2.3	.27	S22255	233	9c	54c
2	2.4	.50	S22256	PR-2	13c	76c
2	2.4	.80	S22257	248	10c	59c
2	2.5	.30	S22258	14	9c	54c
3	3.6	.50	S22259	PR-3	13c	76c
3	3.8	.30	S22260	13	9c	54c
5	6.0	.50	S22261	605	10c	59c
5	6.2	.30	S22262	31	10c	59c

Pilot and Neon Light Sockets



Cat. No.	Construction	Net
S2056	Three lug (A) 10 for 40c Ea.	7c
S2057	Clip mounting 10 for 40c Ea.	7c

Cat. No.	Construction	Net
S22242	Miniature screw base*	15c
S22243	Candelabra screw base* (B)	36c
S22244	Medium screw base*	15c
S22245	Medium screw base*	25c

BAKELITE INSULATED—NICKEL SHELL (C)
S22246 Single contact bayonet base* 45c
S22247 Single contact bayonet base* 45c
S22248 Double contact bayonet base* 45c
S22249 Double contact bayonet base* 45c

*Surface mounting. †High-panel mounting.

$\frac{3}{4}$ " Jewel and Bracket

Ruggedly made. Available in 110 volt candelabra socket or 6 V. miniature screw socket.

Cat. No.	Cat. No.	Color	Net Price
S11327	S11333	Red	any type
S11328	S11334	Green	
S11329	S11335	Amber	
S11330	S11336	Blue	35c
S11331	S11337	Opal	
S11332	S11338	Crystal	



Dial Lite Color Kit

Handy for servicemen and experimenters, for coding forms, sockets, resistors, condensers, and dial lites. Contains five bottles of coloring: green, blue, yellow, red and solvent.



Cat. No. S1762 Dial Lite Kit Net Price 29c
Cat. No. S1763 Color Coding Kit Net Price 29c

Jewel and Bracket Horizontal Mounting

This assembly has a $\frac{1}{2}$ " jewel. Available in 7 different colors, in diamond cut. Pilot bulb may be removed from the front panel.

Cat. No.	Color	Cat. No.	Color	Net Price
S1772	Amber	S1776	White	Each
S1773	Blue	S1777	Ruby	Each
S1774	Crystal	S1778	Yellow	24c
S1775	Green			

One-Inch Jewel Assembly

This panel light assembly has a pure white bulb-eye but is available in 6 different colors which show only when bulb is lit. Supplied only with candelabra base. To be used with 115 V. bulb. Bulb is accessible through front panel.



Cat. No.	Color	Cat. No.	Color	Net Price
S1782	Amber	S1785	Red	Each
S1783	Blue	S1786	White	Each
S1784	Green	S1787	Yellow	78c

One-Inch Enclosed Pilot Light

Porcelain and brass construction, heat-proof. Und. Lab. listed. Takes candelabra base lamp, removable from front.

No. S22203 Red No. S22204 Green Net \$1.22

KNOBS -- DIAL PLATES -- DIALS -- COUPLINGS

Bar Knobs



Made of moulded black bakelite with set screw for 1/8" shaft.

Cat. No.	Fig.	Size	Net Price
S1753*	A	1" Dia.	12c
S1753	B	1 1/2" Lgt.	12c
S1754	B	2 1/2" Lgt.	13c

* Supplied in Walnut finish also. Specify finish.

Dial Plates

Made of aluminum, black finish with reverse numerals and calibrations. Gives the receiver or transmitter a professional appearance.



Cat. No.	Degrees	Dia.	Marking	Net
S8505	325	3"	0-100	35c
S8506	180	3"	100-0	35c
S8507	180	3"	0-100	35c
S8508	180	3"	100-0	26c
S8509	325	2 1/2"	0-100	26c
S8510	325	2 1/2"	100-0	26c
S8511	180	2 1/2"	0-100	26c

Moulded Bakelite Knobs



These knobs are constructed of moulded bakelite. Fltted for 1/8" shaft with set screw included. All knobs are accurately centered and finished in a permanent lustrous effect that will last indefinitely. Supplied in an attractive walnut finish.

Cat. No.	Fig.	Dia.	Net Price
S1746	A*	1"	12c
S1747	B	1"	12c
S1748	B	1 1/2"	13c
S1749	B	1 1/2"	13c
S1750	C	1"	12c
S1751	C	1 1/2"	12c
S1752	D	1"	12c

* Only supplied in black, red, green, brown and white. Specify color.

Brass and Insulated Shafting

Insulated	Brass	Length	Net
S3770	S3771	6"	13c
S3772	S3773	12"	20c

Shaft Couplings, Reducers and Extenders



Cat. No.	Brass	Type	Size
Insulated			
S3760	S3761	B	1/8" to 1/2"
S3762	S3763	B	1/4" to 3/8"
S3764	S3765	A	1/8" to 1/2"
S3766	S3767	A	1/4" to 3/8"
S3768	S3769	A	1/2" to 3/4"

Net Price, each 15c

Panel Bushings

Made of cadmium plated brass for panels up to 1" thick. Supplied with 3" shaft with locking ring.

Cat. No. S1133 Type 256. Net Price 29c

1/4" Shaft Bushing

For bringing a 1/4" shaft through the panel.

No. S1756. Net Price 9c



MILLEN DIALS & ACCESSORIES

Disc Vernier Dial

A disc type vernier with escheatons to match popular square meters for symmetrical front panel designs. 3 1/2" dia. Ratio 10-1.

Cat. No. 10011 Net Price \$2.25



Illuminator

Comprises of a bayonet socket and mounting slip. Includes a 6-volt bulb. For use with above dial.

Cat. No. 10036 Net Price 35c

Inertia Wheel

A lead flywheel which permits inertia tuning. Can be used with the disc type dial or the drum dial shown above.

Cat. No. 10045 Net Price 35c

Large Grip Dial

Heavy gauge, nickel silver dials of conventional design, but with improved type knobs. 3 1/2" dia. Nickel silver finish, calibrated 0-100.

Cat. No. 10008 Net Price \$1.00



Small Tuning Knobs

A small dial in same finish as above. 1 1/2" dia. Calibrated 0-100. Semi-bar knob.

Cat. No. 10007 Net Price 50c



Dial Lock (E)

For No. 1007 and 1008 dials. Vertical movement of clamping finger prevents detuning.

Cat. No. 10050 Net Price 45c



Shaft Lock

Hex nut clamps split bushing to lock 1/8" shaft.

Cat. No. 10060 Net Price 35c



Shaft Lock

Converts volume controls, variable condensers, etc., from ordinary to locking type; used in place of regular mounting nut.

Cat. No. 10061 Net Price 36c



Flexible Couplings

Something new in flexible couplings. No back lash, yet single drives with as much as 45°, may be obtained. Isolantite insulation.

Cat. No. 39001

Net Price 36c



Isolantite Flexible Coupling

A compact conventional style flexible coupling. Overall dia. 1 1/2". Hubs for 1/8" shafts. Isolantite insulation.

Cat. No. 39002 Net Price 36c



Bud Geared Vernier Dial

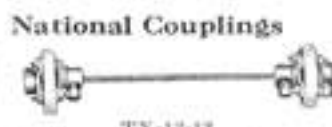
A precision-built gear-driven dial for electron-coupled oscillators, receivers, frequency meters, and other instruments requiring extreme accuracy of calibration. 10 to 1 ratio gears are spring loaded for freedom from back-lash. Calibrated in 500 divisions over 180 degree scale; gear drive mounts behind panel and dial scale mounts on front of panel. Scale may be removed for calibration without disturbing drive. Dial mounting area is 5 1/2" by 5 1/2".

Cat. No. S22307 Type No. D-1729

Net Price \$2.65



National Couplings



TX-9... flexible coupling for 1/8" shafts; Steatite insulation gives high efficiency.

Cat. No. S13553 Net Price 75c

TX-10... non-flexible, close coupling for 1/8" shafts; glazed isolantite insulated.

Cat. No. S13554 Net Price 36c

Flexible Shaft Units

Provide driving means for offset shafts or shafts at angles up to 90 degrees; 1/8" hubs.

TX-11, 4 1/2" overall, un-insulated hubs.

Cat. No. S13555 Net Price 42c

TX-12, 4 1/2" overall, isolantite insulated hubs.

Cat. No. S13556 Net Price 84c

TX-13, 7 1/2" overall, isolantite insulated hubs.

Cat. No. S13557 Net Price 99c



High Voltage Rigid Couplings

Glazed Isolantite insulation; fit 1/8" shafts.

Cat. No. S13558 TX-1 1" leakage path. Net 66c

Cat. No. S13559 TX-2 2 1/2" leakage path. Net 75c

Dial Cable

Phosphor bronze dial cable made of 42 strands over a linen thread center. High tensile strength. Will not stretch. 25, 50, and 100 ft. lengths supplied on spools.



Cat. No. Net Price Cat. No. Net Price

S11855 5 ft. \$.20 S11857 50 ft. \$1.39

S11856 25 ft. .74 S11858 100 ft. 2.50

B & W Turns Counter

Eliminates guesswork or haphazard settings in practically any application where a shaft must be turned a pre-determined number of times or set in any exactly pre-determined position; direct reading, eyrometer type dial shows turns down to one-tenth of a turn; records up to 10 turns. Drive is direct from crank to shaft of condenser, rotary inductor, or other driven unit; drive shaft is 1/8" diameter and extends 3" behind panel, other length on special order; crank 1 1/2" or 2 1/2" long, with roller handle 1/2" diameter by 1 1/2" long; requires panel space 3" by 3". Units are available for right-hand or left-hand rotation. Can be furnished, in quantity, with name plate marking to suit the application and to record 100 or 1,000 turns.

Cat. No. S22701 with 1 1/2" handle. Net \$7.50

Cat. No. S22702 with 2 1/2" handle. Net \$7.50

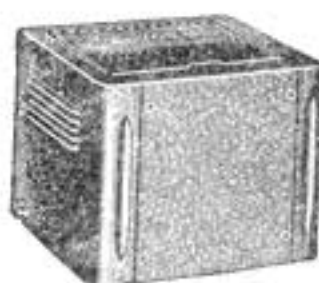


Woven Fabric Dial Belts

Approved replacements for all sets; will not stretch; treated to prevent slipping; dimensions listed are inside circumference. When determining size of belt required, stretch a thin thread around the belt pulleys. (A thick cord will provide an inaccurate reading.) When taking stretched out measurement of old belts, subtract 1/2" from over all length of stretched out belt. Note that stretched out length is not the accurate circumference of belts. Belts are listed according to inside circumference.

6 3/8"	7 1/8"	9 1/8"	10 1/8"	11 1/8"	12 1/8"	16 1/8"
6 7/8"	8 1/4"	9 3/4"	10 3/4"	11 3/4"	12 3/4"	16 3/4"
6 1/2"	8 1/2"	9 1/2"	10 1/2"	11 1/2"	12 1/2"	16 1/2"
6 1/4"	8 3/4"	9 3/4"	10 3/4"	11 3/4"	12 3/4"	16 3/4"
7 1/4"	8 7/8"	9 7/8"	10 7/8"	11 7/8"	12 7/8"	16 7/8"
7 3/8"	9 1/8"	10 1/8"	11 1/8"	12 1/8"	13 1/8"	17 1/8"
7 7/8"	9 3/4"	10 3/4"	11 3/4"	12 3/4"	13 3/4"	17 3/4"
7 1/2"	9 1/2"	10 1/2"	11 1/2"	12 1/2"	13 1/2"	17 1/2"
7 1/4"	9 3/4"	10 3/4"	11 3/4"	12 3/4"	13 3/4"	17 3/4"
7 3/8"	10 1/8"	11 1/8"	12 1/8"	13 1/8"	14 1/8"	18 1/8"
7 7/8"	10 3/4"	11 3/4"	12 3/4"	13 3/4"	14 3/4"	18 3/4"
7 1/2"	10 1/2"	11 1/2"	12 1/2"	13 1/2"	14 1/2"	18 1/2"
7 1/4"	10 3/4"	11 3/4"	12 3/4"	13 3/4"	14 3/4"	18 3/4"
7 3/8"	11 1/8"	12 1/8"	13 1/8"	14 1/8"	15 1/8"	19 1/8"
7 7/8"	11 3/4"	12 3/4"	13 3/4"	14 3/4"	15 3/4"	19 3/4"
7 1/2"	11 1/2"	12 1/2"	13 1/2"	14 1/2"	15 1/2"	19 1/2"
7 1/4"	11 3/4"	12 3/4"	13 3/4"	14 3/4"	15 3/4"	19 3/4"
7 3/8"	12 1/8"	13 1/8"	14 1/8"	15 1/8"	16 1/8"	20 1/8"
7 7/8"	12 3/4"	13 3/4"	14 3/4"	15 3/4"	16 3/4"	20 3/4"
7 1/2"	12 1/2"	13 1/2"	14 1/2"	15 1/2"	16 1/2"	20 1/2"
7 1/4"	12 3/4"	13 3/4"	14 3/4"	15 3/4"	16 3/4"	20 3/4"
7 3/8"	13 1/8"	14 1/8"	15 1/8"	16 1/8"	17 1/8"	21 1/8"
7 7/8"	13 3/4"	14 3/4"	15 3/4"	16 3/4"	17 3/4"	21 3/4"
7 1/2"	13 1/2"	14 1/2"	15 1/2"	16 1/2"	17 1/2"	21 1/2"
7 1/4"	13 3/4"	14 3/4"	15 3/4"	16 3/4"	17 3/4"	21 3/4"
7 3/8"	14 1/8"	15 1/8"	16 1/8"	17 1/8"	18 1/8"	22 1/8"
7 7/8"	14 3/4"	15 3/4"	16 3/4"	17 3/4"	18 3/4"	22 3/4"
7 1/2"	14 1/2"	15 1/2"	16 1/2"	17 1/2"	18 1/2"	22 1/2"
7 1/4"	14 3/4"	15 3/4"	16 3/4"	17 3/4"	18 3/4"	22 3/4"
7 3/8"	15 1/8"	16 1/8"	17 1/8"	18 1/8"	19 1/8"	23 1/8"
7 7/8"	15 3/4"	16 3/4"	17 3/4"	18 3/4"	19 3/4"	23 3/4"
7 1/2"	15 1/2"	16 1/2"	17 1/2"	18 1/2"	19 1/2"	23 1/2"
7 1/4"	15 3/4"	16 3/4"	17 3/4"	18 3/4"	19 3/4"	23 3/4"
7 3/8"	16 1/8"	17 1/8"	18 1/8"	19 1/8"	20 1/8"	24 1/8"
7 7/8"	16 3/4"	17 3/4"	18 3/4"	19 3/4"	20 3/4"	24 3/4"
7 1/2"	16 1/2"	17 1/2"	18 1/2"	19 1/2"	20 1/2"	24 1/2"
7 1/4"	16 3/4"	17 3/4"	18 3/4"	19 3/4"	20 3/4"	24 3/4"
7 3/8"	17 1/8"	18 1/8"	19 1/8"	20 1/8"	21 1/8"	25 1/8"
7 7/8"	17 3/4"	18 3/4"	19 3/4"	20 3/4"	21 3/4"	25 3/4"
7 1/2"	17 1/2"	18 1/2"	19 1/2"	20 1/2"	21 1/2"	25 1/2"
7 1/4"	17 3/4"	18 3/4"	19 3/4"	20 3/4"	21 3/4"	25 3/4"
7 3/8"	18 1/8"	19 1/8"	20 1/8"	21 1/8"	22 1/8"	26 1/8"
7 7/8"	18 3/4"	19 3/4"	20 3/4"	21 3/4"	22 3/4"	26 3/4"
7 1/2"	18 1/2"	19 1/2"	20 1/2"	21 1/2"	22 1/2"	26 1/2"
7 1/4"	18 3/4"	19 3/4"	20 3/4"	21 3/4"	22 3/4"	26 3/4"
7 3/8"	19 1/8"	20 1/8"	21 1/8"	22 1/8"	23 1/8"	27 1/8"
7 7/8"	19 3/4"	20 3/4"	21 3/4"	22 3/4"	23 3/4"	27 3/4"
7 1/2"	19 1/2"	20 1/2"	21 1/2"	22 1/2"	23 1/2"	27 1/2"
7 1/4"	19 3/4"	20 3/4"	21 3/4"	22 3/4"	23 3/4"	27 3/4"
7 3/8"	20 1/8"	21 1/8"	22 1/8"	23 1/8"	24 1/8"	28 1/8"
7 7/8"	20 3/4"	21 3/4"	22 3/4"	23 3/4"	24 3/4"	28 3/4"
7 1/2"	20 1/2"	21 1/2"	22 1/2"	23 1/2"	24 1/2"	28 1/2"
7 1/4"	20 3/4"	21 3/4"	22 3/4"	23 3/4"	24 3/4"	28 3/4"
7 3/8"	21 1/8"	22 1/8"	23 1/8"	24 1/8"	25 1/8"	29 1/8"
7 7/8"	21 3/4"	22 3/4"	23 3/4"	24 3/4"	25 3/4"	29 3/4"
7 1/2"	21 1/2"	22 1/2"	23 1/2"	24 1/2"	25 1/2"	29 1/2"
7 1/4"	21 3/4"	22 3/4"	23 3/4"	24 3/4"	25 3/4"	29 3/4"
7 3/8"	22 1/8"	23 1/8"	24 1/8"	25 1/8"	26 1/8"	30 1/8"
7 7/8"	22 3/4"	23 3/4"	24 3/4"	25 3/4"	26 3/4"	30 3/4"
7 1/2"	22 1/2"	23 1/2"	24 1/2"	25 1/2"	26 1/2"	30 1/2"
7 1/4"	22 3/4"	23 3/4"	24 3/4"	25 3/4"	26 3/4"	30 3/4"
7 3/8"	23 1/8"	24 1/8"	25 1/8"	26 1/8"	27 1/8"	31 1/8"
7 7/8"	23 3/4"	24 3/4"	25 3/4"	26 3/4"	27 3/4"	31 3/4"
7 1/2"	23 1/2"	24 1/2"	25 1/2"	26 1/2"	27 1/2"	31 1/2"
7 1/4"	23 3/4"	24 3/4"	25 3/4"	26 3/4"	27 3/4"	31 3/4"
7 3/8"	24 1/8"	25 1/8"	26 1/8"	27 1/8"	28 1/8"	32 1/8"
7 7/8"	24 3/4"	25 3/4"	26 3/4"	27 3/4"	28 3/4"	32 3/4"
7 1/2"	24 1/2"	25 1/2"	26 1/2"	27 1/2"	28 1/2"	32 1/2"
7 1/4"	24 3/4"	25 3/4"	26 3/4"	27 3/4"	28 3/4"	32 3/4"
7 3/8"	25 1/8"	26 1/8"	27 1/8"	28 1/8"	29 1/8"	33 1/8"
7 7/8"	25 3/4"	26 3/4"	27 3/4"	28 3/4"	29 3/4"	33 3/4"
7 1/2"	25 1/2"	26 1/2"	27 1/2"	28 1/2"	29 1/2"	33 1/2"
7 1/4"	25 3/4"	26 3/4"	27 3/4"	28 3/4"	29 3/4"	33 3/4"
7 3/8"	26 1/8"	27 1/8"	28 1/8"	29 1/8"	30 1/8"	34 1/8"
7 7/8"	26 3/4"	27 3/4"	28 3/4"	29 3/4"	30 3/4"	34 3/4"
7 1/2"	26 1/2"	27 1/2"	28 1/2"	29 1/2"	30 1/2"	34 1/2"
7 1/4"	26 3/4"	27 3/4"	28 3/4"	29 3/4"	30 3/4"	34 3/4"
7 3/8"	27 1/8"	28 1/8"	29 1/8"	30 1/8"	31 1/8"	35 1/8"
7 7/8"	27 3/4"	28 3/4"	29 3/4"	30 3/4"	31 3/4"	35 3/4"
7 1/2"	27 1/2"	28 1/2"	29 1/2"	30 1/2"	31 1/2"	35 1/2"
7 1/4"	27 3/4"	28 3/4"	29 3/4"	30 3/4"	31 3/4"	35 3/4"
7 3/8"	28 1/8"	29 1/8"	30 1/8"	31 1/8"	32 1/8"	36 1/8"
7 7/8"	28 3/4"	29 3/4"	30 3/4"	31 3/4"	32 3/4"	36 3/4"
7 1/2"	28 1/2"	29 1/2"	30 1/2"	31 1/2"	32 1/2"	36 1/2"
7 1/4"	28 3/4"	29 3/4"	30 3/4"	31 3/4"	32 3/4"	36 3/4"
7 3/8"	29 1/8"	30 1/8"	31 1/8"	32 1/8"	33 1/8"	37 1/8"
7 7/8"	29 3/4"	30 3/4"	31 3/4"	32 3/4"	33 3/4"	37 3/4"
7 1/2"	29 1/2"	30 1/2"	31 1/2"	32 1/2"	33 1/2"	37 1/2"
7 1/4"	29 3/4"	30 3/4"	31 3/4"	32 3/4"	33 3/4"	37 3/4"
7 3/8"	30 1/8"	31 1/8"	32 1/8"	33 1/8"	34 1/8"	38 1/8"
7 7/8"	30 3/4"	31 3/4"	32 3/4"	33 3/4"	34 3/4"	38 3/4"
7 1/2"	30 1/2"	31 1/2"	32 1/2"	33 1/2"	34 1/2"	38 1/2"
7 1/4"	30 3/4"	31 3/4"	32 3/4"	33 3/4"	34 3/4"	38 3/4"
7 3/8"	31 1/8"	32 1/8"	33 1/8"	34 1/8"	35 1/8"	39 1/8"
7 7/8"	31 3/4"	32 3/4"	33 3/4"	34 3/4"	35 3/4"	39 3/4"
7 1/2"	31 1/2"	32 1/2"	33 1/2"	34 1/2"	35 1/2"	39 1/2"
7 1/4"	31 3/4"	32 3/4"	33 3/4"	34 3/4"	35 3/4"	39 3/4"
7 3/8"	32 1/8"	33 1/8"	34 1/8"	35 1/8"	36 1/8"	40 1/8"
7 7/8"	32 3/4"	33 3/4"	34 3/4"	35 3/4"	36 3/4"	40 3/4"
7 1/2"	32 1/2"	33 1/2"	34 1/2"	35 1/2"	36 1/2"	40 1/2"
7 1/4"	32 3/4"	33 3/4"	34 3/4"	35 3/4"	36 3/4"	40 3/4"
7 3/8"	33 1/8"	34 1/8"	35 1/8"	36 1/8"	37 1/8"	41 1/8"
7 7/8"	33 3/4"	34 3/4"	35 3/4"	36 3/4"	37 3/4"	41 3/4"
7 1/2"	33 1/2"	34 1/2"	35 1/2"	36 1/2"	37 1/2"	41 1/2"
7 1/4"	33 3/4"	34 3/4"	35 3/4"	36 3/4"	37 3/4"	41 3/4"
7 3/8"	34 1/8"	35 1/8"	36 1/8"	37 1/8"	38 1/8"	42 1/8"
7 7/8"	34 3/4"	35 3/4"	36 3/4"	37 3/4"	38 3/4"	42 3/4"
7 1/2"	34 1/2"	35 1/2"	36 1/2"	37 1/2"	38 1/2"	42 1/2"
7 1/4"	34 3/4"	35 3/4"	36 3/4"	37 3/4"	38 3/4"	42 3/4"
7 3/8"	35 1/8"	36 1/8"	37 1/8"	38 1/8"	39 1/8"	43 1/8"
7 7/8"	35 3/4"	36 3/4"	37 3/4"	38 3/4"	39 3/4"	43 3/4"
7 1/2"	35 1/2"	36 1/2"	37 1/2"	38 1/2"	39 1/2"	43 1/2"
7 1/4"	35 3/4"	36 3/4"	37 3/4"	38 3/4"	39 3/4"	43 3/4"
7 3/8"	36 1/8"	37 1/8"	38 1/8"	39 1/8"	40 1/8"	44 1/8"
7 7/8"	36 3/4"	37 3/4"	38 3/4"	39 3/4"	40 3/4"	44 3/4"
7 1/2"	36 1/2"	37 1/2"	38 1/2"	39 1/2"	40 1/2"	44 1/2"
7 1/4"	36 3/4"	37 3/4"	38 3/4"	39 3/4"	40 3/4"	44 3/4"
7 3/8"	37 1/8"	38 1/8"	39 1/8"	40 1/8"	41 1/8"	45 1/8"
7 7/8"	37 3/4"	38 3/4"	39 3/4"	40 3/4"	41 3/4"	45 3/4"
7 1/2"	37 1/2"	38 1/2"	39 1/2"	40 1/2"	41 1/2"	45 1/2"
7 1/4"	37 3/4"	38 3/4"	39 3/4"	40 3/4"	41 3/4"	45 3/4"
7 3/8"	38 1/8"	39 1/8"	40 1/8"	41 1/8"	42 1/8"	46 1/8"
7 7/8"	38 3/4"	39 3/4"	40 3/4"	41 3/4"	42 3/4"	46 3/4"
7 1/2"	38 1/2"	39 1/2"	40 1/2"	41 1/2"	42 1/2"	46 1/2"
7 1/4"	38 3/4"	39 3/4"	40 3/4"	41 3/4"	42 3/4"	46 3/4"
7 3/8"	39 1/8"	40 1/8"	41 1/8"	42 1/8"	43 1/8"	47 1/8"
7 7/8"	39 3/4"	40 3/4"	41 3/4"	42 3/4"	43 3/4"	47 3/4"
7 1/2"	39 1/2"	40 1/2"	41 1/2"	42 1/2"	43 1/2"	47 1/2"
7 1/4"	39 3/4"	40 3/4"	41 3/4"	42 3/4"	43 3/4"	47 3/4"
7 3/8"	40 1/8"	41 1/8"	42 1/8"	43 1/8"	44 1/8"	48 1/8"
7 7/8"	40 3/4"	41 3/4"	42 3/4"	43 3/4"	44 3/4"	48 3/4"
7 1/2"	40 1/2"	41 1/2"	42 1/2"	43 1/2"	44 1/2"	48 1/2"
7 1/4"	40 3/4"	41 3/4"	42 3/4"	43 3/4"	44 3/4"	48 3/4"
7 3/8"	41 1/8"	42 1/8"	43 1/8"	44 1/8"	45 1/8"	49 1/8"
7 7/8"	41 3/4"	42 3/4"	43 3/4"	44 3/4"	45 3/4"	49 3/4"
7 1/2"	41 1/2"	42 1/2"	43 1/2"	44 1/2"	45 1/2"	49 1/2"
7 1/4"	41 3/4"	42 3/4"	43 3/4"	44 3/4"	45 3/4"	49 3/4"
7 3/8"	42 1/8"	43 1/8"	44 1/8"	45 1/8"	46 1/8"	50 1/8"
7 7/8"	42 3/4"	43 3/4"	44 3/4"	45 3/4"	46 3/4"	50 3/4"
7 1/2"	42 1/2"	43 1/2"	44 1/2"	45 1/2"	46 1/2"	50 1/2"
7 1/4"	42 3/4"	43 3/4"	44 3/4"	45 3/4"	46 3/4"	50 3/4"
7 3/8"	43 1/8"	44 1/8"	45 1/8"	46 1/8"	47 1/8"	51 1/8"
7 7/8"	43 3/4"	44 3/4"	45 3/4"	46 3/4"	47 3/4"	51 3/4"
7 1/2"	43 1/2"	44 1/2"	45 1/2"	46 1/2"	47 1/2"	51 1/2"
7 1/4"	43 3/4"	44 3/4"	45 3/4"	46 3/4"	47 3/4"	51 3/4"
7 3/8"	44 1/8"	45 1/8"	46 1/8"	47 1/8"	48 1/8"	52 1/8"
7 7/8"	44 3/4"	45 3/4"	46 3/4"	47 3/4"	48 3/4"	52 3/4"
7 1/2"	44 1/2"	45 1/2"	46 1/2"	47 1/2"	48 1/2"	52 1/2"
7 1/4"	44 3/4"	45 3/4"	46 3/4"	47 3/4"	48 3/4"	52 3/4"
7 3/8"	45 1/8"	46 1/8"	47 1/8"	48 1/8"	49 1/8"	53 1/8"
7 7/8"	45 3/4"	46 3/4"	47 3/4"	48 3/4"	49 3/4"	53 3/4"
7 1/2"	45 1/2"	46 1/2"	47 1/2"	48 1/2"	49 1/2"	53 1/2"
7 1/4"	45 3/4"	46 3/4"	47 3/4"	48 3/4"	49 3/4"	53 3/4"
7 3/8"	46 1/8"	47 1/8"	48 1/8"	49 1/8"	50 1/8"	54 1/8"
7 7/8"	46 3/4"	47 3/4"	48 3/4"	49 3/4"	50 3/4"	54 3/4"</

METAL CABINETS - - RELAY RACKS - - PANELS



DeLuxe Hinged Steel Cabinets

Chrome trim
Ventilated
sides & rear
Piano-hinged
top door
Marine Gray
finish

Besides the features listed above, these modern cabinets have rounded front vertical corners and vertical chrome molding to match most streamlined equipment. Rear panel has bottom openings for leads and cable entrance. Four embossed feet.

Cat. No.	Panel	Cabinet	Chassis*	Net
S21304	8 x 8"	8 x 10 x 8"	7 x 7 x 2"	\$4.26
S21305	8 x 10"	8 x 12 x 8"	7 x 9 x 2"	4.41
S21306	8 x 12"	8 x 14 x 8"	7 x 11 x 2"	5.29
S21307	12 x 18"	12 x 20 x 12"	10 x 17 x 3"	8.23

*Order from listing on next page.

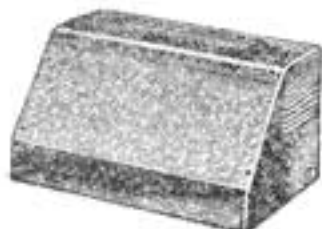
Standard Hinged Steel Cabinets

Same features and general construction as cabinets listed above, but without chrome trim. Panel attaches by self-tapping screws.

S21308	8 x 8"	8 x 10 x 8"	7 x 7 x 2"	\$2.65
S21309	8 x 10"	8 x 12 x 8"	7 x 9 x 2"	3.09
S21310	8 x 12"	8 x 14 x 8"	7 x 11 x 2"	3.88
S21311	12 x 18"	12 x 20 x 12"	10 x 17 x 3"	7.06

Deluxe Sloping Panel Cabinets

Red-stripped chrome trim
Removable front panel
Louvered ventilators back & sides

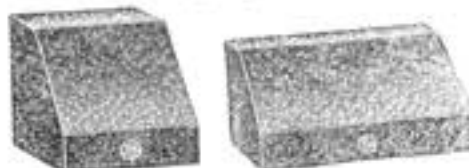


These all-purpose cabinets, designed for use by studios, laboratories, amateurs, etc., have rounded top corners to match the smart appearance of the chrome trim. Removable front panel permits chassis to be attached and used as one unit. Opening at bottom of rear for cables and wires. Beautifully finished in marine gray.

Cat. No.	Height	Width	Length	Chassis*	Net
S21312	8"	8"	8"	7 x 7 x 2"	\$3.88
S21313	8"	10"	8"	7 x 9 x 2"	4.26
S21314	8"	12"	8"	7 x 11 x 2"	5.14
S21315	12"	18"	12"	10 x 17 x 3"	7.50

*Order separately from listing next page.

Compact Sloping-front Cabinets



These small, rugged cabinets have many uses such as speaker cases, small receivers, monitors, oscillator cases, etc. Smoothly rounded corners and beautiful marine gray ripple finish.

Cat. No. S21316	4 1/2 x 4 1/2 x 4 1/2"	Net Price	\$1.26
Cat. No. S21317	7 1/2 x 4 1/2 x 4 1/2"	Net Price	2.26

Portable Cabinets

Removable front and back panels held with self-tapping screws; has leather handle; black ripple finish; sturdy, all-metal construction.

Cat. No.	Size	Net
S21318	12 x 7 1/2 x 7"	\$2.26
S21319	15 x 7 1/2 x 7"	2.65
CHASSIS FOR ABOVE		
S21320	7 1/2 x 6 1/2 x 2 1/2"	.44



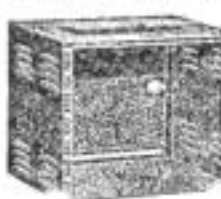
Standard Relay Racks

73 1/2" High
PANEL SPACE 7 1/2"

These sturdy steel racks are constructed of 1/2" steel, with spot-welded corners. Finished in black ripple enamel. Racks are for use with standard 19" long panels, and are adequately drilled for mounting holes every 1 1/2". Holes tapped for 10-32 thread. Substantially braced to prevent warble and to keep units in correct alignment.

Cat. No. S6200
NET PRICE \$12.64

Steel Cabinets for Rack Panels



New streamlined cabinet ideal for test equipment, P.A. systems, etc. Rounded front corners; red-stripped chrome trim; side louvers; hinged doors with snap locks. Welded heavy duty steel with black ripple finish. Drilled for standard 10" panels; take

chassis up to 17" x 13"; all cabinets 21" wide by 13 1/2" deep.

Cat. No.	Ht.	Panel	Doors	Net
S21289	10 1/2"	8"	Top only	\$9.72
S21290	14"	12"	Top only	11.76
S21291	19 1/2"	17"	Top & rear	16.32
S21292	28"	26 1/2"	Rear only	18.23
S21293	36 1/2"	35"	Rear only	20.30

DeLuxe Amplifier Foundation



Professional type amplifier chassis units with rounded top covers. "Air Gate" ventilators plus louvers and screen openings; red-stripped chrome trim and chrome handles; marine gray ripple finish.

Cat. No.	Overall Size	Chassis Ht.	Net
S21294	5 1/2 x 10 x 9"	3"	\$3.62
S21295	8 x 12 x 9"	3"	4.70
S21296	7 x 17 x 9"	3"	4.85
S21297	10 x 14 x 9"	3"	5.29
S21298	10 x 17 x 9"	3"	5.59

Standard Amplifier Foundations

Same design and appearance as deluxe units described above, but without the handles and chrome trim; rounded covers louvered at sides, front, and back and with screened openings in top; marine gray finish.

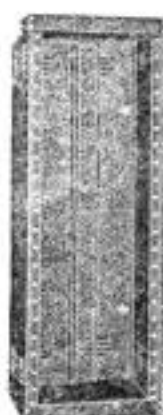
Cat. No.	Overall Size	Chassis Ht.	Net
S21299	5 1/2 x 10 x 9"	3"	\$2.12
S21300	8 x 12 x 9"	3"	3.09
S21301	7 x 17 x 9"	3"	3.18
S21302	10 x 14 x 9"	3"	3.44
S21303	10 x 17 x 9"	3"	3.62

Metal Speaker Cabinets



Sturdy metal cases with smoothly rounded corners, well ventilated back cover, punched metal grille, and convenient carrying handle. Deluxe model has marine gray finish plus red-stripped chrome trim on front and handle; standard model is all black.

Cat. No.	Size	Spkr.	Style	Net
S21201	10 x 10 x 6"	6"	Deluxe	\$4.12
S21282	12 x 12 x 7"	8"	Deluxe	5.17
S21283	14 x 14 x 8"	10"	Deluxe	6.47
S21284	16 x 16 x 8"	12"	Deluxe	8.61
S21285	10 x 10 x 6"	6"	Standard	3.00
S21286	12 x 12 x 7"	8"	Standard	3.57
S21287	14 x 14 x 8"	10"	Standard	4.71
S21288	16 x 16 x 8"	12"	Standard	6.32



Enclosed Relay Racks

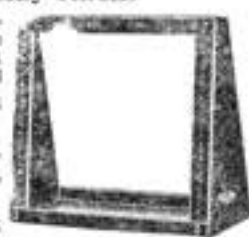
Constructed of heavy steel finished in black ripple enamel. Holes drilled for standard 19" panels every 1 1/2". Holes have 10-32 thread. Sides have louvers to provide ample ventilation. Back panel in form of a door with heavy latch; has two screen sections for additional ventilation. Comes knicked down, with all necessary nuts, bolts, and washers. Easy to assemble. Ideal for the professional type amateur transmitter.

Cat. No.	Overall Size	Panel Space	Net Price
S6248	42 x 21 x 16 1/2"	30 1/2"	\$20.87
S6249	66 1/2 x 21 x 16 1/2"	61 1/2"	27.93
S6250	82 1/2 x 21 x 16 1/2"	77"	34.69

Table Relay Racks

Table mounting; finished in black ripple enamel; and shipped knocked down. Fit all standard rack panels. No. S6259 24x20x12" panel space 21"x19".

Net Price	\$3.97
No. S6260 31x20x12" panel space 28"x19"	
Net Price	\$5.15



Standard Rack Panels
1" Steel
19" Long

Made to standard specifications; fit racks drilled to Western Electric standards; black, baked crackle finish.

Cat. No.	Width	Net	Cat. No.	Width	Net
S6202	1 1/2"	.65	S6208	12 1/2"	\$1.59
S6203	3"	.72	S6209	14"	1.82
S6204	5"	.85	S6210	15 1/2"	2.11
S6205	7"	.91	S6211	17"	2.26
S6206	8 1/2"	1.15	S6212	19"	2.44
S6207	10 1/2"	1.29	S6213	21"	2.79

MASONITE RELAY PANELS

Light, non-magnetic, insulated panels of tempered masonite 1/2" by 19"; durable black baked crackle finish; strong and tough, readily worked with hand tools; amateur notching.

Cat. No.	Width	Net	Cat. No.	Width	Net
S10541	1 1/2"	.35	S10547	12 1/2"	\$1.06
S10542	3"	.47	S10548	14"	1.21
S10543	5"	.62	S10549	15 1/2"	1.32
S10544	7"	.67	S10550	17"	1.53
S10545	8 1/2"	.82	S10551	19"	1.62
S10546	10 1/2"	.94	S10552	21"	1.85

Relay Rack Meter Panels

1" steel panels 5 1/2 x 19"; standard slots; finished black ripple.



No. Holes	Cat. No.	Net Price
3	S21321	\$1.47
5	S21323	2.11

Deluxe Meter Cases

Metal cases with rounded tops, marine gray finish, and chrome trim to match modern streamlined gear. Size 4 1/2 x 4 1/2 x 4 1/2".

Cat. No.	Meter	Net
S21325	2"	\$1.32
S21326	3"	1.32



CHASSIS - SOLDERING LUGS - FITTINGS

Cadmium Plated or Cracked Chassis for All Purposes



Solidly constructed one-piece steel chassis bases for receivers, transmitters, amplifiers, etc. Welded corners; bottom edges folded in with 1" lip on long side; drilled for bottom plate fastening. Specify whether cadmium plate or baked crackle finish is required.

Cat. No.	W x L x D	Stock	Net Price
S21327	4 1/2 x 8 1/2 x 1 1/2"		\$0.62
S21328	5 x 9 1/2 x 1 1/2"		.65
S21329	5 1/2 x 9 1/2 x 3		.86
S21330	5 1/2 x 10 1/2 x 3		.91
S21331	5 x 13 x 3		1.02
S21332	7 x 7 x 2 1/2		.82
S21333	7 x 9 x 2 1/2		.88
S21334	7 x 11 x 2 1/2		.97
S21335	7 x 12 x 3		1.15
S21336	7 x 13 x 2 1/2	±20	1.06
S21337	7 x 15 x 3		1.26
S21338	7 x 17 x 3		1.26
S21339	8 x 12 x 3		1.26
S21340	8 x 17 x 2		1.35
S21341	8 x 17 x 3		1.44
S21342	10 x 11 x 2 1/2		1.35
S21343	10 x 12 x 3		1.38
S21344	10 x 14 x 3		1.44
S21345	10 x 17 x 3 1/2		1.29
S21346	10 x 17 x 3		1.56
S21347	10 x 23 x 3		1.94
S21348	11 x 17 x 2		1.76
S21349	11 x 17 x 3		1.94
S21350	12 x 17 x 2	±18	1.76
S21351	12 x 17 x 3		1.94
S21352	13 x 17 x 2		2.08
S21353	13 x 17 x 3		2.44
S21354	10 x 17 x 4		2.06
S21355	13 x 17 x 4		2.76

*Narrow ends partly open.
†Fit hinged and sloping panel cabinets on preceding page.

Bottom Plates

Fit all chassis bases and amplifier units listed in this catalog. Cadmium plate or black ripple finish; four raised bosses prevent marring or scratching.

Cat. No.	Size	Net	Cat. No.	Size	Net
S21356	8x10"	\$0.38	S21366	8x12"	\$0.65
S21357	8x10"	.38	S21367	8x17"	.68
S21358	8x13"	.47	S21368	10x11"	.68
S21359	7x7"	.47	S21369	10x12"	.68
S21360	7x9"	.47	S21370	10x14"	.73
S21361	7x11"	.53	S21371	10x17"	.82
S21362	7x12"	.56	S21372	10x23"	1.06
S21363	7x13"	.56	S21373	11x17"	.82
S21364	7x15"	.62	S21374	12x17"	.88
S21365	7x17"	.65	S21375	13x17"	1.06
			S21376	13x14"	.88

NOTE: Due to uncertainties in critical materials, we reserve the right to supply chassis and bottom plates in whatever finish is most readily available.

Chassis Mounting Brackets

Hold 17" wide chassis in relay rack; panel must be 7" or more high; 1/4" steel; black ripple.

Cat. No.	Deep	Per Pair
S6252	8"	\$.73
S6257	11"	1.12
S6258	13"	1.29

Cat. No.	Size	Net per Pair
S6261	5"	\$0.62
S21377	8"	.88
S21378	11"	1.18

Relay Rack Brackets

To reinforce racks and for mounting panels, chassis, and shelves; black rippled steel.

Cat. No.	Size	Net per Pair
S6261	5"	\$0.62
S21377	8"	.88
S21378	11"	1.18

Oval Head Rack Screws and Washers



Nickel plated brass, size 1/4 x 1".
Cat. No. S3642 for 10 screws.
Net Price 9c
Cat. No. S3643 for 10 washers.
Net Price 9c



Spade Lugs

For mounting shields to chassis. Cadmium plated steel. 1/4 screws.
Cat. No. S3664
Net for 10 9c

Rubber Grommets

Insulate holes in metal panels, chassis, etc. Two styles — regular, and pure gum rubber.

REGULAR	GUM RUBBER
Cat. No.	Cat. No.
S3646 11c	S3653 16c
S3647 14c	S3654 18c
S3648 15c	S3655 22c
S3649 16c	S3656 26c
S3650 16c	S3657 30c
S3651 20c	S3658 34c
S3652 25c	

Round Nickel-Plated Washers

Cat. No.	For 23
S11706 1/4" for 23	
S11707 1/2" for 23	

Insulated and Brass Spacers

Ins.	Brass	D. L. for
S11692	S11697	10c
S11693	S11698	12c
S11694	S11699	12c
S11695	S11700	15c
S11696	S11701	20c

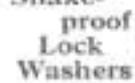
Tinned Soldering Lugs

No. S3659 Type 1	
No. S3660 Type 2	
No. S3661 Type 3	
No. S3662 Type 4	
No. S3663 Type 5	
Net Per 100	30c

Heavy Duty Soldering Lugs

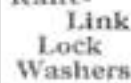
A	B	C	E	F
S11684	S11685	S11686	S11687	S11688
Net price per dozen 10c				

Shake-proof Lock Washers



No.	For 25
S11704 No. 6	for 25
S11705 No. 8	5c

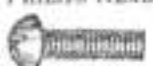
Kant-Link Lock Washers



No.	For 25
S10702 No. 6	for 25
S10703 No. 8	5c

Screws and Nuts

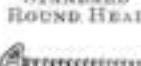
PHILIPS HEAD



The famous Phillips recessed head screw. Easier to drive, improves appearance of work.

Cat. No.	Size	Net
S3630*	1/8-32	100
S3631*	1/8-32	25c
S3632*	1/8-32	30c
S3633*	1/8-32	39c
S3634*	1/8-32	41c
S3635*	1/8-32	15c
S3636*	1/8-32	17c
S3637*	1/8-32	19c
S3638*	1/8-32	21c
S3639*	1/8-32	29c
S3640*	1/8-32	19c
S3641*	1/8-32	22c
S3642*	1/8-32	27c

STANDARD ROUND HEAD



Cat. No.	Size	Net
S3630*	1/8-32	100
S3631*	1/8-32	25c
S3632*	1/8-32	30c
S3633*	1/8-32	39c
S3634*	1/8-32	41c
S3635*	1/8-32	15c
S3636*	1/8-32	17c
S3637*	1/8-32	19c
S3638*	1/8-32	21c
S3639*	1/8-32	29c
S3640*	1/8-32	19c
S3641*	1/8-32	22c
S3642*	1/8-32	27c

Hexagon Nuts

Cat. No.	Size	Net
S3644A	6-32x1	25c
S3644*	6-32x1	20c
S3645*	8-32x1	22c

*Nickel plated brass.

†Cadmium plated steel

Cable Clamps



Cad-plated steel, 1" wide, 50 hole. For 1/4" and 1/2" dia. cables.

Cat. No.	Cable	L.
S11676	1/4"	1"
S11677	1/2"	1"

Net Price per doz. either size 12c

Angle Brackets

HOLES TAPPED 5-32

Heavy cad-plated steel; one tapped hole, one plain 1/2" D.

Cat. No.	Size
S11689	1x1
S11690	1x1
S11691	1x1

Net — any size 6 for 6c

Angle Brackets



MADE OF NICKEL PLATED BRASS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
S11677																								
S11678																								
S11679																								
S11680																								
S11681																								
S11682																								

Extruded Insulating Washers

With protruding burr. For insulating screws, jacks, etc., from metal panel.

Cat. No.	Hole	Dimensions	Fits	Net
S3665	1/8"	1/8" x 1/8" x 1/8"	No. 4 Screw	10
S3666	1/8"	1/8" x 1/8" x 1/8"	No. 6 Screw	for
S3667	1/8"	1/8" x 1/8" x 1/8"	No. 8 Screw	12c
S3668	1/8"	1/8" x 1/8" x 1/8"	No. 10 Screw	
S3669	1/8"	1/8" x 1/8" x 1/8"	Shaft	Per
S3670	1/8"	1/8" x 1/8" x 1/8"	Shaft	100
S3671	1/8"	1/8" x 1/8" x 1/8"	Shaft	90c

ICA Radio Hardware Assortment

Contains 1,000 pieces of assorted machine screws, wood screws, nuts, bolts, rivets, eyelets, lugs, lock washers, fibre washers, bakelite washers, rubber grommets, etc.
Cat. No. S3774 Type S250.
Net Price \$1.62

1,000 Piece Radio Hardware Assortment

Consists of popular size nuts, wood screws, machine screws, eyelets, washers, lock washers, and grommets.
No. S3801
Net \$2.85

A 2 Lb. Hardware Kit

A hardware assortment that consists of assorted sizes of screws, nuts, wood screws, self-tapping screws, and washers. All units are of popular sizes.
Cat. No. S3800 Net Price 90c

PUNCHES ~ DRILLS ~ SAWS ~ DIES



Greenlee Hole Punch

These new type hole punches will make or enlarge holes in any metals up to No. 10 gauge. This tool is operated by turning the screw with a wrench until the hole is cut thru. Available in 10 sizes listed below.

Cat. No.	Size	Net	Cat. No.	Size	Net
S10419	1/8"	\$1.72	S21716	1 1/2"	\$2.00
S2715	1/4"	1.72	S10422	1 3/4"	2.00
S10420	1/2"	1.88	S2712	1 7/8"	2.28
S10421	3/4"	2.00	S23045	1 1/2"	2.56
S23046	1 1/4"	2.00	S10423	2"	4.96

Hole Punch for Cliprite Socket



For use with the Amphipol or cliprite sockets. Punches a keyed hole in chassis to accommodate the special sockets. Simple to use. A hammer is the only other tool necessary.

Cat. No.	Size	Net
S2718	1.170"	\$5.88
S2719	1.320"	5.88
S23046	1 1/4"	1.76

Square Hole Shearing Punch

Will cut any size straight sided hole. Holes for mounting. Cutting plate is 1 1/2" long. Ideal for cutting transformer holes, etc.

Cat. No. S2724.
Net Price \$9.70



Socket Hole Punch

Die hardened oil tempered steel. Cuts clean round holes in sheet metal up to No. 16 gauge. Made in U. S. A.

No.	Size	Net
S2720	1/8"	
S2721	1/4"	
S2722	1/2"	\$1.67
S2723	3/4"	

Pawood Hole Cutters

Heavy duty tool type & bar brace or electric drill. Cuts holes 1" to 3 1/2" diameter in steel, bakelite or wood. Type 4 similar to type 5 cuts holes 1/2" to 4" in diameter.

Type	Size	Net Price
S2709	Type 5 round shank.	\$1.98
S2710	Type 5 square shank.	1.98
S2711	Type 4 round shank.	1.35
S2712	Type 2 round shank.	1.20



Heavy-duty Circle Cutter

Cuts holes 1/2" to 3" dia.; 1" square bar holds tool-steel cutting bit.

Cat. No. S23081 Net Price, complete \$3.53

Pistol Grip Hack Saw



A well made nickel plated hack saw frame. Adjustable to fit various size blades. Supplied with 8" blade.

Cat. No. S3620
Net Price 75c

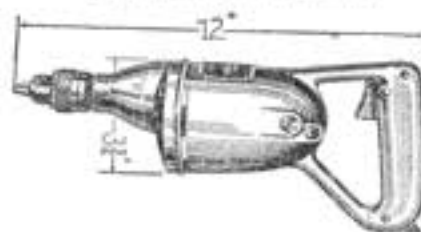
Electric Drill



An ideal drill for general use. Small, light, sturdy, and dependable. Easy to handle for steel, metal, or wood. Operates on 110 volts AC or DC. Will fit up to 1/2" straight shank drills. Finished in aluminum. Size 7 1/2" x 6". Weight 3 1/2 pounds.

Cat. No. S10111 Type B-144. Net Price \$5.95

Signal Electric Drill



A high quality standard duty electric drill. Durable cast aluminum alloy housing. A special neck permits drilling in close quarters. A three jaw key type chuck which handles up to 1/2" drill. An all-around useful tool in the workshop. Supplied with an 8 ft. heavy duty rubber covered cord and plug. For 115 V. AC-DC operation.

Cat. No. S3625 Type OB-8. Net Price \$18.50

Hollow Handle Hand Drill



Heavy 3 1/2" single gear drive; three-jaw chuck handles standard round shank drills up to 1/2"; chuck closes down to grip even the extremely small size drills. Hollow wooden handle has threaded cap that unscrews to provide space for containing extra drills.

Cat. No. S14008 Net Price 79c

Drill Gauge



Provides quick, easy means of finding sizes of twist drills. Made of polished, tempered steel, this gauge gives drill sizes in both number ratings and decimal diameters; also gives standard tap sizes for machine screws.

Cat. No. S20382 Net Price 95c

Coping Saws to Cut Steel



Fully nicked and polished frame with wood handle. Ideal for cutting odd size and square holes in radio chassis. Blades are filed and set, also highly oil tempered. Blade length 6 1/2" long supplied with two blades.

Cat. No. S10598—Type 963D. Net Price 34c

Cat. No. S10599 6 Blades in envelope. Net Price 25c

Tap and Die Set



Extremely useful in the home or shop. Set contains one of each of the following popular size machine screw taps and dies: 6-32, 8-32, 10-32, 12-24, and 14-20; one die stock to fit the above dies; one adjustable tap and reamer wrench; entire set supplied in hardwood case with hinged cover.

Cat. No. S14007 Net Price \$1.89

Hex. Head Self-Tapping Screws



Extremely useful in radio and metal work because they may be turned into drilled, punched or pierced holes without need for previous tapping. They cut their own threads in metal or bakelite and require no nut for holding.

Standard hexagon head Cadmium plated.

Cat. No.	Body Size	Length	Net Price
S14000	6	1/2"	\$.94 gross
S14001	6	3/4"	1.02 gross
S14002	6	1"	1.06 gross
S14003	8	1"	.97 gross
S14004	8	1 1/4"	1.06 gross
S14005	8	1 1/2"	1.14 gross

Screw Hole Punch

Designed to pierce or punch small diameter holes in sheet metal to take self-tapping screws. Made of high-grade, heat-treated steel.

Cat. No. S14006 Net Price 29c

Micrometer

Essential to precision measurement, the micrometer is the standard of quality workmanship. Modern production methods now permit us to offer this fine micrometer at a price that places it within reach of every serviceman. Made of hardened steel, with zero setting in April, this instrument measures to 1/1000 of an inch.

Cat. No. S20380 Maximum capacity 1" Net 98c

Cat. No. S20381 Maximum capacity 1 1/2" Net 49c

6" Scale and Wire Gauge

Stainless steel rule graduated in 64ths, with table of decimal equivalents etched on the back. Wire gauge gives Brownie & Sharpe ratings for wires from No. 20 to No. 8.

Cat. No. S20383 Net Price 23c

Walsco Staple Driver



Just the thing for rapid installation of ground wires, lead-in wires, and indoor aerials. Reaches into the hard-to-get-at places and drives staples quickly and accurately into wood, plaster, cement, and mortar. For protecting insulated wire, the depth the staple is driven may be adjusted as required. Magazine holds 23 staples of size suitable for holding No. 14 wire. Feed mechanism operates with trigger. Supplied with box of staples and suggestions for use.

Cat. No. S20386 Walsco Stapler, tool finish. Net Price \$2.97

Cat. No. S20387 Walsco Stapler, Chromium finish. Net Price \$3.82

Cat. No. S20388 Box of 250 staples, assorted colors: Ivory, blue, brown. Net Price 24c

Cat. No. S20389 10 boxes staples. Net \$2.00

Cat. No. S20390 Special hardened staples for concrete, box of 250. Net Price 29c

PLIERS - WRENCHES - SCREW DRIVERS

Utica Tools



Type 41

Diagonal Cutting Pliers

Drop forged from alloy steel. Hardened and tempered in oil. Special narrow nose for radio use.

Cat. No. S2700 Type 41—5" Net Price \$1.22
Cat. No. S2701 Type 41—6" Net Price \$1.33
Cat. No. S13405 Type 43—with hole for stripping No. 18 wire; 6 inch also. Net Price \$1.44

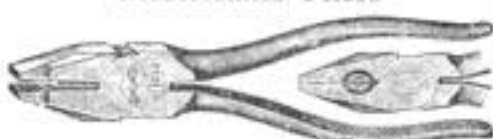
Long Needle Nose Side Cutting Pliers



This is a long fine spring tempered nose side cutting plier, drop forged from alloy steel with hand honed cutting edge.

Cat. No. S2702 Type 654—6" Net Price \$1.21
Same pliers as above but less cutters.
Cat. No. S2704 Type 1033—6" Net Price 1.02

Electricians' Pliers



An ideal tool for electrical work. Forged from alloy steel and skillfully tempered. A keen cutting edge.

Cat. No. S2706 Type 50—5" Net Price \$.89
Cat. No. S2707 Type 50—6" Net Price .94
Cat. No. S2708 Type 50—8" Net Price 1.09

Automatic Wire Stripper



For speedy stripping of all types of wire; just press the handles and end of wire is stripped neatly with no frayed insulation; one tool takes several wire sizes.

Cat. No.	Type	Wire Sizes	Net Price
S23067	733	12 to 20	
S23068	733A	14 to 24	\$3.53
S23069	733B	10 to 18	each
S23070	733C	8 to 10	

Cat. No.	Type	Wire Sizes	Net Price
S23071	733D	16 to 22	\$3.53
S23072	733E	14 to 18	each
S23073	733F	10 to 14	

Friction Tape



Guaranteed against drying. Passes all the ASTM specifications except yardage.
No. S3775
8 oz. Net Price .27c

Insulating Cambric

10,000 v. breakdown. Ideal for preventing shorts and grounds. 210 sq. in.
No. S3756 Net 29c



Xcelite Nut Drivers Shock-Proof—Break-Proof

Similar in appearance to the above screw drivers except that it has socket to fit over nuts. Deep socket. Made of the finest alloy steel. All socket wrenches 6" long.



Cat. No.	Nut Size	Type	Net Price Each
S3609	1/4"	6	
S3610	3/8"	7	
S3611	1/2"	8	
S3612	5/8"	9	
S3613	3/4"	10	
S3614	7/8"	11	42c
S3615	1"	12	
S3616	1 1/8"	13	
S3617	1 1/4"	14	56c

Volume Control Nut Driver

A nut driver with a hollow shaft for tightening volume control nuts. Available in two sizes.

Cat. No. S10593 to fit 1/8" nut. Net .59c
Cat. No. S10594 to fit 1/4" nut. Net .71c

Turn Tight Socket Wrenches



Hardened steel. Cadmium plated with sturdy black handle. Ideal for all service work. Hexagon red shafts. Hollowed at ends. Socket fits over extended screws.

6" Long	Net	9" Long	Net
S2733		S2740	
S2734		S2741	
S2735		S2742	
S2736	Each	S2743	Each
S2737	29c	S2744	35c
S2738		S2745	
S2739—Kit of 6	1.76c	S2746—Kit of 6	2.12

Handy Radio Wrench Set



This set is made of high grade steel with case hardened sockets. A hard wood handle fits screw driver socket and 3 wrench sockets, size 1/4, 1/2, 3/4, and 1".
Cat. No. S3626 Complete Set. Net Price 69c

Lock Socket Wrench and Screw Driver Set



Efficient socket wrench supplied with a knurled socket and extensions to extend the length of handle to 4" straight extension and a 6" L-shaped extension. Screw driver blade made of hardened steel, has a patented locking device. Knurled wooden handle.
No. S2747 Complete Set Net Price \$1.47

Chassis Cradle



Indispensable to the radio or amplifier serviceman who wants to work efficiently. Holds chassis in any desired position and locks to permit accurate working. Adjustable to take any chassis up to 21" in length. Saves time by making the awkward jobs easy. Sturdy steel construction.
Cat. No. S20384 Chassis Cradle. Net Price \$4.75
Cat. No. S20385 Extra set of clamps. Net 2.69

Xcelite Shockless Screw Drivers



These screw drivers are made of the finest alloy steel and have an amber handle that is shock-proof and cannot break.

Cat. No.	Size Blade	Type No.	Net Price
S3600	1/4" x 4"	R-154	29c
S3601	1/4" x 6"	R-156	33c
S3602	1/4" x 8"	R-158	36c
S3603	1/4" x 10"	R-160	39c
S3604	1/4" x 12"	R-162	43c
S3605	1/4" x 14"	R-164	52c
S3606	1/4" x 16"	R-166	52c
S3607	1/4" x 18"	R-168	59c
S3608	1/4" x 20"	R-170	59c

Insulated Screw Drivers



Particularly shaped to fit into set screws of knobs. Transparent unbreakable amber colored handle. Length 11". Specially hardened blades.
Cat. No. S3624 Net Price 15c

Phillips Screw Drivers

Fit Phillips recessed head screws Nos. 5 to 9; Xcelite

Cat. No.	Blade Size	Total Length	Net Price
S13405	4 1/2" x 1/8"	8 1/2"	83c
S13406	1 1/2" x 1/8" (stub)	3 1/2"	57c

Neon Tester Screw Driver

Neon tube built into clear, transparent shock proof handle glows brightly when screw driver blade touches "hot" circuit; a handy tool for checking spark plugs, coils, insulation, etc.
Cat. No. S23074 4" blade Net 59c

Brach Test-O-Lite



Ideal for locating blown fuses, high resistance leaks, condenser, transformer trouble, and indicating A.C. or D.C. current. Operates on 100 to 550 volts. Insulated rubber covered leads.
Cat. No. S2713 Net Price \$1.10

Plier Values—Diagonal Pliers

Made of forged tool steel. Has hardened and tempered cutters, 5 1/2" overall.
Cat. No. S2730 Net Price 79c

Long Nose Pliers

Made of hardened steel with side cutters, 5" long. Excellently made and fitted.
Cat. No. S2731 Net Price 89c

All Purpose Pliers

Handy pliers. A sturdy heavy tool. Has toothed jaws that will not slip.
Cat. No. S2732 Net Price 44c

SOLDERING IRONS AND ACCESSORIES

American Beauty Soldering Irons



Preferred by those who measure the value of a tool by the service it renders, these dependable, long-lasting soldering irons are available in sizes to suit every use. Each iron has baffle plate at shank to keep handle cooler; separate, heat-insulating stand furnished with each iron.

Cat. No.	Type	Watts	Tip Dia.	Net
S23047	3135	100	1/8"	\$4.79
S23048	3155	200	1/4"	5.72
S23049	3175	300	3/8"	7.67
S23050	3195	550	1"	9.98

Replacement Tips



for above irons	3738	3758	3778	3798
	for	for	for	for
	3138	3158	3178	3198
	iron	iron	iron	iron

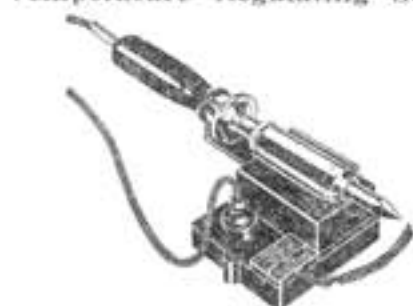
Cat. No.	S23051	S23052	S23053	S23054
Net. Ea.	\$.33	\$.74	\$1.27	\$1.47

Replacement Elements

Genuine American Beauty heating elements to fit irons listed above.

Iron No.	3138	3158	3178	3198
Cat. No.	S23055	S23056	S23057	S23058
Net. Ea.	\$2.47	\$3.29	\$4.45	\$5.86

Temperature Regulating Stand



Stops over-heating when iron is idle yet holds iron at working temperature ready for instant use; adjustable thermostat lets you set heat just where you want it; iron plugs into stand and rests in metal cradle when not in use; handles irons up to 660 watts on circuits up to 240 volts; for use on A.C. only.

Cat. No.	S23059	Type 475	Net Price	\$3.46
----------	--------	----------	-----------	--------

Light-duty Soldering Iron



This light-weight American Beauty iron draws only 50 watts and is wholly adequate for light work; tip screws on and is easily replaced.

Cat. No.	S23060	Type 8-76	Net Price	\$2.98
Cat. No.	S23061	Replacement tip	Net ea.	21c

While priority regulations remain in force, orders must be accompanied by applicable certification in order to ensure shipment on schedule.

Kester Solder



S3627	Rosin core radio solder, per tin	17c net
S3628	Rosin core radio solder, per lb.	64c net
S20307	Acid core solder, per lb.	64c net
S20308	Plain wire solder, per lb.	64c net

Soldering Paste

Non-corroding flux for the more difficult soldering jobs. Use with plain wire solder.

Cat. No.	S20309	Per Tin, Net Price	12c
----------	--------	--------------------	-----

Lenk High Heat Blotorch



Heavy duty alcohol-burning blow-torch that generates quickly and delivers high steady heat; extra large priming cup for faster starting; flame control and shut-off valve; self-cleaning orifice; non-clogging burner; polished brass-finished tank holds 1 pint; 7 1/2" high 3" dia.

Cat. No.	S23065	Type 105
Net Price		\$2.06

Lenk Automatic Blotorch

Blows itself; works on denatured or commercial alcohol; screw top for easy loading; copper heat-conductor attached to wick in pressure chamber insures quick starting; patented wick construction feeds fuel evenly for steady heat; solid base makes it leak proof; all parts made of brass; size 5 1/2" x 2 1/2" x 1 inches.

Cat. No.	S23066	Type 105
Net Price		\$1.19



Crystal Finish Lacquer

Black, air-drying lacquer that gives a professional finish on any metal; easy to apply.



Cat. No.	Quantity	Net
S2752	1 pint	\$.21
S3753	1 pint	.63
S3754	1 pint	1.18

Wrinkle Finish Varnish

Requires no baking; can be brushed or sprayed; gives professional results; available in rich black and delicate silver-gray.

Black Silver Gray	Net
No. No. Size	Price
S3746 S3747	1 pt. \$.24
S3748 S3749	1 pt. .65
S3750 S3751	1 pt. 1.18



Coil Dope

Specialty prepared for coating and holding coil windings firmly in place. Fast-drying and non-inductive. 1 pt. bottle.

No.	S3755
Net Price	21c

"Esico" Soldering Irons



These famous Esico irons with one piece blue steel cases. Mahogany handles, replaceable forged copper tips. Underwriter approved cord with unbreakable rubber plug. Guaranteed for one year. For use on 105-120 V. AC or DC.

S2725	Nick Nack, 55 watts.	Net	\$.73
S2726	Midget, 65 watts.	Net	1.15
S2727	Junior, 100 watts.	Net	1.74
S2728	Trophy, 150 watts.	Net	2.94

Copper tip replacement for the midget or junior irons above.

Cat. No.	S2729	Net Price	\$.21
----------	-------	-----------	--------

Thermostatic Control Stand

Keeps iron at desired heat while in stand. Picking up iron restores full voltage to heating element.



Cat. No.	S10068	for irons up to 1" tip	Net Price	\$3.82
Cat. No.	S10069	for irons 1" to 1 1/2" tip		

Electric Solder Pot



Ideal for tinning wire leads, dip-soldering tubes, and other production soldering operations; ruggedly built and not top-heavy; may be bolted to bench; pilot light shows when pot is heating; size of pot, 1 1/2" dia. 1 1/2" deep; draws 200 watts at 110 volts AC or DC; holds 1 pound of solder; overall height 4 1/2".

Cat. No.	S23062	Type 12	Net Price	\$4.50
Cat. No.	S23063	Cord set replacement		.75
Cat. No.	S23064	Replacement element		1.50

Kwikheat Soldering Iron



Ready to use in 1 1/2 minutes. Built-in thermostat holds heat at best value for fast work. Supplied with 3 interchangeable tips. Underwriters' listed.

Cat. No.		
S20303	Kwikheat Iron	Net Price \$8.25
S20304	Extra tip No. 1	Net Price
S20305	Extra tip No. 2	Each
S20306	Extra tip No. 3	\$1.25

Pencil Type Soldering Iron



Designed for use in hard-to-get corners. Removable tip. 110 volt AC-DC.

Cat. No.	S10113	50 watt.	Net Price	\$1.25
Cat. No.	S10114	75 watt.	Net Price	1.62

SIMPSON PANEL METERS TEST EQUIPMENT

Round and Square Panel Meters



Type 25-35-45-55-105
135-145-155-45

Simpson Meters are the only instruments in their price class incorporating soft iron pole pieces and bridge type construction. These design features are your assurance that Simpson instruments will remain uniformly accurate through years of service.



Type 27-37-47-57-127
137-147-157-47

MODEL 25-35-45-55 in round Bakelite case, flange diameter 3 1/2", body diameter 2 1/2", depth overall 1 1/2".

MODEL 27-37-47-57 in square Bakelite case, width 3", height 3 1/2", mounts in round hole, 2 1/2" in diameter.

MODEL 127-137-147-157, 2 1/2" square, mounts in round hole, 2 1/2" in diameter.

3" . . . "DC" Milliammeters . . . 2"					
Type 25	Net	Type 27	Range	Type 127	Net
Cat. No.	Price	Cat. No.	MA.	Cat. No.	Price
S1600	\$6.12	S1613	0-1	S1626	\$5.14
S1601	5.04	S1614	0-5	S1627	4.21
S1602	5.04	S1615	0-10	S1628	4.21
S1603	5.04	S1616	0-15	S1629	4.21
S1604	5.04	S1617	0-25	S1630	4.21
S1605	5.04	S1618	0-50	S1631	4.21
S1606	5.04	S1619	0-100	S1632	4.21
S1607	5.04	S1620	0-150	S1633	4.21
S1608	5.04	S1621	0-200	S1634	4.21
S1609	5.04	S1622	0-250	S1635	4.21
S1610	5.04	S1623	0-300	S1636	4.21
S1611	5.04	S1624	0-500	S1637	4.21
S1612	5.04	S1625	0-1000	S1638	4.21

3" DC Voltmeters					
Type 25	Net	Type 27	Range	Type 127	Net
Cat. No.	Price	Cat. No.	MA.	Cat. No.	Price
S23265	\$23.266	0-3	\$5.04	S23309	\$23.310
S23267	\$23.268	0-5	5.04	S23311	\$23.312
S23269	\$23.270	0-8	5.04	S23313	\$23.314
S23271	\$23.272	0-10	5.04	S23315	\$23.316
S23273	\$23.274	0-15	5.04	S23317	\$23.318
S23275	\$23.276	0-25	5.04	S23499	\$23.500
S23277	\$23.278	0-50	5.04	S10047*	\$10.325*
S23279	\$23.280	0-100	5.04	S10048*	\$10.326*
S23281	\$23.282	0-150	5.04	S10049*	\$10.327*
S23283	\$23.284	0-200	6.12	S10050*	\$10.328*
S23285	\$23.286	0-250	6.12	S10051*	\$10.329*
S23287	\$23.288	0-300	7.19		

3" DC Microammeters					
Type 25	Net	Type 27	Range	Type 127	Net
Cat. No.	Price	Cat. No.	MA.	Cat. No.	Price
S23289	\$23.290	0-100	\$11.93	S23319	\$23.320
S23291	\$23.292	0-200	10.47	S23321	\$23.322
S23293	\$23.294	0-500	7.84	S23323	\$23.324
				S23325	\$23.326
				S23327	\$23.328
				S23329	\$23.330
				S23331	\$23.332
				S23333	\$23.334
				S23335	\$23.336
				S23337	\$23.338

3" . . . Decibel Meters-Volume Level Indicators . . . 2"					
(Copper Oxide Rectifier Type)					
Calibrated for use on 500 ohm line. Power 65mW. Zero DB—1.73 volts.					
General Purpose Type. Range—10 to +6 DB.					
Type 45	Net	Type 47	Resistance	Type 145	Net
Cat. No.	Price	Cat. No.	2,500 ohms	Cat. No.	Price
S10603	\$9.48	S10609	5,000 ohms	S10332	\$8.91
S10604	11.86	S10601		S10333	10.29

3" . . . R.F. Thermo Couple Ammeters . . . 2"					
Supplied with internal thermocouple.					
Type 35	Net	Type 37	Range	Type 135	Net
Cat. No.	Price	Cat. No.	0-1 amp	Cat. No.	Price
S10053	Ea.	S10311	0-2 amp	S10320	Ea.
S10054		S10312	0-3 amp	S10321	
S10055	\$5.56	S10314	0-5 amp	S10322	\$4.74
S10056		S10315		S10323	

Simpson Micro-Testers



AC AMMETER with self-contained current transformer. For 60 cycle service. Ranges 0-1-2.5-5-10-25 amperes. Binding posts.

Cat. No. S13120 Model 280. Net \$11.51

AC MILLIAMMETER with built-in current transformer. Ranges 0-5-25-100-250-1,000 milliamperes 60 cycle AC Binding Posts.

Cat. No. S13121 Model 285. Net \$11.51

AC VOLTMETER particularly adapted to checking line voltage. Ranges 0-150-300-600; range selector switch; binding posts.

Cat. No. S13122 Model 281. Net \$11.03

AC VOLTMETER, rectifier type. Ranges 0-5-10-25-50-100-250-500-1,000 AC volts; range selector switch; binding posts.

Cat. No. S13123 Model 286. Net \$11.51

DC VOLT-OHM-MILLIAMMETER 5,000 ohms per volt; ranges selected by tap switch are 0-10-50-250-500-1,000 volts; 0-10-100-500 MA; 0-250 microamp; 0-2,000-20,000-200,000 ohms; test probe; tip jacks for connection; 200 microamp. basic movement. Cat. No. S13124 Model 285. Net \$11.76

LOAD TYPE BATTERY TESTER AND VOLTMETER provides means of loading circuit when battery is under test. Rotary switch selects ranges 0-2-4-8-50-100-150 volts DC. Toggle switch connects and disconnects normal battery load to duplicate operating conditions. Cat. No. S23178 Model 245 Tester complete with attached leads Net \$9.55

INDUSTRIAL KIT holds any three Simpson Micro-Testers; hinged cover; strong carrying handle; case 8" x 10" x 3". Cat. No. S13130 Net \$3.19



DC MILLIAMMETER, ranges 0-1-5-10-25-50-100-250-500-1,000 MA.; shorting position at high end of range switch; binding posts.

Cat. No. S13125 Model 283. Net \$11.03

DC MICROAMMETER has basic movement of 50 microamp. sensitivity and built-in shunts for higher ranges; control switch for 0-50-100-250-500-1,000 microamp. and short; binding posts.

Cat. No. S13126 Model 284. Net \$11.51

DC AMMETER entirely self-contained; connecting binding posts for ranges 0-1-2.5-5-10-25 amperes.

Cat. No. S13127 Model 285. Net \$11.03

DC VOLTMETER, resistance 1,000 ohms per volt; control switch for ranges 0-1-2.5-5-10-25-50-100-250-500-1,000 volts; binding posts marked for polarity.

Cat. No. S13128 Model 287. Net \$11.03

OHMMETER with self-contained batteries; battery compensator; switch selects ranges 0-1,000-10,000-100,000-1,000,000-10,000,000 ohms; binding posts; three cycle log scale.

Cat. No. S13129 Model 282. Net \$11.51

Simpson Volt-Ohm Milliammeter

Ranges to 5,000 volts, 5,000 ohms per volt with large 4 1/2" meter. The Model 215 set tester incorporates all of the essential ranges for modern servicing both AC and DC. It has a large 4 1/2" meter with its long, easy to read scale which permits close reading on all ranges. Molded bakelite case is provided with leather handle. Supplied complete with pair of test leads.

Ranges: DC at 5,000 ohms per volt; AC at 1,000 ohms per volt; Volts 0-2.5-10-250-1,000-5,000 AC, DC.; Milliamperes 0-10-100-500; Microamperes 0-250; Decibels (5 Ranges)—12 to +55; Ohms 0-1,000 (30 at center), 0-400,000 (3,000 at center), 0-4 meg. (30,000 at center). Size: width, 5 1/2", height 7", depth 3". Cat. No. S11423 Type 215. Net Price \$27.19



High Sensitivity Tester

Similar to Model 215 described above, but with 20,000 ohms per volt DC sensitivity and 1,000 ohms per volt AC sensitivity. AC, DC, and output volts ranges 0-2.5-10-50-250-1,000-5,000; DC milliamperes 0-10-100-500; DC microamperes 0-100; ohms 0-1,000 (12 at center), 0-100,000 (1,200 at center) 0-10 megohms (120,000 at center); decibels in 5 ranges from -10 to +52.

Cat. No. S23176 Model 260. Net Price \$32.59

Simpson Hammett

Completely encased in Bakelite, this meter is shockproof in every detail. Ranges as follows: "AC volts"—15, 150, 750, 3,000. "DC volts"—15, 75, 300, 750, and 3,000. "DC ma." 15, 150, and 750. Ohms—0-3,000, 0-200,000. Sensitivity and AC and DC volt scales, 1,000 ohms per volt. Cat. No. S10052 Model 240. Net Price \$17.49

Pocket "AC-DC" V-O-M

A small pocket type AC-DC service instrument. Employs a Simpson 2" rectangular meter. Sensitivity 1,000 ohms per volt. Ranges: 0-10, 250 and 1,000 AC volts. 0-10, 50, 250, and 1,000 DC volts. 0-10, 50 and 250 DC MA. 0-1,000 and 100,000 ohms. Complete with test leads. Cat. No. S1678 Model 230. Net Price \$16.94



PANEL METERS



3" Round and Square "DC" Voltmeters



Supplied with internal multipliers up to 500V			
ROUND STYLE	SQUARE STYLE		
Type 321	Type 327A	Volts Range	Net Price
Cat. No.	Cat. No.		
S1845	S10288	0-10	\$5.94
S1846	S10289	0-25	5.94
S1847	S10290	0-50	5.94
S1848	S10291	0-100	6.31
S1849	S10292	0-150	6.31
S1850	S10293	0-300	7.20
S1851	S10294	0-500	7.90

1,000 ohm per volt

Supplied with external multipliers

Model	321	327A		
Body	2 1/2" dia.	2 1/2"		
Flange	3 1/2" dia.	3" x 3"		
Depth	1 1/2"	1 1/2"		
	S10033	S23434	0-1000	
	S10034	S10295	0-1500	
	S10035	S10296	0-2000	\$9.37
	S10036	S10297	0-2500	
	S10037	S10298	0-3000	
	S10038	S10299	0-4000	
	S10039	S10300	0-5000	\$12.56

3" Round and Square Thermo Ammeters

Supplied with internal couples only. Will withstand 50% overloads.

Round Style Model 341. Body 2 1/2" dia. Flange 3 1/2" dia. 1 1/2" Depth.

Square Style Model 347A. Flange 3" x 3". Body 2 1/2" dia. 1 1/2" Depth.

Type 347A	Type 341	Range	High Freq. Accuracy	Approx. Res.	Net Price
Cat. No.	Cat. No.				
S23435	S10283	0-.5 amps.		.93	Each
S23436	S10284	0-1 amps.		.35	
S23437	S10285	0-1.5 amps.	2%	.21	\$4.84
S23438	S10286	0-2.5 amps.		.13	
S23439	S10287	0-5 amps.		.06	

3" Round and Square Decibel Meters



POWER LEVEL INDICATORS

Used to measure sound or noise levels in applications for public address, theaters, broadcasting studios. Standard range reads up 6 and down 10 decibels, zero decibel at 1.73 volts, 500 ohm line, 6 milliwatts.

Cat. No. S1883 Model 321, round type.

Cat. No. S12076 Model 327A, square type.

Net Price, either type \$8.41

"Little Triplets"

Matched instruments available singly or in combination; answer every servicing and analyzing need. Each tester is complete—each incorporates a large, 3-inch Triplet meter with lifetime guarantee against any defect in material or workmanship. Red molded cases are only 3 1/2" x 5 1/2" x 2 1/2". Panels are ivory color with red markings and trim.

"Little Triplets"—as listed—Net \$9.70 ea.



A.C. Instruments

Cat. No. S12192 A.C. VOLTMETER, Model 672... particularly adapted to testing electrical appliances, motors, etc.; three popular ranges, 0-150, 0-300, and 0-750 A.C. volts.

Cat. No. S12193 A.C. VOLTMETER, Model 673... rectifier type for circuits where available power is limited; also for output measurement with series condenser. Ranges 0-5-10-25-50-100-250-500-1,000.

Cat. No. S12194 A.C. AMMETER, Model 670... self-contained current transformer permits use on ranges of 0-1-2.5-5-10-25 amp, 60 cycles.

Cat. No. S12197 A.C. MILLIAMMETER, Model 671... invaluable for radio servicing, experimental, and laboratory work; ranges 0-5-10-25-50-100-250-500-1,000 A.C. milliamperes.

D.C. Instruments

Cat. No. S12195 D.C. VOLTMETER, Model 677... 1,000 ohms per volt; ranges 0-1-2.5-5-10-25-50-100-250-500-1,000 D.C. volts. All resistors are built into the instrument.

Cat. No. S12198 D.C. AMMETER, Model 674... five ranges all self-contained; no external shunts required; 0-1-2.5-5-10-25 D.C. amp.

Cat. No. S12196 D.C. MILLIAMMETER, Model 675... covers all the needs in radio servicing and most experimental work. Ranges 0-1-5-10-25-100-250-500-1,000 D.C. milliamperes.

Cat. No. S12199 D.C. MICROAMMETER, Model 676... self-contained shunts for ranges 0-50-100-250-500-1,000 D.C. milliamperes. May be used with external resistors to check volts at 20,000 ohms per volt.

Cat. No. S12200 OHM METER, Model 678... for readings from 0.2 ohms to 10 megohms; ranges 0-1,000 ohms (10 ohms center scale), 0-10,000 ohms (100 ohms center scale), 0-100,000 ohms, 0-1 megohm, 0-10 megohms.

Cat. No. S12201 COMBINATION CASE... holds any three "Little Triplets," also provides space for test leads, small tools, etc. Carrying handle and removable cover. Net Price \$2.71

2" and 3" Round Case "DC" Milliammeters



Type 227A-327A-327A

Triplet DC meters are the D'Arsonval type with an extra light moving coil and reinforced strong parts. The AC meters are the movable iron repulsion type. All are air damped. Extra light moving parts. Both AC and DC instruments have Sapphire jewel bearings. Finest workmanship to assure dependable performance. White enameled on metal dials. Molded compound zero adjuster. Accuracy 2%. All models listed are flange mount as illustrated. Molded compound case.



Type 321-321-321

Model 221 Body 2 1/2" dia. Depth 1 1/2". Flange 2 1/2" dia.			
Model 321 Body 2 1/2" dia. Depth 1 1/2". Flange 3 1/2" dia.			
Type 321	Net Price	M.A. Range	Approx. Res.
Cat. No.			
S1815	\$5.04	0-1	33
S1817	4.16	0-3	6.6
S1818	4.16	0-10	3.1
S1819	4.16	0-15	2
S1820	4.16	0-25	1.2
S1821	4.16	0-50	.6
S1822	4.16	0-100	.3
S1823	4.16	0-150	.23
S1824	4.16	0-200	.15
S1825	4.16	0-250	.12
S1826	4.16	0-300	.1
S1827	4.16	0-500	.06
S1829	4.16	0-1000	.03

2" and 3" Square Case "DC" Milliammeters

Model 227A Flange 2 1/2" x 2 1/2". Body 2 1/2" dia. Depth 1 1/2".			
Model 327A Flange 3" x 3". Body 2 1/2" dia. Depth 1 1/2".			
Type 327A	Net Price	M.A. Range	Approx. Res.
Cat. No.			
S10250	\$5.04	0-1	33
S10251	4.16	0-5	6.6
S10252	4.16	0-10	3.1
S10253	4.16	0-15	2
S10254	4.16	0-25	1.2
S10255	4.16	0-50	.6
S10256	4.16	0-100	.3
S10257	4.16	0-150	.23
S10258	4.16	0-200	.15
S10259	4.16	0-250	.12
S10260	4.16	0-300	.1
S10261	4.16	0-500	.06
S10262	4.16	0-1000	.03

2" and 3" Round Case "AC" Voltmeters

Model 231 Body 2 1/2" dia. Depth 1 1/2". Flange 2 1/2" dia.			
Model 331 Body 2 1/2" dia. Depth 1 1/2". Flange 3 1/2" dia.			
Type 331	Net Price	Range	Approx. Res.
Cat. No.			
S1861	\$4.16	0-10	16
S1862	4.16	0-15	16
S1863	5.04	0-150	110

2" and 3" Square Case "AC" Voltmeters

Model 237A Flange 2 1/2" x 2 1/2". Body 2 1/2" dia. Depth 1 1/2".			
Model 337A Flange 3" x 3". Body 2 1/2" dia. Depth 1 1/2".			
Type 337A	Net Price	Range	Approx. Res.
Cat. No.			
S10276	\$4.16	0-10	16
S10277	4.16	0-15	16
S10278	5.04	0-150	110

2" and 3" Round Case "DC" Microammeters

Type 321	Net Price	Range	Approx. Res.	Type 221	Net Price
Cat. No.				Cat. No.	
S1876	\$14.00	0-50	2,150	.....	.....
S1877	9.33	0-100	900	.....	.....
S1878	8.60	0-200	360	S1880	\$7.50
S1879	6.86	0-500	156	S1881	5.36

2" and 3" Square Case "DC" Microammeters

Type 327A	Net Price	Range	Approx. Res.	Type 227A	Net Price
Cat. No.				Cat. No.	
S10302	\$14.00	0-50	2,150	.....	.....
S10303	9.33	0-100	900	.....	.....
S10304	8.60	0-200	360	S10308	\$7.53
S10305	6.86	0-500	156	S10309	5.56

TEST EQUIPMENT

TRIPLET



Wide Range Direct Current Meter

Provides twelve D.C. ranges in a single, compact instrument—without external shunts. Ranges are: microamperes—0-50-100-500; milliamperes—0-1-5-10-50-100-500; amperes—0-1-5-10. All ranges read on large, $4\frac{1}{2}$ " meter. Instrument housed in black bakelite case $5\frac{1}{2}$ " x $7\frac{1}{2}$ " x $3\frac{1}{2}$ ", with leather handle.
Cat. No. S20202 Model 261, complete with test leads.
Net Price \$17.35



A.C.-D.C. Voltmeter

Companion instrument to the Model 261 ammeter described above, this voltmeter measures A.C. and D.C. volts in ranges 0-1-5-10-50-100-500-1,000-5,000. D.C. sensitivity is 70,000 ohms per volt; A.C., 1,000 ohms per volt. Has a wide variety of applications—checking electrical appliances, dry batteries, filaments, transformers, line voltage, etc. Has 5,000 volt insulated test leads.
Cat. No. S20203 Model 262, complete with test leads.
Net Price \$21.07

Portable Ohmmeter

Completing the group of test instruments that will form the basis of a practical service outfit, this ohmmeter covers practically all testing requirements. Measures ohms 0-1,000-10,000-100,000; megohms 0-1-10. Self contained, with its own batteries; has zero adjuster knob, $4\frac{1}{2}$ " meter, test leads; wire wound and matched metalized resistors throughout.
Cat. No. S20203 Model 263, as described, less batteries.
Net Price \$17.35



Wide-Range Portable Volt-Ohm-Ammeter



Having the same ranges of measurement as the Model 606-8 described at right, this new meter has extra features for added convenience. The battery is contained in an accessible compartment with snap-on cap so that it may be changed without opening the instrument case or unsoldering leads. The $4\frac{1}{2}$ " meter has scales in contrasting colors. Bakelite case $6\frac{1}{2}$ " x $5\frac{1}{2}$ " x $2\frac{1}{2}$ " has removable leather carrying strap.
Cat. No. S20132 Model 625-T complete with battery and test leads.
\$21.56

RCA Rider Volt-Ohmyst, Junior

Here is a brand-new instrument having many of the fine features contained in the standard Rider VoltOhmyst. High input resistance (11 megohms) allows its use in signal carrying circuits. Wide voltage and resistance ranges, 0 to 1,000 volts DC in 6 ranges; 0-1,000 volts AC in 5 ranges; 0-1,000 megohms in 6 ranges with a single zero adjustment. Fully protected against overloads. AC voltmeter completely isolated. Every serviceman should have a Jr. VoltOhmyst. Truly the foremost instrument in the Service field. Complete with tubes. Size, $10\frac{1}{2}$ " x $8\frac{1}{2}$ " x $5\frac{1}{2}$ ". For 105-125 V. 50-60 cycles. Ship. wt., 12 lbs.
Model 165A Cash \$34.95

Hickok Electronic AC-DC V.O.M.

High-impedance electronic AC-DC voltmeter and ohmmeter combined with current reading meter from 25 microamperes to 1 ampere, DC. Measures AC volts 5-2.5-10-50-250-1,000, DC volts 2.5-10-50-250-1,000, DC milliamperes 2.5-10-50-250-1,000, ohms 1 ohm to 1,000 megohms; all readings on large $5\frac{1}{2}$ " square meter. Power supply includes voltage regulator. Furnished with two shielded cables, one for AC and one for DC volts; also two unshielded cables for current and resistance measurement. Circuit design protects meter against damage from overload; also permits FM discriminator alignment without disconnecting circuit.
Cat. No. S23135 Type 202. Net Price, complete with tubes \$46.30



Radio City Electronic Voltmeter

Specifically designed for accurate measurements through the entire audio and low radio-frequency range, this instrument is essentially a peak voltmeter with RMS calibration; response is practically flat up to 1,500 kilocycles; ranges are 0-3-6-30-150 volts; 16 megohms input resistance on all ranges; $2\frac{1}{2}$ " $4\frac{1}{2}$ " meter has 200 microampere movements; 60 cycle 110 volt power supply includes voltage regulator; provision for external battery operation; well shielded in steel case $9\frac{1}{2}$ " x $9\frac{1}{2}$ " x $4\frac{1}{2}$ "; leather carrying handle.
Cat. No. S23167 Model 666 complete with tubes.
Net Price \$34.79



Model 666-H Volt-Ohm-Milliammeter

An instrument for AC-DC voltage, direct current and resistance analysis. This handy pocket Volt-Ohm Milliammeter reads to 5,000 volts without external multipliers. Has selector switch for all instrument readings. Molded case and panel, completely insulated. AC-DC voltage at 1,000 ohms per volt 0-10-50-250-1,000-5,000, 10C milliamperes 0-10-100-500; resistance 0-300 ohms (shunt type circuit); 10 ohms reading at center scale; 0-250,000 ohms (series type) 3,700 ohms at center scale. Black molded panel and case, completely insulated. Handy pocket size $3\frac{1}{2}$ " x $5\frac{1}{2}$ " x $2\frac{1}{2}$ " deep. Complete with self-contained battery and special test leads with pin wire clips.
Cat. No. S10538 Model 666-H.
Net Price \$15.65



Model 666H Pocket Volt-Ohm Milliammeter is the same as Model 666-H but has the following ranges: AC-DC volts 0-10-50-250-500-1,000 at 1,000 ohms per volt; 0-1-10-50-250 DC. M.A. Low ohms $\frac{1}{2}$ to 300; high ohms to 250,000.
Cat. No. S10539 Model 666H. Net Price \$15.09

Attractive leather carrying case to fit above meters.
Cat. No. S10540 Model 669. Net Price \$3.96

Triplet Automatic Volt-Ohm-Milliammeter

PUSH-BUTTON OPERATED—19 AC DC RANGES—25,000 OHMS PER VOLT DC

You'll find this the fastest and most convenient test instrument you ever used—just touch the button corresponding to the range you want and the necessary switching is done automatically. Large, plainly marked, color-coded push-buttons control these ranges: DC volts 0-10-50-250-500-1,000 at 25,000 ohms per volt; AC volts 0-10-50-250-500-1,000 at 1,000 ohms per volt; DC milliamperes 0-1-10-50-250; DC microamperes 0-50 (through separate jacks); resistance 0-500 low ohms, shunt type circuit, 0-300,000 ohms-3-30 megohms, series type circuit; output readings on all AC voltage ranges through a built-in $\frac{1}{2}$ mfd. condenser. Ohmmeter circuit operates from self contained battery. Four-inch rectangular meter has extra-long, easily readable scales. Plug-in meter rectifier is pre-calibrated for accurate replacement in case of damage through overload. Instrument is housed in strong, metal case beautifully finished in brown suede enamel; attached strap handle for convenient carrying; snap-on cover has elastic strap inside to hold accessories; size $7\frac{1}{2}$ " x $6\frac{1}{2}$ " x $3\frac{1}{2}$ "; weight 11 pounds.
Cat. No. S13830 Model No. 1200-F. Net Price \$30.03



Wide Range Volt-Ohm-Milliammeter

25,000 OHMS PER VOLT

25,000 ohms per volt D.C. measurement and resistance readings to 40 megohms with this new super sensitive volt-ohm milliammeter. Instrument reads D.C.: 10-50-250-500-1,000 volts at 25,000 ohms per volt; 0-50 microamperes; 1-10-50-250 milliamperes; low ohms (shunt type circuit), $\frac{1}{2}$ to 1,000; 40,000 ohms, 4 and 40 megohms (series type circuit); A.C. 10-50-250-500-1,000 volts.

Cat. No. S10812 Model 1200-E.
Net Price \$31.36

5,000 OHMS PER VOLT

Insulated for 11,000 volts, this instrument has the following ranges: D.C. volts at 5,000 ohms per volt, 0-10-50-250-1,000-5,000; A.C. volts 0-10-50-250-1,000-5,000; direct current, 0-250 microamperes, 0-1-10-50-250 milliamperes, 0-10 amperes; alternating current 0-1-10-25 amperes; resistance 0-500 (shunt circuit), 0-1,500 ohms-1.5-7.5 megohms (series circuit); self-contained batteries for all ranges.

Cat. No. S20133 Model 1200-C.
Net Price \$35.28

2,000 OHMS PER VOLT

Has two instruments, AC and DC, in tilting type twin case. Resistance measurements have individual zero adjustments. Selector switch for all readings. Ranges as follows: DC 10-50-250-500-1,000 volts at 2,000 ohms per volt; 1-10-50-250 M.A. Low ohms, $\frac{1}{2}$ to 500, 1,500 ohms, 1 $\frac{1}{2}$ and 3 megohms. AC 10-50-250-500-1,000 volts.

Cat. No. S1884 Model 1200-A.
Net Price \$23.56



PRECISION • MULTI-TESTERS • RADIO CITY

Precision AC-DC Volt-Ohm-Decibel-Milliammeter

6,000 VOLTS AC-DC
Uses large $4\frac{1}{2}''$ square meter of 400 microampere sensitivity. Master range selector with double wiping silvered contacts controls scales of AC and DC volts 0-12-60-300-600-1,200-6,000 at 1,000 ohms per volt; DC current 0-12-60-300-600-1,200 milliamperes and 0-12 ampere resistance 0-100-100,000 ohms—1-10 megohms; decibels in six ranges from -12 to +70. Provision for mounting ohmmeter batteries inside case.

Cat. No. S3907 Type S441. In open face case less test leads and batteries. Net Price \$24.45
Cat. No. S3908 Type S441P. Same meter but in closed case. Net Price \$26.41



20,000 Ohms per Volt—Precision Sensitive Tester



Essential for reliable measurements in modern radio and television circuits where only minute current drain by the measuring instrument can be tolerated; an invaluable measuring standard for television, transmitting, laboratory, photo-electric, industrial, and radio service applications.

The "heart" of this tester is the $4\frac{1}{2}''$ Precision square meter with cobalt magnet, double jeweled D'Arsonval movement, and 50 microampere sensitivity. Combined with this meter are Precision shunts and multipliers with the necessary

selector-switching for these ranges: DC volts, 0-6-12-60-300-600-1,200-6,000 at 20,000 ohms per volt and at 1,000 ohms per volt; 2% accuracy; A.C. volts 0-3-12-60-300-600-1,200-6,000 at 1,000 ohms per volt; 3% accuracy; D.C. current 0-60-300 microamperes, 0-3-30-120-600 milliamperes, 0-12 amperes; 2% accuracy; resistance 0-6,000-600,000 ohms, 0-60 megohms; output volt, 0-3-12-60-300-600-1,200-6,000; decibels in six ranges from -12 to +70. Provision is also made for direct current measurement of leakage in electrolytic condensers and for qualitative tests on paper condensers.

The Type S261P Tester is housed in a walnut finished hardwood case $9\frac{1}{2}'' \times 10\frac{1}{2}'' \times 6\frac{1}{2}''$, with carrying handle and removable cover. Tool compartment holds high voltage test leads. Supplied complete with batteries and high voltage leads.

Cat. No. S13144 Type No. S261P. Net Price \$39.15

Radio City Sensitive Pocket Multitester

5,000 ohms per volt, in a low-priced, pocket size multitester is an outstanding feature of this instrument. $3\frac{1}{2}''$ square meter has 200 microampere element. Ranges are: DC volts 0-6-150-300-1,500; AC and output volts 0-6-30-150-300; DC mills 0-0.3-0.30-150; ohms 0-2,000-20M-200M-2 megohms; db from -6 to +50 in four ranges; metal case only $5\frac{1}{2}'' \times 3\frac{1}{2}'' \times 2\frac{1}{2}''$; snap spring contact battery holders. Supplied complete with batteries.

Cat. No. S23156 Model 442. Net Price \$29.58



Radio City Pocket Multitester

High range and good accuracy in small space feature this pocket tester; 400 microampere meter 2% accuracy; multipliers are metalized, matched pair 1% resistors; a precision job throughout. Ranges are: DC volts 0-2.5-10-50-250-1,000-5,000; AC and output volts 0-10-50-250-1,000-5,000; DC mills 0-1-10-100-1,000; db from -10 to +60; rotary switch selects all ranges.

Cat. No. S23157 Model 420 in open-face wood case $6\frac{1}{2}'' \times 3\frac{1}{2}'' \times 3\frac{1}{2}''$, complete with batteries. Net \$19.55
Cat. No. S23158 Model 420P same as above but case has hinged cover; size $6\frac{1}{2}'' \times 4\frac{1}{2}'' \times 4\frac{1}{2}''$. Net \$21.51



AC-DC Multitester

A unique general test instrument of beautiful appearance and universal performance. Uses a $3\frac{1}{2}''$ D'Arsonval meter. Ranges—DC volts 0-5-50-250-500-2,500 at 1,000 ohms per volt. AC volts—0-10-100-500-1,000. DC M.A.—0-1-10-100-1,000. DC amps, 0-10. Ohms 0-500-100,000-1 meg. 4 decibel ranges. Convenient selector switch operation.

Cat. No. S11164 Model 440. Net Price \$13.18



Radio City Ultra Sensitive Multitester

25,000 OHMS PER VOLT—
PUSH-BUTTON OPERATED

Designed for the quick-testing needs of today with the wide range of measurements demanded by general laboratory use; push-button system built so that no shorts result if two buttons are pressed at same time; meter automatically disconnects if wrong circuit button is pressed; $4\frac{1}{2}''$ rectangular meter with 40 micro-amp. movement; matched shunts and multipliers accurate to 1%; dual DC sensitivity 25,000 and 1,000 ohms per volt; AC sensitivity 1,000 ohms per volt. Ranges are: DC volts 0-2.5-5-10-25-50-100-250-500-1,000; AC and output volts 0-5-10-25-50-100-250-500-1,000; DC microamps 0-50-500; DC mills 0-5-25-100-250-1,000; DC amps 0-10; ohms 0-500-5,000-50,000-500,000; megohms 5-50; decibels minus 10 to plus 54. Supplied in oak case with hinged cover and self-contained battery supply; size $12\frac{1}{2}'' \times 10\frac{1}{2}'' \times 6\frac{1}{2}''$.

Cat. No. S23148 Model 492. Net Price \$57.33



Radio City Sensitive Multitester

20,000 OHMS PER VOLT

This sensitive, wide-range tester is well suited to field and shop testing of military and naval, as well as civilian, radio gear. DC ranges 20,000 ohms per volt, AC 1,000 ohms per volt; $4\frac{1}{2}''$ meter with 50 microamp movement 2% accurate; shunts and matched-pair multipliers accurate to 1%; suppressor-type copper-oxide rectifier. Ranges are: DC and AC volts 0-2.5-10-50-250-1,000-5,000; DC mills 0-10-100-500; DC microamps 0-100; ohms 0-1,000-100,000; 10 megohms; db -10 to +55. Covered wood case $8\frac{1}{2}'' \times 7\frac{1}{2}'' \times 3\frac{1}{2}''$.

Cat. No. S23149 Model 461P complete with test leads, batteries, and handle. Net Price \$37.71

Cat. No. S23150 Model 461 as above but open case. Net Price \$33.81



Radio City Dual Sensitivity Multitester

Dual DC sensitivity of 20,000 and 1,000 ohms per volt and AC sensitivity of 1,000 ohms per volt; also measures AC amperes; $4\frac{1}{2}''$ 50 microamp meter with 1% matched multipliers and shunts; overall accuracy, DC 3%—AC 5%; spring connectors for batteries; plug-in copper-oxide rectifier. Ranges are: volts DC, AC, and output 0-3-12-60-300-600-1,200-6,000; DC amps 0-12; DC mills 0-3-30-120-600; DC microamps 0-60-300; AC amps 0-3-6-12; ohms 0-3,000-300,000-3 megohms. Wood case $13\frac{1}{2}'' \times 12\frac{1}{2}'' \times 5\frac{1}{2}''$.

Cat. No. S23151 Model 488. Net Price \$58.31



Radio City Volt-Ohm-Milliammeter

A very compact instrument for general testing; uses $3\frac{1}{2}''$ meter with 400 microamp movement giving 2,500 ohms per volt sensitivity on DC and AC ranges; shunts and multipliers individually calibrated to 2%; ranges are: DC volts 0-2.5-10-50-250-1,000; AC volts 0-10-50-250-1,000; DC mills 0-10-50-250-1,000; ohms 0-500-100,000; 1-10 megohms; db (at 500 ohms) minus 10 to plus 15, 4 to 29, 18 to 43, 30 to 55. Supplied in wood case with hinged cover, strap handle, and batteries and test leads; size $8\frac{1}{2}'' \times 6\frac{1}{2}'' \times 4\frac{1}{2}''$.

Cat. No. S23152 Model 423P. Net Price \$25.43
Cat. No. S23153 Model 423 as above but in bench type case and without test leads. Net Price \$23.03



Radio City Supertester

The equivalent of 27 individual instruments in one compact unit, including an unusual variety of very low and very high ranges; 5,000 ohms per volt on DC scales, 1,000 ohms per volt AC; $3\frac{1}{2}''$ square meter has 200 microamp movement; high voltage not applied to selector switch. Ranges are: DC volts 0-2.5-10-50-1,000-5,000; AC volts 0-10-50-250-1,000-5,000; DC mills 0-1-10-100; DC and AC amps 0-1-5-25; output volts 0-10-50-250-1,000; ohms 0-1,000-100,000-10 megohms. Wood case $6\frac{1}{2}'' \times 7\frac{1}{2}'' \times 2\frac{1}{2}''$; strap handle. Supplied complete with batteries.

Cat. No. S23154 Model 422. Net Price \$28.91

As above but in portable hinged cover case with low voltage test leads. Cat. No. S23155 Model 422P Net \$31.31



TUBE AND SET TESTERS

Dynamic Mutual Conductance Tube Tester and 33 Range AC-DC Multi-Range Set Tester



"magic eye." Pin jacks provide for phone or amplifier connection in noise test. Hot cathode leakage test and short tests are rapid and positive. Pilot light tests for both screw base and bayonet type lamps. Line voltage adjustment is continuously variable with meter indication. Comprehensive roller-type tube chart gives speedy, easy reading tube references.

SET ANALYZING FEATURES

Large 5½" square meter of 400 microampere sensitivity reads DC and AC volts, at 1,000 ohms per volt, in ranges 0-12-60-300-600-1,200-3,000; current ranges 0-1.2-12-120-600 MA, 0-12 Amp. DC; resistance 0-100-100,000 ohms, 0-1-10 megohms, decibels in six ranges from -10 to +64. Paper condensers tested by sensitive mesh method; electrolytics by direct meter readings of current per microfarad. Entire instrument is carefully adjusted for accuracy and sealed after inspection; AC accuracy is 3%, DC accuracy is 2%. Hardwood carrying case 12" x 13" x 6" has removable cover and tool compartment. Supplied with battery and test leads.

Cat. No. S13140 Type No. 920P. Net Price \$58.75

Dynamic Mutual Conductance Tube Tester



This modern tube tester covers the complete variety of present day tubes and, in addition, provides means for anticipating future tube developments so that the instrument may not become obsolete. Includes all the tube tests specified for the Type 920P instrument described above. Meter on which tube characteristics are read has three-inch, square case and D'Arsonval movement of 2% accuracy. The Type 910MCP Tube Tester is contained in an open type, portable metal case 12" x 10½" x 6", beautifully finished in black ripple.

Cat. No. S13141 Type 910MCP. Net Price \$33.27

Hickok Tube & Set Tester

DYNAMIC MUTUAL CONDUCTANCE TYPE

Tests tube to manufacturers' and engineering standards — in microhms; measures AC and DC volts 0-20-200-500-1,000 at 1,000 ohms per volt for all ranges; electronic rectifiers for all ranges assure linear scales; reads ohms from 10 to 25,000,000 in three overlapping ranges, no batteries used; measures DC milliamperes 0-20-200; reads capacity from .0001 to 24 microfarads; checks leakage of electrolytic or paper condensers; also inductance of chokes, with or without DC component; decibel scale for output measurement; 5" rectangular meter; over-all dimensions 14 x 13½ x 6".

Cat. No. S23136 Type 510-X. Net Price \$71.74



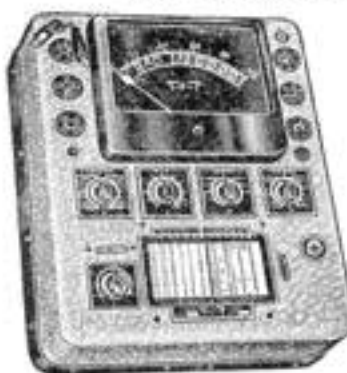
Radio City Set and Tube Tester



Tests sets, batteries, and tubes including all acorn types, old and new receiving and rectifier tubes; condenser leakage; ballast tubes; noise, hum, and intermittents; hot shorts; separate sections of multi-purpose tubes; filament voltages; uses famous Dynoluximum test circuit; has latest type built-in "Rylinde" mechanical roller tube chart; tests all radio batteries under rated load with readings on "good-bad" scale; low-drain type low range ohmmeter; self-contained battery for medium range ohmmeter; high-range ohmmeter operates from plug-in line supply. Scale ranges are: DC volts 0-2.5-10-50-250-1,000-5,000; AC volts 0-10-50-250-1,000-5,000; output volts 0-10-50-250-1,000; DC mills 0-1-10-100-1,000; DC amps 0-10; ohms 0-250-2,500-25,000; megohms 0-2.5-25; decibels —8 to 15, 15 to 29, 29 to 49, 32 to 55. Supplied complete with high-voltage test leads; wood case 14½ x 13 x 6" has removable cover. 110 volt 60 cycle operation.

Cat. No. S23146 Model 804. Net Price \$82.91
Cat. No. S23147 Model 804E combines 804 tester and 500 plug-in analyzer in same case. Net Price, complete \$99.96

Triplett Model 1612 Tube Tester



SPEED ROLL CHART, 36 READINGS AT A SINGLE GLANCE

Equipped with a meter having a 6" scale, and will test all of the present and future tubes. Your assurance against obsolescence is that all of the filament voltages are provided in twenty steps from 1 to 110 volts. Accurate and speedy. Features: A fully balanced RMA circuit and leakage test for Cathode and Heater and inner elements, with short tests between any two elements. Checks Magic Eye, Bantam Jr., Ballast tubes, spray shield tubes, and vacuum rectifiers. Has noise test jack and separate line voltage meter. Enclosed in a streamlined, heavy seamless steel case, beautifully finished in baked suede

enamel, silvered gray and maroon colors. Cat. No. S10811 Model 1612. Net Price \$32.18

Triplett Model 1213 Tube Tester

A modern tube checker with sockets to test all the present-day tubes, including Loctals, Bantam Jr., Single-End types, Magic Eye, Pilot Lamp, Ballast tubes, and gaseous rectifiers. Filament voltages ranging from 1 to 110 volts for all future tubes to be announced. A fully balanced circuit with leakage tests for Cathode and Heater and inner elements with short tests between any two elements is featured. Encased in a black baked-on enamel suede finish portable case with a snap-on cover.

Cat. No. S10816 Model 1213. Net Price \$23.72



Triplett Model 1620 Tube Tester

WITH SECTIONAL PANELS
This new counter model tube tester is made practically obsolescence-proof by the provision for simple replacement of meter, speed-roll chart, socket panel, and lever switch system. Present design covers all tubes now used, including octals, loctals, bantam Jr., miniatures, and midgets; also gaseous rectifiers and ballasts. Fully balanced RMA approved circuit. Noise tests, hot short and leakage test, separate plate tests on rectifiers and diodes. Lever type flexible switching gives individual control for each tube prong, thus speeding test of multi-purpose tubes, dual cathode structures, and roaming elements. 7" indicating instrument has 6" direct reading scale; lifetime guarantee. Speed-roll chart is kept up-to-date free for one year. Wood case is 18½" x 10½" x 6½".

Cat. No. S13831 Model 1620 for 60 cycles 110 volts. Net \$40.81



Test Master—Filament Range .5-120 Volts



This all-service tube and set tester gives you voltage ranges of 0-7.5-30-75-150-300-750-1,500-3,000 volts AC and DC at 3,000 ohms per volt; resistance ranges 0-500-50,000-500,000 ohms-5-50 megohms; milliamperes 0-5-15-75-300-750; decibels, five ranges from -10 to +40. Tube rectifier supplies DC for ohm meter. Tests all popular radio tubes as well as loctals, magic eye, bantams, midgets, miniatures, ballast, gaseous rectifier, and Christmas tree lamps.

Cat. No. S13131 Model 450. Net Price \$46.98

Simpson Electronic Volt-Ohmmeter and AC Voltmeter

Covering radio servicing and electronic device testing, this self-contained instrument is very simple and easy to use. Instrument reads D.C. volts (12.5 megohm input) and A.C. volts (by rectifier type meter) in ranges 0-3-15-30-150-300-600; ohms, 0-2,000-20,000-200,000; and megohms 0-2-20-200. Reversing switch provides quick check on D.C. polarity. Contained in leatherette carrying case 8" x 8" x 6", with handle, removable cover, and compartment for test leads which are supplied.

Cat. No. S20202 Model 265, complete with batteries. Net Price \$28.91



SERVICE INSTRUMENTS -:- ANALYZERS

Meissner Analyst



Tests receivers and locates faults by the "signal tracing" method; completely equipped with all devices that might be needed to make simultaneous checks on various parts of the receiver circuit; five separate channels, each integrated in its own panel division with all controls clearly marked and accurately calibrated. The Analyst is completely wired, aligned, and laboratory tested; furnished with full set of 12 tubes and ready to use the minute it is connected to the 110 volt AC line. Includes 4-range electronic voltmeter, wide-range audio channel, 95 to 1,700 KC rf-if channel, four electron ray indicators, shielded test cables and prods, and detailed instruction book.
Cat. No. S23138 Type 9-1040 Meissner Analyst. Net Price \$94.32

Radio City Master Analyzer

Completely push-button operated, this efficient and fool-proof unit combines all controls needed for modern high-speed free-point testing. Locking buttons need no release button; measures current and voltage simultaneously; voltage buttons can automatically reverse meter polarity; 10-wire analyzer cable includes spare lead; midjet socket and plug adapter included; supplied with toggle latch plug and 8 adapters; terminal numbers etched at sockets and buttons; wood case 9 1/2 x 7 x 3 1/2".

Cat. No. S23139 Model 504C. Net Price



\$20.33

Radio City Analyzer Unit

Combines with multi-tester to provide multiple circuit selection for free-point testing; allows meter to be connected in any lead; supplied with toggle latch, plug, and 7 adapters, including midjet; wood case 5 1/2 x 7 1/2 x 1 1/2".

Cat. No. S23140 Model 506C. Net Price \$16.17



Radio City Master Multi-tester

Recommended for use with the above analyzers; includes special rectifier system giving linear AC scale and freedom from frequency, wave-form, and temperature errors; fused meter has 2,000 ohms per volt sensitivity and 2% accuracy rating; ranges are: DC volts 0-5-50-250-500-2,500-5,000; AC and output volts 0-10-100-500-1,000-5,000; DC amps. 0-1-5-25; DC mls 0-1-10-50-250-1,000; microfarads 0-0.3-3-30-300; ohms 0-100-1,000-150,000; megohms 0-1-5-15; inductance 0-25-1,000 mh; 0-25-100-1,000-10,000 henries; wood case, including hinged cover, 9 1/2 x 12 1/2 x 6".

Cat. No. S23141 Model 419P. Net Price \$35.77

Same as above, but in open-face cabinet for bench use.

Cat. No. S23142 Model 419. Net Price



\$33.81

Radio City Complete Set Analyzers

PUSH-BUTTON TYPE

An ultra-modern combination of instruments to give the last word in convenience, flexibility, safety, and speed for accurate socket analysis; combines in one case the Model 419P and 504 instruments described above. Wood case 9 1/2 x 12 1/2 x 8 1/2".

Cat. No. S23143 Model 4194 Net Price \$56.35

PLUG-IN TYPE

Combines Models 419P and 506 to provide a comprehensive, accurate, and sensitive instrument for plug-in socket analysis. Contained in portable wood case 9 1/2 x 12 1/2 x 6".

Cat. No. S23144 Model 4196. Net Price \$50.47



Instrument Rectifiers

Full-wave oxide-type rectifiers for general instrument applications; sensitive type rated at 5 ma., heavy-duty type rated 50 ma.

Cat. No.	Type	Ma. DC AC Input	Overall Size	Mtg. Stud Net.
S23169	A-4	5 2 volts	1 x 1 1/2 x 1 1/2"	\$2.59
S23170	B-4	20 2 volts	1 x 1 1/2 x 1 1/2"	1.95
S23171	C-4	50 2 volts	1 x 1 1/2 x 1 1/2"	1.75

* Mounts with right-angle bracket as illustrated.

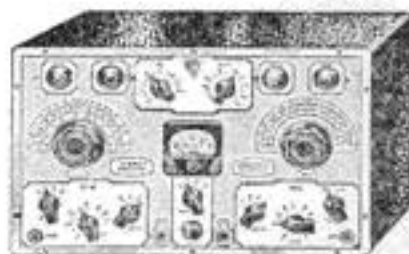


The RCA Rider Chanalyst

Based upon the only logical way to service radio receivers, by process of elimination. Can be used in radio frequency or super-het circuits, with each individual stage diagnosed with equal facility. Permits uniform testing and in most cases will bring a receiver to a better point of efficiency than when it originally left the factory. Localizes trouble and enables intermittent conditions to be serviced in the shortest time possible. A modern service instrument for profitable servicing. Operates on 115 V. 50-60 cycle current. Size 14 x 9 x 9 1/2". Complete with tubes and test leads.

Cat. No. S11658 Model 162-C. Net Price

\$107.50



Chanalyst Converter

For UHF Signal Tracing in combination with the standard RCA Rider Chanalyst. New probe furnished with Converter has only 1 mmfd. capacitance and will not appreciably load or detune even high frequency circuits. Covers range of 1600 KC to 80 MC in four bands; wide spread dial calibration and high image ratio assure proper signal determination. Dual tuning ratios—12:1 and 60:1. Frequency calibration $\pm 1\%$; polystyrene coil forms and air trimmers insure operating stability. Supplied in metal case 10 1/2 x 9 1/2 x 9 1/2".

Chanalyst; leather handle; 117 volt 60

panel and case finished to match cycle power supply built in.

Cat. No. S20190 Model 164, complete with 4 tubes, Chanalyst coupling lead, and special test cable and probe. Net Price \$55.00



Audio Chanalyst

Provides in one portable case all measuring equipment needed to find trouble in an audio system or to match up a new sound installation. Most important of the measurements to be made by the Audio Chanalyst are operating levels, gain, noise and hum levels, AF and DC voltage, resistance and impedance, microphone output; will also give spot frequencies throughout the audio band. Because the Audio Chanalyst will hold continuous check simultaneously on four different audio circuit conditions, without interfering with the system being checked, this instrument is invaluable for locating intermittent defects. More rapid and positive means of isolating troubles result from the negligible loading effect imposed by the Audio Chanalyst. Good regulation of the built-in 110-120 volt 60 cycle power supply contributes to accuracy of testing. A loudspeaker is provided for listening tests and as a standard sound source for microphone test. Audio Chanalyst is housed in a metal case 12 1/2 x 9 1/2 x 18 1/2", with carrying handle. Weight 35 pounds.

Cat. No. S20191 Model 170, complete with 15 tubes, cover, and test leads. Net Price \$225.00



Simpson Signal Tracer

Providing complete coverage through audio, I.F., and R.F. ranges to 17 megacycles, with accurate calibration and utmost flexibility, the Model 510 Signal Tracer meets every requirement of this modern test procedure. The instrument is, in effect, three separate units which may be used separately or in combination. It includes RF-IF amplifier and demodulator covering 170 KC to 17 MC, with indicator calibrated in millivolts and volts in eight overlapping ranges; sensitive audio amplifier with its own meter having eight overlapping scales from 0.6 to 150 volts full scale; and vacuum tube volt-ohmmeter measuring 0-3-15-30-150-300-600 volts at 12.5 megohms input resistance, and reading resistances of 0-2,000-20,000-200,000 ohms—2-20-200 megohms. VTVM shows positive and negative volts without reversing leads; ohmmeter is protected against damage from accidental contact with high potentials. RF and AF amplifiers have jacks for oscilloscope or phone connections. Co-axial cable used in RF test lead ensures minimum loss and maximum uniformity of calibration.

All meters are connected in balanced bridge circuits for stability and are grouped at the top of the panel for easy reading. Separate probe cables for each section of the Signal Tracer permit simultaneous observation of different parts of the receiver circuit in testing for intermittents. Instrument has output stage and speaker for monitoring, with master switch controlling six circuit combinations. Instrument is contained in metal case 10 x 16 x 8 inches. For use on 115 volt 60 cycle power.

Cat. No. S20200 Model 510 Signal Tracer. Net Price

\$95.55



SIGNAL GENERATORS -- OSCILLATORS

RCA Beat Frequency Audio Oscillator



An instrument that should be in the shop of every service engineer. Frequency range 30-15,000 cycles. Excellent for testing P.A. systems and loud speakers. An 8 1/2" dial calibrated in cycles through 160° permits accurate setting. Hum level—60 dB below maximum output. Distortion less than 1% RMS over entire range. Dimensions 9 1/2" x 13 1/2" x 6 1/2".

Cat. No. S11656 Type 154 complete with tubes. Net Price \$49.95

New RCA AC Test Oscillator

For servicing the most complex receivers. 6" giant dial over 50° long assures easy reading. R.F. frequency range 100-30,000 KC in six bands (fundamental frequency.) Audio output 5V. at 400 cycles. Output impedances 10, 750, and 4,000 ohms. Calibration accuracy 2%. Frequency modulator jack provided for use with sweep condenser for visual L.F. alignment. Dimensions 13 1/2" x 9 1/2" x 6 1/2". Finished in a blue-gray wrinkle lacquer with lithographed panel. For operation on 110-120 volts, 50-60 cycles.

Cat. No. S11655 Type 167A complete with tubes and 3-ft. low-capacity output cable. Net Price \$34.50



Precision Signal Generator

Featuring the exclusive, Precision A.V.C. substitution method for simplified, accurate radio receiver alignment, this laboratory Signal Generator permits receivers to be properly aligned under their normal operating conditions as regards the A.V.C. action. This not only speeds the servicing of the receiver but also assures accurate and efficient tuned circuit adjustments.

Covering a frequency range of from 90 KC to 88 megacycles in six bands, the instrument scale has an effective length of six feet of direct-reading, deeply etched graduations. The full-vision dial is 6 1/2" in diameter with large fluted knob for easy grip; ball bearing planetary drive eliminates backlash, insuring stability of all dial settings. Vernier scale and twin, engraved transparent hairline indicators provide direct reading to one part in 1,000 for critical laboratory usage.

Utilizing the new single ended 6BJ7 in a highly stable electron-coupled oscillator circuit, and employing a separate 6CS for 400 cycle sine-wave modulation, this instrument offers maximum frequency stability even at high levels. Maximum deviation, 1% on all bands. Modulation is fully controllable from zero to 100%. The 400 cycle modulating frequency is also available separately for audio frequency testing. The double RF attenuation network is calibrated for receiver gain comparisons. Through shielding, filtered power line connection, and electrostatically shielded power transformer add to the satisfying performance of this signal generator. Output is delivered through a coaxial cable, screw-connected to a dual (high-low) outlet on the instrument panel; a shielding screw cap prevents leakage from the unused outlet.

The E-200 Signal Generator is housed in a heavy gauge steel case 12" x 10 1/2" x 6", supplied complete with tubes and coaxial output cable.

Cat. No. S13142 Type No. E-200. Net Price \$39.15

Simpson FM-AM Signal Generator

This combination AM-FM Signal Generator covers all intermediate and broadcast frequencies from 75 KC to 56 MC in overlapping ranges—all on fundamentals. May be used with or without oscilloscope; scope synchronization is provided at jack on front. The Model 410 has an electron coupled circuit for stability and output uniformity, using a 6K6GT as fundamental frequency power oscillator, coupled to the output by a 6BJ7 mixer which also serves to superimpose an AF signal on the carrier to produce AM RF output with modulation variable from 0 to 100%. The FM unit comprises a 6J5 oscillator and a 6V6 modulator producing a wide deviation FM output from 0 to 200 KC without the usual high percentage of amplitude modulation. A 6CS audio oscillator delivers 6 volts at 400 cycles to modulate either the FM or AM section; the 400 cycle signal is also available at the audio jack for external use. The FM or AM carrier may also be modulated at 60 cycles internally or from any suitable external source.

The Model 410 is adequately shielded with attenuator and multiplier separately shielded and the resistors in the multiplier shielded from each other. A built-in line filter and shielded power cord minimize feed-back to the power line. The large dial is easy to read with AM bands (and corresponding controls) in black and FM bands and controls in red. Metal case 10 x 16 x 5 inches. For use on 115 volts, 60 cycles.

Cat. No. S20201 Model 410 Signal Generator. Net Price \$56.35



Triplett

All-Wave Oscillator

SIX BANDS, 115 KC TO 30.5 MC
New improvements in these signal generators answer the demand for performance in service instruments approaching that of precision laboratory equipment. Direct reading type. Large dial opening 180° improves readability. Line filter between oscillator and line, 400 cycle audio note obtained from panel jacks. Improved band selector switch. Enclosed in a streamlined metal case finished in black suede enamel. For operation on 110 volts 60 cycle. Complete with shielded leads and accessories.

Cat. No. S10813 Model 1232-A. Net Price \$32.18



Hickok Crystal-Controlled FM-AM

Signal Generator

Seven fundamental continuously variable RF ranges—100-300 KC, 300M 850KC, 850KC to 2.6MC, 2.6-8MC, 8-24MC, 24-60MC, and 60-110MC; audio oscillators deliver 0 to 1 volt continuously variable at 400 cycles fixed and 100 to 10,000 cycles variable. Output selections are: wide band FM 750 KC sweep; FM standard 150KC sweep; FM 30KC sweep; AM 400 cycle modulated or may be externally modulated at 50 to 15,000 cycles; unmodulated RF. Crystal-controlled outputs are: 100-15,000 KC unmodulated or modulated at 400 cycles, and 1,000 KC-100 MC unmodulated or modulated at 400 cycles. Power level meter reads —10 to +6, 6 to 22, and 22 to 38 db; also 0-3.5-20-140 volts. Furnished complete with 6 tubes and built-in power supply; VHI30-30 voltage regulator tube (not supplied) can be added by simply plugging into socket provided; cables, crystals, and detailed operating instructions included.

Cat. No. S23137 Model 188X. Net Price \$72.32



Radio City Signal Generator

Covering frequencies from 95 KC to 100 MC, this stable, well-designed test oscillator has excellent performance characteristics. Fundamental frequencies in 5 bands continuously variable from 95 KC to 25 MC; calibration accurate to 2% per band up to broadcast band and 3% for high frequency bands; planetary drive with direct-reading calibration; output modulated or unmodulated; self-contained source for 400 cycle 30% modulation, also available for external use; 5-step, ladder-type output attenuator; thoroughly filtered and shielded. Steel case 8 x 11 1/2 x 5".

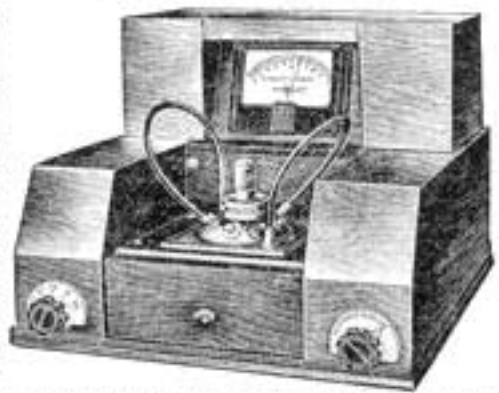
Cat. No. S23145 Model 703. Net Price \$32.83



TAC Interelectrode Capacity Meter

Read capacity directly on large meter; measurement at R.F. for full-scale ranges of 100, 10, 1, 0.1, and 0.01 mmfd.; wholly shielded test socket and adapters accommodate tubes with bases up to 8-pin; base adapters fit the RMA standard shields; universal shield furnished with instrument takes tubes up to 2 1/2" diameter and 4 1/2" high; input and output voltages are automatically regulated for maximum operating stability; simple operation—just plug in tube and read meter; fast enough for factory use yet precise enough for laboratory standardization. Reading increments as low as 0.0001 microfarad; the instrument is adaptable to a variety of applications where very low capacity must be measured rapidly.

Cat. No. S23174 Interelectrode Capacity Meter. Price on request.



OSCILLOSCOPES



RCA Oscillographs

3" cathode-ray scope designed to meet today's service needs. Gives large image yet is compact and light weight. Simple controls, all on front panel. Medium persistence screen; sensitivity 20 volts/inch less amplifier, 1 volt/inch with amplifier. Amplifier flat 20-90,000 cycles. Size 15 x 8 x 14; wgt. sup. 110 60 cycles.

Cat. No. S11653 Type 155-C complete with tubes. Net Price \$74.50

5-INCH TELEVISION OSCILLOGRAPH
With its larger screen, step attenuator, broad band amplifiers, and special input cable having high resistance and low capacitance, this scope is suitable for all modern service work including television and frequency modulation. All controls are located on the front panel and are of the easily adjusted bar type. Size 14 1/2 x 8 x 19 1/2". Power supply 110 volts 60 cycles. Supplied complete with all tubes and special input cable.

Cat. No. S11654 Model 160B complete. Net Price \$142.50

5" Wide Range Oscillograph

Frequency response from 5 cycles to 500 kilocycles gives this instrument increased utility; sweep range is from 4 to 22,000 cycles; supplied with low-capacity input cable four feet long; sensitivity .04 volts per inch direct input, .30 volts when cable is used; housing 14 1/2 x 8 x 19 1/2"; 110 volt 60 cycle operation.

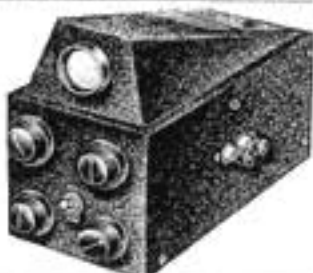
Cat. No. S23134 Model 155 complete with tubes. Net Price \$160.00

Cathode Ray Oscilloscope

Compact cathode ray oscilloscope for general checking of transmitter performance, modulation, distortion, etc. Housed in steel case 4 1/2 x 6 1/2 x 8". Built-in power supply and input controls; panel switch permits use of 60 cycle or external audio sweep. Brilliance and Sweep Amplitude controls on front panel. Uses 1" screen RCA-913 tube and 6X3 rectifier; for 110 v. 50/60 cycles.

Cat. No. S14444 less tubes. Net \$12.60

Kit of 2 tubes.
Cat. No. S14445. Net Price \$4.86



Radio City Wide Range Oscilloscopes



Model 550-A . . . for universal service from 5 cycles to 500 KC; permits study of square waves and pulses in complex wave-form; vertical amplifier flat to ± 1 db, with voltage gain of 625; horizontal amplifier range 5 cycles to 100 KC; special compensated 4-step attenuator permits observation of voltages up to 175; detachable co-axial cable for input; positive locking synchronization; vertical sensitivity, without cable, .03 v. per in.; uses 5BP1 tube; metal case 14 1/2 x 8 x 17 1/2".

Cat. No. S23430 Model 550-A complete with tubes. Net \$183.75

Model 556 . . . designed for higher frequency service; has comparison voltmeter on control panel for convenient check of input voltage by comparison of 60 cycle sine wave amplitude with amplitude of impressed signal; uses 5BP1 tube at accelerating potential of 1,000 or 2,000 volts; switch-selected; sweep range 20 cycles to 1 MC; input range vertical and horizontal 10 cycles to 2 MC; deflection (max.) .10 volts per inch vertical and horizontal, .5 volts per inch on Z axis; all gain controls are independent of the frequency range of the amplifiers; metal case 17 1/2 x 19 x 14 1/2 inches, with carrying handle.

Cat. No. S23431 Model 556 complete with tubes. Net \$445.90



Radio City Square Wave Generator

For use in production and general testing; can be synchronized with any external frequency source; range, 10 cycles to 100 kilocycles with hand-calibrated scale; 4-step decade multiplier; output voltage in steps or continuously variable; maximum output, 20 volts; output impedances 100-200-500-600-1,000-2,000 depending on voltage output; draws 30 watts at 110 volts 60 cycles; contained in metal case 8 x 9 x 15".

Cat. No. S23432 Model 530 complete with tubes. Net \$93.10



DuMont Low-Frequency Linear Time Base Generator

Provides single or recurrent sweep over range of 0.2 to 125 cycles per second in a circuit having negligible deviation from linearity; undistorted output up to 450 volts; sweep initiation manual or by positive signal; balanced output signal voltage; positive or negative blanking of return trace. Metal case 14 1/2 x 8 1/2 x 19 1/2"; carrying handle. Operates from either 115 or 230 volts AC, 40 to 60 cycles.

Cat. No. S23133 Type 215 complete with tubes. Net Price \$215.00

DuMont 3" General Purpose Oscilloscope



A small, convenient cathode-ray oscilloscope for laboratory and shop use; valuable in field work where minimum power consumption, small size, and light weight are essential; uses 3AP1 high-vacuum tube at 1,100 volts accelerating potential; gas-discharge sawtooth oscillator for sweep continuously variable from 15 to 30,000 cycles; amplifiers cover 5 to 100,000 cycle range; deflection factors—.70 RMS volts per inch vertical, .55 volts per inch horizontal; input impedance—1 megohm vertical, 800,000 ohms horizontal; metal case 11 1/2 x 7 1/2 x 14"; with convenient carrying handle.

Cat. No. S23127 Type 164C complete with tubes. Net Price \$64.50

DuMont 5" Scope for Transients

Provides means for studying non-recurrent or transient phenomena, with either visual or photographic recording of the cathode-ray trace; uses 5CP1 tube at accelerating potentials of 3,000 volts; recurrent sweep continuously adjustable from 0.5 to 50,000 cycles; single sweep at 10,000 cycle rate; input frequencies 2 to 200,000 cycles; deflection factors—.05 volts per inch vertical and horizontal; input impedance—2 megohms vertical and horizontal; Z-axis amplifier permits complete intensity modulation from 50 to 2,000,000 cycles; metal case 14 x 19 x 26"; 2 carrying handles.

Cat. No. S23128 Type 247 complete with tubes. Net Price \$818.30

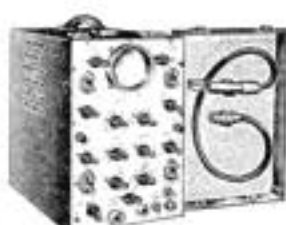


DuMont Wide-Range Oscilloscope

Uses 5LP1 tube at 1,400 volts accelerating potential; sweep range is 2 to 50,000 cycles; deflection factors—.010 volts per inch vertical, .50 volts per inch horizontal; input impedance—2 megohms vertical, 5 megohms horizontal; input frequencies 2 to 100,000 cycles; distortionless input attenuator; metal case 10 1/2 x 8 1/2 x 19 1/2"; carrying handle.

Cat. No. S23129 Type 208 complete with tubes. Net Price \$167.75

DuMont 3" High Frequency Oscilloscope



For studying audio and video signals above the usual working range of oscilloscopes; wide-range response adequate for work with square waves, pulses, and steep wave-fronts; furnished with test probe having shielded cable and low input capacitance. Uses 3GP1 tube at 1,000 volts accelerating potential; sweep range 15 to 30,000 cycles; input range 20 to 2,000,000 cycles vertical, 10 to 100,000 cycles horizontal; deflection factors—.70 volts per inch horizontal, .10 volts per inch vertical, .40 volts per inch vertical with probe; input impedances—2 megohms at terminals, 1 megohm at probe; metal case 14 1/2 x 8 1/2 x 15 1/2"; carrying handle.

Cat. No. S23130 Type 224 complete with tubes and probe. Net Price \$239.50

5" High Frequency Oscilloscope

Has all features of 3" unit described above, plus Z-axis amplifier with frequency range 30 cycles to 2 megacycles; uses 5JP1 tube at 1,500 volts accelerating potential; deflection factors—.70 volts per inch for horizontal and for vertical with probe, .07 volts per inch vertical without probe; metal case 17 1/2 x 20 1/2 x 21", with handle.

Cat. No. S23131 Type 241 complete with tubes and probe. Net Price \$449.84

DuMont Electronic Switch and Square-Wave Generator



Permits simultaneous observation of two independent signals on the screen of a single cathode-ray tube; useful in comparing amplitude, waveform, and phase relationships; may be cascaded for study of three circuits on a single tube; switching rate is continuously variable from 10 to 2,000 times per second; input resistance 100,000 ohms; output resistance 50,000 ohms; square-wave output 30 volts peak-to-peak, frequency continuously variable 10 to 500 square-wave cycles per second; metal case 11 1/2 x 7 1/2 x 13"; carrying handle.

Cat. No. S23132 Type 185A complete with tubes. Net Price \$71.50

NOTE: The DuMont oscilloscopes listed are for 115 volt AC operation unless otherwise noted. Operation at other voltages can be furnished on order.



C-D Capacitor Analyzer



A precision instrument for laboratory and shop; accurately measures capacity of paper, mica, air, and electrolytic capacitors from .00001 to 240 mfd; measures power factor; indicates leakage and insulation resistance; detects defective capacitors; readings are on six linear color-coded scales. The Wien bridge circuit has high sensitivity and includes balance sensitivity control that speeds operation. Visual eye indicates balance and leakage. Push-button switching for rapid control. Contained in portable case $6\frac{1}{2} \times 12 \times 9\frac{1}{2}$ " with built-in power supply for 110 volt AC operation.

Cat. No. S11755 Type BF-50, less tubes. Net Price . \$29.28
Cat. No. S11756 Kit of tubes 1-12A7 and 1-6E5. Net \$1.74

C-D Capacitor Bridge

This ultra-compact bridge (Wien type) quickly and accurately measures all types of capacitors from .00001 to 50 mfd.; indicates power factor; detects defective capacitors; checks circuit continuity. Dual type visual eye bridge balance and direct-reading scale for rapid, easy use. This compact instrument—only $3\frac{1}{2} \times 5 \times 3\frac{1}{2}$ "—is wholly self-contained, requiring no accessories; bakelite case, is attractive walnut color. Furnished with detachable test leads and complete operating instructions.



Cat. No. S11757 Type BN, less tubes. Net Price . \$11.64
Cat. No. S11758 Kit of tubes 1-6AF6G and 1-12A7. Net \$1.85

C-D Capacitor Decades



Provide accurate standards over wide range of capacity; may be used in groups of three, or individually; each unit furnished with calibration chart giving exact capacity values for all scale markings; rated at 600 volts DC, 220 volts AC.

Cat. No.	Type	Mfd.	Steps	Tol.	Net
S23159	CDA-5	.011	.0001	5%	\$6.35
S23160	CDB-5	1.1	.01	5%	\$6.35
S23161	CDB-3	1.1	.01	3%	\$8.12
S23162	CDC-5	10.0	1.0	5%	\$11.29
S23163	CDC-3	10.0	1.0	3%	\$13.05

*Oil-paper dielectric.

†Mica dielectric.

Radio City V.T. Volt-Ohmmeter
Insulation Tester

Provides insulation testing up to 10,000 megohms at 500 volts with readings on 8" microammeter having 2% accuracy at full scale; also measures capacity from .000025 mfd. (25 mmf.) to 2,000 mfd. Circuit includes voltage-regulator tube for freedom from error due to line voltage fluctuations. Integral electronic multimeter circuit includes all ranges listed for Model 663A described below. Housed in metal case $9\frac{1}{2} \times 12\frac{1}{2} \times 6\frac{1}{2}$ " with carrying strap, high voltage test leads, r.f. lead, signal tracing probe, batteries, pilot lamp, and tubes.

Cat. No. S23165 Model 665. Net Price \$77.91



Radio City Electronic Volt-Ohm-Capacity Meter



Combining maximum sensitivity with flexibility and utility, this vacuum-tube type tester speeds production tests and saves engineering time. Features include: direct-reading VTVM on DC or AC ranges, line voltage regulation, meter cannot be damaged by contact with live circuit, input capacity only .00005 mfd., input resistance 160 megohms for high ranges and 16 megohms for low ranges. Measuring ranges are: DC volts 0-6-30-150-600-1,500-6,000; AC volts 0-3-6-30-150-600-1,500-6,000; ohms 0-1,000-10M-100M; megohms 0-1-10-100-1,000; capacity 0-0.002-0.02-0.2-2-20-200-2,000 mfd. Also measures signal, output volts, etc. Well shielded in steel case $9\frac{1}{2} \times 9\frac{1}{2} \times 7\frac{1}{2}$ ". Furnished complete with tubes, pilot lamp, batteries, test leads, and 110 volt AC power supply.

Cat. No. S23166 Model 603A. Net Price . \$54.40

Aerovox L-C Checker

Tests condensers and inductances at radio frequencies under essentially working conditions... while part is still in its circuit. Also tests combinations of capacitance and inductance, showing resonant frequency, hence operating efficiency of circuit. Indispensable to the serious radio worker.

Large, full-vision dial reads capacitance .0004 to 1.0 mfd. and inductance 0.1 to 10,000 mmh. In six frequency ranges, 60-170, 170-490, 490-1,500 kc., 1.5-4.5, 4.5-15, 13-26 mc. Magic eye type 6E5 is indicator. Other tubes are 6J5G, 25Z5, and VR105. Accuracy of L and C readings is better than 10%; frequency readings, about 1%. Instrument contained in crackle-finished steel housing with side compartment holding power cord, test leads, coupling link, and capacity clip. Size $10\frac{1}{2} \times 7\frac{1}{2} \times 5\frac{1}{2}$ ".



Cat. No. S13160 L-C Checker Model 95, complete as described, including explicit operating instructions. Net Price \$28.91

Aerovox Capacity & Resistance Bridge



Measures all essential properties of condensers under actual working conditions and, in addition, permits all components and circuits to be utilized for other measurements and tests. High grade meter movement used in place of conventional magic eye or neon tube. Measures capacity, leakage, and power factor for condensers from .0001 to 100 mfd. In six ranges; measures resistance from 10 ohms to 1 megohm; measures insulation resistance to 10,000 megohms at 500 volts; meter terminals brought out to allow reading of 0-0-60 milliamperes, 0-60-300-600 volts at 1,000 ohms per volt, and direct-element reading of 60 millivolts at 60 ohms. Power supply, continuously variable over entire range, delivers 15 to 600 volts DC. Main dial has linear calibration; other controls plainly marked with multiplying values. Furnished complete with 3 tubes, test leads, and instruction manual. Wood case, with removable cover and carrying handle, is $10\frac{1}{2} \times 7\frac{1}{2} \times 8\frac{1}{2}$ ".

Cat. No. S23164 Capacity and resistance bridge. Net Price \$35.03

Radio City
Electronic Limit Bridge

Permits rapid, precision measurement of resistance; scale is uniformly calibrated from zero center to 10% deviation either side; readings show amount and direction of error; furnished with built-in standard of any specified value between 8 ohms and 10 megohms; 4" galvanometer has 25 microampere sensitivity; automatic cutout switch disconnects batteries when instrument is not in use; bakelite panel is heavily shielded. Supplied in sturdy oak case $14\frac{1}{2} \times 14\frac{1}{2} \times 8\frac{1}{2}$ " with hinged cover. Be sure to state value of internal resistance standard required.

Cat. No. S23168 Model 670 with batteries and tubes. Net \$147.00



TAC High-Range Megohmmeter



Reads megohms from 400 to 100,000 in two ranges; especially suited to measurement of condenser dielectric and other resistance values that vary with time, this instrument is adaptable to all requirements for high megohm testing in production. Stable operation from 110 volt 60 cycle line; accuracy 5%; applies 90 volts to test specimen; self-contained in metal case $8 \times 10 \times 8\frac{1}{2}$ "; all controls on front panel; indicating meter hand-calibrated for greatest accuracy.

Cat. No. S23175 TAC Megohmmeter. Net Price, complete \$125.00



**CORNELL
DUBILIER**

CAPACITORS

OIL-FILLED & ELECTROLYTIC



"DYR" Dykanol Bypass Capacitors



Non-inductive bypass units impregnated and filled with Dykanol "A" and sealed in non-corrosive cases with lead-proof screw-log terminals. Suitable for R.F. and A.F. bypass, audio frequency coupling, and AC circuits. Will stand immersion in hot salt water; hence are desirable for marine, aircraft and tropical service.

600 VOLTS DC WORKING				Net Price
Cat. No.	Cap. Mfd.	Long	Wide Thick	
S12110	.05	1 1/2 x 1	x 1/2	\$1.21
S12111	.1	1 1/2 x 1 1/2	x 1/2	1.24
S12113	.25	1 1/2 x 1 1/2	x 1/2	1.30
S12114	.5	1 1/2 x 1 1/2	x 1/2	1.38
S12115	1	2 x 1 1/2	x 1/2	1.59
S12116	2	2 x 2	x 1/2	2.12
S21928	.05-.05	1 1/2 x 1 1/2	x 1/2	1.53
S21929	1-1	1 1/2 x 1 1/2	x 1/2	1.56
S21930	.25-.25	1 1/2 x 1 1/2	x 1/2	1.59
S21931	.5-.5	2 x 1 1/2	x 1/2	1.82
S21932	1.0-1.0	2 x 2	x 1/2	2.24
S21933	1-1-1	1 1/2 x 1 1/2	x 1/2	1.76
S21934	.25-.25-.25	2 x 1 1/2	x 1/2	2.00
S21935	.5-.5-.5	2 x 2	x 1/2	2.41
1000 V.D.C. WORKING				
S12117	.05	1 1/2 x 1 1/2	x 1/2	1.24
S12118	.1	1 1/2 x 1 1/2	x 1/2	1.32
S12119	.25	1 1/2 x 1 1/2	x 1/2	1.35
S12120	.5	2 x 1 1/2	x 1/2	1.47
S12121	1	2 x 2	x 1/2	1.94
S21936	.05-.05	1 1/2 x 1 1/2	x 1/2	1.53
S21937	1-1	1 1/2 x 1 1/2	x 1/2	1.65
S21938	.25-.25	2 x 1 1/2	x 1/2	1.76
S21939	.5-.5	2 x 2	x 1/2	2.29
S21940	1-1-1	1 1/2 x 1 1/2	x 1/2	1.94
S21941	.25-.25-.25	2 x 2	x 1/2	2.47

Dwarf Tiger Tubulars



A compact and dependable non-inductive condenser that is oil-saturated and wax-impregnated. Is moisture-proof and has a low power factor. Wire leads are soldered and firmly anchored.

400 V. DC WORKING				Net Price
Cat. No.	Type	Cap. Mfd.	Size L. Dia.	
S6654	DT-481	.01	1 1/2 x 1/2	12c
S21942	DT-4815	.015	1 1/2 x 1/2	12c
S6655	DT-482	.02	1 1/2 x 1/2	12c
S21943	DT-4825	.025	1 1/2 x 1/2	12c
S6656	DT-483	.03	1 1/2 x 1/2	12c
S21944	DT-484	.04	1 1/2 x 1/2	12c
S6657	DT-485	.05	1 1/2 x 1/2	12c
S21945	DT-486	.06	1 1/2 x 1/2	15c
S6658	DT-4P1	.1	1 1/2 x 1/2	15c
S21946	DT-4P2	.2	2 x 1/2	18c
S6659	DT-4P25	.25	2 x 1/2	18c
S6660	DT-4P5	.5	2 x 1/2	27c
S6661	DT-4W1	1	2 1/2 x 1	35c
600 V. DC WORKING				
S6662	DT-6T1	.0001	1 1/2 x 1/2	12c
S6663	DT-6T25	.00025	1 1/2 x 1/2	12c
S6664	DT-6T5	.0005	1 1/2 x 1/2	12c
S6665	DT-6D1	.001	1 1/2 x 1/2	12c
S6666	DT-6D2	.002	1 1/2 x 1/2	12c
S6667	DT-6D3	.003	1 1/2 x 1/2	12c
S6668	DT-6D4	.004	1 1/2 x 1/2	12c
S6669	DT-6D5	.005	1 1/2 x 1/2	12c
S6670	DT-6D6	.006	1 1/2 x 1/2	12c
S6671	DT-6E1	.01	1 1/2 x 1/2	12c
S21947	DT-6E15	.015	1 1/2 x 1/2	12c
S6672	DT-6E2	.02	1 1/2 x 1/2	12c
S21948	DT-6E25	.025	1 1/2 x 1/2	15c
S6673	DT-6E3	.03	1 1/2 x 1/2	15c
S21949	DT-6E4	.04	1 1/2 x 1/2	15c
S6674	DT-6E5	.05	1 1/2 x 1/2	15c
S21950	DT-6E6	.06	1 1/2 x 1/2	18c
S6675	DT-6P1	.1	2 x 1/2	18c
S21951	DT-6P2	.2	2 x 1/2	27c
S6676	DT-6P25	.25	2 x 1/2	27c
S21952	DT-6P3	.3	2 1/2 x 1	32c
S6677	DT-6P5	.5	2 x 1	35c

Tubular Paper Condensers



These Aerovox cartridge condensers are especially desirable for use where high grade units are required at low cost. They are compact, non-inductively wound, and sealed in wax-impregnated paper tubes with wax-filled ends for longer life and protection against moisture.

400 VOLTS			600 VOLTS		
Mfd.	Cat. No.	Net	Mfd.	Cat. No.	Net
.001	—	—	.001	S21963	12c
.002	—	—	.002	S21964	12c
.003	—	—	.003	S21965	12c
.004	—	—	.004	S21966	12c
.005	—	—	.005	S21967	12c
.006	—	—	.006	S21968	12c
.01	S21953	12c	.01	S21969	12c
.015	—	—	.015	S21970	12c
.02	S21954	12c	.02	S21971	12c
.03	S21955	12c	.03	S21972	15c
.04	S21956	12c	.04	S21973	15c
.05	S21957	12c	.05	S21974	15c
.06	S21958	15c	.06	S21975	18c
.1	S21959	15c	.1	S21976	18c
.25	S21960	18c	.25	S21977	27c
.5	S21961	27c	.5	S21978	35c
1.0	S21962	35c	—	—	—

Cardboard Tube Electrolytic Condensers



TYPE PR

Single and double section dry electrolytic units encased in sturdy cardboard tube containers. Completely sealed. Bare wire leads 2 1/2 inches long; polarity marked on case; two leads for single section, three leads for double section; units may be supported by their own leads.

SINGLE SECTION					
Cat. No.	Mfd.	Volts	Diam.	Ht.	Net Price
S21979	2	—	2 1/2	2 1/2	47c
S21980	4	—	2 1/2	2 1/2	53c
S21981	8	450	2 1/2	2 1/2	68c
S21982	10	—	2 1/2	2 1/2	82c
S21983	16	—	2 1/2	2 1/2	1.03
S21984	2	—	2 1/2	2 1/2	41c
S21985	4	250	2 1/2	2 1/2	47c
S21986	8	—	2 1/2	2 1/2	59c
S21987	10	—	2 1/2	2 1/2	65c
S21988	5	—	2 1/2	2 1/2	41c
S21989	10	100	2 1/2	2 1/2	50c
S21990	25	—	2 1/2	2 1/2	68c
S21991	5	—	2 1/2	2 1/2	35c
S21992	10	—	2 1/2	2 1/2	47c
S21993	20	50	2 1/2	2 1/2	53c
S21994	25	—	2 1/2	2 1/2	59c
S21995	50	—	2 1/2	2 1/2	85c
S21996	5	—	2 1/2	2 1/2	35c
S21997	10	—	2 1/2	2 1/2	35c
S21998	20	25	2 1/2	2 1/2	44c
S21999	25	—	2 1/2	2 1/2	47c
S22000	50	—	2 1/2	2 1/2	68c
DOUBLE SECTION					
S22001	5-5	100	1	2 1/2	53c
S22002	5-5	50	1	2 1/2	53c
S22003	5-5	—	1	2 1/2	53c
S22004	10-10	25	1	2 1/2	53c

SPECIAL CATALOGS

Space does not permit a complete listing of Cornell-Dubilier products, but the Radio Shack can furnish them in such types as the TK High Voltage condensers, oil-filled and hermetically-sealed motor starting condensers, and all special types. Write us for your copy of the C-D Industrial catalog.

Tubular Oil Condensers

OIL IMPREGNATED
OIL FILLED
HERMETICALLY SEALED

Genuine oil-impregnated oil-filled tubular condensers. Completely sealed from moisture or oil leakage. Ideal for vibrator applications, coupling condensers and transmitters, or high-voltage amplifiers and test equipment. In brass cadmium-plated can. Electrically insulated by special varnished-paper jacket. Ends spun over rim eliminate possibility of shorts if leads are bent close to unit. Provided with mounting strap for added connection.



400 VOLTS DC					Net
Cat. No.	Mfd.	Dia.	Length		
S22005	.006	1 1/2	1 1/2	1 1/2	41c
S22006	.0075	1 1/2	1 1/2	1 1/2	41c
S22007	.01	1 1/2	1 1/2	1 1/2	41c
S22008	.015	1 1/2	1 1/2	1 1/2	41c
S22009	.02	1 1/2	1 1/2	1 1/2	41c
S22010	.03	1 1/2	1 1/2	1 1/2	44c
S22011	.04	1 1/2	1 1/2	1 1/2	44c
S22012	.05	1 1/2	1 1/2	1 1/2	44c
S22013	.1	2 1/2	2 1/2	2 1/2	46c
S22014	.25	2 1/2	2 1/2	2 1/2	53c
S22015	.5	1 1/2	2 1/2	2 1/2	59c
600 VOLTS DC					
S22016	.006	1 1/2	1 1/2	1 1/2	44c
S22017	.0075	1 1/2	1 1/2	1 1/2	44c
S22018	.01	1 1/2	1 1/2	1 1/2	44c
S22019	.015	1 1/2	1 1/2	1 1/2	44c
S22020	.02	1 1/2	1 1/2	1 1/2	44c
S22021	.03	1 1/2	1 1/2	1 1/2	47c
S22022	.04	1 1/2	1 1/2	1 1/2	47c
S22023	.05	2 1/2	2 1/2	2 1/2	47c
S22024	.1	2 1/2	2 1/2	2 1/2	53c
S22025	.25	2 1/2	2 1/2	2 1/2	62c
1,000 VOLTS DC					
S22026	.006	1 1/2	1 1/2	1 1/2	47c
S22027	.0075	1 1/2	1 1/2	1 1/2	47c
S22028	.01	1 1/2	1 1/2	1 1/2	47c
S22029	.015	1 1/2	1 1/2	1 1/2	47c
S22030	.02	1 1/2	1 1/2	1 1/2	47c
S22031	.03	2 1/2	2 1/2	2 1/2	50c
S22032	.04	2 1/2	2 1/2	2 1/2	50c
S22033	.05	2 1/2	2 1/2	2 1/2	53c
S22034	.1	2 1/2	2 1/2	2 1/2	59c
2,000 VOLTS DC					
S22035	.006	1 1/2	1 1/2	1 1/2	53c
S22036	.0075	1 1/2	1 1/2	1 1/2	53c
S22037	.01	1 1/2	1 1/2	1 1/2	53c
S22038	.015	2 1/2	2 1/2	2 1/2	53c
S22039	.02	2 1/2	2 1/2	2 1/2	53c
S22040	.03	2 1/2	2 1/2	2 1/2	56c
S22041	.04	2 1/2	2 1/2	2 1/2	56c
S22042	.05	2 1/2	2 1/2	2 1/2	59c

Drawn-case Oil-filled Condensers

HERMETICALLY SEALED

A compact, oil-impregnated oil-filled capacitor; non-inductive paper sections in one-piece drawn metal case with bottom plate soldered for hermetic seal. Immersion-proof terminal assembly meets severe operating conditions in aircraft, police, broadcast, P.A., and communications equipment. 600 volts DC working.



Cat. No.	Mfd.	L.	W.	H.	Net Price
S21827	.1	1 1/2 x 1 1/2	x 1/2	1 1/2	\$1.24
S21828	.25	1 1/2 x 1 1/2	x 1/2	1 1/2	1.29
S21829	.5	2 1/2 x 1 1/2	x 1/2	1 1/2	1.38
S21830	1.0	2 x 2	x 1/2	1 1/2	1.59
S21831	1-1	1 1/2 x 1 1/2	x 1/2	1 1/2	1.56
S21832	.25-.25	2 x 2	x 1/2	1 1/2	1.59
S21833	.5-.5	2 x 2 1/2	x 1/2	1 1/2	1.82

Other capacities and voltages available on special order.

COMMERCIAL GRADE TRANSMITTING CAPACITORS

We can furnish these made-to-order Aerovox extra heavy duty mica, paper, and oil-filled capacitors; write us for quotations.



CORNELL DUBILIER

Type TJU "Dykanol" Capacitors

TRANSMITTING FILTERS

Dependable, compact, lightweight capacitors for amateur, broadcast, and commercial service. Impregnated and filled with non-inflammable, fireproof Dykanol A, these units are safe over a wide range of temperatures and voltages and may be safely operated at 10% above rating. Furnished with universal, clamp-type brackets for upright or inverted mounting. Heavy, threaded terminals are brought out through high-voltage insulators.



600 V. D.C. WORKING					
Cat. No.	Type	Mfd.	H.	W.	D.
S22308	TJU6005	.5	2 1/2	1 1/2	1 1/2
S22309	TJU6010	1	2 1/2	1 1/2	1 1/2
S22310	TJU6020	2	2 1/2	1 1/2	1 1/2
S22311	TJU6030	3	3 1/2	1 1/2	1 1/2
S22312	TJU6040	4	3 1/2	1 1/2	1 1/2
S22313	TJU6050	5	4 1/2	1 1/2	1 1/2
S22314	TJU6060	6	4 1/2	2 1/2	1 1/2
S22315	TJU6080	8	5 1/2	3 1/2	1 1/2
S22316	TJU6100	10	6 1/2	3 1/2	1 1/2

1,000 V. D.C. WORKING					
Cat. No.	Type	Mfd.	H.	W.	D.
S22317	TJU10001	.1	2 1/2	1 1/2	1 1/2
S22318	TJU100025	.25	2 1/2	1 1/2	1 1/2
S22319	TJU10005	.5	2 1/2	1 1/2	1 1/2
S22320	TJU10010	1	2 1/2	1 1/2	1 1/2
S22321	TJU10020	2	4 1/2	1 1/2	1 1/2
S22322	TJU10030	3	4 1/2	1 1/2	1 1/2
S22323	TJU10040	4	4 1/2	2 1/2	1 1/2
S22324	TJU10050	5	5 1/2	2 1/2	1 1/2
S22325	TJU10060	6	4 1/2	3 1/2	1 1/2
S22326	TJU10080	8	6 1/2	3 1/2	1 1/2
S22327	TJU10100	10	6 1/2	3 1/2	1 1/2
S22328	TJU10120	12	8 1/2	3 1/2	2
S22329	TJU10150	15	8 1/2	3 1/2	2

1,500 V. D.C. WORKING					
Cat. No.	Type	Mfd.	H.	W.	D.
S22330	TJU15005	.5	2 1/2	1 1/2	1 1/2
S22331	TJU15010	1	4 1/2	1 1/2	1 1/2
S22332	TJU15020	2	4 1/2	2 1/2	1 1/2
S22333	TJU15030	3	4 1/2	2 1/2	1 1/2
S22334	TJU15040	4	4 1/2	3 1/2	1 1/2
S22335	TJU15050	5	4 1/2	3 1/2	1 1/2
S22336	TJU15060	6	4 1/2	3 1/2	1 1/2
S22337	TJU15080	8	6 1/2	3 1/2	2
S22338	TJU15100	10*	6 1/2	3 1/2	2
S22339	TJU15120	12*	8 1/2	3 1/2	2
S22340	TJU15150	15*	8 1/2	3 1/2	2

2,000 V. D.C. WORKING					
Cat. No.	Type	Mfd.	H.	W.	D.
S22341	TJU20001	.1	2 1/2	1 1/2	1 1/2
S22342	TJU200025	.25	2 1/2	1 1/2	1 1/2
S22343	TJU20005	.5	2 1/2	1 1/2	1 1/2
S22344	TJU20010	1	3 1/2	2 1/2	1 1/2
S22345	TJU20020	2	4 1/2	2 1/2	1 1/2
S22346	TJU20030	3	4 1/2	2 1/2	1 1/2
S22347	TJU20040	4	4 1/2	3 1/2	1 1/2
S22348	TJU20050	5	4 1/2	3 1/2	1 1/2
S22349	TJU20060	6*	4 1/2	3 1/2	1 1/2
S22350	TJU20080	8*	4 1/2	3 1/2	1 1/2
S22351	TJU20100	10*	4 1/2	3 1/2	1 1/2
S22352	TJU20120	12*	5 1/2	3 1/2	1 1/2

2,500 V. D.C. WORKING					
Cat. No.	Type	Mfd.	H.	W.	D.
S22353	TJU25005	.5	3 1/2	2 1/2	1 1/2
S22354	TJU25010	1	3 1/2	3 1/2	1 1/2
S22355	TJU25020	2	4 1/2	3 1/2	1 1/2
S22356	TJU25040	4*	4 1/2	3 1/2	1 1/2
S22357	TJU25100A	10*	6 1/2	3 1/2	1 1/2

3,000 V. D.C. WORKING					
Cat. No.	Type	Mfd.	H.	W.	D.
S22358	TJU30001	.1	2 1/2	2 1/2	1 1/2
S22359	TJU30025	.25	2 1/2	2 1/2	1 1/2
S22360	TJU30005	.5	3 1/2	2 1/2	1 1/2
S22361	TJU30010	1	3 1/2	3 1/2	2 1/2
S22362	TJU30020	2*	4 1/2	3 1/2	2 1/2
S22363	TJU30040	4*	4 1/2	3 1/2	2 1/2

4,000 V. D.C. WORKING					
Cat. No.	Type	Mfd.	H.	W.	D.
S22364	TJU40001	.1	2 1/2	3 1/2	2 1/2
S22365	TJU400025	.25	2 1/2	3 1/2	2 1/2
S22366	TJU40005	.5	4 1/2	3 1/2	2 1/2
S22367	TJU40010	1	5 1/2	3 1/2	2 1/2
S22368	TJU40020	2*	5 1/2	3 1/2	2 1/2
S22369	TJU40040A	4*	5 1/2	3 1/2	2 1/2

5,000 V. D.C. WORKING					
Cat. No.	Type	Mfd.	H.	W.	D.
S22370	TJU50005	.5	4 1/2	3 1/2	2 1/2
S22371	TJU50010	1*	4 1/2	3 1/2	2 1/2
S22372	TJU50020	2*	6 1/2	3 1/2	2 1/2

6,000 V. D.C. WORKING					
Cat. No.	Type	Mfd.	H.	W.	D.
S22373	TJU60010A	1*	8 1/2	3 1/2	4 1/2

* Mfg. feet soldered to bottom of can.

TRANSMITTING CONDENSERS

Oil-filled Transmitting Condensers

For compact high-voltage filter applications in P.A. amplifiers and power supplies; one terminal is insulated, the other is the metal case; insulating washers furnished allow insulated mounting; impregnated and filled with Dykanol; will withstand high transient and surge voltages.



WORKING VOLTAGE 600 VOLTS D.C.					
Cat. No.	Type No.	Mfd.	L.	W.	Net
S6698	TLA-6020	2	2 1/2	1 1/2	\$1.94
S21820	TLA-6030	3	4 1/2	1 1/2	2.35
S6699	TLA-6040	4	4 1/2	1 1/2	2.65

WORKING VOLTAGE 1,000 VOLTS D.C.					
Cat. No.	Type No.	Mfd.	L.	W.	Net
S6700	TLA-10010	1	2 1/2	1 1/2	1.76
S6701	TLA-10010	2	4 1/2	1 1/2	2.35

WORKING VOLTAGE 1,500 VOLTS D.C.					
Cat. No.	Type No.	Mfd.	L.	W.	Net
S21821	TLA-15005	.5	2 1/2	1 1/2	2.12
S21822	TLA-15010	1	4 1/2	1 1/2	2.35



"TQ" Dykanol Transmitting Condensers

Type TQ are genuine Dykanol, fireproof transmitting filter capacitors that can be mounted vertically or inverted by means of the mounting ring supplied. Equipped with neat porcelain terminals. Cylindrical can.

Cat. No.	Type No.	Mfd.	V. D.C.	Net
S11751	TQ-6020	2	600	\$2.35
S11752	TQ-6040	4	600	3.18
S21823	TQ-10010	1	1,000	1.94
S6782	TQ-10020	2	1,000	2.65
S6783	TQ-10040	4	1,000	3.35
S21824	TQ-15010	1	1,500	2.47
S6784	TQ-15020	2	1,500	3.35
S21825	TQ-20010	1	2,000	3.18
S6785	TQ-20020	2	2,000	3.53
S11753	TQ-20040	4	2,000	4.94
S21826	TQ-30010	1	3,000	6.35
S11754	TQ-30020	2	3,000	7.64

General Electric Pyranol Transmitting Condensers



General Electric D-C Transmitter Capacitors are filled and treated with Pyranol, a non-inflammable, non-explosive dielectric which has extraordinary insulating and dielectric qualities, and its use makes possible an unusually small and compact unit for all transmitter capacitor ratings.

The lacquer-finished cases are hermetically sealed. Porcelain bushings and clamp-type mounting feet are included. Can be mounted in any position. These units are suitable for continuous operation at voltages up to 10 per cent above the rated voltage.

Cat. No.	Type	Volts	Mfd.	H.	D.	W.	Net
S6728	23F2	600	2	4 1/2	1 1/2	1 1/2	\$3.00
S6729	23F4	600	4	4 1/2	1 1/2	1 1/2	3.88
S6731	23F11	1,000	2	5 1/2	1 1/2	1 1/2	3.53
S6732	23F13	1,000	4	5 1/2	1 1/2	1 1/2	4.41
S6733	23F17	1,000	10	5 1/2	1 1/2	1 1/2	7.05
S6734	23F30	2,000	1	6 1/2	1 1/2	1 1/2	3.88
S6735	23F31	2,000	2	5 1/2	1 1/2	1 1/2	4.59
S6736	23F33	2,000	4	5 1/2	1 1/2	1 1/2	6.33
S6737	23F37	2,000	10	5 1/2	1 1/2	1 1/2	12.05
S6740	23F43	3,000	2	6 1/2	1 1/2	1 1/2	10.59
S6741	23F44	3,000	4	7 1/2	1 1/2	1 1/2	15.52
S6742	23F49	5,000	1	6 1/2	1 1/2	1 1/2	17.64
S6743	23F50	5,000	2	8 1/2	1 1/2	1 1/2	22.58

AEROVOX

Series "09 Hyvol" Oil-impregnated Oil-filled Condensers

Hermetically sealed in rectangular metal cans with adjustable clamp mounting and high-tension pillar terminals with locknuts and soldering lugs. Intended for heavy duty continuous service in transmitters, amplifiers, etc. Exceptionally compact size for given capacity and working voltage—with high safety factor.



600 VOLTS D.C. WORKING					
Cat. No.	Mfd.	L.	W.	D.	Net Price
S24047	.5	2 1/2	1 1/2	1 1/2	\$1.94
S24048	1	2 1/2	1 1/2	1 1/2	2.47
S24049	2	2 1/2	1 1/2	1 1/2	3.00
S24050	4	3 1/2	2 1/2	1 1/2	3.88
S24051	6	4 1/2	2 1/2	1 1/2	4.76
S24052	8	3 1/2	3 1/2	1 1/2	5.64
S24053	10	4 1/2	3 1/2	1 1/2	6.35

1,000 VOLTS D.C. WORKING					
Cat. No.	Mfd.	L.	W.	D.	Net Price
S24054	.25	2 1/2	1 1/2	1 1/2	1.76
S24055	.5	2 1/2	1 1/2	1 1/2	1.94
S24056	1	2 1/2	1 1/2	1 1/2	2.13
S24057	2	3 1/2	1 1/2	1 1/2	2.65
S24058	4	4 1/2	2 1/2	1 1/2	3.53
S24059	6	4 1/2	2 1/2	1 1/2	4.41
S24060	8	4 1/2	3 1/2	1 1/2	5.82
S24061	10	4 1/2	3 1/2	1 1/2	6.35

1,500 VOLTS D.C. WORKING					
Cat. No.	Mfd.	L.	W.	D.	Net Price
S24062	.5	2 1/2	1 1/2	1 1/2	2.82
S24063	1	4 1/2	1 1/2	1 1/2	3.18
S24064	2	4 1/2	2 1/2	1 1/2	4.41
S24065	4	4 1/2	3 1/2	1 1/2	6.00

2,000 VOLTS D.C. WORKING					
Cat. No.	Mfd.	L.	W.	D.	Net Price
S24066	.1	2 1/2	1 1/2	1 1/2	2.82
S24067	.25	2 1/2	1 1/2	1 1/2	3.00
S24068	.5	2 1/2	1 1/2	1 1/2	3.18
S24069	1	3 1/2	2 1/2	1 1/2	3.88
S24070	2	4 1/2	3 1/2	1 1/2	4.59
S24071	4	4 1/2	3 1/2	2 1/2	6.35

2,500 VOLTS D.C. WORKING					
Cat. No.	Mfd.	L.	W.	D.	Net Price
S24072	.5	3 1/2	3 1/2	1 1/2	4.94
S24073	1	3 1/2	3 1/2	1 1/2	5.64
S24074	2	4 1/2	3 1/2	1 1/2	9.17
S24075	4	4 1/2	3 1/2	4 1/2	12.82

3,000 VOLTS D.C. WORKING					
S24076	.1	2	2	1 $\frac{1}{4}$	6.00
S24077	.25	2	2	1 $\frac{1}{4}$	6.35
S24078	.5	3	2	1 $\frac{1}{4}$	7.06
S24079	1	3	3	2	8.47
S24080	2	3	3	3 $\frac{1}{4}$	10.68
S24081	4	4	3	4 $\frac{1}{4}$	15.66

High-Voltage AND Transmitting CONDENSERS

C-D Porcelain Cased Mica Transmitting Condensers



High voltage mica transmitting condensers in porcelain containers. Loss of power flowing through capacitors 1/20 that of flint glass dielectric condensers. Capacity remains constant at high frequencies and high temperatures. For amateur plate blocking and tank applications. Dimensions: 3 1/2" between mounting holes, 3 1/2" high overall, 2" deep. Screw terminals have 12-24 thread and nut. Mounting holes are 3/16" diameter; mounting ears, 1/8" thick.

Cat. No.	Type No.	Volts D.C.	Mfd. Mfd.	Max. Amps.	Net Price
S6709	45A86	12,500	.00005	3	\$3.88
S6710	31A86	12,500	.0001	5	3.53
S6711	325A86	12,500	.00025	7	3.88
S6713	35A86	12,500	.0005	8	3.88
S6712	35C86	7,000	.0005	7	3.18
S6715	21A86	12,500	.001	9	3.88
S6714	21C86	7,000	.001	8	3.53
S22669	21D86	3,500	.001	8	3.18
S22670	215A86	12,500	.0015	9	4.59
S6717	22A86	12,500	.002	9	5.29
S6716	22C86	7,000	.002	8	4.59
S22671	22D86	3,500	.002	8	3.88
S6719	25B86	10,000	.005	10	7.06
S6720	11C86	7,000	.01	10	7.41
S22672	11D86	3,500	.01	10	7.06
S22673	12D86	3,500	.02	10	7.06
S22674	1E86	2,000	.1	10	7.76

C-D Moulded Mica Transmitting Condensers



Type 4



Type 9

Highly perfected mica condensers that readily mount in any position. Designed with the most precise care.

TEST 1,000 V. D.C. WORKING 500 V. D.C.			TEST 1,000 V. D.C. WORKING 500 V. D.C.		
Cat. No.	Cap. Mfd.	Net Price	Cat. No.	Cap. Mfd.	Net Price
S6584	.00005	\$.35	S6617	.00005	\$.44
S6585	.0001	.35	S6618	.0001	.44
S11746	.00015	.35	S6619	.0002	.44
S6585	.0002	.35	S6620	.00025	.44
S6587	.00025	.35	S6621	.0005	.44
S24134	.0003	.35	S6622	.001	.44
S24135	.0004	.35	S6623	.002	.47
S6588	.0005	.35	S24136	.0025	.53
S6589	.001	.38	S6624	.003	.62
S24137	.0015	.38	S6625	.004	.62
S6590	.002	.41	S6626	.005	.62
S24138	.0025	.47	S6627	.006	.71
S6591	.003	.50	S24139	.008	.85
S6592	.004	.50	S6628	.01	1.00
S6593	.005	.50	S24140	.015	1.15
S11747	.006	.62	S6629	.02	1.32
S24141	.007	.68	S24142	.025	1.65
S24143	.008	.71	S24144	.03	1.76
S6595	.02	.82	S24145	.04	2.29
S24146	.015	.97	S6630	.05	2.73
S0090	.025	1.14			
S24147	.03	1.35			
S24148	.03	1.50			

TEST 2,500 V. D.C. WORKING 1,200 V. D.C.			TEST 2,500 V. D.C. WORKING 1,200 V. D.C.		
Cat. No.	Cap. Mfd.	Net Price	Cat. No.	Cap. Mfd.	Net Price
S6596	.00005	.50	S6631	.00005	.50
S6597	.0001	.50	S24149	.0001	.50
S6598	.0002	.50	S6632	.0002	.50
S6599	.00025	.50	S6633	.00025	.50
S24150	.0003	.50	S11749	.0005	.50
S6600	.0005	.50	S6634	.001	.65
S6601	.001	.65	S6635	.002	.97
S24152	.0015	.80	S24151	.0025	1.03
S0090	.003	.70	S6636	.003	1.12
S24153	.0025	1.03	S6637	.004	1.12
S6603	.003	1.12	S6638	.005	1.23
S6604	.004	1.12	S6639	.006	1.23
S6605	.005	1.26	S24154	.008	1.59
S6606	.006	1.26	S0090	.009	0.00
S24158	.008	1.59	S24155	.015	2.38
S6607	.01	2.00	S6641	.02	2.82
			S24156	.025	3.12
			S24157	.03	3.26

TEST 5,000 V. D.C. WORKING 2,500 V. D.C.			TEST 5,000 V. D.C. WORKING 2,500 V. D.C.		
Cat. No.	Cap. Mfd.	Net Price	Cat. No.	Cap. Mfd.	Net Price
S6608	.00005	.65	S6642	.00005	.65
S6609	.0001	.65	S6643	.0001	.65
S6610	.0002	.76	S6644	.0002	.76
S6611	.00025	.76	S6645	.00025	.76
S24159	.0003	.76	S6646	.0005	.88
S6612	.0005	.91	S6647	.001	1.06
S6613	.001	1.06	S6648	.002	1.59
S24161	.0015	1.38	S24160	.0025	1.76
S6614	.002	1.59	S6649	.003	1.94
S24162	.0025	1.76	S6650	.004	2.23
S6615	.003	2.24	S6651	.005	2.41
S6616	.004	2.24	S6652	.006	2.47
S11748	.005	2.24	S24163	.008	2.70
			S6653	.01	2.91
			S24164	.015	3.18

Aerovox Molded Mica Transmitting Condensers

Heaviest duty molded Aerovox units; threaded holes take roundhead screw terminals; also available with plain holes to clear screws. Size 1 1/2" x 1 1/2".



1,000 V. D.C. MAX.			5,000 V. D.C. MAX.		
Cat. No.	Mfd. Price	Net	Cat. No.	Mfd. Price	Net
S22580	.00005	\$.44	S22614	.00005	\$.65
S22581	.0001	.44	S22615	.0001	.65
S22582	.00015	.44	S22616	.00015	.68
S22583	.0002	.44	S22617	.0002	.71
S22584	.00025	.44	S22618	.00025	.76
S22585	.0005	.44	S22619	.0005	.88
S22586	.001	.44	S22620	.001	1.06
S22587	.002	.47	S22621	.002	1.59
S22588	.003	.62	S22622	.003	1.94
S22589	.004	.62	S22623	.004	2.24
S22590	.005	.62	S22624	.005	2.41
S22591	.006	.71	S22625	.006	2.47
S22592	.01	1.00	S22626	.01	2.91
S22593	.015	1.15	S22627	.015	3.18
S22594	.02	1.32			
S22595	.03	1.76			
S22596	.05	2.73			
S22597	.06	3.18			
2,500 V. D.C. MAX.			7,500 V. D.C. MAX.		
S22598	.00005	.50	S22628	.00005	1.18
S22599	.0001	.50	S22629	.0001	1.38
S22600	.00015	.50	S22630	.00015	1.50
S22601	.0002	.50	S22631	.0002	1.59
S22602	.00025	.50	S22632	.00025	1.76
S22603	.0005	.50	S22633	.0005	2.47
S22604	.001	.65	S22634	.001	2.97
S22605	.002	.97	S22635	.002	4.53
S22606	.003	1.12	S22636	.003	5.64
S22607	.004	1.12	S22637	.004	7.06
S22608	.005	1.24			
S22609	.006	1.24			
S22610	.01	2.00			
S22611	.015	2.38			
S22612	.02	2.79			
S22613	.03	3.26			

Aerovox Porcelain Cased Mica Condensers

Ideal for high frequency applications; encased and hermetically sealed in glazed porcelain cases with heavy duty terminals. Minimum power loss from dielectric absorption; units operate at full load without heating. Size 4" x 3" 1/2" mtg. ctrs.



2,000 V. D.C. MAX.			7,000 V. D.C. MAX.		
Cat. No.	Mfd. Price	Net	Cat. No.	Mfd. Price	Net
S22548	.02	\$5.82	S22562	.0005	\$3.18
S22549	.1	7.76	S22563	.001	3.53
3,500 V. D.C. MAX.			10,000 V. D.C. MAX.		
S22550	.001	3.18	S22565	.002	4.59
S22551	.0015	3.18	S22566	.003	4.94
S22552	.002	3.88	S22567	.005	6.70
S22553	.003	4.23	S22568	.01	7.41
S22554	.005	5.29	S22569	.002	4.94
S22555	.01	7.06	S22570	.003	6.35
S22556	.02	7.06	S22571	.005	7.06
S22557	.05	8.12			
5,000 V. D.C. MAX.			12,500 V. D.C. MAX.		
S22558	.002	4.21	S22572	.00005	3.88
S22559	.003	4.59	S22573	.0001	3.88
S22560	.005	5.29	S22574	.00025	3.88
S22561	.01	7.41	S22575	.0005	3.88
			S22576	.001	3.88
			S22577	.0015	4.59
			S22578	.002	5.29
			S22579	.003	7.41

Special High-Voltage Capacitor

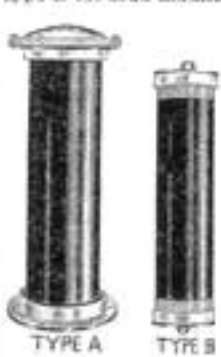


This 5,000 volt .00015 mfd. capacitor is specially designed for RF service and is rated at 0.5 amperes at 300 kilocycles; potted in molded bakelite case, ASA size. CM-70; threaded stud terminals; mounts on 2 1/2" centers.

Cat. No. S23501 Net Price \$3.50

EXTRA HIGH VOLTAGE Porcelain-cased Condensers

For use on D.C. up to a quarter million volts; oil-filled units solder-sealed into strong, wet-process porcelain sleeve, with end-castings serving as terminals; type A for flange mounting; type B for stud mounting.



TYPE A

TYPE B

Cat. No.	Working Volts	Mfd.	Description	Overall Dia. L.	Mtd. Holes B.	Net
S22533	100,000	.005	Flange mtg. solder-sealed 23 1/2"	4 1/2"	8 1/2"	\$167.58
S22534	200,000	.005	Flange mtg. solder-sealed 34 1/2"	7 1/2"	11 1/2"	345.74
S22535	250,000	.02	Flange mtg. gasket-sealed 47 1/2"	11 1/2"	16 1/2"	632.29
STUD-MOUNTING—TYPE B						
Cat. No.	Wkg. V.	Mfd.	L.	Dia.	Stud L.	Stud D.
S22536	7,500	.0025	3 1/2"	1 1/2"	1 1/2"	.20
S22537	7,500	.0075	3 1/2"	2 1/2"	1 1/2"	.20
S22538	7,500	.03	5 1/2"	3 1/2"	1 1/2"	.18
S22539	10,000	.0075	5 1/2"	3 1/2"	1 1/2"	.20
S22540	10,000	.075	8 1/2"	3 1/2"	1 1/2"	.16
S22541	12,500	.005	7 1/2"	2 1/2"	1 1/2"	.20
S22542	12,500	.05	10 1/2"	3 1/2"	1 1/2"	.16
S22543	15,000	.075	13 1/2"	3 1/2"	1 1/2"	.16
S22544	25,000	.005	10 1/2"	4 1/2"	1 1/2"	.13
S22545	50,000	.001	10 1/2"	4 1/2"	1 1/2"	.13
S22546	100,000	.005	22 1/2"	5 1/2"	1 1/2"	.13
S22547	200,000	.005	33 1/2"	7 1/2"	1 1/2"	.13

LOG TYPE MICAS

Insulated mounting holes, independent of soldering lugs; size 1 1/2" x 1 1/2" 1 1/2" mtg. ctrs.



1,000 Volts D.C.			2,500 Volts D.C.		
Cat. No.	Net Price	Mfd.	Cat. No.	Net Price	Mfd.
S22645	\$.35	.00005	S22655	\$.50	.00005
S22646	.35	.0001	S22656	.50	.0001
S22647	.35	.00025	S22657	.50	.00025
S22648	.35	.0005	S22658	.50	.0005
S22649	.35	.001	S22659	.65	.001
S22650	.41	.002	S22660	.97	.002
S22651	.62	.006	S22661	1.24	.006
S22652	.82	.01	S22662	2.00	.01
S22653	1.12	.02			
S22654	1.50	.03			

5,000 Volts D.C.			5,000 Volts D.C.		
Cat. No.	Mfd.	Net	Cat. No.	Mfd.	Net
S22663	.00005	\$.65	S22666	.0005	\$.88
S22664	.0001	.65	S22667	.001	1.06
S22665	.00025	.76	S22668	.002	1.59

MOLDED MICA SILVERED MICA

CONDENSERS

MOLDED PAPER CERAMIC

Aerovox Mica Condensers



POSTAGE
STAMP
STYLE
25/32" square

Dependable mica condensers in popular "postage stamp" size; built of selected mica and foil and molded in bakelite casing impervious to moisture, heat, or mechanical damage; wire leads for connection.

1,000 V. D.C. TEST			600 V. D.C. TEST		
Cat. No.	Mfd.	Net	Cat. No.	Mfd.	Net
S22503	.0005	15c	S22510	.004	32c
S22504	.00075	15c	S22511	.005	35c
S22505	.001	18c	S22512	.006	44c
S22506	.0015	18c	S22513	.008	47c
S22507	.002	24c	S22514	.01	53c
S22508	.0025	27c			
S22509	.003	29c			

MIDGUT MICA CONDENSERS



1 1/2" x 1 1/2"
Wire leads
1,000 V. test

Cat. No.	Mfd.	Net	Cat. No.	Mfd.	Net
S22515	.000001	12c	S22524	.00015	12c
S22516	.000005	12c	S22525	.0002	12c
S22517	.00001	12c	S22526	.00025	15c
S22518	.000025	12c	S22527	.0003	15c
S22519	.00004	12c	S22528	.00035	15c
S22520	.00005	12c	S22529	.0004	15c
S22521	.00007	12c	S22530	.0005	15c
S22522	.000075	12c	S22531	.00075	15c
S22523	.0001	12c	S22532	.001	18c

Silver Mica Condensers



For critical applications; low temperature coefficient—.0025 per degree F.; exceptionally high "Q"; practically no capacity drift with time; wax impregnated externally; specifically designed for push-button tuning; tolerance $\pm 5\%$; 1,000 volt D.C. test; Size 25/32 square.

Cat. No.	Mfd.	Net	Cat. No.	Mfd.	Net
S22401	.00075	\$.71	S22405	.002	\$1.06
S22402	.0008	.71	S22406	.0025	1.41
S22403	.0009	.79	S22407	.003*	1.59
S22404	.001	.88	S22408	.004*	1.68
S22409	.0015	1.06	S22410	.005*	1.76

* 600 volt D.C. test.



MIDGUT SIZE
1 1/2" x 1 1/2"
D.C. test

Cat. No.	Mfd.	Net	Cat. No.	Mfd.	Net
S22411	.000005	35c	S22419	.0015	35c
S22412	.00001	29c	S22420	.002	35c
S22413	.000025	29c	S22421	.00025	35c
S22414	.00004	29c	S22422	.0003	53c
S22415	.00005	29c	S22423	.00035	53c
S22416	.00007	29c	S22424	.0004	53c
S22417	.000075	29c	S22425	.0005	53c
S22418	.0001	29c			

C-D Molded Mica Condensers



Ideal for use as padding units, plate blocking, grid stop, RF bypass and tuned filter capacitors. Type 1W is 1 1/2" x 1 1/2" in. 1,000 V. test.

Cat. No.	Type No.	Cap. Mfd.	Net
S6567	5W5V5	.000005	15c
S6568	5W5Q1	.00001	15c
S22426	5W5Q2	.00002	15c
S6569	5W5Q25	.000025	15c
S6570	5W5Q3	.00003	15c
S6571	5W5Q4	.00004	12c
S6572	5W5Q5	.00005	12c
S22427	5W5Q7	.00007	12c
S6573	5W5T1	.0001	12c
S19235	5W5T15	.00015	12c
S6574	5W5T2	.0002	12c
S6575	5W5T25	.00025	15c
S6576	5W5T3	.0003	15c
S22428	5W5T4	.0004	15c
S6577	5W5T5	.0005	15c
S22429	1W5T6	.0006	15c
S22430	1W5T7	.0007	15c
S22431	1W5T8	.0008	15c
S22432	1W5T9	.0009	15c
S6578	1W5D1	.001	18c
S22433	1W5D15	.0015	18c
S6579	1W5D2	.002	24c
S22434	1W5D25	.0025	27c
S6580	1W5D3	.003	29c
S6581	1W5D4	.004	32c
S6582	1W5D5	.005	35c
S6583	1W5D6	.006	44c
S22435	1W5D7	.007	47c
S22436	1W5D8	.008	47c
S22437	1W5D9	.009	50c
S10236	1W5B1	.01	53c



"Silver Mike" Condensers

This new moulded silver plated mica construction permits low temperature coefficient. Exceptionally high "Q." Capacity tolerance $\pm 5\%$ or better. Tested at 1,000 V. D.C.

Cat. No.	Type No.	Mfd.	Net
S22438	5R5V1*	.000001	\$.35
S22439	5R5V5*	.000005	.35
S22440	5R5Q1*	.00001	.29
S22441	5R5Q2*	.00002	.29
S22442	5R5Q25	.000025	.29
S22443	5R5Q3	.00003	.29
S22444	5R5Q4	.00004	.29
S22445	5R5Q5	.00005	.29
S22446	5R5Q7	.00007	.29
S22447	5R5T1	.0001	.29
S22448	5R5T15	.00015	.35
S22449	5R5T2	.0002	.35
S22450	5R5T25	.00025	.35
S22451	5R5T3	.0003	.53
S22452	5R5T4	.0004	.53
S22453	5R5T5	.0005	.53
S22454	2R5T7	.0007	.71
S22455	2R5T8	.0008	.79
S22456	2R5T9	.0009	.79
S22457	1R5D1	.001	.88
S22458	1R5D15	.0015	1.06
S22459	1R5D2	.002	1.06
	1R5D25	.0025	1.41
600 VOLT D.C. TEST			
S22460	1R3D3	.003	1.59
S22461	1R3D4	.004	1.68
S22462	1R3D5	.005	1.76

* Closest possible tolerance ± 1 mmfd.

TOBE Molded Paper Capacitors



OIL-IMPREGNATED
Oil-impregnated, paper dielectric, molded bakelite cased units identical in size with popular mica capacitors which it replaces; suitable for coupling and by-pass circuits

in which higher "Q" of mica is not essential. Working temperature range minus 50 F. to plus 185 F.; "Q" at 1 Mc.—average 20; Power factor at 1,000 cycles—.004 to .006. Shunt resistance 1,000 megohms at 185 F. and 50,000 megohms at 72 F. Overall size 1 1/2" x 1 1/2" x 1 1/2".

Cat. No.	Type No.	Mfd.	VDC	Net
S22464	CN35A102	.001	600	41c
S22465	CN35A202	.002	600	41c
S22466	CN35A502	.005	600	41c
S22467	CN35A602	.006	600	41c
S22468	CN35A103	.01	400	45c
S22469	CN35A203	.02	200	45c

Ceramic Capacitors

For high frequency circuits and where temperature compensation, low power factor, or absolute permanence are essential. Capacitor stays permanent because metal is plated on ceramic so spacing cannot change. D.C. rating 1,000 volts; resistance over 10,000 megohms; P.F. under 0.1%; tolerance $\pm 2\frac{1}{2}\%$ ($\pm .5$ mmfd. below .000025 mfd.).

ZERO COEFFICIENT CAPACITORS

Used where no change with temperature can be allowed.

Cat. No.	Mfd.	Net
S22470	.000005	35c
S22471	.00001	35c
S22472	.00002	35c
S22473	.000025	35c
S22474	.00004	35c
S22475	.00005	35c
S22476	.000075	35c
S22477	.0001	35c
S22478	.000125	47c
S22479	.00015	47c
S22480	.000175	47c
S22481	.0002	47c
S22482	.00025	59c
S22483	.0003	59c
S22484	.00035	59c

NEGATIVE COEFFICIENT CAPACITORS

Uniform change	.00074 mmfd./mmfd./degree C.	C.
S22485	.00001	35c
S22486	.00002	35c
S22487	.000025	35c
S22488	.00004	35c
S22489	.00005	35c
S22490	.000075	35c
S22491	.0001	35c
S22492	.00015	35c
S22493	.0002	35c
S22494	.00025	35c
S22495	.0003	47c
S22496	.00035	47c
S22497	.0004	47c
S22498	.00045	47c
S22499	.0005	59c
S22500	.0006	59c
S22501	.0007	59c
S22502	.0008	59c

Sangamo Mica Capacitors

BAKELITE CASED



The quality and uniformity for which Sangamo capacitors are famous are provided in these molded-bakelite cased mica capacitors. The type F-1 units are 1 1/2" wide, 2 1/2" long, and 1 1/2" high overall; the type F-2 units are 1 1/2" wide, 3 1/2" long, and 2 1/2" high overall; mounting centers are 2 1/2" and 2 1/2" respectively; screw terminals, with locking nuts and washers are S-32 for the F-1 and 10-32 for F-2. Prices given are for the B characteristic of the American War Standard for fixed mica capacitors, others on request.

TYPE F-1			
Cat. No.	Mfd.	Net	
3,000 VOLTS D.C.			
S22703	.00001		
S22704	.00002		
S22705	.00005		
S22706	.0001		
S22707	.00015		
S22708	.0002		
S22709	.00025		
S22710	.0003		
S22711	.0004	\$5.82	
S22712	.0005	each	
S22713	.0006		
S22714	.00075		
S22715	.0008		
S22716	.001		
S22717	.0015		
S22718	.002		
S22719	.0025		
1,500 VOLTS D.C.			
S22720	.003		
S22721	.004	\$5.82	
S22722	.005	each	
S22723	.006		
1,000 VOLTS D.C.			
S22724	.008	\$5.82	
S22725	.01	5.82	
S22726	.02	6.15	
250 VOLTS D.C.			
S22727	.05	6.15	
S22728	.10	6.47	

TYPE F-2			
Cat. No.	Mfd.	Net	
5,000 VOLTS D.C.			
S22729	.00005		
S22730	.0001		
S22731	.00015		
S22732	.0002		
S22733	.00025		
S22734	.0003		
S22735	.0004		
S22736	.0005	\$8.41	
S22737	.0006	each	
S22738	.00075		
S22739	.0008		
S22740	.001		
S22741	.0015		
S22742	.002		
S22743	.0025		
S22744	.003	\$9.06	
4,000 VOLTS D.C.			
S22745	.004	\$9.06	
3,000 VOLTS D.C.			
S22746	.005	8.41	
S22747	.006	8.41	
S22748	.008	8.41	
2,000 VOLTS D.C.			
S22749	.01	8.41	
S22750	.015	8.41	
S22751	.02	9.06	
S22752	.03	9.06	
1,500 VOLTS D.C.			
S22753	.04	8.41	
S22754	.05	8.73	
500 VOLTS D.C.			
S22755	.10	9.38	
250 VOLTS D.C.			
S22756	.20	12.29	
S22757	.25	13.88	



CAPACITORS

TRANSMITTING FILTER • BY-PASS

"Oil-Mite" Filter Capacitors



Oil-impregnated and filled capacitors for use where service demands ability to stand extremes of heat and humidity, and momentary or sustained high voltage; occupy minimum space; meet test and performance specifications of AWS-C75.16-1944; extremely high insulation resistance for high temperature service; yet characteristics of the mineral oil used render them stable in capacitance and power factor from -55 to +185 F. Hermetically sealed in drawn metal cases with corrosion-resisting finish and oil-tight solder-bug terminals. Case size $1\frac{1}{2} \times 1\frac{1}{2} \times 2$, except 2 mfd. 600 v. and 1 mfd. 1,000 v. sizes which are $1\frac{1}{2} \times 1\frac{1}{2} \times 2\frac{1}{2}$. "U"-type hold-down bracket with 6-32 spade bolts allows either upright or inverted mounting on $1\frac{1}{2}$ " centers.

600 VOLTS			1,000 VOLTS		
Cat. No.	Net Price	Mfd.	Cat. No.	Net Price	Mfd.
S20429	\$1.12	.01	S20436	\$1.22	
S20430	1.12	.05	S20437	1.22	
S20431	1.19	.1	S20438	1.25	
S20432	1.25	.25	S20439	1.31	
S20433	1.35	.5	S20440	1.45	
S20434	1.65	1.0	S20441	1.98	
S20435	2.13	2.0			

Flange-mounted "Oil-Mites"



For applications in which the hold-down bracket is not suitable, OILMITES are available with rigid, flange-type brackets soldered to the container; slots



provide for mounting centers from $1\frac{1}{2}$ to $2\frac{1}{2}$ " specify whether upright or inverted mounting is required.

600 VOLTS			1,000 VOLTS		
Cat. No.	Net Price	Mfd.	Cat. No.	Net Price	Mfd.
S23339	\$1.22	.01	S23345	\$1.32	
S23340	1.22	.05	S23346	1.32	
S23341	1.29	.10	S23347	1.36	
S23342	1.36	.25	S23348	1.41	
S23343	1.45	.50	S23349	1.55	
S23344	1.75	1.0			

Military Type "Oil-Mites"

For compact and convenient installation in filter and by-pass circuits, the CA series of capacitors is available; meeting Army specifications, they may be used as replacements in certain types of military equipment and will also be found useful in the construction of apparatus in which performance must be maintained under all extremes of atmospheric conditions.



Cat. No.	Type	Mfd.	V. H. W. D. Net
S23380	CA-255 1-1-1	600	$1\frac{1}{2} \times 1\frac{1}{2} \times 1$ \$1.58
S23381	CA-355 3-5-2	200	$2\frac{1}{2} \times 2\frac{1}{2} \times 1$ 1.53

Heavy-Duty Filter Blocks



Oil-impregnated and oil-filled multi-section filter blocks, originally designed for secret military equipment and now available for industrial and laboratory use. Dual 5 mfd. block has three solder terminals, one common to both sections; triple 5 mfd. block has

five solder terminals with No. 1 terminal common to two sections and third section wholly insulated from the other two; all sections insulated from case. Units designed for chassis mounting with terminals extending through base; flange bracket has No. 13 mounting holes on $3\frac{1}{2} \times 1\frac{1}{2}$ " ctrs. Voltage rating 400 DC; capacity $\pm 14\%$ -6%.

Cat. No.	Type	Mfd.	H. W. D. Net
S23385	RAL-300 5-5	$3\frac{1}{2} \times 3\frac{1}{2} \times 2$	\$6.47
S23386	RAL-302 5-5-5	$4\frac{1}{2} \times 3\frac{1}{2} \times 2$	8.57
S23387	RAL-301 5-5	$3\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2}$	6.59

*Two $\frac{1}{2} \times \frac{1}{32}$ studs on diagonal 2" apart.

Drawn Case Oil-impregnated Oil-filled Capacitors



The compact "bath-tub" style by-pass capacitor of long-standing popularity now embodies the advantages of OILMITE construction. Seamless drawn cases, complete hermetic seal, generous insulation, molded phenolic insulators, heavy tin-plated soldering terminals, and corrosion-resistant finish are features of these units; stocked with terminals on longest side (0) but can be furnished with terminals on top (N) or on bottom (L) on special order. Capacity tolerance $\pm 20\%$; meet AWS-C75.16-1944.

Cat. No.	Mfd.	L. W. D.	Mtg.	Net
S23350	.01			\$1.35
S23351	.02			1.35
S23352	.05	$1\frac{1}{2} \times 1 \times 1$	2	1.35
S23353	.10			1.39
S23354	.25			1.43
S23355	.50	$1\frac{1}{2} \times 1 \times 1$	2	1.55
S23356	1.0	$2 \times 1\frac{1}{2} \times 1$	2	1.79
S23357	2.0	$2 \times 2 \times 1\frac{1}{2}$	2	2.39

MULTI-SECTION UNITS*				
S23358	.05-.05			\$1.75
S23359	.10-.10	$1\frac{1}{2} \times 1 \times 1$	2	1.75
S23360	.25-.25			1.84
S23361	.50-.50	$2 \times 1\frac{1}{2} \times 1$	2	2.04
S23362	1.0-1.0	$2 \times 2 \times 1\frac{1}{2}$	2	2.55
S23363	.05-.05-.05	$1\frac{1}{2} \times 1 \times 1$	2	2.00
S23364	.10-.10-.10	$1\frac{1}{2} \times 1 \times 1$	2	2.00
S23365	.25-.25-.25	$2 \times 1\frac{1}{2} \times 1$	2	2.34
S23366	.50-.50-.50	$2 \times 2 \times 1\frac{1}{2}$	2	2.71

1,000 VOLTS DC WORKING				
S23367	.01			1.39
S23368	.02			1.39
S23369	.05	$1\frac{1}{2} \times 1 \times 1$	2	1.39
S23370	.10			1.48
S23371	.25			1.51
S23372	.50	$2 \times 1\frac{1}{2} \times 1$	2	1.64
S23373	1.0	$2 \times 2 \times 1\frac{1}{2}$	2	2.20

MULTI-SECTION UNITS*				
S23374	.05-.05	$1\frac{1}{2} \times 1 \times 1$	2	1.83
S23375	.10-.10	$1\frac{1}{2} \times 1 \times 1$	2	1.83
S23376	.25-.25	$2 \times 1\frac{1}{2} \times 1$	2	2.02
S23377	.50-.50	$2 \times 2 \times 1\frac{1}{2}$	2	2.59
S23378	.10-.10-.10	$2 \times 1\frac{1}{2} \times 1$	2	2.38
S23379	.25-.25-.25	$2 \times 2 \times 1\frac{1}{2}$	2	2.50

*One terminal common to all sections.

Plug-In Filter Capacitors



Paper-dielectric capacitors connected to standard tube bases so block can be replaced instantly without a soldering iron. Hermetically sealed to meet Army specifications.



They are compact, convenient, and especially suitable for units where uninterrupted service must be maintained. Working voltage 600 v. DC. Cat. No. Type Mfd. H. W. D. Mtg. Net

S23382	PT-SC-2	8-8	$3\frac{1}{2} \times 3\frac{1}{2} \times 2$	A	\$5.21
S23383	PT-SC-8	8-8-8	$4 \times 3\frac{1}{2} \times 2$	A	7.41
S23384	PT-SC-11	8-8	$3\frac{1}{2} \times 2\frac{1}{2} \times 2$	B	5.29

A—flange base, mtg. ctrs. $3\frac{1}{2} \times 1\frac{1}{2}$.
B—2 studs $\frac{1}{2} \times \frac{1}{32}$ on diagonal of two-inch square.

Electrolytic Plug-In Condensers



Plug-in electrolytic condensers with a UX 4 prong base. Makes condensers as readily interchangeable as tubes.

PEAK V. 600—WORK V. 475				
Cat. No.	Cap.	Dimen.		Net Price
S9524	8	$1\frac{1}{2} \times 3\frac{1}{2}$		\$1.94
S9525	16	$1\frac{1}{2} \times 3\frac{1}{2}$		2.47
S9526	8-8	$1\frac{1}{2} \times 3\frac{1}{2}$		2.47

"TRS" Transmitting Condensers



Impregnated and filled with mineral oil of stable characteristics under wide variation of temperature, these condensers are applicable to transmitting, filter, and tuning circuits; hermetically sealed in steel cases; sturdy insulators support husky terminals furnished with shakeproof terminal lugs that take wires up to No. 15; hook hold-downs permit either upright or inverted mounting; brackets have 10-32 spade bolts; mtg. ctrs. are $\frac{1}{2}$ " beyond W. or D. dimension; universal clamp-around bracket on special order.

Cat. No.	TRS No.	Cap. Mfd.	Dimensions H. W. D.	Net Price
WORKING VOLTAGE 600 v. DC				
S23390	650	.5	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	\$1.65
S23391	601	1.	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	2.14
S23392	602	2	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	2.64
S23393	603	3	$4 \times 1\frac{1}{2} \times 1\frac{1}{2}$	3.13
S23394	604	4	$3\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{2}$	3.46
S23395	605	5	$4 \times 2\frac{1}{2} \times 1\frac{1}{2}$	3.95
S23396	606	6	$4\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{2}$	4.56
S23397	608	8	$3\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$	5.69
S23398	6010	10	$4 \times 3\frac{1}{2} \times 1\frac{1}{2}$	5.93
S23399	6020	20	$4 \times 3\frac{1}{2} \times 2\frac{1}{2}$	9.39
S23398	6040	40	$4\frac{1}{2} \times 3\frac{1}{2} \times 4\frac{1}{2}$	16.46
S23399	6050	50	$4\frac{1}{2} \times 3\frac{1}{2} \times 4\frac{1}{2}$	20.09

WORKING VOLTAGE 1,000 v. DC				
S23400	1050	.5	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	2.06
S23401	1001	1.	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	2.30
S23402	1002	2	$4 \times 1\frac{1}{2} \times 1\frac{1}{2}$	3.13
S23403	1004	4	$4\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{2}$	3.95
S23404	1005	5	$4 \times 3\frac{1}{2} \times 1\frac{1}{2}$	4.77
S23405	1008	8	$4\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$	5.76
S23406	10010	10	$4 \times 3\frac{1}{2} \times 1\frac{1}{2}$	6.42
S23407	10015	15	$4 \times 3\frac{1}{2} \times 2\frac{1}{2}$	7.75

WORKING VOLTAGE 1500 v. DC				
S23408	1510	.1	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	2.14
S23407	1525	.25	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	2.30
S23408	1550	.5	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	2.47
S23409	1501	1.	$4 \times 1\frac{1}{2} \times 1\frac{1}{2}$	2.80
S23410	1502	2	$4\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{2}$	3.95
S23411	1504	4	$4\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$	5.43

WORKING VOLTAGE 2000 v. DC				
S23410	2010	.1	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	2.65
S23411	20025	.25	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	2.79
S23412	2050	.5	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	2.96
S23413	2001	1.	$3\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{2}$	3.46
S23414	2002	2	$4 \times 3\frac{1}{2} \times 1\frac{1}{2}$	4.12
S23415	2004	4	$4 \times 3\frac{1}{2} \times 2\frac{1}{2}$	5.76

WORKING VOLTAGE 2500 v. DC				
S23414	2501	1	$3\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$	5.11
S23415	2502	2	$4\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$	8.40
S23416	2504	4	$4 \times 3\frac{1}{2} \times 4\frac{1}{2}$	11.69

WORKING VOLTAGE 3000 v. DC				
S23415	30001	.1	$2 \times 2\frac{1}{2} \times 1\frac{1}{2}$	5.43
S23416	30002	.2	$2 \times 2\frac{1}{2} \times 1\frac{1}{2}$	5.73
S23417	3025	.25	$2 \times 2\frac{1}{2} \times 1\frac{1}{2}$	5.73
S23418	3050	.5	$4 \times 2\frac{1}{2} \times 1\frac{1}{2}$	5.93
S23419	3001	1.	$4 \times 3\frac{1}{2} \times 2\frac{1}{2}$	7.74
S23420	3002	2	$4\frac{1}{2} \times 3\frac{1}{2} \times 3\frac{1}{2}$	9.71
S23421	3004	4	$4\frac{1}{2} \times 3\frac{1}{2} \times 4\frac{1}{2}$	14.33

WORKING VOLTAGE 4000 v. DC				
S23420	4001	1	$5 \times 3\frac{1}{2} \times 2\frac{1}{2}$	14.33

WORKING VOLTAGE 6000 v. DC				
S23421	60025	.25	$4 \times 3\frac{1}{2} \times 1\frac{1}{2}$	8.82
S23422	6001	1.	$4\frac{1}{2} \times 3\frac{1}{2} \times 4\frac{1}{2}$	17.64

*2 spade bolts per bracket.

High-Voltage Filter Blocks

First designed for military applications, in which their performance has built them an enviable reputation; oil-impregnated and oil-filled, contained in heavy "squeeze-ream" cases, with 20 gauge mounting base securely soldered to housing; screw terminals, assembled to specially designed Abinsing bushings, have lock-type solder lugs; entire assembly is hermetically sealed. Single unit block is wholly insulated from ground; triple-section block has case common to all three sections; designed for 4,000 volt DC service at temperatures from -55° F. to +185° F. and at high altitude Mtg. Ctrs. $4\frac{1}{2} \times 2\frac{1}{2}$.

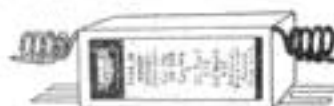
Cat. No.	Type	Mfd.	H. W. D. Net
S23388	81C-510M-2-EU	.2	$2\frac{1}{2} \times 4\frac{1}{2} \times 2\frac{1}{2}$ \$6.42
S23389	81C-510M-6-EU	.2-2-2-4	$4\frac{1}{2} \times 2\frac{1}{2} \times 8.15$



ELECTROLYTIC CONDENSERS

Midget Electrolytic Condensers

Square
Carton



A compact, dependable electrolytic condenser having excellent electrical characteristics. Available in single and multiple units. The multiple units have separate negatives and positives allowing use in common negative and common positive circuits.

250 V. DC WORKING VOLTAGE

Cat. No.	Type No.	Cap. Mfd.	Size L. D.	Net Price
S6532	JRX-204	4	2 1/2 x 1 1/2	.47
S6533	JRX-208	8	2 1/2 x 1 1/2	.59
S6534	JRX-210	10	2 1/2 x 1 1/2	.58
S6535	JRX-212	12	2 1/2 x 1 1/2	.71
S6536	JRX-216	16	2 1/2 x 1 1/2	.79
S6537	JRX-248	4-8	2 1/2 x 1 1/2	.82
S6538	JRX-288	8-8	2 1/2 x 1 1/2	.94

450 V. DC WORKING VOLTAGE

Cat. No.	Type No.	Cap. Mfd.	Size L. D.	Net Price
S6540	JR-504	4	2 1/2 x 1 1/2	.53
S6541	JR-508	8	2 1/2 x 1 1/2	.68
S6542	JR-512	12	2 1/2 x 1 1/2	.94
S22043	JR-516	16	1 1/2 x 1 1/2	1.03
S6543	JR-544	4-4	3 1/2 x 1 1/2	.85
S6544	JR-548	4-8	3 1/2 x 1 1/2	.97
S6545	JR-588	8-8	3 1/2 x 1 1/2	1.06
S6546	JR-5816	8-16	2 1/2 x 1 1/2	1.35
S10233	JR-5888	8-8-8	2 1/2 x 1 1/2	1.56

Beaver Tubular Electrolytic Condensers



A new development in small electrolytic condensers. Hermetically sealed. Will fit in a very small area conveniently.

Cat. No.	Type No.	Cap. Mfd.	L. D.	Net Price
S10214	BR-850	500	8	62c
S10215	BR-1650	500	16	94c
S6500	BR-445	450	4	41c
S6501	BR-845	450	8	44c
S10216	BR-1245	450	12	53c
S10217	BR-1645	450	16	65c
S10218	BR-2045	450	20	71c
S6506	BR-425	250	4	32c
S6507	BR-825	250	8	29c
S6508	BR-1225	250	12	47c
S6509	BR-1625	250	16	53c
S6510	BR-2025	250	20	59c
S6511	BR-4025	250	40	68c
S6512	BR-415	150	4	29c
S6513	BR-815	150	8	32c
S6514	BR-1215	150	12	35c
S6515	BR-1615	150	16	41c
S6516	BR-2015	150	20	44c
S6517	BR-4015	150	40	50c
S10219	BR-550	50	5	29c
S10220	BR-105	50	10	32c
S10221	BR-255	50	25	41c
S10222	BR-505	50	50	50c
S6518	BR-102-A	25	10	29c
S6519	BR-252-A	25	25	35c
S10223	BR-502	25	50	44c

DUAL BEAVER TUBULAR ELECTROLYTIC CONDENSERS

Cat. No.	Type No.	Cap. Mfd.	L. D.	Net Price
S10224	BRL-8845	450	8-8	76c
S10225	BRL-8145	450	8-16	97c
S10226	BRL-8125	250	8-16	76c
S10227	BRL-1125	250	16-16	88c
S10228	BRL-8815	150	8-8	59c
S10229	BRL-8115	150	8-16	62c
S10230	BRL-2215	150	20-20	76c
S10231	BRL-115	50	10-10	59c
S10232	BRL-2101	25	10-10	50c

Lug Terminal Can Type Electrolytic Condensers

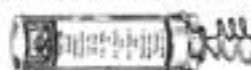


Instead of the usual wire leads these condensers have lugs for connections. The aluminum container is grounded and is the common negative connection.

WORKING VOLT. 450—PEAK VOLT 525

Cat. No.	Type No.	Cap. Mfd.	Size L. D.	Net Price
S6548	EP-9050	5	4 1/2 x 1 1/2	.76
S6549	EP-9051	8	4 1/2 x 1 1/2	.76
S22984	EP-9250	25	4 1/2 x 1 1/2	1.41
S6554	EP-9508	8-8	4 1/2 x 1 1/2	1.15

Midget Can Dry Electrolytic Condensers



These etched foil dry electrolytic condensers are contained in an aluminum can designed for inverted mounting—wire leads—a great space saver. Avail. ble in single and multiple sections. Separate negative and positive leads allowing either common negative or common positive use.

WORKING 500 V. D.C.

Cat. No.	Type No.	Cap. Mfd.	Size L. D.	Net Price
S10211	KR-604	4	1 1/2 x 1 1/2	\$1.32
S10212	KR-608	8	1 1/2 x 1 1/2	1.85
S10213	KR-616	16	1 1/2 x 1 1/2	2.49

WORKING 450 V. D.C.

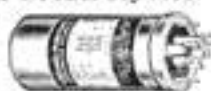
Cat. No.	Type No.	Cap. Mfd.	Size L. D.	Net Price
S6520	KR-504	4	1 1/2 x 1 1/2	.62
S6521	KR-508	8	1 1/2 x 1 1/2	.76
S22985	KR-512A	12	1 1/2 x 1 1/2	1.00
S6522	KR-516-A	16	1 1/2 x 1 1/2	1.12
S6523	KR-548-A	4-8	1 1/2 x 1 1/2	1.03
S6524	KR-588-A	8-8	1 1/2 x 1 1/2	1.15
S6525	KR-5816-A	8-16	1 1/2 x 1 1/2	1.35
S6526	KR-5888-A	8-8-8	1 1/2 x 1 1/2	1.65

WORKING 25 V. D.C.

Cat. No.	Type No.	Cap. Mfd.	Size L. D.	Net Price
S22044	KR-105	50	1 1/2 x 1 1/2	.76

"UP" Round Can Electrolytics

The smallest can-type electrolytics available. Hermetically sealed, positive terminals on bakelite cover; tongue mounting ring. Low leakage and power factor. Supplied with bakelite and metal washer.



SINGLE SECTION

Cat. No.	Cap. Mfd.	V. D.C.	D. L.	Net Price
S24121	40	25	1 1/2 x 2	\$.47
S24122	100	25	1 1/2 x 2	.79
S24123	30	150	1 1/2 x 2	.50
S24124	50	150	1 1/2 x 2	.68
S24125	10	450	1 1/2 x 2	.53
S24126	20	450	1 1/2 x 2	.79
S24127	40	450	1 1/2 x 3	1.15
S24128	60	400	1 1/2 x 3	1.73

DUAL SECTION

Cat. No.	Cap. Mfd.	V. D.C.	D. L.	Net Price
S24129	40-40	25	1 1/2 x 2	.71
S24130	10-10	450	1 1/2 x 2	.85
S24131	20-20	450	1 1/2 x 3	1.18
S24132	40-40	450	1 1/2 x 3	1.88

QUADRUPLE SECTION

Cat. No.	Cap. Mfd.	V. D.C.	D. L.	Net Price
S24133	10-10-10-10	450	1 1/2 x 2	1.35
S24134	20-20-20-20	450	1 1/2 x 3	1.94

Hardware for UP Units

Cat. No.	Item	Net Price
S24032	Wrench for mounting UP Units	54c
S24033	Bakelite washer for 1" UP	4c
S24034	Bakelite washer for 1 1/2" UP	4c
S24035	Bakelite washer for 1 1/2" UP	4c
S24036	Metal washer for 1" UP	4c
S24037	Metal washer for 1 1/2" UP	4c
S24038	Metal washer for 1 1/2" UP	4c
S24039	Mounting clip for 1" UP	7c
S24040	Mounting clip for 1" UP	7c
S24041	Mounting clip for 1 1/2" UP	7c
S24042	Insulating tube 1 1/2" x 2"	4c
S24043	Insulating tube 1" x 2"	4c
S24044	Insulating tube 1" x 3"	4c
S24045	Insulating tube 1 1/2" x 2"	4c
S24046	Insulating tube 1 1/2" x 3"	4c

Aluminum Can Dry Electrolytic Condensers



Standard size dry electrolytic condensers employing a high formation process which insures long dependable service—wire leads. Available in single and dual sections, the dual sections having separate negative and positive leads.

WORKING 450 V. PEAK 525 V.

Cat. No.	Type No.	Cap. Mfd.	L. D.	Net Price
S6555	EB-9040	4	2 1/2 x 1 1/2	.62
S6556	EB-9080	8	2 1/2 x 1 1/2	.76
S6557	EB-9120	12	2 1/2 x 1 1/2	1.00
S6558	EB-9160	16	2 1/2 x 1 1/2	1.12
S6559	EB-4400	4-4	2 1/2 x 1 1/2	.94
S6560	EB-4800	4-8	2 1/2 x 1 1/2	1.03
S6561	EB-8800	8-8	2 1/2 x 1 1/2	1.15
S22945	EB-11080	8*	2 1/2 x 1 1/2	1.21

*500 V. D.C. working.

High Capacity Low Voltage Electrolytics TYPE "FA"

Specially designed for use as replacements in "A" eliminators, low voltage rectifier circuits, talking pictures, and all low voltage hum filtering. Round metal can with cardboard insulating sleeve; screw terminals moulded into bakelite head.



Cat. No.	Type No.	Cap. Mfd.	V. D.C.	D. L.	Net Price
S22046	FA-1205	500	12	1 1/2 x 2	\$1.06
S22047	FA-1210	1,000	12	1 1/2 x 3	1.76
S22048	FA-1215	1,500	12	1 1/2 x 4	2.12
S22049	FA-1220	2,000	12	1 1/2 x 4	2.29
S22050	FA-1225	2,500	12	1 1/2 x 4	2.65
S22051	FA-1230	3,000	12	1 1/2 x 4	2.82
S22052	FA-1240	4,000	12	1 1/2 x 4	3.88
S22053	FA-1505	500	15	1 1/2 x 2	1.24
S22054	FA-1510	1,000	15	1 1/2 x 3	2.12
S22055	FA-1520	2,000	15	1 1/2 x 4	2.65
S22056	FA-1530	3,000	15	1 1/2 x 4	3.70
S22057	FA-1540	4,000	15	1 1/2 x 4	5.64
S22058	FA-1805	500	18	1 1/2 x 2	1.41
S22059	FA-1810	1,000	18	1 1/2 x 3	2.12
S22060	FA-1820	2,000	18	1 1/2 x 4	2.82
S22061	FA-1840	4,000	18	1 1/2 x 4	6.35
S22062	FA-2005	500	20	1 1/2 x 3	1.59
S22063	FA-2010	1,000	20	1 1/2 x 4	2.29
S22064	FA-2020	2,000	20	1 1/2 x 4	3.18
S22065	FA-2040	4,000	20	2 x 4	7.06
S22066	FA-2505	500	25	1 1/2 x 3	1.59
S22067	FA-2510	1,000	25	1 1/2 x 4	2.47
S22068	FA-2520	2,000	25	1 1/2 x 4	4.27
S22069	FA-2540	4,000	25	2 x 4	8.82
S22070	FA-3010	1,000	30	1 1/2 x 4	2.65
S22071	FA-3020	2,000	30	2 1/2 x 4	5.64
S22072	FA-3040	4,000	30	3 x 4	10.23
S22073	FA-3505	500	35	1 1/2 x 4	2.12
S22074	FA-3510	1,000	35	1 1/2 x 4	2.82
S22075	FA-3520	2,000	35	2 1/2 x 4	6.35
S22076	FA-3530	3,000	35	3 x 4	9.35
S22077	FA-4010	1,000	40	1 1/2 x 4	3.18
S22078	FA-4020	2,000	40	2 1/2 x 4	7.14
S22079	FA-5005	500	50	1 1/2 x 4	2.29
S22080	FA-5010	1,000	50	1 1/2 x 4	4.32
S22081	FA-5020	2,000	50	2 1/2 x 4	8.82



TYPE "BRH"
Hermetically sealed in aluminum can, with insulating sleeve and mounting strap. Etched foil. All standard ratings.

Cat. No.	Type No.	Cap. Mfd.	V. D.C.	D. L.	Net Price
S22082	BRH-601	100	6	1 1/2 x 1 1/2	\$.53
S22083	BRH-6025	250	6	1 1/2 x 1 1/2	.68
S22084	BRH-605	500	6	1 1/2 x 2	.88
S22085	BRH-610	1,000	6	1 1/2 x 2	1.24
S22086	BRH-615	1,500	6	1 1/2 x 2	1.59
S22087	BRH-620	2,000	6	1 1/2 x 2	1.94
S22088	BRH-121	100	12	1 1/2 x 1 1/2	.59
S22089	BRH-1225	250	12	1 1/2 x 2	.76
S22090	BRH-125	500	12	1 1/2 x 2	1.06
S22091	BRH-151	100	15	1 1/2 x 1 1/2	.62
S22092	BRH-1525	150	15	1 1/2 x 2	.88
S22093	BRH-155	500	15	1 1/2 x 2	1.24
S22094	BRH-251	100	25	1 1/2 x 2	.65
S22095	BRH-2525	250	25	1 1/2 x 2	1.06
S22096	BRH-255	500	25	1 1/2 x 2	1.59
S22097	BRH-501	100	50	1 1/2 x 2	.71

Inverted Mounted Condensers Grounded or Insulated

These standard size, inverted units are furnished in either grounded or negative mounting or insulated mounting. The latter, Type I, have an integral insulating boss cover and can lug. All come 11.



475 V. D.C. WORKING SINGLE SECTION				
Can.	Ins.	Mfd.	Can.	Net Price
S21834	S21835	2	1 1/2 x 1 1/2	\$0.76
S21836	S21837	4	2 x 2	.88
S21838	S21839	6	2 1/2 x 2 1/2	1.03
S21840	S21841	8	3 x 3	1.06
450 V. D.C. WORKING SINGLE SECTION				
S21842	S21843	2	1 1/2 x 1 1/2	.53
S21844	S21845	4	2 x 2	.62
S21846	S21847	6	2 1/2 x 2 1/2	.71
S21848	S21849	8	3 x 3	.76
S21850	S21851	10	4 x 4	.88
S21852	S21853	12	4 1/2 x 4 1/2	1.00
S21854	S21855	16	5 x 5	1.12

Wire Lead Condensers

TYPE GL

These inverted mounting, aluminum can condensers are made in single, double and triple section units with separate color-coded leads. Multiple section units have two leads brought out from each section.



600 V. D.C. WORK TYPE GL600				
Can.	Ins.	Mfd.	Can.	Net Price
S21834	S21835	2	1 1/2 x 1 1/2	\$1.32
S21842	S21843	4	2 x 2	1.85
475 V. D.C. WORK TYPE GL475				
S21856	S21857	2	1 1/2 x 1 1/2	1.06
S21858	S21859	4	2 x 2	1.47
S21860	S21861	6	2 1/2 x 2 1/2	1.65
S21862	S21863	8	3 x 3	1.71
450 V. D.C. WORKING TYPE GL450				
S21864	S21865	2	1 1/2 x 1 1/2	.62
S21866	S21867	4	2 x 2	.76
S21868	S21869	6	2 1/2 x 2 1/2	1.12
S21870	S21871	8	3 x 3	1.24
S21872	S21873	10	4 x 4	2.18
S21874	S21875	12	4 1/2 x 4 1/2	3.00
S21876	S21877	16	5 x 5	.94
S21878	S21879	20	6 x 6	1.03
S21880	S21881	25	8 x 8	1.15
S21882	S21883	35	10 x 10	1.38
S21884	S21885	50	12 x 12	1.41
S21886	S21887	70	14 x 14	1.38
S21888	S21889	100	16 x 16	1.65
S21890	S21891	150	20 x 20	1.94
S21892	S21893	200	25 x 25	1.71
S21894	S21895	300	35 x 35	1.88

Midget Can-Type Condensers

TYPE GLS

Colored polarity-indicating flexible leads. Inverted screw mounting. Two 8-in. leads for each section in single and double section units. 1-inch diameter can and short length make for more compact assemblies, while retaining generous proportions for hard service.



450 V. D.C. WORKING				
Can.	Ins.	Mfd.	Can.	Net Price
S21875	S21876	4	1 1/2 x 1 1/2	\$.62
S21877	S21878	6	2 x 2	.76
S21879	S21880	8	2 1/2 x 2 1/2	1.00
S21881	S21882	10	3 x 3	1.12
S21883	S21884	12	3 1/2 x 3 1/2	1.15

Prong Base Midget Condensers

TYPE F

Compact, economical, simply mounted dry electrolytic for new assemblies and replacements. Base prongs slip into hole (for insulated can) or metal (grounded can) elliptical washer rivetted or eyeletted on chassis, and are bent over. Terminal lugs slip through hole in washer for soldered connections. Hermetically-sealed. Safety vent. Negative can. Metal or bakelite washer 5c each.



Cat. No.	Mfd.	D.C. W.V.DxH	Net Price
F2J	10	450 1 x 2	.53
F4J	20	450 1 x 2	.79
F8J	40	450 1 x 3	1.15
F22J	10-10	450 1 x 2	.85
F44J	20-20	450 1 x 3	1.18
F222J	10-10-10	450 1 x 3	1.12
F4444J	20-20-20-20	450 1 x 3	1.94
F16H	80	400 1 x 2	1.73
F22F	10-10	250 1 x 2	.76
F44F	20-20	250 1 x 2	.79
F6D	30	150 1 x 2	.50
F44D	20-20	150 1 x 2	.71
F66D	30-30	150 1 x 2	.79
F64D4A	30-20	150 1 x 2	.82
F3F4A	15-15	250 1 x 2	.79
F22J4A	10-10	450 1 x 3	.94
F86D4A	40-30	150 1 1/2 x 3	1.00
F6J	+20	450 1 x 3	.97

Plug-in Electrolytics

Quick-change dry electrolytics facilitate testing and replacement; plug into standard octal socket; ultra compact due to use of etched foil for higher capacitance in the small can size; non-corrosive and fully vented for safety.



Cat. No.	Mfd.	Dia.-High	Net Price
S21880	10	1 1/2 x 2	\$0.88
S21881	20	1 1/2 x 2	1.24
S21882	40	1 1/2 x 2	2.20
S21883	80	1 1/2 x 4	3.00
S21884	10-10	1 1/2 x 2	1.38
S21885	20-20	1 1/2 x 3	1.94

Space-Saver Midget Condensers

Extremely small size obtained by a time-tested process ensuring higher capacity in given size.

Units are encased in heavy, impregnated cardboard containers; wire leads color-coded for polarity; "Adjustmount" feature provides swivel mounting flange with slotted holes to fit any mounting hole spacing; condenser may be mounted flat or upright, or may be stacked by overlapping the metal flanges.

600V. D.C. WORKING TYPE PR8600				
Cat. No.	Mfd.	D.	W. L.	Net Price
S21886	4	1 1/2 x 1 1/2	2 1/2	\$1.23
S21887	8	1 1/2 x 1 1/2	3 1/2	1.73
450 V. D.C. WORKING TYPE PR8450				
S21888	2	1 1/2 x 1 1/2	2 1/2	.47
S21889	4	1 1/2 x 1 1/2	2 1/2	.53
S21890	8	1 1/2 x 1 1/2	2 1/2	.68
S21891	16	1 1/2 x 1 1/2	2 1/2	1.03
S21892	8-8	1 1/2 x 1 1/2	2 1/2	1.06

Aerovox Research Worker

If you are not getting this snappy, informative, practical engineering paper — issued monthly and sent free of charge to servicemen, engineers, hams, and other interested workers — send us your name, business address, and occupational classification and we will enter your subscription.

Miniature Tubular Aluminum Can

Dry Electrolytics

Hermetically-sealed aluminum-can dry electrolytics; smallest proportions consistent with full-rated capacity and voltage, operating under normal-duty conditions; favorites for midget sets, A.C.-D.C. sets, auto-radios; also servicing jobs where low cost is important. Insulated with special waxed paper jacket; ends spun over can rim, eliminating possibility of shorts if leads are bent close to unit. Polarity-indicating red end washer. Generous flared wire leads on single section units. DANDEES are properly vented. Excessive gas pressure escapes, without fuse, bother, danger. DANDEES are thoroughly aged, ready for immediate use.



450 V. D.C. WORKING TYPE PR8450				
Cat. No.	Mfd.	Dia.-High	Net Price	
S21893	4	1 1/2 x 1 1/2	\$.41	
S21894	8	1 1/2 x 1 1/2	.44	
S21895	12	1 1/2 x 1 1/2	.53	
S21896	16	1 1/2 x 1 1/2	.65	
S21897	20	1 1/2 x 1 1/2	.71	
250V. D.C. WORKING TYPE PR8250				
S21898	4	1 1/2 x 1 1/2	.32	
S21899	8	1 1/2 x 1 1/2	.35	
S21900	12	1 1/2 x 1 1/2	.47	
S21901	16	1 1/2 x 1 1/2	.53	
150V. D.C. WORKING TYPE PR8150				
S21902	4	1 1/2 x 1 1/2	.29	
S21903	8	1 1/2 x 1 1/2	.32	
S21904	12	1 1/2 x 1 1/2	.35	
S21905	16	1 1/2 x 1 1/2	.41	
S21906	24	1 1/2 x 2 1/2	.44	
S21907	30	1 1/2 x 2 1/2	.47	
S21908	40	1 1/2 x 2 1/2	.50	
50V. D.C. WORKING TYPE PR850				
S21909	10	1 1/2 x 1 1/2	.32	
S21910	25	1 1/2 x 1 1/2	.41	
S21911	50	1 1/2 x 1 1/2	.59	
S21912	100	1 1/2 x 2 1/2	.71	
25 V. D.C. WORKING TYPE PR825				
S21913	10	1 1/2 x 1 1/2	.29	
S21914	25	1 1/2 x 1 1/2	.35	
S21915	50	1 1/2 x 1 1/2	.44	
S21916	100	1 1/2 x 1 1/2	.65	

TYPE PRS-A

Type PRS-A is a concentrically wound, 3-lead unit (one lead is common) furnished with a riveted mounting strap at the center. Flexible leads are supplied on these units.

450V. D.C. WORKING TYPE PRS-A450				
Cat. No.	Mfd.	Dia.-High	Net Price	
S21917	8-8	1 x 2 1/2	\$.76	
S21918	8-16	1 x 2 1/2	.94	
200 V. D.C. WORKING TYPE PRS-A200				
S21919	8-8	1 x 2 1/2	.68	
S21920	8-16	1 x 2 1/2	.71	
S21921	16-16	1 x 2 1/2	.82	
150V. D.C. WORKING TYPE PRS-A150				
S21922	8-8	1 x 2 1/2	.59	
S21923	8-16	1 x 2 1/2	.62	
S21924	20-20	1 x 2 1/2	.76	

TYPE PRS-B

Separate sections, 3 flexible leads. Permit independent use of either section and either common positive or common negative connections.

450V. D.C. WORKING TYPE PRS-B450				
Cat. No.	Mfd.	Dia.-High	Net Price	
S21925	8-8	1 x 2 1/2	\$.97	
S21926	8-16	1 x 2 1/2	1.34	
150V. D.C. WORKING TYPE PRS-B150				
S21927	20-20	1 x 2 1/2	.97	

Motor Starting Capacitors

Standard universal and exact duplicate replacement motor starting capacitors covering all requirements are listed in a special Aerovox catalog. We will gladly send you a copy of this catalog showing the motor starting capacitors you can get at the Radio Shack.



Single Filament Transformers

Primary 115 volts 50-60 cycles except those marked * which have primary taps of 105, 110 and 115 volts to compensate for low line or voltage drop in filament leads.

Cat. and Type No.	Fil. Cts.	Sec. Amps.	Volts	Mtg. Fig.	Dimensions W. D. H.	Net Price
T-19F61	2.5	3.5	1,600	2B	2 1 1/2	\$1.24
T-19F75	2.5	5	7,500	2B	3 1/2 3	1.60
T-19F88	2.5	5.25	1,600	3C	2 2 2 1/2	1.41
T-19F89	2.5	10	1,600	3C	2 2 3	1.61
T-19F90	2.5	10	7,500	3C	2 1/2 3 1/2	2.12
T-64F33*	2.5	10	7,500	2N	3 1/2 3 1/2	4.24
T-19F82	2.5	15	10,000	3C	3 1/2 4	3.53
T-63F99	5	4	1,600	2D	3 2 3 1/2	2.29
T-19F83	5	5	1,600	3C	2 1/2 3	1.60
T-19F84	5	8	1,600	3C	2 1/2 3 1/2	1.94
T-19F85	5	13	1,600	3C	3 1/2 4	2.81
T-19F86	5	21	1,600	3C	3 1/2 5	3.88
T-19F91	5.25	4	1,600	3C	2 2 3 1/2	1.76
T-19F92	5.25	13	1,600	3C	3 1/2 4	2.47
T-74F23*	5.25	13	1,600	2D	3 1/2 4	3.53
T-74F24*	5.25	21	1,600	2D	3 1/2 4 1/2	6.00
T-19F80	6.3	1	1,600	2B	1 1/2 1 1/2	.94
T-19F81	6.3	2	1,600	2B	1 1/2 2	1.06
T-19F97	6.3	3	1,600	2B	2 2 2 1/2	1.24
T-61F85	6.3, 5.25, 2.3	2.3	1,600	2E	2 1/2 2 1/2	1.60
T-73F60*	6.3	5	1,600	2D	3 2 3 1/2	2.81
T-19F98	6.3	6	1,600	3C	2 1/2 3 1/2	1.94
T-19F99	6.3	10	1,600	3C	3 1/2 4	2.47
T-19F93	7.5	4	1,600	3C	2 1/2 3 1/2	1.76
T-19F94	7.5	8	1,600	3C	3 2 3 1/2	2.12
T-92F20	7.5	8	1,600	2D	3 1/2 4	3.70
T-19F95	10	4	1,600	3C	2 1/2 3 1/2	1.94
T-19F96	10	8	1,600	3C	3 2 3 1/2	2.47
T-64F14*	10	8	1,600	2D	3 1/2 4	3.53
T-19F87	10	12	1,600	3C	3 1/2 4	4.41

Universal Bias Transformers

Primary 115 volts, 50-60 cycles. Mtg. Fig. 2N No filament winding.

Cat. and Type No.	Application	M.A.	Dimensions W. D. H.	Net Price
T-19R31	Will supply DC voltages 10 to 100 in app. 5 volt steps	200	3 1/2 4 1/2	\$6.70
T-19R32	Will supply DC voltages 100 to 400 in app. 15 volt steps	200	3 1/2 4 1/2	8.82

These plate transformers are rated in D.C. voltages from a two section filter, including the voltage drop through the rectifier tubes. Designed especially for Amateur Short Wave or experimental equipment. Electrostatic shield between primary and secondary. Primary 115 volts 50-60 cycles.

Type No.	Sec. Load Volts	D.C. Volts	D.C. M.A.	Pri. V.A.	Mtg. Fig.	Dimensions W. D. H.	Wt. Lbs.	Net Price
T-19P54	560-0-560	400	150	115	2G	3 3/4 5	7	\$4.24
T-19P55	600-0-600	500-0-500	500, 400	250	20G	3 3/4 4 1/2	8	4.59
T-19P56	900-0-900	800-0-800	750, 600	225	20G	3 3/4 4 1/2	10	4.94
T-19P57	1,075-0-1,075	900-0-900	1,000, 400	125, 150	24G	3 3/4 6 1/2	10 1/2	6.00
T-19P58	1,200-0-1,200	900-0-900	1,000, 750	200, 150	20G	4 5/8 6 1/2	19	10.58
T-19P69	1,180-0-1,180	900-0-900	1,000, 750	300	20G	4 5/8 6 1/2	20	10.58
T-19P59	1,500-0-1,500	1,250-0-1,250	1,250, 1,000	300	550	5 7/8 7	28 1/2	12.35
T-19P60	1,875-0-1,875	1,500-0-1,500	1,500, 1,250	300	620	6 4/8 7	29 1/2	14.82
T-19P61	2,125-0-2,125	1,875-0-1,875	1,750, 1,500	300	745	6 4/8 7	31 1/2	15.88
T-19P62	2,420-0-2,420	2,125-0-2,125	2,000, 1,750	300	860	6 5/8 7	34 1/2	18.88
T-19P63	1,500-0-1,500	1,250-0-1,250	1,250, 1,000	500	925	6 5/8 7	38	18.17
T-19P64	1,875-0-1,875	1,500-0-1,500	1,500, 1,250	500	1,130	6 6/8 7	43 1/2	20.99
T-19P65	3,000-0-3,000	2,420-0-2,420	2,500, 2,000	300	1,195	6 6/8 7	44	21.87
T-19P66	2,125-0-2,125	1,875-0-1,875	1,750, 1,500	500	1,185	6 4/8 10	45 1/2	29.28
T-19P67	2,450-0-2,450	2,125-0-2,125	2,000, 1,750	500	1,380	6 4/8 10	51	35.28
T-19P68	3,000-0-3,000	2,450-0-2,450	2,500, 2,000	500	1,760	6 5/8 10	61	41.28

* These transformers designed for double rectifiers and will deliver both secondary ratings simultaneously. If only the lower voltage taps are used, the current rating is equal to the current rating of both windings.
† Bias tap 30 volts.

C. H. T. Series Multi-Volt Plate Transformers

The value of Thorndarson experience in manufacturing quality transformers is best demonstrated by the C.H.T. Multi-Volt transformers. These units, engineered for continuous operation, provide extreme flexibility, excellent regulation and quiet operation. The new 3P mounting, used on the larger types, consists of two heavy cast cases for full shielding of the coil. Moisture proof compound is used for complete coil protection. Primary volts, 115-230.

Type No.	Sec. Load A.C. Volts	Pri. V.A.	D.C. Volts	D.C. M.A.	Mtg. Fig.	Dimensions W. D. H.	Wt. Lbs.	Net Price
T-15P11	605/605 or 535/535	160	500 or 400	200	3U	4 1/2 4 1/2 5 1/2	15 1/2	\$9.88
T-15P12	835/835 or 655/655	200	650 or 500	200	3U	5 1/2 4 1/2 6 1/2	19 1/2	11.29
T-15P13	945/945 or 770/770	315	750 or 600	300	3U	6 1/2 5 1/2 7 1/2	31 1/2	16.94
T-15P14	1,225/1,225 or 945/945	427	1,000 or 750	300	3U	6 1/2 5 1/2 7 1/2	41	21.17
T-15P15	1,450/1,450 or 1,190/1,190	520	1,250 or 1,000	300	3U	7 1/2 7 1/2 8	51 1/2	24.70
T-15P16	1,540/1,540 or 1,255/1,255	875	1,250 or 1,000	500	3P	6 1/2 11 9	81	37.04
T-15P17	1,815/1,815 or 1,535/1,535	665	1,500 or 1,250	300	3U	7 1/2 8 8	55	26.46
T-15P18	2,130/2,130 or 1,845/1,845	1,210	1,750 or 1,500	500	3P	6 1/2 12 9	96	49.39
T-15P19	2,950/2,950 or 2,365/2,365	1,160	2,500 or 2,000	300	3P	6 1/2 11 9	85	47.63
T-15P20	2,960/2,960 or 2,390/2,390	2,390	2,500 or 2,000	650	3P	7 1/2 13 9 1/2	140	70.56
T-15P21	3,400/3,400 or 2,980/2,980	2,150	3,000 or 2,500	500	3P	7 1/2 12 9 1/2	129	67.03
T-15P22	2,340/2,340 or 1,815/1,815	745	2,000 or 1,500	300	3P	6 1/2 10 1/2 9	76	35.45
	2,070/2,070 or 1,785/1,785		1,750 or 1,500					
	1,495/1,495 or 1,210/1,210		1,250 or 1,000					

C.H.T. Single Filament Transformers—3U

Terminals brought out to solder lugs on recessed base; permits mounting on chassis with one hole for sub-panel wiring. Side knock-out holes for above panel wiring. Primary volts 105-115 50-60 cycles.

Cat. and Type No.	C.T. Fil.	Sec. Amps.	Volts	Dimensions W. D. H.	Net Price
T-11F59	5	5	2,000	3 3/4 3 1/2	\$5.29
T-11F63	5	13	2,000	4 1/2 3 1/2 4 1/2	6.70
T-11F55	5.25	22	2,000	4 1/2 4 1/2 5 1/2	8.82
T-11F60	6.3	5	2,000	3 3/4 3 1/2	5.64
T-11F62	7.5	8	2,000	4 1/2 3 1/2 4 1/2	6.00
T-11F64	10	10	2,000	4 1/2 4 1/2 5 1/2	7.06
T-11F53	2.5	10	7,500	5 1/2 3 1/2 4 1/2	6.00
T-11F61	2.5	20	15,000	5 1/2 6 1/2	15.88
T-11F54	5	20	10,000	5 1/2 5 1/2 6 1/2	14.11

Tapped Filament Transformers—3U

INSULATED FOR 2,000 V						
Cat. and Type No.	Filament	Fil. Cur.	Dimensions W. D. H.			Net Price
T-11F50	7.5 tap 6.3, 5* and 2.5 Ct.	6.5	4 1/2	3 1/2	4 1/2	\$6.35
T-11F51	10 tap 7.5 and 6.3 Ct.	8	4 1/2	3 1/2	4 1/2	7.76
T-11F52	11 tap 10 and 7.5 Ct.	10	4 1/2	4 1/2	5 1/2	9.35

* Not center tapped.

Multiple Filament Transformers—2G

The trend of amateur transmitter design has been carefully studied in planning this series. One transformer from this group will often supply all filament voltages required.

Cat. and Type No.	Filaments	Cur.	Dimensions W. D. H.	Net Price
T-19F76	5 V.*	3	3 1/2 3 1/2 4 1/2	\$3.35
	7.5 V. tapped at 6.3 and 5*	6		
T-19F77	5 V.*	3	3 1/2 3 1/2 5	5.80
	2.5 V. Ct.*	10		
	10 V. tapped at 7.5, 6.3 and 5*	8		
T-19F78	2.5 V. Ct.*	10	3 1/2 3 1/2 5 1/2	4.06
	5 V.*	3		
T-19F79	6.3 V. Ct.*	3	3 1/2 3 1/2 5 1/2	4.76
	10 V. tapped at 7.5, 6.3 and 5*	10		
T-79P84	2.5 V. Ct.; 5 V. Ct.; 6.3 V. Ct.*	3A. 3A. 3A.	3 1/2 3 1/2 4 1/2	3.35

* 1,600 v. ins. † 7,500 v. ins.



2-B



2-E



3-C



2-D



2-N



2-G



2-K



3-U



3-P



3-P



POWER TRANSFORMERS

THORNDARSON
MADE IN U.S.A.


General Purpose Power Transformers

MOUNTING FIG. 2G. For continuous duty applications in high quality receivers, amplifiers or for low power stages of transmitters and many similar applications. Primary 115 volts 50-60 cycles.

Cat. and Type No.	H.V.—Sec.		Rect. Fil.	Fil. C.T.	Dimensions W. D. H.	Net Price
	AC. V.	D.C. M.A.				
T-92R21	800	200	5V 3A	6.3V 5A	3 1/2 4 1/2	\$5.29
T-17R30	740	280	5V 3A	6.3V 6A	3 1/2 4 1/2	6.00
T-17R31	800	325	5V 6A	6.3V 7A	3 1/2 5 1/2	8.82
T-74R28	880	125	5V 3A	6.3V 3.5A	3 1/2 3 1/2	4.76
2.5V 3A						
T-87R85	660	160	77V	6.3V 2A	3 1/2 4 1/2	5.29
5V 2A						
T-68R26	1,100	150	5V 3A	2.5V 5A	3 1/2 4 1/2	5.12
2.5V 5A						
T-69R35	775	200	5V 3A	6.3V 3A	3 1/2 4 1/2	4.76
T-75R50	870	250	80V	6.3V 1.5A	3 1/2 4 1/2	5.47
2.5V 3A						
T-83R82	1,480	140	150V	7.5V 2.5A	3 1/2 4 1/2	7.06
2.5V 3A						
T-83R85	1,480	200	150V	7.5V 5A	3 1/2 5 1/2	8.82
2.5V 3A						
T-89R28	1,100	275	5V 3A	6.3V 6A	3 1/2 5 1/2	8.12
650 75 5V 2A						

Multi-Volt Power Transformers

Specified for build-it-yourself amplifiers described in Sound Amplifier Guide No. 346-D. Primary 115 volts, 50-60 cycles. Mounting style 3U.

Cat. and Type No.	H.V.—Sec.		Rect. Fil.	Fil. C.T.	Dimensions W. D. H.	Net Price
	AC. V.	D.C. M.A.				
T-15R04	510	25	5V 3A	6.3V 2.1A	3 3/4 4 1/2	\$5.29
T-15R05	680	135	5V 3A	6.3V 2A	4 1/2 4 1/2	9.35
77 Bias tap 5V 2A 2.5V or 5A						
T-15R06	725	175	5V 3A	6.3V 5A	4 1/2 4 1/2	8.64
T-15R07	760	280	5V 3A	6.3V 7A	4 1/2 4 1/2	9.35
T-15R08	900	325	5V 6A	6.3V 8A	5 1/2 4 1/2	11.29

Plate and Filament Transformers

Combination plate and filament transformers for tubes of medium power such as 6L6, 807, T-20, RK-23, RK-39, etc. Primary 115 volts, 50-60 cycles. Mounting figure 3U.

Cat. and Type No.	H.V.—Sec.		Rect. Fil.	Fil. C.T.	Dimensions W. D. H.	Net Price
	AC. V.	D.C. M.A.				
T-15R09	500	150	5V 3A	7.5V 5A	5 1/2 4 1/2	\$8.82
Tapped at 6.3V						
T-15R01	500	400	5V 6A	6.3V 6A	6 1/2 5 1/2	12.35
T-15R02	700	200	2.5V 10A	7.5V 3A	5 1/2 4 1/2	9.35
Tapped at 6.3V						
T-15R03	400	200	2.5V 4A	6.3V 3A	5 1/2 4 1/2	9.70
5V 3A						

Combination Plate and Filament Transformers

FOR TRANSMITTER APPLICATIONS

Cat. and Type No.	H.V.—Sec.		Rect. Fil.	Fil. C.T.	Dimensions W. D. H.	Net Price
	AC. V.	D.C. M.A.				
T-19R30	560-0-560	400	150	2G	3 1/2 4 4 1/2	\$5.64

Filament windings: 5V at 3A; 6.3V at 3A CL; 7.5V at 2.5A CL.

Power Transformers for Cathode Ray Tubes

Cat. and Type No.	Volts		Rect. Fil.	Fil. C.T.	Dimensions W. D. H.	Net Price
	D.C.	M.A.				
T-92R33 Mtg. 2F	500	3	6.3V 9A	6.3V 6A	3 1/2 4 1/2	\$3.15
For 913 tube tap 400 15						
6.3V 6A						
T-14R32 Mtg. 2G	400	15	5V 2A	6.3V 6A	2 1/2 3 1/2 3 1/2	5.29
5V 2A 2.5V 2A						
6.3V 6A						

For Dumont 24-NH; RCA 902, 913; National 2002 tubes.

* With half wave rectification.

Plate and Filament Television Transformers

Electrostatically shielded. Primary 115 volts—60 Cycles. Mounting Fig. 2G.

Type No.	Kinescope Tubes	Secondary		Volts Insulation	Dimensions W. D. H.	Net Price
		No. 1—2300V AC	No. 2—2.5V at 3A			
T-17R32	5"	No. 3—2.5V at 2A	No. 4—2.5V at 2A	7,500	3 1/2 3 1/2 4 1/2	\$7.22
No. 5—4500V AC						
T-17R33	9"	No. 6—2.5V at 3A	No. 7—2.5V at 2A	10,000	3 1/2 3 1/2 4 1/2	12.00

Universal Duplicate Power Transformers—"13R" Series

MOUNTING FIGURE 3A permits mounting in flush, vertical or horizontal position as shown in illustrations above. Adjustable mounting brackets are furnished.

Features include: Electrostatic shields between primary and secondary windings; double shells to protect the coil from mechanical injury and to provide magnetic shielding; 10-inch RMA color coded leads. Primary 110-120 volts, 50-60 cycles.

Cat. and Type No.	AC. V. D.C.		Rect. Fil.	Fil. C.T.	Dimensions W. D. H.	Net Price
	AC. V.	D.C. M.A.				
T-13R19	480	40	5V 2A	6.3V 2A	2 1/2 2 1/2 2 1/2	\$2.12
T-13R11	580	50	5V 3A	6.3V 2A	2 1/2 2 1/2 3	2.29
T-13R20	610	70	5V 3A	6.3V 3.5A	2 1/2 3 3/4	2.65
T-13R12	700	70	5V 3A	6.3V 2.5A	2 1/2 3 3/4	2.65
T-13R13	700	90	5V 3A	6.3V 3.5A	3 1/2 3 3/4	3.18
T-13R14	700	120	5V 4A	6.3V 4.7A	3 1/2 3 3/4	3.53
T-13R15	750	150	5V 4A	6.3V 5A	3 1/2 3 3/4	4.06
T-13R16	800	200	5V 4A	6.3V 5.14A	3 1/2 3 3/4	4.59
T-13R17	600	60	5V 3A	6.3V 2.5A	2 1/2 3 3/4	3.00
T-13R18	700	90	5V 3A	6.3V 3.5A	3 1/2 3 3/4	3.53
Tapped at 2.5V						
T-13R08	700	90	5V 3A	6.3V 3.3A	3 1/2 3 3/4	3.53
T-13R09	750	180	5V 3A	6.3V 3.3A	3 1/2 3 3/4	4.41
T-13R00	550	70	5V 3A	5V 5A	2 1/2 3 3/4	3.18
T-13R01	650	40	5V 3A	2.5V 4A	2 1/2 2 1/2 3	2.47
T-13R02	700	50	5V 3A	2.5V 7.25A	2 1/2 2 1/2 3	2.65
T-13R03	700	70	5V 3A	2.5V 9A	2 1/2 3 3/4	3.00
T-13R04	700	100	5V 3A	2.5V 12.5A	3 1/2 3 3/4	3.53
T-13R05	700	70	5V 3A	2.5V 9A	3 1/2 3 3/4	3.53
T-13R06	700	120	5V 3A	2.5V 12.5A	3 1/2 3 3/4	4.06
T-13R07	800	110	5V 3A	2.5V 15A	3 1/2 3 3/4	4.24

Replacement Power Transformers

STYLE 2H—Half shell flush mounting, lug identification on label.

Cat. and Type No.	AC. V. D.C.		Rect. Fil.	Fil. C.T.	Dimensions W. D. H.	Net Price
	AC. V.	D.C. M.A.				
T-60R49	500	30	5V 2A	2.5V 3.5A	3 2 1/2 2 1/2	\$2.12
T-70R20	600	50	5V 2A	6.3V 2A	3 2 1/2 3	2.29
T-75R47	610	125	5V 2A	6.3V 2A	3 1/2 3 1/2 3 1/2	3.35

CASE STYLE 2G—Fully shielded upright mounting with leads brought out through base. Knock out holes provide optional above panel connection.

Cat. and Type No.	AC. V. D.C.		Rect. Fil.	Fil. C.T.	Dimensions W. D. H.	Net Price
	AC. V.	D.C. M.A.				
T-56R01	650	70	5V 2A	2.5V 3A	1.5V 1A*	\$4.06
(Primary—110 volts 50-60 cycles) 5V 5A 1.5V 4A*						
T-56R03	700	105	5V 3A	2.5V 3A	1.5V 5A*	4.76
2.5V 1.75A 1.5V 1A*						

T-56R05	700	110	5V 3A	2.5V 9A	2.5V 3A	4.76
---------	-----	-----	-------	---------	---------	------

T-37R70	700	80	5V 2A	3V 10A	5V 2.5A	5.29
---------	-----	----	-------	--------	---------	------

For Barton Models 235, 589, 593, 600 Series, 737, 931.

T-70R78	680	55	5V 2A	4.3V 1.5A	3 3/4 3 1/2 4 1/2	3.00
T-17R34	600	125	5V 2A	6.3V 4.8A	3 3/4 3 1/2 4 1/2	3.70
T-17R35	580	50	5V 3A	6.3V 2A	2 1/2 3 3/4	2.47
T-17R36	700	70	5V 3A	6.3V 2.5A	2 1/2 3 3/4	2.81
T-17R37	700	90	5V 3A	6.3V 3.5A	3 3/4 3 3/4	3.35
T-17R38	700	120	5V 4A	6.3V 4.7A	3 3/4 3 3/4	3.70
T-70R61	770	70	5V 2A	6.3V 2.5A	3 1/2 3 1/2 4 1/2	3.35
T-70R62	700	145	5V 3A	6.3V 4.5A	3 1/2 3 1/2 4 1/2	4.41

* Not Center Tapped.

Six Volt Vibrator Transformers

These transformers, while primarily designed for replacement using original mounting brackets, are equipped with mounting feet for use in experimental or original equipment.

Experimental or fraction equipment.						
Cat. and	Secondary		Mtg.	Dimensions		Net
Type No.	D.C. Volts	to Filter M.A.	Fig.	W. D. H.		Price
T-14R33	225	40	3C	2 1/2	2 1/2	\$2.12
T-14R34	250	50	3C	2 1/2	2 1/2	2.47
T-14R35	260	60	3C	2 1/2	2 1/2	2.65
T-14R36	285	75	3C	2 1/2	2 1/2	3.35
T-14R37	350	75	3C	2 1/2	3 1/2	3.53
T-14R38	320	100	2G	3 1/2	3 1/2	4.06
T-14R39	150	40	2B	2	2 1/2	1.94
115V AC or 6V DC VIBRATOR TRANSFORMERS						
T-14R40	350	135	2G	3 1/2	4 1/2	\$5.29
FIL. 6.3 C.T. 4.75 Amp.						

Speaker-Field Supply Transformers

Cat. and Type No.	D.C. Volts		Rect. Fil.	Fil. C.T.	Mtg. Fig.	Dimensions W. D. H.	Net Price
	Volts	D.C. M.A.					
T-67R97	115V	50 to 250	5V 3A	115V	2G	3 1/2 3 1/2 3 1/2	\$3.00
T-92R53	300V	200	5V 3A	115	2G	3 1/2 3 1/2 3 1/2	4.06



2-B



2-C



2-D



2-E



2-F



2-G



2-H



2-I

Input and Smoothing Chokes

Companion units to the C. H. T. Multi-Volt plate transformers, these chokes are accurately rated and the inductance shown is obtained with full rated D. C. applied. Many commercial choke ratings are obtained by tests not comparable to operating values. Thorndarson test methods give the ACTUAL inductance as obtained in filter circuits.

C.H.T. Input Chokes MTG. Fig. 3U

Cat. and Type No.	Ind. Hy.	Cur. M.A.	Volts Ins.	D.C. Res.	Dimensions W. D. H.	Net Price
T-15C36	5-25	200-20	4,000	105	4 1/2 x 4 1/2 x 5 1/2	\$6.35
T-15C37	5-25	300-30	4,000	78	5 1/2 x 4 1/2 x 6 1/2	8.82
T-15C38	5-25	400-30	4,000	95	5 1/2 x 5 1/2 x 6 1/2	10.58
T-15C39	5-25	500-30	10,000	86	7 1/2 x 6 1/2 x 8	15.88
T-15C41	5-25	600-50	10,000	46	7 1/2 x 6 1/2 x 8	19.40

C.H.T. Smoothing Chokes MTG. Fig. 3U

Cat. and Type No.	Ind. Hy.	Cur. M.A.	Volts Ins.	D.C. Res.	Dimensions W. D. H.	Net Price
T-15C45	12	200	4,000	105	4 1/2 x 4 1/2 x 5 1/2	\$6.35
T-15C46	12	300	4,000	78	5 1/2 x 4 1/2 x 6 1/2	8.82
T-15C47	12	400	4,000	95	5 1/2 x 5 1/2 x 6 1/2	10.58
T-15C48	12	500	10,000	86	7 1/2 x 6 1/2 x 8	15.88
T-15C50	12	600	10,000	46	7 1/2 x 6 1/2 x 8	19.40

C.H.T. Amplifier Chokes MTG. 3U

These types have two windings each. The first line of description applies when the windings are connected in parallel, the second for series connection. Insulated for 1,600 volts.

Cat. and Type No.	Ind. Hy.	Cur. M.A.	D.C. Res.	Dimensions			Net Price
T-15C52	30 Parallel	35	750	3	3	3 $\frac{1}{2}$	\$3.88
	120 Series	17	3,000				
T-15C53	12 Parallel	100	272	3	3	3 $\frac{1}{2}$	4.06
	50 Series	50	1,000				
T-15C54	8 Parallel	150	184	3	3 $\frac{1}{2}$	4 $\frac{1}{2}$	4.41
	32 Series	75	735				
T-15C55	2 Parallel	500	32 $\frac{1}{2}$	4 $\frac{1}{2}$	3 $\frac{1}{2}$	4 $\frac{1}{2}$	5.29
	8 Series	250	130				
T-15C56	2 Parallel	100	27	4 $\frac{1}{2}$	4 $\frac{1}{2}$	5 $\frac{1}{2}$	7.06
	8 Series	50	107				

C. H. T. Splatter Chokes

Tapped chokes for use between any Class B modulator and any Class C stage to eliminate objectionable side band splatter due to excessive audio distortion. Supplied with complete instructions for use.

Cat. and Type No.	Hourly	Cur. M.A.	D.C. Res.	Volts Ins.	Mtg. Fig.	Dimensions W. D. H.			Net Price
T-15C30	.025-.8	150	54	3,000	3U	3"	2 1/2"	3 1/2"	\$3.53
T-15C31	.025-.8	300	20	5,000	3U	3"	3 1/2"	4 1/2"	4.24
T-15C32	.025-.8	500	14	7,500	3U	4 1/2"	3 1/2"	4 1/2"	5.64

C. H. T. Speech Filter

Hi-pass filter with cut-off below 200 c.p.s.; provides definite increase in effective side band power with corresponding reduction of hum pick-up. May also be used to couple single plate to either single or push-pull grids.

Cat. and Type No.	Ind. Hy.	Cur. M.A.	D.C. Res.	Dimensions W. D. H.	Net Price
T-15C34	3U	3"	2 1/2"	4"	\$6.35

Television Filter Reactor MTG. 2F

Cat. and Type No.	Ind. Hy.	Cur. M.A.	D.C. Res.	Dimensions W. D. H.	Net Price
T-17C40	1,500	3	12,000	2 1/2 x 3 x 3 1/2	\$3.88

10,000 volts insulation

"19" Series Transmitter Input and Filter Chokes

Matched input and smoothing chokes for amateur, amplifier or experimental applications. Inductance values are measured under full load conditions and adequate insulation is provided for recommended service.

Input or Smoothing Chokes

Cat. and Type No.	D.C. Ind. Hy.	D.C. Res.	Mtg. Fig.	Dimensions			Net Price
T-19C39*	150	5-20	215	2F	3	3	\$2.29
T-19C35*	200	5-20	120	2D	3	4	2.81
T-19C36**	300	5-20	105	2D	4	4	4.94
T-19C37**	400	5-20	90	2J	5	6	8.82
T-19C38**	500	5-20	75	2J	6	7	10.58

Smoothing Chokes

T-19C46*	150	12	215	2F	3	3	\$2.29
T-19C42*	200	12	130	2D	3	4	2.81
T-19C43**	300	12	105	2D	4	4	4.94
T-19C44**	400	12	90	2J	5	6	8.82
T-19C45**	500	12	75	2J	6	7	10.58

* 3,000 volts insulation

** 5,000 volts insulation

Replacement Filter Chokes

Inductance and current ratings suitable for any receiver. Black enamel wrap mounting. Inductance ratings given for inductance at actual operating conditions. The AC-DC chokes are designed for use in circuits where the DC resistance of the winding is the important factor. Insulated for 1,600 volts.

Cat. and Type No.	Ind. Hy.	Cur. M.A.	D.C. Res.	Mtg. Fig.	Dimensions W. D. H.	Net Price
T-13C26	8	40	530	3H	1 1/2 x 1 1/2 x 1 1/2	\$.65
T-13C27	10	40	475	3H	2 x 1 1/2 x 1 1/2	.76
T-13C28	10	65	460	3H	2 1/2 x 2 x 2	.85
T-43C92	10	75	260	2C	1 1/2 x 2 1/2 x 2	1.18
T-47C07	12	75	410	3H	2 x 2 1/2 x 2 1/2	1.18
T-44C02	12	80	405	3H	1 1/2 x 2 1/2 x 2	1.06
T-57C51	6	80	138	2H	2 x 2 x 2	1.06
T-13C29	9	85	250	3H	2 1/2 x 2 x 2	1.12
T-68C07	15	85	375	2H	2 x 2 1/2 x 3	1.41
T-57C53	10	110	200	2H	2 x 2 1/2 x 3	1.41
T-75C49	8	120	200	3H	2 x 2 1/2 x 2	1.06
T-53C19	8	120	290	2H	2 x 2 x 2 1/2	1.06
T-13C30	8	150	200	2H	2 1/2 x 2 x 2 1/2	1.41

Chokes for A.C.-D.C. Sets

Cat. and Type No.	Ind. Hy.	Cur. M.A.	D.C. Res.	Mtg. Fig.	Dimensions W. D. H.	Net Price
T-14C61	7	55	200	3H	2 x 1 1/2 x 1 1/2	\$.71
T-14C62	8	55	250	3H	2 x 1 1/2 x 1 1/2	.71
T-14C63	8	55	300	3H	2 x 1 1/2 x 1 1/2	.71
T-14C64	10	55	350	3H	2 x 1 1/2 x 1 1/2	.71

General Purpose Filter Chokes

For use in amplifiers, transmitters, etc. These chokes are rated in actual inductance as measured under full rated load. Insulated for 1,600 volts.

Cat. and Type No.	Ind. Hy.	Cur. M.A.	D.C. Res.	Mtg. Fig.	Dimensions W. D. H.	Net Price
T-57C52	5	80	138	2F	2 x 2 x 2 1/2	\$1.24
T-16C07	15	85	375	2F	3 1/2 x 2 x 2	1.60
T-57C54	10	110	200	2F	2 1/2 x 2 x 3	1.60
T-49C91	4	120	160	2F	2 x 2 x 2 1/2	1.24
T-17C06-B	12	150	231	2F	3 1/2 x 3 x 3	1.94
T-74C29	15	150	200	2G	3 1/2 x 3 1/2 x 4 1/2	2.81
T-67C49	5	200	80	2F	3 x 2 1/2 x 3 1/2	1.94
T-75C51	13	250	121	2G	3 1/2 x 3 1/2 x 5	3.53

Audio Reactors

* For use in circuits where the voltage drop caused by a resistor load is objectionable, also for isolating plate current from transformer primaries. CTypes T-81C15 and T-93C20 are for use in tuned circuits to accentuate a predetermined band of frequencies.

Cat. and Type No.	Application	Type Tubes	Ind. Hy.	Max. M.A.	D.C. Res.	Mtg. Fig.	Net Price
T-37C36	Plate Impedance	50-30-76-6C5	300	10	6,470	2F	\$1.41
T-67C46	Plate Impedance	55-85, etc.				2D	1.24
T-52C98	Plate Impedance for 8G.	2-57-56-76	700	8	6,150	2F	1.41
T-29C27	Detector or grid impedance	6C5-6F5-6J7				2D	1.24
T-68C08	Plate Impedance or Filter	45-46-10, etc.	22	35	405	2F	1.24
T-18C92	Plate Impedance or Filter	45-46-10, etc.	22	35	405	2D	1.06
T-74A31	Center tapped impedance		2,220	8	12,210	2F	2.47
T-81C15*	Tuned Audio Circuits		.75	100	30	2D	1.41
T-93C20*	Tuned Audio Circuits		250	8.0	6,400	2H	1.94
T-74C30	Tuned Audio Circuits or Filter		42	15	2,100	2H	1.06
T-14C70	Tone Control, hum bucking type		22	5	220	3Y	1.76
R-1068	Dual Tone Control Potentiometer		-	-	-	-	1.76



MODULATION AND OUTPUT TRANSFORMERS

THORDARSON
MFG. CO.



"19" Series Universal Modulation Transformers

Tapped coils enable the experimenter to match any modulator tubes to any class C, R, F, load. Complete table of driver and modulator combinations supplied.

Cat. and Type No.	Cap. Watts	Pr. M.A.	Sec. M.A.	Mtg. Series	Par. Pkg.	Dimensions W. D. H.	Net Price
T-19M13	15	50	50	100	2N	2 1/2 2 1/2 3	\$3.35
T-19M14	30	75	75	150	2N	3 1/2 3 1/2 4	5.80
T-19M15	60	125	125	250	2N	3 1/2 4 4	8.47
T-19M16	100	175	175	350	2N	4 1/2 5 6	12.60
T-19M17	250	225	225	450	2Q	5 1/2 8 7 1/2	19.40

Multi-Match Modulation Transformers

Supplied complete with table of driver and modulator combinations for all transmitting tubes.

Cat. and Type No.	Cap. Watts	Pr. M.A.	Sec. M.A.	Mtg. Series	Par. Pkg.	Dimensions W. D. H.	Net Price
T-11M74	40	100	50	160	4U	4 1/2 4 1/2 4	\$7.76
T-11M75	75	145	145	290	4U	4 1/2 4 1/2 4	9.00
T-11M76	125	210	190	320	4U	5 1/2 5 1/2 6	15.88
T-11M77	300	250	250	500	4U	6 1/2 7 1/2 7 1/2	21.17
T-11M78	500	320	320	640	4U	5 1/2 13 6 1/2	42.34

Modulation Transformers (For Specific Applications)

Cat. and Type No.	Tube Type	Class	Ohms Impedance	Sec. M.A.	Max. D.C. Pwr. W.	Max. Audio W.	Net Price
T-67M69*	1-10	B	10,000	2,700	50	10	\$1.94
T-17M59*	1-6A6, 6N7, or 53	B	10,000	3,000	100	10	1.94
T-64M26**	2-40 or 50	B	5,800	5,000	100	40	4.24
T-19M21**	2-250	AB	10,000	3,750	200	75	4.94
T-19M22**	2-800	B	8,400	5,000	200	100	7.06
T-84M70**	2-6L6	AB	3,800	2,500	250	75	7.06
T-14M49***	2-35T	B	5,000	200	150	175	12.70
T-82M25***	2-805, HD-203A, 522	B	9,000	4,000	500	650	29.99

* Mtg. Fig. 2F ** Mtg. Fig. 2D *** Mtg. Fig. 2Q

Conventional Cathode Modulation Transformers

Audio power, 10% of Class C input; R.F. efficiency 44%; mtg. fig. 4U.

Cat. and Type No.	Primary Ohms	Sec. Ohms	M.A. Watts	W. D. H.	Net Price
T-11M69	5000-7000-10000	80 to 2000	200	15 4 1/2 3 1/2	\$6.35
T-11M70	3000-6000-10000	80 to 2000	400	40 4 1/2 4 1/2 5 1/2	8.82
T-11M71	6000-8000-10000	80 to 2000	600	100 4 1/2 4 1/2 5 1/2	10.58

Modulation Transformers for Matching Lines to R. F. Loads

Cat. and Type No.	Pr. Ohms	Sec. Ohms	Load	Max. M.A. Watts	Net Price
T-7352M*	500	5,000-6,000-7,000-8,000	215	80	\$15.88
T-8322M**	500-200	9,000-10,000	150	30	8.12

Universal Replacement Tube to Voice Coil

For push-pull or single output tubes except T-13S42 which for single only.

Cat. and Type No.	Pr. Ohms Impedance	Sec. Ohms	Max. Watta	Mtg. Fig.	W.	D.	H.	Net Price
T-13S38	4,000/7,000	Adjustable	8	3E	2	1 1/2	1 1/2	\$1.06
T-57S01*	8,000/10,000	.1 to 29		2E	2	2	2 1/2	1.41
T-57S02**	18,000 Cl.			2B	2	2	3 1/2	1.41
T-17S57				2C	2 1/2	1 1/2	2 1/2	1.60
T-13S42	1,500/2,000	Adjustable	10	3E	2	1 1/2	1 1/2	1.06
	4,000/5,000	1 to 29						
	7,000							
T-13S41	3,000/5,000	Adjustable	20	2E	2 1/2	2	3	1.94
	8,000/7,000	.1 to 29						
	8,000/10,000							

Multiple-Tap Output Transformers

C. H. T. SERIES Mtg. Fig. 4U

Cat. and Type No.	P. P. Tubes	Class	Ohms Impedance	Sec. Impedance	Max. Watts	Dimensions W. D. H.	Net Price
T-15S90	2-6V6	AB1	8,000	2/3/4/6/-	15	4 1/2 4 1/2 4 1/2	\$7.06
	2-6L6	AB1	5,000	8/10/125/-			
	2-2A3*	AB	5,000	250/500			
T-15S91	2-6L6**	AB	4,300	Same	25	4 1/2 4 1/2 4 1/2	8.82
	2-2A3***	AB	3,000	as above			
T-15S92	2-6L6	AB1	6,600	Same	40	4 1/2 4 1/2 5 1/2	10.58
	2-6L6	AB2	5,500	as above			
T-15S93	4-6L6 Par	AB1	3,300	Same	60	4 1/2 4 1/2 5 1/2	12.35
	2-6L6	AB2	3,800	as above			
T-15S94	4-6L6 Par	AB2	1,900	500/250/166-125/100/84	120	5 1/2 5 1/2 6 1/2	14.11

* Self Bias

** 300V Plate and screen

*** Fixed bias

Multiple-Tap Line to Voice Coil Transformers Fig. 4U

Cat. and Type No.	Application	Pr. Imped.	Sec. Imped.	Max. Watts	Dimensions W. D. H.	Net Price
T-15S96	Line to Voice Coil	1,000/500	50/24/16/8/6/4/3/2	25	4 1/2 4 1/2 5 1/2	\$8.82
T-15S97	Line to Voice Coil	1,000/500	50/24/16/8/6/4/3/2	60	4 1/2 4 1/2 5 1/2	11.29

Heavy Duty Output Transformers to Line or Speaker (High Level)

Cat. and Type No.	Tube Type	Class	Ohms Impedance	Sec. Impedance	Max. Watts	Net Price
T-17S10*	1-6L6	A	2,500	2-4-8-500	5	\$2.12
T-17S11*	2-6V6 P-P	AB1	8,000*	4-8-15-250-500	15	3.18
T-17S12*	2-6L6 P-P	AB1	4,300*	4-8-15-250-500	25	3.18
				(with 300V on plate and screen)		
T-17S13*	2-6L6 P-P	AB1	6,600*	4-8-15-250-500	34	4.24
T-17S14*	2-6L6 P-P	AB2	5,500*	4-8-15-250-500	40	4.24
T-17S15*	4-6L6 P-P Par	AB1	3,300*	4-8-15-250-500	60	4.59
T-17S16**	4-6L6 P-P Par	AB2	1,900*	84-100-125-166-250-500	120	10.58
T-68S06	1-6F6, 42, 2A5	A	7,000	10 or 2,000	5	1.76
	1-47, 31, 33	A	Small 2F Mtr. W. 2", D. 1 1/2", H. 2 1/2"			
T-67S51†	2-6F6, 42, 2A5, 47PP	A	14,000	4-8-15-500	20	2.47
	1-79 P-P	B				
T-67S48†	2-45, 71, 43, 25A6 PP	A	8,000	4-8-15-500	25	2.47
	1-6N7, 6A6, 53 PP	B				
T-67S52†	2-46, 59 P-P	B	5,800	4-8-15-500	30	2.81
	2-6F6, 42, 2A5 PP	AB2				
	2-6N7, 6A6, 53 PP	Par.	B			
T-58S72†	2-2A3, 6B4G PP	AB	3,000	4-8-15-500	30	2.67
	2-48, 25L0 PP	A				
T-67S54†	2-6L6 P-P	A	5,000	4-8-15-500	30	2.81
	2-2A3, 6B4G, 45PP	AB				
T-67S92†	2-19 P-P Par	B				
	4-2A3, 6B4G, 45 P-P Par	AB	1,500	4-8-15-500	40	2.81
	4-48, 25L0 PP Par.	A				
T-65S94†	2-50 P-P	A	8,000	4-8-15-500	40	2.81
	2-6F6, 42, 2A5 PP	AB2				
T-75S75†	1-79 P-P	B				
	2-6F6, 42 or 2A5	AB2	10,000	4-8-15-500	40	2.81
	1-6N7, 6A6, 53 PP	B				
	2-6N6G, 6B5, 2B6, 6AC5 P-P	A				
T-84S58†	2-6L6 P-P	AB2	3,800	4-8-15-500	60	4.24
T-89S75†	2-6L6 P-P	AB1	6,600	4-8-15-500	40	2.81
T-89S74†	1-6L6	A	4,000	4-8-15-500	15	2.65
T-89S68†	4-6L6 P-P Par.	AB1	3,300	50-125-200-250-333-500	75	4.59
T-83S87†	4-50 P-P Par.	AB2	3,000	4-8-15-500	90	6.35

* 10% feed back winding. † Small Fig. 2F. W. 2 1/2", D. 2 1/2", H. 3".

‡ Large Fig. 2F. W. 2 1/2", D. 3", H. 3 1/2".

§ Small Fig. 2G. W. 3 1/2", D. 3 1/2", H. 4 1/2".

** Large Fig. 2G. W. 3 1/2", D. 5", H. 4 1/2".

Tube to Line or Mixer (Low Level)

Cat. and Type No.	Mtg. Fig.	Pr. Imped.	Sec. Imped.	Max. Watts	Net Price
T-14A90	8gt. or P.P. Plates	20,000 Cl.	500 Cl. or 125	8*	\$1.76
T-14A91	8gt. or P.P. Plates	20,000 Cl.	200 Cl. or 50	8*	1.76
T-55A15	Plate to line or mixer	15,000/10,000	200 Cl. or 50	8	1.94

* Per Side.



AUDIO AND DRIVER TRANSFORMERS

THORDARSON
EST. 1924



2-B



3-B



2-C



4-D



2-F



3-H



3-U



4-U

"19" Series Universal Driver Transformers Fig. 4-D

Through the use of five ratios on each transformer, this series will handle all driver transformer requirements usually encountered in amateur transmitter circuits.

Cat. and Type No.	Cap. Watts	Max. Pri. M.A. Per Side	Ratio Pri. to 1 Sec.	Dimensions W. D. H.	Net Price
T-19D91	15	60	1:1, 1:2, 1:1.4, 1:1.6, 1:1.8, 1:2	2 1/2 3 3/4	\$4.41
T-19D92	15	60	0:1, 2:1, 3:1, 4:1, 5:1, 6:1	2 1/2 3 3/4	4.41
T-19D93	15	60	3:1, 3.2:1, 3.4:1, 3.6:1, 3.8:1	2 1/2 3 3/4	4.41
T-19D94	15	60	4:1, 4.5:1, 5:1, 5.5:1, 6:1	2 1/2 3 3/4	4.41
T-19D95	15	Primary for 500 ohm line	1:3, 1.5:1, 2:1, 2.5:1, 3:1, 4:1, 5:1, 6:1, 7:1, 8:1, 9:1, 10:1, 11:1, 12:1, 13:1, 14:1, 15:1, 16:1, 17:1, 18:1, 19:1, 20:1	2 1/2 3 3/4	4.41

Plate to Grid Interstage Transformers

A variety of units designed for the same general application but varying in size, frequency response and style of mounting. *Type T-75A74 will couple a super-regenerative detector to an audio stage; any tendency toward outside noise is reduced by the static shield between windings.

Cat. and Type No.	Ratio	Imped. in Ohms Pri. Sec.	Pri. M.A.	Mtg. Fig.	Dimensions W. D. H.	Net Price
T-13A34	3:1	10,000 90,000	8	3B	2 1/2 1 1/2 1 1/2	\$.94
T-29A99	3.26:1	10,000 106,300	8	2B	2 2 2 2 1/2	1.41
T-57A36	3.26:1	10,000 106,300	8	2F	2 2 2 2 1/2	1.60
T-47A25	3:1	10,000 90,000	8	2C	2 1 1 2 1/2	1.60
T-57A38	3:1	10,000 90,000	8	2F	2 2 2 2 1/2	2.12
T-75A74*	2:1	10,000 40,000	8	2F	2 2 2 2 1/2	1.94

Push-Pull Input Transformers

*T-74A31, ordinarily a push-pull input transformer, may also be used as a tapped push-pull grid impedance with ratios of 1:1, 1:2 or 1:4 by connecting the primary and secondary in series, according to instructions furnished.

Cat. and Type No.	Ratio	Imped. in Ohms Pri. Sec.	Pri. M.A.	Mtg. Fig.	Dimensions W. D. H.	Net Price
T-14A92	3:1	10,000 90,000	8	3B	1 1/2 1 1/2 1 1/2	\$.94
T-13A35	3:1	10,000 90,000	8	3B	1 1/2 2 1 1/2	1.06
T-33A91	3.26:1	10,000 106,300	8	2B	2 2 2 2 1/2	1.41
T-86A03	3.26:1	10,000 106,300	8	3B	2 2 2 2 1/2	1.60
T-14A29	3.26:1	10,000 106,300	8	2C	2 2 2 1 1/2 2 1/2	1.76
T-57A39	3.26:1	10,000 106,300	8	2F	2 2 2 2 1/2 2 1/2	1.76
T-57A40	3:1	10,000 90,000	8	2B	2 2 2 2 1/2	2.29
T-57A41	3:1	10,000 90,000	8	2F	2 2 2 2 1/2 2 1/2	2.47
T-74A31*	1:1	10,000 10,000	8	2F	2 2 2 2 1/2 2 1/2	2.47
T-57A42	3:1	10,000 90,000	8	2B	2 2 2 2 1/2 2 1/2	2.47

For coupling screen grid or power detector to P.P. output—Clarion AC 60 etc.

Push-Pull Interstage Transformers

For connecting push-pull plates to push-pull grids, these types offer a choice of size and ratio.

Cat. and Type No.	Ratio	Imped. in Ohms Pri. Sec.	Pri. M.A.	Mtg. Fig.	Dimensions W. D. H.	Net Price
T-13A36	1:1	20,000 20,000	8*	3B	2 2 1 1 1/2	\$1.41
T-58A70	1.5:1	20,000 45,000	10*	2F	2 2 2 2 1/2 3	2.65

P.P. or P. P. par power tube grids. Split sec. *Per side.

Universal Audio Transformer

To couple single plate to single grid; single plate to push-pull grids; push-pull plates to push-pull grids. Has split secondary.

Cat. and Type No.	Ratio	Imped. in Ohms Pri. Sec.	Pri. M.A.	Mtg. Fig.	Dimensions W. D. H.	Net Price
T-17A92	3:1	Universal	10	2F	2 2 2 2 1/2 2 1/2	\$1.76

If you do not find a listing of the Thordarson transformer you need, write us for latest information and prices. We stock a wide variety of standard and special transformers in broadcast, high-fidelity, amateur, and service types and can supply whatever audio and power transformer you need... at money-saving prices.

Replacement Driver Transformers

Cat. and Type No.	Driver Tubes	Output Tubes	Class	Ratio Pri. to 1 Sec.	Imped. in Ohms Pri. Sec.	Dim. W. D. H.	Net Price
T-78D46*	1-30	1-126G	B	2.4:1	20,000 3,500	1 1/2 1 1/2 2	\$8.88
T-17D01†	1-6F6 Trl.	2-6F6	AB	1.7:1	10,000 3,300	2 2 2 1.41	
	1-42 Trl.	2-6L6	AB	1.5:1	4,500		
	1-2A5 Trl.		AB	1.3:1	5,800		
T-14D93†	1-76 Trl.	1-6A6, 6N7	B	4:1	20,000 1,250	1 1/2 1 1/2 1.24	

* Mtg. Fig. 2B. † Mtg. Fig. 3B.

Driver Transformers

FOR SPECIFIC APPLICATIONS MTG. FIG. 2F

Cat. and Type No.	Driver Tubes	Output Tubes	Class	Ratio Pri. to 1 Sec.	Dimensions W. D. H.	Net Price
T-19D96	1-6A6, 1-6N7, 1-6A6, 6N7		B	5:1, 4:1	2 2 2 2 1/2	\$1.94
	1-6C5	2-49, 2-6V6		3:1, 2.5:1		
T-54D63	1-30, 1-49, 1-6C5	1-126G, 10, 2-49, 2-6V6	B, AB2	2.4:1	2 1 1/2 2 1/2	1.60
T-67D50	1-89 Trl.	1-79	B	2:1	2 2 2 2 1/2	1.94
T-67D47	1-6N7, 6A6	1-6N7, 6A6, 33	B	5.25:1	2 2 2 2 1/2	1.76
T-81D52	1-6C5, 76	2-6F6 Trl.	AB	1.82:1	2 1/2 3 3	2.29
	1-56	2-42, 2A5 Trl.	AB	1.67:1		
T-84D59*	2-6C5, 6N7	2-6L6, 6V6	B2	5:1	2 1/2 3 3	2.29
	2-6A6, 53	2-6N7, 6A6	B			
T-74D32	2-6C5, 76, 56	2-6F6, 42	AB2	3:1	2 1/2 2 1/2 3	2.29
	4-2A3, 6B4G	AB				
T-81D42	1-6F6 Trl.	2-6F6 Trl.	AB2	1.7:1	2 1/2 2 1/2 3	2.29
	1-42 Trl.	2-42 or 2-2A5 Trl.	AB2	1.5:1		
			AB2	1.3:1		
T-17D03*	1-6F6 Trl.	2-6L6	AB2	1.4:1	2 1/2 3 3 1/2	3.18
T-17D04*	2-6F6	2-6L6	AB2	2.6:1	2 1/2 3 3 1/2	3.18
T-67D78	1-46, 59, 6F6, 42, 2A5 Trl.	2-46, 59	B	2.2:1	2 1/2 2 1/2 3	2.12
		2-6L6	AB2			

* Split sec. required for inverse feedback and separate power tube bias.

Driver Transformers

FOR SPECIFIC APPLICATIONS MTG. FIG. 3U

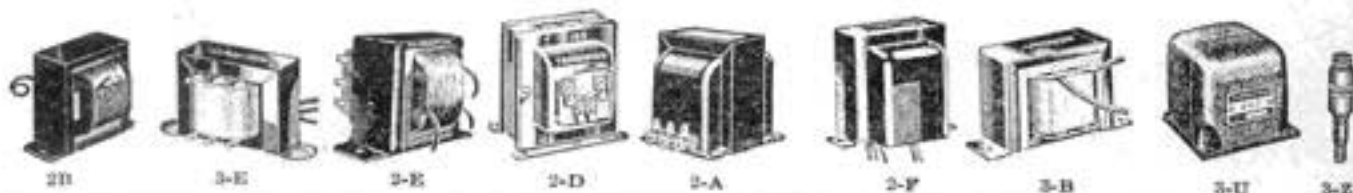
Cat. and Type No.	Driver Tubes	Output Tubes	Class	Ratio Pri. to 1 Sec.	Dimensions W. D. H.	Net Price
T-15D85*	86L, 6F6, 42	PP 6L6-40-W	AB2	1.4:1, 1.3:1	3 3 3 3 1/2	\$5.64
	2A5 Triode	PP 6L6-60-W		1.2:1		
T-15D86*	PP 6F6, 42	PP Par 6L6	AB2	2.6:1	3 3 3 3 1/2	6.35
	2A5 Triode	120 W.				

* With humbucking coil construction.

Interstage Coupling Transformers (Class A) MTG. 3U

Cat. and Type No.	Pri. Ohms	Sec. Ohms	Max. D.C.	Max. Sig. Level D.B.	Dimensions W. D. H.	Net Price
T-15A73	10,000/2,500 Single Plate	40,000/10,000 Single Grid	10*	+15	3 3 3 3 1/2	\$5.29
T-15A74	10,000/2,500 Single Plate	40,000/10,000 P.P. Grids	10*	+15	3 3 3 3 1/2	4.94
T-15A75	20,000/5,000 P.P. Plates	45,000/11,250 P.P. Grids	10*	+20	3 3 3 3 1/2	5.12

* Per side.



Universal Tube to Line Output Transformers

Type No.	Application	Ohms Impedance	Sec.	Max. Mtg. Watts	Fig.	W.	D.	H.	Net Price
T-61S25	Univ. Single Tube	2,500/4,000	500	10	2E	2 1/2	2	3	\$2.29
T-61S26	Univ. P.P. Tubes	5,000/6,000/7,000 8,000/10,000 12,000/14,000 C.T.	500	10	2E	2 1/2	2	3	2.47

Universal Line to Speaker Transformers

T-53S81	Line to voice coil	500/250	4-8-15	35	2D	2 1/2	3	3 1/2	\$3.35
T-60S48	Line to voice coil	500/1,000	Pri. as 500 ohm-.06 to 8.; pri. as 1,000 ohm .12 to .16, etc.	10	2E	2 1/2	2	3	2.12
T-14S80	Line to voice coil	500	2-4-6-8	12	2E	2	2	2 1/2	1.41
T-17S17	Line to voice coil	500	4/8/16/25/50	75	2E	3 1/4	4	4	4.59
T-76S74	Line to multiple speakers (autotransformer)	500	250/166/125/100/84	30	2E	2 1/2	2	3	2.65

Transceiver Transformers

Type No.	Application	Ohms Impedance	D.C. Power Mtg.	Fig.	W.	D.	H.	Net Price
T-72A59	Plate and single button Mike to grid	3,000 100,000	10 5	2B	1 1/2	1 1/2	2	\$1.18
T-72S58	Penr. Plate to low or high imp. phones or etc.	10,000 2,000 50	30 5	2B	1 1/2	1 1/2	2	1.18

Matching Transformers (Low Level)

A complete line of low level input, microphone, line and mixer transformers to fit all applications. Special winding methods result in low leakage reactance so essential to good frequency response.

Low Impedance Source (Microphone, Line Mixer) to Grid

Cat. and Type No.	Application	Impedance in Ohms	Sec.	Overall Ratio	Mtg. Fig.	W.	D.	H.	Net Price
T-65A73	DB mike to grid	200 Ct.	100,000	1:22.2	2F	2 1/2	2 1/2	3	\$2.12
T-30A20	DB mike to grid	200 Ct.	100,000	1:22.2	2A	2 1/2	2 1/2	3	2.12
T-58A37	DB mike to grid	200 Ct.	100,000	1:22.2	2F	2	2	2 1/2	1.60
T-83A78	Single button mike to single or P.P. grids	100	400,000	1:64	2F	2	1 1/2	2 1/2	1.60
T-86A02	Single button mike to single grid	100	400,000	1:64	2B	2	1 1/2	2 1/2	1.60
T-23A57	Single button mike to single grid	100	400,000	1:64	2A	2	1 1/2	2 1/2	1.60
T-55A16	Dyn. mike, line or mixer to single or P.P. grids	200/50	100,000 Ct.	1:22.2	2F	2	2 1/2	2 1/2	1.94
T-61A94	Line to single or P.P. CLA grids	500/125	100,000 Ct.	1:14.1	2F	2 1/2	2 1/2	3	2.29
T-83D21	Line to P.P. grids of 61.6's or 50's Class AB	500	5,100 12,500	1:3.2 1:5	2F	2 1/2	2 1/2	3	2.47

Microphone or Line to Mixer or Line

Cat. and Type No.	Application	Impedance in Ohms	Sec.	Mtg. Fig.	W.	D.	H.	Net Price
T-70A82	DB mike to line	200 Ct. or 50	500 Ct. or 125	2F	2 1/2	2 1/2	3	\$2.47
T-70A83	Crystal mike to line or mixer	100,000	200 Ct. or 50	2F	2 1/2	2 1/2	3	2.47

Audio Coupling Transformers

Ultra modern design, balanced windings, laminated coil construction and moisture-proof compound-filled cases. Frequency response variation + or - 1 db 50 to 8,000 C.P.S.

Low Impedance Source to Grid MTG. Fig. 3U

DIMENSIONS 3" x 3" x 3 1/4"

Type No.	Pri. Ohms	Secondary Ohms	Per side (M.A.)	Max. DC	Max. DC	Max. Sig. Level (db)	Net Price
T-15A66	500-333-250	60,000/15,000	100	2.5	2.5	+10	\$5.64
T-15A67	200-125-50	Single Grid	100	2.5	2.5	+20	5.64
T-15A68	500-333-250	P.P. Grids	100	2.5	2.5	0	5.64
	200-125-50	15-10-5.5-2.5	100	2.5	2.5	0	5.64

Low Impedance Source to Line or Mixer

MTG. Fig. 3U

Type No.	Pri. Ohms	Secondary Ohms	Per side (M.A.)	Max. DC	Max. DC	Max. Sig. Level (db)	Net Price
T-15A69	500-333-250	500-333-250	100	2.5	2.5	+20	\$5.64
T-15A70	200-125-50	200-125-50	100	2.5	2.5	+20	5.64
	500-333-250	15-10-5.5-2.5	100	2.5	2.5	+20	5.64

Tube to Line (Low Level) MTG. Fig. 3U

DIMENSIONS 3" x 3" x 3 1/4"

Type No.	Pri. Ohms	Secondary Ohms	Per side (M.A.)	Max. DC	Max. DC	Max. Sig. Level (db)	Net Price
T-15A71	20,000/5,000	500-333-250	8	8	8	+15	\$5.64
T-15A72	20,000/5,000	200-125-50	10	0	0	+20	5.64
	P.P. Plates	500-333-250	10	0	0	+20	5.64

Amplifier Manual

Contains laboratory designed and tested circuits of amplifiers from 8 to 120 watts output. Complete parts list and mechanical chassis drawings. Data is included for pre-amplifiers, dual tone controls, speaker impedance matching and testing. Cat. No. S11303

Type 340.
Net Price 9c



No. 352—Replacement Encyclopedia and Service Guide. Free

Thorndarson Replacement Transformer Encyclopedia and Service Guide No. 352 recommends proper transformer and choke replacement for receivers listed in Rider's Manuals. This handy, useful time-saver, originated by Thorndarson, is now used by good service engineers the world over. In addition, it contains electrical and physical characteristics of all transformers and chokes listed in the Guide. Also included is a convenient table for choosing the correct output transformer for each application.

Beginner's Guide to Amateur Radio



This 160 page, cloth-cover, text-book gives a comprehensive treatment of amateur radio in all its aspects. Subjects covered include learning the code, receiver theory and construction, crystal oscillator transmitter, two-stage and three-stage transmitter, modulator construction, and general receiver data. Over 100 photos, diagrams, and drawings.

Cat. No. S13370 Net Price 75c

Transmitter Guide

Fifty-two pages of up-to-the-minute data on transmitter design and operation. Portable units, beginners transmitters, and larger rigs up to 1,000 watts are fully described. Circuit diagrams, parts lists, and photographs illustrate each article.

Cat. No. S11304 Type 344E. Net Price 9c

Microphone Cable Transformers MTG. Fig. 3Z

Type No.	Ohms	Impedance	Turns Ratio	Wt. Lbs.	Net Price
C-14A75	30-50	50,000	1:31.6	1	\$9.93
T-14A76	200-250	50,000	1:14.14	1	9.93

Replacement Output Transformers

Cat. and Type No.	Tube Type	Class	Ohms Imped.	Max. Mtg. Watts	Net Price
T-14S81*	1-42, 2A5, 6F6, or P-P45, 71	A	7,000	3 to 6	5 3B \$5.88
T-14S82*	1-251.6	A	1,500	8 to 6	5 3B .88
T-14S83*	1A5-G, 1E7-G	A	25,000	3 to 6	5 3B .88
T-14S84*	1-1C5G, 1Q5G	A	8,000	3 to 6	5 3B .88
T-13S37*	1-616, 42, 2A5, 47	A	7,000	1-2-4	5 3E .88
T-13S39*	1-45, 12A5, 1-31, 43, 71A	A	4,000	1-2-4	5 3E .88
T-13S43*	1-1F4, 1D4, 1F5G	A	16,000	1-2-4	5 3F .94
T-33S99*	2-45, 71, 43, 25A6 P-P	A	8,000	6 to 12	10 2B 1.06
T-13S40*	1-6N7, 6A6, 1C5G, 53 P-P	B	14,000	1-2-4	10 3K 1.06
T-81S01*	2-6F6, 42 P-P	A	14,000	1-2-4	10 3K 1.06
	2-2A5, 47 P-P	A	14,000	1-2-4	10 3K 1.06
	1-19, 13G, 1G6G P-P	B	10,000	2-4-8	8 2B 1.06
	2-30, 49 P-P	B	10,000	2-4-8	8 2B 1.06
	2-31 P-P	A	10,000	2-4-8	8 2B 1.06

DIMENSIONS

* W 1 1/2", D 1 1/2", H 1 1/2" * W 2", D 1 1/2", H 2"



Bantam Series

Compact audio transformers for high quality services. High permeability alloy case, balanced coil construction, high permeability alloy laminations, moisture proof compound fill, one-hole ring mounting flange with terminals arranged to fit within standard tube socket hole, electrostatic shield (except interstage types), relative hum reduction 67 db, maximum operating level +10 db.



Incher Series

Especially small and lightweight, these transformers have uniform frequency response +1 db from 30 to 15,000 c.p.s. (except where otherwise noted). Maximum operating level is 6 milliwatts. Single coil shell type construction, electrostatic shields (except interstage types), minimum hum pickup, moisture proof compound filled case, high permeability alloy laminations, tinned solder lugs.



Major Series

Designed for high level operation, this series is naturally slightly larger than the Bantam and Incher but incorporates every quality feature of the smaller units. Except where otherwise noted, Major units have uniform response—1 db from 30 to 15,000 c.p.s. Cast cases are finished in grey enamel. One hole ring mounting permits rotation of units for maximum hum reduction.



B-T
Case 3 1/2" w.
4 1/2" h.
2 1/2" d.

Type No.	Application	Ohms Impedance		Primary Max./Side Unbal.	D.C.	Net Price
		Primary	Secondary			
T-1A50	Low impedance mixer, pick-up, or multiple line	50/125/200*/250/333/500*	50,000	75	.5	\$10.23
T-1A51	Low impedance mixer, pick-up, or multiple line	2.5/5.5/10*/22*/30/35/60*	50,000	75	.5	10.23
T-1A52	Dynamic microphone	30*/7.5	50,000 overall in two sections	0	0	10.94
T-1A53	Low impedance pick-up, microphone, or line	50/125/200*/250/333/500*	50,000 overall in two sections	75	.5	10.94
T-1A54	Single plate to multiple line; no D.C. in pri.	10,000 to 15,000	50/125/200*/250/333/500*	0	0	9.88
T-1A55	Single plate to multiple line; D.C. in pri.	10,000	50/125/200*/250/333/500*	4	4	10.23
T-1A56	Single triode 6F6 etc., to line; D.C. in pri.	4,000	50/125/200*/250/333/500*	25	25	10.58
T-1A57	Push-pull low level plates to multiple line	10,000 to 15,000 each side	50/125/200*/250/333/500*	8	0	9.88
T-1A59	Single plate to single grid; ratio 1:2	10,000 to 15,000	60,000	0	0	9.88
T-1A60	Single plate to push-pull grids; ratio 1:2.31	10,000 to 15,000	80,000* overall in 2 sections	0	0	9.88

Tru-Fidelity Incher Series						
T-5A1	Mike, line, or pick-up to single grid	50/200*/500*	50,000	25	.5	7.41
T-5A2	Mike, line, or pick-up to P-P grids	50/200*/500*	80,000*	25	.5	7.76
T-5A3	Dynamic microphone to single grid	7.5/30*	50,000	0	0	6.70
T-5A4	Single plate to single grid; ratio 1:2	10,000 to 15,000	60,000	0	0	6.17
T-5A5	Single plate to grid; D.C. in pri.; ratio 1:2	10,000 to 15,000	60,000	2	2	5.64
T-5A7	Single plate to P-P grids; ratio 1:2.5	10,000 to 15,000	95,000*	2	2	7.06
T-5A8	P-P plates to P-P grids; ratio 1:1.5	10,000 to 15,000 each side	67,500*	2	.25	7.41
T-5A9	Single plate to line	10,000 to 15,000	50/200*/500*	0	0	7.41
T-6A0	Single plate to line; D.C. in primary	10,000 to 15,000	50/200*/500*	2	2	7.41
T-6A1	Push-pull plates to line	10,000 to 15,000 each side	50/200*/500*	2	.25	7.41
T-6A3	Matching and mixing	50/200*/500*	50/200*	25	.5	6.70
T-6A4	60:1 mike or line to single grid	200	500,000	10	10	7.06

Tru-Fidelity Major Series								
		Max. DB Case						
T-90A06	Crystal mike or photo cell to line	+10	3T	250,000/62,500	500*/125/200*/50	0	0	12.00
T-90A02	Plate to line (low level)	+15	3T	20,000/5,000 single plate	500*/125/200*/50	8	8	12.00
T-3A32	Plate to line (low level)	+20	C5	20,000/5,000 single or P-P plates	500*/125/200*/50	10	0	12.35
T-90A10	Mixer	+10	3T	500*/125/200*/50	500*/125/200*/50	100	.5	12.00
T-2A66	Line to grid	+10	C5	500*/125/200*/50	75,000/18,750 single grid	100	.5	12.70
T-2A68	Line to grid	+20	C5	500*/125/200*/50	150,000*/37,500 P-P grids ²	100	.5	13.41
T-90A03	Interstage	+15	3T	10,000/2,500 Ratio overall single plate 1:2	40,000/10,000 single grid	0	0	12.00
T-2A36	Interstage	+15	C5	10,000/2,500 ratio overall single plate 1:2	40,000/10,000 P-P grids	0	0	12.35
T-90A05	Interstage	+20	3T	20,000/5,000 ratio overall P-P plates 1:1.5	45,000/11,250 P-P grids	10	0	12.00
T-90S07	High level output to line or u.e.	+33	3T	750/1,250/3,000*/5,000*	50/125/200*/500*	60	5	12.70
T-3S21	High level output to line or u.e.	+32	C7	750/1,250/3,000*/5,000*	1.25/3.75/5*/15*	60	5	12.70
T-3S22 ¹	High level output to line or u.e.	+34	C10	750/1,250/3,000*/5,000*	1.25/3.75/5*/15*/50/125/ 200*/500*	60	5	13.41

Tru-Fidelity "Bantam" Audio Plate Reactors						
Type No.	Application	Inductance No. Rated	D.C. D.C.	M.A.D.C.	Ohms Res. D.C.	Net Price
T-1C62	Parallel feed	475 320/80	2/4	6,000/1,500	\$7.06	
T-1C63	Parallel feed	450 200/50	4/8	5,000/1,250	7.06	

*Balanced to center tap. 160 to 15,000 c.p.s.
†Voice frequencies only, 150-8,000 cycles.
‡+1 db 30 to 15,000 c.p.s.

Tru-Fidelity "Major" Audio Plate Reactors						
Type No.	Connection	Henries	M.A.	D.C. Ohms	Case Style	Net Price
T-90C09	Series	300	8	4,000	3T	\$8.82
	Parallel	75	16	1,000		

†With single tube use parallel feed with resistor or T-90C09.
‡Secondary ohms T-2A65 100,000/25,000.
*Max. +22 db.

Free Thordarson Catalog

Includes characteristics, dimensions, case styles, and other complete information about Thordarson amplifiers, audio transformers, audio reactors, auto transformers, automatic voltage reactors, chokes, driver transformers, exciter lamp transformers, fence control transformers, field supply transformers, isolation transformers, modulation transformers, oscilloscope output transformers, plate supply transformers, power transformers, television transformers, transistor transformers, Tropen Transformers, Tru-Fidelity transformers, vibrator transformers, and voltage changers.

Cat. No. S11964 600-E

Free Replacement Transformer Encyclopedia and Supplement

Complete information regarding correct choke, audio and power transformer replacements. Covers almost 6,000 receivers as listed in Rider's Manuals. Volumes I to IX. Includes data on AC, AC-DC and battery models. This is the only complete listing available and will save valuable time for the serviceman. You cannot afford to be without a copy. Send for your free copy today.

Cat. No. S11963 352

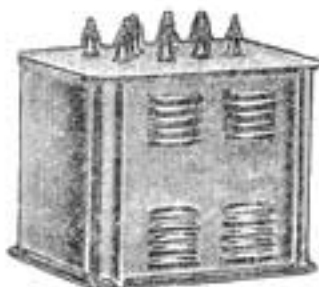
Transformer Manual

Complete Transformer Manual—The Thordarson Transformer Manual is a complete book, containing the Radio Servicing Guide, the Replacement Transformer Encyclopedia, the Transmitter Guide, and the Sound Amplifier Guide, plus Thordarson catalogs and prices. It is bound in an attractive blue and orange cover with looseleaf arrangement, giving the user opportunity to keep the Manual up-to-date by adding the latest Thordarson releases.

Cat. No. S11962 Type 340.
Net Price 29c



FILAMENT - PLATE - TRANSFORMERS SPECIAL SERIES



Figures G6 to G11

G1 to G4

Plate Transformers PRIMARY 115 V.—50/60 CYCLES

Cat. No.	Type No.	High Voltage	D.C. Voltages*	D.C. Current	Mfg. Fig.	Net Price
S8038	S-44	575-925-0-525-075	470/430	500 Ma.	G-9	\$9.11
S8039	S-45	900-750-0-750-900	750/620	200 Ma.	G-8	7.06
S8040	S-46	1,000-750-0-750-1,000	825/600	300 Ma.	G-9	8.82
S8041	S-47	1,500-1,250-1,000-0-1,000-1,250-1,500	1,275/1,050/825	300 Ma.	G-10	11.47
S8042	S-48	1,500-1,250-1,000-0-1,000-1,250-1,500	1,300/1,075/850	300 Ma.	G-11	16.46
S8043	S-49	2,100-1,800-1,500-0-1,500-1,800-2,100	1,815/1,540/1,275	300 Ma.	G-11	15.88
S8044	S-50	3,000-2,500-0-2,500-3,000	2,625/2,175	300 Ma.	G-11	22.05
S11000*	S-74	500-0-500	400	150 Ma.	G-10	9.70
		1,000-0-1,000	1,000	150 Ma.		

* For double rectifier service, where both secondary voltages are simultaneously required.

Dimensions

Type	H	W	D
G-1	1 1/2	2	1 1/2
G-2	2 1/2	2 1/2	1 1/2
G-3	2 1/2	2 1/2	2 1/2
G-4	2 1/2	3 1/2	2 1/2
G-5	3 1/2	3 1/2	4 1/2
G-6	4 1/2	3 1/2	5 1/2
G-7	5 1/2	4 1/2	5 1/2
G-8	5 1/2	5 1/2	5 1/2
G-9	6 1/2	5 1/2	6 1/2
G-10	6 1/2	6 1/2	6 1/2
G-11	7 1/2	6 1/2	7 1/2

Single Filament Transformers

Cat. No.	Type No.	Primary Tapped 105, 115 Volts—50/60 Cycles	Secondary Current	Insulation	Mfg. Fig.	Net Price
S8045	S-53	2.5 VCT	10 A.	1,500 V.	G-3	\$2.06
S8046	S-54	5 VCT	4 A.	2,500 V.	G-3	2.06
S8047	S-55	6.3 VCT	3 A.	1,500 V.	G-3	2.06
S8048	S-56	7.5 VCT	3 A.	1,500 V.	G-3	2.06
S8049	S-57	2.5 VCT	10 A.	10,000 V.	G-5	2.94
S8050	S-58	2.5 VCT	20 A.	10,000 V.	G-5	3.53
S8051	S-59	5 to 5.25 VCT	13 A.	5,000 V.	G-5	2.94
S8052	S-60	5 to 5.25 VCT	22 A.	10,000 V.	G-7	6.47
S8053	S-61	7.5 VCT*	8 A.	3,000 V.	G-5	2.94
		6.3 VCT		3,000 V.	G-5	2.94
S8054	S-62	14 VCT	10 A.	3,000 V.	G-5	3.53
S8055	S-63	14 VCT*	10 A.	5,000 V.	G-7	6.47
		12 VCT				
		11 VCT				

* Single winding tapped.

Universal Modulation Transformer

Will handle any modulator tubes to any RF load.

Cat. No.	Type No.	Audio Power	Mfg. Fig.	Net Price
S8081	S-18	12 watts	G-3	\$3.09
S8082	S-19	30 watts	G-4	4.71
S8083	S-20	55 watts	G-5	6.76
S8084	S-21	110 watts	G-7	9.41
S8085	S-22	250 watts	G-9	14.79

Universal Driver Transformers

Cat. No.	Type No.	Application	Mfg. Fig.	Net Price
S8086	S-8	Single driver plate to pushpull grids	G-3	\$2.48
S8087	S-9	Pushpull driver plates to grids of Class B tubes up to 400 watts output.	G-4	3.23
S8088	S-10	Pushpull 56, 6C6 triode, 6C5, or similar plates to 45's, 2A1's or 61.6's, self or fixed bias.	G-3	2.94

Multiple Filament Transformers

PRIMARY TAPPED 105, 115 VOLTS—50/60 CYCLES							
Cat. No.	Type No.	FIL. 1 C.T.	FIL. 2 C.T.	FIL. 3 C.T.	Mfg. Fig.	Net Price	
S8056	S-64	2.5 V.-5A	2.5 V.-5A	5 V.-6A	G-5	\$5.53	
S8057	S-65	2.5 V.-5A	5 V.-4A	6.3 V.-3A	G-5	3.53	
S8058	S-66	2.5 V.-10A	7.5 V.-6.5A		G-5	3.53	
S8059	S-67	5 V.-6A	6.3 V.-5A		G-5	3.53	
S8060	S-68	5 V.-3A	6.3 V.-4A	7.5 V.-5A	G-5	3.82	
S8061	S-69	6.3 V.-3A	7.5 V.-5A		G-5	3.82	
S8062	S-70	6.3 V.-5A	6.3 V.-5A		G-5	3.82	
S8063	S-71*	2.5 V.-6.5	2.5 V.-6A	2.5 V.-12A	G-7	6.47	
S8064	S-72	5 V.-3A	5 V.-3A	5 V.-6A	G-5	4.12	

* Insulation 10,000 volts all others 3,000 volts.

Filter, Swinging, and Audio Chokes

Cat. No.	Type No.	Application	Inductance	Current	Resistance	Mfg. Fig.	Net Price
S8065	S-23	Audio	500 Hy.	5 Ma.	6,000 ohms	G-2	\$2.06
S8066	S-24	P.P. Choke	500 Hy.	3 Ma.	4,000 ohms	G-2	2.21
S8067	S-25	Filter	30 Hy.	30 Ma.	900 ohms	G-2	1.91
S8068	S-26	Filter	15 Hy.	60 Ma.	230 ohms	G-2	1.91
S8069	S-27	Filter	30 Hy.	75 Ma.	350 ohms	G-4	2.35
S8070	S-28	Filter	20 Hy.	100 Ma.	350 ohms	G-4	2.35
S8071	S-29	Filter	10 Hy.	175 Ma.	95 ohms	G-4	2.35
S8072	S-30	Swinging	4/25 Hy.	175 Ma.	95 ohms	G-4	2.35
S8073	S-31	Filter	20 Hy.	225 Ma.	120 ohms	G-5	3.09
S8074	S-32	Swinging	4/25 Hy.	225 Ma.	120 ohms	G-5	3.09
S8075	S-33	Filter	20 Hy.	300 Ma.	90 ohms	G-7	4.41
S8076	S-34	Swinging	4/25 Hy.	300 Ma.	90 ohms	G-7	4.41
S8077	S-35	Filter	20 Hy.	400 Ma.	85 ohms	G-8	6.47
S8078	S-36	Swinging	4/25 Hy.	400 Ma.	85 ohms	G-8	6.47
S8079	S-37	Filter	20 Hy.	550 Ma.	60 ohms	G-9	8.82
S8080	S-38	Swinging	4/25 Hy.	550 Ma.	60 ohms	G-9	8.82

Plate and Filament Transformers

Cat. No.	High Voltage	DC Rect. Fil.	DC Rect. Fil. C.T.	Fil. C.T.	Mfg. Fig.	Net Price
S-39	490-400-0-400/310	5V.-3A.	2.5V. 6A.	6.3V. 4A.	G-6	\$5.88
S-40	175 Ma.					
S-41	425-425-0-400/310	5V.-3A.	6.3V. 3A.	6.3V. 3A.	G-7	5.88
S-42	250 Ma.					
S-43	600-0-600	475	5V.-3A.	7.5V. 2A.	G-7	5.29
	200 Ma.					
S-44	600-625-0-525-600	480/400	5V.-3A.	7.5V. 3A.	G-8	7.06
	300 Ma.					
S-45	525-0-525	400	5V.-3A.	6.3V. 3A.	G-9	9.70
	450 Ma.					
	40-0-40		5V.-6A.	-2A. 5A.		
	200 Ma.					

* Based on two-section filter, choke input.

Universal Bias Transformers

The DC voltages shown are based at 200 Ma.—single section filter—choke input—120 ohm choke. Lower values of current will increase the output voltage somewhat.

PRIMARY 115 V.—50/60 CYCLES No Filament Windings

Cat. No.	Type No.	Application	DC Current	Mfg. Fig.	Net Price
S8094	S-51	Will supply any bias voltage from 15 to 100 volts DC with in approximately 6% of desired value.	200 Ma.	G-3	\$5.29
S8095	S-52	Will supply any bias voltage from 75 to 400 volts DC with in approximately 6% of desired value.	200 Ma.	G-7	7.06



REPLACEMENT AUDIO AND POWER TRANSFORMERS AND CHOKES



Fig. M3



Fig. M1

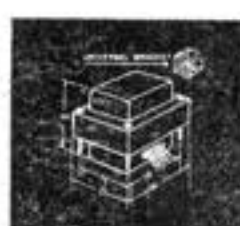


Fig. M2

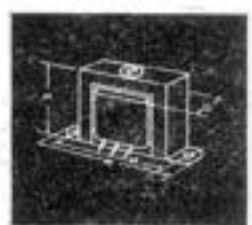


Fig. M4

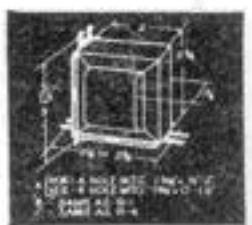


Fig. M5

Varitap Power Transformers—Universal Mounting—Fig. M1

Cat. No.	Type No.	High Voltage	DC MA.	Rect. FIL.	FIL. 1 C.T.	FIL. 2 C.T.	Dimensions W D H	Net Price
S9080	R-1	325-0-325	40	5V-3A	6.3V-2A or 2.5V-4A	.....	3 x2 1/2 x2 1/2	\$2.20
S9081	R-2	350-0-350	70	5V-3A	6.3V-2.5A or 2.5V-5A	.....	3 1/2 x2 1/2 x3	2.65
S9082	R-3	350-0-350	95	5V-3A	6.3V-4.5A or 2.5V-4.5A	.....	3 1/2 x3 1/2 x3	3.23
S9083	R-4	375-0-375	120	5V-4A	6.3V-5A or 2.5V-5A	2.5V-8A	4 1/2 x3 1/2 x3	3.82
S9084	R-5	385-0-385	180	5V-4A	6.3V-4A or 2.5V-6A	6.3V-5A	4 1/2 x3 1/2 x4	4.70

ALL ABOVE transformers supplied with universal mounting brackets. 115V. primary 50-60 cycles.

Upright Mounting Power Transformers—Fig. M2

Cat. No.	Type No.	High Voltage	DC MA.	Rect. FIL.	FIL. 1 C.T.	FIL. 2 C.T.	Dimensions W D H	Net Price
S9085	R-11	350-0-350	75	5V-3A	6.3V-3A or 2.5V-3A	2.5V-8A	3 x3 1/2 x3 1/2	\$3.38
S9086	R-12	375-0-375	100	5V-3A	6.3V-4A or 2.5V-4A	6.3V-2A or 2.5V-8A	3 1/2 x3 1/2 x4	3.82
S9087	R-13	425-0-425	200	5V-3A	6.3V-5A or 2.5V-5A	6.3V-3A or 2.5V-12A	3 1/2 x4 1/2 x4 1/2	5.59

Half Shell Power Transformers—Flush Mounting—Fig. M3

Cat. No.	Type No.	High Voltage	DC MA.	Rect. FIL.	FIL. 1 C.T.	FIL. 2 C.T.	Dimensions W D H	Net Price
S9088	R-6	300-0-300	50	5V-2A	6.3V-2A or 2.5V-3A	.....	3 x2 1/2 x3	\$2.20
S9089	R-7	350-0-350	75	5V-3A	6.3V-3A or 2.5V-3A	2.5V-8A	3 1/2 x2 1/2 x3 1/2	2.79
S9090	R-8	375-0-375	100	5V-3A	6.3V-4A or 2.5V-4A	2.5V-10A	3 1/2 x3 1/2 x3 1/2	3.41
S9091	R-9	400-0-400	125	5V-3A	6.3V-4A or 2.5V-4A	6.3V-2A or 2.5V-10A	4 1/2 x3 1/2 x4	3.97
S9092	R-10	425-0-425	200	5V-3A	6.3V-5A or 5V-5A	6.3V-3A or 2.5V-12A	4 1/2 x3 1/2 x4 1/2	5.00

Smoothing, Swinging, and Audio Chokes—Fig. M4

Cat. No.	Type No.	Hys.	Ohms	Current	Dimensions, In. W D H	Net Price
S9093	R-14	12	250	40MA	2 1/2 x1 1/2 x1 1/2	\$.79
S9094	R-15	15	450	30MA	2 1/2 x1 1/2 x1 1/2	.79
S9095	R-16	20	600	30MA	2 1/2 x1 1/2 x1 1/2	.79
S9097	R-18	10	250	75MA	3 1/2 x1 1/2 x2	1.06
S9098	R-19	15	450	100MA	3 1/2 x1 1/2 x2	1.47
S9099	R-20	8	100	160MA	4 1/2 x2 1/2 x3	1.62
S9100	R-21	5-25	100	160MA	4 1/2 x2 1/2 x3	1.62
S9101	R-22	500	6,000	5MA	3 1/2 x1 1/2 x2	1.47
S9102	R-30	13	100	250MA	Mtg. Dim. C Fig. M5	4.12
S9103	R-31	10	250	80MA	Mtg. Dim. A Fig. M5	1.32
S9104	R-32	10	100	160MA	Mtg. Dim. B Fig. M5	1.91

Filament Transformers—Fig. M4

Cat. No.	Type No.	Filament Volts	Amps.	Net Price
S9710	FT-1	2.5 CT.	3	\$1.03
S9711	FT-2	6.3 CT.	1.2	1.03
S9712	FT-3	2.5 CT.	6	1.18
S9713	FT-4	6.3 CT.	2.5	1.32
S9714	FT-5	2.5 CT.	10	1.32
S9715	FT-6	5 CT.	3	1.32
S9716	FT-7	7 1/2 CT.	3	1.32

Mike, Audio, Driver and Output Transformers—Fig. M4

Cat. No.	Type No.	Application	Dimensions, In. W D H	Net Price
S9105	R-33	1 plate* to 1 grid 4:1 ratio	2 1/2 x1 1/2 x1 1/2	\$1.06
S9106	R-34	1 plate* to 2 grids 2:1 ratio	2 1/2 x1 1/2 x1 1/2	1.09
S9107	R-35	Mike to 1 grid 17:1 ratio	2 1/2 x1 1/2 x1 1/2	1.32
S9108	R-36	30, 49, etc. to class B 19, 49	2 1/2 x1 1/2 x1 1/2	1.32
S9109	R-37	R.F. Output, Class B 19, 49, 79, 89 to 3,500 and 5,000 ohms	2 1/2 x1 1/2 x1 1/2	1.38
S9110	R-38	Any tubes up to 10 watts to any voice coil, .1 to 30 ohms	2 1/2 x1 1/2 x1 1/2	1.03
S9111	R-39	10 watt 250, 500, 1,500 ohms to 2, 8, 15 ohms	2 1/2 x1 1/2 x1 1/2	1.38
S9112	R-40	25 watt 250, 500, 1,500 ohms to 2, 8, 15 ohms	4 1/2 x2 1/2 x2 1/2	2.12

*Will match tubes like 27, 37, 56, 6C6 triodes, 6C5.

Varitap Input and Output Transformers—Fig. M5

Cat. No.	Type No.	Application	Description	Dim. A	Net Price
S9113	R-23	1 plate* to 1 grid	3 1/2:1 ratio	A	\$1.47
S9114	R-24	1 plate* to 2 grids	2:1 ratio	A	1.53
S9115	R-25	2 plates* to 2 grids	1.5:1 stepup for Class A triodes	A	1.62
S9115A	R-26	Driver, 1 plate to 2 grids	1.5:1 stepdown for Class AB Single 42, 2A5, 6F6, 45, 46 to AB 6L6's, 42's, 2A5's, 6F6's	A	1.62
S9116	R-27	15 watt Universal Output	All tubes to any voice coil from .1 to 30 ohms	A	1.47
S9117	R-28	35 watt Universal Output	All tubes to any voice coil from .1 to 30 ohms	B	2.06
S9117A	R-29	Mike to grid	Single or double button mike or line to 1 grid	A	1.53

*Will match tubes like 27, 37, 56, 6C6 triode, 6C5.

Amplifier Power Transformers

Cat. No.	Type No.	High Voltage	DC MA.	Rect. FIL.	FIL. 1 C.T.	FIL. 2 C.T.	FIL. 3 C.T.	Mtg. Fig.	Net Price
S9118	PA-422	435-0-435-0-435	125	5V-3A	5V-2A	6.3V-3A	2.5V-5A	PA-3	\$7.35
S9119	PA-420	600-0-600-0-600	250	5V-3A	6.3V-3A	7.5V-3A*	.....	PA-4	10.58
S9120	PA-425	450-0-450	250	5V-3A	6.3V-4A	6.3V-3A*	2.5V-3A	PA-4	10.00
S9121	PA-431	500-0-500-0-500	500	5V-6A	5V-3A	tapped 2.5V-3A	6.3V-5A	PA-5	15.88

*Tapped for other voltage

TRANSMITTING AND PUBLIC ADDRESS EQUIPMENT

CASE DIMENSIONS

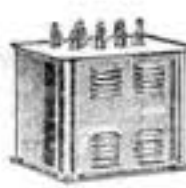
G-1	1 1/2 x 2 x 1 1/2
G-2	2 1/2 x 2 1/2 x 1 1/2
G-3	2 1/2 x 2 1/2 x 2 1/2
G-4	2 1/2 x 3 1/2 x 2 1/2
G-5	3 1/2 x 3 1/2 x 4 1/2
G-6	3 1/2 x 3 1/2 x 4 1/2



PA-2



PA-4



G5-G6



G1 to G4

CASE DIMENSIONS

PA-1	1 1/2 x 2 1/2
PA-2	2 1/2 x 3 1/2
PA-3	3 1/2 x 4 1/2
PA-4	3 1/2 x 4 1/2 x 4 1/2
PA-5	7 x 5 1/2 x 5 1/2
PA-6	7 1/2 x 7 1/2 x 7 1/2

Class "A" Input Transformers

Cat. No.	Type	Application	Ratio	Fig.	Net
S9000	8-1	1 plate to 1 grid	3-1	G-2	\$2.06
S9001	8-2	1 plate to 2 grids	2-1	G-2	2.35
S9002	8-3	1 plate or 1 or 2 grids compact type	4-1	G-1	1.91
S9003	8-4	1 plate to 2 grids wide range response	1-1	G-3	3.23
S9004	PA-131	1 plate to 1 grid	3-1	PA-1	3.53
S9005	PA-132	1 plate to 2 grids	2-1	PA-1	3.82
S9006	PA-133	2 plate to 2 grids	1-1	PA-1	4.70
S9007	PA-233	2-6C5, 2-6E to 6L6, 2A3		PA-1	4.12

Mike-Line-Mixer to Grid Transformers

Cat. No.	Type	Application	Ratio	Fig.	Net
S9008	8-5	Single or double button mike or line to 1 grid hum-bucking type	16-1	G-2	\$2.65
S9009	8-6	Single or double button mike or line to 1 grid compact type	16-1	G-1	1.91
S9010	8-7	Single plate and carbon mike to one or two grids	3-1	G-2	3.09
S9011	PA-134	500-200, or 50 ohm line to single grid		PA-1	4.70
S9012	PA-135	500-200, or 50 ohm line to PP grids		PA-1	5.00
S9013	PA-136	Single plate or pickup and carbon mike to 1 or 2 grids		PA-1	5.00

Line to Line—Line to Speaker

Cat. No.	Type	Watts	Prim. Ohms	Sec. Ohms	Fig.	Net
S9014	8-12	15	500-2,000-4,000	2-4-8-15	G-2	\$2.94
S9015	8-13	30	500-2,000-4,000	2-4-8-15	G-4	3.82
S9016	PA-137	15	50-200-500	50-200-500	PA-1	3.85

Tube to Line Transformers

Cat. No.	Type	Application	Prim. Ohms	Sec.	Fig.	Net
S9017	8-11	Single 6B-6C5	10,000	200-500	G-2	\$2.65
S9018	PA-140	Single 864-56-55-30	10,000	50-200-500	PA-1	4.41
S9019	PA-141	P.P. 864-56-30-6C5	20,000	50-200-500	PA-1	5.00

Universal Output Transformers to Line and Voice Coils

Cat. No.	Type	Prim. Ohms	Sec. Ohms	Watts	Fig.	Net
S9020	8-14	2,500-4,000-7,000-10,000	2-8-15-500	10	G-2	\$2.79
S9021	8-15	4,000-5,000-10,000	2-8-15-500	12	G-2	2.94
S9022	8-16	3,000-6,000-6,000-10,000	2-8-15-500	30	G-4	3.82
S9023	8-17	3,300-3,800-5,000	2-8-15-500	55	G-5	4.70

Class "A" and "B" Output Transformers

Cat. No.	Type	Tube	Class	Ohms	Ohms Sec.	Fig.	Net
S9046	PA-15	PP 50-45	A	8,000	1.5-3-5-8	PA-2	\$4.12
S9047	PA-16	PP 2A3	AB	3,000*	1.5-3-5-8	PA-2	4.12
S9048	PA-19	PP 59-6B5	A	6,000	1.5-3-5-8	PA-2	4.12
S9049	PA-710	PP 45-23-46	B	10,000	1.5-3-5-8	PA-2	4.12
S9050	PA-2161	PP 210-47	A	20,000	1.5-3-5-8	PA-2	4.12
S9051	PA-2161	PP 6L6	AB	6,000	1.5-3-5-8	PA-4	7.06
S9051	PA-4101	PP 6L6	AB1	3,800*	1.5-3-5-8	PA-4	10.58
S9051	PA-4101	PP 6L6	AB	3,300	1.5-3-5-8	PA-4	10.58

* Self Bias. † 60 watts output. ‡ 85-40 watts output.

These transformers incorporate the new UTC Feedback Winding, which reduces harmonic distortion, increases available power and reduces resistance tremendously. No resistors or condensers are necessary.

Grid-Cathode Modulation Transformers

Universal type, primaries match popular tubes; secondaries tapped 1,000 to 10,000 ohms; separate tapped tertiary grid winding for matching grids to secure best operating conditions.

Cat. No.	GCM-1 matches 200 or 500 ohm line to popular tubes for grid-cathode modulation service, 30 watts audio output.
Cat. No. G-3	Net Price \$4.32

Cat. No.	Audio Watts	Will Modulate	Case No.	Net Price
GCM-2	15	200 watts	G-2	\$2.65
GCM-3	30	500 watts	G-3	3.53
GCM-4	60	1,000 watts	G-4	4.70
GCM-5	200		G-5	8.00
GCM-6	110		G-5	7.06

Plate Transformers

Primaries for 105, 115, 220, 230 volts, 50/60 cycles. For reduced power secondary voltages can be reduced to half by using 220 v. P.R. on 110 V.					
No. Cat.	Type	A.C. Volts	D.C. Volts	D.C. Ma.	Fig. Net
S9033	PA-300	625-510-0-515-625	500/400	200	PA-3 \$7.06
S9034	PA-301	580-530-300-0-300-530-580	475/425/250	500	PA-4 10.00
S9035	PA-302	950-760-0-750-950	760/610	325	PA-4 11.76
S9036	PA-303	1500-1235-400-0-400-1235-1500	1250/1000/300	300	L W H 17.64
S9038	PA-304	1500-1235-0-1235-1500	1250/1000	800	14 11 9 47.04
S9040	PA-305	2400-1750-0-1750-2400	2000/1500	300	10 7 5 29.46
S9041	PA-306	2400-1750-0-1750-2400	2000/1500	500	14 11 9 47.04
S9042	PA-307	3500-3000-0-3000-3500	3000/2500/2000	300	13 11 9 44.10
S9043	PA-308	3500-3000-0-3000-3500	3000/2200/2000	500	15 11 9 55.86
S9044	PA-309	3500-3000-0-3000-3500	3000/5000/2000	1000	17 14 11 97.02
S9045	PA-310	4000-4050-0-4050-4000	4000/3500/3000	600	15 14 11 73.50

Filament Transformers

Cat. No.	Type	Volts	Amps.	Fig.	Volts. Ins.	Net
S9052	PA-34*	2.5 C.T.	10	PA-2	5,000	\$4.41
S9053	PA-120*	2.5 C.T.	20	PA-3	10,000	5.88
S9054	PA-121*	5 C.T.	20	PA-3	10,000	8.23
S9055	PA-122*	7.5 C.T.	6.5	PA-3	5,000	7.06
S9056	PA-124*	10 C.T.	7	PA-3	10,000	7.06
S9057	PA-126*	14 C.T.	12.5	PA-4	5,000	12.94
S9057	PA-126*	14 C.T.	12.5			

* Primary tapped at 105, 115, 220, 230 AC 50/60 cycles. Others have 115V primary.

Input or Swinging Chokes

Cat. No.	Type	Hen.	D.C. M.A.	Ohms	Fig.	Net
S9026	PA-41	5/25	200	100	PA-2	\$3.23
S9027	PA-101	5/25	15-150	115	PA-2	3.53
S9028	PA-103	5/25	20-200	110	PA-3	5.29
S9029	PA-105	6/30	25-250	90	PA-4	8.23
S9030	PA-109	5/25	75-500	60	PA-5	14.70

Smoother Chokes

Cat. No.	Type	Hen.	D.C. M.A.	Ohms	Fig.	Net
S9031	PA-40	12	200	110	PA-2	3.23
S9032	PA-44	30	100	375	PA-2	3.23

Audio Chokes

Cat. No.	Type	Hen.	D.C. M.A.	Ohms	Fig.	Net
S9024	PA-45	250	15	4,500	PA-1	\$3.23
S9025	PA-48C	100	50	2,500	PA-1	3.23

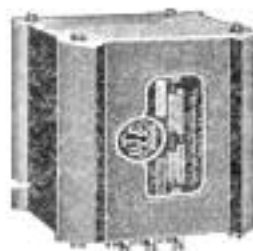
Cathode Modulation Transformers

For modulating up to 1 KW. Primaries match popular tubes; secondaries tapped 300 to 2,000 ohms.

Cat. No.	Audio Watts	Will Modulate	Case No.	Net Price
CM-15	15	200 watts	G-3	\$3.23
CM-16	35	500 watts	G-4	4.70
CM-17	100	1,000 watts	G-5	9.68
CM-18	15 watt, line matching to RF load; primary 200, 500 ohms; secondary 300 to 2,000 ohms; G-3 case.			\$3.23



LINEAR STANDARD



AUDIO COMPONENTS



- High Permeability Cast Shield—maximum shielding from inductive pickup.
- True Hum Balancing Coil Structure—maximum neutralization of stray fields.
- Balanced Variable Impedance Line—permits highest fidelity on every tap of a universal unit—no line reflections or transverse coupling.
- Reversible Mounting—permits above chassis or sub-chassis wiring.
- Full Electrostatic Shielding Between Windings—brought out to separate terminal.
- Multiple Coil Semi-Toroidal Coil Structure—minimum distributed capacity and leakage reactance.
- Precision Winding—accuracy of windings .1% perfect balance of inductance and capacity; exact impedance reflection.
- Hiperm-Alloy—a stable high permeability nickel-iron core material.
- High Fidelity—UTC Linear Standard transformers are the only audio units with a guaranteed uniform response, from 30 to 20,000 cycles plus 1 db.

OVERALL DIMENSIONS

LS-1	1 1/2" x 2 1/2"
LS-2	2 1/2" x 3 1/2"
LS-3	4 1/2" x 5 1/2"
LS-4	5 1/2" x 5 1/2"
LS-5	7 1/2" x 7 1/2"

UTC LINEAR STANDARD components represent the closest approach to the ideal transformer from the standpoint of uniform response, low-wave form distortion, high efficiency, thorough shielding and dependability.

The multiple tap windings used on input to grid, plate to line, mixing and output audio transformers make possible a wide combination of impedance connections without impairing the audio range or efficiency of each unit.

UTC engineers have spent considerable time studying the many annoying hum pick-up difficulties which are prevalent in high gain A.C. operated amplifying equipment. As a result, a special grade of high permeability cast iron has been developed to house all UTC Linear Standard units.

In addition, low level input transformers use the new UTC and quadruple alloy shields thus making possible a transformer with the lowest hum pickup of any available commercially.

Plate, Crystal, Photocell and Bridging to Line Transformers

Cat. No.	Type	Application	Prim. Imp.	Sec. Imp.	Mtg. Fig.	Net Price
S6006	LS-50	Single plate to multiple line	8,000/15,000	50, 125, 200, 250, 333, 500	LS-1	\$10.00
S6007	LS-51	Push pull low level plates to multiple line	8,000/15,000 each side	50, 125, 200, 250, 333, 500	LS-1	10.00
S6008	LS-37	Crystal microphone or pickup to multiple line	100,000	50, 125, 200, 250, 333, 500	LS-1	10.58
S6009	LS-38	Crystal microphone or pickup to multiple line, with external equalizer	100,000	50, 125, 200, 250, 333, 500	LS-1	13.23
S6011	LS-150	Bridging transformer from 50 to 500 ohm line to multiple line	4,000 bridging	50, 125, 200, 250, 333, 500	LS-1	10.58
S6012	LS-151	Bridging transformer from 50 to 500 ohm line to multiple line	15,000 bridging	50, 125, 200, 250, 333, 500	LS-1	10.58

High Level Matching Transformers

Cat. No.	Type	Application	Primary Imp. Ohms	Secondary Imp. Ohms	Mtg. Fig.	Net Price
S6013	LS-33	High level line matching, 15 watts	50, 125, 200, 250, 333, 500	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200, 250, 333, 500	LS-2	\$11.76
S6014	LS-34	High level line matching, 30 watts	50, 125, 200, 250, 333, 500	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200, 250, 333, 500	LS-3	17.64

Output Transformers to Line or Speaker

Cat. No.	Type	Type	Primary Imp. Ohms	Secondary Imp. Ohms	Mtg. Fig.	Net Price
S6016	LS-54	Same as above	8,000 ohms	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-2	\$8.23
S6017	LS-55	Push pull 2A3's, 6AB6's, 300A's, 275A's, 6A2's	5,000 ohms plate to plate and 3,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-2	11.76
S6018	LS-57	Same as above	8,000 ohms plate to plate and 3,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-2	8.23
S6019	LS-58	Push pull parallel 2A3's, 6AB6's, 300A's, 6A2's	2,500 ohms plate to plate and 1,500 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-4	20.58
S6020	LS-61	Push pull 6X5, 6AB5, 6F6, 71A, 50, 79, 80, Class B46, 69's	10,000 ohms plate to plate and 6,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-2	11.76
S6021	LS-63	Same as above	10,000 ohms plate to plate and 6,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-2	8.23
S6023	LS-61.1	Push pull 6L6's self bias, incorporates tertiary winding for stabilized feedback	6,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	LS-3	17.64

Driver Transformers

Cat. No.	Application	Primary Impedance	Reflected Sec. Imp.	Mtg. Fig.	Net Price
LS-19	Single plate to PP grids like 2A3, 59, 46, 6L6	8,000 to 15,000 ohms; split primary	95,000 ohms; turn ratio 1.25:1 ea. side; split; —74DB	LS-1	\$10.00
LS-25	PT plates to PP grids	8,000 to 15,000 ohms; split primary	100,000 ohms over all; 25,000 ohms ea. side. Turn ratio 1.3:1, split; —74DB	LS-1	11.76
LS-7	PP 56, 6C5 or similar plates to A prime 45's 42's, 6F6's, 2A3's	8,000 to 15,000 ohms	.45 primary impedance turns ratio 1.5:1 overall	LS-2	12.94

Interstage Audio Transformers

Cat. No.	Imp. Ohms	Secondary Imp. Ohms	Shielding and hum reduction	Mtg. Fig.	Net Price
LS-20*	50-500	60,000 2:1 turn ratio	Dual alloy shield—74DB	LS-1	\$8.82
LS-21**	50-500	125,000—turn ratio 1.5:1	Dual alloy shield—74DB	LS-1	10.00
LS-22*	8,000-15,000	38,000 ohms sec. turn ratio 1.6:1	Alloy casting shield—74DB	LS-2	12.94
LS-24††	50-125-200 250-333-500	60,000 ohms 2:1 turn ratio	Dual alloy shield—74DB	LS-1	12.94
LS-28*	8,000 to 15,000 ohms. Also for bridging 50/500 ohm line	60,000 ohms; 2:1 turn ratio	Dual alloy shield—74DB	LS-1	9.41
LS-40**	8,000 to 15,000 ohms also for bridging 50/500 ohm line	125,000 ohms; turn ratio 1.5:1 each side	Dual alloy shield—74DB	LS-1	10.00

* Single plate to single grid

** Single plate to P.P. grids

† Primary and secondary each in two sections.

†† P.P. Plates to P.P. grid

†† Single plate or line to one or two grids

Mixing Transformers

LS-30	50, 125, 200, 250, 333, 500	50, 125, 200, 250, 333, 500	Dual alloy shield—74DB	LS-1	\$10.58
LS-30X	50, 125, 200, 250, 333, 500	50, 125, 200, 250, 333, 500	Quadruple alloy shield—92DB	LS-1	13.23
LS-31*	30, 50, 200, 500 each primary	50, 125, 200, 250, 333, 500	Dual alloy shield—74DB	LS-1	11.76
LS-31X	30, 50, 200, 500 each primary	50, 125, 200, 250, 333, 500	Quadruple alloy shield—92DB	LS-1	14.70

* Three isolated lines or pairs to multiple lines.

Low Impedance To Grid Transformers

LS-10	50, 125, 200, 250, 333, 500	60,000 ohms in 2 sections	Dual alloy shield—74DB	LS-1	\$10.58
LS-10X	50, 125, 200, 250, 333, 500	50,000 ohms	Quadruple alloy shield—92DB	LS-1	12.94
LS-12	50, 125, 200, 250, 333, 500	12,000 ohms overall in two sections	Dual alloy shield—74DB	LS-1	11.76
LS-12X	50, 125, 200, 250, 333, 500	80,000 ohms overall in two sections	Quadruple alloy shield—92DB	LS-1	14.70
LS-15X*	30, 50, 200, 250 ohms each primary	60,000 ohms overall in two sections	Quadruple alloy shield—92DB	LS-1	14.70
LS-18†	50, 125, 200, 250, 333, 500	50,000 ohms overall in two sections	Alloy casting —50DB	LS-2	12.94

* Three isolated lines or pairs to one or two grids.

† High level multiple line to PP grids.



HI-FIDELITY :- VARIMATCH TRANSFORMERS



Ultra Compact Hi-Fidelity Audio Units

The UTC Ultra compact light-weight units are ideal where portability or size is of paramount importance. Through the use of new design methods, high fidelity is obtainable in all individual units, the frequency response being 20dB from 10 to 20,000 cycles on all units. All units employ true hum balanced coil structure, which combined with a high conductivity outer case, afford a maximum of inductive sheldings.

Ultra compact audio units weight only 5 1/2 ounces and have overall dimensions of 1 1/4" x 1 1/4" x 1 1/4".



Cat. No.	Application	Primary Impedance	Secondary Impedance	Net Price
A-10	Low impedance mike, pickup, or multiple line to grid	50,125,200 250,333,500 ohms	50,000 ohms	\$6.47
A-11	Low impedance to 1 or 2 grids, low hum pickup	50,200,500	50,000	7.06
A-12	Low impedance mike, pickup or multiple line to push pull grids	50,125,200 250,333,500 ohms	50,000 ohms overall in 2 sections	6.47
A-14	Dynamic microphone to one or two grids	30 ohms	50,000 ohms overall in 2 sections	5.88
A-16	Single plate to single grid	8,000 to 15,000 ohms	50,000 ohms, 2:1 turn ratio	5.29
A-17	Single plate to single 8 MA unbalanced DC	8,000 to 15,000 ohms	50,000 ohms, 2:1 turn ratio	6.47
A-18	Single plate to 2 grids	8,000 to 15,000 ohms	50,000 ohms overall, 2:3:1 turn ratio overall	5.88
A-19	Single plate to two grids 8 MA unbalanced DC	8,000 to 15,000 ohms	50,000 ohms overall, 2:3:1 turn ratio overall	7.64
A-20	Mixing, low impedance mike, pickup, or multiple line to multiple line	50,125,200,250,333,500 ohms	50,125,200,250,333,500 ohms	6.47
A-21	Mixing, low impedance mike, pickup, or multiple line to multiple line	50,200,500 ohms	50,200,500 ohms	7.06
A-24	Single plate to multiple line	8,000 to 15,000 ohms	50,125,200,250,333,500 ohms	6.47
A-25	Single plate to multiple line 8 MA unbalanced DC	8,000 to 15,000 ohms	50,125,200,250,333,500 ohms	5.88
A-26	Push-pull low level plates to multiple line	8,000 to 15,000 ohms each side	50,125,200,250,333,500 ohms	6.47
A-27	Crystal microphone to multiple line	100,000 ohms	50,125,200,250,333,500 ohms	6.47
A-30	Audio choke, 300 hys, 66 2 M.A., 6,000 ohms DC, 75 hys, 66 4 M.A. 1,500 ohms DC, inductance with no DC 450 hys.			4.41



PA-1 2 1/2" x 3" x 2 1/2"
PA-2 3 1/2" x 4 1/2" x 4 1/2"
PA-3 3 1/2" x 4 1/2" x 4 1/2"



PA-4 6" x 4 1/2" x 8"



PA-5 7" x 5 1/2" x 5 1/2"
CA-1 7 1/2" x 9" x 5 1/2"
CA-2 11" x 11" x 9"

Varimatch Transformers Never Become Obsolete

Varimatch Modulation Transformers

The Varimatch transformer will not only match PRESENT available modulator tubes, but any tube that may be released at a FUTURE date. These transformers will also match the line impedance output of PA or similar amplifiers direct to the Class C tubes.

Cat. No.	Type No.	Cap. Audio Watts	Will Modulate	Mtg. Fig.	Net Price
S8000	VM-0	12	25 Watts	PA-1	\$3.53
S8001	VM-1	30	60 Watts	PA-2	5.59
S8002	VM-2	60	120 Watts	PA-3	8.23
S8003	VM-3	125	250 Watts	PA-4	11.76
S8004	VM-4	300	600 Watts	CA-1	20.58
S8005	VM-5	600	1 KW	CA-2	47.06

The secondaries of all Varimatch transformers are designed to carry the Class C plate current.

Varimatch Driver Transformers

Cat. No.	Type No.	From Plates	To Grids	Class	Mtg. Fig.	Net Price
S8006	PA-81AX	*46, *61L6, *45, *50, *2A3, *49	46, 59			
		*37, *76, *6C6	*19, 79	B	PA-1	\$3.82
		*6C75	*19			
		*2A5, *42, *45	45, 2A5, 42	AB		
S8007	PA-83AX	42, 45, 50, 50	210, 801, 8K15			
		2A3 or 6L6	35T, 800, 825 B		PA-2	4.70
			203A, 50T, 35T			
S8008	PA-59AX	500, 200 or 50	805, 838, 203A	B	PA-2	4.70
		ohm line to	800, 8K18, 801			
S8009	PA-238AX	P.P.PAR, 2A3	P.P.PAR, 805			
		45, 50, 59, 6L6	838, 203A	B	PA-3	11.46
		100T, 845	250T, HF200			
S8010	PA-812	500, 200 or 50	250T, HF200	B	PA-3	11.46
		ohm to	HF200 or 849			

* Single tubes. All others push pull.

Ouncer — High-Fidelity Audio Units — Plug-In



Ideal for hearing aid, aircraft, glider, portable, concealed service, and similar applications. Overall dimensions 1 1/4" dia. by 1 1/4", including lugs. Weight about one ounce. Mounting by two screws on 1/4" centers. Units not carrying D.C. have flat response 40 to 15,000 cycles; units with D.C. in primary (and 0-14 & 0-15) are for voice frequencies 150 to 4,000 cycles. Max. level 0 DB. 200 ohm balanced winding may be used for 250 ohm service.



Plug-In units are identical in characteristics with Ouncers; submersion-proof design; fit standard octal sockets; 1 1/4" diameter, 1 1/4" above socket.

Ouncer Cat. No.	Net Price	Application	Primary Impedance	Secondary Impedance	Plug-In Cat. No.	Net Price
0-1	\$3.88	Mike, pickup or line to 1 grid	50, 200, 500	50,000	P-1	\$6.47
0-2	5.88	Mike, pickup or line to 2 grids	50, 200, 500	50,000	P-2	6.47
0-3	5.29	Dynamic mike to 1 grid	7.5/30	50,000	P-3	5.88
0-4	4.70	Single plate to 1 grid	8,000-15,000	50,000	P-4	5.29
0-5	4.70	Single plate to 1 grid, D.C. in Pri.	8,000-15,000	50,000	P-5	5.29
0-6	5.29	Single plate to 2 grids	8,000-15,000	50,000	P-6	5.88
0-7	5.29	Single plate to 2 grids, D.C. in Pri.	8,000-15,000	50,000	P-7	5.88
0-8	5.88	Single plate to line	8,000-15,000	50, 200, 500	P-8	6.47
0-9	5.88	Single plate to line, D.C. in Pri.	8,000-15,000	50, 200, 500	P-9	6.47
0-10	5.88	Push pull plates to line	8,000-15,000 ea. side	50, 200, 500	P-10	6.47
0-11	5.88	Crystal mike or pickup to line	50,000	50, 200, 500	P-11	6.47
0-12	5.29	Mixing and matching Resistor,	50, 200	50, 200, 500	P-12	5.88
0-13	4.12	200 Hys.—no D.C.; 50 Hys.—2	M.A. D.C., 6,000 ohms		P-13	4.70
0-14	5.88	50:1 mike or line to 1 grid	200	1 megohm	P-14	6.47
0-15	5.88	10:1 single plate to 1 grid	8,000-15,000	1 megohm	P-15	6.47

Varimatch Output Transformers

Ideally suited for P.A. work. These universal output transformers will match any output tube within its power limits to 500, 200, 16, 8, 5, 3, and 1 ohms.

Cat. No.	Type No.	Audio Watts	Mtg. Fig.	Net Price
S8011	PVM-1	12 max.	PA-1	\$3.53
S8012	PVM-2	30 max.	PA-2	5.59
S8013	PVM-3	60 max.	PA-3	8.23
S8014	PVM-4	125 max.	PA-4	11.76
S8015	PVM-5	300 max.	CA-1	20.58

Varimatch Line Transformers

Will match any voice coil or group of voice coils to a 500 ohm line. Impedance range is from .2 to 75 ohms in 50 combinations. Varimatch Autoformers will match one to ten 500 ohm lines or LVM 500 ohm windings to the 500 ohm output of an audio amplifier. The autoformers are tapped at 500, 250, 125, 100, 83, 71, 62 and 50 ohms.

Cat. No.	Type No.	Audio Watts	Mtg. Fig.	Net Price
S8016	LVM-1*	15 max.	PA-1	\$3.23
S8017	LVM-2*	40 max.	PA-2	4.70
S8018	LVM-3*	75 max.	PA-3	7.06
S8019	LVM-10**	15 max.	PA-1	3.23
S8020	LVM-11**	30 max.	PA-2	4.70
S8021	LVM-12**	60 max.	PA-3	7.06
S8022	LVM-13**	125 max.	PA-4	12.71
S8023	LVM-14**	300 max.	PA-5	17.68

*Varimatch transformer.

**Varimatch autoformer.

**REGULATING****TRANSFORMERS****THORDARSON****UTC "Steady-Volt"****AUTOMATIC LINE REGULATOR 95-130**

VOLTS INPUT 110-115-120
VOLTS OUTPUT
 Wherever constant line voltage must be held, this regulator does the trick. Maintains output at 110, 115, and 120 volts, at triple outlet receptacle, accurate to 1%.

for line inputs of 95 to 130 volts; load variations have practically no effect on output voltage; efficiency compares to that of a standard, non-regulating transformer; power factor is better than 90% on typical unit; distortion, less than 20% for all harmonics. Time constant is negligible; temperature rise, 55 degrees C. UTC Voltage Regulators contain no moving parts, hence they require no maintenance. Standard input 95-130 volts 60 cycles.

Cat. No.	Type No.	V.A.	Net Price
21192	AR-1	15	\$11.76
21193	AR-2	30	14.70
21194	AR-3	60	20.58
21195	AR-4	120	27.44
21196	AR-5	250	45.98
21197	AR-6	500	65.66
21198	AR-7	1,000	107.80
21199	AR-8	2,000	196.00

Varitran Voltage Control Unit

Provides continuously variable output voltage, using a sliding contact riding over the turns of an auto-transformer; 115 volt input, 0-130 volts continuously variable output. Complete with cord, plug, and switch.



APPLICATIONS
 Motor control
 Heat control
 Rectifier control
 Light control
 Line voltage control

Cat. No.	Type No.	Watts	Max. Amps	Net Price
S11001	V-0	230	2	\$8.33
S8024	V-1	370	5	11.76
S8025	V-2	570	5	9.80
S8026	V-3	800	7.5	14.70
S8027	V-4	1,250	11	21.58
S8028	V-5	1,950	17	34.30
S11002	V-6	3,500	30	63.70

UTC Varipower Autoformers

These units are designed to serve three functions, namely, to effect reduced power for transmitter operation, to take care of line voltage variations from 95 to 130 volts, and to permit minor voltage variation from other transformers. Taps are provided at 55, 75, 95, 100, 105, 110, 115, 120, 125, and 130 volts. Output voltages from 0 to 130 volts in 5 V. steps can be obtained.

Cat. No.	Type No.	Rating	Net Price
S8029	VA-1	150 watt	\$4.12
S8030	VA-2	250 watt	5.29
S8031	VA-3	500 watt	7.06
S8032	VA-4	1,000 watt	10.68
S8033	VA-5	2,000 watt	14.70

UTC Export Voltage Adapter

Complete with cord and plug. Provides voltages of 105, 115, 125, 135, 150, 210, 230, 250 volts; 42 to 60 cycles. Output voltage 115.

Cat. No.	Type No.	Rating	Net Price
S11011	R-45	150 watts	\$5.88

**Special Autoformer**

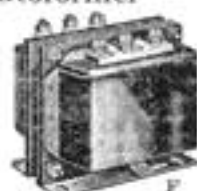
Delivers full 250 watts output at 25-55-75-95-105-110-115-120-125-130 volts 50-60 cycles; or can be used to give voltage from 0 to 130 in 5 volt steps; primary voltage, 25-55-75-95-105-110-115-120-125-130; size 4 1/2" x 3 1/2" x 3 1/2".

Cat. No. S21664 Type P-6148 Net \$5.88

Testing Autoformer

Convenient tap switch permits selection of 90-100-110-120-130-140-150 volts for testing. Primary 115 volts, 50-60 cycles. Input has 5' cord and plug; output to standard receptacle; switch has locking screw. Output—150 watts. Size 3 1/2" x 3 1/2" x 4 1/2".

Cat. No. S21668 Type P-6299 Net \$5.73

Step-Down Autoformer

Permit 110-125 volt apparatus to be used on 220-250 volt 50-60 cycles; may be connected as 110-220 step-up unit for testing. Style K mounting except 40 and 1,000 watt units.

Cat. No.	Type No.	Watts	Dimensions	Net Price
S21669	P-6287	40*	4 1/2" x 3 1/2" x 3 1/2"	\$2.79
S21670	P-5062	80	4 1/2" x 3 1/2" x 3 1/2"	3.53
S21671	P-5063	100	5 1/2" x 3 1/2" x 3 1/2"	4.06
S21672	P-5064	150	4 1/2" x 3 1/2" x 3 1/2"	4.62
S21673	P-5065	300	4 1/2" x 3 1/2" x 4 1/2"	5.88
S21674	P-6141	500	4 1/2" x 3 1/2" x 5 1/2"	8.82
S21675	P-6124	1,000†	7 1/2" x 6 1/2" x 6 1/2"	14.85

* In special can, with cord, plug, and receptacle. † Style F mounting.

Isolation Transformers

Equipped with electro-static shield to isolate line noise and interference; for use with screen test booths, medical apparatus, amateur transmitters, etc. Tap switch controls primary for 105-115-125 volts, 50-60 cycles; secondary 115 volts. Input has 6' cord and plug; output to standard receptacle.

Cat. No.	Type No.	Watts	Dimensions	Net Price
S21676	P-6160*	100	4 1/2" x 3 1/2" x 3 1/2"	\$7.41
S21677	P-6161*	250	4 1/2" x 3 1/2" x 4 1/2"	14.41
S21678	P-6298†	500	7 1/2" x 6 1/2" x 6 1/2"	22.21
S21679	P-6125†	1,000	7 1/2" x 7 1/2" x 6 1/2"	29.40
S21680	P-6123†	1,500	7 1/2" x 7 1/2" x 7 1/2"	37.06

* KA mounting. † FK mounting (same as F but with female receptacle at side of case).

Universal Varitrans

Applicable to just about any type of combination power transformation and control likely to be met in radio, electronic, and public address service, the Universal Varitrans has a 115/230 volt primary and a smoothly variable secondary from 0-28 volts. Can be used to maintain output of 115 v. for input of 102 to 140 volts, or 230 v. output for 197 to 243 volts input. Primary and secondary windings can be connected for variable 220/115 volt or 115/220 volt output. 28 volt secondary useful for trains, resistors, low voltage lights.

Cat. No.	Type	Out	Size	Net Price
S20117	VL-0	1.5	4 1/2" x 6 1/2" x 2 1/2"	\$6.86
S20118	VL-1	3.5	4 1/2" x 6 1/2" x 3 1/2"	7.84
S20119	VL-2	6	4 1/2" x 6 1/2" x 4 1/2"	9.80
S20120	VL-3	11	5 1/2" x 7 1/2" x 5 1/2"	15.68

Autotransformers**STEP-DOWN TYPE**

Input 220-250 volts, 60 cycles; output 110-125 volts; style 2V mounting.

Cat. and Type No.	Sec. V.A.	Dimensions W. D. H.	Net Price
T-26V04	80	3 1/2" x 3 1/2" x 4 1/2"	\$3.34
T-18V06	150	3 1/2" x 4 1/2" x 4 1/2"	4.41
T-50V11	250	3 1/2" x 4 1/2" x 4 1/2"	5.29
T-18V07	500	3 1/2" x 4 1/2" x 4 1/2"	9.53

LINE VOLTAGE ADJUSTING

Input voltages 95, 105 and 125—60 cycles; output 115 volts. Mounting style 2V.

Cat. No.	Sec. V.A.	Dimensions W. D. H.	Net Price
T-18V20	100	3 1/2" x 3 1/2" x 4 1/2"	\$4.23
T-18V21	150	3 1/2" x 3 1/2" x 4 1/2"	4.55
T-18V22	250	3 1/2" x 3 1/2" x 4 1/2"	6.35
T-18V23	500	3 1/2" x 4 1/2" x 4 1/2"	8.82

**B-C****2-V****LINE VOLTAGE AUTOTRANSFORMERS**

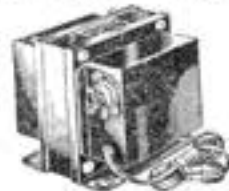
Provide means of increasing or decreasing primary voltages from 0 to 135 volts in 5-volt steps, when operated from 120 volt line. Mounting style 3C (with lugs).

Cat. No.	Sec. V.A.	Dimensions W. D. H.	Net Price
T-18V03	150	3 1/2" x 2 1/2" x 3 1/2"	\$5.12
T-18V04	250	3 1/2" x 2 1/2" x 4 1/2"	6.35
T-18V05	500	4 1/2" x 3 1/2" x 6 1/2"	9.53

PRIMARY REGULATING TYPE

For increasing or decreasing line voltage. Taps for 60-90-100-110-120-125 volts 50-60 cycles. Mounting style 2W.

Cat. and Type No.	Sec. V.A.	Dimensions W. D. H.	Net Price
T-82V11	500	4 1/2" x 7 1/2" x 6 1/2"	\$10.88
T-82V12	1,000	5 1/2" x 7 1/2" x 6 1/2"	14.11

**2-W****4-E****Isolation Transformers**

Electrostatic shield between primary and secondary. Features unique "plug-in" primary voltage adjustments—no changing of connections. Prevent radiation of line noise by electrical therapeutic machines, clippers, dryers, etc., or for use in amateur transmitting stations. Reduce line interference to radio receivers. Mounting style 4E except T-18V00, 2V.

Cat. and Type No.	Sec. V.A.	Dimensions W. D. H.	Net Price
T-18V00	100	3 1/2" x 3 1/2" x 4 1/2"	\$7.41
T-18V01	250	5 1/2" x 6 1/2" x 6 1/2"	13.96

**U T C Step-Down Line Transformers**

Designed to reduce the line voltage from 220-240 to 110-120 V or increase the line voltage from 110-120 to 220-240. Supplied with cord and plug. Built-in receptacles to plug in any device. Operates on 50-60 cycles.

Cat. No.	Type No.	Rating	Net Price
S11004	R-41	85 watt	\$3.82
S11005	R-42	125 watt	4.12
S11006	R-43	175 watt	5.00
S11007	R-44	250 watt	5.88
S11008	R-45	500 watt	11.76
S11009	R-46	1,000 watts, no cord	20.58

REPLACEMENT TRANSFORMERS



POWER TRANSFORMERS



Universal Power Transformers

These transformers will service the majority of radios in use today. Providing efficient performance in combination with extreme compactness and a high degree of adaptability, these are truly universal replacement transformers. The four universal mounting brackets supplied with each unit provide for vertical or horizontal mounting on nearly any probable mounting centers, while special screws allow ready installation as two-hole or four-hole half-shell units. Special studs are available to provide Underwriters' type mounting. Static shields, color-coded 8" leads, and 115 v. primaries.

2.5 VOLT STYLE

Cat. No.	Type No.	Tubes	Plate Ma. V.	Amps. per Winding @5v. @2.5v. @2.5v.	Mtg. Ctrs.	Net Price
S21511	P-6001	4-5	40 650	2 4	2 x 2 1/2"	\$2.18
S21512	P-6002	5-6	50 700	2 7.25	2 x 2 1/2"	2.79
S21513	P-6009	6-7	70 550	3 5 10.5	2 1/2 x 2 1/2"	3.21
S21514	P-6005	6-7	70 700	3 9 3.5	2 1/2 x 2 1/2"	3.21
S21515	P-6003	6-7	70 700	3 9	2 1/2 x 2 1/2"	2.91
S21516	P-6004	8-9	90 700	3 12.5	2 1/2 x 2 1/2"	3.43
S21517	P-6007	10-12	110 800	3 15.0 3.5	2 1/2 x 3 1/2"	4.38
S21518	P-6006	11-13	120 700	3 12.5 3.5	2 1/2 x 3 1/2"	4.21

6.3 VOLT STYLE

Cat. No.	Type No.	Tubes	Plate Ma. V.	Amps. per Winding @5v. @6.3v.	Mtg. Ctrs.	Net Price
S21519	P-6289	5-6	40 420	2 2	2 x 2 1/2"	\$2.18
S21520	P-6297	4-5	40 480	2 2	2 x 2 1/2"	2.18
S21521	P-6310	4-5	40 650	3 2	2 x 2 1/2"	2.18
S21522	P-6119	6-7	55 600	2 2.7	2 x 2 1/2"	2.21
S21523	P-6111	6-7	70 700	3 2.5	2 x 2 1/2"	2.79
S21524	P-6120	7-9	70 830	3 3.5	2 1/2 x 2 1/2"	2.94
S21525	P-6312	7-8	90 380	3 2.8	2 1/2 x 2 1/2"	3.35
S21526	P-6012	8-9	90 700	3 3.5	2 1/2 x 2 1/2"	3.15
S21527	P-6013	11-13	120 700	3 4.7	2 1/2 x 3 1/2"	3.48
S21528	P-6313	11-13	125 580	3 4.5	3 1/2 x 2 1/2"	3.72
S21529	P-6014	13-15	150 750	3 5.0	2 1/2 x 3 1/2"	4.56
S21530	P-6165	14-16	200 800	4 5.5	3 x 3 1/2"	5.26
S21531	P-6314	14-16	200 700	3 5.5	3 1/2 x 3 1/2"	5.18
S21532	P-6315	16-18	275 740	3 7.0	3 1/2 x 3 1/2"	7.06

6.3 VOLT & 2.5 VOLT COMBINATION—All units in this group have 5v. 3a. rectifier filament C.T.

Cat. No.	Type No.	Tubes	Plate Ma. V.	Amps. per Winding @5v. @6.3v. @2.5v. @2.5v.	Mtg. Ctrs.	Net Price
S21533	P-6293	6-7	60 600	6.3 2.5 2.5 7.5 2 1/2 x 2 1/2"	2 1/2 x 2 1/2"	\$3.15
S21534	P-6294	8-9	85 750	2.5 9.0 6.3-5 3.5 2 1/2 x 2 1/2"	2 1/2 x 2 1/2"	3.67
S21535	P-6295	8-9	90 700	6.3-2.5 3.5 2.5 9.0 2 1/2 x 3 1/2"	2 1/2 x 3 1/2"	3.67
S21536	P-6234*	11-13	90 600	2.5 12.0 6.3-5 4.0 2 1/2 x 3 1/2"	2 1/2 x 3 1/2"	4.79
S21537	P-6008	14-16	180 750	6.3 3.3 2.5 6.0 2 1/2 x 3 1/2"	2 1/2 x 3 1/2"	4.91

*Has additional 2.5v. center tapped winding for 1.75 a.

Half Shell Power Transformers

Cat. No.	Type No.	Tubes	Plate Ma. V.	Amps. per Winding @5v. @6.3v. @2.5v. @2.5v.	Mtg. Ctrs.	Net Price
S21538	P-2750	4	40 650	2 3.75	2 x 2 1/2"	\$1.76
S21539	P-2770	4-5	40 650	2 4.5	2 x 2 1/2"	2.18
S21540	P-2868	4-5	40 650	2 1.75 3.5	2 x 2 1/2"	2.32
S21541	P-2869	5-6	50 700	2 1.75 5.25	2 1/2 x 2 1/2"	2.52
S21542	P-2839	6-7	70 700	3 3.5 7.5	2 1/2 x 3 1/2"	3.63
S21543	P-2860	8-9	90 700	3 3.5 9.0	2 1/2 x 3 1/2"	3.21

6.3 VOLT STYLE

Cat. No.	Type No.	Tubes	Plate Ma. V.	Amps. per Winding @5v. @6.3v.	Mtg. Ctrs.	Net Price
S21544	P-2751	4	40 650	2 1.6	2 x 2 1/2"	\$1.91
S21545	P-2771	4-5	40 650	2 2.0	2 x 2 1/2"	2.06
S21546	P-947	4-5	50 700	2 2.0	2 1/2 x 2 1/2"	2.44
S21547	P-948	5-6	70 775	3 2.5	2 1/2 x 3 1/2"	3.21
S21548	P-949	7-10	120 700	3 3.0	2 1/2 x 3 1/2"	3.67
S21549	P-6335	6-8	120 700	3 3.0	2 1/2 x 2 1/2"	3.65
S21550	P-6336	6-8	150 600	3 3.0	2 1/2 x 2 1/2"	3.47
S21551	P-953	11-14	160 800	3 4.5	3 x 3 1/2"	4.79

Vibrator Transformer

(6 V. DC or 115 V. AC)

Handles 135 ma. at 350 volts; has 6.3 volt center-tapped filament winding delivering 2.25 amperes; style C housing 4 1/2 x 3 1/2 x 4".

Cat. No. S21552 Type P-6166 Net Price \$4.95

Tube Checker Transformer

Necessary in modernizing older model tube checkers. Ideal for other testing equipment and laboratory. Packed complete with wiring instructions giving color coding of leads. Primary voltage 105, 115, 125, 50/60 cycles. Secondary voltages of 1.1/ 1.4/ 1.5/ 2/ 2.5/ 3/ 3.3/ 5/ 6.3/ 7.5/ 12/ 25/ 30/ 35/ 50/ 70/ 85/ 110/ 117. Type A mounting.

The above power transformers are all for 115 volts 50-60 cycles. For 28 cycles, add 100% to these prices; for 230 volts 50-60 cycles add 35%.

Cat. No. S21206 Net Price \$5.09

Fully Cased Power Transformers

Fully cased power transformers for vertical mounting. Insulated leads brought out at bottom of case; all secondary windings center-tapped; rectifier filament winding 5 volts 3 amperes except as noted; 115 v. primary.



2.5 VOLT STYLE

Cat. No.	Type No.	Tubes	Plate Ma. V.	Amps. per Winding @2.5v. @2.5v. @2.5v.	Mtg. Ctrs.	Net Price
S21553	P-4042	6-7	70 700	3.5 7.5	2 1/2 x 1 1/2"	\$3.67
S21554	P-4043	8-9	90 700	3.5 9.0	2 1/2 x 2 1/2"	4.23
S21555	P-4044	10-12	110 700	3.5 14.0	2 1/2 x 2 1/2"	4.94

6.3 VOLT STYLE

Cat. No.	Type No.	Tubes	Plate Ma. V.	Amps. per Winding @6.3v. @6.3v. @6.3v.	Mtg. Ctrs.	Net Price
S21556	P-4076*	4-5	40 650	2.0	2 1/2 x 1 1/2"	\$2.82
S21557	P-4077*	5-6	50 700	2.0	2 1/2 x 1 1/2"	3.06
S21558	P-4078	6-7	70 700	3.0	2 1/2 x 1 1/2"	3.65
S21559	P-4079	8-9	90 700	3.5	2 1/2 x 2 1/2"	4.03
S21560	P-4080	10-12	110 700	4.5	3 x 2 1/2"	4.41
S21561	P-4143	8-9	130 880	3.5	2 1/2 x 3 1/2"	5.15
S21562	P-4081	11-14	160 800	4.5	3 x 2 1/2"	5.26
S21563	P-4084	11-14	175 800	2.5 3.5	3 x 2 1/2"	6.29
S21564	P-5059	11-14	200 675	5.0	3 x 3 1/2"	6.03
S21565	P-6170	200	1200	3.0 4.0	3 x 3 1/2"	5.88

*Rectifier filament winding 5v. 2A., center tapped; all others, 3A. Has 80V. bias tap and extra 2.5V. 1.75A. filament.

2.5 and 6.3 or 7.5 VOLT COMBINATION

Cat. No.	Type No.	Tubes	Plate Ma. V.	Amps. per Winding @2.5v. @6.3v. @7.5v.	Mtg. Ctrs.	Net Price
S21566	P-4045*	4-5	40 600	3.25 6.3 2.0	2 1/2 x 1 1/2"	\$2.76
S21567	P-4046*	5-6	50 700	7.25 6.3 2.0	2 1/2 x 2 1/2"	3.21
S21568	P-4047	6-7	70 700	9.0 6.3 3.0	2 1/2 x 2 1/2"	3.76
S21569	P-4048	8-9	90 700	10.0 6.3 3.5	2 1/2 x 2 1/2"	4.09
S21570	P-4049	10-12	110 700	14.0 6.3 4.5	3 x 2 1/2"	4.62
S21571	P-3005	10-12	125 720	10.0 6.3 4.0	3 x 2 1/2"	4.41
S21572	P-4050	11-14	160 800	14.0 6.3 4.5	3 x 2 1/2"	5.29
S21573	P-6169	200	1200	10.0 7.5 3.0	3 x 3 1/2"	5.88

*Rectifier filament winding 5v. 2A., center tapped; all others, 3A. Has 80V. bias tap and extra 2.5V. 1.75A. filament.

Has 80V. bias tap and extra 5V. 2A. filament.

1.5; 2.5 and 5 VOLT COMBINATION

Cat. No.	Type No.	Tubes	Plate Ma. V.	Amps. per Winding @1.5v. @2.5v. @5v.	Mtg. Ctrs.	Net Price
S21574	P-1501	60	600	1.5 1 1.5* 4	2 1/2 x 2 1/2"	\$4.41
S21575	P-1503	120	700	1.5 1 5.0* 5	3 1/2 x 3 1/2"	4.56
S21576	P-1505	120	700	2.5 4 2.5 9	3 x 3 1/2"	4.62

*Winding not center tapped.

Plate Transformers

Deliver rated DC voltage and current output when used with full-wave mercury vapor rectifier tubes with a two-section filter employing choke input and two 2 mfd. condensers and working into a resistive load; above average regulation and efficiency; phenolic terminal boards and heavy duty ceramic insulators. Primary 115 volts 50-60 cycles except on largest units which are arranged for 115 or 230 volt operation.



Cat. No.	Type No.	DC after Filter	Taps	Ma. V.	Dimensions H. W. D.	Net Price
S21577	P-8040*	400	40	300	4 1/2 x 3 1/2 x 4 1/2"	\$6.61
S21578	P-8041*	500	400-40	250	4 1/2 x 3 1/2 x 5 1/2"	8.09
S21579	P-8042*	600	400-40	300	4 1/2 x 3 1/2 x 6 1/2"	10.58
S21580	P-8043	750	600-40	300	7 1/2 x 6 1/2 x 8 1/2"	15.88
S21581	P-8044*	1000	400	150-150	7 1/2 x 6 1/2 x 8 1/2"	17.05
S21582	P-8045	1000	750	250	7 1/2 x 6 1/2 x 8 1/2"	15.88
S21583	P-8025	1000	750	400	7 1/2 x 6 1/2 x 8 1/2"	18.82
S21584	P-8026	1250	1000	300	7 1/2 x 7 1/2 x 9 1/2"	19.99
S21585	P-8027	1250	1000	500	7 1/2 x 7 1/2 x 9 1/2"	24.70
S21586	P-8028	1500	1250	300	7 1/2 x 7 1/2 x 9 1/2"	22.05
S21587	P-8029	1500	1250	500	7 1/2 x 7 1/2 x 9 1/2"	30.87
S21588	P-8030	1750	1500	300	7 1/2 x 7 1/2 x 9 1/2"	24.11
S21589	P-8031	1750	1500	500	11 1/2 x 7 1/2 x 9 1/2"	32.34
S21590	P-8032	2000	1750	300	7 1/2 x 7 1/2 x 9 1/2"	24.28
S21591	P-8033	2000	1750	500	11 1/2 x 7 1/2 x 9 1/2"	39.69
S21592	P-8034	2500	2000	300	7 1/2 x 7 1/2 x 9 1/2"	29.99
S21593	P-8035	2500	2000	500	11 1/2 x 7 1/2 x 9 1/2"	47.04

*Type C mounting, all others type B.

Secondary windings for dual rectifier supply; rated current available at each output.

Primary arranged for 115-230 volt operation.

Bias Transformers

Four outputs available at maximum current of 200 ma. Primary input—115 volts 50-60 cycles; filament winding delivers 3 amperes at 5 volts; vertical mounting enclosed case, styles C and D.



Cat. No.	Type No.	Volts	H. W. D.	Net Price
S21594	P-6317	90-130-170-200	3 1/2 x 3 1/2 x 3 1/2"	\$5.64
S21595	P-6318	250-350-400-450	4 1/2 x 3 1/2 x 4 1/2"	6.35

CHOKES



FILAMENT TRANSFORMERS



Chokes

These chokes include all commonly used ratings for units of their type. Since the amount of inductance varies with the magnitude of D.C. flowing through each choke inductance values listed are approximate.

Filter Chokes (REPLACEMENT TYPES)

Cat. No.	Type No.	Henries	D.C. Ma.	Ohms	Volts	Dimensions H. W. D.	Net Price
S10788	C-1515	50	15	900	1,650 A	1 1/2 x 2 1/2 x 1 1/2	\$.71
S10783	C-1706	5	50	300	1,650 A	1 1/2 x 2 1/2 x 1 1/2	.68
S10784	C-1707	7	50	500	1,650 A	1 1/2 x 2 1/2 x 1 1/2	.68
S10790	C-1003	30	50	550	1,650 A	1 1/2 x 3 1/2 x 1 1/2	.91
S10785	C-1708	10	65	450	1,650 A	1 1/2 x 3 1/2 x 1 1/2	.88
S10789	C-1353	20	75	375	1,650 L	2 1/2 x 2 1/2 x 1 1/2	.88
S10791	C-1002	30	75	400	1,650 A	2 1/2 x 3 1/2 x 1 1/2	1.24
S21628	C-1420	30	80	350	2,000 C	3 1/2 x 2 1/2 x 1 1/2	1.82
S10786	C-1709	9	85	250	1,650 A	1 1/2 x 3 1/2 x 2 1/2	1.18
S21629	C-2365	20	100	275	2,000 E	2 1/2 x 2 1/2 x 2 1/2	1.47
S10792	C-1001	30	110	200	3,000 A	2 1/2 x 4 x 2 1/2	1.56
S21630	C-2303	10	130	100	2,000 A	2 1/2 x 3 1/2 x 1 1/2	1.09
S21631	C-1421	25	140	100	3,000 C	3 1/2 x 2 1/2 x 2 1/2	2.24
S21632	C-2304	8	150	65	2,000 A	2 1/2 x 3 1/2 x 1 1/2	1.09
S21633	C-2309	8	150	90	2,000 A	2 1/2 x 3 1/2 x 1 1/2	1.27
S10787	C-1710	8	150	300	1,650 A	2 1/2 x 4 x 2 1/2	1.47

(HEAVY DUTY TYPES)

S21634	C-1410	20	175	100	3,000 C	3 1/2 x 2 1/2 x 2 1/2	2.12
S21635	C-1640	20	200	70	5,000 C	3 1/2 x 3 1/2 x 3 1/2	3.09
S10721	C-1411	15	200	80	3,000 C	3 1/2 x 2 1/2 x 3 1/2	2.76
S21636	C-1721	15	200	120	3,000 N	3 1/2 x 3 1/2 x 3 1/2	2.82
S21637	C-1703	15	250	60	3,000 B	3 1/2 x 2 1/2 x 3 1/2	2.94
S21638	C-1412	15	250	60	3,000 C	3 1/2 x 2 1/2 x 3 1/2	3.23
S21639	C-1722	13	300	80	3,000 N	4 1/2 x 3 1/2 x 3 1/2	3.71
S21640	C-2308	13	300	80	3,000 C	4 1/2 x 3 1/2 x 3 1/2	4.79
S10722	C-1413	12	300	80	5,000 D	4 1/2 x 3 1/2 x 3 1/2	5.09
S10723	C-1414	10	400	60	5,000 D	4 1/2 x 3 1/2 x 4 1/2	6.67
S10724	C-1415	5	500	70	5,000 FH	8 1/2 x 6 x 5 1/2	11.11

Swinging Chokes

S21641	C-1718	8-30	150	130	2,000 C	3 1/2 x 2 1/2 x 2 1/2	2.41
S21642	C-1400	8-40	175	100	3,000 C	3 1/2 x 2 1/2 x 2 1/2	2.24
S10717	C-1401	8-30	200	80	3,000 C	3 1/2 x 2 1/2 x 3 1/2	2.76
S21443	C-1645	8-35	200	85	5,000 C	3 1/2 x 3 1/2 x 3 1/2	3.09
S21644	C-1719	5-25	200	120	3,000 N	3 1/2 x 3 1/2 x 3 1/2	2.94
S21645	C-1702	8-30	250	60	3,000 B	3 1/2 x 2 1/2 x 3 1/2	2.94
S21646	C-1402	8-30	250	60	3,000 C	3 1/2 x 2 1/2 x 3 1/2	3.23
S21647	C-1720	5-25	300	80	3,000 N	4 1/2 x 3 1/2 x 3 1/2	3.71
S21648	C-2307	5-25	300	80	3,000 C	4 1/2 x 3 1/2 x 3 1/2	4.79
S10718	C-1403	8-25	300	80	5,000 D	4 1/2 x 3 1/2 x 3 1/2	5.09
S10719	C-1404	5-25	400	60	5,000 D	4 1/2 x 3 1/2 x 4 1/2	6.67
S10720	C-1405	5-25	500	70	5,000 FH	8 1/2 x 6 x 5 1/2	11.11

A.C.-D.C. Chokes

S21649	C-1711	4.5	50	325	1,600 Q	1 1/2 x 2 1/2 x 1 1/2	.68
S21650	C-1723	4.4	50	330	1,600 A	1 1/2 x 2 1/2 x 1 1/2	.68
S21651	C-1050	15	50	200	1,600 A	1 1/2 x 2 1/2 x 1 1/2	.71
S21652	C-1325	15	50	250	1,600 A	1 1/2 x 2 1/2 x 1 1/2	.71
S21653	C-1277	15	50	300	1,600 A	1 1/2 x 2 1/2 x 1 1/2	.71
S21654	C-1227	15	50	350	1,600 A	1 1/2 x 2 1/2 x 1 1/2	.71
S21655	C-1279	15	50	400	1,600 A	1 1/2 x 2 1/2 x 1 1/2	.71
S21656	C-1333	15	50	450	1,600 A	1 1/2 x 2 1/2 x 1 1/2	.71
S21657	C-1215	15	50	500	1,600 A	1 1/2 x 2 1/2 x 1 1/2	.71
S21658	C-1262	15	50	550	1,600 A	1 1/2 x 2 1/2 x 1 1/2	.71

Output Chokes

S21659	C-1003	30	50	550	1,600 A	2 1/2 x 3 1/2 x 1 1/2	.91
S21660	C-1034*	30	30	1150	1,600 A	1 1/2 x 2 1/2 x 1 1/2	1.12

Audio Reactors (MAX. CURRENT—10 MA.)

S21661	C-2300	1000	0.5	5500	1,600 E	2 1/2 x 2 1/2 x 2 1/2	1.57
S21662	C-2301	300	5	6000	1,600 E	2 1/2 x 2 1/2 x 2 1/2	1.76
S21663	C-1701*	300	10	11400	1,600 D	3 1/2 x 2 1/2 x 2 1/2	3.12

*Center tapped.

Hearing Aid Chokes (MANUFACTURERS' TYPES)

Small unshielded chokes for use with midrange tubes in low-current circuits; impedance values given are as measured with 1 ma. D.C. in the windings.

Cat. No.	Type No.	Ohms R	400 cycles 2VAC	200 cycles 10VAC	60 cycles 2VAC	10VAC	10VAC	10VAC	Dimen. H. W. D.	Net Price
S21665	C-65	1875	54M	70M	27M	39M	11M	18M	1 1/2 x 1 1/2 x 1 1/2	\$2.12
S21666	C-66	3675	21.5	27.9	21.5	31	30.5	47.5	1 1/2 x 1 1/2 x 1 1/2	3.47
S21667	C-67	2520	31	35.1	30	38.3	38	55.6	1 1/2 x 1 1/2 x 1 1/2	2.65

Filament Transformers

Filament transformers in a variety of physical and electrical sizes for all uses. 115 volt primary and center-tapped secondary unless otherwise noted.

SINGLE SECONDARY

Cat. No.	Type No.	secondary Volts	Amperes	Ins.	Mtg.	Dimensions H. W. D.	Net Price
S21596	P-4026	2.5	1.5	2,500 A	1 1/2 x 1 1/2 x 2 1/2	\$1.00	
S21597	P-4082†	2.5	2.5	2,500 E	2 1/2 x 2 1/2 x 2 1/2	1.71	
S21598	P-6133	2.5	5	7,500 B	2 1/2 x 2 1/2 x 2 1/2	1.53	
S21599	P-4083†	2.5	6	2,500 C	3 1/2 x 2 1/2 x 2 1/2	2.24	
S10726	P-3024†	2.5	10	2,500 C	3 1/2 x 2 1/2 x 2 1/2	2.79	
S21600	P-3060	2.5	10	10,000 B	3 1/2 x 2 1/2 x 2 1/2	2.41	
S10727	P-3025†	2.5	10	10,000 FA	5 1/2 x 4 1/2 x 8 1/2	5.64	
S21601	P-3026†	5.0	3	2,500 C	3 1/2 x 2 1/2 x 2 1/2	2.24	
S21602	P-4088	5.0	3	2,500 B	3 1/2 x 2 1/2 x 2 1/2	1.65	
S10728	P-3062	5.0	6	2,500 B	3 1/2 x 2 1/2 x 2 1/2	2.06	
S21603	P-5000†	5.0	6	2,500 C	3 1/2 x 2 1/2 x 2 1/2	2.59	
S21604	P-6135	5.0	10	2,500 N	3 1/2 x 3 1/2 x 3 1/2	2.59	
S21605	P-4086†	5.0	14	10,000 FA	5 1/2 x 4 1/2 x 8 1/2	6.32	
S21606	P-6302†	5.0	22	10,000 FA	5 1/2 x 4 1/2 x 8 1/2	7.35	
S10729	P-6136	5.25	4	2,500 N	2 1/2 x 2 1/2 x 2 1/2	1.65	
S21607	P-6137	5.25	13	2,500 N	3 1/2 x 3 1/2 x 3 1/2	3.21	
S21608	P-5011†	5.25	13	2,500 C	3 1/2 x 3 1/2 x 3 1/2	3.88	
S21609	P-6134	6.3	1.2	2,500 A	1 1/2 x 2 1/2 x 1 1/2	1.00	
S21610	P-5014	6.3	3	2,500 B	3 1/2 x 2 1/2 x 2 1/2	1.73	
S10731	P-4019†	6.3	4	2,500 C	3 1/2 x 2 1/2 x 2 1/2	2.59	
S10732	P-3064	6.3	6	2,500 B	3 1/2 x 2 1/2 x 2 1/2	2.06	
S21611	P-4089†	6.3	6	2,500 C	3 1/2 x 2 1/2 x 2 1/2	2.79	
S10733	P-6308†	6.3	10	2,500 N	3 1/2 x 3 1/2 x 3 1/2	2.70	
S21612	P-6309	6.3	20	2,500 N	4 1/2 x 3 1/2 x 3 1/2	5.53	
S10734	P-5015	7.5	4	2,500 B	3 1/2 x 2 1/2 x 2 1/2	1.76	
S21613	P-4091†	7.5	5	2,500 C	3 1/2 x 2 1/2 x 2 1/2	2.94	
S10735	P-6138	7.5	8	2,500 N	3 1/2 x 3 1/2 x 3 1/2	2.79	
S21614	P-4092†	7.5	8	2,500 C	3 1/2 x 3 1/2 x 3 1/2	3.53	
S21615	P-4094†	7.5	15	5,000 FA	5 1/2 x 4 1/2 x 8 1/2	6.70	
S21616	P-4093†	7.5	24	5,000 FA	5 1/2 x 4 1/2 x 8 1/2	9.85	
S10736	P-5016	10.0	4	2,500 B	3 1/2 x 2 1/2 x 2 1/2	2.24	
S21617	P-4090†	10.0	5	2,500 C	3 1/2 x 3 1/2 x 3 1/2	3.52	
S10737	P-6139	10.0	8	2,500 N	3 1/2 x 3 1/2 x 3 1/2	2.94	
S21618	P-4097†	10.0	8	2,500 C	3 1/2 x 3 1/2 x 3 1/2	3.70	
S21619	P-5002†	10.0	12	7,500 FA	5 1/2 x 4 1/2 x 8 1/2	6.67	
S21620	P-3020†	11.0	10	2,500 C	4 1/2 x 3 1/2 x 3 1/2	5.35	
S10738	P-6164	6.3, 5.2, 2.5*	2.5	2,500 B	2 1/2 x 2 1/2 x 2 1/2	1.65	

MULTIPLE SECONDARY

S21621	P-5012†	2.5	10.0	10,000 FA	5 1/2 x 4 1/2 x 8 1/2	7.03
S21622	P-3061	5.0	3.0	2,500 B	3 1/2 x 2 1/2 x 2 1/2	2.47
S21623	P-6324†	2.5	5.0	2,500 C	3 1/2 x 3 1/2 x 3 1/2	3.53
S21624	P-5009†	2.5	6.0	2,500 C	3 1/2 x 3 1/2 x 3 1/2	3.53
S10739	P-5008†	5.0	4.0	2,500 C	3 1/2 x 2 1/2 x 3 1/2	3.32
S10740	P-4022†	5.0	6.0	2,500 C	3 1/2 x 3 1/2 x 3 1/2	3.70
S10741	P-4090	6.3	3.0	2,500 B	3 1/2 x 2 1/2 x 2 1/2	2.47
S10742	P-6144	2.5	3.5	2,500 C	3 1/2 x 3 1/2 x 3 1/2	3.70
S10743	P-4084†	5.0	3.0	2,500 C	3 1/2 x 3 1/2 x 3 1/2	4.23
S21625	P-6310†	2.5	4.0	2,500 C	3 1/2 x 2 1/2 x 3 1/2	4.41
S21626	P-6333	7.5, 6.3	3.0	2,500 B	2 1/2 x 3 1/2 x 2 1/2	3.21
S21627	P-6335	6.3*	3.0	2,500 C	3 1/2 x 2 1/2 x 3 1/2	3.15

* Secondary NOT center-tapped.

† Primary 105-115 volts.

DRIVER TRANSFORMERS



MODULATION TRANSFORMERS

Poly-Pedance Driver Transformers

Four transformers with the maximum number of usable ratios will match the driver tubes to any class B modulator grid circuit without exceeding the power capabilities of the driver tubes. Balanced pie-wound coils are used throughout. Each unit packed with complete instructions.

Cat. No.	Type No.	Ratio Pri. to 1 Sec.	Mtg. Fig.	Dimensions H. W. D.	Net Price
S10756	A-4761	1.25:1, 1.4:1, 1.6:1, 1.8:1, 2:1, 2.2:1, 2.4:1	CD	3 1/2" 2 1/2" 3 1/2"	\$4.79
S10757	A-4762	2.6:1, 3:1, 3.2:1, 3.4:1, 4:1, 4.5:1, 5:1	CD	3 1/2" 2 1/2" 3 1/2"	4.79
S10758	A-4763	1.25:1, 1.5:1, 1.75:1, 2:1, 2.25:1, 2.5:1	CD	3 1/2" 3" 4"	5.88
S10759	A-4764	1.5:1, 2:1, 2.5:1, 3:1, 3.5:1	CD	3 1/2" 3" 4"	5.88

Poly-Pedance Line Driver Transformers

S21681	A-4765	1.075/0.85/1.0/1.25/1.45/1.75/2.0/2.25/2.5/2.75/3.15	CD	3 1/2" 2 1/2" 3 1/2"	4.41
S21682	A-4766	Same as above	CD	3 1/2" 3" 3 1/2"	5.18

*PP 6L6's with 16% inverse feedback.

115 watt; pri. MA 60 per side. 130 watt; pri. MA 120 per side.

Poly-Pedance Modulation Transformers

This carefully selected group of pie-wound, accurately tapped coil units gives an almost unlimited range in power and impedance ratings to assure a correct load match at all times. Liberal design, special impregnation and high quality laminations assure quiet operation and long life.

Cat. No.	Type No.	Cap. Pri. M.A. Sec. M.A. Mtg. Fig.	Dimensions H. W. D.	Net Price
S10760	A-3891	15 45 45 90 D	3 1/2" 2 1/2" 3 1/2"	\$4.05
S10761	A-3892	30 80 80 160 D	3 1/2" 3 1/2" 4 1/2"	5.00
S10762	A-3893	60 125 125 250 D	3 1/2" 3 1/2" 4 1/2"	5.88
S10763	A-3894	125 150 150 300 D	4 1/2" 3 1/2" 5 1/2"	7.76
S10764	A-3895	260 260 260 520 F8	7 1/2" 7 1/2" 8 1/2"	27.93
S21683	A-3896	600 350 350 700 F8	11 1/2" 7 1/2" 10 1/2"	57.62

Modulation Transformers—Line to R.F. Load

Cat. No.	Type No.	Primary Ohms	Secondary Ohms	Mtg. Fig.	Dimensions H. W. D.	Net Price
S21684	A-3834	500, 200	4000, 6000, 9500 C	4 1/2" 3 1/2" 3 1/2"	4 1/2" 3 1/2" 3 1/2"	\$4.79
S21685	A-3866	500, 200	5000, 6000, 7000 D	4 1/2" 3 1/2" 3 1/2"	4 1/2" 3 1/2" 3 1/2"	5.88

Driver Transformers (Specific Types)

Cat. No.	Type & Class	Application	Impedance Pri. 1 Sec.	Pri. 1 Sec.	Dimensions H. W. D.	Mtg. Fig.	Net Price
S21686	A-4765 CL AB	From PP or a 45 6F6 2A5 42 6K6 6N7 or 6C5 To PP 6K6 2A5 42 6F6 6V6 6Y6 or 6Z7	10,000 10,000 35 Ma. 4,400 2,500 2:1	1:1 2 1/2" 2 1/2" 1 1/2"	2 1/2" 2 1/2" 1 1/2"	1:1	\$1.47
S21687	A-4405 CL B	From Sgl. 45 6F6 42 2A5 6K6 or 41 To PP 42 59 2A5 6F6 6V6 or 6Z7	10,000 40 Ma. 18,500 95 Ma. 2,500 2:1	1:1 2 1/2" 2 1/2" 1 1/2"	2 1/2" 2 1/2" 1 1/2"	1:1	2.79
S21688	A-4406 CL B	From PP 2A3 6A3 or 45 To PP 50T 154 203A HF100 HF200 or 825	10,000 40 Ma. 18,500 95 Ma. 2,500 2:1	1:1 2 1/2" 2 1/2" 1 1/2"	2 1/2" 2 1/2" 1 1/2"	1:1	3.09
S10774	A-4721 CL B	From Sgl. 2A3 6A3 45 46 59 42 6V6 2A5 89 53 6A6 6N7 6C5 37 30 or 1H4 To PP 1J6 19 79 6Z7 53 6N7 42 45 6V6 46 49 2A5 59 89 6K6 or 7X20	10,000 22,500 30 Ma. 14,000 90 Ma. 2,500 2:1	1:1 2 1/2" 2 1/2" 1 1/2"	2 1/2" 2 1/2" 1 1/2"	1:1	2.12
S10779	A-4404 CL A* CL B	From PP 2A3 6A3 45 6L6 6V6 6F6 50 42 or 59 To PP 849* PP 800 830B 203 10 RK18 RK28 HF100 T20 TZ40 or 811 From PP par. 2A3 6A3 or 6L6 To PP 154 812 203A 358 211 203Z RH38 HF100 100TL HF200 822 HD203A 354 or 150T	10,000 10 Ma. 25,000 15 Ma. 22,500 40 Ma. 2,500 2:1	1:1 2 1/2" 2 1/2" 1 1/2"	2 1/2" 2 1/2" 1 1/2"	1:1	3.09
S10773	A-4292 CL B	From Sgl. 6C5 6J5 30 1H4 or 49 To PP 1J6 19 79 6Z7 30 1H4 or 49	10,000 10 Ma. 25,000 15 Ma. 22,500 40 Ma. 2,500 2:1	1:1 2 1/2" 2 1/2" 1 1/2"	2 1/2" 2 1/2" 1 1/2"	1:1	1.09
S10778	A-4208 CL AB	From PP 6C5 6J5 6N7 6L5 56 27 76 55 85 or 6R7 To PP 2A3 2A5 6A3 6F6 6L6 6V6 42 45 50 59 89	10,000 10 Ma. 25,000 15 Ma. 22,500 40 Ma. 2,500 2:1	1:1 2 1/2" 2 1/2" 1 1/2"	2 1/2" 2 1/2" 1 1/2"	1:1	2.53
S10776	A-4210 CL B	From Sgl. 2A3 6A3 45 46 59 2A5 6F6 42 45 50 59 89 6N7 or 76 To PP 2A3 6A3 46 or 59 To PP 2A5 42 45 6F6 6L6 or 807	10,000 10 Ma. 25,000 15 Ma. 22,500 40 Ma. 2,500 2:1	1:1 2 1/2" 2 1/2" 1 1/2"	2 1/2" 2 1/2" 1 1/2"	1:1	2.41
S10777	A-4701 CL AB1	From PP 46 59 6C5 6J5 56 37 27 or 76 To PP 6L6 6V6 6Y6 42 6F6 45 2A3 or 6A3	10,000 25 Ma. 25,000 50 Ma. 2,500 2:1	1:1 2 1/2" 2 1/2" 1 1/2"	2 1/2" 2 1/2" 1 1/2"	1:1	2.61
S21689	A-4212 CL B	From PP 2A3 6A3 45 or 6L6 To PP 801 830 B 35T 808 838 RK52 2120 RK 57 HY40Z 805 828 756 100TL 100TH TZ20 TZ40 PP Par. 46 59 (PP807 CL AB)	10,000 25 Ma. 25,000 50 Ma. 2,500 2:1	1:1 2 1/2" 2 1/2" 1 1/2"	2 1/2" 2 1/2" 1 1/2"	1:1	2.61
S10775	A-4218 CL B	From Sgl. 53 6A6 6N7 70 or 6E6 To PP 53 6A6 6N7 6L6 6V6 or 59	10,000 15 Ma. 25,000 50 Ma. 2,500 2:1	1:1 2 1/2" 2 1/2" 1 1/2"	2 1/2" 2 1/2" 1 1/2"	1:1	2.06
S21690	A-4416 CL B	From PP 53 6A6 or 6N7 To PP Par. 53 6A6 6N7	10,000 15 Ma. 25,000 50 Ma. 2,500 2:1	1:1 2 1/2" 2 1/2" 1 1/2"	2 1/2" 2 1/2" 1 1/2"	1:1	2.79
S21691	A-4702 CL AB2	From Sgl. 2A3 45 46 59 or 6F6 To PP 6L6 or 6V6 (CL AB2) or To PP Par. 46 or 59 (CL B)	10,000 40 Ma. 25,000 50 Ma. 2,500 2:1	1:1 2 1/2" 2 1/2" 1 1/2"	2 1/2" 2 1/2" 1 1/2"	1:1	2.44
S21692	A-4703 CL AB2	From PP 2A3 45 46 6L6 89 6V6 2A5 or 42 To PP 807 or HY61 or To PP Par. 6L6	10,000 90 Ma. 25,000 50 Ma. 2,500 2:1	1:1 2 1/2" 2 1/2" 1 1/2"	2 1/2" 2 1/2" 1 1/2"	1:1	3.15

*PP Primary ratio is 2:1. 1:1 split secondary.

Plate Modulation Transformers (Specific Types)

Plate Modulation Transformer Specifications (Specific Types)									
	Cat. No.	Type No.	Class	Output Tubes	Primary Ohms Ma.	Secondary Ohms Ma.	Audio W. Mtg.	Dimensions H. W. D.	Net Price
	S10765	A-3812	B	106 1J6 19 6E6 6G6 6Z7 PP 1H4 30 49 1G5 6K6 37 38 41	10000 32	4000 50	5 A 1 1/2"	2 1/2" 1 1/2"	\$1.09
	S21693	A-3871	A1	6B5* 6F6* 6L6 6N6* HY69	4500 60	8500 50	10 E 2 1/2"	2 1/2" 2 1/2"	2.06
	S21694	A-3873	AB1	PP 6L6 RK56 HY60	8000 100	8000 100	25 C 3 1/2"	2 1/2" 3 1/2"	3.70
	S10767	A-3843	B	6A6 6N7 53 6Y7 79	10000 100	3000 5000 100	25 C 3 1/2"	2 1/2" 2 1/2"	2.41
	S21695	A-3835	AB2	PP 6V6 6V6 2A5 42	3000 80	5350 8350 100	25 C 3 1/2"	3 1/2" 3 1/2"	3.70
	S21696	A-4200	A	PP 2A3 6A3 45 6A5 6B4 50	5000 80	5000 80	12 W-2 3 1/2"	2 1/2" 3 1/2"	4.06
	S21697	A-3868	AB1	PP 6L6	12000 100	12000 70	35 C 3 1/2"	2 1/2" 3 1/2"	3.53
	S10768	A-2906	B	PP 10 HK24 46 59 801 4602	6000 200	3300 4000 125	40 D 4 1/2"	3 1/2" 4 1/2"	4.79
	S10769	A-3843	AB1	PP 6L6 50 HY69	6000 150	5000 7500 150	40 D 4 1/2"	3 1/2" 4 1/2"	5.00
	S21698	A-3874	AB1	PP 6L6	6000 100	500 2800 200	50 C 4 1/2"	3 1/2" 3 1/2"	5.00
	S21699	A-3808	AB2	PP 6L6 807 HY61 RK41	3800 260	4000 5000 170	60 D 4 1/2"	3 1/2" 4 1/2"	5.41
	S21700	A-2907	B	PP Par. 6L6 PP 10 TZ20 TZ20 HY25 46 PP 801 825 841	3300 5000 200	7500 10000 3300 5000 150	90 D 4 1/2"	3 1/2" 4 1/2"	7.03
	S10770	A-2908	B	PP RK18 T20 TZ20 HY25 RK31 PP 35T 50T 800 801 830B 1623	7200 260	3000 4500 220	120 D 4 1/2"	3 1/2" 4 1/2"	7.41
	S10771	A-3829	B	PP RK12 HY25 35T HY40Z T40 PP TZ40 100TL HK354 765 809 830B	12000 6000 250	5350 6250 3300 4000 300	175 D 4 1/2"	3 1/2" 5"	8.00

*Secondary winding used as primary.

AUDIO TRANSFORMERS



INTERSTAGE TRANSFORMERS



TYPE "A"



TYPE "C"



TYPE "D"



TYPE "E"



TYPE "J"



TYPE "L"

Microphone, Pick-up, or Line-to-Grid

Cat. No.	Type No.	From	to	Grids	Impedance	Sec.	Overall Ratio	Mtg.	Dimensions	Net Price
S21476	A-4742	S.B. mike		Rel. or PP	100	400,000*	1:64	E	2 1/2 x 2 1/2 x 1 1/2	\$1.47
S21477	A-4706	S.B. mike		Single	100	60,000	1:24.6	A	1 1/2 x 2 1/2 x 1 1/2	.88
S21478	A-4708	D.B. mike		Single	200*	57,000	1:17	J	2 1/2 x 2 1/2 x 1 1/2	1.29
S10781	A-4351	S.B. or D.B. mike, or line		Single	50, 125, 200, 333, 500	89,000	1:13.3	E	2 3/4 x 2 1/2 x 1 1/2	1.82
S10782	A-4352	S.B. or D.B. mike, or line		PP	50, 125, 200, 333, 500	89,000	1:13.3	Q	2 3/4 x 2 1/2 x 1 1/2	2.06
S21481	A-4705	S.B. mike		Single	200 or 70	80,000	1:20	A	1 1/2 x 2 1/2 x 1 1/2	.88

*Winding center-tapped.

Microphone or Line-to-Line

S21479	A-4350	S.B. or D.B. mike, or line	Line	50, 125, 200, 333, 500	Same as pri.	-	Q	2 3/4 x 2 1/2 x 1 1/2	2.06
S21480	A-4407	S.B. or D.B. mike, or line	Line	50, 125, 200, 333, 500	Same as pri.	-	D	2 1/2 x 2 1/2 x 1 1/2	3.41

Universal Tube-to-Line Transformers

Cat. No.	Type No.	To Line from	Primary	Secondary	DC. Ma. Primary	Mtg.	Dimensions	Net Price
S21482	A-3250	Rel. or PP 27, 30, 12A 37, 55, 56, 76, 6C5, 6C6	10M/20M	50, 125, 200 333, 500	10	Q	2 3/4 x 2 1/2 x 1 1/2	\$1.65
S21483	A-4770	Universal single tube	2500, 4500 500	50M, 6M, 7M	60	J	3 1/2 x 2 1/2 x 2 1/2	2.59
S21484	A-4771	Universal PP tubes	8M, 10M, 12M 14M, C.T.	500	55	J	3 1/2 x 2 1/2 x 2 1/2	2.79

Universal Line-to-Voice-Coil Transformers

Cat. No.	Type No.	Pri. Impedance	Sec. Impedance	Max. Watts	Mtg.	H. W. D.	Net Price
S21485	A-3882	250, 333, 500	4, 8, 15	25	D	3 1/2 x 2 1/2 x 3 1/2	\$2.82
S21486	A-3883	500	4, 8, 8, 15	25	J	2 1/2 x 1 1/2 x 1 1/2	1.65

Transceiver Transformers

Cat. No.	Type No.	Service	Primary	Secondary	DC. Ma. Primary	Audio W.	Mtg.	Dimensions	Net Price
S21487	A-3833	S.B. mike and plate to single grid	5,000 200	60,000	10	5	A	1 1/2 x 2 1/2 x 1 1/2	\$1.24
S21488	A-4413	S.B. mike and plate to single grid	10,000 200	90,000	45	10	J	2 1/2 x 2 1/2 x 2 1/2	1.82
S21489	A-3836	Pent. plate to low or high impedance phone or oscillator	10,000 50	2,000	30	5	A	1 1/2 x 2 1/2 x 1 1/2	1.38

INTERSTAGE TRANSFORMERS

With its wide range of sizes and styles, this group of fine transformers has a great variety of applications both in replacement service and in the design of new equipment. For convenient installation and satisfying performance, you'll find these transformers hard to beat.

Plate-to-Grid Interstage Transformers

For coupling single, 10,000 ohm plate to single grid, except No. A-4205 which is for 20,000 ohm plate.

Cat. No.	Type No.	Ohms Sec.	Turns Ratio	Pri. Ma.	Mtg.	Dimensions	Net Price
S21490	A-4205	115M	2.4:1	15	C	3 1/2 x 2 1/2 x 2 1/2	\$3.15
S10748	A-53C	90M	3:1	10	A	1 1/2 x 2 1/2 x 1 1/2	.91
S10750	A-63C	90M	3:1	10	A	1 1/2 x 2 1/2 x 1 1/2	1.06
S10749	A-73C	90M	3:1	10	A	2 3/4 x 2 1/2 x 1 1/2	1.32
S21491	A-6198	125M	3.5:1	30	W-1	2 1/2 x 1 1/2 x 2 1/2	3.41

Push-Pull Interstage Transformers

Push-pull plates to push-pull grids; 10 Ma. primary current, except A-4208 which is 15 Ma.

Cat. No.	Type No.	Ohms Pri.	Ohms Sec.	Turns Ratio	Mtg.	Dimensions	Net Price
S10778	A-4208*	25M	13M	1:1.4	C	3 1/2 x 2 1/2 x 2 1/2	\$2.53
S10751	A-4711	20M	20M	1:1	A	1 1/2 x 2 1/2 x 1 1/2	1.32
S21492	A-4772*	20M	45M	1.5:1	E	3 1/2 x 2 1/2 x 2 1/2	2.47
S21493	A-4777*	20M	45M	1.5:1	C	3 1/2 x 2 1/2 x 2 1/2	2.79
S10752	A-4155	10M	90M	3:1	L	2 1/2 x 2 1/2 x 2 1/2	1.47

*Split secondary.

Universal Interstage Transformers

Split secondary type; may be used as plate-to-grid, push-pull input, or push-pull interstage replacements; overall ratio 3:1; center-tapped primary and split secondary permit ratios 1:1, 3:1, and 6:1. Transformers may be used either step-up or step-down.

Cat. No.	Type No.	Pri. Ma.	Mtg.	Dimensions	Net Price
S21494	A-4773	10	E	2 1/2 x 2 1/2 x 2 1/2	\$1.82
S21495	A-4774	10	E	2 1/2 x 2 1/2 x 2 1/2	1.53
S21496	A-4775	10	E	2 1/2 x 2 1/2 x 2 1/2	2.06

Push-Pull Input Transformers

For coupling 10,000 ohm plate to push-pull grids; A-4206 only for 20,000 ohm plate.

Cat. No.	Type No.	Ohms Sec.	Turns Ratio	Pri. Ma.	Mtg.	Dimensions	Net Price
S21497	A-52C	40M	2:1	10	A	1 1/2 x 2 1/2 x 1 1/2	\$.91
S21498	A-62C	40M	2:1	10	A	1 1/2 x 2 1/2 x 1 1/2	1.06
S21499	A-4741	40M	2:1	10	E	2 1/2 x 1 1/2 x 1 1/2	1.09
S21500	A-4745*	40M	2:1	10	E	2 1/2 x 2 1/2 x 2 1/2	2.12
S10748	A-53C	90M	3:1	10	A	1 1/2 x 2 1/2 x 1 1/2	.91
S10750	A-63C	90M	3:1	10	A	1 1/2 x 2 1/2 x 1 1/2	1.06
S10749	A-73C	90M	3:1	10	A	2 3/4 x 2 1/2 x 1 1/2	1.32
S21501	A-4719	90M	3:1	10	E	2 1/2 x 2 1/2 x 2 1/2	2.32
S21502	A-4206*	180M	3:1	15	C	3 1/2 x 2 1/2 x 2 1/2	3.09
S21503	A-64C	160M	4:1	10	E	1 1/2 x 2 1/2 x 1 1/2	1.18

*Split secondary.

†State shield between windings, for super-regenerative detector.

Driver Transformers



TYPE "Q"



TYPE "S"

Cat. No.	Type No.	Class	Application	Imp. Sec.	Turns Ratio	DC. Ma. Pri.	Mtg.	Dimensions	Net Price
S21504	A-4722	AB	42 47 2A5 6X6 to PP42 2A5 6F6 6X6	10,000	1:1	30	E	2 1/2 x 2 1/2 x 1 1/2	\$1.76
S21505	A-4752	AB	6G6G 6F6 42 2A5† to* 6V6 6Y6 6F6 6L6 6Z7	2,500 4,400 10,000	2:1 1.5:1 1:1	35 8	E	2 1/2 x 2 1/2 x 1 1/2	1.47
S21506	A-4713	AB	46 45 2A5 6F6 to* 79 2A5 6A6 6F6	2,500	2:1	30	A	1 1/2 x 2 1/2 x 1 1/2	1.09
S10773	A-4292	B	6C5 30 49 to 1J6 19 2-30 2-49	1,600	2.5:1	10	A	1 1/2 x 2 1/2 x 1 1/2	1.09
S21507	A-4734	B	30 2A5 6A6 1G5 6F6 6K6 to* 19 2A5 2A6 1J6	1,600	2.5:1	15	A	2 1/2 x 2 1/2 x 1 1/2	1.29
S21508	A-4401	B	27 30 37 56 76 6C5 1H4 6J7 to 19 79 1J6	1,400	2.7:1	15	J	2 1/2 x 2 1/2 x 2 1/2	1.59
S21509	A-4723	B	30 2A5 6A6 1G5 6K6, etc. to* 19 79 2A5 6A6 6F6 1J6 6K6	1,000	3:1	30	A	1 1/2 x 2 1/2 x 1 1/2	1.09
S21510	A-4712	B	PP27 30 37 56 76 6C5 1H4 6J5 to PP19 53 6A6 1J6 6N7	2,200	3:1	10	A	1 1/2 x 2 1/2 x 1 1/2	1.09

*PP grids.

†As triodes.

‡Primary impedance A-4712 is 20,000 ohms; all others 10,000 ohms.

STANCOR OUTPUT TRANSFORMERS

Replacement Output Transformers

	Cat. No.	Type No.	Class	Output Tube	Ohms		Pri. Ma.	Audio W.	Mtg.	Dimensions			Net Price
					Pri.	Sec.				H.	W.	D.	
TYPE "A"	S21701	A-3803	A	48 25B6 25L6 50L6	1500	2, 4, 6	65	5	A	1 1/8"	2 1/2"	1 1/8"	.91
	S21702	A-3876	A	2A3 6A3 6B4 6V6 6Y6 25AC5 25B5 25B6 25L6 35A5 35L6 50L6	2000	4	60	5	A	1 1/8"	2 1/2"	1 1/8"	.68
	S21703	A-3825	A	2A3 6A3 6B4 6L6 6Y6 25AC5 25B5 25L6 25N6 35N6 35L6 50L6 50W6	2500	1, 2, 4	75	8	Q	1 1/8"	2 1/2"	1 1/8"	1.18
TYPE "C"	S21704	A-2203	A	12A5 25A6 31 43 45 71 45	4000	8	40	5	A	1 1/8"	2 1/2"	1 1/8"	.91
	S21705	A-3877	A	2B5 6V6 7C5 12A 25A6 31 43 59	5000	8	40	5	A	1 1/8"	2 1/2"	1 1/8"	.68
	S21706	A-3822	A	2A5 6AC5 6B5 6F6 6K6 6N6 7B5 38 41 42 47 59 89	7000	0.7, 1, 1.4	45	5	Q	1 1/8"	2 1/2"	1 1/8"	.85
TYPE "E"	S21707	A-3878	A	2A5 6AC5 6B5 7B5 6F6 6K6 6N6 20 31 33 42	7000	4	30	5	A	1 1/8"	2 1/2"	1 1/8"	.68
	S21708	A-2313	A	2A3 6AC5 6F6 6K6 6N6 7B5 33 41 42 47 59 89	7000	8	40	10	A	1 1/8"	3 1/2"	1 1/8"	1.03
	S21709	A-2201	A	6A6 53 PP 25A6 43 45 48 71	8000	6	40	10	A	1 1/8"	3 1/2"	1 1/8"	1.32
TYPE "F"	S21710	A-3824	B	6A6 6N7 53; PP 46	8000	1, 2, 4	75	8	Q	1 1/8"	3 1/2"	1 1/8"	1.41
	S21711	A-3879	A	1J6 3C5 6A4 6C6 6N7 6R7 12A 38	10000	4	50	5	A	1 1/8"	2 1/2"	1 1/8"	.71
	S21712	A-3496	A	PP 2A5 6F6 6K6 7B5 33 41 42 47 49	14000	4	45	5	A	1 1/8"	2 1/2"	1 1/8"	1.00

Heavy Duty Output Transformers to Line or Speaker (High Level)													
Cat. No.	Type	Class	Output Tube	Power (W)	Ohms	Pri. Ma.	Audio W.	Mtg.	Dimensions (H x W x D)	Net Price			
S21713	A-3306	A	PP Par. 48 25L6	2500	(b)	100	25	C	3 1/2" x 2 1/2" x 3 1/2"	\$4.41			
S21714	A-3301	AB	PP Par. 2A3 45	3000	(b)	55	30	C	3 1/2" x 2 1/2" x 3 1/2"	2.94			
S21715	A-3802	AB1	PP Par. 6L6	3300	(e)	250	75	C	4 1/2" x 3 1/2" x 3 1/2"	5.00			
S21716	A-3851	AB1	PP 45 6L6	3800	(d)	70	30	C	3 1/2" x 2 1/2" x 3 1/2"	3.53			
S21717	A-3872	A	PP 6L6 (10% inv. feedback)	4400	(a)	150	18	E	2 1/2" x 2 1/2" x 2 1/2"	2.06			
S21718	A-3310	A	PP 2A3 6A3 45	5000	(b)	55	30	C	3 1/2" x 2 1/2" x 3 1/2"	2.94			
S21719	A-3800	A	PP 6L6; C1, AB-PP 2A3 6A3 54	5000	(d)	60	30	C	3 1/2" x 2 1/2" x 3 1/2"	3.32			
S21720	A-3307	AB2	PP 2A5 6F6 42	6000	(b)	100	30	C	3 1/2" x 2 1/2" x 3 1/2"	3.53			
S21721	A-3801	AB1	PP 46 59; PP Par. 6A6 6N7 53	6600	(d)	150	35	C	3 1/2" x 3 1/2" x 3 1/2"	3.88			
S21722	A-3855	A	2A5 6AC5 6F6 6K6 6N6 7B5 33 41 42 47 59 89; PP 12A5 45	7000	(b)	40	5	E	2 1/2" x 2 1/2" x 2 1/2"	2.00			
S21723	A-3855	AB1	PP 6L6	9000	(d)	150	35	C	3 1/2" x 3 1/2" x 3 1/2"	3.88			
S21724	A-3304	A	6A4 6B5 6N6; PP 6V6 45	7000	(b)	60	25	C	3 1/2" x 2 1/2" x 3 1/2"	2.82			
S21725	A-3303	B	6A6 6N7 53; PP 6AC5	10000	(b)	55	20	C	3 1/2" x 2 1/2" x 3 1/2"	2.59			
		A	PP 2A5 6F6 6K6 7B5 41 42 47 59 89	14000	(b)	55	20	C	3 1/2" x 2 1/2" x 3 1/2"	2.59			

(a) 4-8-15 ohms. (b) 4-8-15-500 ohms. (c) 4-8-250-500 ohms. (d) 4-8-15-250-500 ohms. NOTE: All transformers for PP operation have CT.

Universal Output Transformers

Cat. No.	Type	Output Tubes	Ohms Impedance	Secondary	Pri. Ma.	Audio Watts	Mtg.	Dimensions (H x W x D)	Net Price
S21726	A-3856	(e)	4000 7000 8000 10000 14000 CT	1 to 30	35	4	Q	1 1/8" x 2 1/2" x 1 1/8"	\$1.09
S21727	A-3849	(f)	1500 2000 4000 5000 7000 10000	1 to 30	55	10	Q	1 1/8" x 2 1/2" x 1 1/8"	1.09
S21728	A-3823	(e)	4000 7000 8000 10000 14000 CT	1 to 30	40	8	Q	1 1/8" x 2 1/2" x 1 1/8"	1.09
S21729	A-3850	(e)	4000 7000 8000 10000 14000 CT	1 to 30	40	8	J	1 1/8" x 2 1/2" x 1 1/8"	1.09
S21730	A-3852	(e)	4000 7000 8000 10000 14000 CT	1 to 30	40	15	J	1 1/8" x 2 1/2" x 1 1/8"	1.41
S21731	A-3870	(e)	4000 7000 8000 10000 14000 CT	1 to 30	50	18	Q	1 1/8" x 2 1/2" x 1 1/8"	1.41
S21732	A-3850	(e)	4000 7000 8000 10000 14000 CT	1 to 30	40	15	Q	1 1/8" x 2 1/2" x 1 1/8"	2.06
S21733	A-3830	(e)	3000 5000 6000 7000 8000 10000 CT	1 to 30	60	20	Q	1 1/8" x 2 1/2" x 1 1/8"	2.06
S21734	A-3890	(e)	4000 7000 8000 10000 14000 CT	1 to 30	50	15	E	1 1/8" x 2 1/2" x 1 1/8"	2.79
S21735	A-2855	(e)	4000 7000 8000 10000 14000 CT	1 to 30	50	15	E	1 1/8" x 2 1/2" x 1 1/8"	1.32
S21736	A-3841	(f)	2500 4000 5000 6000 7000	500	60	10	J	1 1/8" x 2 1/2" x 1 1/8"	2.76
S21737	A-3842	(g)	8000 10000 12000 14000 CT	500	55	10	J	1 1/8" x 2 1/2" x 1 1/8"	2.76

(e) Single or PP plates. (f) Universal single plate. (g) Universal PP plates.



4,000 Volt Dielectric Test Set



A convenient source of DC potential for dielectric testing; meter-indicated output continuously adjustable from zero to 4,000 volts; neon lamp shows condition of test specimen; delivers up to 10 milliamperes; built-in resistive guard circuit protects instrument against damage from external shorts. This instrument has the important safety feature of a built-in relay that may be operated by a remote manual or foot switch to turn high voltage circuit on and off and to provide automatic discharge of capacitors; this is a valuable aid to breakdown testing. Instrument is housed in compact steel case with attractive gray crackle finish and is furnished complete with 2 x 2 rectifier, indicating meter, primary Variac, attachment cord and plug, primary fuse and two 4-foot, 5,000 volt test cables; 110 volt AC operation. Cat. No. S23505 Model 1011. Net Price, complete. \$135.00



Voltage-Regulated Power Supply



A reliable, constant-voltage source for DC applications; delivers up to 40 watts at 200 to 400 volts DC; holds voltage constant regardless of load fluctuations; regulation is accurate to 1%; control panel carries voltmeter and milliammeter that indicate load at all times; output is well filtered at all loads; all condensers are of oil-filled construction for maximum safety factor and long life. Instrument is housed in sloping-front, steel case with all controls accessibly located on front panel; tubes used are 3-TC5, 1-VR105, 1-6SN7, and 1-83; instrument cover is easily removed for tube replacement or test; operates on 110 volts 60 cycles. Cat. No. S23503 Model 1218. Net Price, complete. \$135.00



VOLUME CONTROLS • RESISTORS

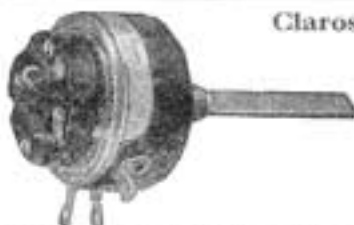
IRC Wire Wound Controls

For power requirements up to 2 watts; tight, uniform winding assures accuracy; spiral spring connector from rotor to terminal eliminates noise; diameter $1\frac{1}{2}$ " depth behind panel $\frac{3}{8}$ " shaft length $2\frac{1}{2}$ " supplied with back cover.

Net Price, without switch 59c

Cat. No.	Type	Ohms	MA. max.	Cat. No.	Type	Ohms	MA. max.
S21067	W-2	2	1,000	S21081	W-100	100	142
S21068	W-3	3	815	S21082	W-200	200	100
S21069	W-5	5	630	S21083	W-300	300	83
S21070	W-6	6	560	S21084	W-400	400	71
S21071	W-8	8	500	S21085	W-500	500	63
S21072	W-10	10	450	S21086	W-750	750	52
S21073	W-15	15	370	S21087	W-1000	1,000	45
S21074	W-20	20	320	S21088	W-2000	2,000	32
S21075	W-25	25	285	S21089	W-3000	3,000	26
S21076	W-30	30	260	S21090	W-4000	4,000	22
S21077	W-40	40	225	S21091	W-5000	5,000	20
S21078	W-50	50	200	S21092	W-7500	7,500	16
S21079	W-60	60	183	S21093	W-10000	10,000	14
S21080	W-75	75	164				

Type W switches to fit above controls. SPST-Cat. No. S21094 Net 29c DPST-Cat. No. S21095, SPDT-Cat. No. S21096 Net each 35c



Clarostat Wire-Wound Controls

A dependable rheostat or potentiometer for delicate control purposes, yet capable of handling considerable current. Clarostat wire-wound controls are the logical choice. Available up to 100,000 ohms.

Figures showing usual application are 2—untuned antenna, 3—antenna and grid bias, 4—grid

bias, 5—standard potentiometer, 9—screen grid and phonograph, 10—antenna and RF coil.

Cat. No.	Type	Use	Ohms	Net	Cat. No.	Type	Use	Ohms	Net
S7233	W-1	8	50		S7257	W-25	4	7,500	
S7234	W-2	8	100		S7258	W-26	9	7,500	
S7235	W-3	8	200		S7259	W-27	8	10,000	
S7236	W-4	8	300		S7260	W-28	10	10,000	
S7237	W-5	8	400		S7261	W-29	3*	10,000	
S7238	W-6	8	500		S7262	W-30	4	10,000	
S7239	W-7	8	750		S7263	W-31	9	10,000	
S7240	W-8	8	1,000		S7264	W-32	8	15,000	
S7241	W-9	2	1,000		S7265	W-33	3	15,000	
S7242	W-10	4	1,000		S7266	W-34	4	15,000	
S7243	W-11	8	2,000		S7267	W-35	9	15,000	
S7244	W-12	2	2,000		S7268	W-36	8	20,000	
S7245	W-13	4	2,000		S7269	W-37	3*	20,000	
S7246	W-14	9	2,000		S7270	W-38	4	20,000	
S7247	W-15	8	3,000		S7271	W-39	9	20,000	
S7248	W-16	3*	3,000		S7272	W-40	8	25,000	
S7249	W-17	4	3,000		S7273	W-41	9	25,000	
S7250	W-18	9	3,000		S7274	W-42	8	30,000	
S7251	W-19	8	5,000		S7275	W-43	8	40,000	
S7252	W-20	3*	5,000		S7276	W-44	8	50,000	
S7253	W-21	4	5,000		S7277	W-45	9	50,000	
S7254	W-22	9	5,000		S7278	W-47	8	75,000	
S7255	W-23	8	7,500		S7279	W-49	8	100,000	
S7256	W-24	3*	7,500						

All the controls listed above are equipped so that a SPST switch can be attached to the back and be operated from the shaft of the control. Cat. No. S7280 SPST switch. Net Price 29c

Precision Resistors

Designed to meet the most exacting demands for accuracy and durability. Especially adapted for use as meter multipliers, and shunts to increase the range of single range voltmeters and milliammeters, and for other equipment such as false, gain control-pads, etc. Normal tolerance is 1%.

Cat. No.	Ohms	Net Price	Cat. No.	Ohms	Net Price
S6814	1	.59	S6828	15,000	.65
S6815	10	.50	S6829	20,000	.79
S6816	25	.50	S6830	25,000	.79
S6817	50	.50	S6831	50,000	.79
S6818	100	.50	S6832	75,000	.94
S6819	250	.50	S6833	100,000	1.08
S6820	300	.50	S6834	150,000	1.38
S6821	500	.50	S6835	200,000	1.38
S6822	1,000	.53	S6836	250,000	1.53
S6823	2,500	.53	S6837	300,000	1.68
S6824	4,500	.59	S6838	400,000	1.76
S6825	5,000	.59	S6839	500,000	2.00
S6826	7,500	.59	S6840	750,000	2.65
S6827	10,000	.59	S6841	1,000,000	3.09



Insulated Metallized Resistors

Small—light—high voltage insulation, usable anywhere without fear of shorting. IRC famous metallized resistance element sealed in moisture-proof insulation. Noise-free, crack-proof. Color coded and marked. Long wire leads. When ordering specify resistance.



Ohms	Ohms	Ohms	Ohms	Ohms	Megohms
10*	100*	1,000*	10,000*	100,000*	1.0*
12*	120*	1,200*	11,000*	120,000*	1.2*
15*	150*	1,250*	12,000*	125,000*	1.5*
18*	180*	1,500*	12,500*	150,000*	1.8*
22*	200*	1,800*	15,000*	180,000*	2.0*
27*	220*	2,000*	17,500*	200,000*	2.2*
33*	250*	2,200*	18,000*	220,000*	2.7*
38*	270*	2,250*	20,000*	250,000*	3.0*
47*	300*	2,500*	22,000*	270,000*	3.3*
56*	330*	2,700*	22,500*	300,000*	3.9*
68*	350*	3,000*	25,000*	330,000*	4.0*
82*	390*	3,300*	27,000*	390,000*	4.7*
	400*	3,500*	30,000*	400,000*	5.0*
	450*	3,900*	33,000*	470,000*	6.0*
	470*	4,000*	35,000*	500,000*	6.5*
	500*	4,700*	39,000*	560,000*	7.0*
	560*	5,000*	40,000*	600,000*	9.2*
	600*	5,600*	47,000*	650,000*	10.0*
	680*	6,000*	50,000*	750,000*	20.0*
	750*	6,800*	56,000*	820,000*	
	800*	7,000*	60,000*		
	820*	7,500*	68,000*		
		8,000*	70,000*		
		8,200*	75,000*		
		9,000*	82,000*		

No. S6811—BT-1— $1\frac{1}{2}$ " long x $\frac{1}{4}$ " diameter. $\frac{1}{2}$ watt stocked in all ranges in the above list. Net Price, each 10c

No. S6812—BT-1— $1\frac{1}{2}$ " long x $\frac{1}{4}$ " diameter. 1 watt stocked in all ranges in the above list. Specify Size. Net Price, each 12c

No. S6813—BT-2— $1\frac{1}{2}$ " long x $\frac{1}{4}$ " diameter. 2 watt stocked in all ranges in the above list. Specify Size. Net Price, each 18c

*Preferred number—10% series.

Insulated Low Range Wire Wound Resistors

Utilizing a resistance wire wound tightly around a specially constructed core of ceramic material, these resistors are desirable for cathode biasing, decoupling, meter shunts, multipliers, etc. Accuracy $\pm 10\%$. On special order, we can supply type BW resistors with accuracy of $\pm 5\%$ at 50% increase in cost.

Ohms	0.5	5	20	50	150	300	600	1,250	2,500	5,000	Ohms
1	7.5	25	75	200	400	750	1,500	3,000	6,000		
2	10	30	100	250	450	800	2,000	3,500	7,000		
3	15	40	120	300	500	1,000	2,250	4,000	7,500		

No. S12057 $\frac{1}{2}$ watt, BW-1, 0.5 to 750 ohms; $1\frac{1}{2}$ " x $\frac{1}{4}$ ". Net, each 10c

No. S12058 1 watt, BW-1, 1 to 4,000 ohms; $1\frac{1}{2}$ " x $\frac{1}{4}$ ". Net, each 12c

No. S12059 2 watt, BW-2, 1 to 7,500 ohms; $1\frac{1}{2}$ " x $\frac{1}{4}$ ". Net, each 18c

IRC Ultra High Range Fixed Resistors

For high voltage applications. Moisture-proof fixed resistors; 100 to 20,000 megohms. Standard tolerance 10% $\pm 1\frac{1}{2}$ ". Max. volts 1,000

Cat. No.	Res. Megohms	Net Price
S6957	100	\$1.13
S6958	250	1.13
S6959	500	1.13
S6960	1,000	1.62
S6961	5,000	1.62
S6962	10,000	2.11
S10643	20,000	2.11

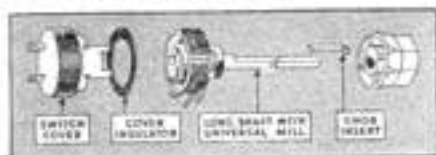
Free Resist-O-Cabinet

This new cardboard cabinet free with your purchase of 59 resistors as listed. Contains the following resistors: Type BT-1, $\frac{1}{2}$ watt—1 ea. 1M, 3M, 10M, 25M, and 50M ohms; .1, .25, and .5 meg. Type BT-1, 1 watt—1 ea. 40M, and 75M ohms; .15 and .2 meg.; 2 ea. 1M, 1500, 2M, 2500, 5M, 15M, and 25M ohms; 1 and 2 meg.; 3 ea. 10M and 50M ohms; .1, .25 and .5 meg. Type AB (30 watts fixed) 1 ea. 1M, 1500, 2500, and 5M ohms; 2 ea. 10M, 15M, and 25M ohms. Type ABA (10 watts adjustable) 1 ea. 1M, 2500, 5M and 10M ohms.

Cat. No. S6843 Net \$9.78

Standard Volume Controls

Centralab controls have important design features. The exclusive "wall type" resistor provides uniform current distribution. Centralab's exclusive non-fishing contact guarantees long life and smooth rotation.



Letters showing usual application are: A—filament, B—miscellaneous, C—grid bias, D—voltage divider, E—antenna shunt, F—antenna, grid bias, G—tone control, H—audio grid or tone, K—RF plate (series).

Cat. No.	Type	Ohms	Use	Curve	Cat. No.	Type	Ohms	Use	Curve
S6854	V-100	2	A	1*	S6885	VF-136	7,500	F	1*
S6855	V-102	4	A	1*	S6886	AF-107	7,500	D	1**
S6856	V-104	6	A	1*	S6887	VF-137	10,000	F	1*
S6857	V-106	8	A	1*	S6888	AF-108	10,000	F	1**
S6858	V-108	10	A	1*	S6889	AF-109	10,000	F	1**
S6859	V-109	12	A	1*	S6890	AF-110	10,000	F	1**
S6860	V-110	20	A	1*	S6891	A-111	10,000	E	6**
S6861	V-111	25	A	1*	S6892	AF-112	15,000	F	3**
S6862	V-112	30	A	1*	S6893	AF-113	15,000	F	4**
S6863	V-114	40	A	1*	S6894	AF-114	20,000	F	3**
S6864	V-116	50	A	1*	S6895	AF-115	25,000	D	1**
S6865	V-117	60	A	1*	S6896	AF-116	25,000	C	4**
S6866	V-118	75	B	1*	S6897	AF-117	25,000	E	3**
S6867	V-121	100	B	1*	S6898	A-118	50,000	D	1**
S6868	V-123	200	B	1*	S6899	A-119	50,000	G	6**
S6869	V-125	200	B	1*	S6900	A-120	75,000	G	6**
S6870	V-126	400	B	1*	S6901	AF-121	75,000	C	4**
S6871	V-127	500	B	1*	S6902	A-122	100,000	D	1**
S6872	A-100	500	D	1**	S6903	A-123	100,000	H	6**
S6873	V-128	700	C	1*	S6904	A-124	150,000	H	6**
S6874	VF-129	1,000	C	1*	S6905	A-125	200,000	H	1**
S6875	A-101	1,000	D	1**	S6906	AF-126	200,000	C	4**
S6876	VF-131	2,000	C	1*	S6907	A-127	250,000	H	6**
S6877	A-102	2,000	D	1**	S6908	A-128	500,000	H	6**
S6878	VF-133	3,000	C	1*	S6909	A-129	500,000	D	1**
S6879	A-103	3,000	D	1**	S6910	A-130	500,000	K	4**
S6880	VF-134	4,000	C	1*	S6911	A-131	700,000	H	6**
S6881	A-104	4,000	D	1**	S6912	A-132	1 Meg.	H	6**
S6882	VF-135	5,000	C	1*	S6913	A-133	2 Megs.	H	6**
S6883	AF-105	5,000	D	1**	S6914	A-134	3 Megs.	H	6**
S6884	A-106	5,000	D	6**					

Net Price, each, any size
* Wire-Wound Element.
** Composition Element.

Midget Volume Controls

Replacements for original controls in modern, ultra-compact receivers. Moulded bakelite case 1 1/2" diam. Soft aluminum shaft 3 1/2" long, milled for standard push-on or set screw knobs. Available both with and without switch. For control with switch, add "S" to the Type Number.

Cat. No.	Type	Ohms	Use	Curve	Cat. No.	Type	Ohms	Use	Curve
S12031	NF-100	5,000	D	1	S12040	NF-101	25,000	C	3
S12032	NF-107	10,000	C	1	S12041	N-118	50,000	D	1
S12033	NF-100	10,000	C*	3	S12042	N-115	50,000	G	6
S12034	NF-108	10,000	C†	4	S12043	N-116	100,000	D	1
S12035	N-109	10,000	E	6	S12044	N-117	100,000	H	6
S12036	NF-110	15,000	C*	3	S12045	N-102	250,000	H	6
S12037	NF-111	15,000	C†	4	S12046	N-118	500,000	D	1
S12038	NF-112	20,000	C	3	S12047	N-103	500,000	H	6
S12039	NF-113	25,000	D	1	S12048	N-104	1 meg.	H	6

Net Price, each with switch 88c Net Price, each less switch 59c
* For one tube. † For two tubes.

Twin Midget Volume Controls

Two controls insulated from each other and from the shaft; 1 1/2" d.

Cat. No.	Type	Front-Ohms-Back
S21105	C-100	10,000 25,000
S21106	C-101	10,000 50,000
S21107	C-102	100,000 100,000
S21108	C-103	250,000 250,000
S21109	C-104	500,000 500,000

Sub-midget Volume Controls

Only 1 1/4" diam. by 1 1/4" deep; ideal for hearing aids, portable equipment, and where larger units will not fit.

Cat. No.	Type	Ohms	Curve
S21110	N8-10	1,000	1
S21111	N8-11	3,000	1
S21112	N8-12	10,000	1
S21113	N8-13	25,000	1
S21114	N8-14	50,000	1
S21115	N8-15	100,000	6
S21116	N8-16	250,000	6
S21117	N8-17	500,000	6
S21118	N8-19	500,000	1
S21119	N8-18	1 megohm	6

Net Price 59c

Tapped Volume Controls

For tapped audio grid control.

STANDARD . . . 1 1/2" dia. 1 1/4" deep.

Cat. No.	Type	Total Ohms Tap
S21120	AT-135	250,000 75,000
S21121	AT-136	500,000 150,000
S21122	AT-137	1 meg. 300,000
S21123	AT-138	2 meg. 600,000

MIDGET . . . 1 1/4" dia. 1 1/4" deep.

Cat. No.	Type	Ohms
S21124	NT-119	250,000 75,000
S21125	NT-147	250,000 125,000
S21126	NT-148	350,000 75,000
S21127	NT-120	500,000 150,000
S21128	NT-149	500,000 250,000
S21129	NT-150	1 meg. 200,000
S21130	NT-121	1 meg. 300,000
S21131	NT-151	2 meg. 200,000
S21132	NT-152	2 meg. 400,000
S21133	NT-122	2 meg. 600,000
S21134	NT-153	2 meg. 1 meg.

Net Price, either size 88c

While priority regulations remain in force, orders must be accompanied by applicable certification in order to ensure shipment on schedule.

Metallized Controls

New IRC Volume Controls are a logical adaptation of the famous IRC Metallized Type Resistance principle to variable resistor use. They feature the proven 5-Finger "Knee Action" Silent Element Contact plus the exclusive Silent Spiral Connector. The Controls afford the utmost in Stability, Quietness, Permanency and Uniformity to prescribed taper.

Figures showing usual application are: 1—voltage divider, 2—antenna control, 3—antenna grid bias, 4—grid bias, 5—tone control, 6—tone or audio, 7—RF plate, 8—potentiometer, 9—screen grid and phonograph, 10—antenna and RF coil.

Cat. No.	Type	Use	Ohms	Taper	Cat. No.	Type	Use	Ohms	Taper
S6918	11-103	1	500	A	S6937	13-123	5	50,000	C
S6919	11-108	1	1,000	A	S6938	13-125	5	75,000	C
S6920	11-110	1	2,000	A	S6939	14-125	4*	75,000	D
S6921	11-112	1	3,000	A	S6940	11-128	1	100,000	A
S6922	11-113	1	4,000	A	S6941	13-128	6	100,000	C
S6923	11-114	1	5,000	A	S6942	11-129	1	200,000	A
S6924	13-114	2	5,000	C	S6943	14-129	4*	200,000	D
S6925	11-115	1	7,500	A	S6944	13-130	6	250,000	C
S6926	11-116	3*	10,000	A	S6945	14-130	4*	250,000	C
S6927	13-116	2	10,000	C	S21097	13-132	6	250,000	D
S6928	14-116	3**	10,000	D	S6946	11-133	1	500,000	A
S6929	16-116	3**	10,000	F	S6947	13-133	6	500,000	C
S6930	14-118	3*	15,000	D	S11404	14-133	7	500,000	D
S6931	16-118	3*	15,000	F	S6948	13-137	6	1 Meg.	C
S6932	16-119	3*	20,000	F	S6949	13-139	6	2 Megs.	C
S6933	11-120	1	25,000	A	S6950	13-140	6	3 Megs.	C
S6934	14-120	4*	25,000	D	S6951	11-141	1	5 Megs.	A
S6935	16-120	2	25,000	F	S6952	11-42	1	7 Megs.	A
S6936	11-123	1	50,000	A	S6953	11-43	8	10 Megs.	A

Net price, any size

TAPPED CONTROLS

Cat. No.	Type No.	Ohms	Tapped	Application	Taper
S20694	13-130X	250,000	125 M	Tapped for A.V.C.	A
S20695	13-130X	250,000	60 M	Tapped tone compensation	H
S20696	13-132X	350,000	75 M	Tapped tone compensation	H
S20697	13-132X	500,000	125 M	Tapped tone compensation	H
S20698	13-137X	1 meg.	250 M	Tapped tone compensation	H
S20699	VC-539X	1 meg.	500 M	Fader control, in and out	A
S20610	13-139X	2 meg.	500 M	Tapped tone compensation	H

Net price, any size, tapped control 88c
* A 300-ohm BT-1 (1/2-Watt) Insulated Metallized Resistor is included without additional charge with every Control indicated by an asterisk (*) for use as external grid bias resistor. † For one tube. ‡ For two tubes.

IRC Dual Controls

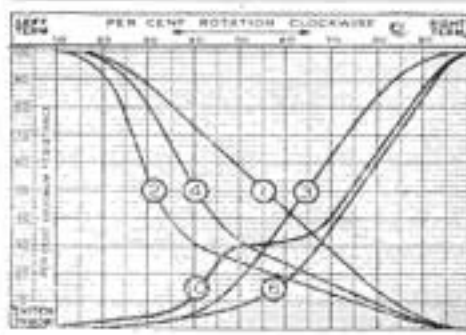
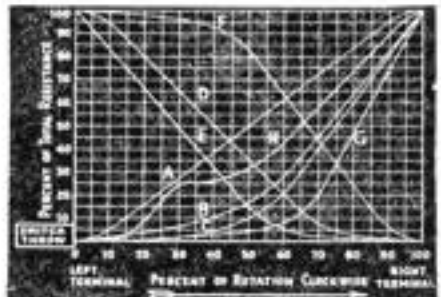
Cat. No.	Type	Ohms	Curves	Cat. No.	Type	Ohms	Curves
S21098	33-1620	10M/25M	C/E	S21102	33-3333	500M ea.	C/C
S21099	61-1623	10M/50M	F/A	S21103	33-3737	1 Meg. ea.	C/C
S21100	33-2828	100M ea.	C/C	S21104	33-3939	2 Meg. ea.	C/C
S21101	33-3030	250M ea.	C/C				

Net Price dual control \$1.47

Attachable Switches

These switches fit the standard IRC volume and tone controls listed above and are easily attached.

Cat. No.	Type	Net
S6954	SPST	29c
S6955	DPST	35c
S6956	SPDT	35c



Attachable Switches



Switches for Centralab controls, control number.	Type	Net
S6963	SPST	29c
S6964	DPST	35c
S6965	SPDT	35c

Centralab Power Rheostats

Work at high temperatures without damage. Give maximum dissipation for size because of complete air circulation. All metal frame and core, insulated with treated asbestos. Practically indestructible. Made in three sizes, all two inches in diameter. Bushing $\frac{1}{2}$ x $\frac{1}{2}$ long. Shaft $\frac{1}{2}$ x $\frac{1}{2}$ long. Depth behind panel—20 watt, $\frac{1}{2}$; 50 watt, $\frac{1}{2}$; 75 watt, $\frac{1}{2}$.



All sizes furnished with Bakelite knob and panel insulating washers.

25 WATT — Net Price \$1.18			50 WATT — Net Price \$1.47		
Cat. No.	Type No.	Ohms	Cat. No.	Type No.	Ohms
S10608	48-002	2	S10625	48-025	25
S10609	48-006	6	S10626	48-060	60
S10610	48-010	10	S10627	48-151	150
S10611	48-015	15	S10628	48-201	200
S10612	48-025	25	S10629	48-501	500
S10613	48-042	40	S10630	48-811	1,000
S10614	48-050	50	S10631	48-835	2,500
S10615	48-100	100	S10632	48-851	5,000
S10616	48-150	150			
S10617	48-200	200			
S10618	38-250	250			
S10619	48-300	300			
S10620	48-400	400			
S10621	48-500	500			
S10622	48-810	1,000			
S10623	48-815	1,500			
S10624	48-830	2,000			

IRC All-Metal Rheostats

Rapid heat dissipation, ample safety factor, spiral connector, and high current ratings feature these unique rheostats.



PR-25 25 WATT				PR-50 50 WATT			
Cat. No.	Ohms	Max. Price	Net	Cat. No.	Ohms	Max. Price	Net
S20550	0.5	7,000	\$2.66	S20575	0.5	10,000	\$2.94
S20551	1	5,000	2.66	S20576	1	7,070	2.94
S20552	2	3,450	2.35	S20577	2	5,000	2.94
S20553	3	2,880	2.35	S20578	3	3,520	2.66
S20554	6	2,040	2.35	S20579	6	2,880	2.66
S20555	8	1,770	2.35	S20580	8	2,500	2.66
S20556	10	1,580	2.35	S20581	12	2,040	2.66
S20557	15	1,290	2.35	S20582	16	1,770	2.66
S20558	25	1,000	2.35	S20583	22	1,500	2.66
S20559	35	845	2.35	S20584	35	1,190	2.66
S20560	50	709	2.35	S20585	50	1,000	2.66
S20561	75	575	2.35	S20586	80	790	2.66
S20562	100	500	2.35	S20587	125	630	2.66
S20563	125	445	2.35	S20588	150	575	2.66
S20564	175	375	2.35	S20589	225	470	2.66
S20565	250	315	2.35	S20590	300	407	2.66
S20566	350	267	2.35	S20591	500	315	2.66
S20567	500	222	2.35	S20592	800	250	2.79
S20568	750	173	2.35	S20593	1,000	223	2.79
S20569	1,000	155	2.66	S20594	1,600	177	2.79
S20570	1,500	129	2.66	S20595	2,500	140	2.79
S20571	2,500	100	2.66	S20596	3,500	120	2.94
S20572	3,500	84	2.79	S20597	5,000	100	2.94
S20573	5,000	70	2.79	S20598	8,000	79	2.94
S20574				S20599	10,000	70	2.94

IRC Wire Wound Fixed Resistors

These cement coated power wire wound resistors will stand the overloads and assure you long life, moisture proof and great mechanical strength. Wound on a ceramic core. This, coupled with the cement coating, makes it impervious to moisture, permitting difficult service such as naval, marine, and aircraft applications. Accurate to within 5%.



TYPE AB 10 WATT FIXED RESISTORS $\frac{1}{2}$ " x $\frac{1}{2}$ "							
Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1	15	150	490	1,500	3,500	10,000	25,000
2	20	200	500	2,000	4,000	12,000	30,000
3	25	250	600	2,250	5,000	13,500	35,000
5	50	300	750	2,500	7,500	15,000	40,000
10	100	350	1,000	3,000	8,000	20,000	50,000
Cat. No. S6800	Type AB	1 to 10M ohms					27c
Cat. No. S6800A	Type AB	12M to 30M ohms					29c

TYPE DG 20 WATT FIXED RESISTORS $2 \frac{1}{2}$ " x $\frac{1}{2}$ "							
Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1	100	350	1,250	3,500	9,000	25,000	60,000
5	150	400	1,500	4,000	10,000	30,000	75,000
10	200	500	2,000	5,000	12,500	35,000	80,000
25	250	750	2,500	6,000	15,000	40,000	100,000
50	300	1,000	3,000	7,500	20,000	50,000	
Cat. No. S6801	From 1 to 15,000 ohms						41c
Cat. No. S6802	From 20,000 to 50,000 ohms						50c
Cat. No. S6803	From 60,000 to 100,000 ohms						65c

Vitreous Enameled Rheostats

All porcelain body, vitreous enameled, wire wound, insulated shafts. Single hole mounting, $\frac{1}{2}$ " hole. Besides the models listed below, we can furnish the 100, 300 and 500 watt sizes. Write for prices.



Model "H"—25 Watt

Diameter $1 \frac{1}{4}$ "; depth behind panel $1 \frac{1}{4}$ "

Cat. No.	Ohms	Amps.	Net	Cat. No.	Ohms	Amps.	Net
S21135	1	5.00		S21147	125	.445	
S21136	2	3.54		S21148	175	.375	
S21137	3	2.88		S21149	250	.316	
S21138	6	2.04		S21150	350	.267	\$2.53
S21139	8	1.77		S21151	500	.222	Each
S21140	10	1.58		S21152	750	.182	
S21141	15	1.29	\$2.35	S21153	1,000	.155	\$2.65
S21142	25	1.00	Each	S21154	1,500	.129	
S21143	35	.845		S21155	2,500	.100	Each
S21144	50	.707		S21156	3,500	.084	\$2.79
S21145	75	.575		S21157	5,000	.070	Each
S21146	100	.500					

Model "J"—50 Watt

Diameter $2 \frac{1}{4}$ "; depth behind panel $1 \frac{1}{4}$ "

Cat. No.	Ohms	Amps.	Net	Cat. No.	Ohms	Amps.	Net
S7207	0.5	10	\$2.94	S7220	150	.675	
S7208	1	7	Each	S7221	225	.470	
S7209	2	5	Each	S7222	300	.405	\$2.65
				S7223	500	.315	Each
S7210	4	3.5		S7224	800	.250	
S7211	6	2.8		S7225	1,000	.220	\$2.79
S7212	8	2.5		S7226	1,600	.176	
S7213	12	2	\$2.65	S7227	2,500	.140	Each
S7214	16	1.76					
S7215	22	1.5		S7228	3,500	.110	
S7216	35	1.19	Each	S7229	5,000	.100	\$2.94
S7217	50	1		S7230	8,000	.079	
S7218	80	.79		S7231	10,000	.070	Each
S7219	125	.63					

Model "K"—100 Watt

Diameter $3 \frac{1}{4}$ "; depth behind panel $1 \frac{1}{4}$ "

Cat. No.	Ohms	Amps.	Net	Cat. No.	Ohms	Amps.	Net
S11709	0.5	12.5		S11721	200	.707	
S11710	1	10.0	\$4.35	S11722	300	.577	\$4.12
S11711	2	7.07	Each	S11723	400	.500	Each
S11712	3	5.77		S11724	500	.445	
S11713	5	4.45		S11725	750	.395	
S11714	7.5	3.65		S11726	1,000	.315	
S11715	10	3.15	\$4.12	S11727	1,500	.258	\$4.35
S11716	16	2.50	Each	S11728	2,000	.224	
S11717	25	2.00		S11729	2,500	.200	Each
S11718	50	1.42		S11730	3,500	.141	\$4.70
S11719	75	1.15		S11731	5,000	.115	\$5.00
S11720	100	1.00		S11732	10,000	.100	\$5.29

Non-inductive Vitreous Enameled Resistors

50 Watts — $4 \frac{1}{2}$ " by $\frac{1}{2}$ " — $4 \frac{1}{2}$ " mounting centers

Cat. No.	Ohms	Max.	Ind.	Cat. No.	Ohms	Max.	Ind.
S21158	5	3,160	.17	S21167	750	255	1.0
S21159	10	2,235	.37	S21168	1,000	223	2.0
S21160	25	1,414	.55	S21169	1,500	182	2.5
S21161	50	1,000	.39	S21170	2,000	158	2.9
S21162	100	707	.63	S21171	2,500	141	2.9
S21163	150	577	.79	S21172	3,000	129	3.8
S21164	200	500	.87	S21173	3,500	119	4.7
S21165	250	447	.89	S21174	4,000	111	4.0
S21166	500	316	1.6	S21175	5,000	100	3.9
Net Price, any resistance							
							\$1.41

"Brown Devil" Vitreous Enameled Resistors

Real vitreous enamel coating. Recommended for dependability. Size 10-watt: $1 \frac{1}{2}$ " x $\frac{1}{2}$ ". 20-watt: $2 \frac{1}{2}$ " x $\frac{1}{2}$ ".



10 WATT BROWN DEVIL

Stocked in all resistance values listed below.

1	10	40	150	400	800	2,000	5,000	15,000	35,000
2	15	50	200	500	900	2,500	6,000	17,500	40,000
3	20	75	250	600	1,000	3,000	7,500	20,000	40,000
4	25	100	300	700	1,250	3,500	10,000	25,000	50,000
5	30	125	350	750	1,500	4,000	12,500	30,000	
Cat. No. S12090	1 to 10,000 ohms								26c
Cat. No. S12090A	11,000 to 50,000 ohms								29c

20 WATT BROWN DEVIL

Stocked in all resistance values listed below.

5	100	350	800	2,000	7,500	25,000	75,000
10	150	400	1,000	2,500	10,000	35,000	90,000
25	200	500	1,250	4,000	12,500	40,000	100,000
50	250	700	1,500	5,000	15,000	50,000	
75	300	750	1,750	6,000	20,000	60,000	
Cat. No. S12091	5 to 15,000 ohms						41c
Cat. No. S12092	20,000 to 50,000 ohms						50c
Cat. No. S12093	60,000 to 100,000 ohms						65c



ADJUSTABLE POWER RESISTORS

OHMITE

Adjustable Power Resistors

To meet those applications of a highly dependable wire wound resistor, Will stand the test in any climate—from the heat and humidity of the tropics to the icy cold of the arctic. Accurate within 5%. All supplied with mounting brackets as shown and with one slider tap.



TYPE ABA 10 WATT ADJUSTABLE $1\frac{1}{2}''$ by $\frac{1}{8}''$

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1	10	75	300	750	1,500	3,000	7,000
2	15	100	350	800	2,000	4,000	7,500
3	20	150	400	1,000	2,250	4,500	8,000
5	25	200	500	1,250	2,500	5,000	8,500
7.5	50	250	600	1,400	3,000	6,000	9,000

Cat. No. S21183 Be sure to state ohms
Net Price, any resistance **44c**

TYPE DHA 25 WATT ADJUSTABLE $2\frac{1}{2}''$ x $\frac{1}{8}''$

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1	15	100	300	800	2,000	4,000	12,000
3	25	150	400	1,000	2,500	5,000	15,000
5	50	200	500	1,250	3,000	7,500	20,000
10	75	250	750	1,500	3,500	10,000	25,000

Cat. No. S6804 From 1 to 5,000 ohms. Net each . . . **54c**
Cat. No. S6805 From 7,500 to 15,000 ohms. Net each . . . **65c**
Cat. No. S6806 From 20,000 to 25,000 ohms. Net each . . . **71c**
Be sure to specify resistance.

TYPE EPA 50 WATT ADJUSTABLE $3\frac{1}{2}''$ x $\frac{1}{8}''$

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1	75	250	750	1,500	4,000	15,000	40,000
10	100	300	800	2,000	5,000	20,000	50,000
25	150	400	1,000	2,500	7,500	25,000	60,000
50	200	500	1,250	3,000	10,000	30,000	75,000

Cat. No. S6807 From 5 to 5,000 ohms. Net each . . . **\$.88**
Cat. No. S6808 From 7,500 to 25,000 ohms. Net each . . . **.97**
Cat. No. S6809 From 30,000 to 50,000 ohms. Net each . . . **1.12**
Cat. No. S6810 60,000 and 75,000 ohms. Net each . . . **1.29**

TYPE ESA 80 WATT ADJUSTABLE $5\frac{1}{2}''$ x $\frac{1}{8}''$

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
5	100	400	1,500	3,500	10,000	30,000	50,000
10	200	500	2,000	4,000	15,000	35,000	60,000
25	250	750	2,500	5,000	20,000	40,000	80,000
50	300	1,000	3,000	7,500	25,000	45,000	0.1 meg.

Cat. No. S6844 From 5 to 5,000 ohms. Net each . . . **\$1.15**
Cat. No. S6845 From 7,500 to 25,000 ohms. Net each . . . **1.29**
Cat. No. S6846 From 30,000 to 50,000 ohms. Net each . . . **1.47**
Cat. No. S6847 From 60,000 ohms to 0.1 meg. Net each . . . **1.62**

TYPE HAA 100 WATT ADJUSTABLE $6\frac{1}{2}''$ x $\frac{1}{8}''$

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
100	500	1,500	3,000	7,500	15,000	30,000	60,000
200	750	2,000	4,000	8,000	20,000	40,000	75,000
400	1,000	2,500	5,000	10,000	25,000	50,000	0.1 meg.

Cat. No. S6848 From 100 to 5,000 ohms. Net each . . . **\$1.29**
Cat. No. S6849 From 7,500 to 25,000 ohms. Net each . . . **1.47**
Cat. No. S6850 From 30,000 to 50,000 ohms. Net each . . . **1.62**
Cat. No. S6851 From 60,000 ohms to 0.1 meg. Net each . . . **1.72**
Be sure to specify resistance.

TYPE HOA 200 WATT ADJUSTABLE $10\frac{1}{2}''$ x $\frac{1}{8}''$

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
500	2,000	3,000	10,000	20,000	30,000	50,000	75,000
1,000	2,500	4,000	15,000	25,000	40,000	60,000	0.1 meg.

Cat. No. S6852 From 500 to 10,000 ohms. Net each . . . **\$1.94**
Cat. No. S6853 From 15,000 ohms to 0.1 meg. Net each . . . **2.26**

Adjustable Bands

For IRC Adjustable Power Resistors; new Type X band has spring-mounted silver contact button giving positive contact without danger of corrosion or damage to wire when contact is moved.



Resistor	Standard Band	Cat. No.	Net	Type X Band	Cat. No.	Net
ABA	A	S21176	6c			
DHA	D	S21177	6c	X2	S21180	12c
EPA-ESA	E	S21178	6c	X3	S21181	12c
HAA-HOA	H	S21179	9c	X4	S21182	15c

Line Cord Resistors

For AC-DC Sets



A line cord into which has been incorporated a third element, which reduces line voltage to that required by tubes. Eliminates heat from set also.

Cat. No.	Voltage Drop	Ohms
S7282	15.0 to 24.0	330
S7283	25.0 to 31.5	290
S7284	32.0 to 44.5	250
S7285	45.0 to 52.0	220
S7286	53.0 to 61.0	180
S7287	62.0 to 65.9	160
S7288	69.0 to 75.2	135

Net Price ea. **45c**

Dividohm Vitreous Enamelled Semi- Variable Resistors



Resistance wire is wound over a porcelain core. Vitreous enamel covers the surface and protects the unit against both mechanical and electrical injury. A narrow strip along one side of unit is left bare to make contact with the "ball point" on the adjustable lug. Wire is always tight. Mounting brackets supplied.

10 WATTS. SIZE $1\frac{1}{2}''$ x $\frac{1}{8}''$ MOUNTING CENTERS $2\frac{1}{4}''$

1	2	3	4	5	7.5
10	15	20	25	50	75
75	300	500	1,000	1,250	2,000
300	800	1,500	2,500	3,500	7,000

Cat. No. S22769 Any resistance value above. Net Price . . . **44c**

25 WATTS. SIZE $2\frac{1}{2}''$ x $\frac{1}{8}''$ MOUNTING CENTERS $2\frac{1}{4}''$

1	2	3	4	5	7.5
10	15	20	25	50	75
75	300	500	1,000	1,250	2,000
300	800	1,500	2,500	3,500	7,000

Cat. No. S12094 1 to 5,000 ohms Net Price, each . . . **56c**
Cat. No. S12095 7,000 to 15,000 ohms Net Price, each . . . **65c**
Cat. No. S12096 20,000 to 25,000 ohms Net Price, each . . . **71c**

50 WATTS. SIZE $3\frac{1}{2}''$ x $\frac{1}{8}''$ MOUNTING CENTERS $4\frac{1}{4}''$

5	10	25	50	75
100	150	200	250	300
400	500	750	1,000	1,250
1,500	2,000	3,500	5,000	7,000

Cat. No. S12097 5 to 5,000 ohms Net Price, each . . . **\$.88**
Cat. No. S12098 6,000 to 25,000 ohms Net Price, each . . . **.97**
Cat. No. S12099 30,000 to 50,000 ohms Net Price, each . . . **1.12**
Cat. No. S12100 60,000 to 100,000 ohms Net Price, each . . . **1.29**

75 WATTS. SIZE $4\frac{1}{2}''$ x $\frac{1}{8}''$ MOUNTING CENTERS $7''$

5	10	15	25
50	100	200	250
300	400	500	750
1,000	1,500	2,000	2,500

Cat. No. S12101 5 to 3,500 ohms Net Price, each . . . **\$1.15**
Cat. No. S12102 5,000 to 25,000 ohms Net Price, each . . . **1.29**
Cat. No. S12103 30,000 to 50,000 ohms Net Price, each . . . **1.47**
Cat. No. S12104 60,000 to 100,000 ohms Net Price, each . . . **1.62**

100 WATTS. MOUNTING CENTERS $7\frac{1}{4}''$

Cat. No.	Res. Ohms	Net Price
S3436	1,000	\$1.29
S3437	5,000	
S3438	10,000	\$1.47
S3439	15,000	
S3440	20,000	
S3441	25,000	\$1.62
S3442	30,000	
S3443	40,000	
S3444	50,000	
S3445	75,000	\$1.76
S3446	100,000	

200 WATTS. MOUNTING CENTERS $11\frac{1}{4}''$

Cat. No.	Res. Ohms	Net Price
S3447	1,000	\$1.94
S3448	5,000	
S3449	10,000	
S3450	15,000	\$2.26
S3451	20,000	
S3452	25,000	
S3453	30,000	
S3454	40,000	
S3455	50,000	
S3456	75,000	
S3457	100,000	

Adjustable Lugs



No.	For Dividohms Above	Net
S3458	For $\frac{1}{8}''$ dia. resist.	6c
S3459	For $\frac{1}{4}''$ dia. resist.	9c
S3460	For $\frac{1}{2}''$ dia. resist.	9c

Center Tapped Resistors

Used to provide an electrical center when the transformer has no center-tap of its own.



1 WATT			10 WATT		
Cat. No.	Ohms	Net Price	Cat. No.	Ohms	Net Price
S3545	20	21c	S3553	20	29c
S3547	30		S3554	30	
S3548	40		S3555	40	

Quotations gladly furnished on special resistor requirements. Space does not permit complete listing of power rheostats. We can, however, supply them in ratings up to 1,000 watts. Write for prices.

Centralab Selector Switches



All Centralab Selector Switches are supplied with an "adjustable stop." These switches are supplied in the shorting and non-shorting types. BAKelite knob included. Bakelite insulation.

Cat. No.	Non-Shorting	Cat. No.	Shorting	Gangs	Poles	Positions	Net Price
C-1400	C-1401	1	1	2 to 6			.59
C-1402	C-1403	1	1	2 to 11			.68
C-1404	C-1405	1	2	2 to 5			.73
C-1406	C-1407	1	3	2 to 3			.79
C-1408	C-1409	1	4	2			.85
C-1410	C-1411	2	2	2 to 6			.94
C-1412	C-1413	2	2	2 to 11			1.03
C-1414	C-1415	2	4	2 to 5			1.18
C-1416	C-1417	2	6	2 to 3			1.24
C-1418	C-1419	2	8	2			1.32
C-1420	C-1421	3	3	2 to 6			1.29
C-1422	C-1423	3	3	2 to 11			1.38
C-1424	C-1425	3	6	2 to 5			1.47
C-1426	C-1427	4	4	2 to 6			1.62
C-1428	C-1429	4	4	2 to 11			1.72
C-1430	C-1431	4	8	2 to 5			2.10
C-1438	C-1439	1	4	2			.44

SELECTOR SWITCH DIAL PLATES

Cat. No. S3093	No. 1-5*	Cat. No. S3094	No. 1-6*	Net Price
Cat. No. S3095	No. 1-10*	Cat. No. S3096	No. 1-11*	9c each
Cat. No. S3097	No. 1-11*			12c each

*30 degrees between nos. 190 degrees between nos.

Centralab Standard Isolantite Switches

Similar to the popular Centralab Bakelite switches but with Isolantite insulation. Use in high frequency circuits for minimum loss. Adjustable stop permits choice of number or positions for any switch.

Cat. No.	Non-Shorting	Cat. No.	Shorting	Type	Gangs	Poles	Positions	Net Price
S3006	2501	S21056	2500	1	1	2 to 6		
S3007	2503	S21057	2502	1	1	2 to 11		\$1.00
S3008	2505	S21058	2504	1	2	2 to 5		
S3009	2507	S21059	2506	1	3	2 to 3		
S3010	2511	S21060	2510	2	2	2 to 6		
S3011	2513	S21061	2512	2	2	2 to 11		1.59
S3012	2515	S21062	2514	2	4	2 to 5		
S3013	2517	S21063	2516	2	6	2 to 3		
S3014	2521	S21064	2520	3	3	2 to 6		
S3015	2523	S21065	2522	3	3	2 to 11		2.29
S3016	2525	S21066	2524	3	6	2 to 5		

DIAL PLATES FOR ABOVE SWITCHES

Cat. No. S3017	No. 1-5	Cat. No. S3019	No. 1-10	Net Price
Cat. No. S3018	No. 1-6	Cat. No. S3020	No. 1-11	each 9c

Centralab Isolantite Transmitter Switches

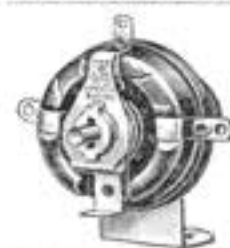
Designed exclusively for the amateur. Isolantite insulation throughout for circuit stability and high efficiency. All types have four positions. Adjustable stop. Will operate in transmitters rated up to 100 watts and at potentials up to 1,000 volts DC. Knob included; 90° indexing.



Cat. No.	Non-Shorting	Type	Poles	Positions	Sections	Net Price
S3000	2542		1	4	1	\$1.00
S3001	2543		2	4	2	1.59
S3002	2544		3	4	3	2.29
S3003	2545		4	4	4	2.88
S3004	2546		5	4	5	3.59

Dial Plate Special: numbered 1-4 for these switches only. Cat. No. S3005 Type K-162. Net Price 12c

Ohmite Band Switch



Band-switching may be provided in all stages of a transmitter, making possible complete front of panel control. Exceptionally efficient because of their low-loss, porcelain construction, low contact resistance, and high current carrying ability. Small in size for use in crystal oscillator and compact low-powered stages. May safely be used in power amplifier and output circuits up to 1 KW rating. Switch has three contacts. Complete with knob and mounting bracket.

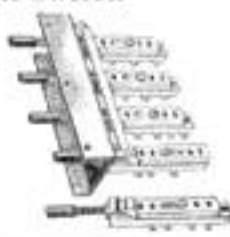
No. S7281 BC-3 Net Price \$1.76

National Interlocking Push Switch

Double-pole, double-throw push button units for switching coils, crystals, etc., in low power transmitters, buffers, etc. Low resistance, silver plated, positive acting contacts on low loss R-29 insulation. Trigger bar releases all switches except the one in use. Designed for panel mounting.

Cat. No. S14446 Type ACS-4, 4-gang push switch with trigger bar. Net Price \$3.30

Cat. No. S14447 Type ACS-1, single section switch, less trigger bar. Net Price 84c



Ohmite Power Switches

New Ohmite tap switches are high-ampere load-break multi-point selectors particularly designed for alternating current use. Each switch is a non-shorting, single-pole, rotary, multi-position unit. Several switches can be connected mechanically to form multi-pole assemblies. A few of the numerous applications are listed below:

Switchboards, Heater or Oven Control, Dryer Control, Arc Welders, Spot Welders, Battery Chargers, Motor Control, Tapped Transformers, X-Ray Equipment, Diathermy Equipment, Radio Transmitters, Ventilating Fan Control, Voltage Regulators, Electrical Machine Tools, Pyrometer Circuits, Meter Circuits.

Silver-to-Silver Contact, Compact, All-Enclosed, Ceramic Construction, Many Contacts, Convenient Terminals, "Slow-Break" Action for Alternating Current, Low Contact Resistance, Self-Cleaning Contacts, Back-of-Panel Mounting, High Current Ratings, Non-Shorting Type.

All ratings for alternating current non-inductive load.

MODEL 212 15 A, 150 V.				MODEL 312 25 A, 300 V.			
Single hole mount. Less knobs.				Mounted by 3 No. 10-32 screws.			
Cat. No.	No. Contacts	Net Price	Cat. No.	No. Contacts	Net Price	Cat. No.	No. Contacts
S11733	4	\$3.82	S11738	4	\$5.59	S11739	6
S11734	6	3.93	S11740	6	5.74	S11741	8
S11735	8	4.12	S11742	8	5.88	S11743	10
S11736	10	4.26			6.03	S11744	12
S11737	12	4.41			6.17		

Above switches are single units; can be furnished in tandem assemblies of two switches or three switches in order.

IRC Type A-21 Attenuators (20 Steps)



Utilizes a milled motor commutator switch with conducting segments of polished, hand-drawn copper, milled in phenolic. This feature, combined with a multi-finger beryllium copper contact and a flat clockspring connector results in an exceptionally low noise level maintained in actual service.

Attenuation range is from 0 to infinity in 21 steps, linear attenuation is 45 DB in 18 steps of 2.5 DB per step, tapering to infinity. 2" long x 2" diameter. Dial plate is calibrated in decibels.

Cat. No.	Type	Impedance Network	Net Price
S10652	A-21150	50 ohms Ladder	1c.
S10653	A-211200	200 ohms Ladder	
S10654	A-211250	250 ohms Ladder	\$6.86
S10655	A-211500	500 ohms Ladder	
S10656	A-21-2503T	250,000 ohms Potentiometer	6.62

IRC Type B-31 Attenuators (30 Steps)

Designed for low-level work, this 30-step Bridged-T attenuator has constant impedance looking in and out. Attenuation is linear for the first 24 steps, 1.5 DB per step up to 36 DB, 65 DB on the next to last step, and infinity on the last step. Stud type contacts connect to IRC insulated resistors. Spiral clock-spring connector in each arm of bridged "T" assure maintained low noise level of -150 DB. Supplied complete with dial plate, knob, and mounting screws; furnished with or without detent as specified. 2" deep x 2 1/2" diam.



Cat. No.	Type No.	Impedance	Net Price
S20600	B-31T50	50 ohms	\$17.15
S20601	B-31T200	200 ohms	17.15
S20602	B-31T250	250 ohms	17.15
S20603	B-31T500	500 ohms	17.15

IRC L-Pad and T-Pad Attenuators

By the use of special tapers and connections, Dual and Triple Controls are available as L-Pad and T-Pad Attenuators. They are especially adapted to low level input circuits in inexpensive sound equipment.

L-PADS (DUAL)			
Cat. No.	Type	Res. Ohms	Net Price
S10644	J-1088	50*	1c.
S10645	J-1089	200*	\$1.47
S10646	J-1090	250*	
S10647	J-976	500	
T-PADS (TRIPLE)			
S10648	J-1091	50*	
S10649	J-1092	200*	\$2.06
S10650	J-1093	250*	
S10651	J-977	500	

* These controls are wire wound.

KNIFE - ROTARY - SELECTOR - TOGGLE SWITCHES

H-H Slide Switches

Fully enclosed bakelite sliding snap on lever, back connected with solder lugs. 2A, 125V, 1A, 250V. A.C. or D.C. Metal mounting plate. Red or black handles. $1\frac{1}{2} \times 1 \times \frac{1}{2}$ " body.



Cat. No.	Circuit	Color	Net Ea.
S20400		Black	
S20401	SPST	Red	33c
S20402		Black	
S20403	SPDT	Red	39c
S20404		Black	
S20405	DPST	Red	41c
S20406		Black	
S20407	DPDT	Red	47c

H & H Push-Button Power Switch



A safety switch for transmitters. Used in racks and cabinets. Will open circuit when door is open. D.P.S.T. $\frac{1}{8}$ " shank.

12 amps, 125 volts. Cat. No. S11849. Net Price 79c

H & H Push-Button Switches



S.P.D.T. 1 amp, 125 volts, $\frac{1}{8}$ " shank. Cat. No. S11848. Net Price 45c

S.P.S.T. same style. Cat. No. S11844A Net Price 45c

Push-Pull Switch



SPST refrigerator type switch. "On" when button is pressed down. 2A, 250V. Cat. No. S20408. Net Price 45c

Momentary Contact Switches



Slow make and break SPST rated 75 watts 125V. $\frac{1}{8}$ " sleeves. Solder lugs. Red or black push button. Cat. No. S20409. Net Price 34c

TWO CIRCUIT MOMENTARY CONTACT One circuit normally "On" and one circuit normally "Off" may be connected for SPDT circuit. Rated current 1A, 125V.

Cat. No.	Type Button	Net Price
S20410	Metal	
S20411	Red Bakelite	45c
S20412	Black Bakelite	

Push-on Push-off Switches

IMPULSE OPERATION Single push button gives both "On" and "Off" control. 2A, 250V. Cat. No. Circuit Net Price

S20421	SPST	35c
S20422	SPDT	40c
S20423	DPST	45c
S20424	DPDT	55c
S20425	2 circuit	
	1 "On" 1 "Off"	45c



Operates on light pressure and short travel of actuating force to control heavy loads; standard type handles 10A at 115V, heater load, or $\frac{1}{2}$ H.P. at 115-400 V, a-c only; aircraft type handles 25A, at 28.5V. Bakelite case only $2 \times 1\frac{1}{2} \times \frac{1}{2}$ ". Screw terminals.

Cat. No.	Actuating Device	SP open	SP closed	SPDT
S21048	Leaf spring (plain)	\$1.10	\$1.10	\$1.20
S21049	Leaf spring with roller	1.25	1.25	1.35
S21050	Small plunger $\frac{1}{8}$ " overtravel	1.25	1.25	1.35
S21051	Large plunger $\frac{1}{4}$ " overtravel	2.15	2.15	2.25
S21052	Aircraft hkt. $\frac{1}{8}$ " overtravel	2.95	2.95	3.15
S21053	Metal-cased $\frac{1}{8}$ " overtravel	2.80	2.80	2.90

*Provision for single-hole panel-mounting. Many other styles available; write for details.

3-Circuit Lever Switch and Mounting Plates

Low-capacity, silvered contacts, save panel space.

*Positive locking index. Spring returns to mid-position.

Furnished with black bakelite knob and mounting bolts.

Cat. No.	Shorting Non-short	Poles	Position
C1453*	C1454*	2	3
C1453*	C1455*	2	3
C1454*	C1457*	4	2
C1459*	C1458*	4	2
C1466*	C1467*	2	3

Net Price, any type 59c

Tone Switches



Positive acting shorting 12 re contacts, insulated $1 \times 2\frac{1}{2}$ " shaft. $\frac{1}{8} \times \frac{1}{2}$ " bushing. rated current 1A, 6V.

Cat. No.	Circuit	Net Price
C1460	SPDT	29c
C1461	SP-3 position	29c
C1462	DPDT	35c
C1473	DP-3 position	44c

Universal Flat Switch

Non-short; ST or DT up to 4 poles; $\frac{1}{8}$ " deep; $2\frac{1}{2}$ " shaft; bar knob. Cat. No. S21047 Net Price 44c

Spring Return Switches

Replacements for intercommunicator talk-back switches. Two-position, shaft returns to initial position when knob is released. Turns clockwise against spring. Turns clockwise against spring.

Cat. No.	Poles	Net Price
C1463	1	38c
C1464	2	44c
C1451	4	59c

Momentary Push Switches

Handle 1 amp. at 110V, a-c; panel mount in $\frac{1}{8}$ " bushing.

Cat. No.	Normally	Net Price
S21054	Open	29c
S21055	Closed	29c

Federal Anti-Capacity Switches



Designed for low capacity between levers. Positive contacts.

Cat. No.	Type	Net Price
S3090	DPST	\$1.65
S3091	DPDT	1.65
S3092	4PDT	1.90

23 Position Selector

For test instruments and laboratory use. Common terminal contacts 23 slips mounted on one section. Double wiping contact for long life and low resistance. Shorting type contact only. Metal shaft $\frac{1}{8} \times 2\frac{1}{2}$ ". Brass bushing; bar knob furnished. Cat. No. C1443 Net Price \$1.47

Dial plate numbered 1 to 23. Cat. No. CK-173 Net Price 12c

Knife Switches

BAKELITE BASE

Moulded Bakelite base and handle. Blades and Contacts Brass, nickel-plated.

Cat. No.	Description	Net Ea.
S3081	SPST	\$.50
S3082	SPDT	.59
S3083	DPST	.68
S3084	DPDT	.79
S23093	3PST	1.09
S3085	3PDT	1.18
S3086	4DST	1.47
S3087	4PDT	1.76
S3088	5PST	2.06
S3089	5PDT	2.16

Wet processed white porcelain base. Insulated handle. Hardware plated.

Cat. No.	Type	Net Price
S3098	SPST	18c
S3099	SPDT	24c
S3100	DPST	30c
S3101	DPDT	42c
S11851	TPDT	66c

H & H Rotary Switches

Positive contact at 3 amp. 125 V. —1 amp. at 250 V. Shaft is $\frac{1}{8}$ " long. Lock nuts supplied.

Cat. No.	Net Ea.
S3066 SPST	23c
S3067 SPDT	26c
S3068 DPST	40c
S3069 DPDT	45c

H-H Toggle Switches

These Toggle Switches are approved by the Fire Underwriters and will carry 3 amp. at 125 V. or 1 amp. at 250 V. Two lock nuts included.



Cat. No.	Circuit	Net Ea.
S3054		23c
S3055	SPST	23c
S3056		23c
S3057		26c
S3058	SPDT	26c
S3059		31c
S3060		31c
S3061	DPST	31c
S3062		31c
S3063		45c
S3064	DPDT	45c
S3065		45c

Toggle Switch Plate

For use with any standard panel type toggle switch. "On" and "Off" type. Cat. No. S3080 Net 3c

Intermediate Type

All-bakelite body, bat handle, lug terminals, $\frac{1}{8}$ " dia. mtg. shank, will handle 6 amperes at 125 volts, 3 amperes 250 volts; two lock-nuts.

Cat. No.	Circuit	Net Price
S20413	SPST	45c
S20414	SPDT	55c
S20415	DPST	59c
S20416	DPDT	69c

H & H Power Switch

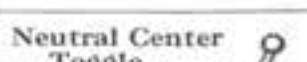
A heavy-duty toggle switch for use in transmitter circuits. D.P.S.T. 12 amps, 125 volts, $\frac{1}{8}$ " shank, screw terminals.

Cat. No. S11850 Net Price 65c

Like above switch but with bat handle and colder lug terminals. Cat. No. S11850A Net Price 65c

Heavy Duty Toggle Switch

Carries 20 Amp. at 125 volts, or 1 $\frac{1}{2}$ H.P. DPST, bakelite body, screw terminals. No. S20417 Net \$1.75



Neutral Center Toggle

Heavy duty. 2, 3, or 4 pole double throw, 10 A, 125 V. Screw terminals.

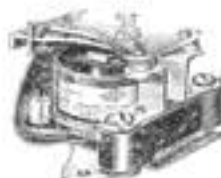
Cat. No.	No. Poles	Net Price
S11847	Two	\$1.75
S20418	Three	2.65
S20419	Four	2.85

Wall Box Mounting Toggle Switch

Heavy duty DPDT neutral center toggle, fits standard switch box, bakelite body and handle, screw terminals 20 amp. 125V. 10A, 250V. Cat. No. S20420 Net Price \$2.75



POTTER & BRUMFIELD RELAYS



Small Power Relays

Constructed from high-grade materials throughout. The frame, core and armature are made from the highest grade relay steel. Contacts are pure silver to silver.

SPST-DOUBLE BREAK CONTACTS			
Open-Norm.-Closed	Coil	Cont.	Net
Cat. No.	Cat. No.	Volts	Price
S21201	S21202	6 D.C.	\$2.45
S21203	S21204	6 A.C.	2.50
S21205	S21206	100 D.C.	2.80
S21207	S21208	110 A.C.	2.50
SPST-SINGLE BREAK CONTACTS			
S21209	S21210	6 D.C.	2.45
S21211	S21212	6 A.C.	2.50
S21213	S21214	100 D.C.	2.80
S21215	S21216	110 A.C.	2.50
DPST-SINGLE BREAK CONTACTS			
S21217	S21218	6 D.C.	3.55
S21219	S21220	6 A.C.	3.60
S21221	S21222	110 D.C.	3.90
S21223	S21224	110 A.C.	3.60
SPDT-SINGLE BREAK CONTACTS			
S21225	8 D.C.	15	2.70
S21226	6 A.C.	15	2.75
S21227	110 D.C.	15	3.05
S21228	110 A.C.	15	2.75



Shock-proof Relay

Balanced armature lens unit operate in any position; coils draw 3-4A. A.C.; 2-2 1/2 W. D.C.; very compact, wt. 4 oz.

SPST-DOUBLE BREAK CONTACTS			
S21229	S21230	6 D.C.	\$3.80
S21231	S21232	6 A.C.	4.60
S21233	S21234	110 D.C.	4.05
S21235	S21236	110 A.C.	4.60
DPST-SINGLE BREAK CONTACTS			
S21237	S21238	6 D.C.	4.20
S21239	S21240	6 A.C.	4.60
S21241	S21242	110 D.C.	4.45
S21243	S21244	110 A.C.	4.60
SPDT-DOUBLE BREAK CONTACTS			
S21245	6 D.C.	5	4.20
S21246	6 A.C.	5	4.60
S21247	110 D.C.	5	4.45
S21248	110 A.C.	5	4.60
DPDT-SINGLE BREAK CONTACTS			
S21249	6 D.C.	5	4.20
S21250	6 A.C.	5	4.60
S21251	110 D.C.	5	4.45
S21252	110 A.C.	5	4.60



Midget Relays

Designed for all applications where a small, inexpensive, and dependable relay is needed. Sturdy construction, very fast operation.

SPST-SINGLE BREAK CONTACTS			
S21253	S21254	6 D.C.	\$1.50
S21255	S21256	6 A.C.	1.50
S21257	S21258	110 D.C.	1.75
S21259	S21260	110 A.C.	1.50
DPST-SINGLE BREAK CONTACTS			
S21261	S21262	6 D.C.	2.15
S21263	S21264	6 A.C.	2.15
S21265	S21266	110 D.C.	2.40
S21267	S21268	110 A.C.	2.15
SPST-DOUBLE BREAK CONTACTS			
S21269	6 D.C.	8	1.55
S21270	6 A.C.	8	1.55
S21271	110 D.C.	8	1.80
S21272	110 A.C.	8	1.55
SPDT-SINGLE BREAK CONTACTS			
S21273	6 D.C.	8	1.55
S21274	6 A.C.	8	1.55
S21275	110 D.C.	8	1.80
S21276	110 A.C.	8	1.55
DPDT-SINGLE BREAK CONTACTS			
S21277	6 D.C.	8	2.20
S21278	6 A.C.	8	2.20
S21279	110 D.C.	8	2.45
S21280	110 A.C.	8	2.20

Other coil voltages for all above relays on special order.

Multiple Leaf Relays



Specially adaptable to plate circuit operation. Tinned phosphor bronze springs. 1/8" fine silver contacts. 5A. non-inductive load. Positive action, ample insulation. 2 1/2" x 1 1/2" x 2". Net

Cat. No.	Type	Contacts	Coil Volts	Price
S20332	SUA-6	DPDT	6-12-24-110	\$2.25
S20333	SUA-9	3PDT	AC	2.65
S20334	SUA-12	4PDT		3.10
S20335	SUD-6	DPDT		2.15
S20336	SUD-9	3PDT	6-12-24 DC	2.60
S20337	SUD-12	4PDT		3.12

Low-Loss Relays



Polystyrene insulated for HF service. Fine silver contacts 1/8" d. 1/8" gap "Y" springs.

Cat. No.	Contacts	Load	Coil	Net Price
S20338	DPDT	[KW RF	110V A.C.	\$4.35
S20339	SPST-NO.	"	110V A.C.	3.25
S20340	Dbl. Brk.	"	6V A.C.	3.25

Midget Photo-cell Relays

Only 2 1/2" x 1 1/2" x 1 1/2"; mounting centers 2 1/2"; fine silver contacts rated 6 amp. non-inductive load at 110 volts AC. Closing and drop-out are adjustable by bending contact arms and spring holder. Single-pole, double-throw.

Cat. No.	Coil Resistance	Net Price
S13200	2,500 ohms	\$1.00
S13201	5,000 ohms	1.15

Eby Sensitive Relay

The Eby EH-12 sensitive relay is designed for installation in photoelectric control equipment—vacuum tube amplifier circuits. Rated at 11.25 milliwatts for positive operation. It may be adjusted to as little as 1.25 milliwatts. Action is S.P.D.T. with steeling silver contacts. Contacts rated to carry 2.5 amperes at 115 V. AC. At 115 V. DC, 1.5 amp.

Cat. No.	Coil Res.	Net Price
S2839	5,000	\$5.00
S2840	10,000	5.59

Photo Electric Cell Relays

The inexpensive relays can be used in all P. E. Cell circuits. Layer wound coil—adequately impregnated, probe, armature, and pole piece made of Armon iron, overall dimensions 2 1/2" long, 1 1/2" high, 1 1/2" wide—designed for plate circuit of vacuum tubes. Will make contact with 8 mils going through coil and drop out at 5 mils. S.P.D.T. Cat. No. S11210 2,500 ohm coil Type PGI. Net Price \$1.50

Type P.C.2—Same as above except coil 5,000 ohms.

Cat. No. S11211 Net Price \$2.15

Compact Relays

Same construction as above except coil voltage.

Cat. No.	Action	Coil Volts	Net Price
S11212	S.P.D.T.	6-AC	\$1.60
S11213	S.P.D.T.	6-DC	1.50
S11214	S.P.D.T.	110-AC	1.60
S11215*	D.P.D.T.	110-AC	4.35

* Different construction, ceramic insulation.

Advance RELAYS

Time Delay Relay

Particularly suited to pre-heat control for tube filaments, this unit has many other uses; adjustable for delay periods of 10 seconds to one min.; timing is accurate and relay makes or breaks without hesitation or chattering; 1/8" pure silver contacts handle 30A. at 6 V. to 10A. at 115 V. Operates on 110 volts A.C.; normally open thermostat.

Cat. No.	Contact Circuit	Net Price
S21184	DPST Normally open	\$4.55
S21185	DPST Normally closed	4.55
S21186	DPDT	4.55



Keying Relay

Safe operation up to 5,000 volts is assured by use of two SPST switches in series; 1" pure silver contacts in heavy phosphor bronze spring leaves; heavy duty magnet coil and strong return spring provide for exceptional keying speeds, size 1 1/2" x 2 1/2" x 1 1/2". Binding posts for coil and line connections.

Cat. No.	Coil Volts	Net Price
S21187	110 D.C.	\$2.94
S21188	110 A.C.	2.94

Transmitter Relay

Highly insulated with Insulante, this heavy duty relay is ideal for high frequency service. DPDT switching circuit employs 1/8" pure silver contacts rated at 10 amperes; operates on 100 volt A.C. with no hum or chatter; size 3 1/2" x 2 1/2" x 1 1/2".

Cat. No.	Net Price
S21189	\$5.29



Power Relays

Exceptionally sturdy relays for handling real power; especially suited to motor-generator systems for which they will handle the heavy current surge encountered in cold starts. Mounted on 1/2" bakelite base with 8-32 binding posts for load connections.

Cat. No.	A.C. Amp.	Contacts	Net Price
S21190	20	Single 1"	\$3.53
S21191	30	Double 1"	4.12

Field coils for 110 volts A.C.

RELAY CATALOGS

Besides the relays listed here, we can furnish a wide variety of units in various coil resistances and contact arrangements. Write us for complete catalogs of Advance, Dunco, Guardian, and Potter-Brumfield relays.

Sigma Sensitive Relay

TYPE 3A
The Sigma 3A relay is a sensitive instrument that proves invaluable in electronic and delicate control applications. It is particularly adaptable to supervisory circuits and coupling systems. The input rating is only 6 milliwatts DC. Single-pole, double throw switching is provided. The contacts are of silver. The Type 3-B relay will handle 50 watts non-inductive load at 110 volts AC or, on low voltage, a maximum current of 1 ampere non-inductive load.

The five-prong base permits plug-in mounting in standard vacuum tube sockets. 2 1/2" in diameter and 2 1/2" high.

INPUT CHARACTERISTICS AT 6 MILLIWATTS				
Cat. No.	Coil Res.	Volts	Milli-amp.	Net Price
S2835	2,000	2.53	1.41	\$4.00
S2836	5,000	1.47	0.89	4.40
S2837	8,000	0.65	0.71	4.40

Other field resistances can be supplied on order.



GUARDIAN RELAYS



High Frequency Relays

Small, efficient, economical, rugged controls designed to give maximum contact capacity in a minimum space. Long-life, large silver contacts. Insulation is of low loss Alkinox 196. Will handle up to 1 KW. Made to operate on 110 volts 60 cycle A.C.



Cat. No.	Type No.	Action No.	Net Price
S11802	R-100B	SPST	\$1.84
S11803	R-100C	SPDT	2.23
S11804	R-100G*	DPDT	3.39

* Handles 400 watts at 14 megacycles, for heavier duty use the A-100 listed at right.

Break-In Relays

Identical in appearance with the Keying relay at right.

An absolute necessity for installation where the transmitter is located in another room from the receiver and key. A frequently employed installation is to leave the B-100 connect the antenna and plate voltage to the receiver when open. Closing a toggle switch in the 110-volt circuit to the relay disconnects the receiver antenna and plate voltage. And at the same time connects the antenna to the transmitter and closes the 110-volt primary of the plate transformers. Action is DPDT.

Cat. No. S2831	Model B-100	Net Price
		\$5.06

Adjustable Overload Relays



Gives positive, precise, protection against current surges and continuous overloads. Being adjustable to operate on any current from 150 to 650 mls, the X-100 is ideal for experimental work with new circuits. Large, fine silver contacts rated 1500 watts non-inductive at 110 volts 60 cycles, and 1 KW. in A.C. primary circuit of inductive power supply. Contact circuit is single pole, single throw, with contacts locking open until overload stops.

Cat. No. S12028	Net Price
	\$6.76

Fixed Overload Relays

Same general construction as X-100 except that these relays are not adjustable. Type L-250 opens contact circuit when field current reaches 250 mls; Type L-500 opens on 500 mls. Both types lock open.

Type L-250 Cat. No. S12029	Net Price
	\$5.06
Type L-500 Cat. No. S12030	Net Price
	\$5.06

Ward Leonard Antenna Change Over Relays



Automatic switching at the antenna for either transmission or reception. May also be used for switching directional antenna. Will handle frequencies up to 60 m.c. Micalex insulation. Silver-to-silver 4 ampere contacts.

Cat. No. S2826	Type 507-532 6-8 V. DC	
Cat. No. S2827	Type 507-531 110 V. AC	
Net Price, each		\$4.70

Heavy Duty Antenna Relay identical to the relay described above except that it is larger in size, and the contacts will carry 15 amperes R. F.

Cat. No. S2828	Type 507-521 110 V. AC	Net Price
		\$14.70
Heavy Duty Antenna Change Over and Break-In Relay. Exactly the same as the 507-521 described above except that it has 2 additional poles, one which is normally open, and one which is normally closed.		
Cat. No. S2829	Type 507-520 110 V. AC	Net Price
		\$16.17

Antenna Relays

WITH ALKINOX 196 INSULATION

These antenna relays have been designed for the amateur who wants a compact, convenient low-loss antenna change-over control. Will handle up to 1 KW on frequencies up to and including 28 m.c. The large silver contacts will stand heavy overloads, and assures low resistance contact. Made to operate on 110 volts, 60 cycle A.C. Ideal for antenna change-over, break-in, Heavy-duty keying in the primary with contacts in parallel, grid control, rectifier keying, and other uses.

Cat. No. S11805	Type A-100	DPDT	Net Price
			\$4.0
Cat. No. S11806	Type A-100C	SPDT	Net Price
			\$2.23

Keying Relay



Secures its operating current from any filament transformer winding, ranging from 5 to 16 volts AC or from any convenient DC source. Contacts are pure silver. Exceptionally speedy with clean make and break that

will give the very best C.W. note and make copying easy. Mount direct to metal panel without danger of short.

Cat. No. S2830	Model K-100	Net Price
		\$3.70

Remote Locking Control

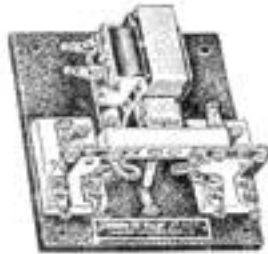


Momentary impulse locking control relay; contacts lock automatically and also reverse with each impulse; 1" fine silver contacts handle up to 1,500 watts non-inductive load at 110 volts A.C.; can also be used in primary of any inductive power supply delivering up to 1 KW. Operating coil draws about 23 V.A. at 110 volts A.C. Mounts on metal base. Timed terminal lugs. Bakelite insulation. Type RC-100-AR . . . four pole, single throw.

Type RC-100-AR . . . four pole, single throw.	
Cat. No. S22758	Net Price
	\$3.38
Type RC-100-DR . . . combination of one DPDT and one single-pole double throw.	
Cat. No. S22759	Net Price
	\$3.72

Gordon Heavy-Duty Antenna Relay

For antenna change-over, multi-band transmitter, tank switching, and 60-cycle power switching. Will handle one kw. easily. 1" silver contacts 1" spacing. Alkinox 196 HF insulation. For frequency up to 100 mc. Positive action double pole double throw. For operation on 110 volt 50-60 cycle A.C. Size 4 1/2" x 5 1/2" x 3" high.



Cat. No. S10169	Type 1,000.	Net Price
		\$8.82

Special Relays

Relays having contact arrangement and coil voltages other than those listed here can be furnished on special order. Please be sure to specify

1. Coil voltage and whether A.C. or D.C.
 2. Number of poles.
 3. Normally open or normally closed.
 4. Single or double throw.
 5. Maximum amperes in contact circuit.
 6. Load voltage and whether A.C. or D.C.
 7. Type of load to be controlled.
- Quotations will be given promptly on receipt of above information.

DUNCO RELAYS

Midget Keying Relay



This keying relay is suitable for speeds up to 40 wpm. Large silver contacts assure long life. Coil requires only 50 M.A. and 110 volts A.C. Contacts will carry 6 amperes, 110 volts A.C. Size 2 1/2" x 1 1/2" x 1 1/2"

Cat. No. S2800	Type 1-AXX	Net Price
		\$3.75

Industrial Relays

The relays listed below are of the same dimensions as that listed above, and have the same type of contacts and same wattage coil. These relays can be supplied in any voltage up to 115 V. AC or any voltage up to 90 V. DC at no extra cost on special order. For voltages from 90 V. DC to 130 V. DC add \$1.21 to these prices. Specify voltage.

Type	Appl.	Cat. No.	Cat. No.	Cat. No.	Net Price
1-HXX	SPST*	S2801	S2802	S2803	\$3.75
1-BXX	DPST*	S2804	S2805	S2806	4.75
1-CXX**	SPST	S2807	S2808	S2809	3.75
1-DXX	SPDT	S2810	S2811	S2812	4.00
1-EXX	DPDT	S2813	S2814	S2815	5.25
1-FXX	3PDT	S2816	S2817	S2818	7.00

* Double break, others are single break.
** Normally closed, others are normally open.

Sensitive Relay



This ultra sensitive relay is designed for use where current is limited. The coil has a resistance of 10,000 ohms and is adjustable to operate between 1 to 18 m.a. DC. Contacts will carry 2 amperes at 110 volts A.C. Size 2 1/2" x 2 1/2" x 2 1/2"

Cat. No. S2824	Type 29NAX.	Net Price
		\$7.75

Midget Radio Relays



These relays have two isolated contacts for operation in low or high voltage circuits at any frequency. Outstanding features include low contact resistance, extremely fast operation, suitable for bug keying, high voltage suitable for use on autos, trains, planes, elevators, boats, etc.

Cat. No.	Type	Operates on	Net Price
S2819	RA1	2.5 V. AC	\$2.00
S2820	RA3	6.3 V. AC	2.00
S2821	RA15	11.5 V. AC	3.50
S2822	RD1	5 to 6 V. DC	2.00
S2823	RD15	10 to 12 V. DC	3.00

Time Delay Relay

This time delay relay is intended for transmitter use, designed to delay the plate current for 30 seconds after the filaments of the rectifiers are turned on. Provided with a snap-on housing and panel mounting studs. Re-cycles in two minutes. Coil is for 110 V. 60 cycle A.C. Contacts will carry 110 V. AC 6 amperes.

Cat. No. S2825	Type TTAH-1.	Net Price
		\$11.00

Relay Bargains

are listed in a weekly bulletin of special items on which we can offer unusually favorable prices or deliveries. Ask to have your name placed on our mailing list to receive this bulletin.

AUTO RADIO AERIALS AND SUPPRESSORS

POWER LINE FILTERS AND FILTERETTES

Aerovox Noise Filters

TYPE IN-20

Very effective for electric razors and other vibrating devices; plugs in between the noise source and the power line to overcome interference of variable character but strong intensity; size 1 1/2" x 3". Cat. No. S22679 Net Price \$3c

TYPE IN-30

Similar to above, but with additional inductance; handles more severe interference; plugs between radio set and outlet or, preferably, between noise appliance and outlet. Size 1 1/2" x 3".

Cat. No. S22680 Net Price \$8c

Automobile Aerials

PROFESSIONAL TYPE

For use where strength, ruggedness, and special high-frequency insulation are vital; solid, vanadium-steel rods, 96" long, tapered for flexibility, and cadmium-plated for protection from corrosion; lower section consists of 1/2" diameter brass rod heavily plated; aerial is flexible enough to bend freely under contact with tree limbs, yet amply sturdy. For particularly arduous service, the spring-base aerial is recommended; heavy conical coil spring holds rod erect at normal speeds and while car is turning corners, and flexes to allow rod to pass under solid obstructions; spring is not part of electrical circuit, flexible insulated lead passes through center of spring and connects to aerial. For dependable service in any weather, Lucite and impregnated bakelite are used for insulation.

SPRING-MOUNTING AERIALS

Model 1200, bumper type, for attachment to car bumper support; rigid clamp holds spring base.

Cat. No. S23423 Net Price \$12.35

Model 1400, body type, mounts anywhere on the car, except the bumper; soft rubber gasket makes tight fit and keeps moisture out. Cat. No. S23424 Net Price \$12.35

RIGID-MOUNTING AERIALS

Model 1100, bumper type, mounts solidly on bumper support by simple, Lucite-insulated clamp. Cat. No. S23425 Net Price \$7.64

Model 1200, body type, three-bolt mounting allows for body curvature and swivel base permits any angle to be obtained. Cat. No. S23426 Net Price \$7.64

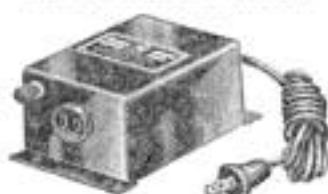
NOTE: Above aerials are furnished without lead-in cables; order from co-ax cable listings in cable section of this catalog.

Shielded Connector



Antenna coupler in auto radios. 1 1/2" x 1/2" dia. For coupling antenna. No. S9836 Net Price, each 4c 12 for 42c

C-D QUIETONE Interference Filters



TYPE IF-15

An efficient all-wave capacitive-inductive filter for use in connection with all types of electrical appliances where interference conditions are severe; has frame connection to reduce radiation; rating—110 volts AC or DC, 5 amp. Furnished in bakelite case. Cat. No. S22675 Net Price \$3.53



TYPE IF-21

All-wave filter—capacitive-inductive type for use on appliances where return lead to frame cannot be made; as with electric shavers, barbers' clippers, etc. Rating 110 volts AC or DC, 1.6 amperes; bakelite case. Cat. No. S22676 Net Price \$1.76

ELECTRIC SHAVERS

TYPE IF-22

Line cord and plug provided with Schick and Packard type adapters that fit practically all shavers. Very effective in stopping electric shaver interference at the source. Rating: 110 volts AC, 5 amperes.

Type IF-22A for Schick, Knapp-Monarch, etc. Cat. No. S22677 Net Price \$1.27

Type IF-22B for Packard, Remington-Rand, Zephyr, and Remson type shavers. Cat. No. S22678 Net Price \$1.27

Wire Wound Suppressors



Permanently sealed and contained in a moisture-proof, heat-resisting, insulated casing with standard brackets and fittings to fit all makes of spark plugs and cars. These suppressors have an extremely low DC resistance and thus definitely do not affect the intensity of the ignition spark or cut down the speed of the car. The inductance of the winding offers a high resistance to the ignition noise frequencies and effectively suppresses all interference.

Cat. No.	Description	Net Price Ea.
S10376	Spark Plug	
S10377	Cable Type	
S10378	Distributor	36c
S10379	Slip-on	

TOBE FILTERETTES

Oil Burner Filterette



Use on all oil burners to kill ignition interference. Mounted in cut-out box. Will carry 2.5 amperes at 110 volts AC or DC. Installation instructions furnished.

Cat. No. S8303 Type OB-31. Net Price \$4.67

All Wave Radio Line Filter



(ALL WAVE) For eliminating all-wave radio noise reaching the receiver through its power line connection. Contains specially designed all-wave inductances. Must not be confused with cheap condenser filters.

Rating: 2 1/2 amperes at 110 volts AC or DC. Cat. No. S8304 HF-2. Net Price \$2.79

All-Wave Appliance Filterette

Similar to above but for use between the power outlet and the attachment plug of food-mixer, fan, or other AC or DC radio noise source; will handle 10 amperes at 110 volts; binding post for connecting return wire to frame of noise-maker; metal case, 4" x 3" x 2"; 3-foot cord. Cat. No. S22681 Type 1142. Net Price \$6.17

High Efficiency Noise Filter



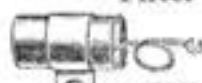
Specially designed for portable appliances producing short wave noise. A plug-in unit. Carries 2 1/2 amperes at 110 volts AC or DC. Cat. No. S8302 Type 811. Net Price \$2.79

Auto Radio Suppressors



Cat. No.	Fig.	Application
S9829	A	Spark plug type
S9830	B	Short spark plug type
S9831	C	Distributor type
S9832	D	Ford V-8 type
S9833	E	Cable type
S9843	F	Elbow type
Net Price, each, any style		10c

Generator-Ammeter Filter Condenser



Enclosed in a metal case with a mounting bracket. Eliminates noise in auto radio installations. No. S9827 1 mfd. Net 19c No. S9828 1 mfd. Net 24c

FUSES - MOUNTINGS - NEON LAMPS

Aircraft Fuses

Designed especially for aircraft service; have high mechanical strength, resistance to fatigue, and long vibration life.

Glass enclosed for general use; bakelite cased for use where severe overloads might shatter glass. Non-crystallizing elements twisted 90° for effective vibration resistance.



4 AG GLASS ENCLOSED				5 AG			
Size: $1\frac{1}{2} \times \frac{1}{8}$ Dia.				Size: $1\frac{1}{2} \times \frac{1}{8}$ Dia.			
Weight: 3.5 grams				Weight: 8.5 grams			
Cat. No.	Net	Amp.	Volts	Cat. No.	Net	Amp.	Volts
S21379	9c	1	250	S21390	9c	1	250
S21380	9c	2	250	S21391	9c	2	250
S21381	9c	3	250	S21392	9c	3	250
S21382	9c	5	25	S21393	12c	5	25
S21383	9c	10	25	S21394	12c	10	25
S21384	9c	15	25	S21395	12c	15	25
S21385	9c	20	25	S21396	12c	20	25
S21386	9c	25	25				
S21387	9c	30	25	S21397	12c	30	25
S21388	12c	40	25	S21398	18c	40	25
S21389	18c	50	25	S21399	18c	50	25

4 AB BAKELITE ENCLOSED				5 AB			
Size: $1\frac{1}{2} \times \frac{1}{8}$ Dia.				Size: $1\frac{1}{2} \times \frac{1}{8}$ Dia.			
Weight: 3.75 grams				Weight: 9.0 grams			
Cat. No.	Net	Amp.	Volts	Cat. No.	Net	Amp.	Volts
S21400	15c	1	250	S21411	18c	1	250
S21401	15c	2	250	S21412	18c	2	250
S21402	15c	3	250	S21413	18c	3	250
S21403	15c	5	25	S21414	18c	5	25
S21404	15c	10	25	S21415	18c	10	25
S21405	15c	15	25	S21416	18c	15	25
S21406	15c	20	25	S21417	18c	20	25
S21407	15c	25	25				
S21408	15c	30	25	S21418	18c	30	25
S21409	18c	40	25	S21419	21c	40	25
S21410	21c	50	25	S21420	21c	50	25



High Voltage Fuses

For aircraft radio service; fuse elements are phosphor bronze ribbons rigidly supported in glass tubes; bright dipped brass end caps $\frac{1}{8}$ " in diameter; standard lengths as specified for telephone and telegraph fuses; capable of withstanding severe vibration; designed to clear shorts on power sources up to 2 K.W.

Cat. No.	Amp.	Volts	Ohms	Wt.	Net Ea.
S21421	1	250	7.3	21c	
S21422	2	250	3.4	18c	
S21423	3	250	1.7	7	18c
S21424	1.0	1,000*	1.1	gms.	18c
S21425	1		.75		18c
S21426	2		.30		18c
S21427	1		5.1		21c
S21428	1		2.6		21c
S21429	1.0	2,500†	1.7	10½	21c
S21430	1		1.1	gms.	21c
S21431	2		.40		21c
S21432	1		5.5		24c
S21433	1		2.9		24c
S21434	1.0	3,000‡	1.8	15½	24c
S21435	1		1.3	gms.	24c
S21436	2		.51		24c

* 3" long. † 4½" long. ‡ 5½" long.

High Voltage Fuse Mountings



Black bakelite base mountings for high voltage, three cased aircraft fuses. Overall height $1\frac{1}{2}$ ", all sizes.

Cat. No.	Volts	Lth.	Wth.	Wt.	Net
S21437	1,000	3½"	1"	42	59c
S21438	2,500	6½"	1"	71	65c
S21439	3,000	6½"	1"	82	76c

Weight is given in grams.

Fuse Container



Cadmium-plated separable metal container for fusing a line. Used extensively for auto sets. Takes 1" or 1½" fuse. Also suitable for aerial connector. Separates easily. Cat. No. S9835. Net Price, each 6c. 12 for 65c.

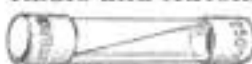
Instrument Littelfuses TYPE 3 AG

For protecting delicate instruments; operate at high speed and prevent burnout of costly equipment through sudden overload. Glass enclosed; 1" long by $\frac{1}{8}$ " diameter; may be used up to 250 volts A.C. or D.C.



General Recommendations for Application	METER APPLICATIONS				Cat. No.	Max. Load M.A.	Aver. Resist. 5		Net Price
	Volts Meter Ohms Per Volt	Ammeters	Thermo-Couple Types	Mag-netic Types			M.A.	Load	
For most delicate instruments	over 1,000	Galvanometer	0-5	0-5	S3802	5	500	18c	
For microammeters	1,000	Up to 0-1	0-10	0-10	S3803	10	110	12c	
For rugged 0-1 milliammeters	500-1,000	0-10	0-25	0-25	S3804	25	20	12c	
Wattmeters and general use	100-500	0-25	0-60	0-60	S3805	60	5.0	12c	
Radio "B" circuits	20-100	0-75	0-115	0-115	S3806	100	3.0	9c	
"B" circuits—battery and auto	10-20	0-150	0-200	0-200	S3807	200	6.2	9c	
Production test equipment	5-10	0-250	0-300	0-300	S3808	300	3.0	9c	
Small rectifier and power tubes	3-5	0-350	0-400	0-400	S3809	400	2.5	9c	
General instrument use	.....	0-500	0-600	0-600	S3810	600	.40	9c	
Primary of tube testers, etc.	.....	0-750	0-1000	0-1000	S3811	1000	.24	6c	
Primary of set analyzers, etc.	.....	0-1000	0-1500	0-1500	S3812	1500	.18	6c	
General instrument protection	.....	0-1500	0-2000	0-2000	S3813	2000	.14	6c	

Radio and Automotive Fuses



TYPE 3 AG
Glass enclosed
 $1\frac{1}{2}$ " long x $\frac{1}{8}$ " dia.

Cat. No.	Amp.	Volts	Ohms	Net ea.	for 12
S21440	1	250	7.5	12c	\$1.39
S21441	2	250	3.7	9c	.97
S21442	3	250	2.5	9c	.97
S21443	5	250	1.5	9c	.97
S21444	10	250	.75	9c	.97
S21445	20	250	.37	9c	.97

For 110 Volt Line

Cat. No.	Amp.	Volts	Ohms	Net ea.
S21446	1*	110	.22	5c
S21447	1½*	Up to 250	.14	5c
S21448	2*		.10	5c
S21449	3*		.07	5c

RFE AUTOMOBILE FUSES

Cat. No.	Amp.	Volts	Ohms	Net ea.
S21450	5		.032	\$2.94
S21451	7½		.02	per
S21452	10	25	.01	hundred
S21453	15		.006	
S21454	20		.005	

* Underwriters' Lab. approved.
† Resistance of clip and contact for 3 AG fuses averages .001 ohms per clip.

LITTELFUSE NEON PRODUCTS

Neon Bulb



This tiny bulb—only $1 \times \frac{1}{8}$ "—may be used on any voltage above minimum of 90 D.C. or 65 A.C. provided a series resistor is used to limit current to 1 M.A. on steady loads; rating about $\frac{1}{10}$ watt; has $\frac{1}{8}$ " wire leads. Cat. No. S21455 Net Price 15c

Neon Lamp and Panel Mount



Same lamp as listed above but with added octagon switchboard lamp base; requires external resistor; overall size $1\frac{1}{2} \times \frac{1}{8}$ "; fits standard switchboard lamp jacks or panel mounting described below.

Cat. No. S21456 Neon lamp Net Price 21c

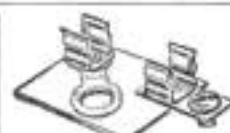
PANEL MOUNTING for neon lamp; mounts in $\frac{1}{8}$ " diameter hole in panels up to $\frac{1}{8}$ " thick; black bakelite body; transparent molded cap; extends $\frac{1}{2}$ " above panel, 2" behind; built-in 200,000 ohm protective resistor wired to third terminal for optional use; safe rating 90 to 350 volts.

Cat. No. S21457 Panel mntg. Net Price 59c

Pocket Type Neon Tester



Up to 500 Volts A.C. or D.C.
Tests for live lines, polarity, blown fuses, defective spark plugs and cables; indicates D.C., A.C., or R.F. and approximate voltage; molded Tenite body, short-proof leads and tips; handy pocket clip; built-in 200,000 ohm resistor.
Cat. No. S21458 Net 59c



Meter Back Mounting

FOR INSTRUMENT LITTELFUSES

Mounts directly on one meter post; will not touch other posts on smallest standard meter; bakelite base $1 \times 1\frac{1}{2} \times \frac{1}{8}$ " length, including screw terminal, $\frac{1}{4}$ ". Should be used on every meter.

Cat. No. S21459 Net Price 12c

Extractor Fuse Posts



SCREW TYPE AND KNOB TYPE

The safe, convenient way to mount Littelfuses. Fuse held in knob pulls out of body when knob is unscrewed. Bakelite case and knob; single hole mounting; screw type meet Underwriters' Lab. spec. Fit panels up to $\frac{1}{8}$ " thick.

Cat. No.	Fuse	Type	Mtg. Hole	Net Price
S21460	3 AG	Screw	"	24c
S21461	4 AG	Screw	"	38c
S21462	4 AFT	Knob	"	44c
S21463	5 AG	Knob*	"	\$1.18
S21464	8 AG	Screw	"	24c

* Has lock nuts and insulating washer.

Clip Type Fuse Mounting

For instrument, radio, and automotive type Littelfuses; bakelite base, nickel-plated clips, tinned shakeproof solder terminals; one-screw mounting.

Cat. No.	Fuse No.	Dimensions	Net Price
S21465	3 AG	$2\frac{1}{2} \times 1 \times \frac{1}{8}$ "	9c
S21466	8 AG	$1 \times 1 \times \frac{1}{8}$ "	9c
S21467	3 AG	$2\frac{1}{2} \times 1 \times \frac{1}{8}$ "	21c
S21468	8 AG	$2 \times 1 \times \frac{1}{8}$ "	21c

Beryllium-Copper Fuse Clips

Triple the grip strength of best phosphor bronze; fatigue resisting; withstand heat up to 200° C. Silver plated, standard package—100.

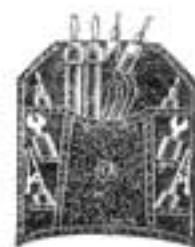


Cat. No.	Dis.	Hole	Term.	Wt.*	Net/100
S21469	$\frac{1}{8}$ "	.134"	B	1	\$2.94
S21470	$\frac{1}{8}$ "	.171"	B	1½	7.06
S21471	$\frac{1}{8}$ "	.196"	B	3½	9.40
S21472	$\frac{1}{8}$ "	.203"	A	5	12.35
S21473	$\frac{1}{8}$ "	.265"	A	10½	15.29

Cat. No.	Style	Weight*	Net each
S21474	A	3.5	2c
S21475	B	2	2c

* Weight in grams.

TEST LEADS • TERMINALS • SPRING CLIPS



Test Lead Kit

Leatherette pocket case. Universal in that insulated fittings are provided for every type of testing. One pair test leads 60" long. One end fine insulated phone tips and the other end insulated removable banana type plugs. Extra fittings are all removable, making the test lead universal in application.

Cat. No. S3848 Type 1005. Net Price \$2.06

Fused Test Lead Set

Protect your test instruments with these fused leads; heavy fenoline handles contain standard instrument fuses that can be easily interchanged; prods have sharp, needle points; flexible leads terminate in insulated banana plugs; furnished with set of alligator clips, spade lugs, and phone tips, to fit the banana plugs; fuses included.

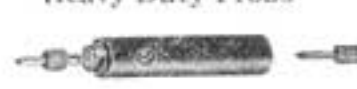
Cat. No. S23082 Type 430 \$1.47

Finger-grip Test Leads

Molded, finger-grip insulated phone tips at ends of flexible "kinkless" leads 65" long; sharp pointed prods screw into 5" handles of red and black fenoline; all connections well soldered.

Cat. No. S23083 Type 373. Net Price \$1.93

Heavy Duty Prods



Fully insulated bakelite test prod with threaded, midge sharp pointed phone tips. Minimum amount of metal exposed. Exposed metal tip only 1/8" long. Overall length of test prod is 2 inches.

Cat. No. S14019 Net Price, each 32c

Insulated Finger-grip Phone Tip

Made of red or black fenoline.

Cat. No. 10196 Net Price 29c



Fahenstock Clips

Holds wire in secure contact. Ideal for temporary hookups.

Cat. No. S1362 Net Per Doz. 12c

Millen High Voltage Terminal Strips

Barriers prevent over- or under-connection internal wiring. No. 37104 Bakelite, four terminals, Net 60c. No. 37105 Slatite five terminals, Net 50c.



10,000-Volt Test Leads



Essential for testing of television, transmitting, and high voltage amplifier equipment and for use with meters; heavy bakelite handles have finger guards and midge tips with minimum metal exposure; 18-gauge cables have heavy, color-coded rubber insulation; handles 6" long; connectors 2", cables 50".

Cat. No. S23084 Type 475. Net Price, per pair \$2.31

5,000-Volt Test Leads

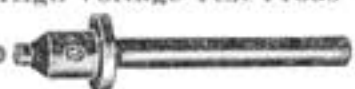
With replaceable phonograph needle points that penetrate the insulation of wire; extra flexible red and black rubber-covered "kinkless" leads 50" long; 4" fenoline handles.

Cat. No. Type Terminals Net
S2049 382 Phone tips 59c
S2052 381 Spade lugs 59c
S23085 379 Alligator clip 65c

With Phone-Tip Prods
Same as above but with pointed, solderless phone-tips inserted in the ends of the handles.

S2051 355 Phone tips 59c
S2050 356 Spade lugs 59c

High Voltage Test Prods



Made of black bakelite, these rugged test leads are especially suited to use in television and other high voltage work. Finger guard ring gives extra protection. Equipped with midge, threaded phone tip. Prods are 6" long overall.

Cat. No. S14018 Net Price ea. 69c

Screw Terminal Strips

Bakelite strip with securely fastened terminals. Ideal for Amplifiers and Radios.

No.	Term.	Each
S1339	2	14c
S1340	3	21c
S1341	4	29c
S1342	5	32c
S1343	6	35c

Lug Terminal Strips



Cat. No.	Terminals	Net Ea.	10 For
S1357	2	3c	16c
S1358	3	3c	18c
S1359	4	4c	32c
S1360	5	4c	34c
S1361	6	4c	35c

MUELLER Spring Clips



A—ALLIGATOR . . . accurately made, slim jaws, fine-meshing teeth, strong spring for hard bite; barrel connection fits banana plug; convenient round thumb grip; made of steel, 2 1/2" long.

Cat. No. S23086 Type 60 solder connection, Net each 5c 10 for 35c
Cat. No. S11932 Type 60CH solid copper for R.F. work, screw connection eliminates necessity for soldering. Net each 10c 10 for 70c

B—INSULATED ALLIGATOR . . . similar to above, plus insulated handle; screw terminal; barrel fits banana plug; 2 1/2" long.

Cat. No. S11941 Type 60H steel, red handle Net each 18c 10 for \$.83
Cat. No. S11942 Type 60H steel, black handle Net each 12c 10 for .83
Cat. No. S11939 Type 60CHS cop., red handle Net each 17c 10 for 1.20
Cat. No. S11940 Type 60CHS cop., blk. handle Net each 17c 10 for 1.20

C—CHOCCHILE . . . gets into tight places; teeth mesh whole length of both sides of jaws; screw connection; shank fits banana plugs.

Cat. No. S3705 Type 55 steel, 2 1/2" long. Net each 7c 10 for 45c

D—"TIP-CLIP" CHOCCHILE . . . same as above but with one jaw equipped with standard phone tip; overall length 2 1/2".

Cat. No. S11937 Type 85T. Net each 14c 10 for 95c



E—WEE-PREE-WEE . . . only 1 1/2" overall, with 1/2" jaw spread; light-weight, thin-nosed; entirely non-ferrous, ideal for R.F.

Cat. No. S10093 Type 88. Net each 9c 10 for 60c

F—PREE-WEE . . . jaw teeth mesh on ends; interlocking necks in full channel construction prevent offsetting; screw connection; use copper clips for R.F. or heavy current work.

Cat. No.	Type	Material	Amps.	Length	Open.	Net ea.	10 for
S3700	45	Cad-plated steel	5	1 1/2"	1"	5c	\$.33
S3708	45C	Copper	10	1 1/2"	1"	8c	.55
S3701	48B	Cad-plated steel	10	2"	1 1/2"	5c	.35
S23088	48C	Copper	20	2"	1 1/2"	10c	.70
S3710	27*	Cad-plated steel	20	2 1/2"	1 1/2"	10c	.70
S3711	27C*	Copper	40	2 1/2"	1 1/2"	17c	1.20

*Jaw teeth mesh on all three sides.

G—BATTERY CLIPS . . . husky clips for connection to storage batteries; teeth on one jaw and notch on other; heavy spring

S3702	24A	Lead-plated steel	25	2 1/2"	1"	\$.10	\$.70
S23090 <td>24 <td>Solid copper <td>50 <td>2 1/2" <td>1" <td>.20</td> <td>1.40</td> </td></td></td></td></td>	24 <td>Solid copper <td>50 <td>2 1/2" <td>1" <td>.20</td> <td>1.40</td> </td></td></td></td>	Solid copper <td>50 <td>2 1/2" <td>1" <td>.20</td> <td>1.40</td> </td></td></td>	50 <td>2 1/2" <td>1" <td>.20</td> <td>1.40</td> </td></td>	2 1/2" <td>1" <td>.20</td> <td>1.40</td> </td>	1" <td>.20</td> <td>1.40</td>	.20	1.40
S3703 <td>21A <td>Lead-plated steel <td>50 <td>4" <td>1 1/2" <td>.17</td> <td>1.20</td> </td></td></td></td></td>	21A <td>Lead-plated steel <td>50 <td>4" <td>1 1/2" <td>.17</td> <td>1.20</td> </td></td></td></td>	Lead-plated steel <td>50 <td>4" <td>1 1/2" <td>.17</td> <td>1.20</td> </td></td></td>	50 <td>4" <td>1 1/2" <td>.17</td> <td>1.20</td> </td></td>	4" <td>1 1/2" <td>.17</td> <td>1.20</td> </td>	1 1/2" <td>.17</td> <td>1.20</td>	.17	1.20
S23092 <td>21*</td> <td>Solid copper <td>100 <td>4" <td>1 1/2" <td>.50</td> <td>3.50</td> </td></td></td></td>	21*	Solid copper <td>100 <td>4" <td>1 1/2" <td>.50</td> <td>3.50</td> </td></td></td>	100 <td>4" <td>1 1/2" <td>.50</td> <td>3.50</td> </td></td>	4" <td>1 1/2" <td>.50</td> <td>3.50</td> </td>	1 1/2" <td>.50</td> <td>3.50</td>	.50	3.50
S3704 <td>11A*</td> <td>Lead-plated steel <td>100 <td>6" <td>1 1/2" <td>.60</td> <td>4.20</td> </td></td></td></td>	11A*	Lead-plated steel <td>100 <td>6" <td>1 1/2" <td>.60</td> <td>4.20</td> </td></td></td>	100 <td>6" <td>1 1/2" <td>.60</td> <td>4.20</td> </td></td>	6" <td>1 1/2" <td>.60</td> <td>4.20</td> </td>	1 1/2" <td>.60</td> <td>4.20</td>	.60	4.20
S23094 <td>11*</td> <td>Solid copper <td>200 <td>6" <td>1 1/2" <td>1.00</td> <td>7.00</td> </td></td></td></td>	11*	Solid copper <td>200 <td>6" <td>1 1/2" <td>1.00</td> <td>7.00</td> </td></td></td>	200 <td>6" <td>1 1/2" <td>1.00</td> <td>7.00</td> </td></td>	6" <td>1 1/2" <td>1.00</td> <td>7.00</td> </td>	1 1/2" <td>1.00</td> <td>7.00</td>	1.00	7.00

*Furnished with lug for cable connection.

Millen High Voltage Safety Terminals

Insulated bushing extends through round hole in chassis; all metal parts wholly enclosed, tapered plug and socket.

Cat. No.	Material	Net Price
37001	Plain bakelite	40c
37501	Millen bakelite	44c

Clip Insulators



Rubber insulators to fit above clips; can be used with jaws exposed or concealed; specify red or black.

Cat. No.	Clip	Ins. Net	Ten
S23095	88	8c	\$.85
S3706	85/85T	8c	.87
S23096	48B/48C	40	9c
S3709	45/45C	47	8c
S23097	27/27C	29	12c
S23098	24/24A	26	19c
S23099	21/21A	23	35c
S23100	11/11A	13	52c

Jones Barrier Type Screw Terminal Strips

Molded bakelite bases with sturdy barriers on top and two sides, preventing flashover; 1/8" metal-to-metal spacing over bakelite; binding head screws are 3/32" x 1/8" nickel plated brass mounted on 1/8" centers in rigid jumper bars; base 1 1/8" wide x 1 1/2" high; 4-hole mounting.

Cat. No.	Term.	Net
S20108	2	17c
S20109	3	24c
S20110	4	39c
S20111	6	41c
S20112	8	56c
S20113	10	67c



Other Jones terminal strips, not listed for lack of space, are available; order by Jones type number.

BINDING POSTS - - PLUGS - - JACKS

Plain Phone Tips



Cat. No. S3846 100 for \$1.90

Solderless Phone Tips

INSULATED



Insulated handle in six different colors—red, black, green, blue, yellow and purple. Length 1 1/2". No tools required to connect wiring. Specify color.

Cat. No. S3842 Net Price 12c

UN-INSULATED
Cat. No. S3843 Net Price 9c

Plain Phone Tip Jacks

Made of nickel plated brass. A strong spring assures perfect contact. Fits in 3/8" mounting hole.



Cat. No. S3840 Net Price 9c

Insulated Tip Jacks

For standard phone tips. Colored head 1/2" in dia. New improved springs hold phone tips very rigid. Available in six beautiful lustrous colors—red, black, green, blue, yellow, and purple. Specify color.



Cat. No. S3837 Net Price 12c

Moulded Twin Tip Jacks



Made to fit standard tip jacks. Bakelite insulation.

Cat. No. S1364 Net Price 4c
5 for 18c

Twin Binding Post



No markings on binding posts. 2" long, 1" wide.

S1388 Net, each 37c

Triple Binding Post

No marking on binding posts.

S1389 Net, each 59c

Eby Binding Posts



Non-removable heads, sturdy construction, knurled bases to prevent slippage.

Cat. No.	Height	Cap Dia.	Net
S20350*	1 1/2"	1"	13c
S20351*	1"	1"	24c
S20352†	1"	1"	35c

* Insulated head, † All metal.

Insulated Banana Plug



Provides secure contact on four sides. Handle is made of a beautiful insulating high lustrous finished material. Screw connection. Specify color—red, black, green, blue, yellow, purple.

Cat. No. S3841 Net Price 15c

Insulated Banana Jacks

Made to receive banana plugs of the G.R. type. Fits handle up to 1/2" thick. Shoulder washer included for insulating on metal panels. Specify color—red, black, green, blue, yellow, and purple.

Cat. No. S3839 Net Price 12c

Insulated Jacks for Banana or Phone Tips

Similar in appearance to the Jack listed above. Will fit standard phone tips or banana type plugs. Mounts in 1" dia. hole. Complete with insulated washer. Specify color—red, black, green, blue, yellow and purple.

Cat. No. S3838 Net Price, each 18c

Insulated Binding Post



Hole for wire. Banana plug fits in top of post. Specify color—red, black, green, blue, yellow, and purple.

Cat. No. S3847 Net Price, each 18c

Millen Posts, Plates and Twin Plugs



Captive-head posts with socket for banana plug; square shoulder fits mounting plate slot to prevent turning; plates of steelite, mica-filled or standard bakelite fit all panels; plug only 1 1/2" x 1/2" has banana tips on 1/2" centers.

Cat. No.	Net Price
37222	Binding posts, pr.

Cat. No.	Net Price
37202S	Steelite
37202M	Mica-filled
37202B	Bakelite

60c

TWIN PLUGS

Cat. No.	Net Price
37212B	Black bakelite
37212R	Red bakelite
37212M	Mica-filled

\$1.40

Jones Co-Axial Plugs



Extremely compact plug and socket connectors for co-axial cables; knurled nut of plug screws onto threaded shank of socket, holding connector firmly; all metal parts are nickel-plated; low loss XXX bakelite insulation in socket, steelite in plug; plug for 1/2" O.D. cable; socket mounts on flat surface; two No. 41 holes on 1/2" centers.

Cat. No.	Type	Net Price
S23089	Type P-101-1/2"	27c

Coaxial plug

Cat. No.	Type	Net Price
S23091	Type S-101	24c

Socket for above

Johnson Plugs and Jacks



76C



76-74



76-77



76A



73A



72 73 70 71

Giant Plug and Jack



Will carry high R.F. current. Ideal for flattening pads. Available in two colors—red and black.

Cat. No. S3828 Plug, Net, each 29c

Cat. No. S3829 Jack, Net, each 24c

Insulated Alligator Clips



Ideal for service bench. Can be soldered without removing insulation. Banana plug fits into handle 3 1/2" long. Available in six different colors—red, black, green, blue, yellow, and purple. Specify color.

No. S3844 Insulated, Net Price 15c

No. S3845 Plain 2" long, Net Price 8c

Phone Plugs



For one or two phone or speaker cords; screw terminals; nickel-plated brass hardware; molded bakelite insulation—red or black.

Cat. No.	Color	Net Price
S3832	Black	35c
S32076	Red	35c

Shielded Phone Plugs



Similar to above but has nicked brass shell with gum rubber insulating bushing for cord.

Cat. No. S3835 Net Price 59c

Brass barrel alone, Net Price 35c

Cat. No. S23077 Net Price 35c

Carter Flat Plug

Designed for use where equipment is to be kept from protruding from panel.

No. S3827 Net Price 35c

3-Wire Microphone Plugs



Solder-lug terminals for cable connection; molded bakelite barrel; nickel-plated brass tip, ring, and sleeve contacts.

Cat. No. S3833 Net Price 65c

Shielded 3-Wire Plug

Same as above but with nickel-plated metal barrel.

Cat. No. S3836 Net Price 91c

Portable Jacks



Fit plugs listed above; solder lug terminals for connection to cord conductors.

Cat. No.	Type	Net
S3834	2-wire plain	41c
S23078	2-wire shielded	75c
S23079	3-wire plain	65c
S23080	3-wire shielded	88c

Midget Jacks



Compact size. Requires 1/2" mounting hole. Bakelite insulation.

No. S3830 Type 1 Open Circuit, Net Price 24c

No. S3831 Type 2A Closed Circuit, Net Price 24c

National Jack Shield



Mounts behind panel, held by bushing of std. small jack; slide holes for connecting wires; also adapted to use at end of extension cords, etc.

Cat. No. S14407 Type JB-1 Net 24c

Jensen

LOUD SPEAKERS • PROJECTORS

Type J Coaxial Speakers

For high fidelity service where plenty of power must be handled. Dual speaker arrangement comprises a fine 12" or 15" "Woofer" assembled on the same framework with a cone type high frequency "tweeter." Both speakers are latest PM type. Filter network for correct balance between speaker units is included. For best low frequency response, use these speakers in Jensen "Bass Reflex" cabinets.

Type JCP-40—12-INCH... a wide range unit physically interchangeable with any full size 12" speaker. When used in suitable enclosure, it covers range of 50 to 10,000 cycles. Impedance, 8 ohms; handles 8 to 10 watts. Complete with

bridging network. Cat. No. S20153 Net \$17.35

Type JHP-50—15-INCH... a low cost 15" coaxial recommended for home use and non-professional applications. Impedance, 8 ohms; handles 12 to 14 watts; range 50 to 12,000 cycles when used in Bass Reflex enclosure. Complete with bridging network. Cat. No. S20154 Net \$22.64

Type JHP-52—15-INCH... for all general applications requiring extended range high fidelity reproduction. Input impedance, 500 ohms; handles 12 to 14 watts; range 50 to 12,000 cycles when used in Bass Reflex enclosure. Complete with 4-position switch controlling cut-off frequency of high frequency unit, extension switch cable, mute/boost, and knob. Cat. No. S20155 Net Price \$29.11

Type JAP-60—15-INCH... high efficiency model for such professional applications as FM-AM broadcast monitoring and transcription playback. Efficiency approximately 3 db higher than any of the other 15" models. Response, when used in Bass Reflex cabinet, is 50 to 12,000 cycles with substantial contribution to 15,000 cycles. Supplied with 4-step HF range control switch and two channel network effecting frequency division at 4,000 cycles. Switch complete with knob and mute/boost. Input impedance 500 ohms; handles 14 to 15 watts. Cat. No. S20156 Net \$41.16

QSP High-Frequency Speaker

As used in 15" coaxials; designed to reproduce the high frequencies from 4,000 to 15,000 cycles when used with bridging network and suitable low frequency speaker. Impedance 16 ohms; diameter 5 1/2", depth 3 1/2"; PM design.

Cat. No. S20157 Model QSP. Net Price \$7.64

MOUNTING ARMS FOR QSP SPEAKER
Set of four as used on 15" coaxials.
Cat. No. S20158 Net Price 59c



Jensen "Speech Master" Reproducers

Designed to reproduce speech with maximum clarity and intelligibility, these new "Speech Masters" combine the Peri-Dynamic principle and a special radiation system. They will be found especially useful in radiophone communication, intercommunication systems, pastor and PA service, and short wave listening; also helpful in CW telegraph work to aid signals in over-riding QRM. Husky voice coil to withstand keying transients. Although designed primarily for speech reproduction, the "Speech Master" will handle music with reasonable quality.

Type AP-10 DESK TYPE "SPEECH MASTER"... for desk or wall mounting; complete with tilt adjustment and base; double dustproof, fully enclosed and protected; internal bracket for mounting 1/2" x 1/2" transformer; three-foot rubber covered cord. Height 8 1/2", depth 5 1/2", diameter 5". Finished gray with satin chrome trim.

Cat. No. S23440 Model ST-500, with 4 ohm voice coil. Net \$5.85

Cat. No. S23441 Model ST-501, with 45 ohm voice coil. Net 5.85

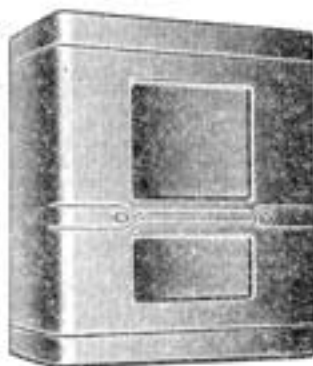
University Reflexed Speakers

Ultra high-efficiency exponential air-column type projectors. Feature one of the few basic improvements in design of acoustic reproducers in years. Results in improvement of entire frequency range. Ultra compact and extremely simple to install. True exponential. Heavy-gauge all-metal spun horns. All units finished in battleship gray. Non-resonant "rubber-tire" rim. Easily handles 25 watts. All supplied with Universal "U" mounting bracket. Less Driver Unit.

Cat. No.	Type	Horn	Length in Ins.	Actual Acoustic	C.P.S.	Proj. Angle	Net Price
S22827	SMH	14"	12	32	180	75°	\$10.58
S22828	PH	21"	16	42	140	80°	14.26
S22829	LJI	25"	21	54	115	90°	23.68

University High Power PM Driver Units

Fit any of above reflexed horns. Handle 25 watts. Unbreakable, heat-proof voice coil suspension; Alnico permanent magnet; Armon pole piece assembly; micrometer centered voice coil; acoustic coupling chamber machined to close tolerance; sealed diaphragm—water-proof. 15 ohm V.C.
Cat. No. S14176 Type SAIL Net Price \$17.40



Type "MT" Reproducers

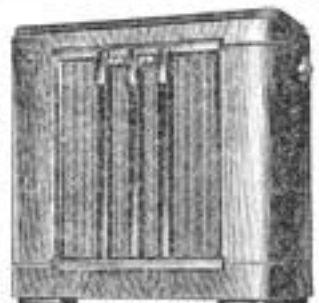
Bass Reflex performance at low cost is afforded by use of modern plywood designs answering the demand for finest reproduction in attractive but unpretentious cabinetry. Durable, two-tone brown lacquer finish harmonizes with any surroundings. Speakers used range from the 8-inch single radiator to the 15-inch co-axial types with high frequency control conveniently located at the right side of the cabinet.

Bass Reflex cabinets may be purchased separately for use with any speaker. See listing below.

SPEAKER IN BASS REFLEX ENCLOSURE					ENCLOSURE ONLY	
Cat. No.	Type	Speaker	Encl.	Net Price	Cat. No.	Net Price
S22809	ST-559	PMSCCT	MT-81*	\$20.32	S22810	\$12.08
S22811	ST-571	PM12CT	MT-121†	28.52	S22812	16.76
S22813	ST-611	JCP-40	MT-121†	37.78		
S22815	ST-613	JHP-52	MT-151†	49.85	S22814	19.40
*17 1/2" x 23 1/2" x 11. †23 1/2" x 30 1/2" x 12. ‡25 x 33 1/2" x 13 1/2."						

Type "CR" Reproducers

Combining arresting beauty with outstanding performance at moderate cost, these reproducers are ideal for broadcast and recording monitoring and audition on FM or AM. Bass Reflex cabinets are well constructed of beautiful striped walnut and contain your choice of co-axial or single radiator type reproducers; coaxial types have high frequency control on right side. CA-12 cabinet is 27 1/2" by 31 1/2" by 12"; CA-15 cabinet is 27 1/2" by 31 1/2" by 14". Cabinets may be purchased separately per listing below.



SPEAKERS IN "CR" ENCLOSURE					ENCLOSURE ONLY	
Cat. No.	Type	Speaker	Encl.	Net Price	Cat. No.	Net Price
S22816	ST-577	PM12CT	CA-12	\$34.40	S22820	\$24.40
S22817	ST-607	JCP-40	CA-12	44.25		
S22818	ST-609	JHP-52	CA-15	57.77	S22821	28.67
S22819	ST-610	JAP-60	CA-15	69.85		

HYPEX Projectors

WITH ANNULAR DIAPHRAGM UNITS

A totally new Jensen development—not exponential, but with an entirely new flare formula that gives increased efficiency in the region above acoustic cut-off; especially suitable for speech reproduction since response extends from the vicinity of acoustic cut-off to the 5,000 cycle region, with greatest emphasis on the middle highs that add punch and carrying power; commercially acceptable reproduction of music, within the limitations of all small reflex horns, is also provided. Sturdy, steel-encased unit, plus reflex horn construction, insures dependable operation indoors and out, under all weather conditions. Finish is durable baked two-tone gray lacquer. Used with Annular Driver listed below, gives nominal cut-offs of 165 and 140 cycles.

Cat. No.	Type	Diam.	Depth	Ac. Lgth.	Cut-off	Net Price
S22822	H-20	20 1/2"	10 1/2"	4 ft.	165 cps.	Horn only \$16.76
S22823	H-24	24 1/2"	20 1/2"	5 ft.	140 cps.	Horn only 20.58

Annular Driver Units

An exclusive Jensen design with dual diaphragm clamped both at the center and at the periphery resulting in extra stability, greater freedom from harsh "break-up" sometimes encountered with "dome" diaphragms. Permanent magnet type is rated at 15 watts average, 25 watts maximum, with normal voice or music input; 16 ohm voice coil; dust-proof, screened sound chamber; internal screw terminals; Diam. 6 1/2", depth 3 1/2".
Cat. No. S22824 Type U Model ST-630 Net Price \$21.17



Stands and Supports for HYPEX Projectors

ADJUSTABLE STAND... for mounting projector on any flat surface; sturdy cast three-leg base with horizontal and vertical adjustment.
Cat. No. S22825 Type EA-6 Net Price \$2.94

ADJUSTABLE SUPPORT... provides adjustment when projector is mounted on pipe mast; 1/2" pipe thread both ends.
Cat. No. S22826 Type EA-7 Net Price \$2.21

SPEAKERS - BAFFLES - RECORD PLAYERS

Jensen "Standard" PM Dynamic Speakers



These unusually sensitive PM dynamic speakers have exceptional performance characteristics. Fully dust-proofed and heavy permanent magnet used insures unlimited life. All speakers are supplied with transformers but brackets are provided for mounting transformers listed on this page.

Cat. No.	Type	Size	V.C. Ohms	Watts	Net Price
S22830	ST-540	4"	4	2	\$2.03
S6100	ST-443	5"	4	2 1/2	2.06
S22831	ST-522	5"	4	3	3.23
S6101	ST-445	6"	4	3 1/2	2.59
S22832	ST-455	6"	4	4	3.41
S22833	ST-646	6"	6	5	4.23
S22834	ST-569	8"	4	4	3.93
S6102	ST-461	8"	4	5	3.70
S22835	ST-523	8"	6	7	4.43
S6109	ST-466	10"	6	8	5.17
S6112	ST-475	12"	6	9	6.47

Jensen "Concert" Speakers PM Type



Heavy-duty, efficient speakers for public address and high quality radio and phonograph service. Type ST-257 is high-fidelity design reproducing frequencies up to 7,500 cycles; it is not intended for general P.A. service. Supplied with transformer but with brackets for attaching it.

Cat. No.	Type	Size	V.C. Ohms	Watts	Net Price
S6108	ST-230	8"	6	8	\$6.47
S6110	ST-246	10"	6	9	8.94
S6113	ST-250	12"	6	10	9.11
S22847	ST-476	12"	8	12	13.82
S22848	ST-257	12"	8	15	24.10

Special Extended Range High Fidelity Speakers



For applications where high fidelity performance extending to 10,000 cycles is required. With power handling capacity practically limited only by permissible distortion, these units will accommodate indoor audiences up to 100 persons and are well suited to broadcast station monitoring and for high fidelity reproduction of voice at relatively low levels, 8" diam.

Cat. No.	Type	V.C.		Field		Net Price
	No.	Ohm	Watt	Ohms	Watt	
S22849	ST-562	6	5	2500	8	\$6.47
S22850	ST-595	8	5	1250	8	6.47
S22851	ST-650	8	5	PM Type		7.40

Walnut Speaker Baffles

These walnut speaker baffles are recommended for indoor installation. When mounted on a wall it directs the sound to about ear level. Will improve most sound installations. Available in three sizes.



Cat. No.	Size	Net Price
S11462	For 6" speaker	\$2.65
S11463	For 8" speaker	3.95
S11464	For 12" speaker	4.25

Space does not permit a complete listing of Jensen products, but we can supply any item of their manufacture—high fidelity speakers—transformers—field supply units—level controls—deluxe Peri-Dynamic baffles—Peri-Dynamic projectors and auditorium speakers on short notice.

Adjustable Impedance Transformers

For use with all Jensen speakers; models "X" and "Y" are provided with flexible lead and pin tip jacks for rapid selection of desired impedance; models "B" and "L" have soldering lug terminals for the various impedances.

Model "X" ... match voice coil to 4,500, 7,000, 10,000, and 14,000 ohms plate impedance; all windings except voice coil are center-tapped.

Cat. No.	Type	V.C. Ohms	Slac	For Speaker Types	Net Price
S7048	ZX1004	6	x	ST-250, 250, 469, 475	\$1.82
S7050	ZX1005	8	x	ST-476, 257	2.44
S22852	ZX1012	6	x	ST-562, 595, 560, JCP-40	2.44

Model "Y" ... match line impedances 500, 1,000, 1,500, and 2,000 ohms to voice coil.

Cat. No.	Type	V.C. Ohms	Slac	For Speaker Types	Net Price
S7047	ZY2001	6	x	ST-230, 250, 469, 475	1.82
S7049	ZY2003	8	x	ST-476, ST-257	2.44
S6168	ZY2007	4	x	ST-565, 560, 567, 437, 438, 439, 461, 522, 455	1.32
S22853	ZY2008	6	x	ST-440, 466, 646, 523	1.32
S22854	ZY2009	8	x	ST-562, 560, 572, JCP-40	2.44

Model "B" and "L" ... center tap on ZP1031 and ZP1022 only.

Cat. No.	Type	V.C. Ohms	Slac	For Speaker Types	Net Price
S22855	ZP1020	4	x	ST-538, 539, 426, 558, 440, 429, 430, 431, 433, 434, 435, 540, 443, 445, 589	.85
S22856	ZP1021	4	x	ST-565, 560, 567, 437, 438, 439, 461, 522, 455	1.18
S22857	ZP1022	6	x	ST-440, 466, 646, 523	1.18
S6165	ZL2020	4	x	Same as S22855	.85

Transcription Player



This general purpose phono player handles records of all sizes, including 16" transcriptions; dual speed (33 1/3-78 RPM) heavy duty motor drives 12" turntable; Astatic crystal pickup feeds built-in 6-watt high quality amplifier having controls for gain and tone; 10" PM dynamic speaker is mounted in carrying case cover—removable for separate use; tubes are 1-7F7, 2-7C5, 1-5W4GT; overall size 23 1/2" by 17 1/2" by 10 1/2"; operates on 110 volts A.C. only. Cat. No. S23040 Model PT16 Net Price, complete with tubes. \$74.39

A.C./D.C. Transcription Player

Similar to above, but operates on either D.C. or A.C. at 110 volts; 4 watt output; uses 1-7F7, 2-25L6G, 1-25Z6G. Cat. No. S23041 Model PT16AD Net Price, complete with tubes. \$90.26

DeLuxe Portable Phonograph



Plays 16" professional transcriptions as well as popular 10" and 12" records; heavy duty, two-speed motor—33 1/3-78 RPM—drives 12" turntable; crystal pickup has special 12" arm; assembly is mounted in sturdy, leatherette carrying case; 31 1/2" by 17 1/2" by 7"; operates on 110 volts, 60 cycles. Cat. No. S23042 Model S016 Net Price \$42.04

Professional Model

A special portable phono similar to above but with low-pressure pickup and permanent sapphire stylus; Model S016L. Cat. No. S23043 Net Price \$46.89

Even-Speed Phono Motor



Rim drive, smooth, quiet, positive operation; good regulation; forced ventilation with slip fan; motor and idler plate shock-mounted; mounting plate maintains correct turntable height on any board; 110 v.-60 cycles, 78 RPM; 9" table. Cat. No. S24171 Net Price \$3.11

PICK-UPS • POWER PLANTS • SPEAKERS

Astatic Low-Pressure Pickups



Operating at a pressure of only one ounce, these new crystal pickups provide greatly increased record life, lower surface noise, minimum "needle talk," and higher fidelity. Permanent sapphire stylus is protected by "U" shaped guard. Curved offset design for accurate tracking with 10" and 12" records. Statuary brown finish.

Cat. No.	Model No.	Frequency Range	Net Price
S12285	FP-18	30-7,000 cycles	\$9.70
S12286	FP-38	30-10,000 cycles	9.70

Astatic D-9 Crystal Pickup



This low cost crystal pickup, with die-cast, True-Tan arm and spring-axial coupled one-hold mounting base, meets high performance standards for playing 10" or 12" records. L-type cartridge delivers 1.4 volts at 1000 cycles across 1 megohm load. Groove type needle loading and locking arm rest. Smooth-baked statuary brown finish. 12" wire leads.

Cat. No. S12284 Model D-9. Net Price \$2.91

Astatic Straight-Arm Type Crystal Pickup



Straight-arm pickups are often preferred for use with lightly cut home recordings as they do not have the tendency experienced with offset pickups to jump grooves and sweep to the inside of the record. This model has a sturdy die-cast arm, spring-axial cushioning, and L-type cartridge; furnished with means of adjusting mounting center distance to either 7 or 8 inches; output is 1.4 volts at 1,000 cycles; supplied complete with 12" plate leads and locking arm rest; statuary brown finish.

Cat. No. S23983 Model SL-8 Net Price \$2.91

For other ASTATIC products, see pages 89 and 92. For other phonograph and recording accessories, see pages 87 and 89.

Green Flyer Phono-Motor Governor Controlled



(DUAL SPEED)

A heavy duty dual speed motor. For 33 1/3 and 78 RPM records. Lever shift for either speed. Induction type motor, silent operation. No radio interference. Absolute uniformity of speed under severe variance of voltage and record drag. Overall size 8 1/2 x 5 1/2. For 105-120 volts—60 cycles. Complete with 12" turntable. Cat. No. S5113

Net Price \$10.50

UTAH Speakers

A complete line of dustproof PM speakers for every application from intercom and portable radio to high power public address; Model W-810 is contained in wall baffle similar to S11463 shown on page 87; order plate or line transformers separately.



Cat. No.	Model No.	Di. In.	Peak Watts	V.C. Ohms	Net Price
S23531	49Z	4	3.75	8.5	\$1.76
S23532	50Z	5	4.5	8.5	1.76
S23533	51*	5*	4.5	8.5	2.26
S23534	61*	6	6.0	8-8	2.79
S23535	F8P	8	12	8-8	5.00
S23536	W810	8	12	8-8	8.09
S23537	101*	10	14	8-8	5.44
S23538	121*	12	16	8-8	6.61
S23539	G12P	12	26	8	14.26
S23540	Q530	5	2750 ohm load		1.79

*Has heavier magnet than 52P

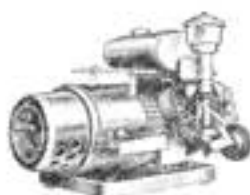
Astatic Low-Pressure Pickups for Professional Use



With features particularly desirable for broadcast and recording studio use, these low-pressure pickups have ball-bearing swivel base and accurately counterbalanced arm for one-ounce needle pressure; will reproduce all lateral transcriptions up to and including 10" size; sapphire stylus is protected by internal hold down spring guard; low-friction pivots maintain constant needle pressure on uneven or warped recordings; finished in rich maroon color; overall length 15 inches; furnished with 2 ft. shielded cable and arm rest.

Cat. No.	Model	Fm. Range	Output	Net
S23981	HL-16	30-7000 c.p.s.	0.85 v.	\$14.70
S23982	HL-36	30-10000 c.p.s.	0.65 v.	14.70

Kato 500 Watt Portable AC 110 Volt Power Plants



Deliver up to 500 watts at 110 volts 60 cycles; compact and readily portable, yet sturdy, economical, and efficient; well suited to use on sound trucks, trailers, boats, construction jobs, and wherever AC power is needed away from central station lines; good voltage and frequency regulation. Ignition is shielded and generator filtered to allow radio operation without interference. Furnished complete with start and stop push button, battery cables, DC ammeter, charge control resistor, cutout, 3-quart gas tank, carrying handle, and 1 horse-power four cycle air-cooled 1,800 RPM engine with air cleaner and cranking rope. Runs 8 to 12 hours on one gallon of gasoline. Will operate self-cranking if one six-volt storage battery is connected.

Cat. No. S23118 Model 23-A. Net Price, less battery \$116.13

Pioneer Portable Electric Plants

Lightweight, sturdy power plants for all portable services; output 400 watts at 110 volts 60 cycles or 100 watts at 6 volts DC; air-cooled, one-cylinder, 1/2 H.P. engine with rope-pull start consumes 0.13 gallons per hour at full load; shielded ignition. Size 18 1/2 x 11 x 14 1/2 overall; weight, 77 pounds.

Cat. No. S23124 Net Price \$77.55

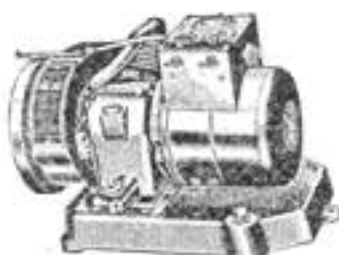
115 VOLT D.C. PLANT

Similar to above but output is 400 watts at 115 volts DC. Cat. No. S23125 115 volt DC plant. Net Price \$69.75

LOW VOLTAGE DC PLANT

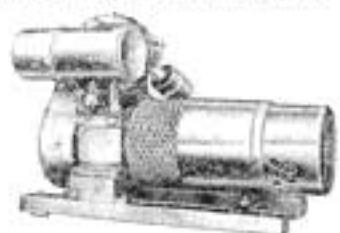
Delivers 300 watts at 15 volts DC or 200 watts at 7 1/2 volts DC; both ratings are continuous-duty; push-button electric start.

Cat. No. S23126 Low voltage DC plant. Net Price \$67.65



Kato 1 and 2 Kilowatt AC 110 Volt Power Plants

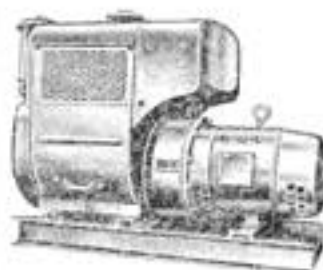
For use where power required is more than the capacity of portable plants. Efficient single-phase AC generator is driven by powerful single-cylinder air-cooled gasoline engine, fully equipped as described above. DC for charging the starting batteries (if used) is available from the generator. 1 KW plant requires 2 six-volt batteries for self cranking; 2 KW plant, 3 six-volt batteries.



Cat. No. S23119 Model 26A 1,000 watts. Net price, less batteries \$219.03

Cat. No. S23120 Model 30A 2,000 watts. Net Price, less batteries \$330.75

Kato Heavy Duty Power Plants



For carrying heavy loads in complete electrification of home, farm, shop, or boat; single-phase alternator has direct-connected separate exciter; plant adequately filtered for radio operation; will handle motor starting loads without difficulty; designed for ease of maintenance. Prime mover is a 4 cylinder, water-cooled gasoline engine furnished complete with radiator, fan, centrifugal pump, starting crank, exhaust pipe and muffler, full-pressure lubrication system with gear type pump and pressure gauge, air and gasoline filters, high tension magnets, spark plugs, and cables.

Cat. No.	Model	Rating*	Net Price
S23121	47A	7,500 watts 110 volts AC	\$982.25
S23122	49A	10,000 watts 110 volts AC	1,073.10
S23123	51A	15,000 watts 110 volts AC	1,200.50

*These plants can be furnished for 3-phase, 3-wire, or other circuit rating on special order.

NOTE: Prices on power plants S23118 to S23123 are net F.O.B. Mankato, Minnesota.

audiocasts



Home Recording Type

Designed for use in radio recordings, voice and speech classes, demonstrations, sales talks, and amateur and home recording, these blanks are precision coated for wide latitude, high quality instantaneous recording.

YELLOW LABEL

Double sided, labeled record blanks; 8 and 10-inch discs coated on flat steel base, 12 and 10-inch discs coated on glass.

Cat. No.	Size	Recording Time	Net.
		33 RPM	78 RPM per disc
S20801	8"	2 1/2 min.	\$.36
S20802	10"	5 min.	.48
S20803	12"	10 min.	.60
S20804	10"	15 min.	1.20

Professional Type

Extremely high quality professional recording blanks precision coated on a special grade of glass developed to replace the aluminum formerly used as a base.

RED LABEL

Double sided blanks for lateral or vertical recording in broadcasting stations, sound and motion picture studios, and all applications requiring the ultimate in disc perfection.

Cat. No.	Size	Net Price Ea.
S20810	8"	\$.42
S20811	10"	.60
S20812	12"	.75
S20813	10"	1.50

MASTER BLANKS

Over-size professional master blanks coated smooth and flat as wax for making a large number of copies by conventional electroplating and pressing processes. These double sided discs are carefully packed in containers that serve as excellent means of storing and filing after recording.

Cat. No. Size Net Price Ea.

S20814	12"	\$.93
S20815	15 1/2"	1.35
S20816	17 1/2"	2.25

Note: Audiocast standard pkg. holds 25 blanks.

RECORD DISC Blanks

For schools, colleges, conservatories, and orchestras desiring unexcelled recordings; glass-smooth surfaces carefully polished and inspected for flatness.

GREEN LABEL

Double-faced, metal-base discs with Underwriters' approved coating.

Cat. No.	Size	Net Ea.
S22974	6 1/2"	17c
S22975	8"	23c
S22976	10"	33c

BLUE LABEL

Heavy base, nitrate coated on both sides; for all semi-professional use.

S22977	6 1/2"	20c
S22978	8"	27c
S22979	10"	40c
S22980	12"	67c

YELLOW LABEL

Paper base discs coated on both sides with non-inflammable material.

S22981	6 1/2"	50c for six discs
S22982	8"	80c for six discs
S22983	10"	\$1.20 for six discs

Safety Shipping Cartons

Consist of inner disc container, outer protection carton, and shredded fire-proof cushioning material; holds 1 to 3 discs; essential for shipping glass-base discs.

Cat. No. S22971 12" carton Per Doz. \$2.50 Net
Cat. No. S22972 10" carton Per Doz. 3.00 Net
Cat. No. S22973 17 1/2" carton Per Doz. 5.00 Net

Skratch Stik

Cabinet scratches vanish like magic when rubbed with this handy scratch remover. An indispensable service tool and household convenience.

Cat. No. S20849 Net, each 29c

Audiopoints

STYL AND NEEDLES

The cutting styl and play-back needles listed below offer a variety meeting every requirement for performance and price. For greatest satisfaction and long life we recommend the sapphire cutting needle; where cost is a primary consideration, the steel needles are satisfactory for many uses; the sapphire needles approach the performance of sapphires at somewhat lower cost.

These sapphire and stellite cutting styls are disc tested for perfect cutting.

Cat. No.	Description	Shank	Net.
S20824	Sapphire	Long	\$3.75
S20825	Sapphire	Short	3.75
S20826	Stellite	Long	.90
S20827	Stellite	Short	.90
S20828	Steel, diamond lapped	Long	.51
S20829	Steel, diamond lapped	Short	.51
S20830	Steel, standard*	Long	.15
S20831	Steel, standard*	Short	.15

*Best type for home recorders with crystal cutting heads.

PLAY BACK NEEDLES

Properly shaped to fit the grooves in the record and highly polished for smoothness and freedom from record wear, these steel and sapphire play-back needles are long-wearing and dependable. The sapphire Audio-Playback-Point, microscopically matched to the characteristics of the Audiopoint cutting styl and checked by shadow-graph, will play thousands of recordings and, when finally worn, can be resharpened. Steel Audio-Playback-Points will play dozens of instantaneous recordings, transcriptions, and commercial pressings without damage because they, too, are accurately matched to cutting points.

S20832	Steel Straight*	45c per 100
S20833	Steel Bent†	36c per 100
S20834	Sapphire	\$3.90 each

*For light pickups. †For heavy pickups.

Chip Chaser

Completely solves the thread problem; automatically brushes thread toward center winding it up on drive pins or overhead post.

Cat. No. S20820	12" Chip Chaser	Net \$2.70
Cat. No. S20821	16" Chip Chaser	Net 3.15

Record Lubricant

Reduces surface noise and prevents excessive wear on record or needle. May also be used as pre-recording lubricant.

Cat. No. S20845	2 oz. Bottle	Net 20c
Cat. No. S20846	4 oz. Bottle	Net 29c

Rek-O-Dope

Cleans, lubricates, and hardens; renews old records and preserves new ones; improves reproduction by removing dirt and loose particles from the grooves.

Cat. No. S20847	1 oz. Bottle	Net 15c
Cat. No. S20848	2 oz. Bottle	Net 21c

"How to Make Good Recordings"

Covers every phase of instantaneous disc recording—from choosing the right equipment to making the most complex type of dramatic recordings. Written in non-technical terms understandable to the layman, this 128-page book contains data valuable even to the experienced recording engineer. 86 illustrations, stiff binding.

Cat. No. S20822 Net Price 90c



"Fun with a Recorder"

Makes your recorder the life of the party. Thirty amusing skits, cues for sound effects and written in radio script form, let everyone become a "mike" performer. Opens a new fun angle in home recording.

Cat. No. S20823 Net Price 70c

PICK-UPS AND ACCESSORIES

Brush Low-Pressure Pickups



These crystal pickups operate at 1 ounce pressure giving ample output to drive a two-stage amplifier, with frequency characteristic ± 2 dB from 50 to 6,000 cycles and slight rise up to 10,000 cycles. Permanent polished sapphire stylus. Combines unexcelled reproduction with minimum record wear and adaptability to constant velocity and constant amplitude recordings. PL-20 handles records up to 16"; PL-25 handles records up to 12".

Cat. No. S20445 PL-20 with equalizer for constant velocity (commercial) records. Net \$22.65

Cat. No. S20446 PL-25 less equalizer. Net \$16.17

Cat. No. S20447 High Impedance Equalizer for PL-25. Net Price \$1.47

Cat. No. S20448 Low Impedance Equalizer 50 or 200 ohms. Net Price \$8.82

Crystal Pickup Replacement Cartridges

For Astatic pickups and automatic phonographs; "B" types are bakelite-cased; "L," "LP," and "M" types metal-cased.

These pickup cartridges are manufactured with utmost care and are individually tested for output and response. Lag terminals on all but B-2.

Cat. No.	Type	For	Pres. Volts	Net Price
S22959	LP-6	FP8, chgr.	1 0.85	\$4.70
S22960	LP-21	FP18, HP16	1 0.85	4.70
S22961	LP-23	FP38, HP36	1 0.65	4.70
S22962	L-22	AL8	2 1.75	2.94
S22963	L-24	Rec. plyr.	2 2.95	2.94
S22964	L-25		2 1.25	2.94
S22965	L-26	D9, SL8	2 1.4	2.35
S22966	L-27	Rec. plyr.	2 1.4	2.94
S22967	L-40	FL48, chgr.	1 0.60	2.35
S22968	M-22	O-7	2 2.9	2.94
S22969	B-2*	B10, B16, AB8, ABM, 88, S12, auto. phones.	2 2.5	2.94
S22970	B-4†	Rec. chgr.	2 2.5	2.94

*Universal terminals. †5 wires.

ATR Midget Photo Inverter

Specially designed to operate 110 volt A.C. devices from 110 volt D.C. line. 15 watt capacity is ample for phonograph motors, electric razors, and other low power devices. Supplied with outlet receptacle and cord and plug. Size only 2 1/2" x 2 1/2" x 3 1/2".

Cat. No. S20850 Type PCP Net Price \$4.67

Cat. No. S20851 Type PCP-F—for A.C. record players; has RF noise suppressor. Net \$5.00

Cat. No. S20852 Type PCP-R like PCP-F except with wire leads instead of plug and cord. Net Price \$4.67



HEADPHONES ★ Trimm - Cannon - Brush

Trimm Featherweight Phones

Weight only 4 oz.
Diam. 2 1/8", depth 1".
Bakelite shell and cap.
Forged magnet of best
36% Cobalt Steel. Ad-
justable steel headband.
Ideal for Aircraft.
Amateurs. Very finest
quality throughout.
Complete with 5-foot
cord.



No. S1904 4,000 ohms Net Price \$5.88
No. S1905 24,000 ohms
No. S20442 600 ohms Aircraft style \$5.88

Trimm Dependable Phones

Bakelite shell and cap. Forged magnet of
Chrome Steel. 2,000 ohm D.C. resistance. No
outside terminals. Very sensitive and absolutely
reliable.

No. S1906 Net Price \$2.24

Trimm Acme DeLuxe Phones

An exceptionally
efficient, small, low
price headphones for
Amateurs and Special
Installations.
Chrome steel mag-
nets. Molded Bakelite caps, giving this excep-
tionally light-weight, comfortable headset a rich,
mellow tone.



No. S1907 2,000 ohms Net Price \$1.47

Trimm Professionals

The original Trimm
headset; double unit
watch case type with
bakelite cap and
shell, forged chrome
steel magnets, im-
pregnated coils, and
five-foot moisture-
proof cord. Concealed terminals; fabric-covered
wire headband; is easily adjusted for comfort.
Cat. No. S22805 3,000 ohms Net Price \$2.73
Cat. No. S22806 4,000 ohms Net Price \$2.73

Trimm Army-Navy Phones

Very sensitive;
meets both Army and
Navy specifications.
Five-foot moisture-
proof cord has phone
tip terminals; bi-
polar magnets with
2-lb. pull; leather
headband; inside ter-
minals.



Cat. No. S22807 2,000 ohms Net Price \$10.95
Cat. No. S22808 112 ohms

Double Headphone Cords

Flexible re-
placement cords
for headphones.
Fit any type
phones. 5 ft.
long.



Cat. No. S8531 With pin tips at both ends.
Cat. No. S8532 With pin tips at one end and
spade tips at the phone end.
Net Price, each, either style 29c

Earphone Cushions

Made of sponge rub-
ber. Necessary for com-
fort for operators who
use receivers over long
periods of time.



No. S1911 Net, per pair 45c

Cannon-Ball Headphones

THE DIXIE



Double coils, two in each
receiver, with magnets of
1" square chrome magnet
steel, give the Dixie head-
phone desirable sensitivity.
The 2 1/4" diameter di-
aphragms are housed in
aluminum cases with black
bakelite caps. Headband
is stainless steel with per-
manent adjustment and no
removable parts.

Supplied with 4 1/2 foot,
cotton covered cord connected to outside ter-
minals. Cat. No. S20443 2,000 ohms.
Net Price \$1.51

THE CHIEF

Satisfies the demand for a high grade, reason-
ably priced bakelite-cased headphone. Dia-
phragm is 2 1/4" in diameter. Double coils in each
receiver have laminated chrome magnets. Braid
covered headband is permanently adjusted.
4 1/2 foot cotton-covered cord connects to inside
terminals.

Cat. No. S20444 2,000 ohms Net Price \$2.20

THE PRESIDENT

Meets the requirements of the particular buyer
who insists on the best in efficiency and appear-
ance. Beautifully designed and light in weight,
this headset reproduces with clarity and volume.
Leather headband has permanent adjustment;
mercurized cord is 6 feet long; terminals con-
cealed; aluminum cases with bakelite caps;
double coils and chrome steel magnets; 2 1/4"
diaphragms.

Cat. No. S22802 2,000 ohms Net Price \$2.35

THE MASTER

Exceptionally high quality and rugged con-
struction; used extensively in hospitals and other
institutions and by servicemen and amateurs
everywhere; similar to the President Model but
has black lacquered steel headband, permanently
adjusted and with no removable parts, and cotton
cord 4 1/2 feet long.

Cat. No. S22803 2,000 ohms Net Price \$1.82

THE GRAND

The single headphone leaves one
ear free to hear room conversation
yet gives ample volume for recep-
tion of code or phone signals. Alu-
minum case, bakelite cap, 1 1/2" di-
aphragm, double coils, heavy 1"
square magnets, 4 1/2 ft. cotton-
covered cord, spring steel headband is perma-
nently attached.

Cat. No. S22804 1,000 ohms Net Price 88c



Brandes Superior Headphones



The well known Brandes
headset is made in alu-
minum cases with black bae-
lite unbreakable caps. Dou-
ble coils in each receiver.
Magnets are of heavy
chrome steel. Supplied
complete with stainless
steel adjustable headband
and 4 1/2 ft. cord. Resistance
per pair 2,000 ohms.
Cat. No. S11908
Type B8-2, Net Price \$1.89

Tuning Indicator

Equip sets not hav-
ing tuning indicators
with the new magic
eye. Extremely ac-
curate and sensitive.
Only 5 connections
are necessary. Com-
plete with escutcheon
plate, brackets, cable and instructions.



No. S1734 Less tube Net Ea. 73c
No. S1735 Raytheon 6E5 for 6V tubes 67c
No. S1736 Raytheon 2E5 for 2 1/2 tubes 67c

Octal Magic Eye Assembly

Similar to above but for octal base tubes.
Cat. No. S14015 Net Price 73c
Cat. No. S14016 Raytheon 6AF6-Gtube Net 73c
Cat. No. S14017 Raytheon 6AD6-Gtube Net 73c

Brush Crystal Headphones



Brings in weak signals
strong and clear and will
handle excessive volume
without overloading. Re-
sponse 60 to 10,000 cycles.
Only 6 oz. complete with
headband and 5 ft. cord.

Cat. No. S1900 Net Price \$6.47

The single phone units are popular for use as
crystal microphones, being extremely sensitive,
compact, and low priced and having excellent
frequency response. No. S1901 makes a fine
hand microphone.

Cat. No. S1901 Single phone with
cord less headband \$3.47

Cat. No. S1902 Single phone with
formote handle and cord \$4.41

Brush Communications Headphone Type BJ



Specially protected against
adverse climatic conditions
by hermetically sealed
aluminum cartridge con-
struction.

Muzziness, comfort, good
ear seal, and safety against
shock assured by molded
soft rubber jacket encasing
the cartridge.

All rubber phone cord; hex nut terminals pro-
tected by rubber jacket. Yokeless cord design
for greater freedom and comfort (see illustration).
High impedance and sensitivity. Bake-
like diaphragm, direct crystal drive. Standard
adjustable headband. Headset complete with
5 foot cord and headband.
Cat. No. S11905 Net Price \$8.53

Brush "Hushatone" Pillow Speaker

Private entertainment
for the home, hospital
and sanitarium. Sim-
ply place it under a
pillow and enjoy the
radio without distur-
bance to others. Easily
installed on any type
of radio set. Encased
in soft sponge rubber
covering. Will not
break when dropped.

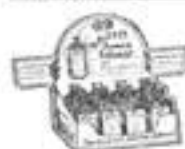


Cat. No. S11906 Type No. 88-1J \$4.85
Net Price

Speaker Cement

Specially prepared for re-
pairing speakers.

No. S3759
2 oz. bottle. Net 29c



Grill Cloth

High quality, beau-
tiful pattern.

No. S3757 18" x 20"
Net 44c



Speaker Shims

These Swedish steel speaker
shims allow adjustments on
speakers to be made in a few
minutes. Very flexible. Four
each are furnished in case,
.0035, .006, .008 and .01 in.

No. S3758
Net 38c

See page 85 for Phone plugs and jacks.

MICROPHONES AND CABLE CONNECTORS



American Dynamic Microphones

MODEL D7T

A moving coil dynamic microphone featuring high output, hi fidelity and efficient design. Excellent for public address installations, communication, and amateur use. Semi-directional, minimum feedback. Flat response throughout scale. Chrome finish. High impedance connects direct to grid. Supplied with 12-ft. cable and connector plug. 1-27 thread to fit stand.
Cat. No. S7020 D7T.
Net Price \$13.26

MODEL D8T

A new type of dynamic microphone carefully designed to have a consistent, well-balanced response, and embodies all the latest improved developments in dynamic microphone construction. A swivel mounting permits either non-directional or semi-directional pick-up. Matches high impedance input, and fits on a 1/2 x 27 thread. Platinum chrome finish. Gain minus 56 dB at 1,000 cycles. Supplied with 12' of cable and shielded connector.
Cat. No. S11982 Net Price \$14.70



MODEL D5T-BULLET

A moving coil, permanent-magnet, dynamic microphone, semi-directional. Immune to temperature changes. Exceptionally rugged. Consistent in response. Freedom from wind noises. High impedance input. Finished in a polished chrome. Supplied complete with 25 ft. of shielded rubber jacketed cable and plug.
Cat. No. S11310 Type D5T.
Net Price \$19.11

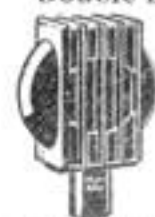


American C-6 Crystal Microphone

Extremely sensitive and twice as efficient as previous type. Produces a high voltage output with equal sound pressure. Broad response, a result of a new construction, include extension of both high and low end of scale. Gain minus 44 dB in 5,000 cycles. Features are swivel head and fully shielded connectors with 12' feet of shielded rubber jacketed cable.
Cat. No. S11981 Net Price \$9.70



Electro Voice Double Button Mike



metal finish, 1-27 thread for stand mounting.
Cat. No. S7018 Type 73
Net Price \$4.41

A modernistic designed double button microphone that has all the qualities of the more expensive types. Frequency Response 40-8,000 cycles. 200 ohms per button. 6 ft. cable. Gun- thread for stand

Universal Hand Set



For use with transceivers and other portable radio telephone apparatus. Receiver has 2,000 ohm impedance; the microphone a 200 ohm button. Supplied with 6 ft. four conductor cable. Colored coded phone tips.
Cat. No. S7023 Type FIMEX
Net Price \$5.88

Universal Carbon Handi-Mikes

For all general uses where close talking and clean cut speech reproduction is required. Finished in highly polished chrome. Overall length 6". Furnished with a 6-ft. cord and on and off snap switch.

SINGLE BUTTON

As described above. Impedance 200 ohms. Output level -40 db. Two conductor cord.
Cat. No. S7011 Type 200 Net Price \$5.88

DOUBLE BUTTON

As described above. Impedance 200 ohms per button. Output level -55 db. Three conductor cord.
Cat. No. S7017 Type 201 Net Price \$8.82



Amperite Kontak Mike

New Amperite Kontak Musicians microphone—for all string instruments such as violin, guitar, ukulele, double bass, piano, etc. Gives an ordinary violin the volume and depth of a strad. No string changes, no drilling, attached without tools. Operated with either high or low gain amplifiers. Can be used on most radio sets manufactured since 1935. Response -40 to 9,000 cps. Output -40 db. Equipped with 25-ft. cable. High impedance connects direct to grid. Professional models.
Cat. No. S7027 Type SKH.
Net Price \$7.06



FOOTPEDAL—operates with Amperite model SKH, for volume effects desired by soloists.
Cat. No. S7028 Net Price \$7.06

Microphone Connectors

SINGLE CIRCUIT



CABLE UNITS
Wholly shielded, unbreakable connectors with butt contacts and threaded couplings; chrome finish; spring cord protectors take cords up to 1/2" diameter. For extra contact pressure, use type SP-MC1M whose center contact is backed by a heavy coil spring.
Cat. Type Coupling Net
No. No. Thread Price
S1354 MC1F Female 29c
S21022 MC1FA Female 35c
S1355 MC1M Male 24c
S21023 SPMC1M Male 29c



Mount in .385" hole for grounded service, in 1/2" hole for two-circuit ungrounded service; furnished with necessary insulating washers and locknut; male threads fit F and FA units listed above.
S1356 PC1M 18c
S21024 SPPC1M Spring cont. 24c
S21025 CLPC1M Closes circuit when cable connector is removed; prevents open grid howls. 24c

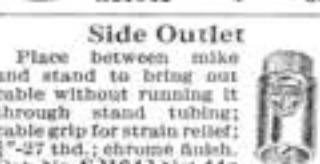
Microphone Switch



Male thread at one end, female ring coupling at other to fit single conductor shielded cables. Push-to-talk, or slide switch ahead for permanent connection. Switch shorts microphone.
Cat. No. S21026 MC18 Net 59c

Stand Connector

Screws on top of any standard mike stand; 1/2-27 thd.; polished chrome finish.
Cat. No. Cont. Net
S21041 3 59c
S21042 4 65c



Side Outlet

Place between mike and stand to bring out cable without running it through stand tubing; cable grip for strain relief; 1/2-27 thd.; chrome finish.
Cat. No. S21043 Net 44c

Low-Loss Connectors

Any connector on this page available in mica-filled bakelite insulation, for high frequency use, at additional cost of 8c net.

Chrome Desk Stand

A non-adjustable chrome finish desk stand 9" high. 2-lb. base with three rubber feet. Threaded to fit a standard microphone 1-27.
Cat. No. S7033
Net Price \$2.20



Plug-in Connectors

1 AND 2 CONTACT



For small co-axial cables, microphone cables, speakers, etc. Sleeve contacts and ring couplings for positive contact protected against accidental disconnections. Bakelite element in chrome-plated brass shell with spring type cord protector for cable units; chassis units furnished with mounting hardware.

CABLE UNITS
Cat. Type No. Con- Cou- Net
No. No. tacts Ring Price
S12226 S03M* 1 M Ring 38c
S12227 S03F* 1 F Thd. 38c
S12228 MC2M† 2 M Ring 47c
S12229 MC2F† 2 F Thd. 47c

CHASSIS UNITS
S21027 S0C1 1 M Thd. 24c
S21028 MSP† 1 M Ring 47c
S12228 S0C 1 F Thd. 24c
S21029 PC2M 2 M Thd. 27c
S21030 SPMC2M† 2 M Ring 53c
S12225 PC2F 2 F Thd. 27c

*Cord protector fits 1/8" cables.
†Cord protector fits 1/4" cables.
‡1-27 mounting thread fits standard microphone body.

3 AND 4 CONTACT CONNECTORS



Interchangeable elements in chrome plated brass shells with spring cord protector; cap unscrews to allow spring to be removed and connector screwed into standard 1/2-27 microphone thread; 3-contact units take cables up to 1/2", 4-contact units to 1/2".

CABLE UNITS
S1381 MC3M 3 M Ring 59c
S21031 MC3M1 3 M Thd. 59c
S1383 MC3F 3 F Thd. 59c
S21032 MC3F1 3 F Ring 59c
S1382 MC4M 4 M Ring 65c
S21033 MC4M1 4 M Thd. 65c
S1384 MC4F 4 F Thd. 65c
S21034 MC4F1 4 F Ring 65c

CHASSIS UNITS



Bakelite element permanently installed in plated brass shell. Mounting hardware furnished.
S21035 PC3M 3 M* Thd. 29c
S21036 SPPC3M 3 M† Ring 59c
S1385 PC3F 3 F* Thd. 29c
S21037 SPPC3F 3 F† Ring 59c
S21038 PC4M 4 M* Thd. 32c
S21039 SPPC4M 4 M† Ring 65c
S1386 PC4F 4 F* Thd. 32c
S21040 SPPC4F 4 F† Ring 65c
*Fits panels up to 1/2" thick.
†Adjustable to panels up to 1/2".
‡Adjustable to panels up to 1/2".

Cap and Chain

Seals chassis units not in use.
Cat. No. S21044 for 1 and 2 contact units—CCC-1 Net 29c
Cat. No. S21045 for 3 and 4 contact units—CCC-3 Net 29c

MICROPHONES

SHURE -:- TURNER -:- UNIVERSAL -:-

ASTATIC

Unidyne True Cardoid Uni-Directional Dynamic Microphones

FOR BROADCASTING AND RECORDING

Eliminates troublesome reflections in small studios, cuts down reverberation, reduces crowd noises, gives prominence and definition to the direct sound. Average front-to-rear discrimination 12 to 15 db; output -62 db; smooth response 40-10,000 cycles. Double wind-wound moving coil system; stainless steel elements in acoustic network; satin-chrome finished case tilts forward and back through 150°; cushioning unit built in between case and mount. Screw terminals for output (balanced to ground) readily accessible. Supplied with 18" stub of rubber-covered two-wire shielded cable, trimmed on free end for plug attachment; mounting thread 1"-27. Call letter plate and desk mount, extra.

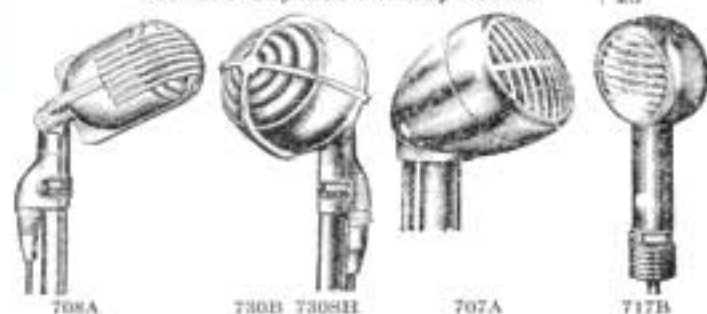
Cat. No. S13800 Model 556A 35-50 ohms	Net Price	\$44.10
Cat. No. S13801 Model 556B, 200-250 ohms	Net Price	\$44.10
Cat. No. S21046 Model 556C 35,000 ohms	Net	\$44.10
STREAMLINED DESK MOUNT; Fits 556A and 556B; adapters for most others; iridescent gray finish.		
Cat. No. S13802 Model 836A Desk Mount	Net Price	\$2.35

"55" Unidyne Uni-Directional Dynamic Microphones

For outdoor and indoor use; true cardoid characteristic kills feed-back, audience and background noise; shock-proof construction; double wind-screens; satin-chrome finished case tilts through full 90°; built-in cable connector; 25-foot cable with locking plug; 1"-27 thread for mount.

Cat. No. S13893 Model 55A 35-50 ohms; output -62db	Net Price	\$27.64
Cat. No. S13894 Model 55C 35,000 ohms; output -58db	Net Price	\$29.11

Shure Crystal Microphones



MODEL 708A... An expensive looking microphone at low cost; high impedance; swivel head; cable connector; genuine Blomorph crystal; die-cast case; 7 foot cable. For home recording, public address, paging, transmitters, and general service. Output -49.7 db.

Cat. No. S15812 Type 708A Net Price \$11.47

MODEL 730B... "Uniplex" true cardoid crystal microphone. Uni-directional type; output -63 db from 30 to 10,000 cycles; rear response down 15 db; permits more volume without feedback; moisture-proofed Blomorph crystal; swivel head; built-in cable connector; 25 foot single-conductor cable.

Cat. No. S13805 Type 740A Net Price \$20.19

MODEL 7308H... "Speech Uniplex" cardoid crystal microphone. Specially engineered speech response; high output at speech frequencies; built-in HP filter protects against burn-outs; cable connector and 7-foot cable.

Cat. No. S13806 Type 7308H Net Price \$20.87

MODEL 707A... Low cost crystal microphone for general service, speech and music; wide range smooth response; -49 db output; Blomorph crystal isolated from case to reduce vibration noise; 7-foot single conductor cable has plug attached; die-cast case has polished grille and iridescent gray finish; standard mounting.

Cat. No. S13813 Type 707A Net Price \$7.35

MODEL 717B... Low cost hand microphone; same characteristics as Model 707B but housed in Tenite plastic case; 7-foot cable.

Cat. No. S13814 Type 717B Net Price \$5.85

Aircraft Microphone

Anti-noise construction damps out motor noise; high output; DPST press-to-talk switch connects mike and relay simultaneously; black bakelite case; 3 ft. moisture-proof cord; three-way plug; push-in mounting bracket; wt. only 6 1/2 oz.

Cat. No. S23491 Model CU-1 Net Price \$11.47



JT Series Crystal Microphone

A new semi-directional microphone with matched acoustic design resulting in pleasing bass response with uniform highs free from dips and peaks. Heavy die-cast cartridge housing, corrosion proof diaphragm protected against abuse. Supplied complete with concentric cable connector, 15 ft. rubber covered cable, wood handle, and interlocking metal base allowing use as either desk or hand microphone. Handle is removable to permit mounting on standard 1"-27 floor stands. Finished in chrome and gray or all chrome.

Cat. No.	Model	Finish	Range	Net
S11973	JT-30-TT	Two-tone	Wide	\$9.11
S11974	JT-30-C	Chrome	Wide	9.11
S11973A	JT-40-TT	Two-tone	Voice	9.11
S11974A	JT-40-C	Chrome	Voice	9.11

Crystal Microphone D104

This crystal microphone has been accepted by the amateur as one of the finest communication microphones available. Frequency response from 30 to 8,000 cycles. Output level -54 db. Heavily chrome plated. Supplied with 7 feet of rubber covered cable.

Cat. No. S7003 Net Price



\$13.23

T-3 Astatic Torpedo Crystal Microphone

A general-purpose crystal microphone with self-locking tilting head for non-directional or semi-directional use; output -52 db from 30 to 10,000 cycles; plug-and-socket connector; 15 ft. rubber covered cable; polished chrome finish.

Cat. No. S7002 Type T3 Net Price \$14.70

Price does not include type G desk stand shown.



"Grip-to-Talk" Desk Stand

Grip-bar actuated switch operates relay for remote control of transmitter or amplifier; equipped with socket connector to fit microphone plug, 8 ft. rubber covered cable, spring cable protector, and terminal strip under felt covered base pad.

Cat. No. S23492 Type G Net Price \$5.88

Astatic "DN" Dynamic Microphones

Unitary moving coil system and carefully proportioned acoustic circuit give substantially flat response from 50 to 7,000 cycles; -55 db output; tilting head for semi- or non-directional use; plug and connector with standard thread; spring cable protector; 25 ft. cable; two-tone gray and chrome finish. An excellent all-purpose dynamic microphone.

Cat. No.	Type No.	Impedance	Cable	Net Price
S23481	DN-50	50 ohms	2-cond.	\$11.76
S23482	DN-200*	200 ohms	2-cond.	13.23
S23483	DN-500*	500 ohms	2-cond.	13.23
S23484	DN-HZ*	50,000 ohms	1-cond.	13.23



Lapel Microphones

ASTATIC—MODEL L-1... Meets especially difficult pickup conditions; spring clip and over-shoulder cord for freedom of movement; dual-diaphragm with Blomorph crystal driven through dual yokes; -62 db output; 5 megohm impedance; 30-10,000 cycles; furnished with 25 ft. small-diameter shielded cloth-covered cord.

Cat. No. S23485 Type L-1 Net Price \$14.70



TURNER—MODEL L-40... Use as lapel unit or concealed microphone; alligator clip fastens mike firmly to clothing and prevents cord twisting; output -48 db; 20 foot black cloth covered cable.

Cat. No. S23486 Type L-40 Net Price \$14.70

TURNER "THIRD HAND"... Holds L-40 mike close to mouth for better volume without feedback; flexible goose-neck adjusts mike to convenient position, leaving both hands free; ideal for police cars, window demonstrators, etc.

Cat. No. S23487 Type 3H Net Price \$2.94

Cat. No. S23488 Type 2HS, with switch Net 3.53



Police-Type Handi-Mike

Single button carbon unit specially designed for police transmitters; motor noises damped out; ventilated rubber mouthpiece for close talking; press-to-talk switch for relay operation; 5 ft. weatherproof shielded cable.

Cat. No. S23489 Model PCT Net Price \$13.26



Holder Bracket



For mounting any hand microphone; rubber rollers with nickel-plated brass springs; sure grip; easy in and out.

Cat. No. S23490 Model 175E Net \$.30

★ ★ ELECTRO-VOICE MICROPHONES ★ ★



Poly-Directional Cardak Dynamic

A versatile microphone with a constantly variable sound pick-up pattern. Simple control enables it to function as a true cardioid as well as a bi-directional for elimination of sidewall reflected sound. In fact, the CARDAK is adjustable for any combination of reflected sound direction. Frequency response is substantially flat from 30-10,000 c.p.s. Average level, -52 DB (0 DB = 1 volt/DYNE/CM²). "On-off" switch is built-in. Tiltable for non-directional use. Three contact wiping connector. Available in Hi-Z (direct to grid) and 50, 200, or 500 ohms impedance; low impedances balanced to ground. Be sure to specify impedance required. 20' cable. Butler chromium finish.

Cat. No. S23459 Model 725 Cardak Net Price \$32.34
Cat. No. S23460 Model 730 Cardak 11 Net Price \$44.10



Dynamic—Model 640

A rugged, dependable and professional style microphone with amazing voice and music reproduction qualities. Exceptionally wide and flat frequency response, 30-12,000 c.p.s. Output: -52 DB (0 DB = 1 volt/DYNE/CM²). Tiltable for directional or non-directional operation. Cable connector is built as an integral part of the sturdy, steel reinforced cradle. 20' well shielded cable. Available in Hi-Z (direct to grid) and 50, 200, or 500 ohms impedance; low impedances balanced to ground. Be sure to specify impedance required.

Cat. No. Model Finish Net Price
S23461 640C Bright Chromium \$18.11
S23462 640G Gunmetal 17.64



Dynamic—Model 630

Smart, modern appearance. Frequency response: 30-9,000 c.p.s. unusually flat through lower and middle registers, rising 5 DB on upper frequencies for added crispness of speech and brilliance of music. Output: -45 DB (0 DB = 1 volt/DYNE/CM²). Full equipment includes "on-off" switch, tilting head for directional or non-directional operation, 20' cable and cable connector. Chromium finish. Available in Hi-Z (direct to grid) and 50, 200, or 500 ohms impedance; low impedances balanced to ground. Be sure to specify impedance required.

Cat. No. S23463 Model 630C Net Price \$17.64

Dynamic—Model 612

A high standard of value and quality in the low priced field. Full musical reproduction; voice is natural and crisp. Tiltable in 90 degree arc for directional or non-directional pick-up. "On-off" switch. Resistant to heat, temperature changes, salt air and rough handling. Frequency response: 40-9,000 c.p.s. Output: -50 DB (0 DB = 1 volt/DYNE/CM²). 20' well shielded cable. Chromium finish. Available in Hi-Z (direct to grid) and 50, 200, or 500 ohms impedance; low impedances balanced to ground. Be sure to specify impedance required.

Cat. No. S23464 Model 612C Net Price \$16.17



Dynamic—Model 605

Dependable quality, maximum durability, flexible operation, handsome appearance. Overall response is highly desirable for all type of sound work, recording and industrial P.A. systems. Fixed 22 degree tilt. Frequency response: 45-8,000 c.p.s. Output: -58 DB (0 DB = 1 volt/DYNE/CM²). 8' cable. Chromium finish. Available in Hi-Z (direct to grid) and 50, 200, or 500 ohms impedance; low impedances balanced to ground. Be sure to specify impedance required.

Cat. No. S23465 Model 605C, without cable \$11.76
Cat. No. S23466 Model 605CC, with 20' cable 12.64

UTC Microphone Cable Transformers

Designed to be inserted in the cable circuit, and ruggedly constructed to withstand mechanical abuse; connections to terminal boards inside the end caps; spring strain relief; units may be located any place on the cable within twenty-five feet of the amplifier; 1 1/2" diameter, 2 1/2" long, wt. 1 lb.

Cat. No.	Type	Matching	Net Price
S23478	MC-1	Primary tapped, 30/50 and 200/250 ohms, secondary to grid, standard fidelity	\$5.29
S23479	MC-2	Primary tapped 30/50 and 200/250 ohms, secondary to grid, high fidelity	7.06
S23480	MC-3	Crystal microphone to 50/200 ohm line	7.06

Noise-Cancelling Differential

MILITARY TYPE

Noise-cancelling Differential type carbon microphone which effectively shuts out all ambient noises and reverberation. Frequency response is substantially flat from 200-4,000 c.p.s. Low harmonic distortion. Self-supporting to free both hands of the operator. Uniform response in all positions. Unaffected by temperature cycles from -40 to +185 degrees. Able to withstand complete immersion in water. Weight including harness, cord and plug, 1 1/2 ounces.

Cat. No. S23467 Model 245 Net Price \$7.35



Communications Type

Noise-cancelling Differential type carbon microphone. Has extremely high intelligibility even under intense surrounding noise. Ideal for aircraft, factories, railroads, police and emergency services. Weighs less than 8 ounces. Operates well in all positions. High impact phenolic case. Close talking, blast proof, waterproof, shock-resistant. Fiberglass wind noise filter. Withstands temperatures from -40 to +185 degrees. Interchangeable with conventional carbon microphones. Frequency response substantially flat from 100-5,000 c.p.s. High output level: -20 DB (0 DB = 1 volt/DYNE/CM²). Internal noise level below .001 volt. Press-to-talk switch opens microphone, closes relay simultaneously, if desired. Cable length 3'. Panel mounting bracket on back.

Cat. No. S23470 Model 2058 Net Price \$14.70
Cat. No. S23471 Model 2058L* Net Price 15.58

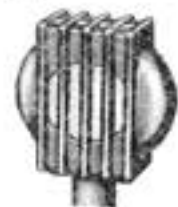
*With switch lock.



Standard Carbon Microphones

STAND-MOUNTING MODEL

With an internal shock-absorber that is even more shockproof than ring mounting, yet conforms to modern design. 1"-27 stand coupling. Button current (each) 3-5 m.a. for close talking or feedback reduction. 10-15 m.a. for normal work. Gunmetal finish. Cat. No. S23472 Model 75 double button Net \$4.70
Cat. No. S23473 Model 75B single button Net 3.82



RING-MOUNTING MODEL

An efficient carbon microphone, designed to give clear reproduction and long life. Mounting for ring type stand. High output to work into low gain amplifier.

Cat. No.	Model	Finish	Buttons	Net
S23474	50G	Gunmetal	Double	\$3.23
S23475	50C	Chromium	Double	3.53
S23476	50CS	Gunmetal	Single	2.35
S23477	50CS	Chromium	Single	2.40



Communications Type Dynamic Microphone



Designed for police, airport, utility, mobile communications and portable P.A. installations. "Press-to-talk" switch opens microphone and closes relay simultaneously, if desired. High impact black phenolic case, built to stand requirements of rugged military use, yet weighs but 9 ounces. Will withstand temperatures from -40 to +185 degrees. Frequency response: 50-8,000 c.p.s. Curve substantially flat for highest articulation. Output: -57 DB (0 DB = 1 volt/DYNE/CM²). 8' cable. Panel mounting bracket on rear of microphone.

Cat. No. S23468 Model 600D Net Price \$16.17
Cat. No. S23469 Model 600DL* 17.05

*With switch lock.

While priority regulations remain in force, orders must be accompanied by applicable certification in order to ensure shipment on schedule.

For special microphone cables see page 18; for plugs, switches, etc., see pages 85 and 91.

BOGEN Sound Systems

HIGH POWER MODEL E-75 70 WATTS

Exclusive BOGEN Dual Construction

Two complete 35 watt power amplifiers, with separate power supply for each unit.

Three Input Channels

Two microphone and one phonograph.

Remote Control Circuits

Provision for connecting SHC-50 remote two-channel control to all channels.

Tone Compensation

with single control for bass and treble.

Where high power is required—with exceptional tone quality and at moderate cost—this dual amplifier system offers remarkable value for service in skating rinks, athletic fields, dance halls, airports, and wherever dependable, high-power service is essential.

The dual construction of this system affords protection against complete breakdown in case of tube burn-out, or other component failure. One 35 watt section is always available for service. The system may be operated as two separate amplifiers with a common preamplifier, or the two outputs may be paralleled for 70 watt output. Each amplifier is separately tuned and a switch is provided to permit voltage for the preamplifier to be obtained from either power supply. Each unit has its own driver stage, power supply, separate fixed bias rectifier, inverse feedback, and master gain control.



Model E75 Amplifier Specifications

OUTPUT: 70 watts at less than 4% distortion; each output channel is tapped at 4, 8, 15, 250, and 500 ohms with marked terminal strip for each amplifier.

GAIN: Microphone 124 db, phono 95 db.

INPUT: Three channels—2 microphone and 1 phonograph; impedance 500,000 ohms each.

FREQUENCY RESPONSE: 30 to 14,000 cycles, $\pm$ one db.

REMOTE CONTROL PROVISION: Built-in.

CONTROLS: Six total; 2-master gain, 2-microphone, 1-phonos, 1-bass-treble compensator.

TUBES: 2-7H4, 2-7F7, 2-6F6G, 4-6L6G, 2-5X4G, 2-5W4GT.

A.C. POWER INPUT: 290 watts 117 volts 50/60 cycles.

DIMENSIONS: 17" by 10" by 12".

Model E75 Dual Amplifier . . . with complete set of tubes.
Cat. No. S22932 Net Price \$95.55

Model E75F Basic Sound System . . . includes one complete E75 amplifier with tubes, four Jensen 12" heavy duty dynamic speakers, one Astatic JT30 crystal microphone with 25' cable and plugs.

Cat. No. S22933 Net Price \$184.64

FOR INDOOR INSTALLATION
Model E75B Sound System . . . complete as described for E75F—plus four deluxe walnut baffles for speaker mounting.

Cat. No. S22934 Net Price \$210.52

FOR OUTDOOR INSTALLATION
Model E75T Sound System . . . complete E75 amplifier and tubes with four University 41" trumpets and 25 watt drivers and one Astatic JT30 crystal microphone with 25' cable and plugs.

Cat. No. S22935 Net Price \$274.60

DELUXE ECONOMY SOUND SYSTEM

10 WATTS



Meets the demand for a medium powered, two-speaker sound system at an economical price; may be used for small paging systems, hearing aid multiple installations, or driver for small transmitter. Basic unit is Model E10 Amplifier of following specs: OUTPUT: 10 watts from push-pull 7C5's; (delivered) at terminal strip and two speaker plugs; 4-8-15-250-500 ohms. INPUT: one microphone and one phono, 500,000 ohms each. CONTROLS: one microphone, one phono, one tone, one master switch. FREQUENCY RESPONSE: 65 to 9,000 cycles $\pm$ 2 db. GAIN: 114 db microphone, 75 db phono. TUBES: 2-7F7, 2-7C5, 1-5W4GT. A.C. INPUT: 88 watts 117 volts. DIMENSIONS: 7" by 7".

Model E10 Amplifier with tubes. Cat. No. S22936 Net Price \$30.13

Model E10F Economy System including Model E10 amplifier and tubes, 2-10" dynamic speakers, each with 25' cable and plugs, and 1-JT30 Astatic crystal microphone with 25' cable and plugs.

Cat. No. S22937 Net Price \$52.34

FOR INDOOR INSTALLATION
Model E10B . . . same as E10F—plus two walnut baffles (W).
Cat. No. S22938 Net Price \$59.69

FOR PORTABLE USE
Model E10P . . . complete system same as E10F—plus portable two-section leatherette covered speaker baffle (P) for carrying the amplifier and mounting the two speakers.

Cat. No. S22939 Net Price \$61.45

PACEMAKER SOUND SYSTEM

14 WATTS



Incorporating many features of the high power systems, the Pacemaker sets the pace for medium powered equipment at moderate price. Basic unit is E14 Amplifier giving 14 watts output from P.P. 6L6's feeding tapped terminal strip and two plug-in speaker sockets at impedances of 4-8-15-250-500 ohms; 500,000 ohm input channels for two microphones and one phono with separate gain control for each; tone compensator accentuates bass or treble as desired; gain at mike input is 125 db, at phono is 85 db; response is $\pm$ 1.5 db from 40 to 12,000 cycles; all controls on illuminated sloping panel; tubes are 2-7H4, 1-7E7, 1-7N7, 2-6L6G, 1-5Y4G; draws 90 watts at 117 volts 50/60 cycles; size 14" x 7" x 8".

Model E14 Amplifier with tubes. Cat. No. S22940 Net Price \$42.05

Model E14F Basic System . . . comprising 1-E14 amplifier with tubes, 2-12" Jensen dynamic speakers each with 25' cable and plug, 1-Astatic JT30 crystal microphone with 25' cable and plugs.

Cat. No. S22941 Net Price \$71.64

Model E14B . . . FOR INDOOR INSTALLATION . . . same as E14F—plus two walnut speaker baffles (W). Cat. No. S22942 Net Price \$81.15

Model E14P . . . FOR PORTABLE USE . . . same as E14F but with portable twin baffle and amplifier carrying case.

Cat. No. S22943 Net Price \$83.50

... for Schools - Churches - Halls

DELUXE STREAMLINER MODEL EX35

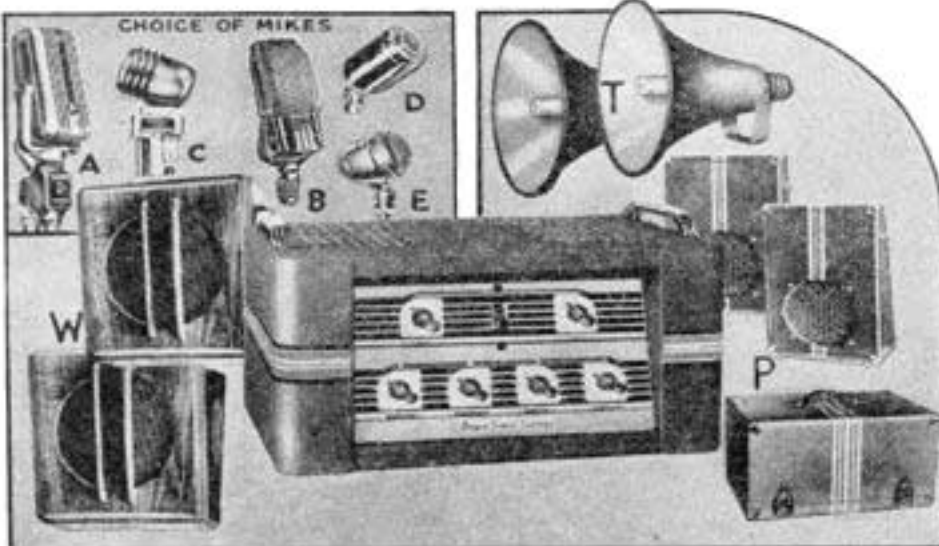
35
WATTS

- Exclusive New Triple-Range Electronic Tone Corrector Controls bass, treble, and intermediate tone ranges.
- Four Input Channels 3 microphone — 1 phono.
- Remote Control Circuits Built in for all inputs.
- Inverse Feedback Separate fixed bias.
- Push-Pull 6L6 Output
- Illuminated Sloping Panel Carries all controls.
- Weatherproof Outdoor Trumpets

Combining every desirable feature of advanced sound engineering, the new Bogen "Streamliner" exceeds all previous standards of performance. An outstanding feature is the Electronic Tone Corrector which provides separate control of amplification in bass, treble, and middle audio ranges in a dual control system enabling the operator to create any desired tone range—without power loss or distortion.

The "Streamliner" sound system is available in designs for indoor, outdoor, and portable service, all systems being based upon the Model EX35 Amplifier embodying the design features listed at the right.

A wide selection of microphones to suit your preference is offered with these sound systems; however, shortage of certain styles may make it necessary for us to substitute another type of microphone of equal quality. We reserve this right on all orders for sound systems.



Model EX35 Specifications

POWER OUTPUT: 35 watts at less than 5% distortion; 50 watts peak power.
INPUT: 4 channels—3 mike, 1 phono—all may be mixed simultaneously; input impedance 500,000 ohms on all channels; low impedance mike input on special order.
OUTPUT: Tapped terminal strip and two plug-in speaker sockets providing output impedances of 4, 8, 15, 250, and 500 ohms; A-C. at speaker sockets for field exciter.
GAIN: 130 db at mike input; 90 db phono.
FREQUENCY RESPONSE: 30 to 14,000 cycles ± 1 db; tone corrector range —15 db to +13 db at 30 cycles; —15 db to +8 db at 10,000 cycles; intermediate range fixed.
CONTROL PANEL: Illuminated; carries three microphone and one phono control, 2 tone corrector controls, and A-C. master switch.
REMOTE CONTROL PROVISION: Permits complete mixing and fading of any two inputs from remote by use of SRC50 remote control unit.
TUBES: 3—7B4, 2—7B7, 1—7B4, 1—7C5, 1—6F6, 2—6L6G, 1—5W4, 1—5N4.
A-C. INPUT POWER: 190 watts, 117 volts 50/60 cycles.
SIZE: 16½" by 8½" by 10½".

Model EX35 Amplifier... complete with tubes, as described.
 Cat. No. S22922 Net Price \$82.04

Model EX35F Sound System... including 1—EX35 Amplifier, kit of matched tubes, 2—Jensen 12" dynamic speakers, each with 25' heavy rubber-covered speaker cable and plugs, and choice of 1—microphone (A—Amperite BH Velocity; C—Amperite BAH Dynamic; D—American D&T Dynamic; E—Astatic T3 Crystal) with 25' cable and plugs.
 Cat. No. S22923 Net Price \$138.18

FOR PORTABLE USE
Model EX35P Sound System... complete system as described above—plus deluxe amplifier carrying case and heavy duty portable dual speaker baffle (P).
 Cat. No. S22924 Net Price \$158.50

FOR INDOOR INSTALLATION
Model EX35B Sound System... complete amplifier system EX35F—plus two deluxe walnut baffles with reinforcing inner baffles (W).
 Cat. No. S22925 Net Price \$151.12

FOR OUTDOOR INSTALLATION
Model EX35T Sound System... complete system includes 1—EX35 amplifier, kit of matched tubes, 2—University 4½' reflexed non-resonant weatherproof trumpets with 25 watt P.M. dynamic drivers, and choice of microphones (listed under EX35F system) with plugs and 25' microphone cable.
 Cat. No. S22926 Net Price \$182.88

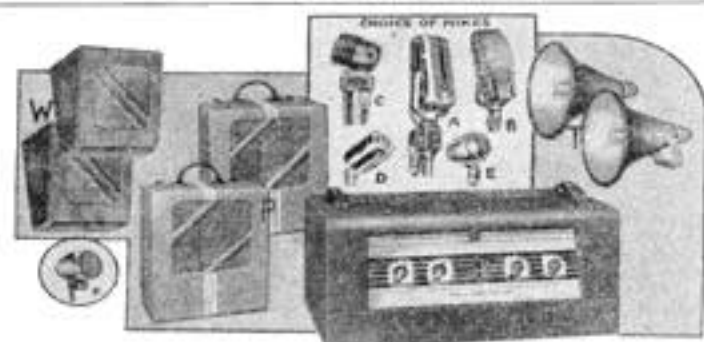
30 TRAIL BLAZER MODEL E-30

WATTS Establishing a new standard of quality and performance, the "Trail Blazer" leads the way in offering fine sound equipment at low cost. The foundation of this popular sound system is the Model E30 amplifier, offering these valuable features:

POWER OUTPUT: 30 watts at less than 5% distortion; 50 watts peak.
INPUT: 3 channels—2 microphone and 1 phono; input impedance 500,000 ohms impedance each channel; low impedance mike input special.
OUTPUT: Tapped terminal strip and two plug-in speaker sockets; 4, 8, 15, 250, and 500 ohms at both terminal strips and sockets; field supply for 5,000 ohm speakers at sockets.
GAIN: 129 db at microphone inputs; 89 db at phono input.
FREQUENCY RESPONSE: 40 to 12,000 cycles ± 1.5 db.
TONE CONTROL: Bass and treble compensator on single control.
CONTROL PANEL: Illuminated sloping panel carries two microphone controls, one phono control, one tone-compensator control, and master A-C. power switch.
TUBES: 2—7B4, 1—7B7, 1—7N7, 2—6L6G, 1—5Y4G.
POWER DRAIN: 130 watts at 117 volts 50/60 cycles.
DIMENSIONS: 15" by 7½" by 9½".

Model E30 Amplifier complete with kit of matched tubes.
 Cat. No. S22927 Net Price \$55.13

Model E30F Sound System... complete basic system includes 1—Model E30 amplifier, kit of tubes, 2—Jensen 12" dynamic speakers each with 25' cable and plugs, 1—Astatic JT30 crystal microphone with 25' cable and plugs.
 Cat. No. S22928 Net Price \$84.83

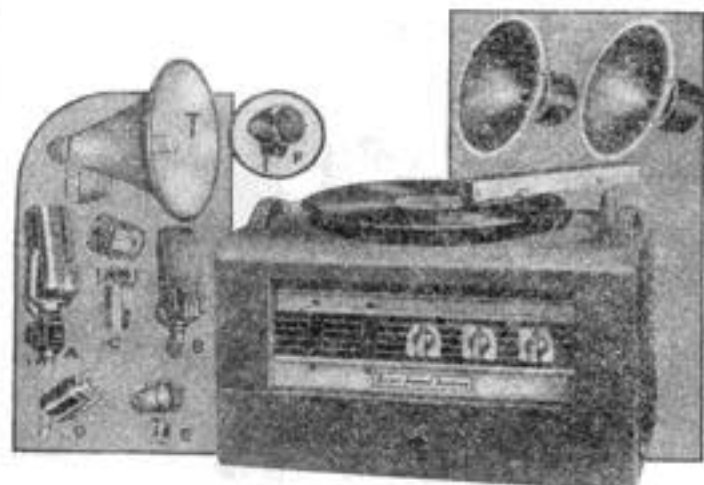


FOR PORTABLE USE
Model E30P Sound System... includes all equipment listed under E30F—plus portable baffle (P) for two speakers.
 Cat. No. S22929 Net Price \$96.56

FOR INDOOR INSTALLATION
Model E30B Sound System... includes all equipment listed under E30F—plus two walnut speaker baffles (W).
 Cat. No. S22930 Net Price \$94.23

FOR OUTDOOR INSTALLATION
Model E30T Sound System... includes one E30 amplifier with tubes, two University 3½' reflexed non-resonant weatherproof trumpets with swivel mounting brackets and 25 watt drivers, and one Astatic crystal microphone JT30, with 25' cable and plugs.
 Cat. No. S22931 Net Price \$131.57

BOGEN UNIVERSAL MOBILE SOUND SYSTEMS



Economy Model E620 20 WATTS

Answering the need for an economical mobile phono-amplifier easily operated on 6 volts D.C. or 115 volts A.C., the Model E620 provides flexibility of operation at low cost. A single self-contained unit comprises amplifier, power unit, automatic changeover switch, and phonograph assembly. Two input channels provide 500,000 ohm input for microphone or phono, with individual gain control for each. Gain at microphone circuit is 116 db; in phono circuit is 69 db; response is ± 2 db from 30 to 12,000 cycles. Push-pull 6L6's give 20 watts out at less than 5% distortion; tapped output transformer connects to terminal strip and speaker plugs providing output at 4-8-15-250-500 ohms. Astatic crystal pick-up affords fine record reproduction and built-in power supply for constant speed motor eliminates speed variation or waver on either 6 volt or 115 volt operation. All controls are conveniently located on the sloping front panel. Tubes used are 1-7B4, 1-7F7, 2-6L6G, 1-7Z4. At full load, unit draws 13.75 amps from 6 volt source or 95 watts from 117 volt A.C. line. Overall case dimensions 15" by 9 1/2" by 8 1/2".

Model E620 Phono-Amplifier with tubes, turntable, and pick-up.
Cat. No. S22948 Net Price \$73.41

Model E620F Mobile Sound System... complete with E620 amplifier and tubes, 2-12" Jensen dynamic speakers with 15' cable and plugs, and Astatic JT30 crystal microphone with 25' cable and plugs.
Cat. No. S22949 Net Price \$103.10

Model E620T Mobile Sound System... For Outdoor Use... Complete with E620 amplifier and tubes, 1-University 3 1/2' high power trumpet and 25 watt driver, and 1-Astatic JT30 crystal microphone with 25' cable and plugs.
Cat. No. S22950 Net Price \$116.14

Ultra Compact Model E8P

8 WATTS

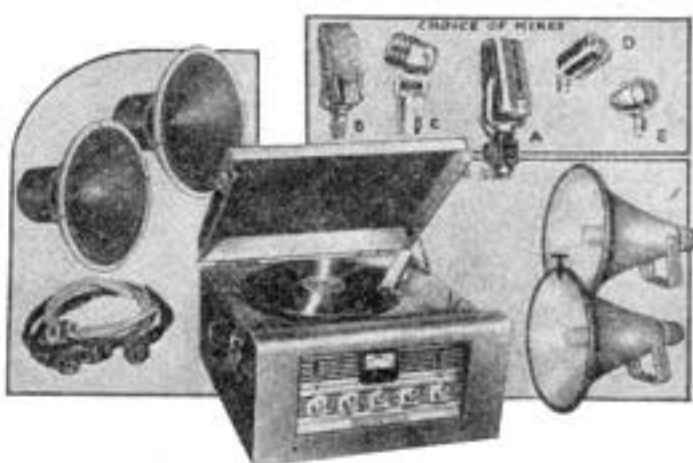
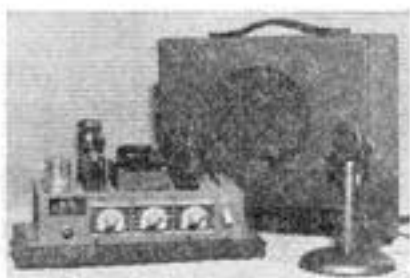
Light-weight and durable, amplifier can be removed from case for remote operation; specially suitable for small orchestras, demonstrators, lecturers, etc. Separate inputs for mike and phono with individual gain and tone control.

Model E8 Amplifier with 1-7F7, 1-6AD7, 1-6F6G, 1-5W4GT; gain at mike 104 db, phono 71 db; 500,000 ohm input; output 4-8-15 ohms at speaker socket, with field supply for 1,000 ohm speaker; size 4 1/2" x 7" x 7 1/2". Cat. No. S22951 Net Price \$19.55

Model E8P Portable Sound System... comprises E8 amplifier with tubes, 8" dynamic speaker, and portable baffle also serving as carrying case for amplifier. Cat. No. S22952 Net Price \$30.00

Model E8PX Same as above plus Astatic Y30 microphone, desk stand, and 7 1/2' cable and connector. Cat. No. S22953 Net Price \$34.40

Model E8PJ Sound System... same as above but with Astatic JT30 microphone and 25' cable and connector.
Cat. No. S22954 Net Price \$37.34



De Luxe Model EX632 32 WATTS

Recommended wherever the finest sound is required, this deluxe unit amply covers power requirements for indoor and outdoor use. It is wholly self-contained—a single compact carrying case contains the amplifier, phonograph turntable and pick-up, six volt D.C. and 115 volt A.C. power supply, and automatic changeover switch.

3 CHANNEL INPUT: Two microphones and the phono, each with its own gain control, can be mixed in the input; each channel is for 500,000 ohm impedance and provision is made for connecting the SRC50 remote control unit to any two channels.

ELECTRONIC TONE CORRECTOR: For bass, treble, and middle ranges; differs completely from ordinary tone controls, being free from power loss and distortion; unique dual control system permits operator to create any desired tone range.

ELECTRONIC HYDROMETER: Mounted on the control panel, gives accurate check of battery condition at all times—under load.

CONSTANT SPEED MOTOR: Runs smoothly on either 6 volts D.C. or 115 volts A.C., assuring freedom from wows or waver. Astatic crystal pick-up with new type shockproof arm is mounted on phono assembly.

ILLUMINATED SLOPING CONTROL PANEL: Carries master switch, plate power switch, tone corrector controls, microphone and phono gain controls, and electronic hydrometer.

32 WATT OUTPUT: From P.P. 6L6's; output impedances of 4, 8, 15, 250, and 500 ohms available.

HIGH GAIN: 120 db on microphones, 81 db on phono; response ± 2 db from 30 to 12,000 cycles.

TUBES: 3-7B4, 2-7F7, 2-6L6G, 1-5X4G.

UNIVERSAL OPERATION: Draws 23.5 amperes at 6 volts D.C. or 120 watts at 117 volts A.C.; automatic changeover switch provides for correct operation under fixed or mobile conditions.

COMPACT SIZE: Case with hinged cover is 16" x 16" x 10 1/2".

Model EX632 Amplifier and phono complete as described.
Cat. No. S22944 Net Price \$119.37

Model EX32-6 Amplifier, phono, and tubes—less electronic hydrometer.
Cat. No. S22945 Net Price \$116.43

DeLuxe Universal Sound System

Model EX632F... complete with EX632 amplifier-phono and tubes, 2-12" Jensen dynamic speakers, each with 15' of cable and plugs, and your choice of microphone (A) Amperite BH Velocity, (C) Amperite BAH Dynamic, (D) American DST Dynamic, or (E) Astatic T3 Crystal, and 25' microphone cable with plugs.
Cat. No. S22946 Net Price \$154.94

FOR OUTDOOR INSTALLATION

Model EX632T... complete with EX632 phono-amplifier and tubes, 2-high power University 3 1/2' trumpets with 25 watt drivers, and your choice of microphones listed above or (B) Bogen VR-HF Velocity microphone with 25' cable and plugs.
Cat. No. S22947 Net Price \$202.36

In the event that your first choice of microphone is not in stock we reserve the right to furnish any one of the microphones listed for use with these sound systems.

BATTERIES — VIBRATOR PACKS



Burgess Batteries

Fresh stock—all popular styles and sizes—for standard and special services. We stock a complete line of Burgess dry batteries and can furnish all available items; if the battery you want is not listed here, order by Burgess number from the Radio Shack.

Code letters giving method of connecting the batteries below are: S—screw terminals; F—fahn-stock type spring clips; W—wire leads.

"B" Batteries

Type No.	Volts	Term.	Lbs.	Net
2150S	15	F	15	\$2.23
1030S	15	F	13	2.05
220S	40	F	9	1.34
530S	40	S	4	1.16

"C" Batteries

5156	22	F	3	.72
4156	22	S	3	.64
5540	7	S	1	.48
2370	4	F	1	.30
6360	4	S	1	.31

Special Purpose Batteries

A30BP	45	S	2 1/2	1.27
X30FL	45	W	1	1.75
Z30BP	45	S	1	1.35
Z30N	45	S	1	1.27
Z30NX	45	S	1	1.50
A15ST	22	F	2	.66
W3BP	7	S	1	.70
F4BP	4	S	1	.40
F2BP	4	S	1	.34
F22H	2	S	1	.40

"A" Batteries

Type No.	Volts	Lbs.	Net ea.
4F6H	9	10	\$2.17
4F4H	6	7	1.41
4F4H	6	2	.39
4F2H	3	3	.70
4F4J	3	3	.65
4F1H	1 1/2	1 1/2	.30

Flashlight Uni-Cells

Long-life 1 1/2 volt flashlight cells in seamless cases with heavy moisture seal.

Standard No. 3 size 2 1/8" x 1 1/8" d. Cat. No. S23104 Net each 6jc
Baby size, No. 1 1/2" x 1" d. Cat. No. S23105 Net each 6jc

Penlight Batteries

2-cell, 3 1/2" x 5/8" dia. Cat. No. S23106 Net each 6jc
1-cell, 1 1/2" x 5/8" dia. Cat. No. S23107 Net each 4c

Electronic Converters

For supplying 110 volt, 60 cycle A.C. power to operate radio receivers, P.A. systems, call systems, radio test equipment, electrical appliances, and phonographs in locations normally having only D.C. power. Compact, easily installed, well ventilated, and adequately filtered, these converters are ideal for use in automobiles, on yachts and motor boats, with farm and portable lighting plants, and in cities in which direct current power is supplied.



Cat. No.	Model No.	D.C. Volts	Watts Output	Amps. Input	Dimensions	Net Price
S13110	302	6	75	14.7	8 1/2" x 6 1/2" x 4 1/2"	\$21.56
S13111	306	6	100	12	8 1/2" x 6 1/2" x 4 1/2"	21.56
S13112	102	32	100	3.7	8 1/2" x 6 1/2" x 4 1/2"	17.64
S13113	203	110	150	1.6	10 1/2" x 8 1/2" x 6	25.16

ATR Radio Inverters

Specially recommended for A.C. radios, television sets, and electronic equipment; exceptionally well-filtered for interference-free operation of all-wave apparatus; furnished with plug-in inverter vibrators with silver-alloy driver contacts and 1/2" diameter tungsten power contacts, four-point voltage regulators assure correct output voltage at all loads; operating efficiency more than 85%.



Cat. No.	Volts D.C.	Volts A.C.	Watts Peak	Out. Cont.	Net Price
S23108	6	110	85	75	\$17.02
S23109	12	110	125	100	17.61
S23110	32	110	150	100	17.61
S23111	32*	110	200	150	24.70
S23112	110	110	250	150	17.61
S23113	110*	110	325	225	23.23
S23114	110*	110	500	350	29.11
S23115	110	110/220	250	150	22.05
S23116	110/220	110/220	250	150	25.23
S23117	220	110	250	150	17.61

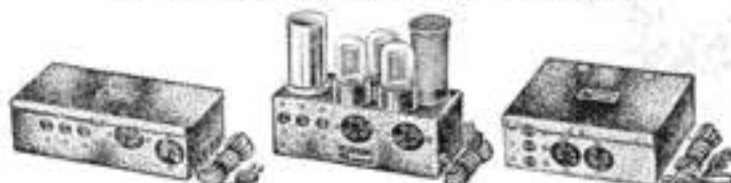
* Heavy duty type.

GTC Porta-Power

Operates farm-type D.C. radios from 110 volt A.C. line; supplies 2, 2 1/2, or 3 volts for 4 to 8 tubes; also 67, 90, 112, and 135 volts "B" power and adjustable "C" bias from 1 1/2 to 22 1/2 volts. Cord and switch for A.C. connection; screw terminals for D.C. Draws about 30 watts. Size 6 1/2" x 4 1/2" x 5 1/2". Cat. No. S24174 Model L Net Price \$7.35



For 1.4 Volt Receivers A & B Supply



AC OPERATED—136 AC-DC OPERATED—137 VIBRATOR UNIT—138

These compact power units provide means of supplying A and B power to operate 4-, 5-, or 6-tube home or portable receivers using 1.4 volt filament tubes such as the 1A7, 1N50, 1H50, 1Q50, 1A50, etc. The well-filtered output of each power unit delivers a maximum of 300 MA DC at 1.4 volts; humless "B" supply furnishes 18 MA at 90 volts. Universal receptacle fits standard battery plugs; special connector for non-standard plugs.

PLUG-IN AC POWER UNIT No. 136 . . . connects to any 115 volt 60-cycle power line and operates portable radios from electric light power for only a few cents a month. Unit will fit battery compartment of portable radio. Black wrinkle case 6 1/2" x 3 1/2" x 2 1/2". Cat. No. S14253 Model 136. Net Price \$6.44

PLUG-IN AC-DC POWER UNIT No. 137 . . . similar to No. 136 but operates from either AC or DC 115 volt power line. Black wrinkle finished case 6" x 4 1/2" x 1 1/2". Cat. No. S14254 Model 137. Net Price \$5.85

VIBRATOR UNIT No. 138 . . . operates from 6 volt "Hot Shot" dry cell or storage battery. Vibrator "B" supply is hash-free. Special relay in pack allows battery switch of radio to control ON and OFF operation of power supply. Case 5" x 5" x 2 1/2". This unit is ideal for operating portable radios from car or boat battery. Cat. No. S14255 Model 138. Net Price \$8.79

For 2 Volt Receivers A & B Supply



AC OPERATED No. 134

VIBRATOR UNIT No. 135

These efficient power units supply filament and plate power to 4-, 5-, 6-, or 7 tube receivers using 2-volt tubes such as the 1C7, 1D5, 1E5, 1F5, 1G5, 1H50, etc. Well-filtered "A" supply delivers up to 480 milliamperes at 2 volts; "B" supplies are humless and hash-free, delivering 20 milliamperes at 90 volts. Equipped with universal receptacle for standard battery plugs; also special connector for non-standard plugs.

PLUG-IN AC POWER UNIT No. 134 . . . connects to any 115-volt 60-cycle electric power line; to operate 2-volt portables using 90-volt "B" supply. Case 5 1/2" x 4 1/2" x 2 1/2". Cat. No. S14256 Model 134. Net Price \$7.31
Cat. No. S14257 Model 134X, like 134 but provides taps for "B" voltage at 67, 90, 112, or 135 volts. Net Price \$8.20

VIBRATOR UNIT No. 135 . . . for connection to 6-volt "Hot Shot" dry cell or storage battery. Built-in relays allows receiver switch to turn power pack ON and OFF. Delivers 20 MA "B" current at 67, 90, 112, or 135 volts. Case 5 1/2" x 5" x 2 1/2". Cat. No. S14258 Model 135. Net Price \$9.48

Utility Pack



For use where variable DC voltage with up to 12 amperes current capacity is required. Tap switch with six positions provides voltages from 1 to 10 depending upon the load. Plugs into 115-volt 50-60 cycle electric power line. Electrostatic shield in transformer; full wave rectifier with 25-3 1/2" radiating fins; 6-ft. cord; ON and OFF switch; pilot light. Overall size, 7" x 6" x 9".

Cat. No. S14259 Model U-129 Net Price \$26.58

Telephone Packs

Supplies dependable, trouble-free DC for telephones and signal devices. Combines requirements for transformer and batteries as used in apartments, offices, etc., by supplying low voltage AC for buzzers, door openers, and bells. Plugs into 115-volt AC power line; full wave rectifier and double section filter provide humless output, 2 amperes, less than 1% ripple.

Cat. No. S14260 Model 125T, 6-volt. Net Price \$19.30
Cat. No. S14261 Model 125T12, 12-volt. Net Price 24.40



TELEGRAPH APPARATUS



**"Tac"
Hand &
Speed
Keys**



PROFESSIONAL SPEED KEY... Designed to U. S. Navy specifications by the world's champion telegrapher; $\frac{1}{8}$ " silver contacts, and fully adjustable tecton springs, contact spacings, and vibrating arm; finished in battleship gray wrinkle enamel and polished chrome; a masterpiece of precision and craftsmanship.
Cat. No. S14602 Model CP-510. Net Price \$6.75

DELUXE SPEED KEY... The finest semi-automatic key made; polished chrome finish on massive base and other metal parts; main and U-spring of carefully selected blue spring steel; fully adjustable to suit the feel of any operator; with cord.
Cat. No. S23458 Model CP810. Net Price \$9.75

DELUXE HAND KEY... Beautiful "teardrop" design metal base with heavy chrome plating buffed to a soft lustrous finish. Finely balanced key lever; bronze bearing screw; ball bearing lever mounting; positive pig-tail connection; $\frac{1}{8}$ " silver contacts; circuit closer.
Cat. No. S14604 Model 300. Net Price \$3.45

PROFESSIONAL MODEL... As above but with black, wrinkle finish.
Cat. No. S14607 Model 200. Net Price \$2.25

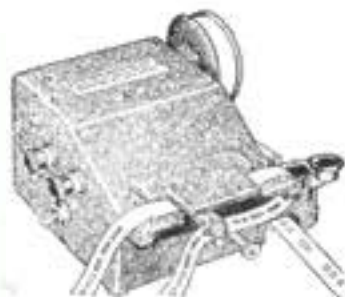
"Tac" Oscillator



For individual or class code instruction; continuous adjustable volume; tone variable from 500 to 1,500 cycles; handles up to 300 sets of phones; also delivers note on built-in speaker; metal case in gray crackle finish; operates on 110 volts AC or DC.

Cat. No. S14614 Model M8708
Net Price, with tube \$11.85

Automatic Sender



A simple, easily used automatic keying unit that operates from punched tape to give steady, evenly-keyed signals for code instruction; adjustable speed from 10 to 60 words per minute; induction motor, operating on 110 volts 60 cycles, gives no radio interference; works with any practice oscillator; furnished with five rolls of pre-punched tape covering alphabet, numerals, and words to five letters; also five rolls of blank tape to use in making additional practice messages. Code perforating device is incorporated in unit, with simple dot and dash keys that punch the tape at proper intervals for even sending.

Cat. No. S23427 Model J Automatic Sender. Net Price \$13.50
Cat. No. S23428 1,000 ft. blank tape. Net, per roll \$1.00

Code Practice Oscillators



MAGNETIC SPEAKER MODEL

Operates built-in magnetic speaker or up to 20 pairs of ear phones. Internal speaker automatically cuts out when phones are plugged in. Variable volume and pitch controls permit adjustment to suit individual requirements. Any number of keys may be connected in parallel for group practice or unit may be operated from Type J sender described above. Unit operates on 110 volts AC or DC. Streamlined metal case, $4\frac{1}{2}$ " x $7\frac{1}{2}$ " x $3\frac{1}{2}$ ", is finished in gray crackle enamel, with red scratchproof plate identifying all controls.

Cat. No. S24175 Type CPO-124. Net Price \$8.82

DYNAMIC SPEAKER MODEL

For service similar to above unit, but equipped with built-in dynamic speaker; tone selector switch gives choice of high or low audio note; key jack on front panel; jack on rear provides for connection of extra key and speaker for two-way code practice; operates on 110 volts AC or DC.

Cat. No. S24176 Type No. CP-120. Net Price \$8.57

EARPHONE MODEL

Similar to unit described above but without built-in speaker. Operates on 110 volts AC or DC. Housed in handsome gray crackle finished metal case $4\frac{1}{2}$ " x $3\frac{1}{2}$ " x $3\frac{1}{2}$ ".
Cat. No. S23429 Type No. CPO-122. Net Price \$7.59



Genuine VIBROPLEX "BUGS"

The "ORIGINAL" VIBROPLEX... transmits the same grade of code as the strongest hand, faster than possible on an ordinary key, and with less than half the labor. Single lever action, with two pairs of contact points—one for dots and the other for dashes. Contacts $\frac{1}{8}$ " diameter; chrome finished metal parts, black base; weight, $3\frac{1}{2}$ lbs. Complete with cord and wedge.

Cat. No. S30440 "ORIGINAL" Model Standard finish. Net Price \$15.95
Cat. No. S30441 "ORIGINAL" Model Deluxe all chrome. Net Price 19.50

The "BLUE RACER" VIBROPLEX... similar to "Original" model but only half as large; weight 2½ lbs.

Cat. No. S30442 "BLUE RACER" Standard finish. Net Price \$15.95
Cat. No. S30443 "BLUE RACER" Deluxe all chrome. Net Price 19.50



The "LIGHTNING BUG" VIBROPLEX... latest model, single lever, improved flat pendulum, instantly adjustable dot contact spring, circuit breaker parallel with pendulum, two pairs of large contact points. Complete with cord and wedge.

Cat. No. S30444 "LIGHTNING BUG" Standard finish. Net Price \$13.95
Cat. No. S30445 "LIGHTNING BUG" Deluxe all chrome. Net Price 17.50

The "ZEPHYR" VIBROPLEX... similar to "Lightning Bug" but mounted on a slightly smaller base; has circuit closer, cord, and wedge.
Cat. No. S30446 "ZEPHYR" Standard finish. Net Price \$12.50

The "CHAMPION" VIBROPLEX... for radio use only; designed to meet the demand for a low-priced radio transmitter. Single lever with two pairs of contact points; large, standard size base; without circuit closer, cord, or wedge. Standard finish only.
Cat. No. S30447 "CHAMPION." Net Price \$9.95

CARRYING CASE... fits all Vibroplex keys. Black morocco finish, plush lining carrying strap, lock and key. Cat. No. S30448 Net Price \$3.50

Beginner's Key R-50



Heavy cast base, well-insulated black crackle finish. $\frac{1}{8}$ " silver contacts. Cat. No. S3220 R-50. Net Price \$1.03

Practice Set



Set consists of key and high frequency buzzer mounted on mahogany finished wood base. Code is printed on plate and fastened to base. Buzzer is adjustable. Model R-68.
No. S3215 Net Price \$2.35

Telegraph Key



Preferred by skilled operators and beginners. The base, equipped with binding posts, is brass with a lacquer finish. Key lever is nickel plated. Furnished with platinum contact points. Model M-100.
No. S3218 Net Price \$1.98

Sounder



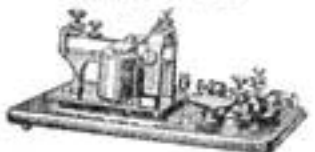
4 Ohms Resistance
Cat. No. S3213-1128. Net Price \$2.28

Beginner's Key



Scientifically correct but moderate in price. Has black metal base and is mounted on a mahogany finished wood base. Key lever is nickel plated. Model 112-K.
No. S3216 Net Price \$1.47

Learner Set



Aluminum sounding bar with black lacquered steel sounder plate. Key lever nickel plated. Mounted on mahogany finished wood base. Model M-110-4 ohm.
No. 3217 Net Price \$3.38

R-62 Heavy Duty Key



Standard wireless key designed to carry heavy currents. All brass construction with lacquer finish. Furnished with $\frac{1}{8}$ " coin silver contacts. Navy type key knob.
No. S3211 Net Price \$2.06

Model R-64

Same construction as above except that it has $\frac{1}{4}$ " contacts.
Cat. No. S3212 Net Price \$2.20

H. F. Buzzer

Adjustable and has a standard resistance of 2 ohms. Model R-60.
No. S3214 Net Price \$7.3c



INTERCOMS -:- SERVICE AIDS -:- BOOKS

Bogen Communo-Phone



Provides up to eleven intercom stations. Ideal for instant, point-to-point voice communication in offices, shops, and factories; master station can call or be called by any of eleven remote stations; or up to eleven masters can be interconnected for selective communication among stations. Master unit—operating from 110 volts AC or DC—is furnished complete with tubes and includes station selector, volume control, press-to-talk switch, power switch, and pilot light; remote units do not require power connection.

MODEL 12A MASTER STATION... for communication with eleven other stations; contained in handsome walnut-finished plastic case; cord and plug for power connection, 6-foot length of twelve wire cable for talking circuits, and complete set of tubes.
Cat. No. S22955 Net Price **\$24.99**

MODEL 4A MASTER STATION... for smaller systems; communicates with four other stations; furnished complete with tubes.
Cat. No. S22956 Net Price **\$23.23**

MODEL AH REMOTE STATION... can receive calls from master and can talk back, but cannot initiate calls; housed in compact plastic case.
Cat. No. S22957 Net Price **\$4.12**

MODEL HS REMOTE STATION... similar to Model AR but equipped with built-in switch allowing remote station to call master.
Cat. No. S22958 Net Price **\$5.29**

CABLE NOTE: A 2-wire cable is required between each Model AR remote unit and the Master Station; for Model HS remotes, a 3-wire cable is used. When master units are interconnected for selective communication, the cable used should have one more conductor than the number of stations interconnected. See pages 17 and 18 for cables and page 84 for junction blocks.

Insulated Neutralizing Wrenches



FOR PHILCO, MAISTEEL, AND OTHER RECEIVERS

These handy tools are made of sturdy, black Fenolite throughout. The entire length of the tool is broached to hexagon shape of the correct size to fit standard adjustment nuts; hence, if one end breaks or wears out, the worn part may be sawed off thus leaving the remainder of the tool as good as new.

Cat. No. S14021 6" long. Net Price **12c**
Cat. No. S14022 8" long. Net Price **15c**

Alignment Wrench



FOR RCA AND PHILCO RECEIVERS

Required for neutralizing and adjusting the air trimmers for all 1937-38-39 RCA-Victor and Philco receivers and air trimmers of many other makes. Made of 1/2" Fenolite rod with hollow shaft hexagon wrench on one end and specially shaped hook on the other. 9 1/2" long.
Cat. No. S14020 Net Price **73c**

For other servicing aids and tools, see pages 37 to 48 and page 84.

RCA Tube Data Manuals

RECEIVING TUBE MANUAL... A complete listing of all RCA receiving tubes, showing operating characteristics and some applicable circuits; much valuable information, dimensions and charts.
Cat. No. S11420
Net Price **25c**



TRANSMITTING TUBE GUIDE... 72 5/8 x 11" pages of data and circuits for popular power tubes, UHF acorn and midjet types, gas-triodes, and gas-tetrodes; special chart showing air- and water-cooled tubes, transmitting and television receivers, cathode-ray tubes, phototubes, and special tubes; facts on design, adjustment, and operation of transmitters.
Cat. No. S23238 Net Price **35c**

CATHODE-RAY TUBE DATA BOOK... covers the operation of cathode-ray tubes and their associated circuits.
Cat. No. S8226 Net Price **25c**

THE "RADIOTRON" DESIGNER'S HANDBOOK, This 356 page, stiff-covered, 6 x 9" handbook is replete with illustrations, tables, reference charts, and data essential to the radio set designer and useful to every radio and electronic engineer, service man, and amateur.
Cat. No. S23237 Net Price **\$1.00**

Handy Book of Practical Electricity

Complete information on electrical subjects, compiled for ready reference in shop, factory, power plant, school, or home; includes fully indexed and easy-to-find data on electrical and mechanical energy, magnetic induction, alternator construction, power transmission, transformers, watt-hour meters, air-conditioning, automatic telephones, elevators, oil burners, welding, X-rays, automotive electrical systems, etc.; 1,346 pages, 2,600 illustrations.
Cat. No. S23260 Net Price **\$3.92**

Electronic Devices

Easily understood explanation of the electric eye, amplifiers, anodes, candle-power, color temperature, illumination, phototubes, vacuum tubes, oscillators, etc.
Cat. No. S23262 Net Price **\$1.96**

Electrical Power Calculations

A practical aid to examinations; covers 275 practical electrical problems for all electricians, testers, engineers, operators, students, and civil service applicants. 420 illustrated pages, with diagrams.
Cat. No. S23263 Net Price **\$1.96**

Radioman's Guide

A key to the practical understanding of radio; 750 pages of authentic, clear, concise information on radio fundamentals, sound, electric measuring instruments, power supply units, rectifiers, amplifiers, aircraft and marine radio, radio compass and beacons, static elimination, trouble shooting, Underwriters' standards, etc.
Cat. No. S23264 Net Price **\$3.92**

4-in-1 Neutralizing Tool



Cat. No. S12025 Net Price **38c**

U.H.F. Alignment Tool



Specially designed for aligning FM, television, and short-wave circuits. Molded from Amphenol B12-A, this tool has no capacity effect on critical circuits. Pencil type clip for carrying.
Cat. No. S12221 Net Price **24c**



Principles of Radio Engineering

By H. S. GLASGOW

A thorough presentation of the fundamentals of radio communication and the application of these principles. Emphasis is placed on the theory of the thermionic vacuum tube and its associated circuits. Mathematical developments are freely used. 320 pages, 344 illustrations.
Cat. No. S11321 Net Price **\$3.92**

Engineering Electronics

By DONALD G. FINK

A practical volume for engineers who wish to take up or review electron principles and their application and typical engineering problems of tube use and circuit design. Describes such electron tubes as thermionic diodes, triodes, tetrodes, pentodes, phanotrons, thyatrons, ignitrons. Vacuum and gas-filled photo tubes, cathode-ray tubes, scientific tubes, electron multipliers, mercury and sodium vapor lamps. 358 pages, 217 illustrations.
Cat. No. S10120 Net Price **\$3.43**

Electronics

By MILLMAN AND SEELY

Systematically presents a lucid, well-rounded explanation of basic electronic principles with their application to problems in electrical engineering and physics; includes general considerations of both vacuum and gas-filled electronic devices with attention to television pick-up devices, secondary emission multipliers, cold cathode gas triodes, vapor and fluorescent lighting, etc.; 721 pages.
Cat. No. S23256 Net Price **\$4.90**

Mathematics for Electricians and Radiomen

By COOKS

Gives a sound mathematical foundation for the electrical and radio student, and shows him how to apply this knowledge in practice; covers elementary algebra through quadratics, logarithms, trigonometry, elementary plane vectors, and vector algebra as applied to AC circuits; 604 pages.
Cat. No. S23257 Net Price **\$3.92**

Mathematics for Electricians

By KERN

Practical electrical problems with the study and explanation of mathematical principles used in solving them; gives workable knowledge of algebra, trigonometry, slide rule, working of formulas, ratio and proportion, vectors, etc.; includes 176 worked-out examples and 1934 practice problems; 254 pages.
Cat. No. S23258 Net Price **\$1.71**

AC Calculation Charts

By H. LORENZEN

Faster than a slide rule; a tremendous time-saver for solving electrical communications and power problems; 146 charts 7" x 11", printed in two colors, covering all AC calculations in series, parallel, series-parallel, and mesh circuits at frequencies from 10 cycles to 1,000 megacycles; each book contains a transparent straight-edge.
Cat. No. S23259 Net Price **\$7.35**

Wiring Diagrams

Pocket-size ready reference book for electricians, hoistmen, plant superintendents, electrical contractors; gives diagrams for connecting all sorts of instruments and electrical machinery; covers relays, circuit breakers, motors, generators, transformers, power-factor indicators, synchroscopes, and power circuits; 210 pages.
Cat. No. S23261 Net Price **\$6.98**

AMATEUR RADIO BOOKS

The Radio Amateur's Handbook



The Handbook tells the things which are needed for a comprehensive understanding of Amateur Radio. Suggestions to learn code, traffic-handling procedure and operating practices—electrical and radio fundamentals, design, construction, and operation of amateur equipment covers subject thoroughly. It includes the latest and the best information on everything in Amateur Radio.

Cat. No. S4000 Net Price \$1.00

DEFENSE EDITION

For training courses; includes portions of regular edition suited to teaching, with added chapters on math, measuring equipment, and code instruction; includes 4-place log table.

Cat. No. S23224 Net Price \$1.00

A Course in Radio Fundamentals

Based on above handbooks; describes 40 experiments with simple apparatus, giving complete practical knowledge of radio theory and design.

Cat. No. S23225 Net Price 50c

How to Become a Radio Amateur



How To Become A Radio Amateur describes in clear understandable language apparatus incorporating features confined to more advanced stations. Also shows how to build inexpensive equipment with complete operating instructions.

Cat. No. S4003 Net Price 25c

Lightning Calculators



These calculators enable quick information of the following: TYPE A, Radio Calculator—coil design, frequency, wave length, inductance and wire sizes.

TYPE B, Ohm's Law Calculator, includes a power, resistance, current, voltage, and wire size. TYPE D, Decibel Calculator, contains an input and output level scale and transmits low or gain scale. TYPE E, Parallel Resistance Series Capacity Calculator, solves easily any resistance or capacity combination. Direct reading answers. Cat. No. S4005 Type A. Cat. No. S4006 Type B. Net Price each \$1.00. Cat. No. S4007 Type D. Cat. No. S4008 Type E. Net Price each 50c.

License Manual



The ARRL License Manual tells you how to pass the government license test and get an officially assigned call. This manual makes a simple and comparatively easy task, and enables you to do this work without difficulty. Also contained is a large amount of general information. Contains 168 typical questions and answers used in government examinations.

Cat. No. S4001 Net Price 25c

Radio Operating Questions and Answers

Contains typical questions and answers that are asked, and examinations for commercial radio operator and amateur operator license. Contains operating procedure, laws and theory by Nilson and Hornung. Seventh Edition. 447 pages.

Cat. No. S5213

Net Price \$2.45



Practical Radio Communication

Written by Nilson and Hornung. Contains all fundamentals about receiving and transmitting theory. A commercial operator should not be without it. Very helpful in obtaining a commercial license. 754 pages and 434 illustrations.

Cat. No. S5214 Net Price \$4.90

How to Pass Radio License Exams.

DREW

Covers every phase of radio telegraph, phone, and broadcast operation and maintenance you need to know to hold any class operating license; gives diagrams and complete details of transmitters, receivers, rectifiers, Auto-Alarm, etc.

Cat. No. S23226 Net Price \$2.94

Radio Traffic Manual & Operating Regulations

DUNCAN and DREW

Includes everything from Morse Code and Conventional Signals to Issuance of Operators' Licenses; Excellent index makes every subject easy to find.

Cat. No. S23227 Net Price \$2.00

Radio Code Manual

NILSON

Twenty lessons that give a course in Radio code—how to send and read it—the fundamentals of a radio operator's job; seven construction projects; and valuable chapter on organizing and running a code class. Similar to courses used in Navy and Signal Corps radio schools.

Cat. No. S23228 Net Price \$2.00

Jones Radio Handbook

A veritable host of real information for the amateur at any stage of the game. Plenty of high frequency data and a great deal of short wave receiver design. A complete chapter on Antennas.

No. S4012

Net Price \$1.75



Cathode Modulation

By FRANK C. JONES

The most revolutionary radio discovery in a decade, a new, very economical system of radio telephony known as cathode modulation. Contains more than 100 large mechanical drawings, showing how to design cathode modulated transmitters of any power from the smallest to the largest. For either amateur or commercial services.

Cat. No. S11406 Net Price \$1.00

Radiograms

The radiogram blank is now an entirely new form, designed by the Communications Department to comply with the new order of transmission.



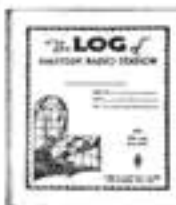
All blocks for 81-in are properly spaced for use in typewriter. It has a strikingly new heading that you will like. Radiogram blanks, 8 1/2 x 7 1/2, lithographed in green ink, and padded 100 blanks to the pad.

Cat. No. S4010 Price per pad 25c

Log Book

This 38-page log with an equal number of blank pages for notes and general log information and a sheet of graph paper are spiral bound, allowing the book to be opened flat at any page.

The page size is 8 1/2 x 11". Cat. No. S4002 Net Price each \$.35 Three for 1.00



Radio Amateur Call Book

Because of the wartime suspension of amateur radio station operation, publication of this book is temporarily discontinued. With the resumption of amateur activities, after the war, this book will be available with all latest listings.

No. S4011 Net Price \$1.25



Building an Amateur Radiotelephone Transmitter



Written for the man who has a class C or class B license. Contains simple description of modulation and good design for phone. A low power inexpensive phone transmitter, described fully. Tells what a new ham should know before attempting to use phone.

Cat. No. S4004

Net Price 25c

ARRL Antenna Handbook

The ARRL Antenna book, A comprehensive manual of amateur antenna design and construction, by the headquarters staff of the American Radio Relay League. Sixteen chapters, profusely illustrated. Both the theory and the practice of all types of antennas used by the amateur, from simple dipoles to multi-element rotaries.

Cat. No. S11650 Net Price 50c



Bliley's Crystal Handbook

A complete hand book covering the theory and operation of quartz crystals. No amateur station should be without one. Write for your copy today.

Cat. No. S5219 Net Price 10c



How to Build Radio Receivers—Meissner

In its 168 full size, 8 1/2 x 11" pages, this useful manual gives up-to-the-minute data on FM and television sets as well as all-wave, broadcast, and battery receivers from one to fourteen tubes. Invaluable to the man who prefers to "build his own."

Cat. No. S13220 Net 50c



Hints and Kinks

This book enables an amateur to make a small amount of money do a great deal for him. Shows him how to use his ingenuity in making many useful gadgets. Full of good ideas. Cat. No. S4009 Net Price 50c



BOOKS ON SERVICING



Servicing by Signal Tracing

By JOHN F. RIDER

A complete explanation of the system of servicing which many authorities believe will revolutionize all methods. Explains theory of radio receiver operation, as it discusses the functions of the various parts of all receivers. 300 pages bound in hard covers.

Cat. No. S10115 Net Price \$2.94



Servicing Superheterodynes

By JOHN F. RIDER

This book takes the uncertainty out of superheterodynes. Completely explains the working operations of all-wave supers. Contains very useful information on AVC, Dual I. F. and electron coupled oscillator circuits. 288 pages.

Cat. No. S4021 Net Price 94c



Servicing Receivers by Means of Resistance Measurements

By JOHN F. RIDER

Teaches the use of an ohmmeter and the servicing of radio equipment with the greatest efficiency. Allows a very simple diagnosis. All contained in 203 pages.

Cat. No. S4020 Net Price \$1.47



Frequency Modulation

By JOHN F. RIDER

This book is a MUST for every serviceman who wants to keep up to date. Six informative chapters in 136 pages tell how F-M differs from ordinary broadcasting, how frequency modulated signals are created, what happens in the F-M receiver, how the ultra-high frequency waves are used for F-M transmission, how to install best types of antenna for F-M reception, and just what adjustment and maintenance are required.

Cat. No. S12072 Net Price \$1.47



Automatic Frequency Control

By JOHN F. RIDER

144 pages of complete theory about automatic frequency control, all types of AFC circuits. Gives the complete story of alignment in radio receivers; also, peculiarities in servicing of receivers having AFC.

Cat. No. S5216 Net Price \$1.22



Principles and Practice of Radio Servicing

By H. J. HICKS

Here is something new in a radio book—every needed bit of theory, presented just as the author would do in personal instruction. Every suitable point to show how the fact applies in servicing some radio part, in making a test, a measurement, or a repair, formulas to solve practical service problems.

The kind of information to enable you to work—not by generalized trouble procedure—but secure in your fundamental knowledge of what goes on in radio circuits. 300 pages, 212 illustrations.

Cat. No. S11318 Net Price \$2.94



Oscillators at Work

By JOHN F. RIDER

This book was written because you asked for it. It contains a description of all types of oscillators—how they function—where they are used—how they are employed in servicing—how they should be serviced. It tells all you need to know about this important phase of radio. It enables you to get the most from your test oscillator.

Cat. No. S11315 Net Price \$1.96



Cathode Ray Tube at Work

By JOHN F. RIDER

A complete theory underlying the operation of the Cathode Ray Tube. The finest book on this subject available. Enables you to interpret an oscillogram. Everything to which a Cathode Ray Tube can be applied including its associated circuits all contained in 338 pages.

Cat. No. S4019 Net Price \$2.94

Practical Radio Including Television

MOTEN and WOSTRELL

Tells what radio is; how it works; how to select, operate, and care for radio receiving sets; how to construct receiving sets; how to test sets; how to locate common troubles; and how to remedy them. Gives accurate working drawings as used in radio shops, with complete lists of materials for building eight typical radio sets. 410 pages.

Cat. No. S23229 Net Price \$2.50

Automatic Record Changers & Recorders

By JOHN F. RIDER

Gives all the information you must have to service these high-cost instruments; covers DC AC, and universal motors, speed regulators, reduction drives, cutting heads, pick-ups, record-changer mechanisms; 744 pages 8 1/2 x 11 1/2.

Cat. No. S23230 Net Price \$5.88



The Meter at Work

By JOHN F. RIDER

Explains theory of each type of meter in distinction to other instruments. Also tells exact kind of work best done by each meter. Covers moving-iron vs. moving-coil meters; thermal, electrodynamic and electrostatic meters; components; rectifiers and thermocouples.

Cat. No. S20260 152 pages, 138 illustrations. Net Price \$1.47



Vacuum Tube Voltmeters

By JOHN F. RIDER

How they work, how to build them, where they are needed, and other essential information about vacuum tube voltmeters will be found in this mine of information about the favorite tool of engineers, research workers, and servicemen. 11 chapters, 180 pages, 111 illustrations and diagrams.

Cat. No. S20261 Net Price \$1.96



Aligning Philco Receivers

By JOHN F. RIDER

An encyclopedia of every Philco receiver made to late 1937. Contained in 136 pages. Will enable any serviceman to service Philco receivers very quickly.

Cat. No. S5215 Net Price \$1.47

Radio-Craft Library

Cat. No. S23231 HOME-MADE RADIO TEST INSTRUMENTS. How to make a signal tracer, tube checker, VTVM, meter-range extender, oscilloscope, etc.

Cat. No. S23232 MODERN RADIO-SERVICING TECHNIQUE. Covers dynamic servicing, AFC, AC-DC sets, "orphans," emergency servicing, etc.

Cat. No. S23233 MODERN BATTERY RADIO SETS. Tells how to make all sorts of battery-operated sets for portable and car use.

Cat. No. S23234 FREQUENCY MODULATION. How it works, how to build the FM set and how to service it.

Net Price, each book 50c



Ghirardi's Modern Radio Servicing

1309 PAGES

Everything practical and constructive, its 1,309 pages contain a complete course. Methods of radio servicing; servicing and repair of all forms of receivers (auto radio, all wave, high fidelity, etc.); locating and eliminating noise and interference; operation, and use of the new Cathode Ray Oscilloscope; AVC and QAVC circuits and their troubles. 1,300 pages—700 illustrations—32 chapters.

No. S4016 Net \$5.00

Special Offer: Modern Radio Servicing in "Combination" with Radio Trouble Shooter's Handbook.

No. S4017 Net \$9.50

Radio Service Trade Kinks

By SIMON

Based on a successful operation of his broad service experience. This new book presents clearly and concisely the methods for servicing and repairing all kinds of radios.

A practical and functional book based on the shirt-sleeve experience of a practical man.

Cat. No. S11317 Net Price \$2.94

Motorola Service Manual

Gives you diagrams, service notes, alignment data, and parts lists for every Motorola auto radio made to 1941: 96 pages, 8 1/2 x 11 1/2.

Cat. No. S20255 Net Price 98c

Servicing by Comparison Method

New servicing technique simplifies testing and gives time-saving shortcuts; over 1,000 practical service hints, 112 pages, 8 1/2 x 11 1/2.

Cat. No. S20256 Net Price 98c

Radio Servicing Course

In book form, this one volume gives you the same material as many high-priced radio courses. Up-to-date, reprinted in 1941, covers signal tracing, television, servicing.

Cat. No. S20257 Net Price \$1.91

BASIC DATA AND DIAGRAMS



Timbie's Basic Electricity for Communications

By WILLIAM H. TIMBIE

Presents the basic electrical principles that the worker in communications and industrial electronics must know to handle both the routine jobs and the unexpected problems that so often arise at critical times; simple, direct statements apply modern theories to daily practice. Includes treatment of Ohm's law, Kirchhoff's law, Thévenin's theorem, vacuum tubes and gaseous conduction, electrical communications; 603 pages. Cat. No. S23241 Net Price \$3.43

Elements of Radio Communication

By JOHN H. MORECROFT

Explains the simple laws of electric circuits, the special laws of radio circuits, the general idea of radio communication, the vacuum tube and its uses, radio telegraphy and telephony, and receiving sets; a self-contained presentation of the science and art of radio in 256 pages. Cat. No. S23242 Net Price \$2.94

"Understanding Radio"

A complete introduction to practical radio, written for the man who has no previous experience. Covers basic radio principles and circuits, wave motion, DC and AC tubes, power supplies, speakers, oscillators, transmitters, aerials, and ultra short-wave sets and circuits. Lays out experimental work to demonstrate each subject covered. Provides foundation for special training in radio servicing, operating, and engineering. A McGraw-Hill book, 601 pages. Cat. No. S13221 Net Price \$2.80

Radio Diagram Manuals

These easy-to-use, inexpensive manuals give you 80% of the circuits you'll ever use; also service hints, parts lists, IF peaks. Vol. 1—1926-35, 244 pages. Cat. No. S26250 Net Price \$1.91
Vol. 2—1939, 192 pages. Cat. No. S26251
Vol. 3—1940, 208 pages. Cat. No. S26253
Vol. 4—1941, 192 pages. Cat. No. S26254
Net Price, Vol. 2, 3, or 4 \$1.47

Rider's Trouble Shooters Manuals

All the necessary information for complete radio servicing. Postpaid anywhere in U.S.A.
Cat. No. S5200 Vol. I 1,000 pages. From 1919 to 1921.
Cat. No. S5201 Vol. II 750 pages. From March 1931 to June 1932.
Cat. No. S5202 Vol. III 1,070 pages. From June 1932 to June 1933.

Cat. No. S5203 Vol. IV 1,060 pages. From June 1933 to Feb. 1934.
Cat. No. S5204 Vol. V 1,200 pages. From 1934 to 1935.
Cat. No. S5205 Vol. VI 1,250 pages. From 1935 to 1936.
Net Price Each Postpaid \$8.08
Cat. No. S5206 Vol. VII 1,600 pages. From Latest models 1935 to 1936.
Cat. No. S5207 Vol. VIII. From late 1936 to early 1937.
Cat. No. S5207A Vol. IX. From early 1937 to 1938.
Cat. No. S12026 Vol. X. From early 1938 to 1939.
Cat. No. S12027 Vol. XI. to June, 1940, 1632 pages, new index, vest-pocket manual.

*Cat. No. S26258 Vol. XII, to April, 1941, 1652 pages.
Cat. No. S23246 Vol. XIII, latest edition to March, 1942, 1672 pages.
Net Price each Postpaid \$10.78



Electron Tubes in Industry

By KEITH HENNEY

Telling the engineer and manufacturer what is being done with electron tubes and how, shows specific application of electron tubes in:
Counting; measuring; sorting; grading; timing; recording; testing; analyzing; power conversion, inversion and transmission; and automatic control of process mechanisms. 539 pages, 397 illustrations. Revised, enlarged, second edition.

Cat. No. S11316 Net Price \$4.90

Ghirardi Radio Physics Course

SECOND REVISED EDITION

Explains in easy-to-understand language all of the essential facts about both electricity and radio from simple fundamentals to the most intricate applications. Invaluable to the radio beginner, student, serviceman, net-builder and experimenter. 972 pages—608 illustrations—556 self review questions.

Cat. No. S4015 Net \$4.90

Principles of Radio

By KEITH HENNEY

An elementary textbook ideal for home study; combined theoretical and practical qualities; tells how—and why—to do things; discusses detection, UHF, television, RF amplifiers, antennas, rectifiers, transmitters, oscillators, facsimile, etc.; thorough and complete in every way; 549 pages.

Cat. No. S23243 Net Price \$3.43

Fundamentals of Radio

By KEITH HENNEY

Covers entire field of basic communications; no advanced mathematics needed; used by all branches of the armed services, industry, and broadcasting; unique in the radio field.

Cat. No. S23245 Net Price \$4.90

Elements of Radio

By MARCUS & HORTON

A complete self-instruction manual in basic radio; written to the exact specifications of the War Department and U. S. Office of Education; requires no previous experience in mathematics or physics.

Cat. No. S23244 Net Price \$3.92



Theory and Applications of Electron Tubes

By HERBERT J. REICH

This book meets the need for a single volume to assemble and co-ordinate present knowledge of theory and application of electron tubes. A thorough co-ordinative ground-work in tube and circuit theory with emphasis on fundamental principles and their use in many applications in industrial electronics, communication, power, and measurement. 670 pages, 512 illustrations.

Cat. No. S10118 Net Price \$4.90

Principles of Electron Tubes

By HERBERT J. REICH

An abridgement of book listed above, covering general tube data including treatment of electron dynamics and frequency modulation; 398 pages, 299 illustrations.

Cat. No. S23235 Net Price \$3.43

Photocells and Their Application

By ZWORTKIN and WILSON

An exceedingly useful treatise on photoelectricity setting forth the underlying principles and giving many practical details from the wealth of the authors' experience; 348 pages.

Cat. No. S23236 Net Price \$2.94

Guide to Cathode-Ray Patterns

By MERWYN ELY

A "sketch-and-caption" summary of more than 100 patterns as met in usual course of laboratory and test-bench work; 39 pages 8 1/2 x 11".

Cat. No. S23239 Net Price \$1.47

Elements of Electricity

By WILLIAM H. TIMBIE

Gives the elementary principles of DC and AC generation, distribution, and utilization in lighting, power, and communication; this work has the unqualified endorsement of thousands of users; 569 pages.

Cat. No. S23240 Net Price \$2.96

An Hour a Day with Rider

A FOUR VOLUME SERIES

No. S5208 Vol. I—ALTERNATING CURRENTS IN RADIO RECEIVERS—How and why the components of a set function with a clear explanation of AC principles and practice.

No. S5209 Vol. II—RESONANCE AND ALIGNMENT—What happens when you align a receiver and correct way to do it. All the types of resonant circuits that should be understood by the Serviceman.

No. S5210 Vol. III—DC VOLTAGE DISTRIBUTION—A clear explanation of how the networks that supply operation voltages to tubes function, and how the sizes of the resistors are calculated.

No. S5211 Vol. IV—AUTOMATIC VOLUME CONTROL—The functioning and servicing of all the new circuits that come under the head of automatic volume control. Net Price Each \$8.00

"Five-in-One" Abridged Manual

All the popular receivers covered in Volumes I to V of the regular Rider Manuals are included in this 2,000 page volume which gives servicing data on the old sets most likely to be brought in for repairs. Gives you the value of five volumes at 1/5 the cost.

Cat. No. S26259 Abridged Manual. Net Price \$12.25



RADIO AND TELEVISION BOOKS



The Radio Manual

FOURTH EDITION By GEORGE K. STERLING
Full of complete information on the structure, installation, upturn, operation, and control of all forms of radio apparatus. Broadcasting is taken up in detail. Theory and application of vacuum tubes; stabilization of radio frequency amplifiers; receiving circuits; oscillators; audio frequency amplifiers; piezo-electric oscillators, also covers every detail of marine and air-traffic radio equipment.
Cat. No. 10117 Price \$5.88

Radio Engineering Handbook

SECOND EDITION By KEITH HENNEY
A book that gives the radio engineering profession its own handbook equal in all ways to the standard handbooks available in other fields of engineering. Thoroughly technical, with broad emphasis on design. It is comprehensive and up to the minute, covering all fields and aspects of radio engineering from fundamentals to latest practical applications. Every section has been written by a specialist. 850 pages, fully illustrated.
Cat. No. S11320 Net Price \$4.90

Trouble Shooter's Handbook

An up-to-date reference book. Intermediate frequencies of most models of superheterodynes; remedies for ignition interference. Complete tube charts, wire tables, RMA Color Codes, other useful charts, diagrams, and tables. No service shop should be without one.
No. S4018 Net \$3.00

Radio Engineers' Handbook

By FREDERICK E. TERMAN
A comprehensive organization of references covering virtually all the engineering literature in English; up-to-date and authoritative in all respects; deals with electronics, vacuum tubes, wave guides, cavity resonators, klystrons and other microwave tubes, radio aids to navigation, oscillators, wide-band antennas, etc.
Cat. No. S23247 Net Price \$6.00

Fundamentals of Radio

By FREDERICK E. TERMAN
Basic radio communication principles in a form suited to use in an introductory course; complete elementary treatment of vacuum tubes and radio requiring no knowledge of complex quantities; teaches theory of tuned circuits, wave propagation, antennas, radio navigation aids, sound equipment, and television; 458 pages.
Cat. No. S23251 Net Price \$3.67

Drake's Cyclopedia of Radio & Electronics

A complete, non-technical reference book covering radio transmission and reception, sound pictures, short wave, public address systems, television, and photoelectricity; the language is simple and direct, easily understood by a novice, yet accurate enough to satisfy the engineer; 1,700 headings; 1,000 pages, 1,178 illustrations, 130 tables, and 105 graphs; fully cross-indexed.
Cat. No. S23255 Net Price \$4.90

Drake's Electrical and Radio Dictionary

More than 3,800 definitions of the technical words and terms used in all branches of radio, including aviation, navigation, industrial control, photo-electricity, photocell applications, sound pictures, public address systems, television, telephony, electricity, and magnetism.
Cat. No. S24178 Net Price \$2.45



Television in America

By BATCHELOR AND RIDER
Telecasts are a daily feature of radio programs today in New York. Soon they will be in your community. Get a complete explanation of American television from studio to home. This book will prepare you for installing and servicing television receivers—it gives the information you will need.
Cat. No. S11314 Net Price \$3.43

Electron Optics in Television

By MALOFF & ERSTEIN
This book develops the theory of electron optics and its most useful application—the television cathode ray tube. Develops the theory of electron emission and electron optics. Deals with problems encountered in designing tubes, practical and economical to construct, and capable of producing satisfactory television pictures. 209 pages, 197 illustrations.
Cat. No. S10121 Net Price \$3.43

Principles of Television Engineering

By DONALD G. FINK
A complete engineering presentation arranged in logical sequence of events in television, beginning with the camera, through the subsidiary amplifying and transmission equipment, radiation through space, reception and amplification, detection, and image reproduction; two chapters describe practical equipment now in use; 541 pages.
Cat. No. S23248 Net Price \$4.90

Microwave Transmission

By SLATER
Lucidly handles the problems and peculiarities of microwaves that necessitate new concepts and methods of manipulation. Treats microwaves from standpoint of conventional transmission lines and of Maxwell's equations; covers plane waves, reflection, rectangular wave guides, radiation from antennas, directive devices, and coupling of co-axial lines and wave guides; relates theory and practice for the experimental worker; 309 pages.
Cat. No. S23249 Net Price \$3.43

Frequency Modulation

By HUND
A critical engineering treatment of all phases, from basic principles to the design of commercial apparatus; up-to-date information on circuit design with discussion of design formulae used in connection with band width and speed of electrical actions; comparison in detail between FM and AM as well as phase modulation; practical applications follow the latest and best engineering practice; 375 pages.
Cat. No. S23250 Net Price \$3.92

UHF Techniques

Sixteen thorough chapters treat every step from linear circuit theory to transmission lines, radiation, propagation, and wave guides—with over 300 diagrams to bring out the salient points; prepared by four leading scientists in such a way that it can be most easily understood, mastered, and applied to best advantage in solving problems and making specific applications; includes detailed laboratory manual; 534 pages.
Cat. No. S23253 Net Price \$4.41



Radio Frequency Electrical Measurements

By U. A. BROWN
A combined textbook, manual, and guide for laboratory manipulation of electrical measurements at radio frequencies—from a lower limit lying above the highest audio frequencies to the upper limit of radio frequencies at which it is practicable to make such measurements. 280 pages, fully illustrated.
Cat. No. S24177 Net Price \$3.92

Measurements in Radio Engineering

By FREDERICK E. TERMAN
A comprehensive engineering discussion of the measuring problems commonly encountered by radio engineers, with emphasis upon the selection of most practical methods requiring minimum of equipment and maximum of accuracy. Also expounds principles involved in design and construction of laboratory equipment, thus aiding the understanding of instrument functions and showing the reader how apparatus may be built in cases where commercial equipment is not available or is not manufactured in suitable form. The method of treatment, the practical approach, and the completeness of this book make it especially useful to the practicing engineer.
Cat. No. S23504 Net Price \$3.92

Radio Engineering

By FREDERICK E. TERMAN
A comprehensive treatment covering all phases of radio communication written from the viewpoint of the engineer who is interested not only in quantitative description of radio phenomena, but also in making quantitative analyses for facilitating design and research.

CHAPTER HEADINGS

THE ELEMENTS OF A SYSTEM OF RADIO COMMUNICATION, CIRCUIT CONSTANTS, PROPERTIES OF RESONANT CIRCUITS, FUNDAMENTAL PROPERTIES OF VACUUM TUBES, VACUUM TUBE AMPLIFIERS, POWER AMPLIFIERS, VACUUM TUBE OSCILLATORS, MODULATION, VACUUM TUBE DETECTORS, SOURCES OF POWER FOR OPERATING VACUUM TUBES, RADIO TRANSMITTERS, PROPAGATION WAVES, ANTENNAS, RADIO AIDS TO NAVIGATION, TELEVISION, SOUND AND SOUND EQUIPMENT. 813 Pages, 475 Illustrations.
Cat. No. S11319 Net Price \$5.88

Communication Engineering

By W. L. EVERITT
Step-by-step analyses of major problems met by radio and telephone engineers; explains every aspect of unilateral and bilateral networks, with theorems which apply fundamental similarities of simple networks to new, complicated structures; effect of non-linear distortion in both audio and radio-frequency amplifiers receives particular attention; 727 pages.
Cat. No. S23254 Net Price \$4.90

Basic Radio

J. B. HOAG
Gives broad training in radio circuits, explaining each type of tube and its circuits, with applications that show its essential characteristics; takes the student from a review of electrical fundamentals through triodes, diodes, multi-electrode tubes, rectifiers, gas-filled tubes, amplifiers, oscillators, FM, direction finders, UHF transmitters and receivers; 379 pages.
Cat. No. S23252 Net Price \$3.19

★ INDEX ★

A	"A" Batteries	97
	ABBOTT Transmitter-receiver	7
	AC/DC Set Kits	8
	Acetate Recording Blanks	89
	Acorn Sockets	14
	Acorn Tubes	10, 11, 12
	ADVANCE Relays	80
	Aerial Adjuster, Spring Type	16
	Aerial Wire	17
	Aerials, Automobile	82
	AEROVOX Capacitors, Filters, and Instruments	48-52, 55, 82
	Aircraft Microphones	92
	Alignment Tools	99
	Alligator Clips	84, 85
	Amateur Books	100
	AMERICAN BEAUTY	
	Soldering Irons and Replacement Parts	39
	AMERICAN Microphones	91
	Ammeter Condensers	82
	Ammeters	40, 41
	AMPERITE Microphones	91
	AMPHENOL Products	14, 19, 20, 21, 23, 24, 90, 91
	Amplifier Cases	35
	Amplifier Chassis	36
	Amplifier Manual	61
	Amplifiers	94, 95, 96
	Analyzers	
	Capacitor	48
	Radio Net	45
	Angle Brackets	36
	Annular Drivers	86
	Antenna Connector, Shielded	82
	Antenna, Dummy	22
	Antenna Wire	17
	Antennas, Auto Radio	82
	Anti-Capacity Switches	79
	Army-Navy Phones	90
	Arresters, Lightning	16
	ARROW—H & H Switches	79
	ASTATIC Microphones	
	Pickups, and Replacement Cartridges	88, 89, 92
	ATR Inverters & Vibrators	89, 97
	Attenuators	78
	Audiocass Recording Blanks	89
	Audio Oscillators	
	Code Practice	98
	Laboratory & Service	46
	Audiopoint Phone Needles	89
	Audio Transformers	60, 62, 64, 66, 67, 72
	Auto Aerials	82
	Auto Radio Noise Suppressors	82
	Automatic Code Sender	98
	Automobile Wire	18
	Autotransformer	68
B	"B" Batteries	97
	Baffles	87
	Bakelite Tubing	24
	Banana Jacks	85
	Banana Plugs	85
	Band Switches	78
	BARKER & WILLIAMSON	
	Dials	84
	Barrier Strips	84
	Base Reflex Enclosures	86
	Batteries	97
	Battery Cables	17, 18
	Battery Clips	84
	Battery Set Kits	8
	Battery Testers	40
	Beads, Insulating	19
	BELDEN Wire and Cable	13, 19
	Belts, Dial	34
	Binding Posts	85
	BIRNBACH Cable, Insulators, Plugs, Sockets, Wire	14, 15, 16, 17, 85
	BLILEY Crystals	24
	Blowtorches	39
	BOGEN Intercoms, P. A. Equipment	94, 95, 96, 99
	Books	
	Amateur Radio	100
	Cathode Ray	101, 102
	Diagram Manuals	101, 102
	Electrical Engineering	102, 103
	Electric Wiring	99
	Elementary Electricity	99

Books—Cont.	
Elementary Mathematics	99
Elementary Radio	99, 101, 102
Frequency Modulation	101, 103
Handbooks	100, 103
How-to-build	61, 62, 100, 101
Radio Construction	91, 100, 101
Radio Engineering	102, 103
Radio Operating	100
Radio Servicing	100, 101, 102
Rider Manuals	102
Service Notes	100
Television	101, 103
Trouble Shooting	101
Ultra-High-Frequency	103
Bottom Plates	36
Bowls, Insulating	16
Brackets	
Angle	36
Chassis Mounting	36
Relay Rack	30
Braid, Shielding	19
BRANDES Phones	90
Bridges	
Capacitor	48
Limit	48
Resistance	48
BROWNING Monitoring	
Equipment	7
BRUSH Headphones and	
Crystal Pickups	59, 90
BUD Components & Accessories	
7, 9, 22, 23, 26, 34, 98	
"Bug" Keys	98
Bulbs, Flashlight & Pilot	33
BURGESS Batteries	97
Bus Bar	17
Bushings	
Feed-Thru	15, 16
Panel	34
Shaft	34
Buzzers, High Frequency	98
C	
"C" Batteries	97
Cabinets	
Base Reflex	86
Metal	35
Metal, Portable	35
Metal, Speaker	35
Rack	35
Cable	
Battery	17, 18
Coaxial	19
Concentric	19
Dial	34
EO-1	17, 19
Microphone	17, 18
Multi-Circuit	17, 18
Rubber Covered	17, 18
Shielded	17, 18
Transmission	17, 19
Twinnax	19
Cable Clamps	20, 36
Cable Connectors	20, 21, 91
Cabling Cord	17
CANNON-BALL Headphones	90
Capacitor Analyzer	48
Capacitor Bridge	48
Capacitor Derivates	48
Capacitors	
By-pass	49, 53
Ceramic	25, 52
Dykanol	49, 50
Electrolytic	49, 53, 54, 55
Extra-high Voltage	51
Filter	53
Hyvol	50
Mica, receiving	52
Mica, transmitting	51
Molded Paper	52
Motor Starting	49, 55
Negative Coefficient	52
Oil-filled	49, 50, 53
Oil-Mites	53
Paper Tubular	49
Plug-in	53
Porcelain-Cased	51
Pyranol	50
Silvered Mica	52
Transmuting	50, 51, 53
Tubular	49
Zero Coefficient	52
Capacity Meter	46, 48
Caps	
Grid	9
Heat Dissipating	9
Insulated	9
Plate	9
Safety	9
Terminating, for cables	91
With Chain	91
Carbon Microphones	91, 92, 93
Cardoid Microphones	92, 93

CARDWELL Condensers	25, 28
Cartridges, Crystal	89
Cases, Meter	35
Cathode Ray Tubes	19, 11
Cement, Speaker	90
Cement, Thermoplastic Ribbon	24
CENTRALAB Condensers	
Resistors, Switches, Volume Controls	25, 75, 76, 78, 79
Ceramic Capacitors	25, 52
CETRON Phototubes	9
Chanalyst	45
Chart Frames	31
Chassis	36
Chassis Cradle	38
Chip-Chaser	89
Chokes	
AC/DC	58, 70
Amplifier	58
Audio	58, 63, 64, 65, 70
Filter	58, 63, 70
Hearing Aid	70
Input	58, 65
Output	70
Plate	22
R-F	22
Replacement	58
Smoothing	58, 64, 65
Swinging	58, 63, 65, 70
Circle Cutter	37
Clamps, Cable	20, 36
Clamps, Ground	16
CLAROSTAT Volume Controls	74
Clip Insulators	84
Clips, Alligator	84, 85
Clips, Crocodile	84
Clips, Fahnestock	84
Clips, Fuse	83
Cloth, Grill	90
Coated Sleeve	18
Coaxial Cable	19
Coaxial Connectors	20
Coaxial Plugs	85
Code Practice Oscillators	98
Code Practice Sets	98
Code Sender, Automatic	98
Coil Dope	23, 39
Coil Forms, all types	23, 24
Coil Shields	13, 24
Coils	
Oscillator	23, 24
R-F	23, 24
Transmitting	23
Color Code Kit	33
Communication Microphones	91, 93
Communications Receivers	2, 3, 4, 6, 108
Condenser Couplings	28, 34
Condensers (See Capacitors)	
Air, fixed	25
Gang	26-30
Neutralizing	25-29
Padding	25, 26, 28, 29
Plug-in, air	25
Silvered Ceramic	25
Transmuting, variable	27-30
Trimmer	25
Tuning	26-30
Vacuum	25
Variable	25-30
Connectors	
Cable	20, 21, 91
Coaxial	20
Cord	20, 21
Microphone	91
Multiple	20, 21
Plug-in	20, 21, 91
Power	20
Control Tubes	10, 11, 12
Control Wheels	31
Controls, Volume	75, 76
Converters	97
Coping Saws	37
Copperweld Wire	17
Cord, Cabling	17
Cord Connectors	20, 21
Cords, Headphone	90
CORNELL-DUBILIER	
Capacitors	49-52, 54
Filters	82
Instruments	45
COTO	
Chokes	22
Control Wheels	31
Couplings, Shaft	
Flexible	28, 34
High Voltage	34
Crocodile Clips	84
Crystal, Cartridges	89
Crystal Detectors	8
Crystal Holders	24

Crystal Lacquer	39
Crystal Microphones	91, 92, 93
Crystal Phones	90
Crystal Pick-ups	88, 89
Crystal Sets	8
Crystal Sockets	24
Crystals, Phone Replacement	80
Crystals, Precision	24
Cushions, Earphone	90
Cutter, Circle	37
Cutters, Wire	38
D	
Decade Capacitor	48
Decibel Meters	40, 41
Detector, Crystal	8
Diagonal Cutters	38
Dial Belts	34
Dial Cable	34
Dial Lights	32, 33
Dial Lite Color Code Kit	33
Dial Lock	34
Dial Plates	34
DIALCO Pilot Lights	32, 33
Dials	
Micrometer	30
Miniature	31
Right Angle	29
Vernier	31, 34
Die and Tap Set	37
Dielectric Test Set	73
Differential Microphones	93
Disks, Recording	89
Drill Gauge	37
Drills	
Electric	37
Hand	37
Drive, Planetary	31
Driver Transformers	60, 63, 66, 67, 71, 72
Driver Units, Loudspeaker	80
Dry Cells	97
Dummy Antenna	22
DUMONT Oscilloscopes	47
DUNCO Relays	81
Dynamic Microphones	91, 92, 93
E	
Earphone Cushions	90
Earphones	90
EBY	
Binding Posts	85
Phototubes	9
Relays	80
Sockets	14
ECHOPHONE Short-Wave Set	8
ECO	7
EIMAC	
Tubes	8, 9
Vacuum Condensers	25
Electric Drills	37
Electronic Switch	47
ELECTRONIC Vibrator	
Packs	97
ELECTRO-VOICE Microphones	93
Eliminators, Radio Noise	82
EO-1 Transmission Cable	17, 19
ERIE Condensers	25
ESICO Soldering Apparatus	39
F	
F-M Receivers	3, 108
Fahnestock Clips	84
Featherweight Phones	90
FEDERAL Switches	79
Filter Blocks	53
Filterettes for Noise Elimination	82
Filters	
Appliance	82
Noise	82
Oil Burner	82
Power Line	82
Radio Interference	82
Finger Grip Knobs	31
Flashlight Batteries	97
Flashlight Bulbs	33
Flux, Soldering	39
Frames, Chart	31
Frequency Meter	7
Frequency-Modulation Receivers	3, 108
Frequency Standards	7
Friction Tape	38
Fuse Clips	83
Fuse Mountings	83
Fuse Posts	83
Fuses	
Aircraft	83
Automotive	83
High Voltage	83
Instrument	83
Panel-mounting	83
Radio	83

G	GAMMATRON Trans-	
	mitting Tubes	9
	Gas Filers	38
Gauges		
	Drill	37
	Wire	37
GENERAL ELECTRIC		
	Industrial Tubes	11
	Pyramid Capacitors	50
	Generator Condensers	82
	Glass Insulators	16
	Glow Lamps	11, 83
	Green Flyer Photo Motors	88
	Grid Grips	9
	Grid Cloth	90
	Grommets, Rubber	36
	Ground Clamps	16
	GTC Power Pack	97
	GUARDIAN Relays	81

H	H & H Switches	79
	Hacksaws	37
HALLICRAFTERS		
	Communication Receivers	2, 3, 4, 108
	FM-AM Receivers	3, 108
	Marine Receivers	4
	Panoramic Receivers	2
	Portable Receivers	2, 4
	Transmitters	5
	V-H-F Receiver	108
HAMMARLUND		
	Communications Receiver	3
	Condensers, Variable	25, 27
	Sockets	14
	Hand Drill	37
	Hand Keys	98
	Hand Microphones	91, 92
	Handle Indicators	31
	Hardware Assortments	30
	Headphone Cords	90
	Headphones	90
	Hearing Aid Tubes	12
	Heat Dissipating Caps	9
	Heating Elements, Soldering	
	Iron	39
	Heating Elements, Replace-	
	ments	39
HEINTZ & KAUFMAN		
	Vacuum Tubes	9
	Hetrodi	7
HICKOK Instruments	42, 44, 46	
	High Frequency Huzzet	98
	Hole Cutters	37
	Hole Punches	37
	Horns	86
	Hushatone Pillow Speaker	90
	Hypex Projectors	86
HYTRON Tubes		9

I	Ignitrons	11
	Industrial Tubes	10, 11, 12
	Instrument Rectifiers	45
Instruments		
	Ammeters	40, 41
	Analyzers	45
	Battery Testers	40, 41
	Bridges	48
	Capacity Meters	46, 48
	Condenser Testers	48, 73
	Decibel Meters	40, 41
	High Voltage Test Set	73
	Insulation Testers	48, 73
	L-C Checker	48
	Megohmmeters	48
	Microammeters	40, 41
	Milliammeters	40, 41
	Multi-Testers	43
	Ohmmeters	40, 41
	Oscillators	46
	Oscilloscopes	47
	R-F Meters	40, 41
	Set Analyzers	45
	Signal Generators	46
	Signal Tracers	45
	Square-Wave Generators	47
	Thermo-couple Meters	40, 41
	Tube Testers	44
	Voltsmeters	40, 41
	Volt-Ohm-Milliammeters	40-43
	Insulating Bushings	15, 16
	Insulating Cambric	36
	Insulating Washers	36
	Insulation Tester	48
Insulators		
	Antenna	16
	Entering	16
	Feed-Thru	15, 16
	Jack Type	15
	Lead-In	16
	Navy Type	16
	Pyrex	16

Insulators—Cont.	
	Screw-Eye
	Standard
	Strain
	Intercoms
	Inter-electrode Capacity Meter
	Interference Filters
	Interlocking Switches
	Inverters, Photo
	Inverters, Radio
IRC	
	Attenuators
	Resistors, Adjustable
	Resistors, Fixed
	Resistors, Metallized
	Resistors, Power
	Resistors, Precision
	Resistors, Wire-Wound
	Rheostats
	Volume Controls

J	Jack Shield	85
	Jacks	
	Banana	85
	Insulator-Mounted	1
	Portable	85
	Shielded	85
	Tip	21, 86
	JENSEN Speakers	86, 87
	JOHNSON	
	Coil Forms	23
	Cuts	23
	Handle Indicators	31
	Insulators	14, 16
	Jacks	85
	Midget Sockets	21
	Plate Caps	9
	Plugs	85
	Sockets	14, 21
	JONES	
	Cable Connectors	29
	Coaxial Plugs & Sockets	85
	Terminal Strips	85

K	Kant-Link Lock	36
	Washers	36
	KATO Power Plants	88
	KESTER Solder	39
	Keys	
	Hand	98
	Semi-Automatic	98
	Telegraph	98
	Knife Switches	79
	Knobs, Dial	34
	Knobs, Finger Grip	31
	Knobs, Insulating	16
	Kontak Microphone	91
	Kwikheat Soldering Irons	39

L	L-C Checker	48
	Lamp Cord	18
	Lapel Microphones	92
	Lead-In Insulators	16
	Lead-In Strip	16
	Lead-In Wire	17, 18
	LENK Tachies	39
	Lever Switches	79
	Lightning Arresters	16
	Line Cord Resistors	77
	Lip Microphones	93
	LITTELFUSE Products	83
	Little Triplets	41
	Lock washers	38
	Loudspeakers	86, 87, 88
	Lugs, Soldering	36
	Lugs, Spade	36
	Lugs, Terminal	36

M	Magic Eye Assembly	90
	Magnet Wire	47
	Mazda Pilot Lamps	33
	Megohm Meter	48
	MEISSNER	
	Analyst	45
	Kits	8
	Short Wave Equipment	7
	Meter Cases	35
	Meters	40, 41, 43, 44, 48
	Microammeters	40, 41
	Micrometers	37
	Microphone Cable	17, 18
	Microphone Connectors	91
	Microphone Holder	92
	Microphone Plugs	85
	Microphone Stands	91, 92
	Microphone Switch	91
	Microphones	
	Aircraft	92
	Carbon	91, 92, 93
	Cardiod	92, 93

Microphones—Cont.	
	Communication
	Crystal
	Differential
	Dynamic
	Hand
	Kontak
	Lapel
	Lip
	Noise-Cancelling
	Police
	Micro-Testers
	Midget Jacks
	Midget Photo Inverter
	Midget Sockets
MILLEN	
	Acorn Sockets
	Bushings
	Chokes
	Coil Forms
	Condensers, Variable
	Couplings
	Crystal Sockets
	Dials
	ECO, Variarm
	Frequency Meter
	Geared Drive
	Hetrodi
	Knobs, Tuning
	Plate Caps
	Plugs, Twin
	Sockets
	Terminal Posts
	Terminal Strips
	Terminals, Safety Type
	Transmitter-Exciter
	Tube Base Clamp
	Milliammeters
	Momentary Contact Switches
	Motors, Photo
	MUELLER Spring Clips
	Multi-Testers
	MU-SWITCH Precision
	Switches

N	Nameplates	31
	NATIONAL	
	Acorn Sockets	14
	Bushings	16
	Chart Frames	31
	Chokes	22
	Coil Forms	23
	Coil Shields	13, 24
	Condensers Variable	23, 30
	Couplings	34
	Dials	31
	Grid Grips	9
	Insulators	15
	Interlocking Push Switch	78
	Jack Shield	85
	L-F Oscillator Coil	24
	Oscilloscope	47
	Plate Caps	9
	Receivers	6
	Shaft Lock	30
	Sockets	14
	Tube Shields	13
	Needles	
	Play-back	89
	Recording	89
	Sapphire	89
	Neon Lamps	11, 83
	Neon Tester Screw Driver	38
	Neon Testers	38, 83
	Neutralizing Tools	99
	Noise-Cancelling Microphones	93
	Noise Filters	82
	Non-Inductive Resistors	76
	Nut Drivers	38
	Nuts, Hexagon	36

O	Ohm Meters	40, 41, 48
	OHMITE	
	Band Switches.....	78
	Dummy Antenna.....	22
	Parasitic Suppressor.....	22
	Plate Chokes.....	22
	Power Line Chokes.....	22
	Power Switches.....	78
	R-F Chokes.....	22
	Resistors, Center-Tapped.....	77
	Resistors, Non-Inductive.....	76
	Resistors, Semi-Variable.....	77
	Rheostats.....	76
	Oil-Mite Capacitors	53
	Oscillator	98
	Oscillators	
	All-Wave.....	46
	Audio.....	46
	Code Practice.....	98
	R-F.....	46
	Oscilloscopes.....	47

P	FM Speakers	86, 87
	Padders, Atr.	25, 26, 28, 29
Panels		
	Masonite	33
	Meter	33
	Rack	35
	Steel	35
	Parasitic Suppressor	22
	Pre-Wee Clips	84
	Pen-Light Batteries	97
	Phonotrons	11
	Phone Cords	90
	Phone Plugs	83
	Phone Tips	85
	Phonographs, Portable	85
	Photo Inverter	89
	Photo Motors	87, 88
	Photo Needles	89
	Phototubes	9, 10, 11
	Pick-Up Cartridges	89
	Pick-Up Tone Equalizer	89
	Pick-Ups	88, 89
	Pillow Speaker	90
	Pilot Lamps	33
	Pilot Light Assemblies	32, 33
	Pilot Light Brackets	33
	Pilot Light Bulbs	33
	Pilot Light Jewels	32, 33
	Pilot Light Sockets	32, 33
	Plate Caps	9
	Plates, Bottom	36
	Play-Back Needles	89
	Players, Record	87
Pliers		
	Cutting	38
	Electricians'	38
	Gas	38
	Long-Nose	38
	Strip-Joint	38
Plutrons		11
	Plug-In Coils	23
Plug-In Condensers		
	Air Dielectric	25
	Electrolytic	53
	Filter	53
	Vacuum	25
Plug-In Connectors, Micro-		
phone		91
Plugs		
	Banana	85
	Coaxial	85
	Hearing Aid	21
	Microphone	85
	Multi-wire	20
	Phone	85
	Power	20
	Three-Wire	85
	Pocket-Clip Screw Drivers	38
	Police Microphones	93
Polystyrene		
	Beads	19
	Coil Forms	23
	Ribbon	24
	Rod	24
	Sheet	24
	Tubing	24
	Porcelain Insulators	15, 16
	Porcelain Wall Tubes	16
	Porta-Power Farm Pack	97
POTTER & BRUMFIELD		
	Relays	80
	Power Line Chokes	22
	Power Packs	97
	Power Plants	88
	Power Switches	78, 79
	Power Tubes	9-12
PRECISION Test Equip-		
ment		43, 44, 46
	Public Address Systems	94, 95, 96
Punches		
	Metal	37
	Screw-Hole	37
	Shearing	37
	Socket	37
	Square-Hole	37
	Push-Back Wire	17, 18
	Push-Button Switches	79
PYREX Insulators		16

Q	Quartz-Q Coil Forms	23
R	Rack Brackets	36
	Rack Cabinets	35
Racks		
	Panel	35
	Relay	35
	Table	35
RADIO CITY Test Equip-		
ment		42-48
	Radio Inverters	97
	Radio Noise Filters	82
	RAYTHEON Tubes	88

INDEX

Concluded

RCA	
Chanalyst	45
Oscillators	46
Oscillographs	47
Signal Generators	46
Signal Tracers	45
Sockets	14, 21
Tubes	10, 12
Volt-Ohmmys	42
R-F Meters	40, 41
Receivers	
Amateur	3, 4, 6, 8, 108
Communications	3, 4, 6
Crystal	8
FM	3, 108
Kit	
Marine	
Panoramic	2
Portable	2, 4
Record Lubrifiant	89
Record Players	87
Recording Blanks	89
Recording Books	89
RECORDISC Blanks	89
Rectifiers	
Instrument	45
High Voltage	9, 10, 11, 12
Mercury Vapor	9, 10, 11, 12
Power	10, 11, 12
Television	10, 12
Rek-O-Dope	89
Relays	
Break-In	81
Change-Over	81
High-Frequency	81
Impulse	81
Industrial	81
Keying	80, 81
Locking	81
Low Loss	80, 81
Midget	80, 81
Multiple Leaf	80
Photo-Cell	80
Power	80, 81
Remote-Locking	81
Sensitive	80, 81
Shock-Proof	81
Small-Power	80, 81
Special	81
Time Delay	80, 81
Transmitter	80, 81
Resistors	
Adjustable	77
Center-Tapped	77
Line Cord	77
Metalized	74
Non-Inductive	76
Power	76, 77
Precision	74
Ultra High Range	74
Variable	77
Wire-Wound	74, 76, 77
Replacement Guide, Trans-	
former	81
RF Chokes	22
Rheostats	76
RIDER	
Books	101, 102
Chanalyst	45
Manuals	102
Rotary Switches	79
S	
SANGAMO Capacitors	52
Sapphire Needles	89
Saws	37
Scale, 6-inch	37
Screw Drivers	
Insulated	38
Midget	38
Non Tester	38
Phillips Head	38
Pocket Clip	38
Screw Hole Punch	37
Screw Terminals	84
Screws	
Parker-Kalon	37
Phillips Head	36
Rack	36
Round Head	36
Self-Tapping	37
Sheet Metal	37
Selector Switches	78, 79
Self-Tapping Screws	37
Set Analyzers	42
Set Testers	42

Shaft Lock	30, 34
Shakeproof Lockwashers	30
Shearing Punch	37
Sheet Metal Screws	37
Shielding Braid	19
Shields	
Coil	13, 24
Socket	14
Tube	13, 24
Shims, Speaker	90
Shipping Cartons	89
SHURE Microphones	92
Side-Cutting Pliers	38
Side-Outlet Mike Mount	91
SIGMA Sensitive Relays	80
Signal Calibrator	7
Signal Generators	44
Signal Shifter	
SIGNAL Telegraph Apparatus	98
Signal Tracers	45
Silver-Mike Capacitors	52
SIMPSON Meters & Test Equipment	40, 44, 45, 46
Skratch-Stik	89
Slide Switches	79
Soap-Action Switches	79
Socket Punches	37
Socket Wrenches	38
Sockets	
Acorn Tube	14
Coil	21
Crystal	24
Dial Light	32, 33
Hearing Aid	21
Isolantite	21
Miniature	14
Navy Type Pilot Lamp	33
Photo Cell	21
Pilot Light	32, 33
Polystyrene	14
Power Line	20
Power Tube	14
Recessed	14, 20
Transmitter Coil	21
Transmitting	14
U. H. F.	14, 21
Wafer	14
Solder	
Acid-Cure	39
Roam-Core	39
Wire	39
Solder Pot	39
Soldering Flux	39
Soldering Iron Control	39
Soldering Iron Tips	39
Soldering Irons	39
Soldering Lugs	36
Soldering Paste	39
Sound Systems	94, 95, 96
Spacers, Brass	36
Spacers, Insulated	36
Spade Lugs	36
Spaghetti	18
Spark Plug Suppressors	82
Spark Plug Wire	18
Speaker Baffles	87
Speaker Carrying Cases	35
Speaker Cement	90
Speaker Grill Cloth	90
Speaker Shims	90
Speakers	
Bass-Reflex	86
Coaxial	86
Dynamic	86, 87, 88
High-Fidelity	86, 87
High-Frequency	86
Outdoor	86
Pillow	90
P.M.	80, 87, 88
Projector	86
Reflexed	86
Speech-Master Reproducers	86
Speed Keys	96
Spreaders	16
Spring Aerial Adjusters	16
Spring Clips	84, 85
Square Hole Punch	37
Square-Wave Generators	47
STANCOR Transformers & Chokes	65-73
Stand Connector, Microphone	91
Staple Driver	37
Stearlite	
Bowls	16
Bushings	16
Buttons	16
Sockets	14
Stripper, Wire	38
STRUTHERS-DUNN Relays	

Styl, Cutting	80
Suppressors, Parasitic	22
Suppressors, Radio Noise	82
Suppressors, Spark Plug	82
Switches	
Anti-Capacity	79
Band	78
Interlocking	78
Knife	79
Lever	79
Microphone	91
Momentary Contact	79
Power	78, 79
Push-Button	79, 91
Rotary	79
Selector	78, 79
Slide	79, 91
Snap-Action	79
Toggle	79
Tone	79
Transmitter	78
Vacuum	11
T	
Tap and Die Set	37
Tape, Friction	38
TAYLOR Tubes	9
TECHNICAL APPARATUS	
CO. 46, 48, 73	
TELEGRAPH APPARATUS	
CO. 98	
Telegraph Keys	98
Telegraph Sounders	98
Telephone Packs	97
Television Tubes	10, 11
Temperature Regulating	
Stand	39
Terminal Strips	
Barrier	84
High Voltage	84
Lug	84
Terminals	
Binding Post	84
High Voltage	84
Safety	84
Test Leads	
Fused	84
High Voltage	84
Non-Kinking	84
Test Prod Wire	17, 18
Test Prods	84
Testers, Neon	38
Testers, Radio Set	44
Testers, Tube	44
Thermocouple Meters	40, 41
THORNDARSON Transformers	
and Chokes	56-62, 68
Thyristors	10, 11, 12
Time Base Generator	47
Tip Clips	84
Tip Jacks	85
Tips, Phone	85
Tips, Soldering Iron	39
TOBE Capacitors & Filter- ettes	52, 53, 52
Toggle Switches	79
Tone Switches	79
Tools	37, 38, 39
Transcription Players	87
Transformer Manual	62
Transformers	
Adjustable Impedance	57
Audio	60, 62, 64, 66, 67, 72
Autotransformer	68
Bias	56, 63, 69
Cathode Modulation	59, 63
Cathode Ray	57
Driver	60, 63, 64, 66, 67, 71
Duplicate	57
Field Supply	57
Filament	56, 63, 64, 65, 70
High Fidelity	62, 63
Input	64, 65, 70
Interstage	60, 66, 70
Isolation	68
Matching	59, 61, 64-67, 72
Microphone	61, 64, 65, 72, 93
Midget Audio	62, 67
Mixing	59, 61, 65, 66
Modulation	59, 63, 67, 71
Output	59, 64-67, 73
Plate	56, 63, 65, 69
Plate-Filament	57, 63
Plug-In	67
Power	57, 64, 69
Push-Pull	60, 71
Regulating	68
Replacement	57, 59, 61, 64, 67, 69, 73
Speaker-Matching	57
Step-Down	68
Television	69

Transformers—Cont.	
Transceiver	61, 72
Tube Tester	69
Vibrator	57, 59
Voltage Control	68
Voltage Regulating	68
Transmitter-Exciter	7
Transmitter Guide	61
Transmitter-Receiver, 34	
Meter	7
Transmitter Switches	78
Transmitters	
Amateur	5
Marine	5
Two-and-one-half Meter	7
Transmitting Condensers	
	50, 51, 53
Transmitting Tubes	8-13
TRIMM Phones	90
Trimmer Condensers	25
TRIPLETT Meters & Test Equipment	41, 42, 44, 46
Tube Caps	9
Tube Shields	13
Tube Testers	44
Tubes	
Acorn	10, 11, 12
Cathode Ray	10, 11
Hearing Aid	12
Mercury Vapor	9, 10, 11, 12
Photoelectric	9, 10, 11
Porcelain	16
Receiving	12, 13
Rectifier	9, 10, 11, 12
Special Service	8-12
Transmitting	8-12
U.H.F.	10, 11, 12
Voltage Regulator	10, 11, 13
Tubing	
Bakelite	24
Plastic	18
Polystyrene	24
Tuning Indicator	90
TURNER Microphones	92
Turns Counter	34
U	
Unit-Cells	97
UNIVERSAL Microphones	91, 92
UNIVERSITY Speakers	88
UTAH Speakers	88
UTC Transformers & Chokes	63-68, 93
UTICA Tools	38
Utility Packs	97
V	
Variable Condensers	25-30
Variable Resistors	77
Varitran Voltage Regulators	68
Varnish, Wrinkle	39
Vibrator Packs	97
VIBROPLEX Telegraph	
Keys	98
Voltage-Regulated Power Supply	73
Voltage Regulator Tubes	10, 11, 13
Voltmeters	40, 41
Volt-Ohmmeters	40, 42, 43, 44, 45
Volume Control Switches	74, 75
Volume Controls	74, 75
W	
Wall Tubes, Porcelain	16
WARD LEONARD Re-lays	81
Washers, Insulating	36
Washers, Lock	36
Wave Meters	7
Wire	
Aerial	17
Automobile	17, 18
Bus Bar	17
Copperweld	17
Dinathermy	18
High Voltage	17, 18
Hook-up	17, 18
Lead-In	17, 18
Magnet	17
Non-Kinking	17
Push-Back	17, 18
Spark Plug	17, 18
Test Lead	17, 18
Tinned	17
Wire Cutters	38
Wire Gauge	37
Wire Strippers	38
Wrenches, Socket	38
Wrinkle Varnish	39
X	
XCELITE Tools	39

On many items, the manufacturer establishes the prices for resale, and reserves the right to change such prices without notice. In view of this, and in view of the present fluctuation in costs and prices, we must reserve the right to change selling prices whenever necessary and without notice.

PHONE CAPITAL 7530

We also reserve the right to add any Federal, State or local taxes which may affect the cost or selling price of any item.

Please be sure to send enough for postage. We will refund promptly any surplus postage sent.

DATE	
WRITE OR PRINT YOUR NAME IN FULL AND PLAINLY	
R.F.D.	Box No.
STREET ADDRESS OR ROUTE BOX NUMBER	
POST OFFICE	State
PLEASE GIVE SHIPPING POINT IF DIFFERENT FROM POST OFFICE	
SHIPPING POINT	County

PAID IN
FULL \$
PART
PAID \$
C.O.D. \$
If you send cash, be sure to
register your letter.

HAVE YOU BOUGHT FROM US BEFORE?

Yes ☐ No ☐

[illegible]

FOREIGN: Payment in New York by irrevocable and confirmed letter of credit against documents, or 70% with order, balance sight draft against B/L. All quotations F.O.B. New York. Orders up to \$25.00 payable in full in advance, including postage. Remit by draft on New York or Boston Bank in U.S. currency.

We will refund any surplus remitted for postage or other transportation charges.

If currency be sent to order
by Registered Mail

PRICES SUBJECT TO CHANGE WITHOUT NOTICE
SEE OTHER SIDE FOR SHIPPING INSTRUCTIONS

PRICES SUBJECT TO CHANGE WITHOUT NOTICE
SEE OTHER SIDE FOR SHIPPING INSTRUCTIONS

HOW TO FIGURE TRANSPORTATION CHARGES

Insurance

For your protection all our parcel post shipments are insured. Allow for insurance at the following rates:

Up to \$5	3c
\$5.01 to \$25	10c
\$25.01 to \$50	15c
\$50.01 to \$100	25c

For each additional \$50, add 10c.

Discounts

All prices shown in this catalog are net. Trade and cash discounts have already been deducted.

We Will Not Be Undersold

We will meet any advertised current competitive price for identical standard merchandise. It is not necessary to split your orders as we can secure any special radio item not shown in this catalog at competitive prices.

Parcel Post Charges

Are determined by the distance from the consignor to the consignee and the weight of the parcel. The distances are graduated by zones. Each zone comprises a certain minimum and maximum distance from the shipping point.

Listed below is a table of parcel post rates to help you estimate the amount of postage.

BE SURE TO INCLUDE POSTAGE.

Table of Parcel Post Rates
For Packages Weighing $\frac{1}{2}$ pound to 20 pounds

	Zones 1-4-7	Zone 1	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8
Weight in Pounds	Up to 150 miles from Boston	150 to 300 miles from Boston	300 to 600 miles from Boston	600 to 1,050 miles from Boston	1,050 to 1,400 miles from Boston	1,400 to 1,800 miles from Boston	Over 1,800 miles from Boston
1	\$0.09	\$0.10	\$0.11	\$0.12	\$0.13	\$0.15	\$0.16
2	.11	.12	.15	.18	.20	.24	.27
3	.12	.14	.18	.23	.27	.33	.38
4	.13	.16	.22	.28	.34	.42	.49
5	.14	.18	.25	.34	.41	.52	.61
6	.15	.20	.29	.39	.48	.61	.72
7	.16	.22	.32	.44	.56	.70	.83
8	.17	.24	.36	.50	.63	.79	.95
9	.18	.26	.39	.54	.70	.89	1.06
10	.19	.28	.43	.61	.77	.98	1.17
11	.20	.30	.48	.66	.84	1.07	1.29
12	.22	.32	.50	.72	.92	1.16	1.40
13	.23	.34	.54	.77	.99	1.26	1.51
14	.24	.36	.58	.82	1.06	1.35	1.63
15	.25	.38	.61	.89	1.13	1.44	1.74
16	.26	.40	.65	.94	1.21	1.53	1.85
17	.27	.42	.69	.99	1.28	1.63	1.97
18	.28	.44	.72	1.05	1.35	1.72	2.09
19	.29	.46	.75	1.10	1.42	1.81	2.19
20	.30	.48	.79	1.15	1.49	1.91	2.31

If the weight of your package exceeds 20 pounds, add 1 lb. for each additional pound or fraction of a pound if you live in the 1st and 2nd zones, 2c extra if you live in the 3rd zone, 3c extra if you live in the 4th zone, 5c extra if you live in the 5th zone, 7c extra if you live in the 6th zone, 9c extra if you live in the 7th zone, and 11c extra if you live in the 8th zone.

NOTE: — Packages weighing over $\frac{1}{2}$ lb. (8 oz.) and not more than 1 lb. take 1 lb. rate.

Packages weighing over 1 lb. and less than 2 lbs. take the 2 lb. rate. Always use the next higher pound rate for pounds and fractional pounds. FOR EXAMPLE: 1 lb. 9 oz. requires 2 lb. rate, or 2 lbs. 2 oz. requires 2 lb. rate.

Include Postage Money

If Shipped Via Parcel Post

If you specify shipment of your order via Parcel Post, please include sufficient money for the postage. If you send too much, we will immediately refund the surplus.

If Shipped by Express or Freight

You need not remit for the transportation charges, if there is an agent at your town. We prefer that you do not remit for the freight or express charges and the amount will be the same whether prepaid or collect.

Boston Customers

Our centrally located City Sales Room is handy for quick counter service, or you may phone your requirements to our City Order Department for prompt delivery. All telephones, CAPitol 7530.

Express Rates

We recommend that all radios, transmitting tubes, transmitters and generators be shipped by express. Also, bulky merchandise.

Listed below is an express rate table, enabling easy calculation of express charges.

Miles	50	100	300	500	750	1000
Package not over						
5 pounds	\$0.28	\$0.42	\$0.46	\$0.50	\$0.53	\$0.58
10 pounds	.42	.69	.66	.85	.75	.81
15 pounds	.45	.57	.67	.81	.95	1.04
20 pounds	.49	.64	.78	.96	1.15	1.27
25 pounds	.52	.71	.89	1.11	1.35	1.50
35 pounds	.59	.86	1.10	1.42	1.75	1.96
45 pounds	.66	1.09	1.32	1.72	2.15	2.42
55 pounds	.73	1.15	1.53	2.03	2.55	2.88
75 pounds	.87	1.44	1.96	2.64	3.25	3.89
95 pounds	1.01	1.73	2.89	3.25	4.15	4.72
105 lbs. and over rate per 100 lbs.	1.05	1.80	2.50	3.40	4.35	4.95

Distributors of Radio and Electronic Equipment



About the book - -

This war-time edition of our catalog is planned to help you find the components and equipment needed in the design, the production, and the testing of electronic and radio apparatus. To expand its utility, we have added many new items, have grouped materials by function, and have provided what we believe is the most comprehensively cross-referenced index ever included in a radio parts catalog.

Because we are in a dynamic industry, this catalog necessarily represents only the state of the industry on the publication date. By the time you receive this book, we shall have in stock many new, uncataloged items. So if you don't find exactly what you need — write, wire, or phone us and we'll undoubtedly be able to help you.

What's in a name - -

Back in the days when Wireless was developing into Radio, the domain of Sparks on shipboard was known as the radio shack; and as radio increased in importance, the radio shack became the primary point of contact with the vessel. So it was logical that this house, serving as the point of contact between the radio operator and amateur and the parts manufacturer, should be named The RADIO SHACK. Better equipment and larger quarters have transformed the old, sea-going radio shack into a Communications Center; but despite its greatly expanded scope of service, our clearing house for radio is still The RADIO SHACK. We old-timers have a sentimental attachment for the name — and we hope your acquaintance with us will give you the same feeling for it.

About ourselves - -

To our old friends, the name RADIO SHACK is synonymous with friendly, efficient service in the procurement of parts and equipment. They know how often we go far afield to get exactly the item required for a specific application — and how well our experience serves when there is a need for choice of a product to fit a particular demand. If this handbook is your first contact with The RADIO SHACK, we hope it begins a long and mutually satisfactory relationship based on the principles that have built our reputation for friendliness, utility, and dependability.

hallicrafters S-37 FM·AM



130 to 210 Mc.

Featuring

- * Accurately calibrated in Megacycles
- * Mechanical handsread dial
- * Two R-F stages with acorn tubes
- * AVC switch
- * Send-receive switch
- * Automatic noise limiter
- * Separate R-F and A-F gain controls
- * Variable tone control
- * Provision for break-in operation
- * 500 ohm or 5000 ohm output
- * Dual purpose "S" and tuning meter
- * Oscillator compensated for frequency drift
- * Antenna compensator on panel
- * Inertia flywheel tuning
- * Moisture proof wiring
- * Hermetically sealed transformers and reactors
- * All paper condensers oil impregnated and hermetically sealed
- * FM/AM switch
- * 18 Mc IF for maximum image rejection

FOR *Very* HIGH FREQUENCY WORK

The first radio manufacturer to offer a receiver covering both FM and AM at very high frequencies, Hallicrafters has again shown its leadership in designing this superb instrument to give continuous coverage from 130 to 210 megacycles. The new Model S-37 incorporates the latest developments in V.H.F. circuit design and provides sensitivity and selectivity in the 130-210 Mc. range that is in every way comparable to the performance of fine communications receivers on the standard frequencies.

The fourteen tubes in this receiver are: 2-954 acorn R-F amplifiers; 1-954 acorn converter-mixer; 1-6AC7 1st L.F. amplifier; 1-6AB7 2nd L.F. amplifier; 1-6SK7 3rd L.F. amplifier; 1-6H6 AM detector and automatic noise limiter; 1-6AC7 FM limiter; 1-6H6 FM discriminator; 1-6SC7 audio amplifier; 1-VR150 voltage regulator; 1-6V6GT power audio amplifier; 1-5U4G rectifier; and 1-955 acorn high frequency oscillator.

All components are mounted on a heavy steel chassis having special end plates for ease of maintenance; the high frequency R-F section is built on a separate chassis. The entire unit is assembled in a steel cabinet with black wrinkle lacquer finish; dimensions are 19 $\frac{3}{4}$ " wide, 9 $\frac{1}{2}$ " high, and 14 $\frac{3}{4}$ " deep.

This new receiver again emphasizes Hallicrafters pre-eminence in the commercial production of V.H.F. equipment.

Cat. No. S23529
Model S-37
Complete with
tubes, less
speaker
Net Price
\$591.75

The **RADIO SHACK**

★ 167 WASHINGTON ST. ★
BOSTON, MASS., U.S.A.