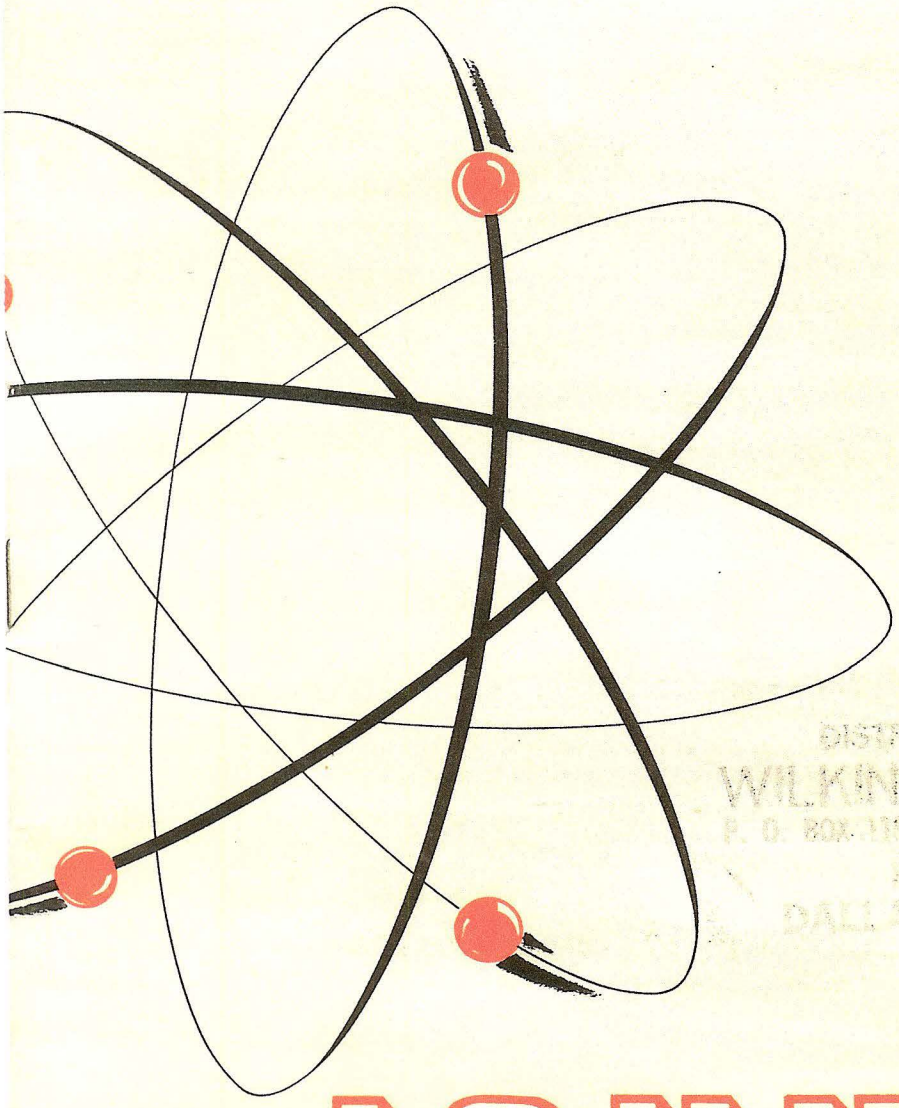


CAPACITORS

INDUCTORS

SOCKETS

INSULATORS

PLUGS

JACKS

KNOBS

DIALS

PILOT LIGHTS

AMATEUR EQUIPMENT

DISTRIBUTED BY
WILKINSON BROS.
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JOHNSON

ELECTRONIC PRODUCTS

GENERAL PRODUCTS CATALOG NO. 975

E. E. GILDER

E. F. JOHNSON COMPANY, WASECA, MINNESOTA, U. S. A.

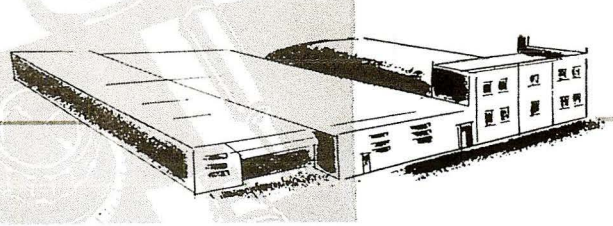
A WORD FROM THE E. F. JOHNSON COMPANY...

The equipment and components described in this catalog conform to our regular commercial standards. Availability of materials may necessitate deviations from standard finish or design provided that interchangeability and performance are not affected.

Electrical ratings are approximate since they depend largely upon conditions of use. Where required, information regarding exact ratings, dimensions and tolerances will be furnished by the factory.

Stated maximum and minimum values of capacitors are nominal, subject to plus or minus tolerances. Guaranteed values or "lowest maximum, highest minimum" should be requested from the factory. Statements regarding capacity tolerances apply only to the subject type.

JOHNSON products are guaranteed to be free from defects in materials and workmanship for a reasonable time after delivery, however, our liability shall be limited to replacement of defective material.



JOHNSON PRODUCTS...

The JOHNSON products described in this catalog are a part of the more than 5,000 items manufactured for all segments of the electronic industry. For broadcast and general communication use, JOHNSON also builds such items as antenna phasing equipment, coaxial transmission line, isolation filters, RF contactors, sampling loops and pressure capacitors. Material for manufacturers' use in their end products includes virtually all standard items plus hundreds of "specials" built to the customer's exact requirements. Our representatives in principal cities throughout the United States and Canada, as listed on the back cover, will gladly provide additional information and technical assistance. Stocks of standard JOHNSON merchandise are maintained by distributors in every major U. S. trading area. Any of the components or equipment shown in Catalog 975 are available through them at catalog prices.

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VIKING "RANGER" TRANSMITTER/EXCITER KIT



Extremely compact (only 15"x11 11/16"x9"), the Ranger is designed throughout for easy assembly by the novice or experienced amateur. Wiring harness, punched chassis, all parts hardware and connectors are furnished along with complete step-by-step assembly instructions, pictorial diagrams and operating directions. Shipping wgt. 54 lbs.

Cat. No. 240-161 Viking Ranger Kit, less tubes, crystal, key and mike ..... **$179.50** Amateur Net

Cat. No. 240-161-2 wired and tested. See your distributor for details.

VIKING "RANGER" TRANSMITTER/EXCITER KIT
BANDSWITCHING-SEVEN BANDS
BUILT-IN VFO—TVI SUPPRESSED

Designed as a rugged, compact transmitter which can also be used as a flexible exciter unit without modification, the new Viking Ranger offers more features than any transmitter/exciter ever built for amateurs!

As a transmitter, the Ranger is a self-contained 75 watt CW or 65 watt Phone unit with 100% AM modulation and pi-network antenna load matching from 50 to 500 ohms. Operating on 160-80-40-20-15-11 and 10 meters VFO or crystal, it features high gain audio with communications speech range and complete TVI shielding and filtering.

As an Exciter, the Ranger will drive any of the popular kilowatt level tubes and provides a high quality speech driver system for high powered modulators. Its design also enables basic control functions for the high powered stage to be handled right at the exciter. No internal changes are necessary to change from transmitter to exciter operation.

The built-in VFO, patterned after the famous Johnson Model 122, is extremely stable. Separate calibrated bandspread dial scales for each of the seven bands and a new 6 to 1 planetary dial mechanism using a 2 3/8" diameter knob result in exceptional tuning accuracy with velvet smooth control. The 28.0 to 29.7 MC calibration alone is nine inches long and 14.0 to 14.35 MC covers more than three inches on the dial. Excellent (break-in) keying stability is achieved by light loading, voltage regulation and careful circuit design.

Easy to tune, the Ranger's basic tuning controls are located on the VFO dial escutcheon. QSY within the phone or CW portion of a band is usually possible by merely changing the VFO frequency setting. For larger frequency excursions, simply touch up the buffer (grid) tuning, adjust loading and dip the final. Simple as A B C. Other controls, used for initial tuning up, changing bands or changing mode of transmission, are as follows: Off-Tune-Phone-Standby-CW switch, Bandswitch, Crystal 1-Crystal 2-VFO-VFO Zero switch, Meter Off-Osc.-Buffer-Grid-Plate-Mod. switch, Audio Gain, RF Drive, Coupling and Auxilliary Coupling. The VFO frequency control, Final Plate tuning and Buffer tuning dials are on the VFO dial escutcheon.

A nine pin receptacle on the rear of the transmitter brings out TVI filtered control and audio leads for exciter operation. This plug also permits the Ranger to be used as a filament and plate power source and a modulator for operating auxiliary equipment such as a VHF transmitter. Available at the output plug are 6.3 VAC at 5.5 Amp., 500 VDC at up to 210 MA, 300 VDC at up to 50 MA along with the full 33 watts output of the modulator.

The Viking Ranger tube lineup is as follows: 6AU6 VFO, OA2 voltage reg., 6CL6 crystal osc., 6CL6 buffer, 6146 final amplifier, 6AQ5 clamper, 12AX7 dual triode speech amp., 12AU7 dual triode audio driver, 2-1614 push pull modulators, 6AX5 low voltage rectifier and 5R4 high voltage rectifier.

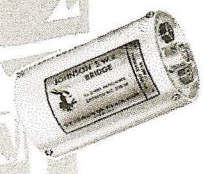
JOHNSON AMATEUR EQUIPMENT AND ACCESSORIES



LOW PASS FILTER

The Johnson Low Pass Filter consists of four individually shielded sections. Handles more than 1000 watts RF, provides 75 DB or more attenuation above 54 mc. Insertion loss, less than .25db. Teflon insulated fixed capacitors are replaceable. SO-239 coaxial connectors at each end. Furnished completely wired and pre-tuned.

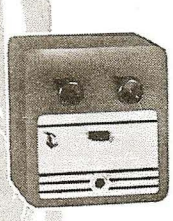
Cat. No. 250-20 Low Pass Filter..... **$13.50** Amateur Net



STANDING WAVE RATIO BRIDGE

Provides accurate measurement of standing wave ratios to insure most effective use of a low pass filter and antenna coupler for ultimate in TVI suppression. 52 ohms impedance can be changed to 70 ohms or other desired value. Equipped with SO-239 connectors and polarized meter jacks.

Cat. No. 250-24 SWR Bridge..... **$ 9.75** Amateur Net



JOHNSON SIGNAL SENTRY
CW OR PHONE MONITOR—ALL BANDS, NO TUNING

A non-frequency sensitive RF actuated monitor, the Johnson Signal Sentry monitors CW or phone on all amateur bands to 50 mc. Triggered directly by transmitter RF, unit acts as "On the Air" indicator because transmitter failure is immediately apparent by lack of monitor output. Circuit designed to mute receiver audio when energized by transmitter enabling break-in operation. Powered from receiver or other available supply, the Signal Sentry is easily installed by plugging into receiver headphone jack—plugging headphones into monitor and coupling RF probe to transmitter. Controls: CW TONE and audio VOLUME.

Maroon cabinet only 3⅛"x3⅝"x3¾". Unit is supplied wired and tested including instructions and all cables and connectors for installation. Tubes required but not furnished: one 12AX7, one 12AU7. Shipping weight 3 lbs

Cat. No. 250-25 Johnson Signal Sentry, less tubes and power supply..... **$14.70** Amateur Net

VIKING II TRANSMITTER KIT



INSTANT BANDSWITCHING
TVI SUPPRESSED
SELF-CONTAINED, NO PLUG-IN COILS

Bandswitching and completely self-contained, the Viking II transmitter delivers 130 watts CW output and 100 watts phone, 160 through 10 meter amateur bands.
Effectively TVI suppressed, features include a heavily copper plated cabinet serving as a simple RF shield. Lid is bonded to cabinet with silver plated phosphor bronze contact fingers yet is easily opened by removing just three thumb screws. Cabinet lid and bottom plate are perforated for effective air cooling.
Special shields provided for meter, dial window and shaft openings. Choke-capacitor type filters for power line leads, VFO receptacle, antenna relay terminals as well as key and mike jacks, plus internal filters at RF tubes effectively eliminate spurious radiation. Wide range pi-network output tuning system provides up to 30 db second harmonic attenuation before any external filtering. Shielded coaxial connectors are used for RF output and VFO input terminals.
All parts furnished including a complete set of tubes, cabinet, punched chassis, wiring harness, wire, terminals, grommets and all other hardware. Carefully detailed and illustrated instructions for assembly, test, and operation are also included.
Supplied for 115 volt 50/60 cycle operation only. Cabinet dimensions 20" wide, 10 5/16" high, 13" deep. Net weight assembled, 65 pounds.

Cat. No. — Amateur Net
240-102 Viking II Transmitter Kit with tubes, less crystals, key, and mike.... **$279.50**
240-102-2 Viking II Transmitter, wired and tested..... **$337.00**

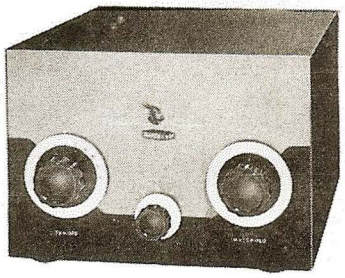
Output Range

Band	Frequency Range	Band	Frequency Range
160	1.8 mc.—2.4 mc.	20	9.8 mc.—15.0 mc.
80	2.9 mc.—4.4 mc.	15	15.0 mc.—21.8 mc.
40	5.2 mc.—8.0 mc.	10-11	21 mc.—30 mc.

RF section consists of a 6AU6 oscillator, a 6AQ5 buffer/doubler and parallel 6146 output amplifier. Modulator pp 807's operating class AB1 with 6AU6 speech amplifier and 6AU6 driver. Parallel 5R4GY HV rectifiers. 5V4G low voltage rectifier with 6AL5 bias rectifier and 6AQ5 clamper screen voltage regulator. Fixed bias applied to buffer and output amplifier for break-in CW operation. Audio response limited to center of speech range.

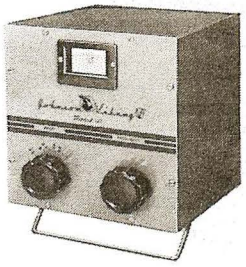
JOHNSON AMATEUR EQUIPMENT AND ACCESSORIES

JOHNSON "MATCHBOX"



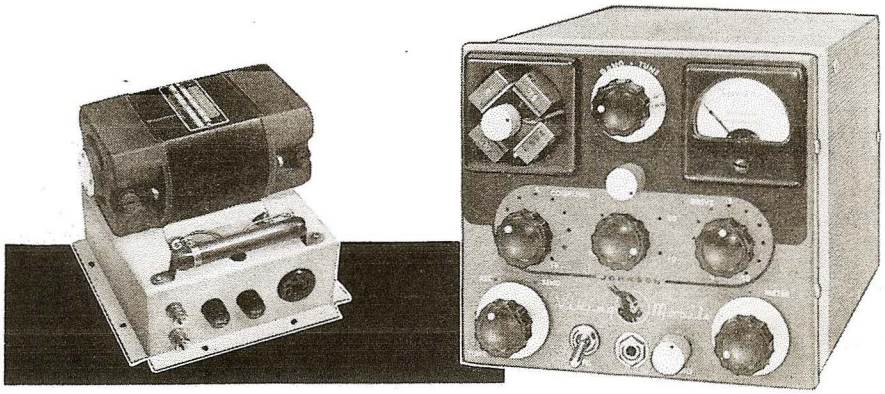
Bandswitching and completely self-contained, the "Matchbox" performs all transmission line matching and switching functions required in medium power amateur stations.
Almost an infinite variety of antennas can be loaded throughout the amateur bands from 3.5 to 30.0 mcs. Balanced antennas from 25 to 1200 ohms resistance can be matched while unbalanced or single wire antennas within the range of 25 to 3000 ohms resistance can be successfully loaded. Furthermore, the "Matchbox" is capable of tuning out large amounts of reactance. Nominal input impedance is 52 ohms; can be used with any transmitter having 250 watts maximum power input and a PA plate voltage not exceeding 1000 volts. Self-contained antenna changeover relay. Bandswitching—front panel controls—no internal adjustment required to change bands. Extra terminal is provided for attachment of an RF probe, or the connection of a phone-CW monitor such as the JOHNSON "Signal Sentry".
Supplied only as a completely assembled and tested unit in a fully shielded maroon and gray cabinet, 9 7/8" wide, 10 1/2" deep, 7" high. Weight, approximately 6 pounds. Ceramic insulated output terminals, SO-239 coaxial RF input connector and terminal strip for connection to receiver and relay all located on rear of cabinet. SWR Bridge required for proper installation.
Cat. No. 250-23 "Matchbox"..... **$49.85** Amateur Net

VIKING VFO KIT



Variable frequency oscillator with 160 and 40 meter output for frequency multiplying transmitters. Accurately calibrated for all amateur bands from 160 thru 10 meters. 6AU6 electron coupled oscillator, OA2 voltage regulator. Excellent stability is assured by temperature compensated padders and rigid construction. 6-1 vernier tuning with high reset accuracy. Power requirements 6.3 volts, 3 amperes, 250-300 volts 15 ma, DC unregulated. (Power and input connections provided on every Viking I and II.) Kit furnished complete, less tubes. All parts, assembly and calibration instructions included. When used with a Viking II or other shielded transmitter having filtered power leads, no TVI suppression measures are required.
Cat. No. 240-122 Viking VFO Kit, less tubes..... **$42.75** Amateur Net
Cat. No. 240-122-2 Viking VFO kit, wired and tested..... **$63.75** Amateur Net

JOHNSON MOBILE EQUIPMENT



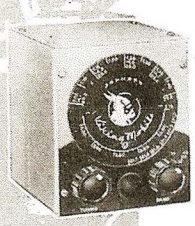
Power-packed mobile kit for advanced amateurs. 60 watts PA input, **instant bandswitching** (75, 40, 20, 15, 11, and 10 meters)—**gang-tuned.** 100% AM modulation engineered for communications audio pass band. Single control coupling system simplifies loading. Ganged coupling circuits pre-tuned for efficient antenna matching. Separate PA trimmer permits large frequency excursions without antenna loading coil adjustments. RF section, 6BH6 oscillator, 6AQ5 buffer doubler and 807 power amplifier. Powerful PP 807 modulator is designed for extra audio punch. 6BH6 speech amplifier and 6BH6 driver has sufficient gain for either high impedence or carbon microphone.

Unique RF bias system protects RF tubes and modulators. "Tune Receive, Transmit" switch enables "non-swish" VFO tuning and receiver muting. Other controls: Audio Gain, PA Exitation, Meter Switch, Crystal selector and filament On-Off.
Unit may be wired for either 6 or 12 volts. Designed to use power supplies delivering 300 volts (30 watts PA input) to 600 volts (60 watts PA input) at 200 MA. Furnished in kit form with all parts, punched chassis, hardware and connectors. Instructions completely illustrated for simplified assembly by the experienced amateur. Control wiring specifications and antenna suggestions included. Dimensions 6 7/16"x7 1/8"x10 5/16". Weight 16 lbs. Less tubes, crystals, microphone and power supply.
Cat. No. 240-141 Viking Mobile Transmitter Kit.....**$99.50** Amateur Net
Cat. No. 240-141-2 Viking Mobile wired and tested available on special order.

DYNAMOTOR POWER SUPPLIES AND BASE KITS

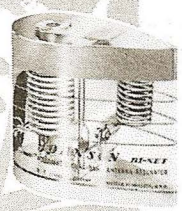
Supplies plate voltages for all stages of JOHNSON VIKING MOBILE and MOBILE VFO. Base contains contactor, fuses, filter and 50 watt adjustable dropping resistor. Supplied with connectors for Viking Mobile. Completely wired and assembled. Dimensions 6 1/8"x7 1/4"x7 1/8". Rated 500 volts, 200 ma. intermittent. Weight 13 3/4 lbs.
Cat. No. 239-102 Dynamotor Power Supply 6 volt primary.....**$89.50** Amateur Net
Cat. No. 239-104 Dynamotor Power Supply 12 volt primary..... **92.50** Amateur Net

Complete base kit with all parts, less dynamotor. Supplied with receptacles and plugs for Viking Mobile power and control cables.
Cat. No. 239-101 6 volt Base Kit.....**$16.50** Amateur Net
Cat. No. 239-103 12 volt Base Kit..... **17.40** Amateur Net



VIKING MOBILE VFO

A diminutive variable frequency oscillator designed specifically for mobile use, the Viking Mobile VFO measures only 4"x4 1/4"x5". Double bearing ceramic insulated tuning capacitor . . . ceramic air dielectric trimmers . . . ceramic switches . . . ceramic coil form and heavy aluminum cabinet minimize frequency shift due to road shock and vibration. Split Colpitts oscillator, compensated for an extremely wide range of ambient temperatures, is voltage regulated. Separate amplifier-multiplier stage, operating essentially class A, provides isolation for constant oscillator loading.
Edge lighted lucite dial with vernier tuning designed for maximum visibility and accurate reset; VFO is calibrated for 75, 40, 20, 15, 11 and 10 meter bands. Output 3.5 to 4 mc. for 75 meter band and 7.05 to 7.45 for 40, 20, 15 and 10. 10.5 mc. output also available for straight doubling to 15 meters. Tube lineup, 6BH6 oscillator, 6BH6 buffer-multiplier and OA2 regulator. Adequate output will drive any straight pentode crystal stage. Cables and connectors for use with Viking Mobile supplied; easily adapted for use with virtually any mobile transmitter. Complete kit includes all parts, hardware and assembly and operating instructions. Weight approximately 3 lbs.
Cat. No. 240-152 Viking Mobile VFO Kit, less tubes.....**$29.45** Amateur Net
Cat. No. 240-152-2 Viking Mobile VFO wired and tested, less tubes..... **44.95** Amateur Net



JOHNSON "BI-NET" ANTENNA RESONATOR

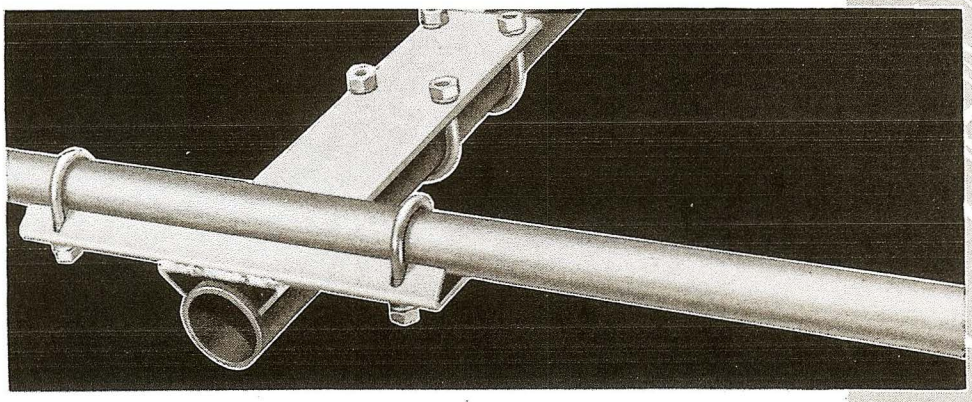
Dual-band mobile antenna loading network for 10 and 20 meters. Mounts in center of standard mobile whip antenna for completely automatic band change while in motion. No relays or mechanical control required. Consists of two adjustable silver plated inductors and ceramic insulated fixed capacitor enclosed in a streamlined plastic housing. 3/8"-24 female threads for antenna mounting. Size, 4 7/16" high, 5 5/16" long, 2 3/8" wide. Weight, 14 oz.
Cat. No. 250-22.....**$10.95** Amateur Net



"WHIPLOAD 6" NEW BANDSWITCHING MOBILE LOADING SYSTEM

The new JOHNSON "Whipload 6" provides high efficiency base loading for mobile whips with instant bandswitch selection of six amateur bands: 75, 40, 20, 15, 11 and 10 meters.
On 75 meters, a special variable capacitor, with a dial scale for accurate calibration, is shunted across the coil to permit tuning the entire band with accurate reset possible on any frequency. Complete coverage is available on the other bands without tuning.
The large diameter airwound coil with low loss polystyrene support strips provides extremely high "Q" factor and much greater efficiency than usual small diameter loading coils. Taps for each band are easily adjusted initially using a grid dipper or field strength measurements and require no further attention. A fibre-glass housing protects assembly against mechanical shock and exposure without sacrificing high Q and efficiency. Unit mounts on standard mobile whip with hardware provided. May be used in conjunction with the Johnson Bi-Net to provide automatic 10-20 meter operation without switching.
Cat. No. 250-26 Whipload-6, Bandswitching Mobile Antenna Loading Coil.....**$19.50** Amateur Net

ROTOMATIC ROTATOR AND ANTENNA ARRAYS



JOHNSON ANTENNA ARRAYS

Rugged, parasitic beam antennas for the 20, 15 and 10 meter amateur bands; designed for years of service in all weather conditions. Booms are 2" galvanized steel tubing, elements are of strong aluminum alloy. Heavy duty galvanized steel clamps will not work loose yet provide adjustable element spacing. Angle feet welded to boom for sturdy mounting. Adjustable "T" or "Gamma" matching assembly included with element kits.

Elements are of adjustable length with specially designed bushings for maximum rigidity. Booms and element kits are available separately for maximum design convenience. A complete array for one band consists of one element kit and appropriate boom assembly. Dual beams require element kit for each band, 138-153 boom and 138-108 antenna switching relay. Relay is DPDT, enclosed in weatherized can with clamps and procelain feed-through connectors.

Boom assemblies have fixed length and are available as follows:

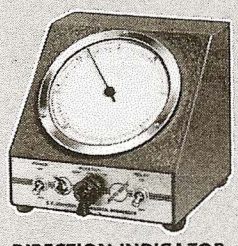
Cat. No.	Length	For beams:	Amateur Net
138-151	9'0"	3 elements 10 meters.....	**$13.00**
138-152	12'0"	3 elements 15 meters.....	**17.00**
138-153	18'9"	3 elements 20 meters, 4 elements 15 meters or dual interlaced beams.....	**24.00**

Element kits complete with "T" match, hardware and element clamps but less boom.

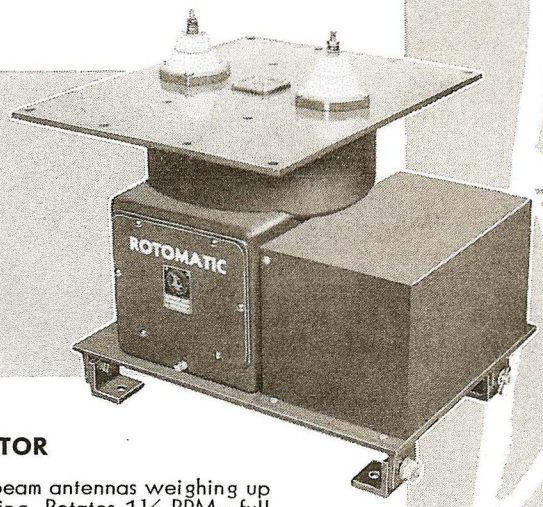
Cat. No.	Description	Amateur Net
138-210-3	3 element 10 meter kit....	**$43.50**
138-210-4	4 element 10 meter kit....	**56.50**
138-215-3	3 element 15 meter kit....	**49.00**
138-215-4	4 element 15 meter kit....	**62.00**
138-220-3	3 element 20 meter kit....	**77.50**
138-108	beam switching relay.....	**19.60**



ANTENNA RELAY



DIRECTION INDICATOR



IMPROVED ROTOMATIC ANTENNA ROTATOR

Designed for rigorous service, the Johnson Rotomatic Rotator supports beam antennas weighing up to 175 pounds even under heavy icing conditions or high wind loading. Rotates 1¼ RPM—full 360° either direction—over-all gear reduction, 1200 to 1.

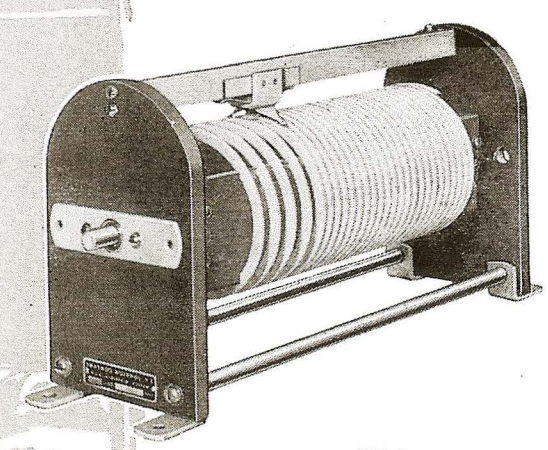
Heavily chrome plated RF slip rings provide smooth, noise free operation and low contact resistance. Auxiliary slip rings provided for antenna switching relay control. Rotator housing is cast aluminum; with 5/16 steel rotating table. Unit hinged to tilt 90° for antenna adjustments; can be rotated in tilted position. Complete assembly includes attractive desk top control box with selsyn indicator. Azimuth bearings continuously presented on illuminated dial. Controls include reversible rotation switch, power switch, and antenna relay switch. Weight 76 pounds.

Cat. No. **138-112** Rotomatic Rotator.....**$324.00** Amateur Net
Cat. No. **144-16** 8 Conductor Control Cable.....**$.26**/ft. Amateur Net

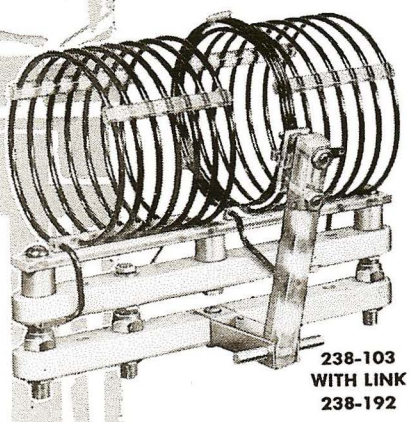
E. E. GILDER

WASECA, MINNESOTA, U. S. A.

JOHNSON AIR WOUND INDUCTORS



226-1



238-103
WITH LINK
238-192

HIGH POWER VARIABLE INDUCTORS

Heavy duty glass bonded mica insulated inductors for amateur and commercial use. Easily handles over a KW of modulated RF energy to 30 mc. Winding ¼"x⅛" edgewise copper. Positive spring loaded beryllium copper contact moves on slide bar as coil rotates. Silver plated winding contact and slide bar. Variable pitch winding provides wide freq. band coverage and increases efficiency at high freq. range. Height 6½", width 4".

Cat No.	Inductance	Mounting Centers	No. Turns	Net Price
226-1	22.5 uh	13½"	27½	$57.00
226-3	13.5 uh	11½"	19½	53.50

SWINGING LINK INDUCTORS

Swinging link inductors for amateur bands 160 thru 6 meters; 150, 500 and 1000 watt sizes. Two inductance values for each band permit choice of appropriate L/C ratio dictated by amplifier plate voltage and plate current. Polystyrene insulation, steatite bases and heavy wire sizes insure highest efficiency. HCS-Inductors match high voltage, low current tubes. LCS-Inductors match low voltage, high current tubes. Complete assembly includes Inductors for bands desired, one Jack Bar, one Link Arm Assembly and one or more Plug-in Links required for matching to line or antenna coupler.

Cat. No.	Type No.	Wire Size	Cap.*mmf.	Height	Width	Net Price
		1,000 watts				
238-106	1000HCS160	10	99	5 11/16"	4 13/32"	$7.50
238-107	1000LCS160	10	140	5 11/16"	4 13/32"	7.50
238-101	1000HCS80	10	46	5"	3 23/32"	6.70
238-102	1000LCS80	10	73	5"	3 23/32"	6.70
238-103	1000HCS40	10	24	5"	3 23/32"	6.05
238-104	1000LCS40	8	55	5"	3 3/4"	6.05
238-105	1000HCS20	8	19	4 7/8"	3 3/4"	5.55
238-111	1000LCS20	.250"	26	5 1/8"	4"	5.55
238-112	1000H/LCS14	.250"	19	4 7/8"	3 1/2"	5.20
238-113	1000H/LCS10	.250"	18	4 7/8"	3 1/2"	4.90
		500 watts				
238-125	500HCS160	14	100	4 7/32"	3 1/8"	3.75
238-126	500LCS160	14	148	4 7/32"	3 1/8"	3.75
238-121	500HCS80	14	45	3 23/32"	2 5/8"	3.45
238-122	500LCS80	12	76	3 3/4"	2 21/32"	3.45
238-123	500HCS40	12	27	3 3/4"	2 21/32"	3.15
238-124	500LCS40	10	50	3 23/32"	2 23/32"	3.15
238-131	500HCS20	6	25	3 13/16"	2 13/16"	2.70
238-132	500LCS20	6	37	3 13/16"	2 13/16"	2.70
238-133	500H/LCS14	6	19	3 11/16"	2 9/16"	2.25
238-134	500H/LCS10	6	19	3 9/16"	2 5/16"	2.10
238-135	500H/LCS6	6	18	3 9/16"	2 5/16"	2.10
		150 watts				
238-147	150HCS160	18	102	4 3/16"	3 1/16"	3.30
238-148	150LCS160	16	151	4 7/32"	3 5/32"	3.30
238-141	150HCS80	16	51	4 7/32"	2 19/32"	3.00
238-142	150LCS80	16	68	4 7/32"	2 19/32"	3.00
238-143	150HCS40	14	28	3 23/32"	2 5/8"	2.70
238-144	150LCS40	12	57	3 3/4"	2 21/32"	2.70
238-145	150HCS20	12	21	3 1/2"	2 13/32"	2.40
238-146	150LCS20	12	32	3 1/2"	2 13/32"	2.40
238-151	150H/LCS14	8	19	3 21/32"	2 1/2"	2.10
238-152	150H/LCS10	8	19	3 21/32"	2 1/2"	1.95
238-153	150H/LCS6	8	16	3 13/32"	2"	1.95

*Total circuit capacity required to effect resonance at low frequency end of band. To determine split-stator capacitor required, subtract tube output and wiring capacity (usually 5 to 20 mmf.) from total capacity in chart; then double the resulting value for capacity per section needed.

PLUG-IN SWINGING LINKS

Select the link to match your line, coupler or output filter for optimum power transfer.

Cat. No.	Type No.	No. Turns	Net Price	Cat. No.	Type No.	No. Turns	Net Price
238-181	150/500SL12	12	$1.80	238-191	1000SL10	10	$1.90
238-182	150/500SL5	5	1.15	238-192	1000SL5	5	1.45
238-183	150/500SL2	2	1.00	238-193	1000SL2	2	1.10

SWINGING LINK ARM ASSEMBLIES

238-179 **150/500SLA**—Arm assembly for 150/500 watt inductors..... $1.15
238-180 **1000SLA**—Arm assembly for 1000 watt inductors..... 1.40

JACK BAR ASSEMBLIES

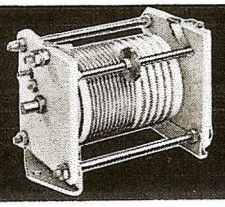
238-171 **150JBS**—150 watt, 3¾" x 5/16" x ⅜"..... $ .90
238-172 **500JBS**—500 watt, 5¾" x ⅝" x ⅜"..... 1.20
238-173 **1000JBS**—1000 watt, 7½" x ⅞" x ½"..... 1.80

INDUCTOR CLIPS

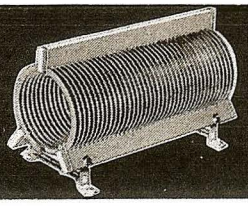
Clip No. 235-804 is plated phosphor bronze and is designed for making connection to edgewise wound inductors. 235-860 will admit wire from No. 20 to No. 10 without moving and shorting adjacent turns.

Cat. No.	Net Price
235-804	$ .22
235-860	.11

229-201



232-610



ROTARY INDUCTOR

Same efficient inductor used in final tank of the VIKING II. May be used in any low and medium power transmitter with band-switching exciter to provide continuous tuning throughout the range3.5 to 30.0 mcs. without changing coils. Variable pitch winding of No. 14 tinned copper wire. Maximum inductance 10 microhenries. Form and end plates steatite. Positive rolling contact assured by beryllium copper tension springs Overall size: 2½" wide x 4½" long x 3" high. Supplied with Typical tuning curves

Cat. No. 229-201.....Net Price $8.85

EDGEWISE WOUND "HI-Q" INDUCTORS

Edgewise wound, ¼" copper strip, cadmium plated, glass bonded mica supporting bars. Widely used commercially, they will safely handle more than 1000 watts in continuous service. Write for information on other types for industrial and broadcast applications.

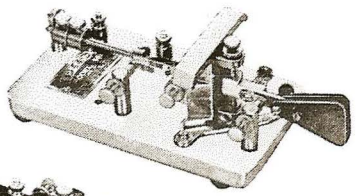
Cat. No.	Winding L x ID	Inductance micro H	Net Price
232-610	7 13/16" x 2½"	31	$8.90
232-620	8 5/16" x 4"	84	11.40
232-622	6 1/16" x 3¼"	41	8.90
232-624	6"x x 3¼"	20	6.30
232-626	4¾" x 2½"	10	5.80

JOHNSON KEYS AND PRACTICE SETS

DELUXE SEMI-AUTOMATIC KEYS

An improved deluxe model mounted on heavy steel base 6¼"x3½"x½". Five adjustments with lock nuts assure dependable operation at all speeds. Smooth, easy action, adjustable from lowest to highest speeds. Vibrator arm, posts, circuit closing switch, and all machine parts heavily chrome plated. Heavy brass connector strips under base insure low resistance circuit. Two black fiber paddles can be adjusted separately to best height. Vibrator bearings are perfectly aligned and free-acting. Complete with circuit-closing switch, adjustable weight, and rubber feet.

Cat. No.		Net Price
114-500	—⅛" contacts, black wrinkle base	$13.50
114-501	—¼" contacts, polished chrome base	17.95
114-501-2	—Same as 114-501 except left handed	19.75

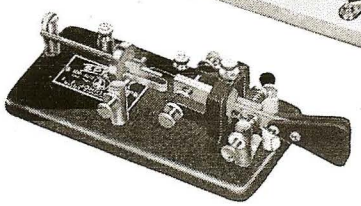


114-500, -501, -501-2

NEW SPECIAL SEMI-AUTOMATIC KEY

Combines the best features of former amateur and professional models. Heavy cast metal base 6¼"x3"x½", attractively finished in black wrinkle enamel. Same vibrator as on deluxe key. Easy action, speed adjustable from lowest to highest speeds. All hardware and vibrator heavily chrome plated. Contacts are of ⅛" coin silver. Adjustments have lock nuts for stable operation. Rubber mounting feet prevent slipping or scratching. Circuit closing switch added.

Cat. No.		Net Price
114-520	Special Model, Semi-Automatic	$11.50

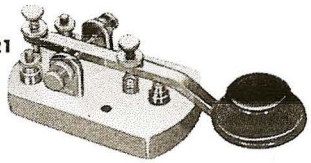


114-520

HEAVY DUTY KEYS

Heavy die cast base, chrome plated key arm, brass connector strips under base. Well insulated for heavy duty service. Large ¼" coin silver contacts. Improved Navy type knob. Adjustable steel bearings and spring design give light keying touch.

Cat. No.		Net Price
114-320	—Black wrinkle enamel base	$4.10
114-321	—Polished chrome plated base	5.10



114-320, -321

STANDARD KEYS

Heavy die cast base. Smooth adjustable bearings. Provision for plugging in semi-automatic keys. Contacts are ⅛" coin silver. A high quality key at low cost.

Cat. No.		Net Price
114-310	—Black wrinkle, no switch	$2.60
114-310-3	—Black wrinkle with switch	3.00
114-311	—Chrome plated, no switch	4.00
114-311-3	—Chrome plated with switch	4.75
114-316	—Brass wrinkle, no switch	2.65

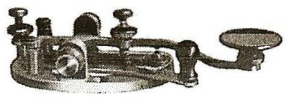


114-310, -311, -316

HIGH SPEED STANDARD KEYS

A superior high speed hand key formerly available from Signal Electric Company. Spring tension, contact spacing and bearings fully adjustable. Base and binding posts are brass with instrument lacquer finish. Platinor contacts .072" diameter.

Cat. No.		Net Price
114-100	R48 Key, polished brass, no switch	$4.90
114-100-3	M100 Key, polished brass with switch	5.55



114-100-3



114-100

PHENOLIC BASE KEYS

High quality, black, phenolic base key. Adjustable, smooth-acting bearings, improved spring, pigtail connection. ⅛" coin silver contacts—nickel plated metal parts.

Cat. No.		Net Price
114-301	Molded phenolic base, no switch	$1.95

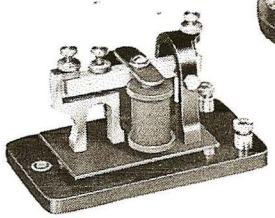


114-301

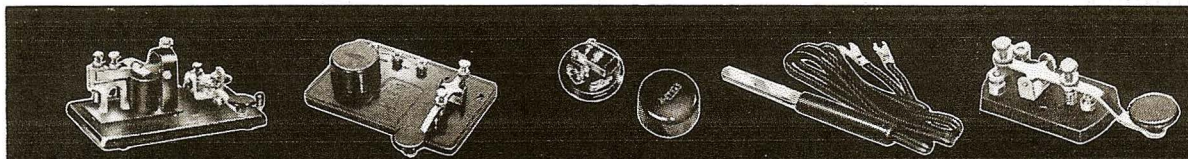
TELEGRAPH SOUNDER

Improved telegraph sounder formerly manufactured by Signal Electric Company. Designed for instant response, the brass sounder provides a clear resonant tone. Bar frame is steel with black enamel finish. Bridge and adjustment screws brass with instrument lacquer finish. Sounder plate is black lacquered steel. Mounted on mahogany finished wood base with brass binding posts and rubber mounting feet.

Cat. No.		Resistance	Net Price
114-112	112S Sounder	4 ohms	$6.70
114-113	113S Sounder	20 ohms	6.95



114-112, -113



114-110 114-450 114-400 114-380 114-300

LEARNER SET

Telegraph practice set for two way operation. Bar frame steel, black enameled bridge. Brass instrument lacquer finish. Brass sounding bar—black lacquered steel sounder plate. Adjustable, nickel plated key arm. Mahogany finished wood base, brass binding posts, rubber feet.

Cat. No.		Net Price
114-110	M110 4 ohms resis.	$9.50
114-111	M111 20 ohms resis.	9.75

PRACTICE SET

Constant frequency buzzer and key on a 4"x6" molded Bakelite base. Use singly or in pairs for code practice.

Cat. No.		Net Price
114-450	Practice Set	$4.25

CONSTANT FREQ. BUZZER

Fully adjustable. Coin silver contacts. Uses 2 dry cells or "C" battery.

Cat. No.		Net Price
114-400	Buzzer	$1.60

CORD AND WEDGE FOR SEMI-AUTOMATIC KEYS

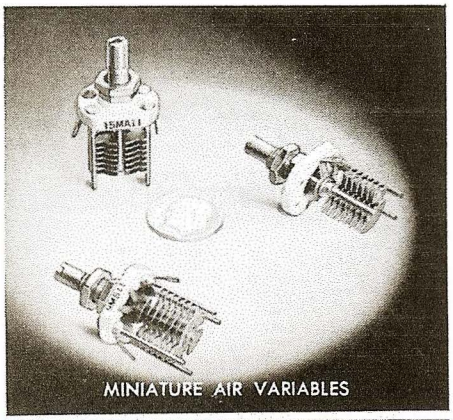
Cord and wedge for quick, easy attachment of semi-automatic key across the circuit-closing switch of a standard hand key. Used almost universally by railroad telegraphers, it is also ideal for amateur service where both hand key and semi-automatic are used.

Cat. No.		Net Price
114-380	Cord and wedge	$1.00

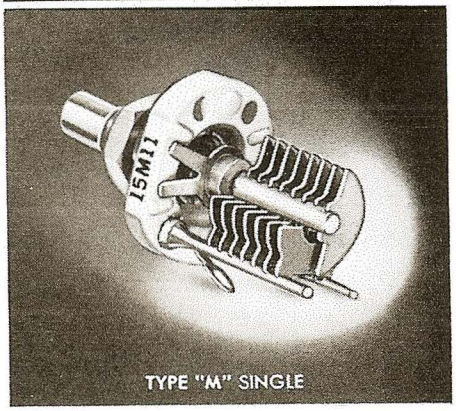
PRACTICE KEYS

An inexpensive practice key—perfect in design for the average beginner. All the metal parts except the base are nickel plated. Furnished with an adjustable key arm spring and smooth action bearings. Contacts are of ⅛" coin silver.

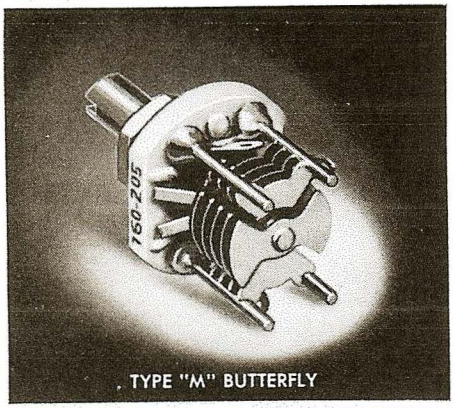
Cat. No.		Net Price
114-300	Mld. phenolic base	$1.75



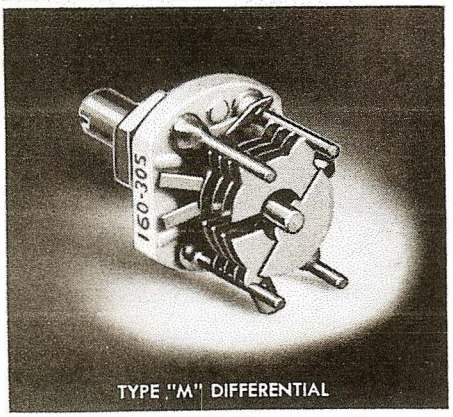
MINIATURE AIR VARIABLES



TYPE "M" SINGLE



TYPE "M" BUTTERFLY



TYPE "M" DIFFERENTIAL

TYPE "M" CAPACITORS

Requiring a panel area just ⅝" wide by ¾" high, these diminutive capacitors provide the perfect answer to problems encountered in the design of compact radio frequency equipment. Designed and constructed to provide peak performance throughout the VHF range, JOHNSON Miniature Capacitors are ideal for compact aircraft and mobile equipment. Small in size, their low inertia mass and sturdy soldered construction assure reliability and long service life under the most rigorous conditions.

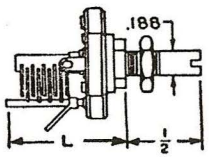
FEATURES

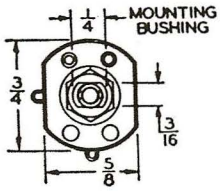
Bridge type stator terminal provides extremely low inductance path to **both** stator supports. Soldered plate construction, oversize bearing, and heavily anchored stator supports insure extreme rigidity. Relatively large beryllium copper compression spring rotor contact provides steady torque—rotor stays "put" where set. Rotor contact silver plated for low noise level at high frequencies—all other metal parts nickel plated. Steatite end frames DC-200 treated to maintain high insulation resistance.

GENERAL SPECIFICATIONS

Mounting bushing threaded ¼"-32 with flats to prevent turning—mounting nut furnished. Peak voltage 1250 volts on .017" spaced units—850 volts on 160-130 which is spaced .013"—3/16" diameter shaft* slotted for screwdriver adjustment.

*Instrument type tuning knob to fit 3/16" shaft available. (See knob and dial section of this catalog.)





SINGLE SECTION

An ideal replacement for adjustable padders used in trimming RF and IF circuits, where stability and reliable capacity change are required. Plate spacing .017" on all but 160-130 which has .013" spacing.

Cat. No.	Type No.	Cap. per Sec. Max	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
160-102	5M11	5	1.5	5	45/64"	$0.95
160-104	9M11	8.7	1.8	9	13/16"	1.00
160-107	15M11	14.2	2.3	15	1"	1.15
160-110	20M11	19.6	2.7	21	1 11/64"	1.30
160-130	30M8	32	3	28	1 17/64"	1.35

BUTTERFLY

Applicable wherever a small split stator capacitor is required. Electrically symmetrical, Butterflies provide perfect circuit balance. Plate spacing .017". Capacity is per section.

Cat. No.	Type No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
160-203	3MB11	3.1	1.5	5	45/64"	1.35
160-205	5MB11	5.1	1.8	9	13/16"	1.50
160-208	9MB11	8	2.2	15	1"	1.70
160-211	11MB11	10.8	2.7	21	1 11/64"	1.90

DIFFERENTIAL

Designed to vary the capacity from rotor to either of two stators providing equal capacity increase and decrease on each side of circuit. Plate spacing .017".

Cat. No.	Type No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Plates per Sec.	L	Net Price
160-303	6MA11	5.0	1.5	5	23/32"	1.40
160-305	9MA11	8.7	1.8	9	13/16"	1.55
160-308	15MA11	14.2	2.3	15	1"	1.75
160-311	19MA11	19.6	2.7	21	1 11/64"	2.00

SPECIALS

JOHNSON Miniature Air Variables are available in production quantities whith the following features: 1. Locking bearing. 2. 180° stop. 3. Various shaft extensions. 4. High torque. On your special requirements—we will be happy to furnish quotations.

EXPLANATION OF TYPE NUMBERS

The first portion of the type number indicates the capacity per section in mmfd. The following letter indicates the frame size or type. A second letter D indicates a two-section type. The final number multiplied by 100 is the approximate peak breakdown voltage.

Stated maximum and minimum values of capacitors are nominal, subject to plus or minus tolerances. Guaranteed values, or "lowest maximum, highest minimum" if necessary should be requested from the factory.

TYPE "L" CAPACITORS

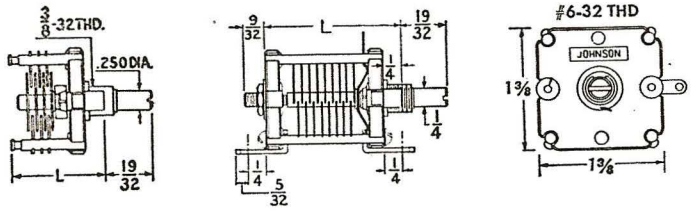
A superior quality general purpose capacitor by JOHNSON embodying important advances in design and construction. The rotor bearing, stator support rods and mounting posts are actually soldered directly to the ceramic (steatite) end frames making the capacitor virtually vibration proof. This exclusive ceramic solder feature makes the "L" a perfect choice for portable, mobile and aircraft applications where vibration might cause failure of standard types.

FEATURES

Rugged in electrical and mechanical design throughout, a special split sleeve tension bearing and silver plated beryllium copper contact provide constant torque and smooth, silent capacity variation. Heavy brass soldered plates and large diameter tie rods provide great rigidity to withstand extreme acceleration and deceleration forces. Plating is new "bright alloy", which is much more corrosion resistant and has higher conductivity than standard platings.

GENERAL SPECIFICATIONS

Shaft diameter ¼" with ⅜"-32 threaded bearing and 6-32 tapped mounting studs on 1 3/32" centers. Removable chassis mounting brackets provided, can be used to mount auxiliary equipment. Plate spacing .030".



SINGLE SECTION

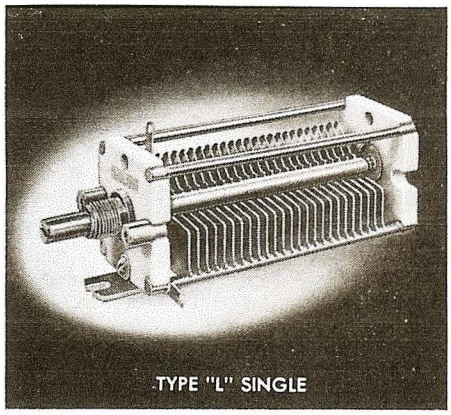
Cat. No.	Type No.	Cap. per Sec. Max.	Min.	Spacing	Plates Per Sec.	L	Net Price
			Single End Plate				
167-101	10L15	11	2.8	.030"	3	15/16"	$1.85
167-102	25L15	27	3.5	.030"	7	1 9/64"	1.95
167-103	50L15	51	4.6	.030"	13	1 7/16"	2.15
167-104	75L15	75	5.7	.030"	19	1 3/4"	2.35
			Double End Plate				
167-151	100L15	99	6.8	.030"	25	2 7/32"	3.60
167-152	200L15	202	11.6	.030"	51	3 33/64"	4.50
			BUTTERFLY				
167-201	10LB15	10.5	2.8	.030"	5	1 3/64"	2.20
167-202	25LB15	26	4.3	.030"	12	1 7/16"	2.50
167-203	50LB15	51	6.8	.030"	23	1 15/16"	2.90
			DIFFERENTIAL				
167-301	10LA15	11	2.8	.030"	3	15/16"	2.10
167-302	25LA15	27	3.5	.030"	7	1 9/64"	2.35
167-303	50LA15	51	4.6	.030"	13	1 7/16"	2.65
			DUAL SECTION				
167-501	25LD15	27	3.5	.030"	7	1 13/16"	3.90
167-502	50LD15	51	4.6	.030"	13	2 27/64"	4.30
167-503	100LD15	99	6.8	.030"	25	3 5/8"	5.05

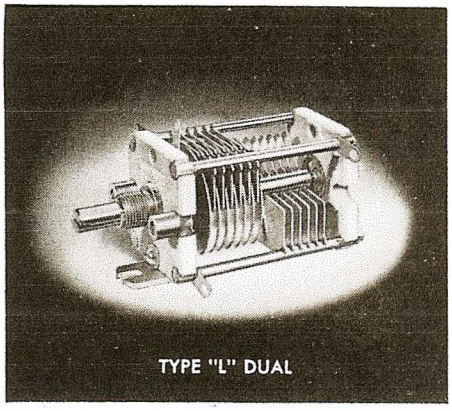
SPECIALS

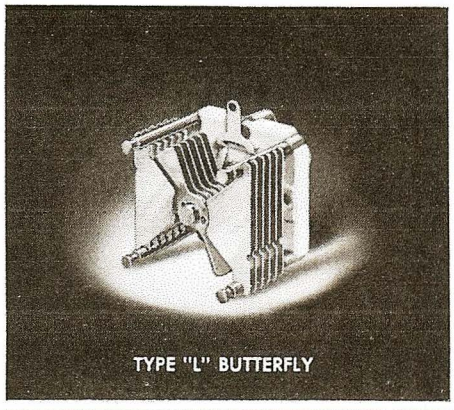
Available with .020", .060" and .080" spacing as well as special platings, shaft lengths and stator terminal locations in production quantities. Models without mounting posts with locking bearing or standard bearing can also be supplied.

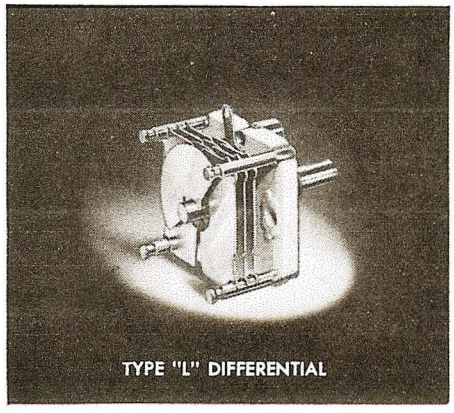
CAPACITORS FOR HIGHER VOLTAGES

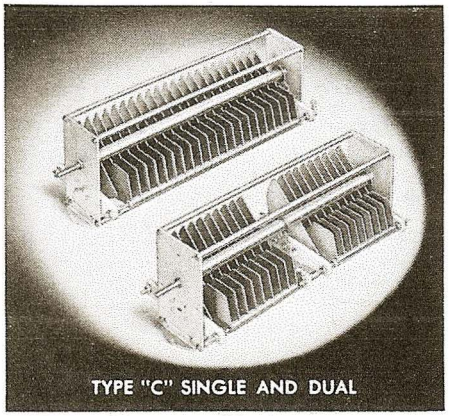
The JOHNSON line includes heavy duty pressurized or air dielectric fixed and variable capacitors for high voltage commercial applications. Data sheets furnished on request.

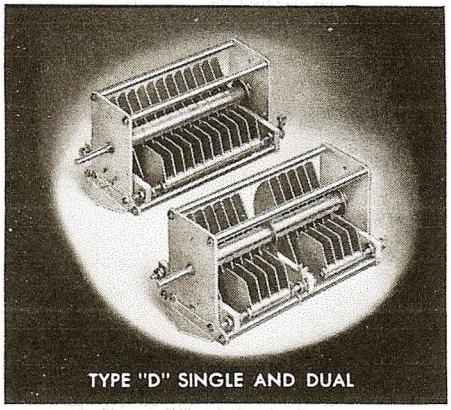

TYPE "L" SINGLE

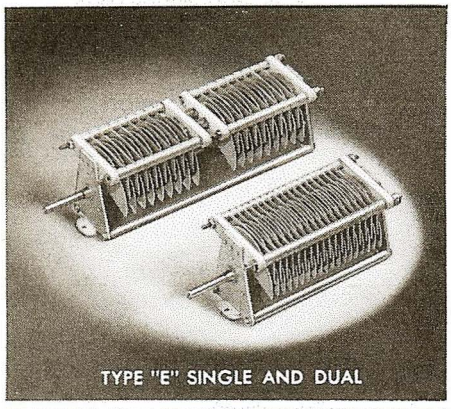

TYPE "L" DUAL

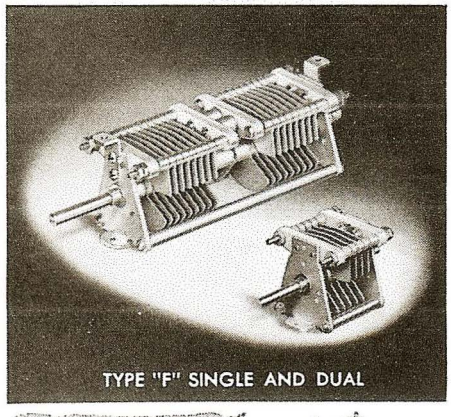

TYPE "L" BUTTERFLY


TYPE "L" DIFFERENTIAL


TYPE "C" SINGLE AND DUAL


TYPE "D" SINGLE AND DUAL


TYPE "E" SINGLE AND DUAL


TYPE "F" SINGLE AND DUAL

TYPE "C" AND "D" CAPACITORS

Functional favorites built to exacting standards for medium power RF equipment. Heavy .051" aluminum plates and 3/16" tie rods. Shafts are 1/4". Laminated phosphor bronze contacts. Dual types have center rotor connection for balance. End frames tapped for panel mounting Brackets furnished for chassis mounting. Shaft length, 1 1/2". Panel area required on "C's" 5 13/32" high x 5 1/2" wide. "D's" 4" high x 4 1/4" wide. L dimension is length between end frames. Mounting length, L dimension plus 7/8". Rear shaft extension 3/4".

TYPE C SINGLE SECTION

Cat. No.	Type No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Spacing	Plates per Sec.	L	Net Price
152-1	250C70	252	34	.175"	24	6 13/16"	$14.25
152-2	500C70	496	56	.175"	47	12 3/16"	17.40
152-6	100C110	103	30	.350"	17	8 19/32"	10.60
152-8	50C130	51	24	.500"	10	7 11/16"	9.75
152-9	100C130	102	42	.500"	21	13 11/32"	12.20
		TYPE C DUAL SECTION					
152-501	200CD45	204	21	.125"	15	8 19/32"	14.90
152-502	300CD45	290	26	.125"	21	10 5/16"	17.70
152-503	200CD70	198	27	.175"	19	12 3/16"	17.20
152-504	300CD70	305	37	.175"	29	16 25/32"	22.80
152-505	150CD90	147	30	.250"	19	14 27/32"	18.00
152-507	50CD110	50	18	.350"	8	10 5/16"	12.35
152-509	100CD110	103	32	.350"	17	16 25/32"	18.40
		TYPE D SINGLE SECTION					
153-6	500D35	496	36	.080"	39	6 25/32"	13.50
153-8	150D45	146	23	.125"	17	4 25/32"	8.35
153-11	100D70	98	23	.175"	15	4 25/32"	8.10
153-12	150D70	151	31	.175"	23	6 13/16"	9.65
153-13	250D70	244	45	.175"	37	10 5/16"	12.00
153-15	50D90	53	20	.250"	10	4 25/32"	7.40
153-16	70D90	73	25	.250"	14	5 13/16"	8.20
153-17	100D90	99	30	.250"	19	7 11/16"	9.15
153-18	150D90	149	43	.250"	29	10 5/16"	11.00
		TYPE D DUAL SECTION					
153-501	100DD35	95	13	.080"	8	4 25/32"	9.30
153-502	150DD35	147	15	.080"	12	5 13/16"	10.70
153-503	200DD35	202	19	.080"	16	7 11/16"	13.00
153-504	300DD35	291	24	.080"	23	9 15/32"	14.90
153-505	500DD35	496	38	.080"	39	13 11/32"	20.70
153-506	150DD45	155	24	.125"	17	9 15/32"	13.30
153-507	200DD45	198	27	.125"	23	12 3/16"	15.00
153-508	50DD70	52	15	.175"	8	5 13/16"	9.50
153-509	70DD70	72	17	.175"	11	7 11/16"	11.00
153-510	100DD70	97	22	.175"	15	9 15/32"	12.40
153-511	150DD70	151	31	.175"	23	13 11/32"	16.00
153-513	50DD90	52	19	.250"	10	9 15/32"	11.00
153-514	100DD90	97	30	.250"	19	14 27/32"	14.55

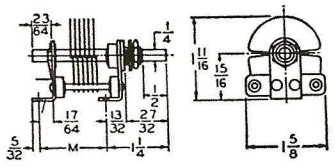
TYPE "E" AND "F" CAPACITORS

Rugged units providing a large amount of capacity per cubic inch and extremely low capacity to chassis. Panel or chassis mounting. Aluminum plates .032" thick with rounded edges—stainless steel shafts—heavy, phosphor bronze contact springs—center contact on duals—large 1/4" tie rods. Extra mounting brackets furnished. Shaft length 1 1/2". Panel area required on "E's" 2 19/32" high by 2 5/8" wide. "F's", 2" high by 2 1/16" wide. L dimension is length between end frames. Mounting length, L dimension plus 7/16". Rear shaft extension 5/8".

TYPE E SINGLE SECTION

Cat. No.	Type No.	Cap. per Sec. Max.	Cap. per Sec. Min.	Spacing	Plates per Sec.	L	Net Price
154-1	250E20	244	12	.045"	23	2 25/32"	$5.35
154-2	350E20	353	15	.045"	33	3 17/32"	6.10
154-3	500E20	488	19	.045"	45	4 15/32"	7.05
154-7	100E30	100	11	.075"	15	2 9/16"	4.95
154-8	150E30	154	14	.075"	23	3 7/16"	5.55
154-9	250E30	251	20	.075"	37	4 15/16"	6.55
154-10	350E30	347	25	.075"	51	6 7/16"	7.70
154-11	35E45	38	9	.125"	9	2 5/16"	4.40
154-12	50E45	53	11	.125"	12	2 31/32"	4.75
154-13	70E45	74	13	.125"	17	3 9/16"	5.05
154-14	100E45	101	16	.125"	23	4 17/32"	5.45
154-15	150E45	145	20	.125"	33	6 3/32"	6.30
154-16	250E45	241	32	.125"	55	9 9/16"	8.05
		TYPE E DUAL SECTION					
154-502	300ED20	312	13	.045"	29	6 21/32"	9.90
154-503	50ED30	52	8	.075"	8	4 3/32"	6.80
154-504	70ED30	72	8	.075"	11	4 17/32"	7.15
154-505	100ED30	99	10	.075"	15	5 3/8"	7.85
154-506	150ED30	153	13	.075"	23	7 1/16"	9.20
154-507	200ED30	196	15	.075"	29	8 3/8"	10.80
154-508	50ED45	52	10	.125"	12	6 5/32"	7.20
154-509	70ED45	74	12	.125"	17	7 7/16"	8.05
154-510	100ED45	100	15	.125"	23	9 9/32"	9.45
		TYPE F SINGLE SECTION					
155-1	35F20	35	7	.045"	6	1 15/32"	4.50
155-2	50F20	54	8	.045"	9	1 5/8"	4.70
155-3	70F20	66	8	.045"	11	1 23/32"	4.85
155-4	100F20	106	10	.045"	17	2 1/4"	5.30
155-5	150F20	154	12	.045"	25	2 7/8"	5.90
155-6	250F20	252	17	.045"	41	4 3/32"	6.95
155-8	50F30	52	9	.075"	13	2 5/16"	5.00
155-9	70F30	67	11	.075"	17	2 23/32"	5.35
155-10	100F30	99	14	.075"	25	3 19/32"	5.90
155-11	150F30	148	18	.075"	37	4 7/8"	6.75
		TYPE F DUAL SECTION					
155-501	50FD20	53	7	.045"	9	3 1/2"	6.40
155-502	70FD20	66	7	.045"	11	3 27/32"	6.80
155-503	100FD20	104	9	.045"	17	4 11/16"	7.60
155-504	150FD20	153	11	.045"	25	6"	8.80
155-505	200FD20	202	14	.045"	33	7 3/32"	9.85
155-506	50FD30	51	8	.075"	13	4 27/32"	6.90
155-507	70FD30	66	10	.075"	17	5 23/32"	7.70
155-508	100FD30	99	13	.075"	25	7 7/16"	8.90

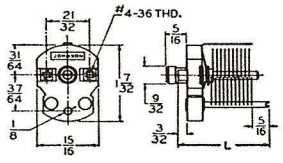
TYPE "R" CAPACITORS



The rugged JOHNSON version of a popular standardized capacitor. Featuring extra heavy steatite stator support insulators and soldered .023" thick brass plates, all metal parts are heavily nickel plated for corrosion resistance. Brass end frames are thicker and heavier than other types. Double bearing construction and silver plated beryllium copper wiping contacts provide smooth, reliable performance in a wide variety of electronics applications. Plate spacing .024", bearing threaded 3/8"-32.

Cat. No.	Type No.	Cap. per Sec. Max.	Min.	Plates per Sec.	M	Net Price
149-1	20R12	20	5	3	1 7/32"	$2.05
149-2	35R12	35	6	5	1 7/32"	2.10
149-3	50R12	50	6.5	7	1 7/32"	2.15
149-4	75R12	80	8	11	1 7/32"	2.30
149-5	100R12	102	8.5	14	1 13/32"	2.45
149-6	140R12	320	13.5	19	1 19/32"	2.65

Johnson Type R capacitors are available with .036", .050", .071" or .095" plate spacings as well as special platings and shaft lengths in production quantities. Also available without mounting feet for panel mounting applications.

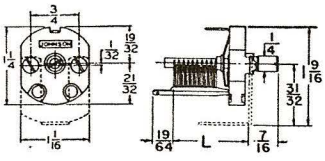


TYPE "K" CAPACITORS

Widely used for military and many commercial applications, the JOHNSON type K features DC 200 impregnated steatite end frames, slotted stator contacts and extra rigid soldered plate construction. Square mounting studs tapped 4-36 on 21/32" centers. Plates are brass, bright alloy plated.

Cat. No.	Type No.	Cap. per Sec. Max.	Min.	Plates per Sec.	L	Net Price
158-1	10K10	10	2.9	3	7/8"	$1.10
158-2	25K10	25	3.7	7	1"	1.20
158-3	50K10	50	4.6	14	1 3/16"	1.40
158-4	75K10	75	5.5	20	1 3/8"	1.55
158-5	100K10	100	6.4	27	1 5/8"	1.75

Other capacities and variations for special military and commercial specifications available in production quantities.

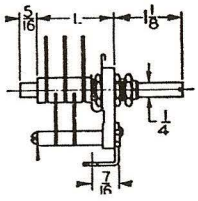


TYPE "J" CAPACITORS

A heavy duty miniature type has wider spacing (.025") than most small air variables, yet occupies little more space. Useful for small space plate tank circuits in low power stages where standard miniatures have insufficient plate spacing. Soldered plate construction. 6-32 tapped mounting studs on 3/4" centers. Mounting brackets and 6-32 screws provided.

Cat. No.	Type No.	Cap. per Sec. Max.	Min.	Plates per Sec.	L	Net Price
157-1	7J12	8	2.6	3	19/32"	$1.65
157-2	15J12	17	3.3	6	23/32"	1.75
157-3	25J12	29	3.6	10	7/8"	1.90
157-4	50J12	52	4.9	19	1 1/4"	2.15
157-5	75J12	73	6	26	1 17/32"	2.40
157-6	100J12	102	7	36	1 31/32"	2.70

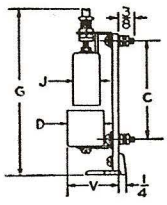
TYPE "G" CAPACITORS



Neutralizing capacitor for medium and low power stages. .032" rounded aluminum plates, steatite insulation. Furnished with universal mounting bracket and locking nut. Mounting space required: 2 1/16" wide, 2 17/64" high.

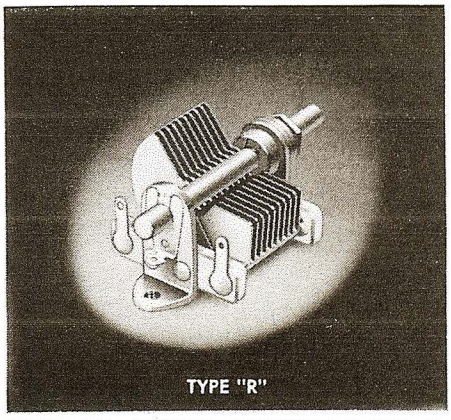
Cat. No.	Type No.	Cap. per Sec. Max.	Min.	Spacing	Plates per Sec.	L	Net Price
165-2	50G20	52	5	.045"	9	1 5/32"	$3.00
165-4	13G45	13	4.7	.125"	5	1 3/32"	2.75
165-5	23G45	23	6.4	.125"	9	1 13/16"	3.00
165-6	6G70	5.7	3.5	.225"	3	1 1/16"	3.00
165-7	12G70	12	6	.225"	7	2 5/8"	3.50

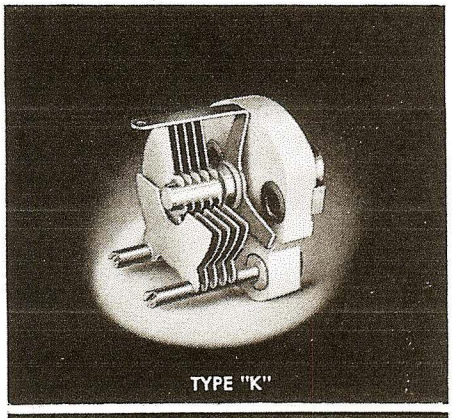
TYPE "N" CAPACITORS

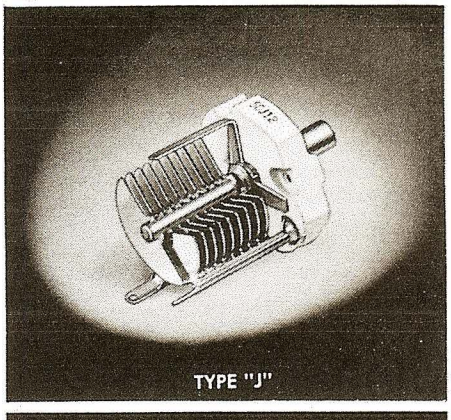


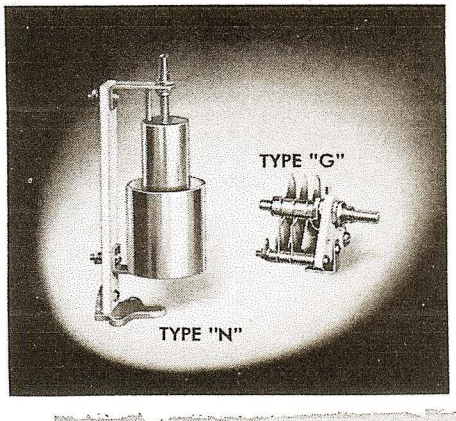
Extremely high voltage rating in proportion to size requiring a small mounting area. Constant voltage rating throughout full capacity range. Plates are aluminum cups supported by steatite frame with cast aluminum mounting bracket. Peak RF breakdown ratings at 2 MC.; N125-8,500, N250-11,500, N375-14,500.

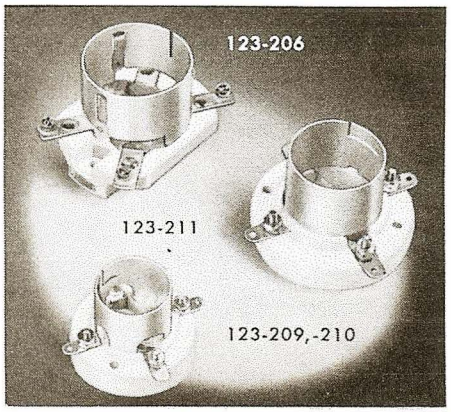
Cat. No.	Type No.	Cap. per Sec. Max.	Min.	D	C	G	V	Spacing	Net Price
159-125	N125	11.0	1.1	1 3/8	3 1/8	6 15/32	1 1/16	.125"	$5.70
159-250	N250	10.6	1.4	1 47/64	3 3/4	7 17/32	2 9/32	.250"	6.75
159-375	N375	10.7	1.7	2 3/8	5 13/32	8 21/32	2 1/16	.375"	8.60

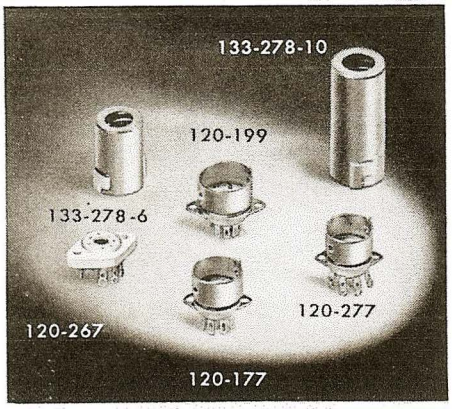


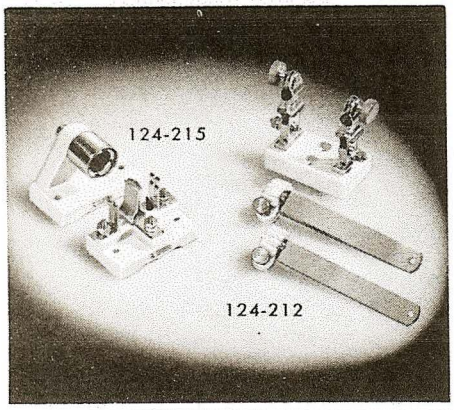


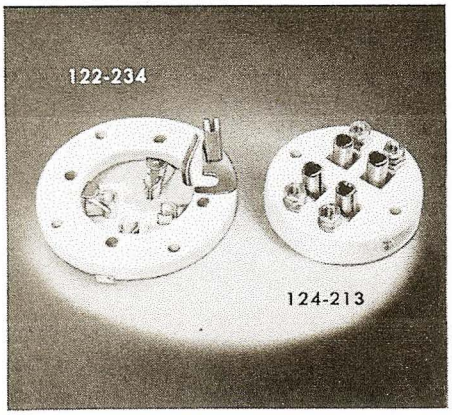






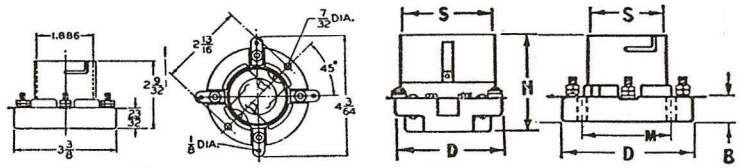






BAYONET

123-211 Standard "50 watt" socket for jumbo 4 pin bayonet based tubes, RETMA No. A4-29. Etched aluminum shell, glazed porcelain base with two mounting holes. Double filament contacts, phosphor bronze cadmium plated, designed for heavy current.
123-211-100 similar to 123-211 except base is DC200 impregnated steatite and contacts are beryllium copper .005 silver plated. Iridite #14 treated aluminum shell, fungus resistant washers.
123-209 Heavy duty socket for medium 4 pin bayonet base tubes, RETMA No. A4-10. White porcelain base equipped with four mounting holes. High current side wiping contacts are phosphor bronze, cadmium plated.
123-209-100 similar to 123-209 except DC200 impregnated steatite base and beryllium copper contacts .005 silver plated. Iridite #14 treated aluminum shell, fungus resistant washers.
123-210 Medium duty type bayonet, accepts 4 pin medium base tubes, RETMA No. A4-10. Compact 2½" diameter, glazed porcelain base with two mounting holes. Cadmium plated phosphor bronze contacts. Popular for rectifier tube applications.
123-206 Industrial bayonet socket for extremely high voltage applications. Rugged aluminum shell. Socket will accommodate 8008, 5C22, FG104, GL146 and other tubes with super jumbo 4 pin bayonet bases, RETMA No. A4-18. Has steatite insulation, silver plated beryllium copper contacts, screw terminals and three heavy retaining springs in the shell to hold tubes securely.



123-211 123-206 123-209 123-210

Cat. No.	D	H	M	S	Pins	Tube Base	Net Price
123-211	3⅜	2 9/32	2 13/16	1.886	4	Jumbo	$1.40
123-211-100	3⅜	2 9/32	2 13/16	1.886	4	Jumbo	2.90
123-209	2 13/16	1 27/32	2 5/16	1.386	4	Med. Bay.	1.10
123-209-100	2 13/16	1 27/32	2 5/16	1.386	4	Med. Bay.	2.30
123-210	2½	1 7/8	2 1/16	1.386	4	Med. Bay.	1.10
123-206	2⅝ x 3½	2½	2¾	2.250	4	Super Jumbo	2.25

MINIATURE SOCKETS

Sockets for tubes with miniature button 7 pin bases, RTMA No. E7-1. Bases are steatite, DC-200 impregnated. Silver plated phosphor bronze contacts. Contacts for -277 are hot tin dipped. -277 shield base is brass, nickel plated. Mounting centers ⅞".

Cat. No.		Net Price
120-267	Miniature socket, all ceramic	$ .33
120-277	Miniature socket with shield base	.49

MILITARY TYPE MINIATURE SOCKETS

Top mounting, saddle type sockets per JAN spec. S-28A. One piece ceramic insulator, grade L-4B or better, top glazed, DC200 impregnated. Brass shell and center shield nickel plated to withstand salt spray test. Contacts beryllium copper, silver plated. Terminals hot tin dipped. Mounting centers ⅞" on 7 prong type, 1⅛" on 9 prong type. -177 is for tubes with 7 prong bases RTMA No. E7-1, -199 for tubes with 9 prong bases RTMA No. E9-1.

Cat. No.	Military Designation	Type	Net Price
120-177	TS102C01	7 prong	$ .59
120-199	TS103C01	9 prong	.79

MINIATURE TUBE SHIELDS

Brass, nickel plated to meet JAN specifications. Twist to lock type construction with internal tube retaining spring. Both spring and shield are non-ferrous, non-magnetic material.

Cat. No.	Military Designation	Fits Socket	Length	Net Price
133-278-6	TS102U01	177, 277	1⅜"	$ .15
133-278-7	TS102U02	177, 277	1¾"	.19
133-278-8	TS102U03	177, 277	2¼"	.22
133-278-9	TS103U01	199	1½"	.22
133-278-10	TS103U02	199	1 15/16"	.24
133-278-11	TS103U03	199	2⅜"	.29
133-277	Miniature shield base only for use with 120-267 socket			.12

SPECIAL PURPOSE 250 WATT

124-215 A two unit socket for "250 watt" tubes such as the 204A and 849. Anode cap RETMA Nos. C1-8, C1-9 and C1-10, cathode mounting RETMA Nos. A3-20, A3-21, A3-22 and A3-23. Bases are glazed porcelain, contacts phosphor bronze nickel plated.

SPECIAL FOR 833 AND 833A

124-212 is a special socket assembly for the 833 and 833A consisting of a steatite base which supports the tube and a pair of 119-843 tube cap connectors. Knurled thumb nuts permit easy installation of tube and base is designed to minimize strains, on the tube envelope and prevent breakage. Heat radiating aluminum plate terminals have 4⅜" flexible laminated leads.

SPECIAL FOR EIMAC 152TL AND 304TL

124-213 A special socket for Eimac 152TL and 304TL. Contacts may be connected for either series or parallel filaments.

SPECIAL FOR 5D21, 705A AND 715A & B

122-234 For Western Electric tubes 5D21, 705A and 715A & B. Includes heavy top glazed steatite base and special locking device for retaining tube in socket.

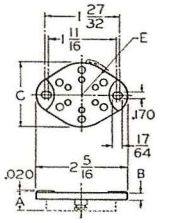
Cat. No.	Base	Net Price
124-215	"250 Watt"	$4.10
124-212	"833"	6.55
124-213	"Eimac"	1.45
122-234	"Western Electric"	2.00

Heat Radiating plate connector only as used on 124-212 above.

Cat. No.	Net Price
119-843	$1.05

STEATITE WAFER SOCKETS

All JOHNSON wafer sockets are insulated with grade L4 or better steatite—top and sides glazed—undersides impregnated in conformance with latest military specifications to prevent moisture absorption. Contacts, designed for maximum area against tube prongs, are mounted against fungus resistant glass melamine cushion washers in molded recesses so they cannot turn. Tubes seat into contacts with constant spring tension against prongs. Rivets on all types are countersunk and socket mounting holes are bossed to permit sub-panel mounting. Pin circles have locating grooves to facilitate tube insertion.



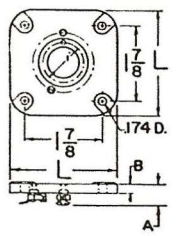
STANDARD WAFERS

For standard receiving and low power transmitting tubes. Contacts are brass with steel springs, cadmium plated.

Cat. No.	Dim. A	Dim. B	C	E	Net Price
122-224	9/16"	1/4"	1 11/16"	7/8"	$.39
122-225	9/16"	1/4"	1 11/16"	59/64"	.42
122-226	9/16"	1/4"	1 11/16"	59/64"	.46
122-227	9/16"	1/4"	1 13/16"	31/32"	.49
122-228	15/32"	3/16"	1 11/16"	57/64"	.52

SUPER JUMBO 4 PIN

Heavy duty 4-pin wafer, steatite insulated. Takes super jumbo base tubes such as the 8008 and many rectifier and thyratron types. Contacts especially designed for long parallel contact against tube pins to withstand high current. Steel springs and brass contacts are cadmium plated.



Cat. No.	Dim. A	Dim. B	L	Net Price
122-244	11/16"	9/32"	2 5/8"	$1.35

GIANT 7 PIN

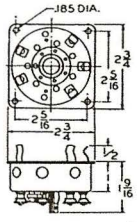
A rugged wafer socket for tubes having the giant 7 pin base, RETMA No. A7-17, such as the 4E27, HK257 and 813. Contacts designed for maximum surface area against tube prongs, are cadmium plated brass with steel springs. Ventilating hole in base 3/4" diameter provides tube seal cooling.

Cat. No.	Dim. A	Dim. B	L	Net Price
122-237	9/16"	1/4"	2 5/8"	$ .72

GIANT 5 PIN

Large steatite wafer socket for tubes having the giant 5 pin base, RETMA specification A5-19, such as the 4-125A, 4-250A and RK48. Ventilation for tube seals is provided by a central hole and five holes between contacts. Base is 2 5/8" square with four .194" mounting holes on 2 1/4" centers. Pin circle, 1 1/4" diameter. Contacts, designed for heavy current, are brass with steel springs, cadmium plated.

Cat. No.	Net Price
122-275	$1.31



SEPTAR SOCKETS

Sockets 122-247 and 122-248 are designed for 7 pin tubes, RETMA No. E7-2. Bases are steatite equipped with brass contacts, steel springs, cadmium plated. Each socket furnished with 2 29/32" diameter aluminum shield ring 11/16" high.

Cat. No.	Dim. A.	Dim. B.	L	Net Price
122-247	17/32"	1/4"	2 5/8"	$ .85
122-248	17/32"	1/4"	2 3/8"	1.10

SPECIAL SEPTAR SOCKET

The 122-101 is a 7 pin Steatite wafer socket for tubes with medium molded flare Septar base, RETMA No. E7-2. Socket is equipped with a ventilated base shield, five tube retainer springs and provision for mounting button mica capacitors directly to the socket. Socket is specially designed for VHF use with tubes such as the 826, 829, 832, 4D32 and 4D22. Contacts phosphor bronze, beryllium copper springs heavily silver plated. Special terminals permit direct mounting of grid coils. Two holes provided for mounting of buss bar neutralizing leads.

Cat. No.	Net Price
122-101	$2.00

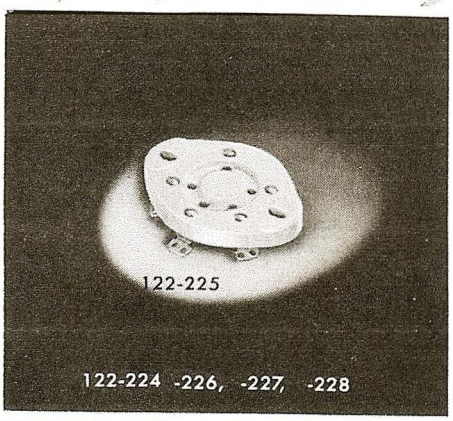
TUBE SOCKET STANDARDIZATION

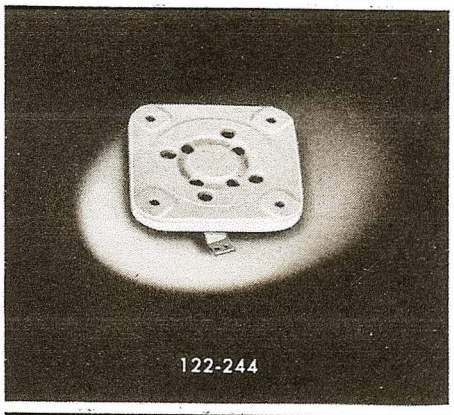
A new standardization program calculated to simplify the selection of sockets and to provide complete specifications for standard, industrial and military requirements has been instituted recently. By reducing the number of variations in special socket types, it will permit the maintenance of stocks of military and industrial types as well as standard sockets and provide shorter delivery cycles on quantity orders. Specifications for the three variations of each socket type are as follows:

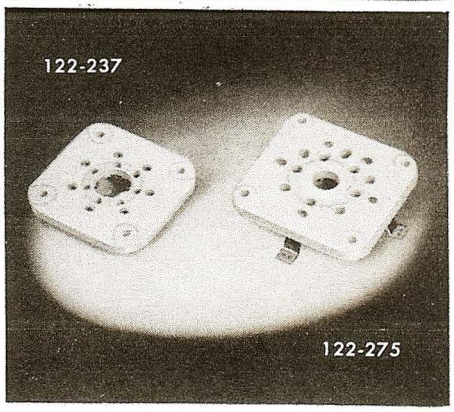
Standard: Commercial grade for general requirements. Bases, glazed porcelain or L4 steatite. Cushion washers, fungus resistant glass base melamine.

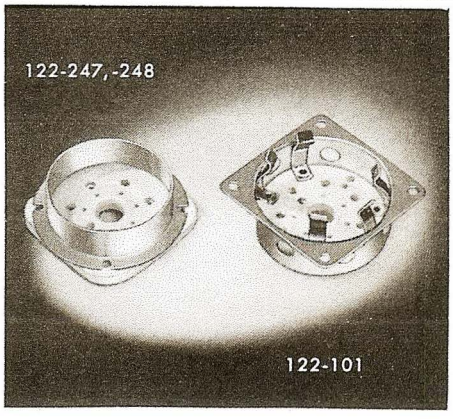
Industrial: Higher quality with glazed steatite bases, DC200 treated, phosphor bronze or beryllium copper contacts .0005 silver plated. Aluminum retaining shells or shields are Iridite #14 treated. Glass base melamine cushion washers, fungus resistant.

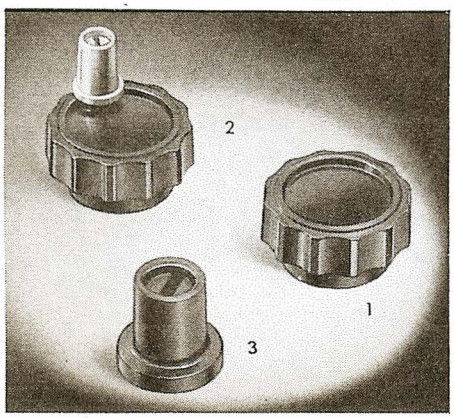
Military: Top quality to meet all military requirements. Bases L4 or better glazed steatite., DC200 treated. Phosphor bronze or beryllium copper contacts, heavy silver plated. Fungus resistant glass base melamine cushion washers. Solder terminal ends hot tin dipped. Retaining shell brass .0003 nickel plated. Aluminum shields or shield bases Iridite #14 treated. Threaded hardware .0002 nickel plated, unthreaded hardware .0003 nickel plated. Entire socket protected for 200 hour salt spray.

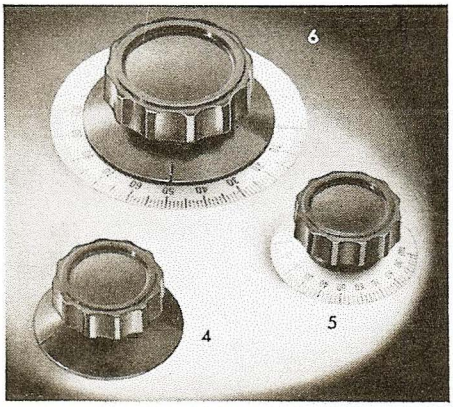


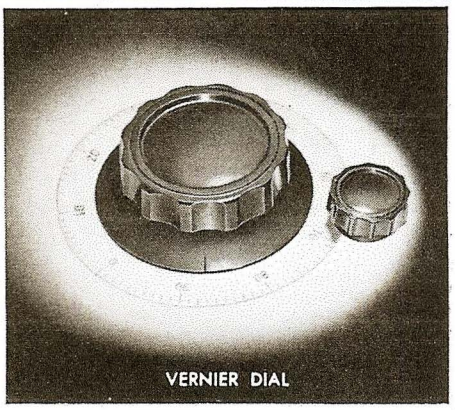


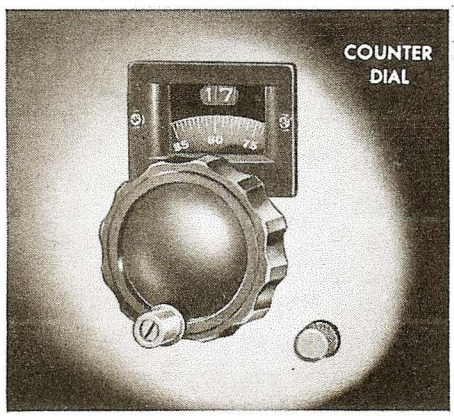












JOHNSON KNOBS AND DIALS

A distinctive line of matching knobs and dials suitable for the finest electronic equipment. All types are derived from a new basic knob design, the first in years. Knobs have twelve well defined flutes and present an essentially round appearance.

Tough, scratch resistant black phenolic is used for all molded parts. Metal dial scales have an etched satin chrome finish. This contrasts greatly with deeply etched and filled engraving, provides maximum legibility under poor lighting conditions. All types have accurately centered brass inserts for ¼" shafts.

In addition to the items listed, JOHNSON is prepared to supply variations (in production quantities) such as, special shaft sizes, scales, set screws or indicators.

Cat. No.	Illus.	Description	Net Price

KNOBS

116-220	1	Knob, 1⅛" dia., black phenolic	$.29
116-260	1	Knob, 1⅝" dia., black phenolic	.39
116-280	1	Knob, 2⅜" dia., black phenolic	.59

SPINNER KNOBS

For multi-turn devices such as variable inductors, potentiometers, etc.

116-226	2	Spinner knob 1⅛" black phenolic	$.56
116-266	2	Spinner knob 1⅝" black phenolic	.67
116-286	2	Spinner knob 2⅜" black phenolic	.82

INSTRUMENT KNOBS

Unique black phenolic knob may be finger operated or mounted so as to project thru panel and screwdriver actuated. Length 13/16", skirt diameter ¾" main body diameter ½". Equipped with set screw.

116-214-1	3	Knob for ¼" shaft	$.33
116-214-2	3	Knob for 3/16" shaft	.33

SKIRTED KNOBS

116-221	4	Knob, 1⅛" dia. with 1½" black phenolic skirt	$.54
116-261	4	Knob, 1⅝" dia. with 2 1/16" black phenolic skirt	.67
116-281	4	Knob, 2⅜" dia. with 3" black phenolic skirt	.82

DIALS

116-222	5	Dial, 1½" bevelled satin chrome scale with 1⅛" knob. Scales as follows:	
		116-222-1 100-0 over 180 degrees	$.56
		116-222-2 10-0 over 270 degrees	.56
		116-222-3 7-1 over 180 degrees	.56
		116-222-4 ON-OFF over 60 degrees	.56
		116-222-5 Line indication	.56
116-262	6	Dial, 2¾" satin chrome scale 0-100 over 180 degrees	$1.40
116-282	6	Dial, 4" satin chrome scale 0-100 over 180 degrees	2.00
116-290	6	Dial, 4" satin chrome scale 100-0 over 360 degrees	1.64

VERNIER DIALS

116-265	Dial, 2¾" satin chrome scale 0-100 over 180 degrees with 3 to 1 friction vernier drive	$3.00
116-285	Dial, 4" satin chrome scale 0-100 over 180 degrees with 5 to 1 friction vernier drive	3.60
116-288	Dial, 4" satin chrome scale 100-0 over 360 degrees with 5 to 1 friction vernier drive	3.60

COUNTER DIAL

A positively calibrated drive for rotary variable inductors and other multi-turn devices. Counter records up to 99 turns. Vernier dial calibrated 100-0 over 360 degrees, making possible accurate return to any pre-determined setting. Built-in dial lock, "spinner knob" and attractive black phenolic escutcheon. Furnished with mounting template for easy installation.

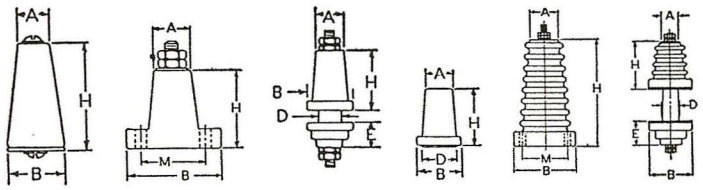
116-208-1	Counter dial with dial lock, escutcheon and 2⅜" spinner knob	$11.10
116-208-4	Same as above without dial lock	9.80

ESCUTCHEON PLATE

Available separately, attractive black phenolic escutcheon as shown on 116-208-1 counter dial. Provides neat "window" for any indicator dial application. Can be mounted "upside down" for attaching a standard ⅜" wide etched name plate. Opening 1¼" wide x ⅛" high. Overall size 2¼" x 1 11/16". Furnished with No. 2 screws and nuts.

JOHNSON INSULATORS

Steatite and porcelain RF insulators with a long history of user satisfaction. Dense molding and glazing impart fracture resistance together with low moisture absorption. Extended creepage paths provide maximum voltage breakdown compatible with compact design. Relatively large mounting faces permit substantial lateral loads. Heavily nickel plated brass hardware suitable for exposed applications. Insulator catalog numbers designated -2 have jack to accommodate standard banana plug. See photo showing 135-20-2.



STAND-OFF INSULATORS

Steatite insulators combining excellent strength with economy for surface mounting applications. Heavy integral mounting bases; ample clearance for screw heads.

Cat. No.	H	B	M	A	Hdwe.	Net Price
135-20	1 9/16	1 3/4	1 5/16	3/4	10-32	$0.15
135-20-2	1 9/16	1 3/4	1 1/16	3/4	74 Jack	.20
135-22	1	1 5/32	13/16	15/29	8-32	.13
135-22-2	1	1 5/32	13/16	15/32	74 Jack	.16
135-24	5/8	1	11/16	3/8	6-32	.10

Ribbed porcelain insulators with square mounting bases and four mounting holes; top glazed.

135-60	4 1/2	2 1/2	1 7/8	1 3/16	1/4-20	.68
135-62	2 3/4	1 7/8	1 3/8	7/8	1/4-20	.36

Surface mounting porcelain insulators with drawn and etched aluminum bases. Nos. 135-65, 135-65-2, 135-68, 135-68-2 are ribbed.

135-65	1 3/8	1 7/8	1 1/2	5/8	10-32	.21
135-65-2	1 3/8	1 7/8	1 1/2	5/8	74 Jack	.29
135-66	2 3/4	1 3/4	1 3/8	15/16	1/4-20	.50
135-66-2	2 3/4	1 3/4	1 3/8	15/16	76 Jack	.72
135-67	4 1/2	2 1/4	1 3/4	1 1/16	1/4-20	.72
135-67-2	4 1/2	2 1/4	1 3/4	1 1/16	76 Jack	.94
135-68	2 1/16*	1 3/4	1 3/8	23/32	10-32	.34
135-68-2	2 1/16*	1 3/4	1 3/8	23/32	74 Jack	.42

*Height dimension includes cushion mounting washer.

THRU-PANEL INSULATORS

High voltage insulators compression mounted by means of a stud throughout length. Extrusion of insulator base extends thru mounting hole increasing breakdown rating. Flat mounting surfaces with cushion washers eliminate breakage. Types equipped with jacks have terminal permitting connection above as well as below the panel.

STEATITE

Cat. No.	H	B	D	E	A	Hdwe.	Net Price
135-40	1 1/4	15/16	7/16	1/2	19/32	10-32	$0.25
135-40-2	1 1/4	15/16	7/16	1/2	19/32	74 Jack	.33
135-42	7/8	3/4	13/32	3/8	1/2	10-32	.24
135-42-2	7/8	3/4	13/32	3/8	1/2	74 Jack	.32
135-44	5/8	5/8	5/16	5/16	3/8	6-32	.18

PORCELAIN

135-45	1 3/8	1 1/4	1/2		11/16	5/8	10-32	$0.33
135-45-2	1 3/8	1 1/4	1/2		11/16	5/8	74 Jack	.41
135-46	2 3/4	1 5/8	11/16	1		15/16	1/4-20	.84
135-46-2	2 3/4	1 5/8	11/16	1		15/16	76 Jack	1.06
135-47	4 1/2	2 1/8	31/32	1 1/2		1 1/16	1/4-20	1.24
135-47-2	4 1/2	2 1/8	31/32	1 1/2		1 1/16	76 Jack	1.46
135-48	2	1 5/8	11/16	7/8		3/4	10-32	.48
135-48-2	2	1 5/8	11/16	7/8		3/4	74 Jack	.60

INSULATED THRU-PANEL BUSHINGS

Assemblies consist of a pair of identical steatite insulators, hardware and cushion washers. The 135-55 assembly has interlocking insulators which are self-centering in mounting hole and may be used on very thin panels.

Cat. No.	H	B	D	A	Hdwe.	Net Price
135-50	1/2	3/4	15/32	3/8	6-32	$0.24
135-51	13/16	1 1/4	27/32	5/8	10-32	.40
135-52	1 1/8	1 3/4	1 7/32	7/8	1/4-20	.59
135-55	1/4	3/4	13/32	1/2	6-32	.23

STEATITE CONE INSULATORS

Material, grade L-4 or better, steatite. Deep clean threads are tapped directly into the ceramic. Furnished complete with machine screws, brass and cork cushion washers.

Cat. No.	H	B	A	Hdwe.	Net Price
135-500	21/32*	5/8	7/16	6-32	$0.20
135-501	1 1/32*	3/4	1/2	8-32	.24
135-502	1 9/16*	1	1/2	8-32	.43
135-503	2 1/16*	1 1/8	5/8	10-32	.49
135-504	3 1/16*	1 1/2	3/4	10-32	.85

*Height dimension includes cushion mounting washer.

FEED-THRU BOWL ASSEMBLIES

Bowls, electrical glass, 6 15/16" maximum diameter. 4 3/8" high. Steel mounting flange 7 3/4" dia. Stud threaded 1/2"-13. Cork gaskets and spun aluminum corona shields included in fittings. 135-15-1 consists of single bowl with fittings, 10 1/4" stud. 135-15-3 two bowls and fittings with 16" stud for walls up to 4". 135-15-7 with 24" stud for walls up to 12". Can also be furnished with special hollow studs.

Cat. No.	Net Price
135-15-1 One bowl and fittings	$12.30
135-15-3 Two bowls and fittings	21.50
135-15-7 Two bowls and fittings	22.00
135-15-11 Glass bowl only, less fittings	6.65

LEAD-IN BUSHINGS

Single porcelain insulators less all hardware except cushion washer. Mounting flanges listed separately.

Cat. No.	H	B	D	A	Net Price
135-53	1 3/4	2 1/2	1 27/32	1 1/16	$0.26
135-54	4	3 1/2	2 11/16	1	.62

MOUNTING FLANGES

Stamped aluminum mounting flanges for lead-in bushings 135-53 and 135-54. Three mounting holes spaced 120 degrees apart.

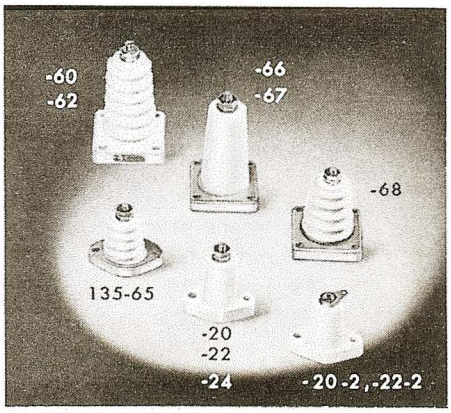
Cat. No.	For Bushing No.	Net Price
135-90	135-53	$0.25
135-91	135-54	.55

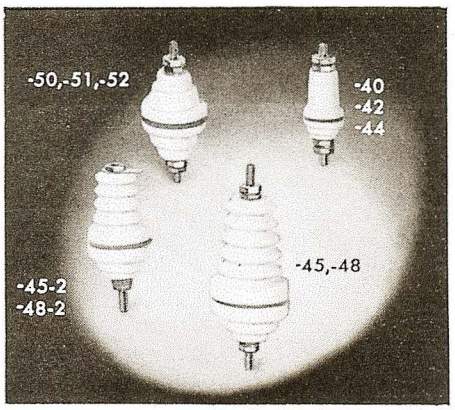
THREADED BRASS ROD

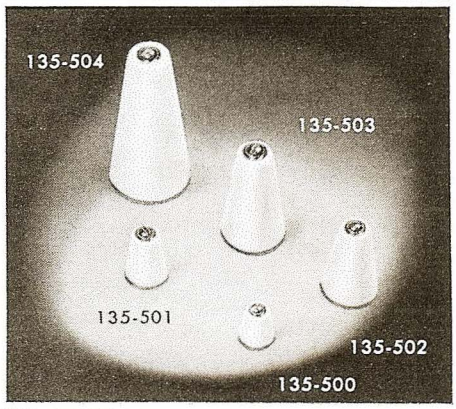
Intended primarily for use with lead-in bushings 135-53 and 135-54. Rod threaded overall 1/4"-20. Complete assembly includes rod, 4 brass washers and 4 nuts, all parts heavily nickel plated.

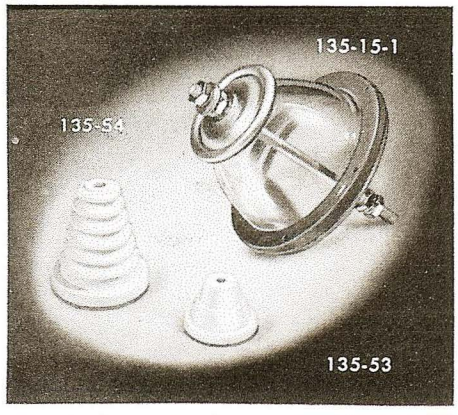
Cat. No.	Length	Net Price
115-240	8"	$0.40
115-241	10"	.50
115-242	15"	.70

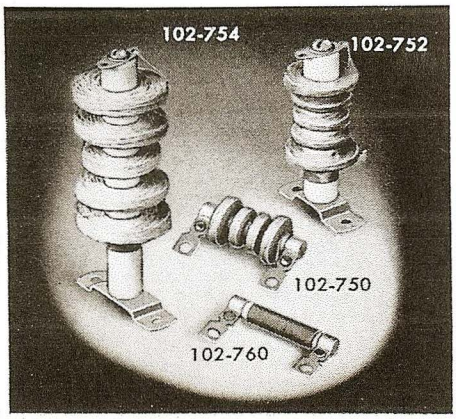
Catalog numbers ending in -2 denote jack types which were formerly identified with a "J" suffix.







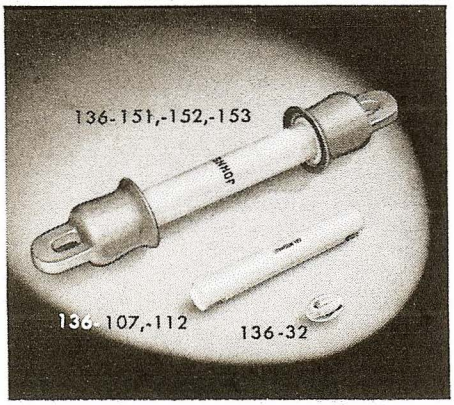




RADIO FREQUENCY CHOKES

Have high reactance over the range for which they are designed. Coils are of enamelled silk-covered wire impregnated with high grade RF lacquer and wound on steatite cores. Current ratings may be increased for intermittent use.

Cat. No.	Frequency	Current	Induct. (1 mc.)	Ohms DC	Lgth.	Net Price
102-750	1.7 to 30 mc.	150 ma	.83 mh	15	1½"	$1.15
102-752	1.7 to 30 mc.	500 ma	1.0 mh	5.2	2⅜"	1.80
102-754	1.7 to 30 mc.	750 ma	1.9 mh	4	4⅝"	2.50
101-760	Ultra-high	250 ma	6.8 uh	.33	1½"	.49



ANTENNA STRAIN INSULATORS

5000 LB. COMMERCIAL STRAIN INSULATORS

The 136-151, 136-152, and 136-153 are heavy duty 1½" diameter wet process porcelain with specially sealed end bells of non-corrosive aluminum alloy. Porcelain glazed to prevent moisture absorption.

Catalog No.	Breaking Strength	Length Net	Length Overall	Net Price
136-151	5000 lbs.	8"	15½"	$7.70
136-152	5000 lbs.	12"	19½"	8.25
136-153	5000 lbs.	20"	25½"	13.25

ANTENNA INSULATORS

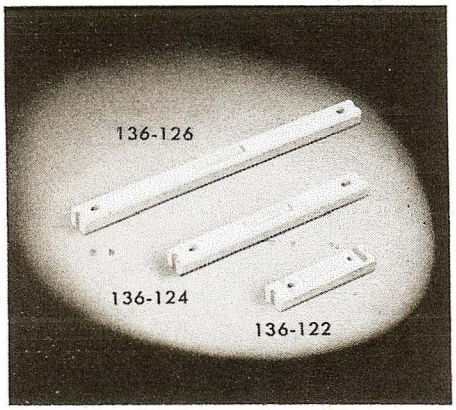
Numbers 136-107 and 136-112 are wet process, glazed porcelain 1" diameter round. Number 136-104 is dry process, glazed ⅝" square.

Catalog No.	Breaking Strength	Length	Net Price
136-104	400 lbs.	4"	$ .15
136-107	800 lbs.	7"	.75
136-112	800 lbs.	12"	.85

EGG INSULATOR

The 136-132 is a compression type strain insulator for aircraft or guy wire applications. Dry process, glazed porcelain.

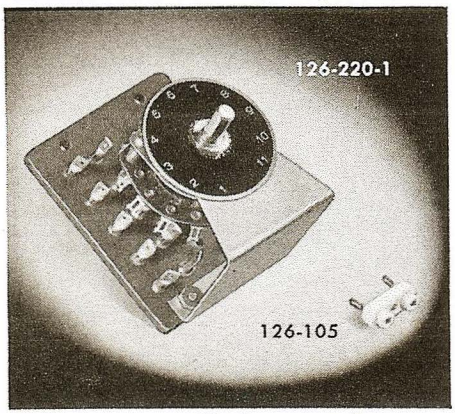
Catalog No.	Length	Net Price
136-32	1½"	$ .10



FEEDER INSULATORS

Numbers 136-122, 136-124, and 136-126 are conventional feeder spreaders for constructing open-wire antenna feeders and transmission lines.
Made of high grade, low absorption porcelain, they are silicone impregnated for moisture resistance.
Number 136-122 has extra notches for 1½" line spacing. All have ⅜" x ½" cross section.

Catalog No.	Length	Net Price
136-122	2"	$ .12
136-124	4"	.17
136-126	6"	.22



CRYSTAL SOCKETS

Designed for HC-6/U crystal holders. Conforms to JAN-1-10. Glazed steatite L4 or better, Dow Corning 200 impregnated. Contacts spaced .486" accept pins .050" diameter, .248" long, and are silver plated with hot tin dipped solder terminals. Single ⅜" mounting hole.

Cat. No.		Net Price
126-105	Crystal socket, phosphor bronze contacts	$ .12
126-105-2	Crystal socket, beryllium copper contacts	.15

Multiple crystal holder accommodates up to ten FT-243 crystals (.093" diameter pins spaced .486") Base is mica filled phenolic; contacts are brass, cadmium plated.

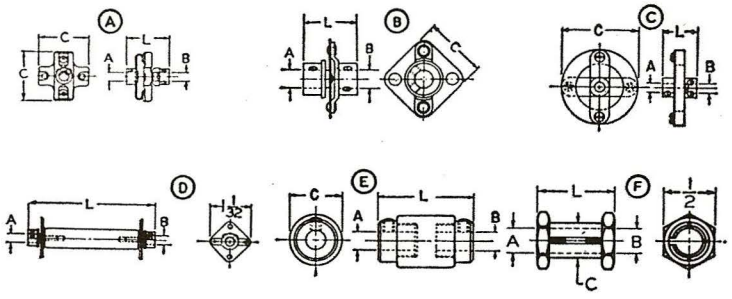
Cat. No.		Ner Ptice
126-120-1	Crystal Board Only	$2.30

Complete crystal selector assembly consisting of crystal board, bracket, 11 position phenolic insulated switch and index plate.

Cat. No.		Net Price
126-220-1	Crystal Selector Assembly	$4.20

SHAFT COUPLINGS

All JOHNSON shaft couplings are manufactured with high quality, low loss insulation, accurately machined and suitably finished metal parts. Each is capable of many thousands of operating cycles without failure due to fatigue. DC "breakdown" ratings derated in accordance with good engineering practice. The phosphor bronze springs of the -250 and -251 series shaft couplings provide flexibility without backlash and adjust to minor shaft misalignments. Rigid types -252 and -262 meet the requirements of accurate shaft alignment and high torque. The -259 is a bar type shaft coupling recommended for high voltages or very high frequencies. The -264 is a small bakelite insulated flexible shaft coupling for DC or low voltage RF applications.



Cat. No.	DC "Breakdown"	Dwg.	Dimension C	L	A	B	Net Price
104-250	4000	A	1 5/16	1 1/8	1/4	1/4	$.70
104-250-3	4000	A	1 5/16	1 3/16	1/4	3/8	.90
104-251	8000	A	2 1/8	1 15/32	3/8	3/8	1.00
104-251-2	8000	A	2 1/8	1 15/32	1/4	1/4	1.00
104-251-3	8000	A	2 1/8	1 15/32	1/4	3/8	1.00
104-252	7000	E	11/16	1 1/4	1/4	1/4	.65
104-258			1/2	3/4	1/4	1/4	.29
104-259	8000	D		3 3/8	1/4	1/4	1.30
104-262	5000	C	2	29/32	1/4	1/4	.67
104-264	750	B	13/16	23/32	1/4	1/4	.52

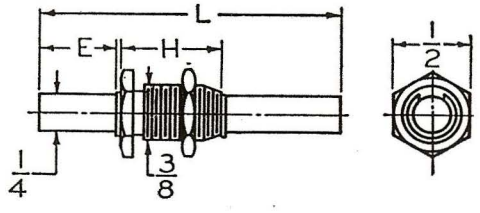
FLEXIBLE SHAFTS

Phosphor bronze, non-rusting flexible shafts with 1/4" nickel plated brass hubs. Permit out of line or up to 90 degree angular control. Total length including hubs 3" for 115-253 and 6" for 115-254.

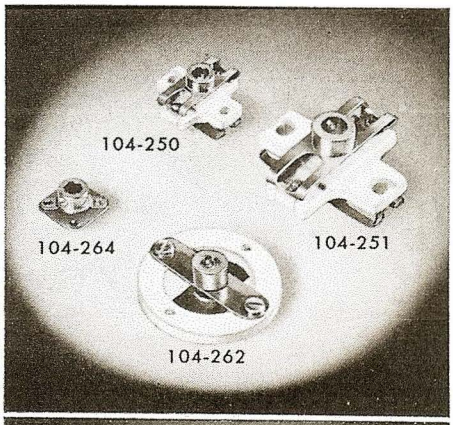
Cat. No.		Net Price
115-253	3" Flexible Shaft	$ .36
115-254	6" Flexible Shaft	.50

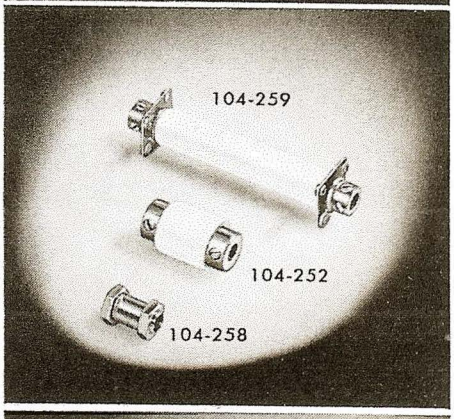
PANEL BEARINGS

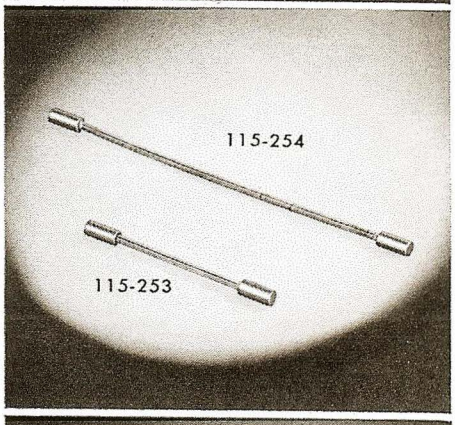
Number 115-255 is nickel plated brass for 1/4" shaft and up to 3/8" panels. The 115-256 and 115-256-2 have 3" and 6" nickel plated brass shafts. Standard 3/8"-24 nut furnished. Models with locking nut and special shaft lengths available on production quantity orders. Bearing threads 3/8"-24.

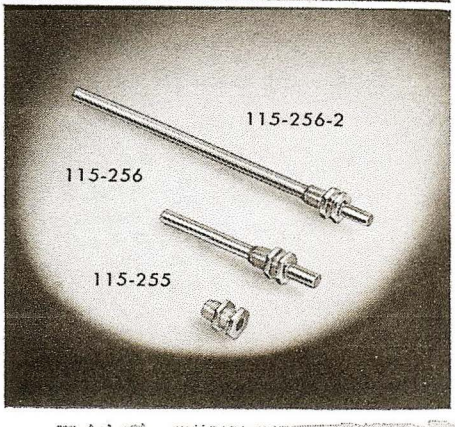


Cat. No.		E	H	L	Net Price
115-255	Panel Bearing Only		21/32		$ .17
115-256	Bearing and 3" Shaft	1/2"	21/32"	3"	.30
115-256-2	Bearing and 6" Shaft	1/2"	21/32"	6"	.40

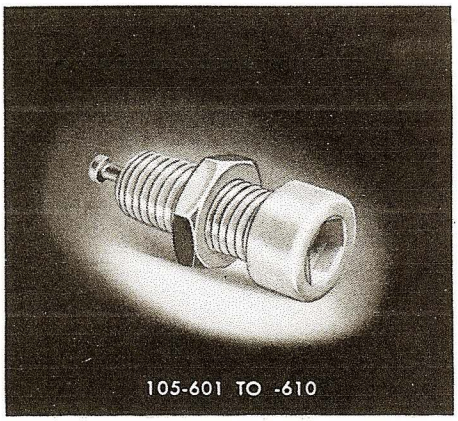


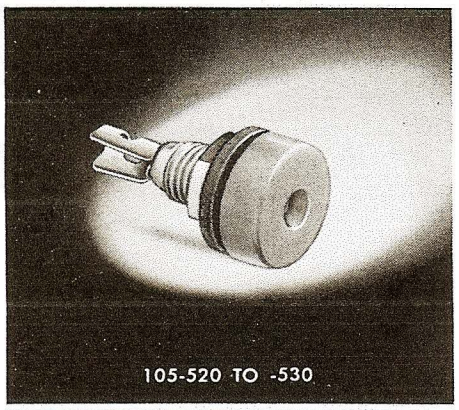


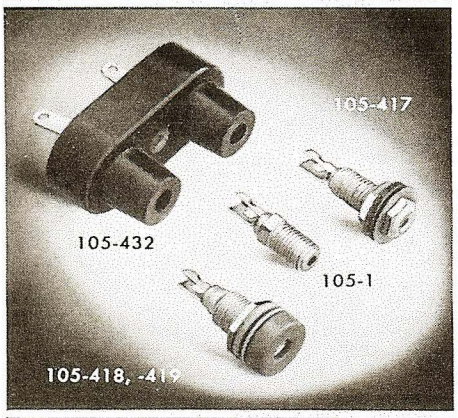


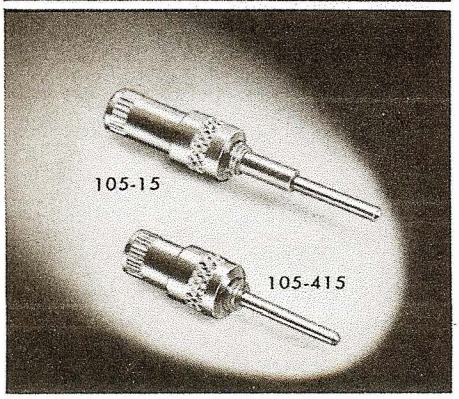


E. E. GILDER



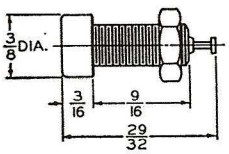






NYLON TIP JACKS
PATENT PENDING

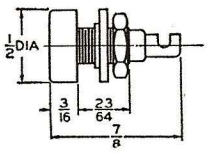
Highest quality, completely insulated jack, body molded from tough, low loss nylon. Suitable for test points in high frequency circuits operating under the most rigorous conditions. Retains low loss characteristics through extremely wide temperature range and high relative humidity conditions. Voltage breakdown 11000 volts, capacity to ⅛" metal panel only 2.0 mmf. Threads on body will not strip using production assembly methods. Conventional soldering methods will not damage dielectric. Machined beryllium copper contact, heat treated and silver plated, is recessed in head for safety. Integral solder terminal hot tin dipped. Single nut furnished for mounting; no auxiliary mounting hardware needed. Mounts in 17/64" hole.



Cat. No.	Color	Net Price
105-601-1	White	$0.25
105-602-1	Red	.25
105-603-1	Black	.25
105-604-1	Dark Green	.25
105-605-1	Light Blue	.25
105-606-1	Orange	.25
105-607-1	Yellow	.25
105-608-1	Brown	.25
105-609-1	Light Green	.25
105-610-1	Dark Blue	.25
105-611-1	Ivory	.25

REMOVABLE PLASTIC HEAD TIP JACKS

Popular general purpose jack for a wide variety of applications. Specially formed beryllium copper contact, cadmium plated, grips tip plug along almost entire length—has large, easy wiring terminal with solder barrier and plenty of room for several wires. Body nickel plated, threaded ¼"-32. Supplied with extruded shoulder bushing and nickel plated hex nut. Mounts in ⅜" hole. Maximum panel thickness, 5/32" where insulating washers are used, ¼" where omitted.



Cat. No.	Color	Net Price
105-520	Red	$0.14
105-521	Black	.14
105-522	Dark Green	.14
105-524	Brown	.14
105-525	Light Blue	.14
105-526	Orange	.14
105-527	Yellow	.14
105-528	Light Green	.14
105-529	Dark Blue	.14
105-530	Ivory	.14

HEAVY DUTY TIP JACKS

Plastic head molded integral with rugged nickel plated brass body. Popular for military and heavy duty industrial applications. Contacts, beryllium copper, cadmium plated. Furnished with extruded shoulder washer, extra phenolic washer and nickel plated hex nut. 5/16"-40 thread. Red and Black only.

Cat. No.		Net Price
105-418	Red	$.22
105-419	Black	.22

HEADLESS TIP JACK

Economical headless jack for molded plastic instrument cases or insulated jack strip panels where jack body can be screwed into tapped panel. Body has hex shoulder for tightening—is threaded ¼"-32. Contact, beryllium copper, cadmium plated.

Cat. No.	Net Price
105-1	$.10

HEX HEAD TIP JACK

All metal construction, brass nickel plated body with beryllium copper contact, cadmium plated. Threaded ¼"-32, supplied with one extruded washer, one flat washer and nickel plated nut. Mounts in ⅜" hole.

Cat. No.	Net Price
105-417	$.14

SHORTING TYPE TWIN TIP JACK

Circuit closes automatically when tips are removed. Jacks spaced ⅞". Single hole mounting Molded black body.

Cat. No.	Net Price
105-432	$.39

SOLDERLESS PHONE TIP PLUGS

Pin length 13/16" with ½" of tip .081" diameter. Knurled body and nut permit leads to be firmly secured without soldering. Body and nut brass, nickel plated. May be used with all tip jacks listed.

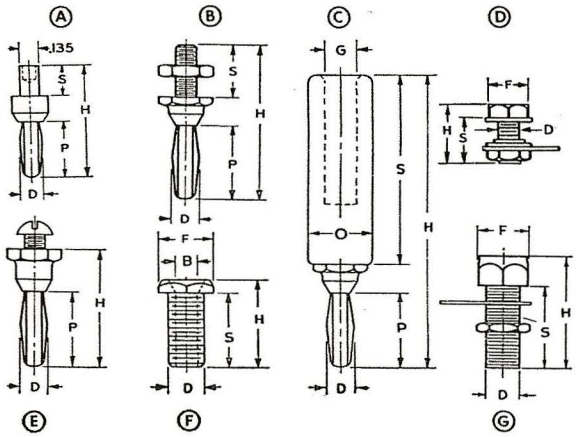
Cat. No.	Net Price
105-15	$.16

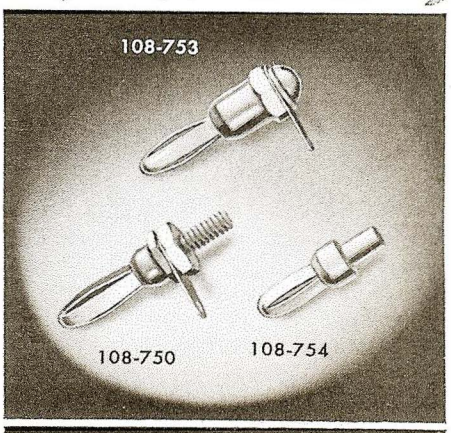
Short solderless tip plug same as above except tip is 9/16" long and .081 diameter throughout its length. May be used with all tip jacks listed except 105-432.

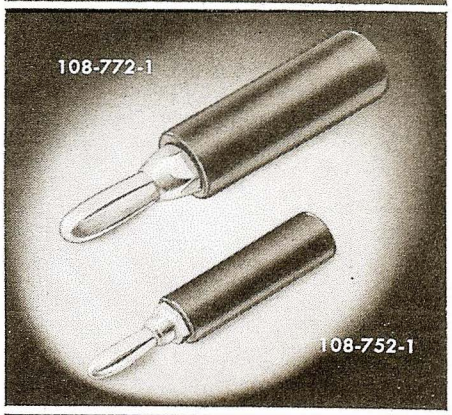
Cat. No.	Net Price
105-415	$.15

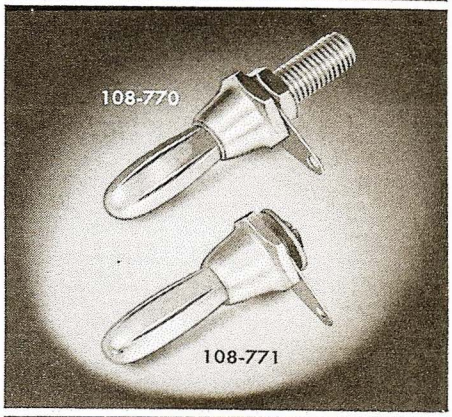
BANANA PLUGS AND JACKS

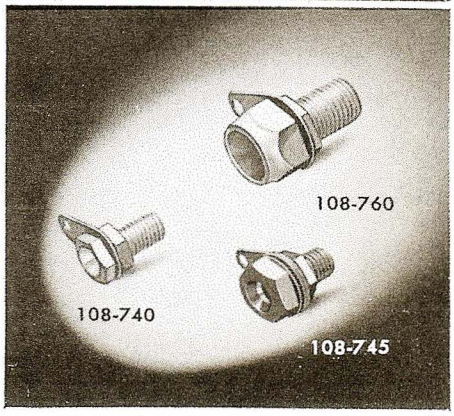
Nickel-silver (not spring brass) springs with high nickel content for resistance to corrosion. High grade nickel plated brass with accurate threads and milled nuts. Studs extend full length for added strength. JOHNSON banana plugs can be furnished on special order with beryllium copper springs and are available plated nickel, cadmium or silver when required. A selection of miniature solder type plugs is available with beryllium copper springs and a variety of platings. Orders for special plugs should be of sufficient quantity to insure economical production runs.











PLUGS

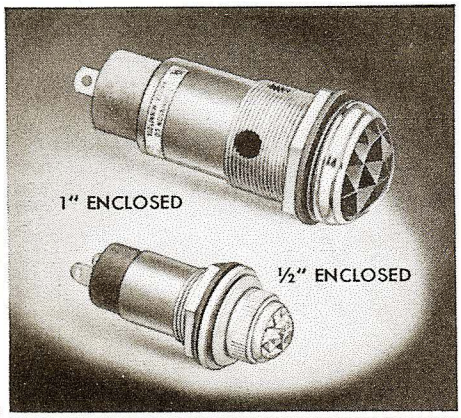
108-750 (75) and 108-750-2 (75A) and 108-753 (75C) have nickel silver springs, securely swaged to machined full length studs. Hardware including solder terminal furnished.
108-754 (75D) is designed for riveting. Spring is beryllium copper.
108-752-1 (75BB) has 1⅜" black plastic handle.
108-752-2 (75BR) has 1⅜" red plastic handle.
108-770 (77) and 108-771 (77A) are jumbo size plugs with nickel silver springs and machined studs. Furnished with hardware and solder terminal.
108-772-1 (77BB) Jumbo plug with 1¾" black plastic handle.
108-772-2 (77BR) Jumbo plug with 1¾" red plastic handle.

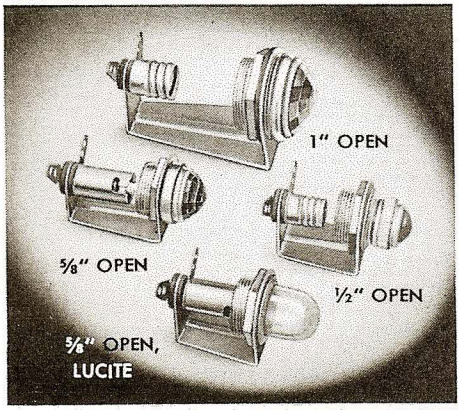
Cat. No.	Old No.	Dwg.	S	P	D	H	G	O	Thread	Net Price
108-750	108-75	B	⅜	17/32	.175	1⅛	....	..	6-32	$0.11
108-750-2	108-75A	B	¾	17/32	.175	1½	....	..	6-32	.12
108-752-1	108-75BB	C	1⅜	17/32	.175	2⅛	.215	7/16	....	.28
108-752-2	108-75BR	C	1⅜	17/32	.175	2⅛	.215	7/16	....	.28
108-753	108-75C	E	...	17/32	.175	15/16	....	..	6-32	.11
108-754	108-75D	A	7/32	13/32	.155	13/16	....	..	....	.08
108-770	108-77	B	⅝	¾	.300	1 25/32	....	..	¼-28	.24
108-771	108-77A	E		¾	.300	1⅛	....	..	10-32	.27
108-772-1	108-77BB	C	1¾	¾	.300	2 25/32	⅜	⅝	....	.39
108-772-2	108-77BR	C	1¾	¾	.300	2 25/32	⅜	⅝	....	.39

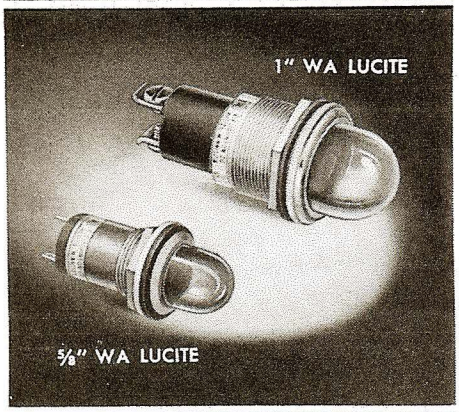
JACKS

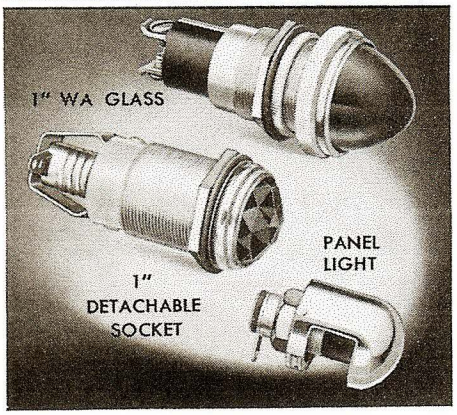
108-740 (74) is a quality nickel plated jack of machined brass. Solder terminal and nut furnished.
108-745-1 (7451) similar to the 108-740 with a red plastic head molded integral with body. Supplied with fibre insulating washer.
108-745-2 (7452) same as 108-745-1 but black.
108-760 (76) for jumbo plugs. Supplied with solder terminal and nickel plated hex nut.

Cat. No.	Old No.	Dwg.	F	D	S	H	Hole Dia.	Thread	Net Price
108-740	108-74	F	⅜	¼	17/32	⅝	.166	¼-28	.10
108-745-1	108-7451	D	7/16	¼	½	21/32	.166	¼-28	.20
108-745-2	108-7452	D	7/16	¼	½	21/32	.166	¼-28	.20
108-760	108-76	F	9/16	⅜	21/32	1	.277	⅜-24	.26









PILOT LIGHTS

ENCLOSED 1" FRICTION (UL)

UL approved, 1" friction type jewel holder. Bezel chrome plated brass. Lamp replaceable from front of panel. Mounting hole required 1". Porcelain insulated candelabra screw socket, solder terminals.

Cat. No.	Length Behind Panel	Bulb Shape	Jwl.	Net Price
147-1000	2 1/2"	S-6	F	$1.02
147-1001	2 1/2"	S-6	S	1.02
147-1002	2 1/2"	S-6	CD	1.07
147-1003	2 3/16"	T4 1/2, NE45	F	.99
147-1004	2 3/16"	T4 1/2, NE45	S	.99
147-1005	2 3/16"	T4 1/2, NE45	CD	1.04

Following assemblies are identical except socket bases are phenolic, with screw terminals.

147-1032	2 3/4"	S-6	F	$1.25
147-1033	2 3/4"	S-6	S	1.25
147-1034	2 3/4"	S-6	CD	1.30
147-1035	2 7/16"	T4 1/2, NE45	F	1.23
147-1036	2 7/16"	T4 1/2, NE45	S	1.23
147-1037	2 7/16"	T4 1/2, NE45	CD	1.28

ENCLOSED 1" BAYONET (UL)

1" friction type jewel holder, lamp replaceable from front of panel. Hard rubber insulation, screw terminals. All UL approved except 147-1050, -1051 and -1052 which have single contact bayonet sockets. Mounting hole 1".

Cat. No.	Length Behind Panel	Bulb Shape	Lamp Base	Jwl.	Net Price
147-1050	2 1/2"	G-6	SC B	F	$1.07
147-1051	2 1/2"	G-6	SC B	S	1.07
147-1052	2 1/2"	G-6	SC B	CD	1.12
147-1053	2 1/2"	G-6	DC B	F	1.20
147-1054	2 1/2"	G-6	DC B	S	1.20
147-1055	2 1/2"	G-6	DC B	CD	1.30
147-1056	2 5/8"	G-6, NE48	DC B	F	1.21
147-1057	2 5/8"	G-6, NE48	DC B	S	1.21
147-1058	2 5/8"	G-6, NE48	DC B	CD	1.26
147-1076	2 5/8"	G-6, NE48	DC B*	F	1.45
147-1077	2 5/8"	G-6, NE48	DC B*	S	1.45
147-1078	2 5/8"	G-6, NE48	DC B*	CD	1.50

*30,000 ohm series resistor built in for NE48.

1" THREADED JEWEL (UL)

Enclosed 1" light assemblies with candelabra screw bases; porcelain insulated sockets. UL approved. Knurled brass, threaded jewel holder polished chrome plated. Mounting hole size 1".

Cat. No.	Length Behind Panel	Bulb Shape	Jwl.	Trm.	Net Price
147-1200	2 9/16"	S-6	F	Sold.	$1.26
147-1201	2 9/16"	S-6	S	Sold	1.26
147-1202	2 9/16"	S-6	CD	Sold.	1.27
147-1209	2 3/4"	S-6	F	Screw	1.37
147-1210	2 3/4"	S-6	S	Screw	1.37
147-1211	2 3/4"	S-6	CD	Screw	1.38
147-1212	2 7/16"	T4 1/2, NE45	F	Screw	1.49
147-1213	2 7/16"	T4 1/2, NE45	S	Screw	1.49
147-1214	2 7/16"	T4 1/2, NE45	CD	Screw	1.50

ENCLOSED ½" JEWEL

Threaded jewel holder and bulb removable from front of panel. All brass construction heavily plated. Phenolic insulated miniature bayonet socket equipped with solder terminals. Furnished in two lengths for either T 3¼ or G 3½ bulb. Mounting hole 11/16" diameter.

Cat. No.	Length Behind Panel	Bulb Shape	Jwl.	Net Price
147-1110	1 9/16"	T 3¼	F	$.76
147-1111	1 9/16"	T 3¼	S	.76
147-1112	1 3/8"	G 3½	F	.76
147-1113	1 3/8"	G 3½	S	.76

Enclosed lights with ½" friction type jewel holders. Otherwise identical of those above.

147-1122	1 9/16"	T 3¼	S	.86
147-1124	1 9/16"	T 3¼	F	.86

OPEN PILOT LIGHTS

1" FRICTION JEWEL

1" friction type jewels removable from front of panel. All parts heavily plated, jewel holder polished chrome. 1" mounting hole. Use on panels up to 3/8" thick.

Cat. No.	Length Behind Panel	Bulb Shape	Base	Jwl.	Net Price
147-100	1 1/2"	G3 1/2, T3 1/4	MS	F	$.60
147-101	1 1/2"	G3 1/2, T3 1/4	MS	S	.60
147-103	2 1/16"	S-6	CS	F	.61
147-104	2 1/16"	S-6	CS	S	.61
147-106	1 1/2"	G3 1/2, T3 1/4	MB	F	.63
147-107	1 1/2"	G3 1/2, T3 1/4	MB	S	.63

⅝" OPEN

Horizontal lamp bracket and jewel secured by single mounting nut. Mounting hole required 11/16" for panels up to 7/32" thick. Polished chrome jewel holder.

Cat. No.	Lgth. Bhd. Panel	Bulb Shape	Base	Jwl.	Net Price
147-700	1 1/4"	G 3 1/2	MS	F	$.39
147-701	1 1/4"	G 3 1/2	MS	S	.39
147-703	1 1/4"	G 3 1/2	MB	F	.43
147-704	1 1/4"	G 3 1/2	MB	S	.43

½" THREADED JEWEL

Jewel removable from front of panel, up to 7/32" thick. Nickel plated jewel holder and bracket. Mounting hole clearance for 11/16" thread.

Cat. No.	Lgth. Bhd. Panel	Bulb	Base	Jwl.	Net Price
147-400	1 1/4"	G3 1/2, T3 1/4	MS	F	$.47
147-401	1 1/4"	G3 1/2, T3 1/4	MS	S	.47
147-403	1 1/2"	G3 1/2, T3 1/4	MB	F	.50
147-404	1 1/2"	G3 1/2, T3 1/4	MB	S	.50

⅝" LUCITE LENS

Efficient utilization of low powered light sources. Wide angle visibility; low cost. Use with neon or incandescent lamps with 3 watts or less dissipation. Mounting hole 11/16", length behind panel 1 1/4".

Cat. No.	Bulb	Base	Net Price
147-406	T 3¼	MB	$.42
147-407	NE51	MB*	.66
147-408	NE51	MB†	.66

*200,000 resistor built in
†100,000 resistor built in

WIDE ANGLE LUCITE LENS (UL)

For use with low powered light sources. Good visibility—designed for neon or low powered incandescent lamps. Jewels furnished in standard colors; red, amber or clear recommended for neon lamps. UL approved.

1" THREADED JEWELS

Chrome plated, threaded bezels. Hard rubber or phenolic insulation, screw terminals. Mounting hole required, 1".

Cat. No.	Lgth. Bhd. Panel	Bulb Shape	Lamp Base	Ins.	Net Price
147-1217	1 15/16"	T 4½	CS	Ph.	$1.16
147-1218	1 1/2"	T 3¼	MB	Ph.	1.10
147-1219	2 1/16"	T4 1/2, G6	DC-CB	HR	1.46
147-1220	2 1/16"	T4 1/2, G6	DC-CB	HR	1.80

147-1220 has 30,000 ohm resistor for NE48.

⅝" THREADED JEWELS

Mounting hole required 11/16", length behind panel 1 7/16". Single contact miniature bayonet socket, phenolic socket body, solder terminals.

Cat. No.	Bulb Shape	Bulb	Net Price
147-1142	T 3¼	47, 49, 1490	$.68
147-1143	T 3¼	NE-51*	.89
147-1144	T 3¼	NE-51†	.89

*Built in 200,000 ohm resistor
†Built in 100,000 ohm resistor

WIDE ANGLE LENS (UL)

Good visibility from extremely wide angles. Lamp extends into internally ribbed, 1⅛" glass bullseye jewel providing diffused light of good intensity. Chrome plated brass bezel, phenolic or hard rubber insulated socket, screw terminals. Mounting hole 1". 147-1600 and 147-1605 UL approved.

Cat. No.	Lgth. Bhd. Panel	Bulb Shape	Lamp Base	Net Price
147-1600	2 1/8"	S 6	CS	$1.54
147-1604	1 13/16"	G 6	SC-CB	1.46
147-1605	1 13/16"	G 6	DC-CB	1.59

1" DETACHABLE SOCKET

Economy 1" pilot light. Chrome plated friction jewel holder. Lamp replaceable from front or rear of panel. Socket detachable from panel bushing. Mounting hole 1". Two solder terminals, both insulated.

Cat. No.	Lgth. Bhd. Panel	Bulb Shape	Lamp Base	Jwl.	Net Price
147-800	1 11/16"	G3 1/2, T3 1/4	MS	F	$.69
147-801	1 11/16"	G3 1/2, T3 1/4	MS	S	.69
147-802	2 3/16"	T4 1/2	CS	F	.71
147-803	2 3/16"	T4 1/2	CS	S	.71
147-804	1 11/16"	G3 1/2, T3 1/4	MB	F	.70
147-805	1 11/16"	G3 1/2, T3 1/4	MB	S	.70
147-808	1 11/16"	G3 1/2, T3 1/4	MB	CD	.75

PANEL LIGHT

For front panel illumination. Polished nickel plated hood, easily removable for lamp replacement; rotates to any position. ½" mounting hole. Miniature bayonet or screw base, T3¼ or G3½ bulbs.

Cat. No.		Net Price
147-330	Miniature Screw Base.....	$.75
147-329	Miniature Bayonet Base...	.90

PILOT LIGHTS

VERTICAL MOUNTING OPEN

Jewel holder and bracket heavily nickel plated. Brackets and nuts are steel, other metal parts brass.

3/8" JEWEL
Mounting Hole 9/32" Clearance

Cat. No.	Length Behind Panel	Bulb	Base	Jewel	Net Price
147-500	1 1/4"	G 3 1/2	M S	F	$.25
147-501	1 1/4"	G 3 1/2	M S	S	.25
147-503	1 1/4"	G 3 1/2	M B	F	.28
147-504	1 1/4"	G 3 1/2	M B	S	.28

1/2" JEWEL
Mounting Hole 7/16" Clearance

147-300	1 1/4"	G 3 1/2	M S	F	.30
147-301	1 1/4"	G 3 1/2	M S	S	.30
147-303	1 1/4"	S-6	C S	F	.31
147-304	1 1/4"	S-6	C S	S	.31
147-306	1"	G 3 1/2	M B	F	.33
147-307	1"	G 3 1/2	M B	S	.33

5/8" JEWEL
Mounting Hole 11/16" Jewel Holder Polished Chrome Plated.

147-200	1 1/4"	G 3 1/2	M S	F	.49
147-201	1 1/4"	G 3 1/2	M S	S	.49
147-203	1 1/4"	S-6	C S	F	.50
147-204	1 1/4"	S-6	C S	S	.50
147-206	1"	G 3 1/2	M B	F	.53
147-207	1"	G 3 1/2	M B	S	.53

VARIABLE INTENSITY LIGHTS

CAMERA SHUTTER TYPE. Rotation of jewel head thru a small angle opens shutter disc uniformly illuminating lens or closed, shuts off all light. A pin hole can be placed in one shutter making jewel faintly visible in off position. Except for jewel head, these pilot lights are identical to types listed under heading "Similar Cat. No.".

Cat. No.	Similar Cat. No.	Net Price
147-430	147-403	$1.14
147-431	147-404	1.14
147-1114	147-1110	1.40
147-1115	147-1111	1.40
147-1116	147-1112	1.40
147-1117	147-1113	1.40
147-1504	147-1209	2.14
147-1505	147-1210	2.14
147-1506	147-1211	2.14
147-1508	147-800*	1.58
147-1509	147-801*	1.58
147-1510	.....	1.58
147-1511	147-804*	1.59
147-1512	147-805*	1.59
147-1513	.....	1.59
147-1514	147-802*	1.59
147-1515	147-803*	1.59
147-1516	.....	1.59
147-1518	147-1053*	2.16
147-1519	147-1054*	2.16
147-1520	147-1055*	2.16

***Threaded jewels instead of friction holders.**

POLARIZED TYPE Light passes thru two polarized discs. Rotation of jewel holder thru 90 degrees varies light from full intensity to near cut-off. Graduation of light intensity may be obtained by varying angle of rotation. 1/2" jewels. See similar catalog numbers.

Cat. No.	Similar Cat. No.	Net Price
147-420	147-403	$1.14
147-421	147-404	1.14
147-1118	147-1110	1.40
147-1119	147-1111	1.40
147-1120	147-1112	1.40
147-1121	147-1113	1.40

DIAL LIGHT BRACKETS

Both terminals insulated on all types. Many other styles and combinations including wire leads, can be furnished from available tools.

Cat. No.	Socket	Net Price
147-600,	Min. Screw (Bracket down)...	$.10
147-601,	Min. Screw (Bracket up).....	.10
147-610,	Min. Bay. (Bracket down)....	.12
147-611,	Min. Bay. (Bracket up).....	.12
147-620,	Cand. Screw (Bracket down)..	.11
147-621,	Cand. Screw (Bracket up)....	.11
147-630,	Min. Bay. (Bracket down)....	.14
147-631,	Min. Bay. (Bracket up).....	.14
147-640,	Min. Screw (Bracket down)...	.12
147-641,	Min. Screw (Bracket up).....	.12

JEWEL ASSEMBLIES

Colors, all types: Red, Green, Amber, Blue, Opal, Clear.

1" JEWEL
Polished chrome bezel with panel bushing to fit 1" hole, fiber washer and nut.

Cat. No.		Net Price
147-110	Faceted Jewel	$.43
147-111	Smooth Jewel	.43
147-112	Colored Disc	.48

5/8" JEWEL
Polished chrome holder fits 11/16" mounting hole. Furnished with nut.

147-210	Faceted Jewel	.34
147-211	Smooth Jewel	.34

1/2" JEWEL
Nickel plated holder and nut, fits 7/16" mounting hole.

147-310	Faceted Jewel	.18
147-311	Smooth Jewel	.18

1/2" JEWEL
Nickel plated internally threaded panel bushing fits 11/16" hole. Furnished with nut.

147-410	Faceted Jewel	.34
147-411	Smooth Jewel	.34

3/8" JEWEL
Nickel plated holder and nut, fits 9/32" mounting hole.

147-510	Faceted Jewel	.13
147-511	Smooth Jewel	.13

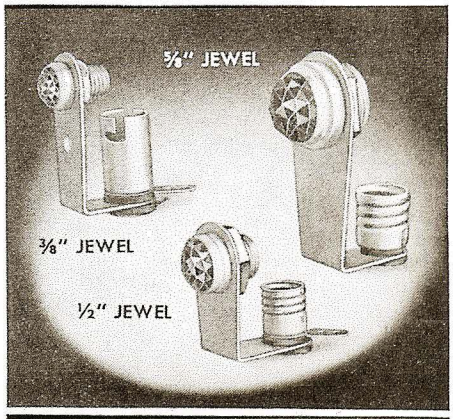
LEGEND

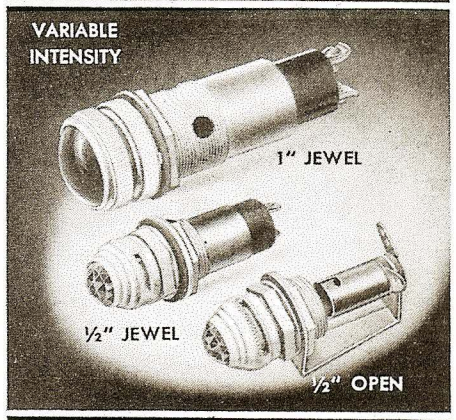
MS–Miniature Screw F–Faceted
MB–Miniature Bayonet S–Smooth
CS–Candelabra Screw CD–Colored Disc
CB–Candelabra Bayonet
SC–Single Contact DC–Double Contact

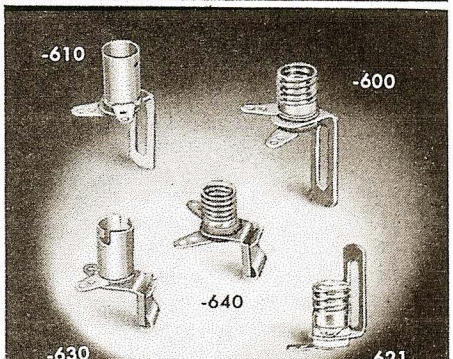
GENERAL SPECIFICATIONS

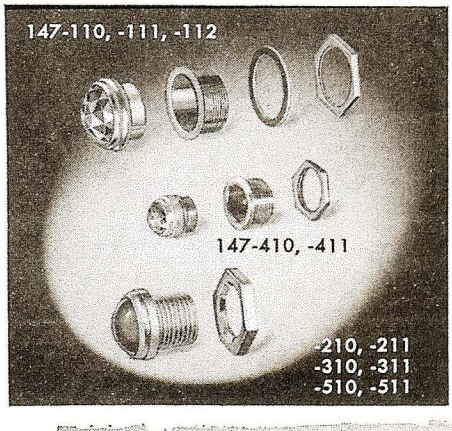
The listings on these pages include only those standard units in greatest demand. Specials, including those meeting military specifications are available in production quantities. Standard finish for jewel holder bezels is polished chrome except for 1/2" and 3/8" sizes which are finished in nickel.

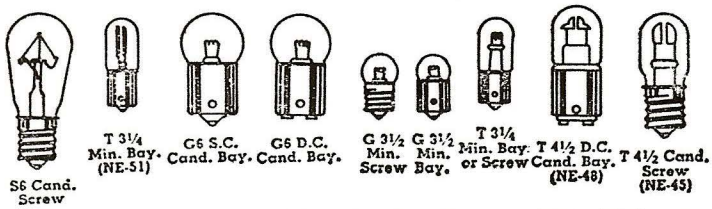
In addition to smooth and faceted types, 1" clear inside frosted jewels with plastic discs to impart color are available. Lettering or numerals can be printed on backing disc and arranged to be visible continuously or only after lamp is lit. Standard jewel colors are clear, red, green, amber, blue and opal. Be certain to specify jewel color on all orders.











Bulbs used on all pilot lights may be identified from these illustrations. (Not included in prices.)

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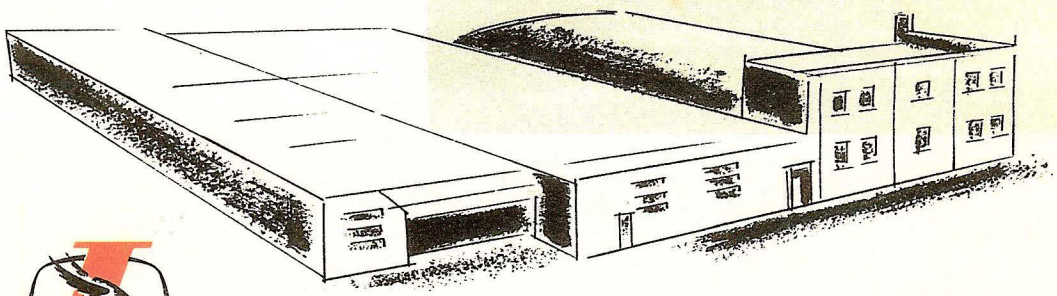
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