JOHNSON

RADIO ELECTRONIC PRODUCTS

DISTRIBUTED

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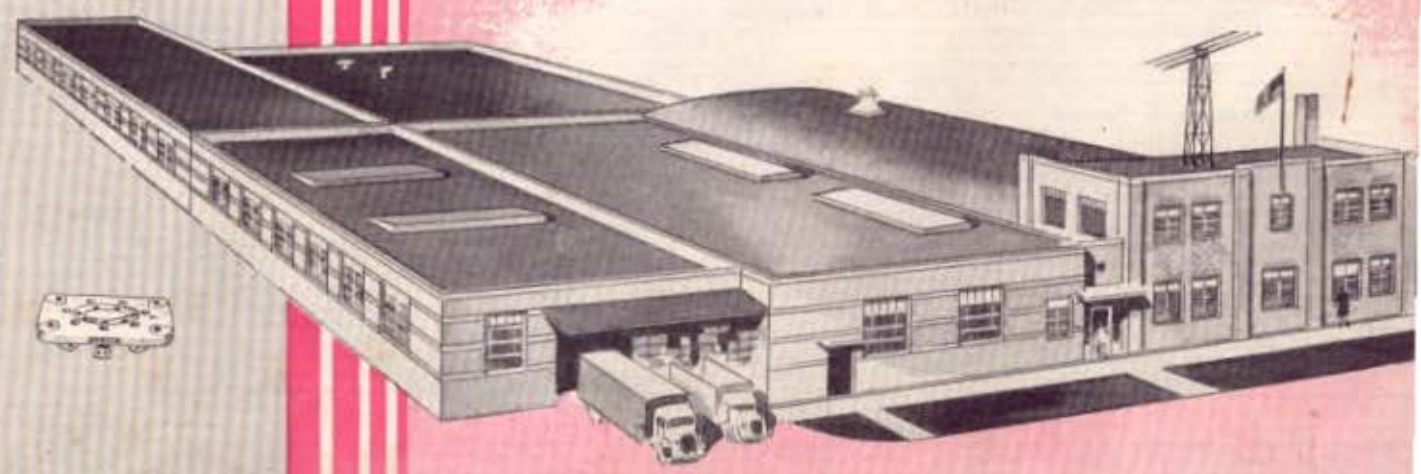


E. F. JOHNSON COMPANY

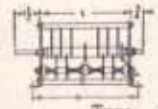
WASECA, MINN.

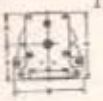
Printed in U.S.A.

JOHNSON

VARIABLE CONDENSERS

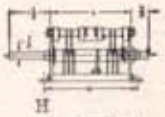
Type C Dual

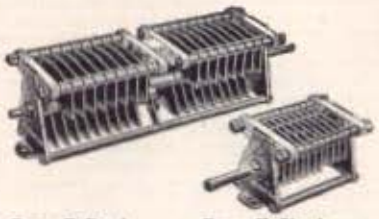




Type D Single

Type	T	S	W	H
C	2⅛	3⅛	5½	5⅛
D	1⅜	2⅛	4¼	4
E	1⅛	1⅛	2⅜	2⅛
F	1⅛	1⅛	2⅛	2





Type E Dual

Type F Single

JOHNSON C and D condensers are sturdily constructed to give trouble-free operation under the most severe service. Only the finest materials are employed yet these units are lower in price than any other quality condensers.

All dual models have center rotor connections, to insure balanced operation at ultra-high frequencies. Heavy laminated phosphor bronze contact springs insure low resistance circuits.

Important features include: Heaviest aluminum plates of any similar condenser, .051" thick—Steatite insulation—Large laminated rotor brushes—Center rotor contacts on all dual condensers—Heavy 5/16" diameter aluminum tie rods for frame strength and rigidity—¼" stainless steel shafts.

Supplied with single hole mounting brackets which fit either top or bottom of end plate so that stators may be mounted to top or bottom as preferred.

TYPE C CONDENSERS SINGLE SECTION

Cat. No.	Part No.	Cap. per Sect. Max.	Min.	Spacing	Number Plates	L
250C70	152-1	252	34	.175"	24	6⅛
500C70	152-2	496	56	.175"	47	12⅛
250C90	152-3	245	45	.250"	31	12⅛
350C90	152-4	337	63	.250"	43	14⅛
50C110	152-5	51	19	.350"	8	4⅛
100C110	152-6	103	30	.350"	17	8⅛
250C110	152-7	251	66	.350"	41	18⅛
50C130	152-8	51	24	.500"	10	7⅛
100C130	1529	102	42	.500"	21	13⅛

TYPE C DUAL SECTION

200CD45	152-501	204	21	.125"	15	8⅛
300CD45	152-502	296	26	.125"	21	10⅛
200CD70	152-503	198	27	.175"	19	12⅛
300CD70	152-504	305	37	.175"	29	16⅛
150CD90	152-505	147	30	.250"	19	14⅛
200CD90	152-506	196	39	.250"	25	18⅛
50CD110	152-507	50	18	.350"	8	10⅛
65CD110	152-508	66	21	.350"	11	12⅛
100CD110	152-509	103	32	.350"	17	16⅛
50CD130	152-510	51	24	.500"	10	14⅛

TYPE D SINGLE SECTION

50D35	153-1	49	12	.080"	5	2⅛
100D35	153-2	99	14	.080"	8	3⅛
150D35	153-3	151	18	.080"	12	3⅛
250D35	153-4	252	24	.080"	20	4⅛
350D35	153-5	343	27	.080"	27	5⅛
500D35	153-6	496	36	.080"	39	6⅛
100D45	153-7	104	19	.125"	12	4⅛
150D45	153-8	146	23	.125"	17	4⅛
50D70	153-9	51	17	.175"	7	2⅛
70D70	153-10	72	18	.175"	11	4⅛
100D70	153-11	98	23	.175"	15	4⅛
150D70	153-12	151	31	.175"	23	6⅛
250D70	153-13	244	45	.175"	37	10⅛
350D70	153-14	351	62	.175"	53	13⅛
50D90	153-15	53	20	.250"	10	4⅛
70D90	153-16	73	25	.250"	14	5⅛
100D90	153-17	99	30	.250"	19	7⅛
150D90	153-18	149	43	.250"	29	10⅛
250D90	153-19	249	68	.250"	49	15⅛

TYPE D DUAL SECTION

100DD35	153-501	95	13	.080"	8	4⅛
150DD35	153-502	147	15	.080"	12	5⅛
200DD35	153-503	202	19	.080"	16	7⅛
300DD35	153-504	291	24	.080"	23	9⅛
500DD35	153-505	496	38	.080"	39	13⅛
150DD45	153-506	155	24	.125"	18	9⅛
200DD45	153-507	198	27	.125"	23	12⅛
50DD70	153-508	52	15	.175"	8	5⅛
70DD70	153-509	72	17	.175"	11	7⅛
100DD70	153-510	97	22	.175"	15	9⅛
150DD70	153-511	151	31	.175"	23	13⅛
200DD70	153-512	199	39	.175"	30	16⅛
50DD90	153-513	52	19	.250"	10	9⅛
100DD90	153-514	97	30	.250"	19	14⅛

MOUNTING BRACKETS

Extra brackets for mounting other components above condenser.

Cat. No.

115-100—Single Hole Bracket for C or D condenser.....

115-101—Two Hole Bracket for C or D condenser.....

Designed as rugged, compact units for medium and low power transmitters, type E and F condensers are in a class by themselves. They have more capacity per cubic inch and occupy less panel space for their rating than any other condenser on the market. Their rapid adoption by manufacturers of high grade equipment and discriminating amateurs is ample proof of their excellence.

Points of superiority: Heavy aluminum plates, .032" thick, with rounded edges for maximum voltage rating—Heavy aluminum tie rods ¼" diameter for frame strength and rigidity—Steatite insulation—Stator mounted above to reduce capacity to ground—heavy phosphor bronze contact springs, cadmium plated—Center contact on dual models—Chassis or panel mounting—Stainless steel shafts.

In addition to mounting foot shown, removable single hole brackets are furnished so that condenser may be inverted from position shown, or other components mounted above.

TYPE E CONDENSERS SINGLE SECTION

Cat. No.	Part No.	Cap. per Sect. Max.	Min.	Spacing	Number Plates	L
250E20	154-1	244	12	.045"	23	2⅛
350E20	154-2	353	15	.045"	33	3⅛
500E20	154-3	488	19	.045"	45	4⅛
35E30	154-4	29	8	.075"	6	1⅛
50E30	154-5	52	9	.075"	8	1⅛
70E30	154-6	73	9	.075"	11	2⅛
100E30	154-7	100	11	.075"	15	2⅛
150E30	154-8	154	14	.075"	23	3⅛
250E30	154-9	251	20	.075"	37	4⅛
350E30	154-10	347	25	.075"	51	6⅛
35E45	154-11	38	11	.125"	12	2⅛
50E45	154-12	38	9	.125"	9	2⅛
70E45	154-13	74	13	.125"	17	3⅛
100E45	154-14	101	16	.125"	23	4⅛
150E45	154-15	145	20	.125"	33	6⅛
250E45	154-16	241	32	.125"	55	9⅛

TYPE E DUAL SECTION

200ED20	154-501	200	10	.045"	19	5⅛
300ED20	154-502	312	13	.045"	29	6⅛
50ED30	154-503	52	8	.075"	8	4⅛
70ED30	154-504	72	8	.075"	11	4⅛
100ED30	154-505	99	10	.075"	15	5⅛
150ED30	154-506	153	13	.075"	23	7⅛
200ED30	154-507	196	15	.075"	29	8⅛
50ED45	154-508	52	10	.125"	12	6⅛
70ED45	154-509	74	12	.125"	17	7⅛
100ED45	154-510	100	15	.125"	23	9⅛

TYPE F SINGLE SECTION

35F20	155-1	35	7	.045"	6	1½
50F20	155-2	54	8	.045"	9	1⅝
70F20	155-3	66	8	.045"	11	1⅝
100F20	155-4	106	10	.045"	17	2⅛
150F20	155-5	154	12	.045"	25	2⅞
250F20	155-6	252	17	.045"	41	4⅛
35F30	155-7	36	8	.075"	9	1⅞
50F30	155-8	52	9	.075"	13	2⅛
70F30	155-9	67	11	.075"	17	2⅞
100F30	155-10	99	14	.075"	25	3⅛
150F30	155-11	148	18	.075"	37	4⅞

TYPE F DUAL SECTION

50FD20	155-501	53	7	.045"	9	3⅛
70FD20	155-502	66	7	.045"	11	3⅛
100FD20	155-503	104	9	.045"	17	4⅛
150FD20	155-504	153	11	.045"	25	6
200FD20	155-505	202	14	.045"	33	7⅞
50FD30	155-506	51	8	.075"	13	4⅛
70FD30	155-507	66	10	.075"	17	5⅛
100FD30	155-508	99	13	.075"	25	7⅞

DEPARTURES FROM STANDARD

Special plate spacings, capacities, shaft extensions, insulation, mounting brackets, terminals, etc., can be furnished to specifications for commercial applications.

CONDENSERS FOR HIGHER VOLTAGES

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

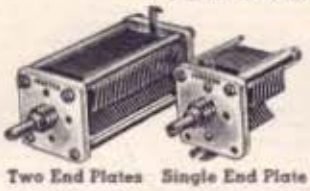
EXPLANATION OF TYPE NUMBERS

The first part 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. Capacity measurements of the E and F types are made with the condensers in the position shown in the above illustration. The C and D types are measured in inverted position.

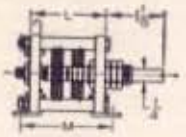
JOHNSON

Condensers
Couplings

TYPE H CONDENSER



Two End Plates



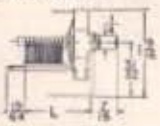
Single End Plate

The Type H condenser was designed for aircraft transmitters and combines a minimum of weight and size with simple but rugged construction. Capacities and spacings are provided for low and medium power stages. Use of steatite for end plates avoids any possibility of "short circuit loops" and permits panel mounting with both rotor and stator insulated from ground. Has aluminum plates .020" thick. End plate 1½" square. Capacity measurements are taken with condenser in position shown above.

TYPE H CONDENSERS SINGLE SECTION

Cat. No.	Part No.	Cap. per Sect. Max.	Min.	Spacing	Number Plates	L
		Single End Plate				
25H15	156-1	25	4	.030"	6	1¼
35H15	156-2	35	4	.030"	8	1¼
50H15	156-3	49	4	.030"	11	1¼
70H15	156-4	69	6	.030"	15	1⅝
100H15	156-5	97	7	.030"	21	1¾
		Double End Plate				
150H15	156-6	146	9	.030"	31	2⅛
250H15	156-7	242	13	.030"	51	3¼
25H30	156-8	28	7	.080"	13	2⅛
35H30	156-9	37	8	.080"	17	2⅝
50H30	156-10	54	11	.080"	25	3⅝
70H30	156-11	74	13	.080"	35	4⅝
		TYPE H DUAL SECTION				
35HD15	156-512	31	6	.030"	7	1⅛
50HD15	156-513	51	7	.030"	11	2⅛
70HD15	156-514	71	8	.030"	15	2½
100HD15	156-515	99	10	.030"	21	3⅛
35HD30	156-516	38	12	.080"	17	4⅝
50HD30	156-517	55	15	.080"	25	6

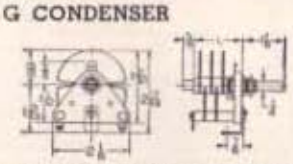
TYPE J CONDENSER



The Type J condenser is a midget with big condenser characteristics. It has wider spacing than most small types, yet occupies little more space and is ideal for oscillator and low power stages. It can be used in conjunction with JOHNSON tube socket type inductors to provide an extremely compact tank unit. The spacing is .025" and universal type mounting brackets make possible a variety of mountings including chassis, panel, or inside tube socket type inductors. Steatite end plate is 1⅛" wide.

Cat. No.	Part No.	Cap. per Sect. Max.	Min.	Spacing	Number Plates	L
7J12	157-1	8	2.6	.025"	3	⅞
15J12	157-2	17	3.3	.025"	6	1¼
25J12	157-3	29	3.6	.025"	10	1⅞
50J12	157-4	52	4.9	.025"	19	2½
75J12	157-5	73	6	.025"	26	3⅛
100J12	157-6	102	7	.025"	36	4¼

TYPE G CONDENSER



The Type G condenser is extremely popular as a neutralizing condenser for medium and low power stages. It is also widely used for grid and plate tuning at high and ultra-high frequencies. A wide range of capacities and spacing make it adaptable to many applications. It has a single end plate of steatite and low minimum capacity. .032" rounded aluminum plates, universal mounting bracket locking nut, and front and rear shaft extension are among outstanding features.

Cat. No.	Part No.	Cap. per Sect. Max.	Min.	Spacing	Number Plates	L
25G20	165-1	27	4	.045"	5	1⅜
50G20	165-2	52	5	.045"	9	1⅝
8G45	165-3	7.7	3.6	.125"	3	⅞
13G45	165-4	13	4.7	.125"	5	1⅛
23G45	165-5	23	6.4	.125"	9	1⅝
6G70	165-6	5.7	3.5	.225"	3	1⅞
12G70	165-7	12	6	.225"	7	2⅝

COUPLINGS

104-251

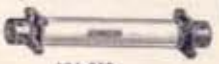
104-250

104-262

104-252

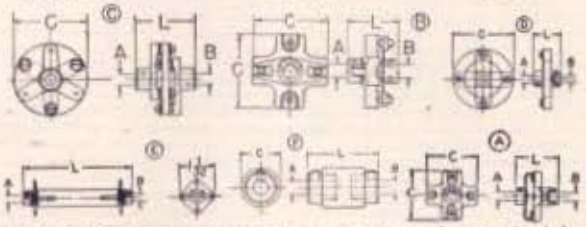
104-258

104-260



104-259

104-261



All JOHNSON insulated shaft couplings are characterized by best steatite insulation properly proportioned for electrical and mechanical strength, by accurate metal parts heavily plated, by advanced design, and by skillful manufacture.

The phosphor bronze springs of the -250 and -251 series couplings provide flexibility without backlash and adjust to minor shaft misalignments.

The hub assemblies of the new -260 and -263 coupling move freely on their supporting posts, accommodating misalignment and strain without dependence upon a flexing metal, and yet are well secured to prevent accidental disassembly. Rigid types -252, -262 and -251 meet the requirements of accurate shaft alignment and high torque.

The -259 and -2593 are bar type couplings recommended for high voltages or very high frequencies.

Cat. No.	Modulated Peak Volt.	Dim. Dwg.	Dimension C	L	A	B
104-250	4000	A	1⅛	1⅛	¼	⅜
104-2503	4000	A	1⅛	1⅛	¼	⅜
104-251	5000	A	2⅛	1⅛	⅜	⅜
104-251A	5000	A	2⅛	1⅛	⅜	⅜
104-251B	5000	A	2⅛	1⅛	⅜	⅜
104-252	1000	F	1¼	1¼	¼	¼
104-258			½	¾	¼	¼
104-259	8000	F	3⅛	1¼	¼	¼
104-2593	5000	F	2⅛	1¼	⅜	⅜
104-260	2500	B	1⅛	1⅛	⅜	⅜
104-261	7500	C	2½	1⅛	⅜	⅜
104-262	5000	D	2"	1⅛	¼	¼
104-263	2000	B	1	1⅛	¼	¼

PANEL BEARINGS

115-255, 256, 2562

Nickel plated brass for ¼" shaft and up to ⅜" panels. Also with 3" and 6" nickel plated brass shafts.

Cat. No. 115-255 Panel bearing only
Cat. No. 115-256 Bearing and 3" shaft
Cat. No. 115-2562 Bearing and 6" shaft

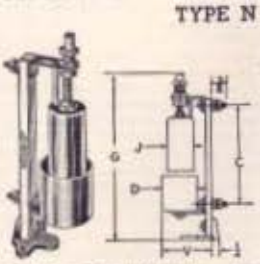
FLEXIBLE SHAFTS

115-253, 254

Phosphor bronze, non-rusting with ⅛" hubs. Permit out of line or up to 90 degree angular control.

Cat. No. 115-253 3" flexible shaft
Cat. No. 115-254 6" flexible shaft

TYPE N CONDENSER



Small mounting space requirements, extremely high voltage rating in proportion to size, fine adjustment with uniform voltage breakdown rating throughout the full capacity range, and low cost, make these neutralizing condensers ideal for the modern transmitter. "Plates" are aluminum cups supported on a steatite frame with cast aluminum mounting bracket. Because of the design these condensers will withstand much higher voltage than conventional flat plate condensers of the same spacing. The N375 has been improved and now features a bushing for the guide shaft for greater stability and a beaded lower cup for high voltage rating. Peak R.F. Breakdown Ratings at 2 Mc.: N125 8,500, N250 11,500, N375 14,500.

Cat. No.	Part No.	Capacity Max.	Min.	D	C	G	V	Spac. ing
N125	159-125	11.0	1.1	1⅛	3⅛	6⅛	1⅛	.125"
N250	159-250	10.6	1.4	1⅛	3¼	7⅛	2⅛	.250"
N375	159-375	10.7	1.7	2⅛	5⅛	9⅛	2¼	.375"

MINIATURE AIR VARIABLE CONDENSERS

The smallest air variables ever built! A necessity in all types of high frequency equipment. Available in single, differential and butterfly types. Single hole mounting flats on mounting bushing to prevent turning. Split sleeve motor bearings — no shaft wobble. Steatite end frames. Voltage breakdown 750 V. RMS at 2.0 mc. — .017 spacing. Nickel-plated finish.

Panel mounting space is ¾" by ⅝". Mounting hole ¼". Slotted for screw driver adjustment or takes a ⅜" knob. Improved terminal provides dual low inductance path to both stator supports, eliminates possibility of loosening plates when soldering, avoids binding stresses on stator supports caused by wiring.

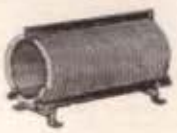
Cat. No.	Capacity	
SINGLE	Min.	Max.
160-102	1.5	5.1
160-104	1.7	8.7
160-107	2.1	14.6
160-110	2.6	19.7
DIFFERENTIAL		
160-303	1.8	5.6
160-305	2.0	9.3
160-308	2.3	14.8
160-311	2.7	19.3
BUTTERFLY		
160-203	1.7	3.3
160-205	2.1	5.3
160-208	2.7	8.5
160-211	3.2	11.0

TUBE-SOCKET "HI-Q" INDUCTORS

Inductors plug into a five prong tube socket. Numbers —640 through —645 have link at center, —650 through —655 link at bottom. Those with center links are center tapped for split stator circuits. Power rating is 100 watts. All sizes use coil from 1¾" in diameter and 3¾" high, and have additional terminal at top.

Cat. No.	Band (Meters)	Cap. to tune (mmf.)
230-640	10	24
230-641	20	33
230-642	40	37
230-643	80	71
230-644	160	130
230-645	14	27
230-650	10	35
230-651	20	58
230-652	40	70
230-653	80	75
230-654	160	110
230-655	14	40
235-646	.85 Form only, 4 prong	
235-647	.85 Form only, 5 prong	

EDGEWISE WOUND "HI-Q" INDUCTORS



Design improvements and mycalex insulation are new features in this inductor of plated edge-wound copper strip. They are widely used in commercial equipment, and will safely handle more than 1000 watts in continuous service. Other sizes and types of inductors are manufactured for commercial broadcast and industrial electronic applications. More information available on request.

Cat No.	Band (Meters)	Cap. to tune (mmf.)	Coupling	Dimensions LxD
232-610	33 mh impedance		matching	7/8" x 2½"
232-611	14 mh impedance		matching	4⅞" x 2½"
232-620	160	100	None	8⅝" x 4"
232-622	80	50	None	6⅝" x 3¼"
232-624	40	25	None	6" x 3¼"
232-626	40	50	None	4⅜" x 2½"
232-628	20	20	None	4⅝" x 2½"
232-619	20 mh coupling inductor			3½" x 4"
232-623	8.1 mh coupling inductor			2⅜" x 3⅛"
232-627	2.2 mh coupling inductor			1⅞" x 2½"

TUBE CAP CONNECTORS

119-850
119-851

115-852
119-854

119-838
119-839
119-840
119-841

Collet types, numbers 119-838 through 119-841 are recommended for heavy current industrial uses. The outside diameter is ⅞" and connector may be tightened with spanner wrench listed below. The 119-843 is a part of the 124-212 socket for 833A tubes and is recommended for other tubes having .567" diameter caps and requiring radiator type connectors for high R.F. currents. The flexible strap is 5⅛" long and ⅝" wide.

Cat. No.	Tube Cap Diameter
119-838	.375
119-839	.437
119-840	.567
119-841	.676
119-843	.567
119-846	.125
119-848	.070
119-849	.048
119-850	.250
119-851	.360
119-852	.360
119-854	.566
115-838	Spanner wrench for use with Nos. 119-838 through -841

119-843

TUBE LOCKING CLAMP

Accurately formed cadmium plated steel band with integral locking device and mounting bracket. Made to hold tubes securely in place under conditions of heavy vibration and shock.

Cat. No. 133-817	Tube Dia. 1.165"
Cat. No. 133-818	Tube Dia. 1.275"
Cat. No. 133-819	Tube Dia. 1.300"
Cat. No. 133-820	Tube Dia. 1.377"

TINNED COPPER SOLDERING TERMINALS

Terminals Illustrated in the Order Listed

Available in eleven sizes, JOHNSON soldering terminals meet the requirements of most applications. Composed of copper for low resistance, they are tinned to permit easy soldering.

Cat. No.	Size Hole	Length
110-880	6-32	⅜"
110-881	¼"	½"
110-882	⅜"	1"
110-883	10-32	⅝"
110-884	10-32	1"
110-885	¼"	1⅜"
110-886	.180"	⅝"
110-887	⅜"	1⅜"
110-888	⅜"	1⅝"
110-889	⅜"	1⅝"
110-890	⅜"	1⅝"

INDUCTOR CLIPS

235-804

235-803

235-860

Clips are plated phosphor bronze Nos. 235-803 and 235-804 are designed for making connections to the above edgewise wound or similar inductors. No. 235-860 will take wire from No. 20 to No. 10 without danger of tilting and shorting adjacent turns.

Cat. No.	Type
235-803	LC4S
235-804	LC4
235-860	860

FUSE CLIP

115-840

This cadmium plated phosphor bronze clip provides sure grip for ⅜" diameter fuse or resistor. Mounts with No. 8 screw.

Cat No. 115-840

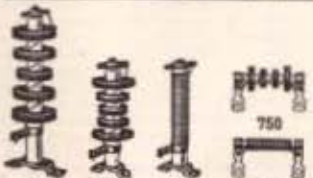
SCREW TERMINAL

A convenient and substantial clip for use as antenna and ground connections and power terminals. Furnished complete with 2 screws.

Cat. No. 110-112

110-112

RADIO FREQUENCY CHOKES

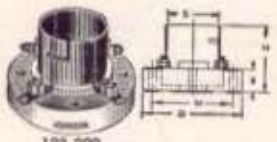


754 752 762 760 750

Uniformly flat in response, JOHNSON R.F. chokes are equally effective over the entire range for which they are designed. Coils are of enameled silk-covered wire impregnated with high grade R.F. lacquer, and are wound on steatite cores. Current ratings are of continuous service and may be increased for intermittent use.

Cat. No.	Frequency	Current Rating	Lgth.
102-750	1.7 to 30 mc	150 ma	1½
102-752	1.7 to 30 mc	500 ma	2⅞
102-754	1.7 to 30 mc	750 ma	4¼
101-760	Ultra-high	250 ma	1½
101-762	Ultra-high	1500 ma	2⅞

TUBE SOCKETS



123-209
-210, -211, -216

"The World's Most Famous Tube Sockets," a title earned over years of top quality in material, workmanship, and design, cover nearly every transmitting tube requirement. "JOHNSON" sockets are specified by exacting users.

Nos. -209, -210, -211 and -216 all have heavy phosphor bronze, side wiping type contacts, aluminum shells and clear white, glazed porcelain bases.

No. -209 is similar to No. -210, but provides greater spacing between contacts and shell, for higher voltages. No. -211, the standard "50 watt" socket has double filament contacts for carrying heavy currents. Terminals are permanently and plainly marked with identifying letters molded in base both top and bottom.

No. -216 is for tubes having a GIANT 5 pin bayonet base such as the 803, RK28, etc. -210F and -211F are enclosed in lustrous black finished aluminum housing for front of panel mounting.

"S" dimension -209, -210 series 1.386", -211 series 1.886", -216 series 2.198".

Suffix letter "B" identifies sockets with beryllium copper contacts, suffix letter "S" sockets with steatite bases.

Cat. No.	D	H	M	B	Base
123-209	2¼	1¼	2⅛	4	Medium
123-209B	2¼	1¼	2⅛	4	Four
123-209S	2¼	1¼	2⅛	4	Pin
123-209SB	2¼	1¼	2⅛	4	Bayonet
123-210	2½	1⅞	2⅝	4	
123-210B	2½	1⅞	2⅝	4	
123-210F	2½	1⅞	2⅝	4	
123-211	3⅛	2⅛	2⅞	4	Standard
123-211B	3⅛	2⅛	2⅞	4	Jumbo
123-211S	3⅛	2⅛	2⅞	4	Four
123-211SB	3⅛	2⅛	2⅞	4	Pin
123-211F	3⅛	2⅛	2⅞	4	
123-216	3¼	2⅛	3⅛	5	Giant
123-216B	3¼	2⅛	3⅛	5	Five
123-216S	3¼	2⅛	3⅛	5	Pin
123-216SB	3¼	2⅛	3⅛	5	Bayonet

124-213

No. -213 takes Eimac 152TL and 304TL. Contacts arranged for either series or parallel filaments.

No. -214 takes Eimac 1500TH and similar tubes. Has air jet tube for cooling filament tube seals.

No. -215 is for "250 watt" tubes such as 204A, 849, etc. The plate terminal has a "safety cup" which prevents accidental dislodgement of the tube.

124-214

124-215

Cat. No.	Base
124-213	"Eimac"
124-214	"Eimac"
124-215	"250 Watt"

MINIATURE SOCKETS

Cat. No.	Description
120-267	Miniature socket, all ceramic
120-277B	Miniature socket with shield base
133-277S	Miniature socket, shield base only
133-278A	1⅛" shield for 277 B or S
133-278B	1¼" shield for 277 B or S

133-278

120-277B

Sockets for 9000 series and miniature series such as 1S4, 1S5, 1T4, 1R5, etc. No. -267 all steatite type. No. -277B steatite base with metal mounting ring which extends upward to form a shield. No. -277S is shield base only as used on No. -277B and can be used with No. -267 or other similar sockets. Nos. -278A and B are shield caps to fit No. -277B or No. -277S. Available in two sizes, they include an inside coil spring to hold the tube firmly in position.

120-267

ACORN SOCKETS

121-265

121-235

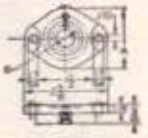
121-245

Cat. No.	Mtg. Cen.
121-235	1⅛
121-265	1⅛
121-245	1¼

Nos. -235, and -265 were all designed for new "acorn" tubes. Nos. -235 and -265 are similar except for size. No. -235 is more rugged but requires slightly more mounting space. No. -245 is a plated metal base and includes built-in by-pass condensers as an integral part of each contact. Contacts insulated by mica. All contacts silver plated beryllium copper.

JOHNSON wafer sockets are insulated with grade L 4 steatite or better, top and sides glazed, underside impregnated in conformance with latest Army Navy specifications. Contacts are brass with steel spring, cadmium plated and are mounted against phenolic washers in molded recesses to prevent movement. Rivets are countersunk and mounting holes bossed to permit sub-panel mounting. Locating grooves facilitate tube insertion.

122-228



122-217, -224, -225, -226, -227

Cat. No.	Base
122-224	4 pin
122-225	5 pin
122-226	6 pin
122-227	7 pin med.
122-217	7 pin small
122-228	Octal

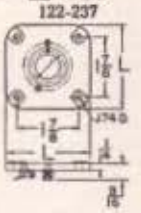
No. -237 is a 7 pin large steatite wafer socket for transmitting tubes having a GIANT 7 pin base such as the HK257, and RCA 813.

122-237

No. -247 is a 7 pin steatite wafer socket for transmitting tubes such as the 826. It is furnished with etched aluminum base shield.

No. -248 is the same as the No. -247 except for its small "L" dimension, is also furnished with shield and has the same mounting dimensions.

122-247, -248



Cat. No.	Dimension L
122-227	2⅜
122-247	2⅜
122-248	2⅛

122-101

The 122-101 is a 7 pin steatite wafer socket of special design incorporating a base shield, retainer springs and provision for mounting button mica capacitors directly to the socket. Socket is specially designed for UHF use with tubes such as the 826, 829 and 832. Contacts and spring are silver plated and recessed to prevent movement. Grid terminals are designed so connecting wires may be isolated from other circuits and permit small grid coils to be mounted on the terminal ends. Four mounting holes are equally spaced 2.312 inches between centers.

Cat. No. 122-101

The 122-275 is a 5 pin steatite wafer socket for transmitting tubes having a GIANT 5 pin base such as the 4-125A and RK48. Contacts are of a superior construction, brass clip and steel spring, both cadmium plated, and are designed for high currents. Stray capacitance, each contact to ground, 2.1 mmf. (socket mounted on metal chassis). Adequate ventilation for tubes is provided by five ¼" holes spaced between contacts. Four mounting holes are equally spaced 2¼" between centers.

122-275

Cat. No. 122-275

The 122-244 is a 4 pin wafer socket of steatite insulation, for transmitting tubes having a SUPER JUMBO base such as the 805. Brass clip contacts and reinforcing steel springs are cadmium plated and are designed for high currents. Stray capacity contacts to ground, 1.25 mmf. Four mounting holes spaced 1⅞" between centers.

122-244

Cat. No. 122-244

124-212

The No. -212 socket for RCA833 or 833A. Base of steatite. Filament clamps incorporate "springs" which minimize strains on the glass tube seals and prevent breakage. Plate leads include laminated phosphor bronze strips for flexibility. Regularly supplied with 5⅛" plate leads. Other lengths available on special order.

Cat. No. 124-212

124-234

No. -234 for Western Electric 5D21, 705A, 715A, 715B Raytheon, RK72 and RK72 includes heavy steatite base and special locking device for retaining tube in socket.

Cat. No. 122-234

THE JOHNSON TUBE SOCKET GUIDE IS AVAILABLE UPON REQUEST.

MULTIPLE WIRE CONNECTORS

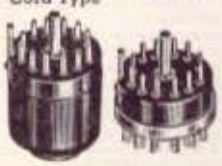
JOHNSON cable connectors provide a most efficient means of quickly connecting or disconnecting multiple electrical circuits in low-voltage control, audio and instrument service. Contacts accommodate No. 16 stranded wire, or No. 14 solid. Minimum surface creepage path for 12 connector types $\frac{1}{4}$", for 7 connector types $\frac{1}{8}$". Body material of molded black bakelite, back shells are brass dull black finished, shell liners are fibre. Plug and receptacle polarized for quick accurate insertion. The cadmium plated steel mounting yokes fit standard switch boxes and cover plates and are supplied with necessary hardware.

The multiple Wire connectors, tip plugs and jacks appearing on this page are former Mallory-Yaxley products.

RECEPTACLES

111-614

111-615 Chassis Type
Cord Type



PLUGS

111-625 111-617

Catalog Number	No. of Contacts	Connector Type
RECEPTACLES		
111-614	12	Chassis
111-615	12	Cord
111-644	7	Chassis
111-645	7	Cord
PLUGS		
111-617	12	Chassis
111-625	12	Cord
111-631	7	Chassis
111-635	7	Cord
PIN PLATE BRACKET MOUNTED		
111-680	7	
111-682	12	
MOUNTING YOKE		
111-6002	for 7 wire connectors	
111-6003	for 12 wire connectors	
MULTIPLE CONDUCTOR CABLE		
144-7	7 wire cable	
144-12	12 wire cable	

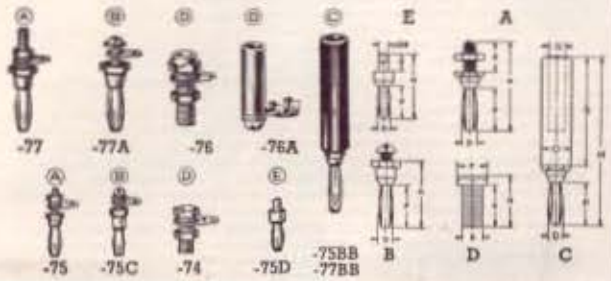
PIN PLATE Bracket Mounted

111-682

MOUNTING YOKES

111-6002, -6003

PLUGS AND JACKS



"BANANA SPRING" TYPE

Nickel-silver springs and high grade nickel plated brass screw machine parts with accurate threads and milled nuts. Studs extend full length of springs for added support.

75D is designed for riveting. Spring is beryllium copper.
75BB has 1⅝" black plastic handle; 75BR same but red.
77BB has 1¾" black plastic handle; 77BR same but red.

75 or 75A can be furnished with beryllium copper spring on special order, and all plugs can be furnished with nickel, cadmium or silver plating if required.

108-7451 is a red plastic insulated jack similar to the 108-74 and furnished with fibre washers. 108-7452 same but black.

If washers used for insulated mounting fits $\frac{1}{8}$" holes, $\frac{1}{4}$" maximum panel thinckness.

Cat. No. Plugs	Illus. Dwg.	S	P	D	H	G	O	Thread
108-75	A	3/8	.53	.170	1.115			6-32
108-75A	A	3/4	.53	.170	1.490			6-32
108-75BB	C	1 3/8	.53	.170	2.115	.215	1/4	
108-75BR	C	1 3/8	.53	.170	2.115	.215	1/4	
108-75C	B		.53	.170	.94			6-32
108-75D	E	1/8	.40	.155	.81			
108-77	A	5/8	.74	.300	1.77			1/4-28
108-77A	B	5/8	.74	.300	1.15			10-32
108-77BB	C	1 3/4	.74	.300	2.90	1/4	3/8	
108-77BR	C	1 3/4	.74	.300	2.90	1/4	3/8	

Jacks		F	D	S	H	B	Thread
108-74	D	5/8	1/8	1/2	.155		1/4-28
108-7451		1/2	1/8	1/2	.155		1/4-28
108-7452		1/2	1/4	1/2	.166		1/4-28
108-76	D	3/8	5/8	1/2	.277		1/8-24
108-76A	D	1/2		1 1/2	.279		1/8-20

"SPRING SLEEVE" TYPE

These jacks have maximum current carrying capacity, minimum resistance, great mechanical strength, and snug fit. Wiping action of spring on insertion insures good electrical contact. Tension is maintained by phosphor bronze "spring sleeves." two sizes available. Furnished regularly nickel plated, but cadmium or silver can be supplied on special order.

Cat. No. Plugs	D	S	P	H	Thread
106-71	.375	1/2	1 1/8	1 1/8	1/4-28 screw
106-73	.250	5/8	1	1	10-32 screw
106-73A	.250		1 1/4		10-32 tapped
Jacks					
106-70	1/2			1 1/2	1/4-20 screw
106-72	5/8			1 1/8	10-32 screw

PLASTIC HEAD TIP JACKS

REMOVABLE ROUND HEAD TIP JACK

105-520

Removable plastic heads in choice of colors listed. Supplied with fibre shoulder bushing and nickel plated hex nut. Standard finish is nickel plate on body. Mounts in ⅜" hole. Maximum panel thickness ⅛" where insulating washers are used, ¼" where omitted. ¼-32 thread.

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

MOLDED ROUND HEAD TIP JACK

Description same as remvoable head type except that brass body is molded integral with head, and additional phenolic washer is furnished. $\frac{1}{4}$"-40 thread.

105-418

No. 105-418—Red **No. 105-419**—Black

INSULATED COMBINATION JACK

105-420

Supplied with shoulder bushing, phenolic washer and one piece contact and nut. Maximum chassis thickness ⅛". Mounts in ⅜" diameter hole. Provides insulated jack for phonetip plugs and No. 75 series "Banana Spring" plugs.

No. 105-420—Red **No. 105-421**—Black

METAL HEAD TIP JACKS

Large Round Head

105-16

Supplied with fibre shoulder bushing, phenolic washer and hex nut. Mounts in ½" hole if shoulder bushing is used. $\frac{1}{4}$" maximum panel thickness. Contact is phosphor bronze cadmium plated.

No. 105-16

Small Round Head

105-416

Mounts in ⅜" hole when using fibre shoulder bushing furnished. ¼" maximum panel thickness.

No. 105-416

Headless Tip Jack

105-1

Metal parts brass. Body nickel plated. ¼-32" thread.

No. 105-1

Small Hex Head

105-417

Same as 105-416 except has hex head.

No. 105-417

Long Solderless Tip Plug

105-15

For use with tip jacks Nos. 105-16, and 105-420.

No. 105-15 List
No. 105-14—Solderless Tip Plug Long Sharpened Point

Short Solderless Tip Plug

105-415

For use with tip jacks Nos. 105-416, 105-417, 105-418, and 105-529.

No. 105-415

TWIN TIP JACKS

Mounting holes ⅞" centers. Molded black phenolic.

Cat. No.	Marking
105-401	Blank
105-4012	Speaker
105-4015	Phono

105-401 SHORTING TYPE TWIN TIP JACKS

Circuit closes automatically when tips are removed.

No. 105-432—Black **No. 105-433**—Red

105-432

THE JOHNSON "Q" AND JOHNSON "Q" BEAM

COMPLETE "Q" SYSTEMS

Cat. No.	Band (Meters)
137-2Q	2
137-6Q	6
137-10Q	10
137-20Q	20
137-40Q	40

The consistent results obtained by the thousands of users of the JOHNSON Q antenna system are due to the extremely high efficiency of this famous antenna. Applications include half-wave doublet, either horizontal or vertical, harmonic or "long wire" radiator, radiator-reflector, radiator director, "V" Beam, JOHNSON Q Beam and others.

The JOHNSON Q Beam is a special application of the Q system. It consists of two half-wave Q antennas spaced 1-5 wave and Q sections connected in parallel at the bottom. In ordering specify two Q antennas for the lower frequency of the two bands desired. For example if you want a Q Beam to operate on 10 and 20 meters, order two JOHNSON Qs for 20 meters.

The -2Q and -6Q use aluminum tubing for the radiating portion as well as for the matching section. They may be suspended overhead in the conventional manner or are self supporting with their end terminal plugs plugged into a 136-35 Jack Strip mounted on the transmitter. The 136-35 Jack Strip and 136-36 Plug Strip make an ideal feeder connection at the transmitter when the antenna is suspended.

Mycalex insulated fittings for use as described in "Q" antenna discussion above.

Cat. No. 136-35—Mounting Jack Strip .....
Cat. No. 136-36—Double Plug Strip .....

ALUMINUM "Q" TUBING

Cat. No.	Band (Meters)	Length
136-ST10	10	2-8'6"
136-ST20	20	4-8'6"
136-ST40	40	8-8'6"

"Q" SUSPENSION ASSEMBLY

136-106

Includes new type insulator and all necessary hardware for connecting "Q" matching section to antenna and transmission line. Insulator may also be used to bring off "Zepp" feeders from the flat top.

Cat. No.
136-39 —Suspension Assembly
136-106—Antenna Feeder Insulator only

FEEDER INSULATORS

Nos. 136-122, -124 and -126 are conventional feeder spreaders of high grade low absorption porcelain. Silicone impregnated for finest water repellent characteristics. No. 136-122 is provided with notches for 1½" line spacing. All have ⅜x½" cross section. No. 136-31 is a glazed porcelain transposition insulator which permits crossing transmission lines at frequent intervals to prevent radiation and provide 2" line spacing.

Cat. No.	Lgth.
136-122	2"
135-124	4"
136-126	6"
136-31	

136-122, -124, -126

136-31

"Q" SPACING BARS

136-33

Made of dense, highly vitrified white glazed porcelain, with aluminum tubing clamps. Used for spacing tubing in matching transformer applications. Clamps are arranged so that spacing is continuously variable from ⅛" to 3½" center to center.

No. 136-33—Spacing Bar.....

ENAMELLED COPPERWELD ANTENNA WIRE

JOHNSON Enameled Copperweld Antenna Wire is the ideal material for any system where the wire must not stretch nor sag. The steel core provides almost three times the strength of ordinary copper wire, the copper coating provides a low RF resistance and the enamel prevents corrosion. Prices are per 100 feet. Carried by most suppliers in bulk, it is available from the factory in any specified length.

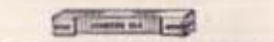
Cat. No.	B&S Gauge	Ft. per lb.	Breaking Strength
144-348	10	34½	1130 lbs.
144-350	12	54	720 lbs.
144-352	14	85	400 lbs.

ANTENNA INSULATORS

These insulators are of genuine WET PROCESS porcelain, with smooth white glazing. The all-porcelain types are 1" in diameter. Their long leakage path, low capacity, and freedom from moisture absorption result in exceptional efficiency. The Commercial Type is 1½" in diameter, for uses where much greater strength is necessary. End fittings are of non-corrosive aluminum alloy. No. 136-104 is a dry process 4" antenna insulator, ⅜" square for service where the strength of the 1" types is not required.

Cat. No.	Break Strength	Lgth.
135-104	400 lbs.	4"
136-107	800 lbs.	7"
136-112	900 lbs.	12"

No.	Break Strength	Net	Overall
136-151	5000 lbs.	8"	15½"
136-152	5000 lbs.	12"	19½"
136-153	5000 lbs.	20"	25½"



136-107, 136-112

136-151, -152, -153

RELAY RACK PANELS

Durable, resistant ⅛" thick aluminum relay rack panels finished in black wrinkle enamel. Lightness of aluminum cuts down overall weight of relay rack equipment, and is easier to work yet costs no more than steel panels. Fits 19" relay racks with "W.E." type notching, starting ¼" from the edge and alternating spaces of 1¼" and ½". Notches are clearly die-cut and edges accurately sheared.

Catalog No.	Height
196-161-4	1¾"
196-162-4	3½
196-163-4	5¼
196-164-4	7
196-165-4	8¾
196-166-4	10½
196-167-4	12¼
196-168-4	14
196-169-4	15¾
196-170-4	17½
196-171-4	19¼
196-172-4	21

NEW DIE-CUT CHASSIS AND BOTTOM PLATES

Johnson's new chassis offer the first major design advance in years. Die-cut butt joints in the ends plus smoothly formed corners give the practical equivalent of a solid drawn chassis. Single thickness of metal throughout allows location of components at any point. Wide bottom skirts allow attachment of bottom plates and add rigidity. Heavy 18 (.040") and 14 (.064") gauge aluminum give strength comparable to steel with the added advantages of light weight and easy machining. Etched satin finish—will not rust—no paint to scratch off.

ALUMINUM CHASSIS

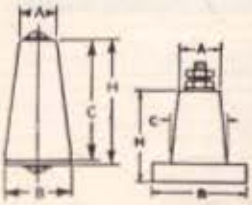
Part No.	Size	Gauge
195-350-2	7 x 5 x 2	18
195-351-2	7 x 7 x 2	18
195-352-2	9 x 7 x 2	18
195-353-2	9½x 5½x 2	18
195-354-2	10 x 5 x 3	18
195-356-2	11 x 7 x 2	18
195-357-2	12 x 7 x 3	18
195-358-2	12 x10 x 3	14
195-360-2	13 x 7 x 2	18
195-363-2	14 x10 x 3	14
195-364-2	15 x 7 x 3	14
195-366-2	17 x 4 x 3	14
195-370-2	17 x10 x 2	14
195-371-2	17 x10 x 3	14
195-373-2	17 x10 x 5	14
195-375-2	17 x11 x 3	14
195-377-2	17 x12 x 3	14
195-379-2	17 x13 x 2	14
195-380-2	17 x13 x 3	14
195-381-2	17 x13 x 4	14

ALUMINUM BOTTOM PLATES

195-470	17 x 10	18
195-474	17 x 11	18
195-476	17 x 12	18
195-479	17 x 13	18

JOHNSON insulators were introduced in the early twenties, and soon established the sort of dominance that occurs occasionally when one line offers more in choice of style and size; in advanced but practical design; and in mass production economy than others. This position has been maintained through the years by careful attention to the product, the line, and the needs of the user.

JOHNSON insulators are specifically designed for high R.F. Insulating materials were selected after exhaustive laboratory tests. Superior grade, low absorption, well glazed electrical porcelain, and Grade L 4 or better steatite are used.



135-20 135-22J 135-22

135-60 135-65

135-62 135-68

135-67 135-66

135-500 135-501 135-502 135-503 135-504

STAND-OFF AND CONE INSULATORS

The stand-off insulators feature heavy, breakage-resistant bases and adequate "glaze grooves" around mounting screw holes. Numbers 135-65, 135-66, 135-67 and 135-68 have unbreakable, etched aluminum bases.

The No. 500 cone insulator series are steatite for better high frequency insulation. Threads are tapped directly into the ceramic. Furnished complete with machine screws, brass and cushion washers.

STAND-OFF INSULATORS

Cat. No.	Dimensions A	B	M*	H	Hardware
Steatite					
135-20	¾	1¾	1⅛	1⅛	10-32
135-20J	¾	1¾	1⅛	1⅛	74 Jack
135-22	⅝	1⅛	1⅛	1	8-32
135-22J	⅝	1⅛	1⅛	1	74 Jack
135-24	⅜	1	⅝	⅝	6-32
Porcelain					
135-60	1⅛	2½	1⅞	4½	¼-20
135-62	⅞	1⅞	1⅜	2¾	¼-20
Metal Base Types					
135-65	⅜	1⅞	1½	1⅜	10-32
135-65J	⅜	1⅞	1½	1⅜	74 Jack
135-66	⅝	1¾	1⅜	2¾	¼-20
135-66J	⅝	1¾	1⅜	2¾	74 Jack
135-67	1⅛	2¼	1¾	4½	¼-20
135-67J	1⅛	2¼	1¾	4½	74 Jack
135-68	⅝	1¾	1⅜	2	10-32
135-68J	⅝	1¾	1⅜	2	74 Jack

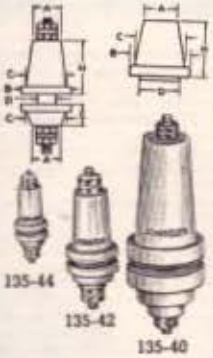
* Mounting centers.

STEATITE CONE INSULATORS

135-500	⅛	⅜	⅜	6-32
135-501	½	¾	1	8-32
135-502	½	1	1½	8-32
135-503	⅝	1½	2	10-32
135-504	¾	1½	3	10-32

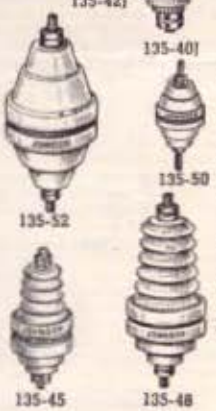
Of the insulators appearing under the headings "Steatite" all but the 500 series and the 135-55 are offered in this finer material for the first time. Their dielectric losses are but a fraction of those for the same parts in porcelain, and they are particularly recommended for high frequency work.

In addition to fine quality insulating materials the JOHNSON line distinguishes itself with a perfection of ceramic design; logical proportions; clean-cut accurate molding; and high grade nickel plated brass hardware, with milled (not stamped) nuts.

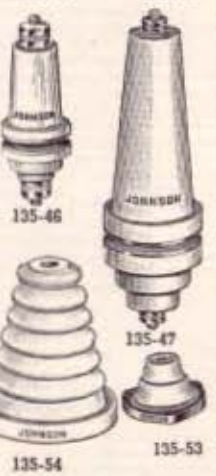


135-44 135-42 135-40

135-55 135-42J 135-40J



135-52 135-50 135-45 135-48



135-46 135-47 135-54 135-53

115-240, -241, -242

THRU-PANEL INSULATORS AND BUSHINGS

In the thru-panel and bushing series special attention has been given to obtaining high mechanical strength through heavier construction and at the same time increasing the breakdown voltage. Flat mounting surfaces with cushion washers eliminate breakage. Bottom pieces have long internal and external portions for higher breakdown voltage rating, and grooved surfaces to increase leakage path. Jack types have terminals permitting connection above as well as below the panel.

JOHNSON lead-in bushings are designed to have even greater mechanical strength and long leakage path in proportion to size. Numbers 135-53 and 135-54 are supplied as single porcelain parts including cushion washers.

Nos. 135-50 and 135-55 are steatite and have a special interlocking feature which permits mounting on thin panels without extra spacing washers.

Nos. 20, 20J, 22, 22J and 24 are now also steatite with heavily plated brass hardware.

THRU-PANEL INSULATORS

Cat. No.	Dimensions A	B	D	E	H	Hardware
Steatite						
135-40	⅜	⅜	⅛	½	1⅛	10-32
135-40J	⅜	⅜	⅛	½	1⅛	74 Jack
135-42	½	⅝	400	⅝	⅞	10-32
135-42J	½	⅝	400	⅝	⅞	74 Jack
135-44	⅝	⅞	205	⅞	⅝	6-32
135-45	⅝	1¼	½	⅜	1⅜	10-32
Porcelain						
135-45J	⅝	1¼	½	⅜	1⅜	74 Jack
135-46	⅜	1⅝	⅜	1	2¼	¼-20
135-46J	⅜	1⅝	⅜	1	2¼	74 Jack
135-47	1⅛	2½	⅜	1½	4½	¼-20
135-47J	1⅛	2½	⅜	1½	4½	74 Jack
135-48	⅝	1⅝	⅜	⅛	2	10-32
135-48J	⅜	1⅝	⅜	⅛	2	74 Jack

LEAD-IN BUSHINGS

Steatite					
135-50	⅜	¾	⅜	½	6-32
135-55	½	¾	⅜	¼	6-32
Porcelain					
135-51	⅝	1¼	⅜	⅜	10-32
135-52	⅞	1¾	1⅛	1⅛	¼-20
135-53	1⅛	2½	1⅜	1¾	
135-54	1	3½	2⅛	4	

MOUNTING FLANGES

Stamped aluminum Mounting Flanges cast aluminum for Lead-in Bushings 135-53 and 135-54.

Cat. No.	For Bushing No.
135-90	135-53
135-91	135-54

THREADED BRASS ROD

Intended primarily for use with lead-in bushings 135-53 and 135-54. Accurately cut threads, heavy nickel plating, complete with 4 washers and 4 nuts, ¼" diameter, ¼-20 thread. It has many other uses in radio construction.

Cat. No.	Length
115-240	8"
115-241	10"
115-242	15"

Gothard INDICATOR LIGHT ASSEMBLIES

Gothard Indicator Light Assemblies were for many years made by the Gothard Manufacturing Co. of Springfield, Illinois, who established a reputation for sound engineering design, excellent material and workmanship, a well rounded line, and fair aggressive merchandising. With its purchase by Johnson, continuance and improvement on these factors at every possible point are assured.

This listing includes most of the standard units in greatest demand, but many other types are readily available. Inquiries are solicited for any not shown. Special assemblies can be furnished in production quantities.

Think of Johnson-Gothard first for Pilot Lights.

1 INCH—CAND. SCREW BASE

Underwriters' approved. Porcelain insulation. Solder terminals. Fits 1 inch hole. 1 inch jewel in friction type holder with polished chrome bezel. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.

For S6 bulb, candelabra screw base.

147-1000 Faceted Jewel _____
147-1001 Smooth Jewel _____
147-1002 Colored Disc* _____

For NE-45 Neon (T 4 ½) bulb. No resistor required for 110 volts.

147-1003 Faceted Jewel _____
147-1004 Smooth Jewel _____
147-1005 Colored Disc* _____

1 INCH—CAND. BAYONET BASE

Hard rubber and fiber insulation. Set screw type terminals. Fits 1 inch hole. 1 inch jewel in friction type holder with polished chrome bezel. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.

Single contact, for G6 bulb, bayonet base.

147-1006 Faceted Jewel _____
147-1007 Smooth Jewel _____
147-1008 Colored Disc* _____

Double contact, for G6 bulb, bayonet base.

147-1009 Faceted Jewel _____
147-1010 Smooth Jewel _____
147-1011 Colored Disc* _____

Double contact, for NE-48 Neon (G6) bulb, requires 30,000 ohm external resistor for 110-115 volts.

147-1012 Faceted Jewel _____
147-1013 Smooth Jewel _____
147-1014 Colored Disc* _____

Jewel Holders all on this page have slotted sleeves which snap in place and hold by friction. All have polished chrome bezels. See next page for similar units with threaded jewel holders.

1 INCH—CAND. SCREW BASE

Underwriters' approved. Molded phenolic insulation. Binding screw terminals. Fits 1 inch hole. 1 inch jewel in friction type holder with polished chrome bezel. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.

For S6 bulb, candelabra screw base.

147-1032 Faceted Jewel _____
147-1033 Smooth Jewel _____
147-1034 Colored Disc* _____

For NE-45 Neon (T 4 ½) bulb. No resistor required for 110-115 volts.

147-1035 Faceted Jewel _____
147-1036 Smooth Jewel _____
147-1037 Colored Disc* _____

1 INCH—CAND. BAYONET BASE

Underwriters' approved (except single contact styles). Molded phenolic insulation. Binding screw terminals. Fits 1 inch hole. 1 inch jewel in friction type holder with polished chrome bezel. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.

Single contact, for G6 bulb, bayonet base.

147-1050 Faceted Jewel _____
147-1051 Smooth Jewel _____
147-1052 Colored Disc* _____

Double contact, for G6 bulb, bayonet base.

147-1053 Faceted Jewel _____
147-1054 Smooth Jewel _____
147-1055 Colored Disc* _____

Double contact, for NE-48 Neon (G6) bulb, requires 30,000 ohm external resistor for 110-115 volts.

147-1056 Faceted Jewel _____
147-1057 Smooth Jewel _____
147-1058 Colored Disc* _____

Double contact, for NE-48 Neon (G6) bulb, with built-in 30,000 ohm resistor for 110-115 volts.

147-1076 Faceted Jewel _____
147-1077 Smooth Jewel _____
147-1078 Colored Disc* _____

1 INCH—DETACHABLE SOCKETS

This series permits installing bulbs from rear, by detaching the spring bracket, as well as from the front. Fits 1 inch hole. 1 inch jewel in friction type holder with polished chrome bezel. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.

Min. screw socket, for G3½ and T3¼ bulbs.

147-800 Faceted Jewel _____
147-801 Smooth Jewel _____

Candelabra screw socket, for S6 bulbs.

147-802 Faceted Jewel _____
147-803 Smooth Jewel _____

Min. bayonet socket, for G3½ & T3¼ bulbs.

147-804 Faceted Jewel _____
147-805 Smooth Jewel _____

***COLORED DISCS**

Where this designation appears, a colored plastic disc is placed behind a clear sandblasted (frosted) smooth jewel, to conceal color until lit. Also prevents external light from giving appearance of bulb being lit.

In addition, lettering, numerals, or insignia may be printed on a plastic disc back of the jewel, and arranged to be invisible either continuously or only after lamp is lit.

Bulbs used on all pilot lights may be identified from these illustrations, but are not included in prices.

DO NOT FAIL TO SPECIFY COLOR OF JEWELS. PRICES DO NOT INCLUDE BULBS.

JOHNSON-GOTHARD PILOT LIGHTS

1 INCH—CAND. SCREW BASE

Underwriters' approved. Threaded jewel holder, otherwise similar to Nos. 147-1000, etc., on previous page. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.

147-1200 Faceted Jewel
147-1201 Smooth Jewel
147-1202 Colored Disc*

1 INCH—CAND. BAYONET BASE

Underwriters' approved. Threaded jewel holders, otherwise similar to Nos. 147-1032, etc., on previous page.

Cat. No.

Single contact, for G6 bulb, bayonet base.
147-1203 Faceted Jewel
147-1204 Smooth Jewel
147-1205 Colored Disc*

Double contact, for G6 bulb, bayonet base.
147-1206 Faceted Jewel
147-1207 Smooth Jewel
147-1208 Colored Disc*

Variable light intensity, controlled either by shutters or polarized discs, can be obtained in most styles of Johnson-Gothard pilot lights.

1 INCH—CAND. SCREW BASE

Threaded jewel holders, otherwise similar to Nos. 147-1006, etc., on previous page. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.

For S6 bulb, candelabra screw base.
147-1209 Faceted Jewel
147-1210 Smooth Jewel
147-1211 Colored Disc*

For NE-45 Neon (T 4½) bulb. No resistor required for 110-115 volts.
147-1212 Faceted Jewel
147-1213 Smooth Jewel
147-1214 Colored Disc*

1 INCH—LUCITE CAP

Underwriters' approved. Transparent Lucite caps providing forward mounting of bulb for maximum light visibility, especially suitable for neon glow lamps. Fits 1 inch hole. Polished chrome bezel. -1218 has solder terminals, others binding screw terminals. Specify color desired: Red, Green, Amber, Blue, Opal, Clear. Do not use blue or green with neon glow lamps.

Cat. No.

147-1217 For NE-45 Neon. No resistor required.

147-1218 For miniature bayonet (T3 ¼) bulbs, filament or neon. NE-51 requires external 200,000 ohm resistor.

147-1219 Double contact cand. bayonet base NE-48 bulb requires external 30,000 ohm resistor.

147-1220 Same as 147-1219 but with built-in 30,000 ohm resistor.

1¼ INCH "BEEHIVE" LENS

Underwriters' approved (except single contact style). High visibility is obtained by the beehive shape placing light source in front of panel. Molded phenolic insulation, Navy Spec. 17P5-FBG. Fits 1 inch hole. Polished chrome bezel. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.

147-1600 Candelabra base, S6 bulb
147-1604 S.C. bay. base, G6 bulb
147-1605 D.C. bay. base, G6 bulb

For neon glow lamps use red, amber or clear lenses only. No blue or green light is emitted from these lamps.

*See previous page, column 3, for description of items designated with *.

½ INCH JEWEL

Fits ⅜ inch mounting hole. Removable (threaded) jewel holder for installing bulb from front. Solder terminals. Specify color desired: Red, Green Amber, Blue, Opal, Clear.

Cat. No.

For T 3¼ miniature bayonet bulbs.
147-1110 Faceted Jewel
147-1111 Smooth Jewel
For G 3½ miniature bayonet bulbs.
147-1112 Faceted Jewel
147-1113 Smooth Jewel

LUCITE CAP

Underwriters' approved. Fits ⅜ inch hole. Transparent Lucite cap permits bulb to extend far forward for maximum light visibility. Especially suitable for NE-51 neon glow lamp. Solder terminals. Specify color desired: Red, Green, Amber, Opal, Clear (Green is not recommended for neon lamps.)

Cat. No.

147-1142 For T3 ¼ bulbs (filament
147-1143 For NE-51 neon (T3¼) bulb, with built-in 20,000 ohm resistor.

147-1144 Same as -1143 but 100,000 ohm resistor for brighter glow but decreased life.

PANEL LIGHT

For front panel illumination. Has polished nickel hood, easily removable for lamp replacement; can be rotated to any position. Fits ½ inch mounting hole. Made for miniature bayonet or screw base, T 3 ¼ or G 3 ½, bulbs.

Cat. No.

147-330 Miniature Screw Base
147-329 Miniature Bayonet Base

DO NOT FAIL TO SPECIFY COLOR OF JEWELS. PRICES DO NOT INCLUDE BULBS.

JOHNSON-GOTHARD PILOT LIGHTS—BRACKET TYPE

1 INCH REMOVABLE JEWEL

Fits 1 inch hole. Polished chrome bezel. Colors: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.

Min. screw socket, for G3 ½ and T3 ¼ bulbs.
147-100 Faceted Jewel
147-101 Smooth Jewel
Min. bay. socket, for G3 ½ and TA ¼ bulbs.
147-106 Faceted Jewel
147-107 Smooth Jewel
Candelabra screw for S6 bulb.
147-103 Faceted Jewel
147-104 Smooth Jewel

¾ INCH JEWEL—HORIZONTAL

Fits $\frac{13}{16}$ inch hole. For G3 ½ bulbs. Colors: Red, Green, Amber, Blue, Opal, Clear.

Fits $\frac{13}{16}$ inch hole. For G3 ½ bulbs. Colors: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.

Miniature screw socket.
147-700 Faceted Jewel
147-701 Smooth Jewel
Miniature bayonet socket.
147-703 Faceted Jewel
147-704 Smooth Jewel

¾ INCH JEWEL—VERTICAL

Fits $\frac{13}{16}$ inch hole. Colors: Red, Green, Amber, Blue, Opal, Clear.

Fits $\frac{13}{16}$ inch hole. Colors: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.

Min. screw socket for G3 ½ bulb.
147-200 Faceted Jewel
147-201 Smooth Jewel
Min. bay. socket for G3 ½ bulb.
147-203 Faceted Jewel
147-204 Smooth Jewel
Candelabra screw for S6 bulb.
147-206 Faceted Jewel
147-207 Smooth Jewel

VARIABLE LIGHT INTENSITY

Pilot lights similar to 147-400 thru 147-404 can be furnished with either polarized or shutter type variable light intensity jewel holders. Information on request.

See Pages J-64 to J-70 for additional listings of the Johnson line of Variable Condensers, Inductors, Chokes, Tube Sockets, Insulators, Antenna Equipment, and miscellaneous hardware.

½ INCH JEWEL—VERTICAL

Fits $\frac{7}{16}$ inch mounting hole. Colors: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.

Min. screw socket for G3 ½ bulb.
147-300 Faceted Jewel
147-301 Smooth Jewel
Min. bay. socket for G3½ bulb.
147-306 Faceted Jewel
147-307 Smooth Jewel
Candelabra screw for S6 bulb.
147-303 Faceted Jewel
147-304 Smooth Jewel

⅜ INCH JEWEL—VERTICAL

Fits $\frac{3}{8}$ inch mounting hole, otherwise similar to ½ inch vertical types listed above. Colors: Red, Green, Amber, Blue, Opal, Clear.

Fits $\frac{3}{8}$ inch mounting hole, otherwise similar to ½ inch vertical types listed above. Colors: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.

Min. screw socket for G3 ½ bulb.
147-500 Faceted Jewel
147-501 Smooth Jewel
Min. bay. socket for G3 ½ bulb.
147-503 Faceted Jewel
147-504 Smooth Jewel

JEWEL ASSEMBLIES

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

1 inch jewel, polished chrome bezel, with mounting sleeve to fit 1 inch hole, fiber washer and nut.

Cat. No.
147-110 Faceted Jewel
147-111 Smooth Jewel
147-112 Colored Disc*

¾ inch jewel in polished chrome holder, fits $\frac{13}{16}$ inch mounting hole.

147-210 Faceted Jewel
147-211 Smooth Jewel

½ inch jewel, nickel plated, threaded holder and mounting sleeve to fit $\frac{7}{16}$ hole.

147-410 Faceted Jewel
147-411 Smooth Jewel

½ inch jewel, nickel plated holder and nut, fits $\frac{7}{16}$ inch mounting hole.

147-310 Faceted Jewel
147-311 Smooth Jewel

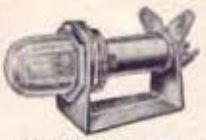
½ INCH—REMOVABLE JEWEL

Horizontal type. Fits $\frac{13}{16}$ inch mounting hole. For G3 ½ and T3 ¼ bulbs. Colors: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.

Miniature screw socket.
147-400 Faceted Jewel
147-401 Smooth Jewel
Miniature bayonet socket.
147-403 Faceted Jewel
147-404 Smooth Jewel

LUCITE CAP—REMOVABLE



Fits $\frac{13}{16}$ inch mounting hole. Bulb sets well forward in Lucite cap for maximum visibility. Colors: Red, Green, Amber, Opal, Clear.

(Avoid green with neon glow lamps.)

Cat. No.

147-406 Min. bayonet T3 ¼ bulb.
147-407 Same as 147-406 but with 200,000 ohm built-in resistor for NE-51 neon bulb.
147-408 Same as 147-407 but 100,000 ohms. Brighter glow with reduced lamp life.

BULB REMOVER

Rubber tool makes easy removal or insertion of bulbs. Double ended, for both miniature and candelabra sizes.

147-999

DIAL LIGHT BRACKETS

Brackets insulated on all types. Many other styles and combinations can be furnished from available tools, also with wire leads.

147-610 147-611

147-600 147-601
147-620 147-621

147-640 147-641

147-630 147-631

Cat. No.	Socket
147-600	Miniature Screw
147-601	Miniature Screw
147-610	Miniature Bayonet
147-611	Miniature Bayonet
147-620	Candelabra Screw
147-621	Candelabra Screw
147-630	Miniature Bayonet
147-631	Miniature Bayonet
147-640	Miniature Screw
147-641	Miniature Screw

DO NOT FAIL TO SPECIFY COLOR OF JEWELS. PRICES DO NOT INCLUDE BULBS.

JOHNSON

SPEED-X

SPEED-X keys, formerly made by Les Logan Co. of San Francisco, Calif., have attained a pre-eminent position as the leading complete line. Now manufactured by JOHNSON, their reputation will be maintained, and improved wherever possible.

HIGH SPEED SEMI-AUTOMATIC KEYS

SPEED-X Semi-Automatic Keys are designed and constructed to rigid specifications and are approved by the experienced professional and amateur C. W. operators. They are fully adjustable from lowest to highest speeds. Manufactured in four distinctive and attractive models. Fully guaranteed against any defect in material or workmanship. Bases of all models drilled for stationary mounting.

STANDARD MODEL 114-500. New-Improved Standard Model Semi-Automatic Key mounted on extra heavy steel base 3½" x 6¼" x ½" finished in attractive wrinkle baked enamel. Mounted on four rubber feet to insure stationary position at all times. The finish will not scratch or chip and will last indefinitely. The frame is finished same as base and has five adjustments with lock nuts, assuring dependable operations at all speeds. Vibrator arm, posts, switch and all machine parts heavily plated in beautiful satin chromium. Complete with adjustable weight, two sets ⅛" pure silver contacts, circuit-closing switch and two paddles adjustable to any desired height. Net weight 4½ lbs.

114-500_____

114-500-L (Left-handed model)_____

MODEL 114-501. New-Improved Beautiful Chrome finish. Heavy steel base 6¼" x 3½" x ½" with four non-slip rubber feet. Heavy brass connector strips mounted under base. Heavy die cast frame with same finish as base and with five screws for sensitive adjustments. Vibrator is designed to obtain slowest and fastest speeds required by high speed operators. Two sets of ¼" pure silver contacts. Pigtail connections to vibrating arm. Perfectly aligned free acting vibrator bearings. Lock nuts on all adjustments. Paddles adjustable to any required height. All machine parts heavily chrome plated, which makes this the most outstanding semi-automatic key on the market. Furnished with circuit closing switch. Net Weight 4½ lbs.

114-501_____

114-501-L (Left-handed model)_____

Nos. 500, 501

114-515

AMATEUR MODEL 114-515. Baked Black Wrinkle Enamel Finished Steel Base 6¼" x 3" x ⅜" with four rubber feet to prevent slipping or tilting. Heavy Brass connector strips. Die Cast Frame finished same as base with adjustable trunion screws. Chromium brass Vibrator has main spring and U-spring made of clock spring for smooth snappy action. Adjustable weight. Two adjustable black fibre paddles. Two sets ⅛" pure silver contacts. Lock nuts for every adjustment. Deadener wheel, post screws, springs and terminals chrome plated. Packed in attractive carton. Net Weight 3¼ lbs.

114-515_____

114-515-L (Left-handed model)_____

JUNIOR MODEL 115-510. Die Cast Base 2¾" x 5" x ¾" finished in black wrinkle baked enamel concealing heavy brass connector strips. Frame is same finish as base and all other parts are chromium plated. Vibrator Arm same as Standard model with lots of pep. Adjustable from eight words per minute to as high a rate as desired. Two sets of ⅛" pure silver contacts. adjustable weight and two adjustable paddles. Circuit closing switch mounted on base. Being small, compact and streamlined, this semi-automatic key is an outstanding value. A light-weight but sturdy built machine for clean-cut sending. Net Weight 2½ lbs.

115-510_____

REPLACEMENT PARTS

114-370

114-330

114-335

114-330 Adjustable Weight ...
114-335 Key Springs ...
114-336 Dash Spring ...
114-340 Set ⅛" Contacts ...
114-341 Set ¼" Contacts ...
114-345 (2) ⅛" Contacts ...
114-346 (2) ¼" Contacts ...
114-350 Knob ...
114-360 Navy Knob ...
114-362 ¾" Chrome Screw ...
114-363 1" Chrome Screw ...
114-364 ⅛" Knurled Nut ...
114-375 Vibrator Arm Comp. ...
114-376 Vibrator Arm Only ...
114-370 Adjustable Paddle ...
114-390 Cord and Plug ...
114-390 U-Spring ⅛" Contact
114-391 U-Spring ¼" Contact

114-333 Self-Locking Adj. weight ...

114-360

114-350

114-390

114-444 KIT

An assortment of the best selling parts for all makes of keys, selected from the above list, and packed in a beautiful display box.

JOHNSON
FIELD REPRESENTATIVES

Atlanta, Georgia
JAMES MILLAR ASSOCIATES
1000 Peachtree St., N.E.
P.O. Box No. 116, Station C
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Phone —Kenmore 5580

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ELLINGER SALES COMPANY
9 South Clinton Street
Phone—Central 1894

Columbus, Ohio
WILLIAM E. McFADDEN
85 East Gay Street
Phone—Main 3363

Denver 10, Colorado
RONALD G. BOWEN
1886 So. Humboldt St.
Phone—Spruce 9368

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Phone—Randolph 7050

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HERBERT A. ROES & CO.
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Phone—Harrison 2036

Los Angeles 15, California
DON C. & WM. H. WALLACE
Bendix Bldg., 1206 Maple
Phone—Richmond 7-0401

Minneapolis, Minnesota
FRED B. HILL
256 First Avenue North
Phone—Main 8353

New Orleans, Louisiana
J. E. MUNIOT, JR.
Southern Sellers
918 Union Street
Phone—Canal 1881

New York—Jersey City
LLOYD W. OLANDER
880 Bergen Ave.
Jersey City 6, New Jersey
Phone—Journal Sq. 5-5836

Philadelphia 2, Pennsylvania
S. K. MACDONALD
1531 Spruce Street
Phone—Kingsley 5-1205

Pittsburgh 22, Pennsylvania
S. K. MACDONALD
715-716 State Theatre Bldg.
335 Fifth Street
Phone—Atlantic 2253

San Francisco 2, California
LES LOGAN SALES CO.
530 Gough St.
Phone—Hemlock 5281

Seattle 1, Washington
DAVE M. LEE CO.
2626 Second Ave.
Phone—Main 5512

Syracuse 9, New York
WALLY B. SWANK
400 Cherry Rd.
Phone—8-1528

Toronto, Ontario, CANADA
A. C. SIMMONDS & SONS
301 King Street East
Phone—Waverly 8077

Washington, D.C.
S. K. MACDONALD
217 Riggs Bank Bldg.
14th Park Road N.W.
Phone—Columbia 3938

Winnipeg, Manitoba, CANADA
C. M. ROBINSON CO.
207 Scott Block
Phone—96-789

EXPORT
M. SIMONS & SON CO., INC.
25 Warren Street
New York 7, New York
Phone—7-5513
Cable Address—Simontrice, N. Y.

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JOHNSON

RADIO ELECTRONIC PRODUCTS

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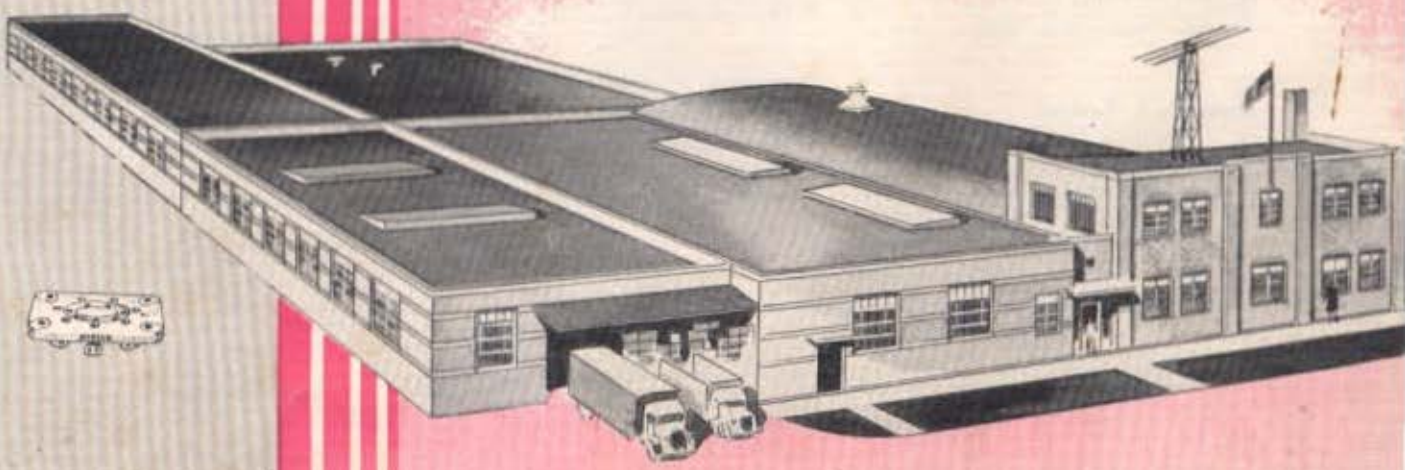

E. F. JOHNSON COMPANY

WASECA, MINNESOTA, U.S.A.

PRICE LIST

EFFECTIVE AUGUST 23, 1948

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

FOR CATALOG 970B

Part No.	Cat. No.	Page	List Price
101-760	.....	3	.60
101-762	.....	3	1.15
102-750	.....	3	1.75
102-752	.....	3	2.50
102-754	.....	3	3.00
104-250	.....	2	1.00
104-2503	.....	2	1.10
104-251	.....	2	1.40
104-251A	.....	2	1.40
104-251B	.....	2	1.40
104-252	.....	2	.90
104-258	.....	2	.35
104-259	.....	2	1.50
104-2593	.....	2	1.45
104-260	.....	2	1.00
104-261	.....	2	4.25
104-262	.....	2	.85
104-263	.....	2	.90
105-1	.....	5	.10
105-14	.....	5	.22
105-15	.....	5	.20
105-16	.....	5	.50
105-401	.....	5	.60
105-4012	.....	5	.60
105-4015	.....	5	.60
105-415	.....	5	.18
105-416	.....	5	.20
105-417	.....	5	.15
105-418	.....	5	.30
105-419	.....	5	.30
105-420	.....	5	.30
105-421	.....	5	.30
105-432	.....	5	.60
105-433	.....	5	.60
105-520	.....	5	.20
105-521	.....	5	.20
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105-527	.....	5	.20
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105-530	.....	5	.20
106-70	.....	5	.50
106-71	.....	5	.25
106-72	.....	5	.35
106-73	.....	5	.15
106-73A	.....	5	.15
108-74	.....	5	.11
108-7451	.....	5	.25
108-7452	.....	5	.25
108-75	.....	5	.12
108-75A	.....	5	.13
108-75BB	.....	5	.40
108-75BR	.....	5	.40
108-75C	.....	5	.13
108-75D	.....	5	.10
108-76	.....	5	.35
108-76A	.....	5	.30
108-77	.....	5	.30
108-77A	.....	5	.35
108-77BB	.....	5	.50
108-77BR	.....	5	.50
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110-885	.....	3	4.00
110-886	.....	3	1.90
110-887	.....	3	2.75
110-888	.....	3	2.75
110-889	.....	3	4.25
110-890	.....	3	4.25
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111-6003	.....	5	.25
111-614	.....	5	2.00
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111-617	.....	5	2.10
111-625	.....	5	2.40
111-631	.....	5	1.45
111-635	.....	5	1.70
111-644	.....	5	1.00
111-645	.....	5	1.25
111-680	.....	5	1.45
111-682	.....	5	1.60
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114-300L	.....	12	2.00
114-301	.....	12	3.00
114-301L	.....	12	3.25
114-301S	.....	12	3.50
114-301SL	.....	12	3.75
114-305	.....	12	1.90
114-306	.....	12	1.90
114-310	.....	12	3.25
114-310L	.....	12	3.50
114-310S	.....	12	3.75
114-310SL	.....	12	4.00
114-311	.....	12	4.00
114-311L	.....	12	4.25
114-311S	.....	12	4.50
114-311SL	.....	12	4.75
114-312	.....	12	3.25
114-312L	.....	12	3.50
114-312S	.....	12	3.75
114-312SL	.....	12	4.00
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114-316L	.....	12	3.50
114-316S	.....	12	3.75
114-316SL	.....	12	4.00
114-320	.....	12	4.25
114-321	.....	12	5.00
114-326	.....	12	4.25
114-330	.....	11	.25
114-333	.....	11	.50
114-335	.....	11	.10
114-336	.....	11	.10
114-340	.....	11	1.00
114-341	.....	11	2.00
114-345	.....	11	.20
114-346	.....	11	.50
114-350	.....	11	.20
114-360	.....	11	.30
114-362	.....	11	.13

Part No.	Cat. No.	Page	List Price
114-363		11	.15
114-364		11	.10
114-370		11	.25
114-375		11	3.00
114-376		11	1.75
114-380		11	1.50
114-390		11	.60
114-391		11	.75
114-400		12	2.00
114-444		11	20.00
114-450		12	4.50
114-500		11	17.50
114-500L		11	19.50
114-501		11	25.00
114-501L		11	27.50
114-510		11	13.50
114-515		11	12.50
114-515L		11	15.00
115-100		1	.15
115-101		1	.15
115-240		7	.50
115-241		7	.60
115-242		7	.70
115-253		2	.40
115-254		2	.55
115-255		2	.20
115-256		2	.40
115-2562		2	.60
115-838		3	1.25
115-840		3	.03
119-838		3	1.35
119-839		3	1.40
119-840		3	1.50
119-841		3	1.75
119-843		3	1.50
119-846		3	.35
119-848		3	.16
119-849		3	.12
119-850		3	1.80C
119-851		3	1.80C
119-852		3	.06
119-854		3	.12
120-267		4	.50
120-277B		4	.75
121-235		4	1.25
121-245		4	2.00
121-265		4	1.10
122-101		4	3.00
122-217		4	.75
122-224		4	.60
122-225		4	.65
122-226		4	.70
122-227		4	.75
122-228		4	.80
122-234		4	3.00
122-237		4	1.10
122-244		4	2.00
122-247		4	1.25
122-248		4	1.25
122-275		4	1.75
123-209		4	1.50
123-209B		4	1.60
123-209S		4	2.40
123-209SB		4	2.50
123-210		4	1.50
123-210B		4	1.60
123-210F		4	3.00
123-211		4	1.85
123-211B		4	2.10
123-211S		4	3.25
123-211SB		4	3.50
123-211F		4	4.20
123-216		4	3.00
123-216B		4	3.40
123-216S		4	4.75
123-216SB		4	5.15
124-212		4	10.00
124-213		4	2.00
124-214		4	2.75
124-215		4	4.25
133-277S		4	.15
133-278A		4	.20
133-278B		4	.20
133-817		3	.35
133-818		3	.35
133-819		3	.35
133-820		3	.35
135-20		7	.20
135-20J		7	.25
135-22		7	.18
135-22J		7	.23
135-24		7	.14
135-40		7	.35
135-40J		7	.45
135-42		7	.30
135-42J		7	.40
135-44		7	.25
135-45		7	.45
135-45J		7	.60
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135-48J		7	.80
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135-51		7	.50
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135-60		7	.90
135-62		7	.50
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135-65J		7	.35
135-66		7	.70
135-66J		7	.90
135-67		7	.85
135-67J		7	1.10
135-68		7	.40
135-68J		7	.50
135-90		7	.35
135-91		7	.70
135-500		7	.30
135-501		7	.35
135-502		7	.65
135-503		7	.75
135-504		7	1.45
136-ST10		6	4.50
136-ST20		6	9.50
136-ST40		6	18.00
136-31		6	.16
136-32		*	.15
*Note 136-32 strain insulator not listed in present catalog but is again available.			
136-33		6	.60
136-35		6	2.00
136-36		6	1.00
136-39		6	3.25
136-104		6	.20
136-106		6	.60
136-107		6	1.10
136-112		6	1.20
136-122		6	.16
136-124		6	.23
136-126		6	.30
136-151		6	9.00
136-152		6	12.00
136-153		6	17.50
137-2Q		6	7.00
137-6Q		6	10.50
137-10Q		6	9.75
137-20Q		6	16.50
137-40Q		6	28.00
144-7		5	.35
144-12		5	.70
144-348		6	4.45
144-350		6	2.90
144-352	Temporarily Discontinued		
147-100		10	.80
147-101		10	.80
147-103		10	.85
147-104		10	.85
147-106		10	.85
147-107		10	.85
147-110		10	.70
147-111		10	.70
147-112		10	.80
147-200		10	.60
147-201		10	.60
147-203		10	.65
NOTE: 147-203 and -206 exchanged in catalog 970 and 970B.			
147-204		10	.65
NOTE: 147-204 and -207 exchanged in catalog 970 and 970B.			
147-206		10	.65
See note above.			
147-207		10	.65
See note above.			
147-210		10	.40
147-211		10	.40
147-300		10	.40
147-301		10	.40
147-303		10	.45
147-304		10	.45
147-306		10	.45
147-307		10	.45
147-310		10	.25
147-311		10	.25
147-329		9	.99

Part No.	Cat. No.	Page	List Price
147-330	.....	9	.80
147-400	.....	10	.55
147-401	.....	10	.55
147-403	.....	10	.60
147-404	.....	10	.60
147-406	.....	10	.55
147-407	.....	10	.70
147-408	.....	10	.70
147-410	.....	10	.40
147-411	.....	10	.40
147-500	.....	10	.33
147-501	.....	10	.33
147-503	.....	10	37
147-504	.....	10	.37
147-600	.....	10	.13
147-601	.....	10	.13
147-610	.....	10	.16
147-611	.....	10	.16
147-620	.....	10	.15
147-621	.....	10	.15
147-630	.....	10	.17
147-631	.....	10	.17
147-640	.....	10	.14
147-641	.....	10	.14
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147-704	.....	10	.65
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147-801	.....	8	1.05
147-802	.....	8	1.10
147-803	.....	8	1.10
147-804	.....	8	1.10
147-805	.....	8	1.10
147-999	.....	10	.50
147-1000	.....	8	1.40
147-1001	.....	8	1.40
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147-1003	.....	8	1.40
147-1004	.....	8	1.40
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147-1006	.....	8	1.60
147-1007	.....	8	1.60
147-1008	.....	8	1.70
147-1009	.....	8	1.60
147-1010	.....	8	1.60
147-1011	.....	8	1.70
147-1012	.....	8	1.60
147-1013	.....	8	1.60
147-1014	.....	8	1.70
147-1032	.....	8	1.65
147-1033	.....	8	1.65
147-1034	.....	8	1.75
147-1035	.....	8	1.65
147-1036	.....	8	1.65
147-1037	.....	8	1.75
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147-1052	.....	8	1.85
147-1053	.....	8	1.75
147-1054	.....	8	1.75
147-1055	.....	8	1.85
147-1056	.....	8	1.75
147-1057	.....	8	1.75
147-1058	.....	8	1.85
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147-1077	.....	8	2.00
147-1078	.....	8	2.10
147-1110	.....	9	1.15
147-1111	.....	9	1.15
147-1112	.....	9	1.15
147-1113	.....	9	1.15
147-1142	.....	9	1.10
147-1143	.....	9	1.25
147-1144	.....	9	1.25
147-1200	.....	9	1.65
147-1201	.....	9	1.65
147-1202	.....	9	1.75
147-1203	.....	9	1.85
147-1204	.....	9	1.85
147-1205	.....	9	1.95
147-1206	.....	9	1.85
147-1207	.....	9	1.85
147 1208	.....	9	1.95
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147-1211	.....	9	2.00
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147-1213	.....	9	1.90
147-1214	.....	9	2.00
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147-1218	.....	9	1.60
147-1219	.....	9	2.10
147-1220	.....	9	2.25
147-1600	.....	9	2.00
147-1604	.....	9	2.00
147-1605	.....	9	2.00
152-1	250C70	1	16.50
152-2	500C70	1	23.50
152-3	250C90	1	19.50
152-4	350C90	1	23.00
152-5	50C110	1	11.75
152-6	100C110	1	15.00
152-7	250C110	1	23.25
152-8	50C130	1	13.00
152-9	100C130	1	17.00
152-501	200CD45	1	20.50
152-502	300CD45	1	24.00
152-503	200CD70	1	23.50
152-504	300CD70	1	31.00
152-505	150CD90	1	25.00
152-506	200CD90	1	29.00
152-507	50CD110	1	17.50
152-508	65CD110	1	19.25
152-509	100CD110	1	24.50
152-510	50CD130	1	20.00
153-1	50D35	1	8.00
153-2	100D35	1	8.75
153-3	150D35	1	9.75
153-4	250D35	1	11.25
153-5	350D35	1	12.50
153-6	500D35	1	14.75
153-7	100D45	1	9.50
153-8	150D45	1	11.00
153-9	50D70	1	8.75
153-10	70D70	1	9.75
153-11	100D70	1	10.75
153-12	150D70	1	12.50
153-13	250D70	1	15.50
153-14	350D70	1	19.00
153-15	50D90	1	10.00
153-16	70D90	1	11.00
153-17	100D90	1	12.00
153-18	150D90	1	14.25
153-19	250D90	1	18.75
153-501	100DD35	1	11.75
153-502	150DD35	1	13.25
153-503	200DD35	1	15.75
153-504	300DD35	1	18.75
153-505	500DD35	1	25.50
153-506	150DD45	1	16.25
153-507	200DD45	1	18.50
153-508	50DD70	1	12.50
153-509	70DD70	1	14.25
153-510	100DD70	1	16.00
153-511	150DD70	1	20.75
153-512	200DD70	1	23.75
153-513	50DD90	1	14.50
153-514	100DD90	1	19.50
154-1	250E20	1	6.20
154-2	350E20	1	7.00
154-3	500E20	1	8.10
154-4	35E30	1	4.75
154-5	50E30	1	4.95
154-6	70E30	1	5.25
154-7	100E30	1	5.60
154-8	150E30	1	6.30
154-9	250E30	1	7.50
154-10	350E30	1	8.90
154-11	35E45	1	5.15
154-12	50E45	1	5.50
154-13	70E45	1	5.85
154-14	100E45	1	6.35
154-15	150E45	1	7.35
154-16	250E45	1	9.35
154-501	200ED20	1	9.60
154-502	300ED20	1	11.20
154-503	50ED30	1	7.85
154-504	70ED30	1	8.35
154-505	100ED30	1	9.15
154-506	150ED30	1	10.50
154-507	200ED30	1	11.75
154-508	50ED45	1	8.35
154-509	70ED45	1	9.40
154-510	100ED45	1	10.85
155-1	35F20	1	4.50
155-2	50F20	1	4.70
155-3	70F20	1	4.90
155-4	100F20	1	5.35
155-5	150F20	1	6.05
155-6	250F20	1	7.25
155-7	35F30	1	4.80
155-8	50F30	1	5.10
155-9	70F30	1	5.45
155-10	100F30	1	6.10
155-11	150F30	1	7.15
155-501	50FD20	1	7.65
155-502	70FD20	1	8.15
155-503	100FD20	1	8.95
155-504	150FD20	1	10.30
155-505	200FD20	1	11.55
155-506	50FD30	1	8.30

Part No.	Cat. No.	Page	List Price
155-507	70FD30	1	9.30
155-508	100FD30	1	10.75
156-1	25H15	2	2.70
156-2	35H15	2	2.80
156-3	50H15	2	2.95
156-4	70H15	2	3.20
156-5	100H15	2	3.50
156-6	150H15	2	5.00
156-7	250H15	2	6.60
156-8	25H30	2	4.10
156-9	35H30	2	4.50
156-10	50H30	2	5.05
156-11	70H30	2	5.75
156-512	35HD15	2	4.70
156-513	50HD15	2	5.05
156-514	70HD15	2	5.55
156-515	100HD15	2	6.25
156-516	35HD30	2	6.05
156-517	50HD30	2	7.15
157-1	7J12	2	1.95
157-2	15J12	2	2.10
157-3	25J12	2	2.30
157-4	50J12	2	2.70
157-5	75J12	2	3.15
157-6	100J12	2	3.75
159-125	N125	2	6.50
159-250	N250	2	7.50
159-375	N375	2	9.50
160-102	.....	3	1.60
160-104	.....	3	1.70
160-107	.....	3	1.85
160-110	.....	3	2.00
160-203	.....	3	2.30
160-205	.....	3	2.50
160-208	.....	3	2.90
160-211	.....	3	3.20
160-303	.....	3	2.15
160-305	.....	3	2.35
160-308	.....	3	2.60
160-311	.....	3	2.90
165-1	25G20	2	3.40
165-2	50G20	2	3.75
165-3	8G45	2	3.25
165-4	13G45	2	3.45
165-5	23G45	2	3.75
165-6	6G70	2	3.75
165-7	12G70	2	4.25
195-3502	7x5x2	6	1.25
195-3512	7x7x2	6	1.40
195-3522	9x7x2	6	1.50
195-3532	9½x5½x2	6	1.40
195-3542	10x5x3	6	1.65
195-3562	11x7x2	6	1.60
195-3572	12x7x3	6	1.95
195-3592	12x10x3	6	2.20
195-3602	13x7x2	6	1.70
195-3632	14x10x3	6	3.60
195-3642	15x7x3	6	3.20
195-3662	17x4x3	6	2.85
195-3702	17x10x2	6	3.40
195-3712	17x10x3	6	4.00
195-3732	17x10x5	6	4.65
195-3752	17x11x3	6	4.20
195-3772	17x12x3	6	4.40
195-3792	17x13x2	6	3.95
195-3802	17x13x3	6	4.60
195-3812	17x13x4	6	5.35
195-470	17x10	6	1.30
195-474	17x11	6	1.35
195-476	17x12	6	1.45
195-479	17x13	6	1.55
196-1614	19x1¾	6	1.10
196-1624	19x3½	6	1.50
196-1634	19x5¼	6	1.95
196-1644	19x7	6	2.30
196-1654	19x8¾	6	2.70
196-1664	19x10½	6	3.10
196-1674	19x12¼	6	3.50
196x1684	19x14	6	3.85
196-1694	19x15¾	6	4.25
196-1704	19x17½	6	4.65
196-1714	19x19¼	6	5.10
196-1724	19x21	6	5.40
230-640	.....	3	2.60
230-641	.....	3	2.65
230-642	.....	3	2.70
230-643	.....	3	2.75
230-644	.....	3	2.80
230-645	.....	3	2.65
230-650	.....	3	2.35
230-651	.....	3	2.40
230-652	.....	3	2.45
230-653	.....	3	2.50
230-654	.....	3	2.55
230-655	.....	3	2.40
232-610	.....	3	8.50
232-611	.....	3	6.50
232-619	.....	3	6.00
232-620	.....	3	9.50
232-622	.....	3	7.50
232-623	.....	3	5.50
232-624	.....	3	7.00
232-626	.....	3	6.60
232-627	.....	3	5.20
232-628	.....	3	6.30
235-646	.....	3	.85
235-647	.....	3	.85
235-803	.....	3	.25
235-804	.....	3	.30
235-860	.....	3	.15

NOTE: The following 238 series is Amateur Inductors shown in a special catalog.

Part No.	Cat. No.	List Price
238-101	1000HCS80	10.25
238-102	1000LCS80	10.25
238-103	1000HCS40	9.25
238-104	1000LCS40	9.25
238-105	1000HCS20	8.50
238-111	1000LCS20	8.50
238-112	1000h/lcs14	8.00
238-113	1000h/lcs10	7.50
238-121	500HCS80	5.75
238-122	500LCS80	5.75
238-123	500HCS40	5.25
238-124	500LCS40	5.25
238-131	500HCS20	4.50
238-132	500LCS20	4.50
238-133	500h/lcs14	3.50
238-134	500h/lcs10	3.25
238-135	500h/lcs6	3.25
238-141	150HCS80	5.00
238-142	150LCS80	5.00
238-143	150HCS40	4.50
238-144	150LCS40	4.50
238-145	150HCS20	4.00
238-146	150LCS20	4.00
238-151	150h/lcs14	3.25
238-152	150h/lcs10	3.00
238-153	150h/lcs6	3.00
238-201	1000HCF80	9.90
238-202	1000LCF80	9.90
238-203	1000HCF40	8.90
238-204	1000LCF40	8.90
238-205	1000HCF20	8.50
238-211	1000LCF20	8.15
238-212	1000h/lcf14	7.65
238-213	1000h/lcf10	7.15
238-221	500HCF80	5.60
238-222	500LCF80	5.60
238-223	500HCF40	5.10
238-224	500LCF40	5.10
238-231	500HCF20	4.35
238-232	500LCF20	4.35
238-233	500h/lcf14	3.35
238-234	500h/lcf10	3.10
238-235	500h/lcf6	3.10
238-241	150HCF80	4.85
238-242	150LCF80	4.85
238-243	150HCF40	4.35
238-244	150LCF40	4.35
238-245	150HCF20	3.85
238-246	150LCF20	3.85
238-251	150h/lcf14	3.10
238-252	150h/lcf10	2.85
238-253	150h/lcf6	2.85

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