

TUBE, TRIMMER LOCATION AND DIAL CABLE DRAWING

ALIGNMENT PROCEDURE

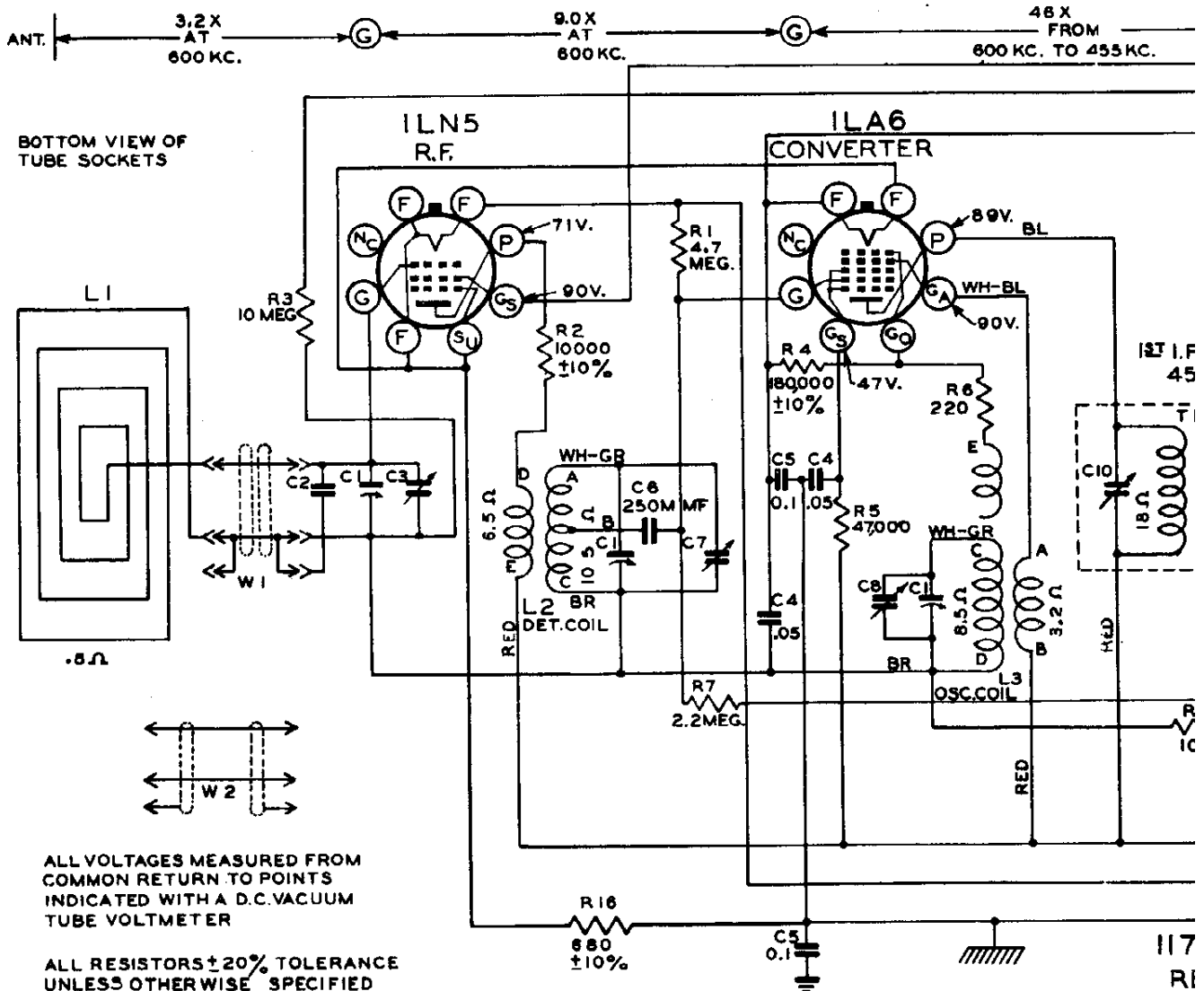
OPERATION	CONNECT OSCILLATOR TO	DUMMY ANTENNA	INPUT SIG. FREQUENCY	BAND	SET DIAL TO	TRIMMERS	PURPOSE
1	Converter Grid	.1 Mfd	455 Kc.	BC	600 Kc.	C-10-11-12-13	I. F. Alignment
2	Two turns loosely coupled to Wavemagnet		1600 Kc.	BC	1600 Kc.	Osc. Trim.	Set Oscillator to scale
3	Two turns loosely coupled to Wavemagnet		1400 Kc.	HC	1400 Kc.	Det. Trim.	Align Det.
4	Two turns loosely coupled to Wavemagnet		1400 Kc.	BC	1400 Kc.	Ant. Trim.	Align Wavemagnet

The 6E40 chassis is an AC, DC or battery operated superheterodyne circuit with a stage of RF amplification. The chassis is isolated from the DC circuit, and all measurements must be made from a common negative point. The most convenient place to reach this negative point is the terminal strip to which C5 is connected. The DC resistance from chassis to any circuit must be almost infinite. If any circuit becomes grounded a hum will appear. Microphonic tubes will cause audio howl. Check 1LA6.

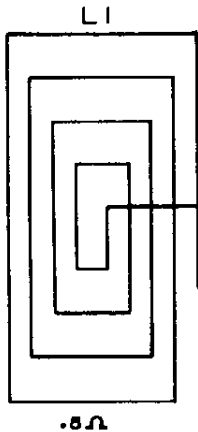
The wavemagnet is connected to the chassis with a two wire cable. If the R.F. becomes weak or dead, check the D.C. resistance of the wavemagnet and connecting cable. This D.C. resistance should be approximately 1.75 ohms. If it is open check the cable and wavemagnet.

IF Alignment: Remove the chassis from the cabinet and arrange the units so that the wavemagnet can be plugged in. All the connections and adjustments can be made from the top of the chassis. Connect a signal generator, through a .1 mfd. dummy antenna, to the lug on top of the center section of the gang condenser (converter grid) and condenser gang frame. Connect an output meter across the voice coil of the speaker (two lugs provided). Set the signal generator to 455 Kc. and adjust C10, C11, C12 and C13 for maximum indication on the output meter. Always keep the signal output from the generator just high enough to get an indication, otherwise excessive loading may result. Remove the signal generator leads from the gang.

RF Alignment: Connect a two turn loop across the leads of the signal generator, loosely couple this loop to the wavemagnet. Set the signal generator and the dial pointer of the receiver to 1600 Kc. and adjust oscillator trimmer to resonance. Set the signal generator and dial pointer to 1400 and adjust detector trimmer and antenna trimmer to resonance. These trimmers are on the top of gang condenser. Check operation and re-install set in cabinet. Tune in a weak station near 1400 Kc. or use background noise and readjust antenna trimmer for maximum sensitivity.



BOTTOM VIEW OF TUBE SOCKETS



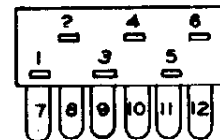
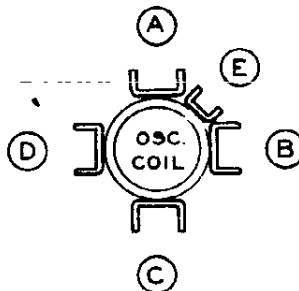
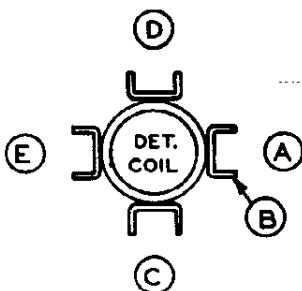
ALL VOLTAGES MEASURED FROM COMMON RETURN TO POINTS INDICATED WITH A D.C. VACUUM TUBE VOLTMETER

ALL RESISTORS ±20% TOLERANCE UNLESS OTHERWISE SPECIFIED

I.F. FREQUENCY 455 KC.

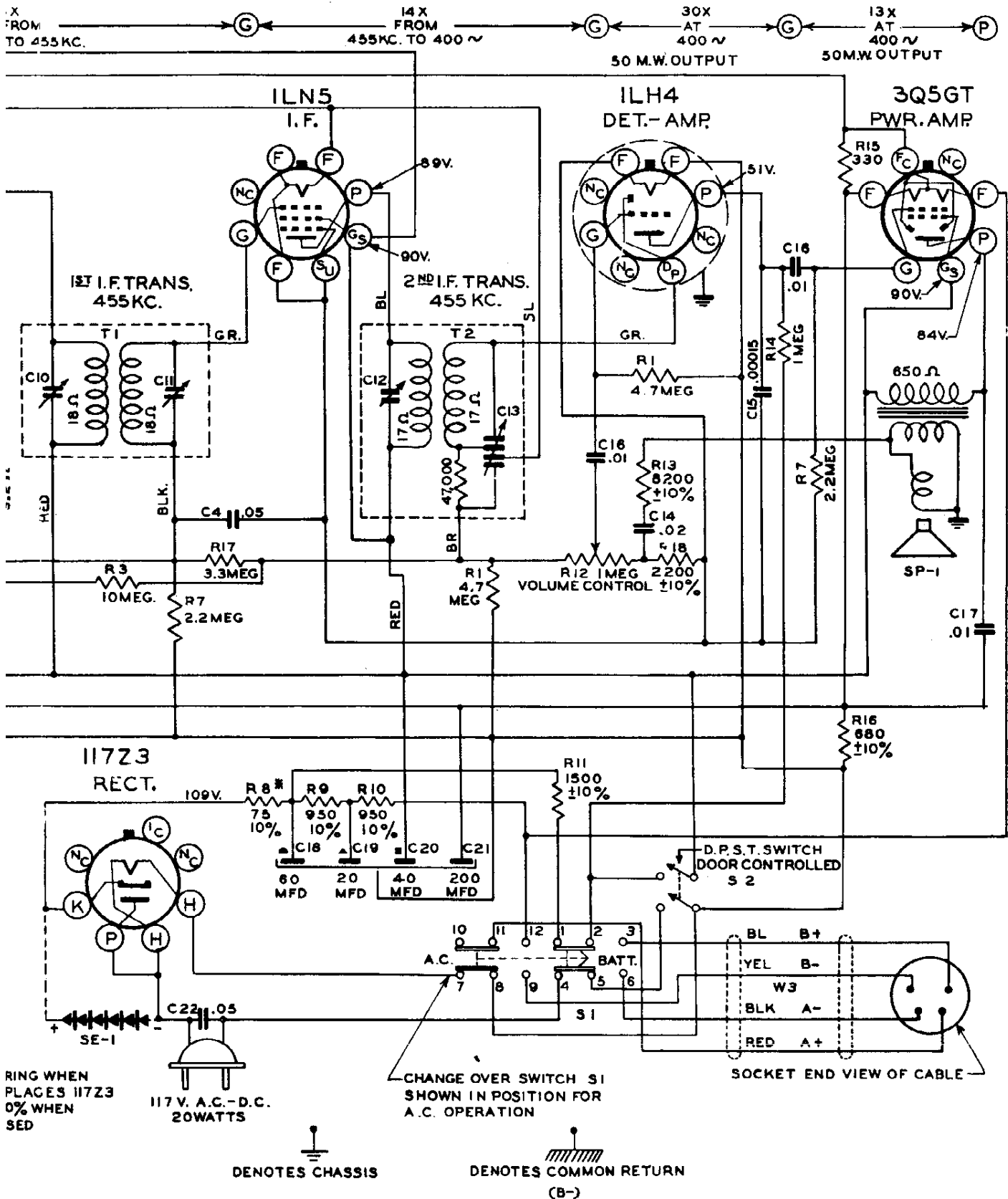
TUNING RANGE 535-1620 KC.

BATTERY PACK NO. Z909



POSITION OF TERMINALS SWITCH S1

*NOTE: DOTTED LINES SHOW WIRING WHEN SELENIUM RECTIFIER REPLACES 117Z3 R8 BECOMES 140 OHMS ±10% WHEN SELENIUM RECTIFIER IS USED



MISCELLANEOUS--Continued

PART NO.	DESCRIPTION	REF. NO.	QTY.
032	N.P. 1/4 x 3/8" Steel Washer		
93-35	N.P. Shield-proof Lockwasher		
93-125	#1206 Shield-proof Lockwasher		
93-126	#1208 Shield-proof Lockwasher		
93-179	Washer - Cad. Pl.		
93-282	Fibre Shoulder Washer		
93-321	Fibre Washer (used on S-475)		
93-325	1/16" x .127 x 5/16" Fibre Washer		
93-609	.015 x .134 x 1/4" Steel Washer		
93-721	N.P. Black Felt Washer (used on 80-603)		
93-906	Black Felt Washer (used on 80-603)		
93-911	Spring Washer (4 used)		
93-912	.010 x 9/64" x 5/16" Steel Washer N.P.		
93-913	.020 x .192 x 5/16" Steel Washer - Black Zinc Finish		
94-295	Condenser Mounting Bushing		
110-131	Grille Cloth		
112-713	#4-40 x 1/2" Rd. Phillips Hd. M.S. (Lockwasher attached)		
112-714	#4 x 1/2" Flat Hd. Self Tapping Screw (2 used)		
114-26	#8 x 1/2" Hex. Hd. Self Tapping Screw (6 used)		
114-48	#6-32 x 1/2" Hex. Acorn Hd. M.S. - Steel - N.P.		
114-50	#8-32 x 1/2" Hex. Acorn Hd. M.S. - Steel - N.P.		
114-248	#6-20 x 5/16" Hex. Hd. Slotted Self Tapping Screw (8 used)		
114-251	#10-32 x 5/8" Hex. Washer Hd. Slotted M. Screw (2 used)		
114-291	#8-32 x 7/16" Hex. Hd. Slotted M.S. - Steel - N.P.		
114-298	#6-32 x 9/8" Hex. Hd. Slotted M.S. (Lockwasher attached)		
195-17	Rubber Grommet (3 used)		
195-26	Rubber Grommet (4 used)		
195-39	Rubber Grommet (2 used)		
196-572	Welding Shield (used on Tube Shield)		
196-573	Speaker Baffle		
199-72	Snap Button		
199-49	Snap Button (2 used on S-14563)		
199-57	Rubber Suction Cup (used on S-14563)		
197-18	Rubber Suction Cup (used on S-14563)		
197-22	Flexible Handle Sleeve		
199-83	Instruction Book		
202-589	Selenium Rectifier		
212-3	Cabinet Frame Assembly		
S-14412	Cabinet Door Latch, Release Knob & Spring Assembly		
S-14414	Switch Mounting Bracket & Lever Assembly		
S-14416	Cabinet Front Cover Assembly		
S-14417	Cabinet Rear Cover & Rivet Assembly		
S-14421	Handle Strip Assembly		
S-14422	Wavecognat Assembly		
S-14424	Cover Strip & Latch Bar Assembly		
S-14563	Wavecognat Shield Assembly		

SE-1

MISCELLANEOUS

PART NO.	DESCRIPTION	REF. NO.	QTY.
11-104	Line Cord & Plug - 7 ft.		
15-51	Plug Cap & Insulator		
17-103	Battery Cable Clamp		
24-458	Switch Cover		
28-23	Cabinet Door (R.H.)		
28-24	Cabinet Door (L.H.)		
40-74	Door Hinge (4 used)		
46-78	Cabinet Rear Cover Hinge (2 used on S-14412)		
43-159	Handle End Piece (2 used)		
46-731	Door Release Knob		
46-732	Tuning & Volume Control Knob (2 used)		
49-631	P.M. Speaker (5 1/2")	SP-1	
52-475	206-631 Output Transformer		
52-476	208-631 Cone & Voice Coil		
54-283	Wavecognat Cable	W1	
54-287	Wavecognat Extension Cable	W2	
54-300	#6-32 x 5/16" Hex. Nut - Steel - N.P.		
54-139	#3/8 - 32 x 9/16" Palnut - Cad.		
54-141	Timmerman Speed Nut (used on S-14417)		
54-211	Timmerman Speed Nut (8 used on S-14417)		
54-281	Spring Nut (used on 80-600)		
54-283	Speed Nut (used on 80-600)		
54-287	#8-32 x 5/16" Palnut Steel-N.P.		
56-236	Hiny Pig (4 used) (2 on 28-23) (2 on 28-24)		
57-1360	Chassis Out Plate		
57-1364	Chassis Cover Plate		
78-335	#8-32 x 3/16" Hex. Hd. Slotted Set Screw - Cup point		
78-274	Socket - Electrolytic Capacitor		
78-488	Socket - Lektrol Tube		
78-543	Socket - Battery Cable (4 Contact)		
78-596	Socket - Lektrol Tube (or 78-762) (8 Contact)		
78-781	Socket - Miniature Tube		
78-801	Socket - Octal Tube		
78-802	Socket - Wavecognat Plug (3 Contact)		
80-597	Door Release Knob Spring		
80-598	Door Catch Spring		
80-599	Cover Catch Spring (2 used on S-14412)		
80-600	Door Hinge Retaining Spring (2 used on S-14417)		
80-601	Lock Lever Spring (Used on S-14424)		
80-602	Latch Bar Spring (used on S-14424)		
80-603	Wavecognat Release Spring		
80-626	Pressure Spring (2 used on S-14424)		
80-629	Link Lever Spring		
83-1482	Rubber Strip (Handle)		
83-1487	Chassis Insulating Strip		
83-1510	Gang Condenser Shield Strip (used with 22-1352)		
83-1512	Rubber Strip (Handle)		
83-1524	Wavecognat Cable Spacer Strip		
83-1525	Wavecognat Cable Strip		
83-1531	Cushion Strip		
85-311	Butt.ry Change-Over Switch		
85-426	D.P.S.T. Switch		

S1 S2

DIAL ASSEMBLY

PART NO.	DESCRIPTION	REF. NO.	QTY.
28-399	Lower dial		
34-262	Speed nut (4 used on 26-399)		
76-500	Dialing Control Shaft		
80-63	Dial Cord Tension Spring		
80-209	Dial Cord Tension Spring		
188-32	Retaining Ring (76-500)		
188-75	Retaining Ring (S-13829)		
S-13829	Dial Printer & Pulley Assembly (39-201)		
S-13830	Condenser Pulley & Bushing Assembly		
S-13838	Pulley Mtg. Bracket & Stud Assembly		
S-14407	Dial Cord & Eyelet Assembly (Long)		
S-14406	Dial Cord & Eyelet Assembly (Short)		

COILS AND CHOKES

PART NO.	DESCRIPTION	REF. NO.	QTY.
95-1085	1st I.F. Transformer	T1	
95-1086	2nd I.F. Transformer	T2	
S-14385	Detector Coil Assembly	L2	
S-14389	Oscillator Coil Assembly	L3	

CONDENSERS

PART NO.	DESCRIPTION	REF. NO.	QTY.
22-182	.00025 MFD. (or 22-1666) .500 V.	C6	
22-186	.01 MFD. .600 V.	C16	
22-337	.02 MFD. .200 V.	C14	
22-470	1.50 MFD. (or 22-1675) .500 V.	C15	
22-827	.1 MFD. .200 V.	C5	
22-829	.05 MFD. .200 V.	C4	
22-1017	.05 MFD. .400 V.	C22	
22-1182	.01 MFD. .400 V.	C17	
22-1726	Single Section Trimmer (use with 22-1352)	C3,7,8	
22-1727	Three Gang Variable (or 22-1352)	C1	
22-1741	Four Section Electrolytic 20-10V	C18,19,20,21	
22-1763	40-60 MFD. -150V. x 200 MFD. *10V	C2	

RESISTORS

PART NO.	DESCRIPTION	REF. NO.	QTY.
63-1362	The Section Condens	R9,10	
63-1362	75 ohm W.W. (Insulated)	R2	
63-1362	220 ohm W.W. (Insulated)	R12	
63-1758	330 ohm W.W. (Insulated)	R5	
63-1765	680 ohm W.W. (Insulated)	R16	
63-1778	1500 ohm W.W. (Insulated)	R11	
63-1792	2200 ohm W.W. (Insulated)	R18	
63-1799	8200 ohm W.W. (Insulated)	R13	
63-1824	10 K ohm W.W. (Insulated)	R2	
63-1827	47 K ohm W.W. (Insulated)	R5	
63-1856	180 K ohm W.W. (Insulated)	R4	
63-1880	1 Megohm W.W. (Insulated)	R14	
63-1912	2.2 Megohm W.W. (Insulated)	R7	
63-1926	3.3 Megohm W.W. (Insulated)	R17	
63-1953	4.7 Megohm W.W. (Insulated)	R1	
63-1940	10 Megohm W.W. (Insulated)	R3	