

TABLE 1. TUBE SOCKET VOLTAGES

Unless otherwise specified, Band 14.0 - 14.4 Mc; AVC - OFF; Noise Limiter - OFF; Function Switch (Type of Reception) - AM; RF Sensitivity Control - max; AF Gain Control - min; Antenna - disconnected; SIDE BANDS - BOTH; SELECT KCS - 3 Kc; Function Switch - (SEND - RECEIVE - CAL.) - RECEIVE. AC Line voltage - 117 volts. 120 watts.

TUBE		SOCKET PIN NUMBERS								
		1	2	3	4	5	6	7	8	9
V1	RF Tube 6BZ6	0	R.F. gain 1.35 (max) 4.0 (min)	0	6.3 AC	250	105	0	--	--
V2	1st Mixer 6BE6	-3.8	1.65	0	6.3 AC	250	105	0	--	--
V3	2nd Mixer 6BE6	-4.0	0	6.3 AC	0	248	98	0	--	--
V4	2nd IF 6BA6	0	0	0	6.3 AC	245	100	R.F. gain 1.9 (max) 23 (min)	--	--
V5	3rd Mixer 6BE6	-6.8	0	0	6.3 AC	247	77	0	--	--
V6	3rd IF (1) 6BA6	0	0	0	6.3 AC	235	80	.86	--	--
V7	3rd IF (2) 6BA6	0	0	0	6.3 AC	230	90	.90	--	--
V8	3rd IF (3) DET-AVC 6BV8	5.2	0	240	0	6.3 AC	--.25	0	0	--.26
V9	Prod. Det 12AU7	225(SSB)	0	7.8(SSB)	6.3 AC	6.3 AC	110(SSB)	0	7.8(SSB)	0
V10	Noise Lim 6AL5	40 (off) 1.1(max)	40 (off) 0 (max)	0	6.3 AC	40 (off) 1.1(max)	0	40 (off) 0 (max)	--	--
V11	Calibrator 6BZ6	-10 to -25 (cal on)	4 to 8 (cal on)	6.3 AC	0	25 to 40 (cal on)	6 to 8	4 to 8 (cal on)	--	--
V12	H.F. Osc. 6C4	100	--	0	6.3 AC	--	-4.8	0	--	--
V13	BFO-Meter 12AU7	105	--.56	4.0	6.3 AC	6.3 AC	225(SSB)	135	140	0
V14	Volt. Reg. OB2	105	--	Tie Point 5.7	--	105	--	--	--	--
V15	Rect. 5U4GB	Tie Point 6.3 AC	280	--	245 AC	--	245 AC	Tie Point AC Line	280	--
V16	Audio- AVC 6AV6	0	1.2	6.3 AC	0	0	0	117	--	--
V17	Per. Ampl. 6AQ5	0	15	6.3 AC	0	270	250	--	--	--



TABLE 2. TUBE SOCKET RESISTANCES

Conditions are the same as in the voltage chart unless otherwise specified.

TUBE		SOCKET PIN NUMBERS								
	1	2	3	4	5	6	7	8	9	
V1	RF 6BZ6	R.F.GAIN 180 (Max) 1.7K (Min)	0	--	17K	15K	0	--	--	
V2	Mixer 6BE6	160	0	--	18K	15K	0	--	--	
V3	Mixer 6BE6	0	--	0	16K	19K	0	--	--	
V4	IF 6BA6	0	0	--	17K	15K	R.F.GAIN 180 (Max) 10K (Min)	--	--	
V5	Mixer 6BE6	8	0	--	18K	42K	220K	--	--	
V6	IF 6BA6	0	0	--	19.5K	66K	68	--	--	
V7	IF 6BA6	0	0	--	19.5K	66K	68	--	--	
V8	IF-DET 6BY8	18.5	18K	--	0	20K	70	0	4.7K	
V9	PROD DET 12AU7	470K	820	--	--	55K	100K	820	0	
V10	Noise Lim. 6AL5	1.25M	0	--	220K	0	1.5M	--	--	
V11	Cal 6BZ6	47K	--	0	INF 500 (cal on)	INF 50K (cal on)	47K	--	--	
V12	Osc 6C4	--	0	--	--	47K	0	--	--	
V13	BFO 12AU7	47K	0	--	--	INF 17K (on)	500F	47K	0	
V14	Rect OR2	--	--	--	15K	--	0	--	--	
V15	Rect 504GB	FIL Tie Point	--	28	--	2K	A.C. Line Tie Point	17K	--	
V16	Audio 6AV6	470K	--	0	240K	240K	470K	--	--	
V17	Ampl 6AV5	470K	--	0	17K	17K	--	--	--	

PARTS LIST HQ-170



SCHEMATIC DESIGNATION	DESCRIPTION	HAMMARLUND PART NO.
CAPACITORS		
C2, C4, C5, C6, C7, C9, C10, C11, C15, C17, C18, C21, C23, C32, C41, C47, C81, C124, C130, C133, C141, C145, C146 C3, C8 C12, C33, C36, C38 C40, C46, C136, C137 C13, C89, C97, C111 C113, C120, C123 C14 C16, C28 C19, C20 C22, C27 C24 C25 C26 C79, C104, C110 C115, C117, C122 C29 C30 C31, C51 C34, C37 C35 C39, C42 C43, C60 C44, C45 C48, C87 C49, C95, C105 C50 C52 C53, C54 C55, C56, C57, C58, C59 C61, C140 C62, C63, C68, C70, C74 C64, C65 C66 C67 C69 C71 C72 C73 C75 C76 C77, C78 C143, C144 C80 C82, a, b, c, d C83, C84 C85 C86, C94 C87 C88, C90, C96, C98 C91, C99 C92, C100 C93, C101, C103, C114 C102, C109, C118, C149, C150, C151 C106 C107, C116 C108, C119 C112, C121 C125 C126, C127 C129 C131 C132 C134 C135 C138 C139, C142 C140 C147	Variable, Tuning Fixed, ceramic disc, .01 mf 600 W.V.D.C. Fixed, ceramic disc, 110 mmf 1000 W.V.D.C. Fixed, ceramic disc, .02 mf 600 W.V.O.C. Fixed, silver mica, 20 mmf 500 W.V.D.C. Fixed, silver mica, 560 mmf 500 W.V.D.C. Fixed, silver mica, 3.0 mmf 500 W.V.D.C. Fixed, ceramic disc, .04 mf 800 W.V.D.C. Fixed, ceramic disc, .01 mf 1000 W.V.D.C. Fixed, silver mica, 1200 mmf 500 W.V.D.C. Fixed, mylar, .033 mf 200 W.V.D.C. Variable, slot freq. Fixed, silver mica, 7 mmf 500 W.V.D.C. Fixed, silver mica, 780 mmf 300 W.V.D.C. Variable, vernier tuning Fixed, silver mica, 100 mmf 500 W.V.D.C. Fixed, silver mica, 24 mmf 500 W.V.D.C. Fixed, Temp. Comp, 330 mmf 500 W.V.D.C. Fixed, ceramic disc, 500 mmf 1000 W.V.O.C. Fixed, silver mica, 10 mmf 500 W.V.O.C. Fixed, ceramic disc, 2000 mmf 1000 W.V.D.C. Fixed, paper, .1 mf 200 W.V.D.C. Fixed, paper, .047 mf 400 W.V.D.C. Variable, Calibrator 8-50 mmf Variable Antenna Comp. Variable mica trimmer, 3-35 mmf Variable, mica trimmer, 1.5-20 mmf Fixed, silver mica, 25 mmf 500 W.V.D.C. Variable, rotary trimmer 1-8 mmf Variable, rotary trimmer 1.5-9.1 mmf Fixed, Temp. Comp, 4.7 mmf 1000 W.V.D.C. Fixed, silver mica, 68 mmf 500 W.V.D.C. Fixed, silver mica, 83 mmf 500 W.V.D.C. Fixed, silver mica, 243 mmf 500 W.V.O.C. Fixed, Temp. Comp, 8.0 mmf 1000 W.V.D.C. Fixed, Temp. Comp, 12 mmf 1000 W.V.D.C. Fixed, silver mica, 10 mmf 500 W.V.D.C. Fixed, Temp. Comp, 20 mmf 1000 W.V.D.C. Fixed, silver mica, 47 mmf 300 W.V.D.C. Fixed, Temp. Comp, 4.7 mmf 500 W.V.D.C. Fixed, Electrolytic, 60, 40, 40, 40 mf Fixed, ceramic disc, .01 mf 1400 W.V.D.C. Fixed, paper, .1 mf 600 W.V.D.C. Fixed, silver mica, 31 mmf 500 W.V.D.C. Fixed, paper, .1 mf 200 W.V.D.C. Fixed, silver mica, 29 mmf 500 W.V.D.C. Fixed, silver mica, 28 mmf 500 W.V.D.C. Fixed, silver mica, 27 mmf 500 W.V.D.C. Fixed, silver mica, 3.0 mmf 500 W.V.D.C. Fixed, silver mica, 9 mmf 500 W.V.D.C. Fixed, silver mica, 10 mmf 500 W.V.D.C. Fixed, silver mica, 14 mmf 500 W.V.D.C. Fixed, silver mica, 21 mmf 500 W.V.D.C. Fixed, silver mica, 16 mmf 500 W.V.D.C. Fixed, silver mica, 47 mmf 500 W.V.D.C. Fixed, mylar, .01 mf 400 W.V.O.C. Variable, BFO Fixed, paper, .1 mf 200 W.V.D.C. Fixed, ceramic disc, 5000 mmf 1000 W.V.D.C. Fixed, silver mica, 2 mmf 500 W.V.D.C. Fixed, ceramic disc, 8 mmf 1000 W.V.D.C. Fixed, Temp. Comp, 47 mmf 500 W.V.D.C. Fixed, Temp. Comp, 12 mmf 1000 W.V.D.C. Fixed, silver mica, 15 mmf 300 W.V.D.C. Fixed, Electrolytic, 20 mf, 25 W.V.D.C.	P38901-1 K23034-19 K23010-5 K23034-9 K23006-17 K23027-6 K23006-18 M23034-12 K23034-25 K23027-4 K23044-1 K42041-1 K23006-24 K23006-39 K42040-2 K23006-1 K23006-7 K23010-9 M23034-13 K23006-8 M23034-18 K23045-3 K23045-2 K23038-5 K34454-G14 K23043-5 K23043-6 K23006-41 K23008-1 K23057-1 K23058-222C K23006-30 K23006-29 K23006-27 K23061-206D K23010-19 K23006-8 K23061-17J K23006-47 K23010-8 K15504-71 M23034-26 K23045-5 K23006-15 K23045-3 K23006-16 K23006-19 K23006-20 K23006-18 K23006-21 K23006-22 K23006-25 K23006-26 K23006-23 K23006-6 K23044-2 K42042-1 K23045-3 M23034-10 K23006-37 M23034-11 K23006-26J K23010-10 K23006-35 K23091-1



PARTS LIST HQ-170 (Cont'd)

SCHEMATIC DESIGNATION	DESCRIPTION	COMMERCIAL PART NO.
SPECIAL ASSEMBLIES		
- CMC M1 Y1 Y2 Z1 Z2	Crystal panel, clock window Clock, Telechron auto-timer Meter "S" (carrier level) Quartz crystal, 2.580 Mcs Quartz crystal, 100.0 Kcs RC printed network (Calibrator) RC printed network (Audio)	M3081-1 K3087-1 E26149-5 K38972-2 K30601-1 K30981-1 K38646-1
COILS		
L1 L2 L3 L4 L5, L7, L10 L6 L8 L9	RF Choke, 2.5 millihenry Bifilar Coil Slot Filter Coil Passband Tuning Coil RF Choke, 330 millihenries Filter Choke, 8.0 henries RF Choke, 38 microhenries RF Choke, 240 microhenries	K15017-1 K42052-1 E42044-1 K26101-1 K42019-1 K26302-1 K15039-1 K15029-2
RESISTORS		
R1, R30, R32, R37, R93 R40, R70, R82, R85, R99 R2, R13, R27, R40, R51 R74, R91 R3, R4 R5, R14 R6 R7, R29 R8, R98 R9, R12, R16, R17 R47, R52, R82, R97 R10, R42, R49, R65 R70, R72, R73, R75, R99 R84 R11 R15 R18 R19 R20 R21 R22 R23, R44 R24 R25 R26 R28, R43, R45, R48 R68, R71 R31, R33 R34 R35 R39 R41, R95 R53 R54 R55 R56 R57 R58 R59, R63, R69 R60, R61, R66, R67 R64 R77 R78 R79 R80 R81 R83 R86 R87 R88 R89 R90 R91 R92 R94 R96	470k ohms, 1/2 w., 10% 100k ohms, 1/2 w., 10% 10 ohms, 1/2 w., 10% 180 ohms, 1/2 w., 5% Variable 1.5k ohms, dual with R15 and S3 22k ohms, 1/2 w., 10% 160 ohms, 1/2 w., 5% 1k ohms, 1/2 w., 10% 47k ohms, 1/2 w., 10% 4.3K ohms, 1/2 w., 5% Variable 10k ohms, part of R6 100k ohms, 1 w., 10% Variable 1.5k ohms, meter sensitivity adj. Variable, 300 ohms, meter zero adj. 22k ohms, 1 w., 10% 750 ohms, 1/2 w., 5% 1 megohm, 1/2 w., 10% 120 ohms, 1/2 w., 5% 39 ohms, 1/2 w., 5% Variable, 200 ohms 220k ohms, 1/2 w., 10% 88 ohms, 1/2 w., 10% 580 ohms, 1/2 w., 10% 1k ohms, 1 w., 10% 820 ohms, 1/2 w., 10% 10k ohms, 1/2 w., 10% 3k ohms, 10 w., 10% 680 ohms, 1/2 w., 10% 3k ohms, 1/2 w., 5% 15k ohms, 1/2 w., 10% 6.8k ohms, 1/2 w., 10% 27k ohms, 2 w., 10% 2.2k ohms, 1/2 w., 10% 330k ohms, 1/2 w., 10% 270 ohms, 1/2 w., 10% 27 ohms, 1/2 w., 10% Variable, 500k Variable 1 megohm 180 ohms, 1/2 w., 10% 1.5k ohms, 1 w., 10% 4.7 megohms, 1/2 w., 10% 430 ohms, 1 w., 5% 470 ohms, 1/2 w., 10% 2.7k ohms, 1/2 w., 5% 3.8k ohms, 1/2 w., 5% 6.2k ohms, 1/2 w., 5% 11k ohms, 1/2 w., 5% 5.0k ohms, 1/2 w., 10% 08 ohms, 1/2 w., 5% 4.7k ohms, 1/2 w., 10%	K19309-113 K19309-97 K19309-1 K19309-260 K36940-1 K19309-81 K19309-199 K19309-49 K19309-89 K19309-113 K19310-97 K15179-2 K15179-1 K15179-1 K19309-206 K19309-121 K19309-250 K19309-253 K15168-7 K19309-105 K19309-21 K19309-13 K19310-19 K19309-17 K19309-73 K15137-2 K19309-45 K19309-212 K19309-77 K19309-69 K19304-52 K19309-57 K19309-109 K19309-35 K19309-11 K15370-3 K26218-3 K19309-31 K19310-53 K19309-137 K19310-212 K19309-41 K19309-272 K19309-179 K19309-176 K19307-215 K19309-67 K19309-256 K19309-65



PARTS LIST HQ-170

SCHEMATIC DESIGNATION	DESCRIPTION	HAMMARLUND PART NO.
SWITCHES		
S1	Noise Limiter ON-OFF (part of R78)	K38952-1
S2A	Switch wafer, Ant. primary	K38952-2
S2B,C	Switch wafer, Ant. sec. RF sec	K38952-3
S2D	Switch wafer, RF tap	K38991-3
S2E	Switch wafer, HF Osc Tank	K38952-6
S2F	Switch wafer, HF Osc. tap	
S3	AC ON-OFF (part of R6 and R15)	K263D6-1
S4	Send-Receive-Calibrate	K26296-1
S5	Selectivity	K263D3-1
S6	Sideband	K42D37-2
S7	AM-SSB/CW	K26309-2
S8	Switch, AVC	
TRANSFORMERS		
T1	IF transformer, Composite 1st and 2nd IF	K26402-1
T2	IF transformer, Composite 1st and 2nd IF	K26402-1
T3	IF transformer, 455 Kcs	K38829-2
T4, T5	IF transformer, 455 Kcs	K38946-1
T6, T7, T8, T9, T1D, T11	IF transformer, 60 Kcs	M42DD5-1
T12	Antenna transformer, 1.8 to 2.0 Mcs	K38926-1
T13	Antenna transformer, 3.5 to 4.0 Mcs	K38927-1
T14	Antenna transformer, 7.0 to 7.3 Mcs	K38928-1
T15	Antenna transformer, 14.0 to 14.4 Mcs	K38929-1
T16	Antenna transformer, 21.0 to 21.6 Mcs	K38930-1
T17	Antenna transformer, 28.0 to 30.0 Mcs	K38931-1
T18	Antenna coil, 50.0 to 54.0 Mcs	K26338-1
T19	RF transformer, 1.8 to 2.0, 3.5 to 4.0 Mcs	K38932-1
T20	RF transformer, 7.0 to 7.3, 14.0 to 14.4 Mcs	K38933-1
T21	RF transformer, 21.0 to 21.6, 28.0 to 30.0 Mcs	K38934-1
T22	RF coil, 50.0 to 54.0 Mcs	K38944-2
T23	Osc transformer, 1.8 to 2.0, 3.5 to 4.0 Mcs	K38935-2
T24	Osc transformer, 7.0 to 7.3, 14.0 to 14.4 Mcs	K38936-2
T25	Osc transformer, 21.0 to 21.6, 28.0 to 30.0 Mcs	K38937-2
T26	Osc coil, 50.0 to 54.0 Mcs	K38945-3
T27A	Power transformer, 117V A.C.	P263D5-1
T27B	Power transformer, 115-230V A.C., Export Model	P263D5-2
T28	BFO transformer, 60 Kcs	M42DD5-4
T29	Audio Output transformer	K38828-1
MISCELLANEOUS		
E1	Fuac, holder	K15923-1
F1	Fuse, 3 Amp. type 3AGC	K15928-8
I1, I2, I3	Lamp, pilot, No. 47, 6.3 V., 15A	K16004-1
J1	External Relay Receptacle	K35013-1
J2	Phone Jack	K35608-1
	Steel Cable Assembly	26338-G1
	Spring	38895-1
	Antenna Trimmer Cord	K42D67-3
OPTIONAL ACCESSORIES		
	Telechron Clock Assembly Conversion Kit including instructions for converting model HQ-170 to Model HQ-170C	PL26380-G1
	Loudspeaker assembly in cabinet matched to the Models HQ-17D, HQ-170C and HQ-170E	PL26394-G1
	NOTE A 50 cy 24 hr. clock timer is now available on special order	K38874-G3

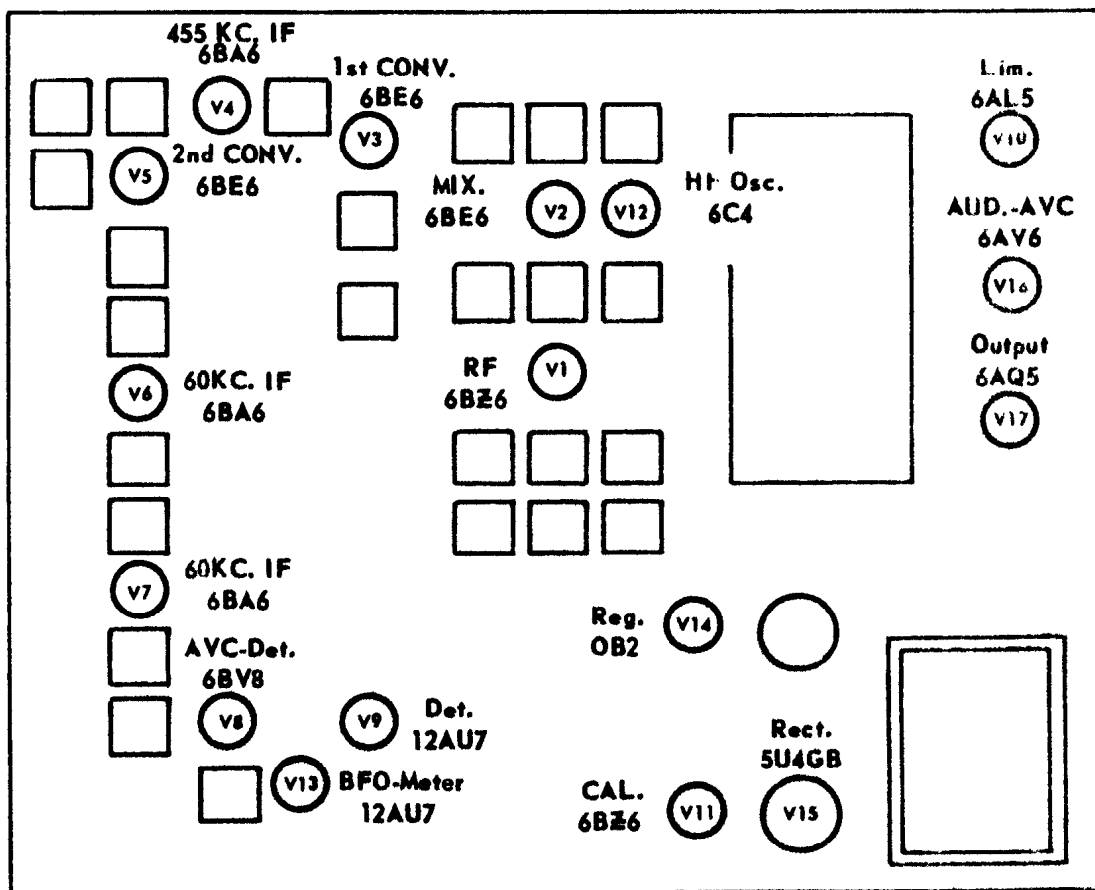


Figure 13. Tube Location Diagram

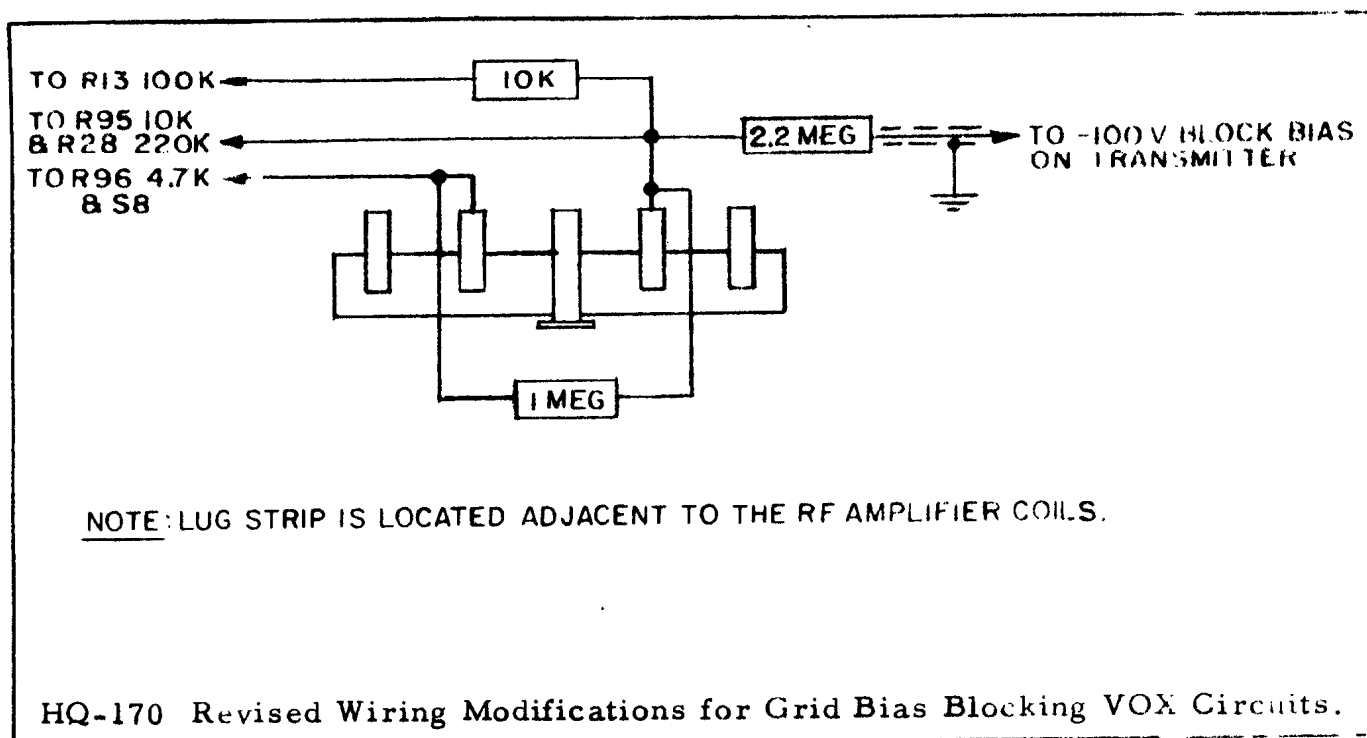


Figure 15

