

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	.85	--	--
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	Pwr. 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	570K	R.F. GAIN 180 (Max) 1.7K (Min)	0	--	17K	15K	0	--	--
V2 Mixer 6BE6	22K	160	0	--	18K	15K	0	--	--
V3 Mixer 6BE6	22K	0	--	0	16K	19K	0	--	--
V4 IF 6BA6	1.1M	0	0	--	17K	15K	R.F. GAIN 180 (Max) 10K (Min)	--	--
V5 Mixer 6BE6	22K	8	0	--	18K	42K	220K	--	--
V6 IF 6BA6	480K	0	0	--	19.5K	66K	68	--	--
V7 IF 6BA6	470K	0	0	--	19.5K	66K	68	--	--
V8 IF-DET 6BV8	560	18.5	18K	--	0	20K	70	0	4.7K
V9 PROD DET 12AU7	INF 17K(SSB)	470K	820	--	--	55K	100K	820	0
V10 Noise Lim. 6AL5	220K	1.25M	0	--	220K	0	1.5M	--	--
V11 Cal 6BZ6	470K	47K	--	0	INF 500 (cal on)	INF 50K (cal on)	47K	--	--
V12 Osc 6C4	15K	--	0	--	--	47K	0	--	--
V13 PFO 12AU7	15K	47K	800	--	--	INF 17K(on)	500F	47K	0
V14 6BE OB2	15K	--	--	--	15K	--	0	--	--
V15 Rect 5U4GB	FIL Tie Point	17K	--	25	--	25	A.C. Line Tie Point	17K	--
V16 Audio 6AV6	470K	5.6K	--	0	240K	240K	470K	--	--
V17 Ampl 6AV6	470K	430	--	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	Variable, Tuning Fixed, ceramic disc, .01 mf 600 W.V.D.C.	P38901-1 K23034-19
C3, C8	Fixed, ceramic disc, 110 mmf 1000 W.V.D.C.	K23010-5
C12, C33, C36, C38	Fixed, ceramic disc, .02 mf 600 W.V.O.C.	K23034-9
C40, C46, C136, C137	Fixed, silver mica, 20 mmf 500 W.V.D.C.	K23006-17
C13, C89, C97, C111	Fixed, silver mica, 560 mmf 500 W.V.D.C.	K23027-6
C113, C120, C123	Fixed, silver mica, 3.0 mmf 500 W.V.D.C.	K23006-18
C14	Fixed, ceramic disc, .04 mf 600 W.V.D.C.	M23034-12
C16, C28	Fixed, ceramic disc, .01 mf 1000 W.V.D.C.	K23034-25
C19, C20	Fixed, silver mica, 1200 mmf 500 W.V.D.C.	K23027-4
C22, C27	Fixed, mylar, .033 mf 200 W.V.D.C.	K23044-1
C24	Variable, slot freq.	K42041-1
C25	Fixed, silver mica, 7 mmf 500 W.V.D.C.	K23006-24
C26	Fixed, silver mica, 780 mmf 300 W.V.D.C.	K23006-39
C79, C104, C110	Variable, vernier tuning	K42040-2
C115, C117, C122	Fixed, silver mica, 100 mmf 500 W.V.D.C.	K23006-1
C29	Fixed, silver mica, 24 mmf 500 W.V.D.C.	K23006-7
C30	Fixed, Temp. Comp, 330 mmf 500 W.V.D.C.	K23010-9
C31, C51	Fixed, ceramic disc, 500 mmf 1000 W.V.O.C.	M23034-13
C34, C37	Fixed, silver mica, 10 mmf 500 W.V.O.C.	K23006-8
C35	Fixed, ceramic disc, 2000 mmf 1000 W.V.D.C.	M23034-18
C39, C42	Fixed, paper, .1 mf 200 W.V.D.C.	K23045-3
C43, C60	Fixed, paper, .047 mf 400 W.V.D.C.	K23045-2
C44, C45	Variable, Calibrator 8-50 mmf	K23038-5
C48, C87	Variable Antenna Comp.	K34454-G14
C49, C95, C105	Variable mica trimmer, 3-35 mmf	K23043-5
C50	Variable, mica trimmer, 1.5-20 mmf	K23043-6
C52	Fixed, silver mica, 25 mmf 500 W.V.D.C.	K23006-41
C53, C54	Variable, rotary trimmer 1-8 mmf	K23008-1
C55, C56, C57, C58, C59	Variable, rotary trimmer 1.5-9.1 mmf	K23057-1
C61, C140	Fixed, Temp. Comp, 4.7 mmf 1000 W.V.D.C.	K23058-222C
C62, C63, C68, C70, C74	Fixed, silver mica, 68 mmf 500 W.V.D.C.	K23006-30
C64, C65	Fixed, silver mica, 83 mmf 500 W.V.D.C.	K23006-29
C66	Fixed, silver mica, 243 mmf 500 W.V.O.C.	K23006-27
C67	Fixed, Temp. Comp, 8.0 mmf 1000 W.V.D.C.	K23061-206D
C69	Fixed, Temp. Comp, 12 mmf 1000 W.V.D.C.	K23010-19
C71	Fixed, silver mica, 10 mmf 500 W.V.D.C.	K23006-8
C72	Fixed, Temp. Comp, 20 mmf 1000 W.V.D.C.	K23061-17J
C73	Fixed, silver mica, 47 mmf	K23006-47
C75	300 W.V.D.C.	
C76	Fixed, Temp. Comp, 4.7 mmf 500 W.V.D.C.	K23010-8
C77, C78	Fixed, Electrolytic, 60, 40, 40, 40 mf	K15504-71
C143, C144	Fixed, ceramic disc, .01 mf 1400 W.V.D.C.	M23034-26
C80	Fixed, paper, .1 mf 600 W.V.D.C.	K23045-5
C82, a, b, c, d	Fixed, silver mica, 31 mmf 500 W.V.D.C.	K23006-15
C83, C84	Fixed, paper, .1 mf 200 W.V.D.C.	K23045-3
C85	Fixed, silver mica, 29 mmf 500 W.V.D.C.	K23006-16
C88, C94	Fixed, silver mica, 28 mmf 500 W.V.D.C.	K23006-19
C87	Fixed, silver mica, 27 mmf 500 W.V.D.C.	K23006-20
C88, C90, C96, C98	Fixed, silver mica, 3.0 mmf 500 W.V.D.C.	K23006-18
C91, C99	Fixed, silver mica, 9 mmf 500 W.V.D.C.	K23006-21
C92, C100	Fixed, silver mica, 10 mmf 500 W.V.D.C.	K23006-22
C93, C101, C103, C114	Fixed, silver mica, 14 mmf 500 W.V.D.C.	K23006-25
C102, C109, C118, C149, C150, C151	Fixed, silver mica, 21 mmf 500 W.V.D.C.	K23006-26
C106	Fixed, silver mica, 16 mmf 500 W.V.D.C.	K23006-23
C107, C116	Fixed, silver mica, 47 mmf 500 W.V.D.C.	K23006-6
C108, C119	Fixed, mylar, .01 mf 400 W.V.O.C.	K23044-2
C112, C121	Variable, BFO	K42042-1
C125	Fixed, paper, .1 mf 200 W.V.D.C.	K23045-3
C126, C127	Fixed, ceramic disc, 5000 mmf 1000 W.V.D.C.	M23034-10
C129	Fixed, silver mica, 2 mmf 500 W.V.D.C.	K23006-37
C131	Fixed, ceramic disc, 8 mmf 1000 W.V.D.C.	M23034-11
C132	Fixed, Temp. Comp, 47 mmf 500 W.V.D.C.	K23006-26J
C134	Fixed, Temp. Comp, 12 mmf 1000 W.V.D.C.	K23010-10
C135	Fixed, silver mica, 15 mmf 300 W.V.D.C.	K23006-35
C138	Fixed, Electrolytic, 20 mf, 25 W.V.D.C.	K23091-1
C139, C142		
C140		
C147		



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)	M38877-1 K38877-1 E26149-5 K38872-2 K38861-1 K38881-1 K38846-1
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	K15627-1 K4262-1 E42034-1 K26301-1 K42019-1 K26302-1 K15639-1 K15629-2
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% 68 ohms, 1/2 w., 5% 4.7k ohms, 1/2 w., 10%	K19309-113 K19309-97 K19309-1 E19309-260 K38810-1 K19309-81 K19309-199 K19309-49 K19309-89 K19309-113 K19310-97 K15379-2 K15379-1 K15310-81 K19309-206 K19309-121 K19309-250 K19309-253 K15368-7 K19309-105 K19309-21 K19309-13 K19310-19 K19309-47 K19309-73 K15337-2 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)	
S2A	Switch wafer, Ant. primary	K38952-1
S2B, C	Switch wafer, Ant. sec. RF sec	K38952-2
S2D	Switch wafer, RF tap	K38952-3
S2E	Switch wafer, HF Dsc Tank	K38991-3
S2F	Switch wafer, HF Osc. tap	K38952-6
S3	AC DN-OFF (part of R6 and R15)	
S4	Send-Receive-Calibrate	K263D6-1
S5	Selectivity	K26296-1
S6	Sideband	K263D3-1
S7	AM-SSB/CW	K42D37-2
S8	Switch, AVC	K26309-2
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 Mca	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
T2D	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	Dsc 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	Fuse, 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	Phons Jack	K35608-1
	Steel Cable Assembly	26339-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

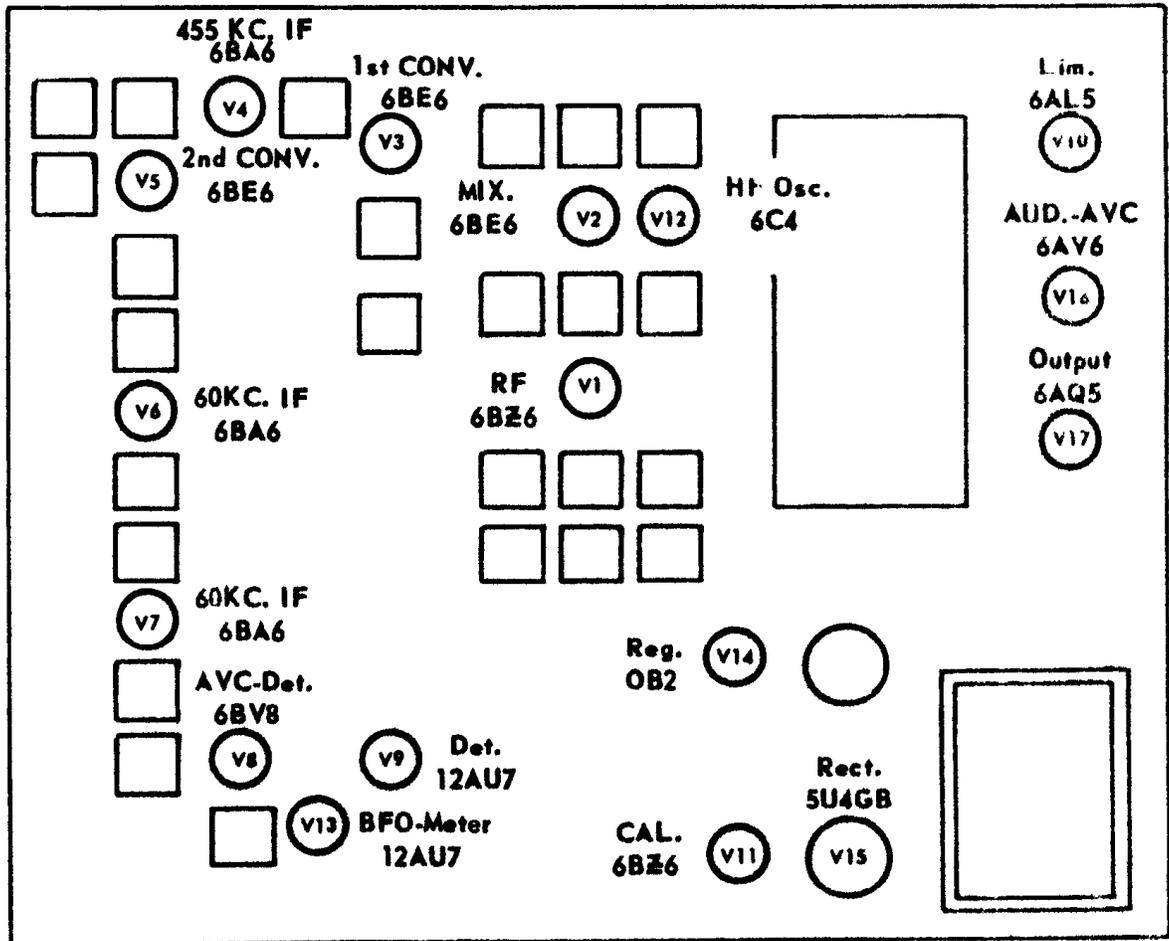


Figure 13. Tube Location Diagram

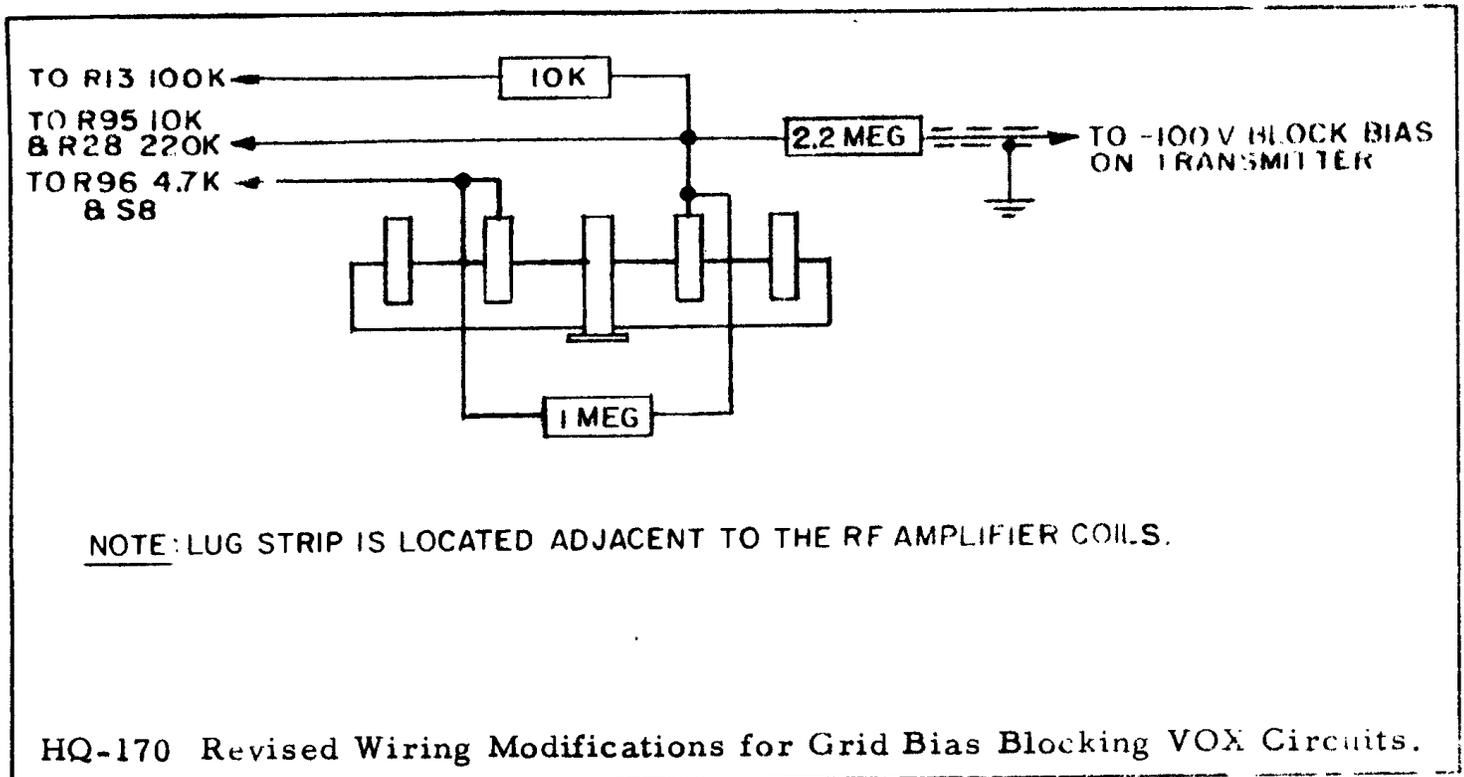


Figure 15

