

MODEL H500,
Ch. 5H40

ALIGNMENT PROCEDURE

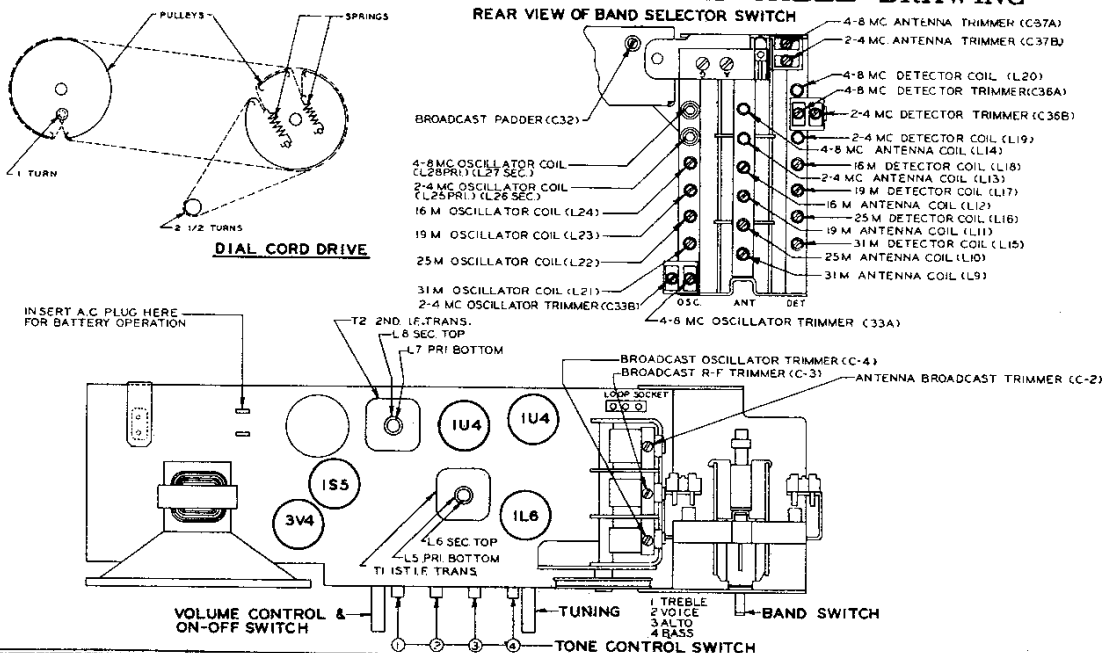
OPER.	CONNECT OSCILLATOR TO DUMMY ANTENNA	INPUT SIGNAL FREQ.	BAND	SET DIAL AT	TRIMMERS	PURPOSE
1	Positive lead of signal generator to converter grid through a .1 Mfd. condenser & negative lead to negative filament of 1L6 tube.	455 Kc	BC	600 Kc	L5, 6, 7, 8	Align I. F.
2	One turn loop coupled loosely to broadcast wavemagnet	1600 Kc	BC	1600 Kc	C4	Set oscillator to scale
3		1400 Kc	BC	1400 Kc	C3	Alignment of detector
4		1400 Kc	BC	1400 Kc	C2	Alignment of BC antenna
5*		600 Kc	BC	Rock at 600 Kc	C32	Alignment of BC at 600 Kc

*Note: Rock Tuning Condenser When Making Alignment Under Operations 5, 7, 10, 12, 13, 14 & 15.

NOTE: If Trimmers C2, C3, C4 are adjusted after procedures #2 through #15 are completed, it will be necessary to repeat alignment procedures #2 through #15.

OPERATION	CONNECT OSCILLATOR TO DUMMY ANTENNA	INPUT SIGNAL FREQ.	BAND	SET DIAL AT	TRIMMERS	PURPOSE
6	3 feet of wire approximately 1 foot from extended wave rod.	7.8 Mc	4-8 Mc	7.8 Mc	C33A, C36A, C37A	Alignment of S. W. Oscillator Detector and Antenna
7*		4.2 Mc	4-8 Mc	Rock at 4.2 Mc	4-8 Mc Osc. slug	
8		Repeat Operations 6 & 7				
9		3.9 Mc	2-4 Mc	3.9 Mc	C33B, C36B, C37B	
10*		2.1 Mc	2-4 Mc	Rock at 2.1 Mc	2-4 Mc Osc. slug	
11		Repeat Operation 9 & 10				
12*		17.8 Mc	16 Meters	17.8 Mc	L24, L18, L12	
13*		15.2 Mc	19 Meters	15.2 Mc	L23, L17, L11	
14*		11.8 Mc	25 Meters	11.8 Mc	L22, L16, L10	
15*		9.6 Mc	31 Meters	9.6 Mc	L21, L15, L9	

TUBE, TRIMMER LOCATION AND DIAL CABLE DRAWING



22-50

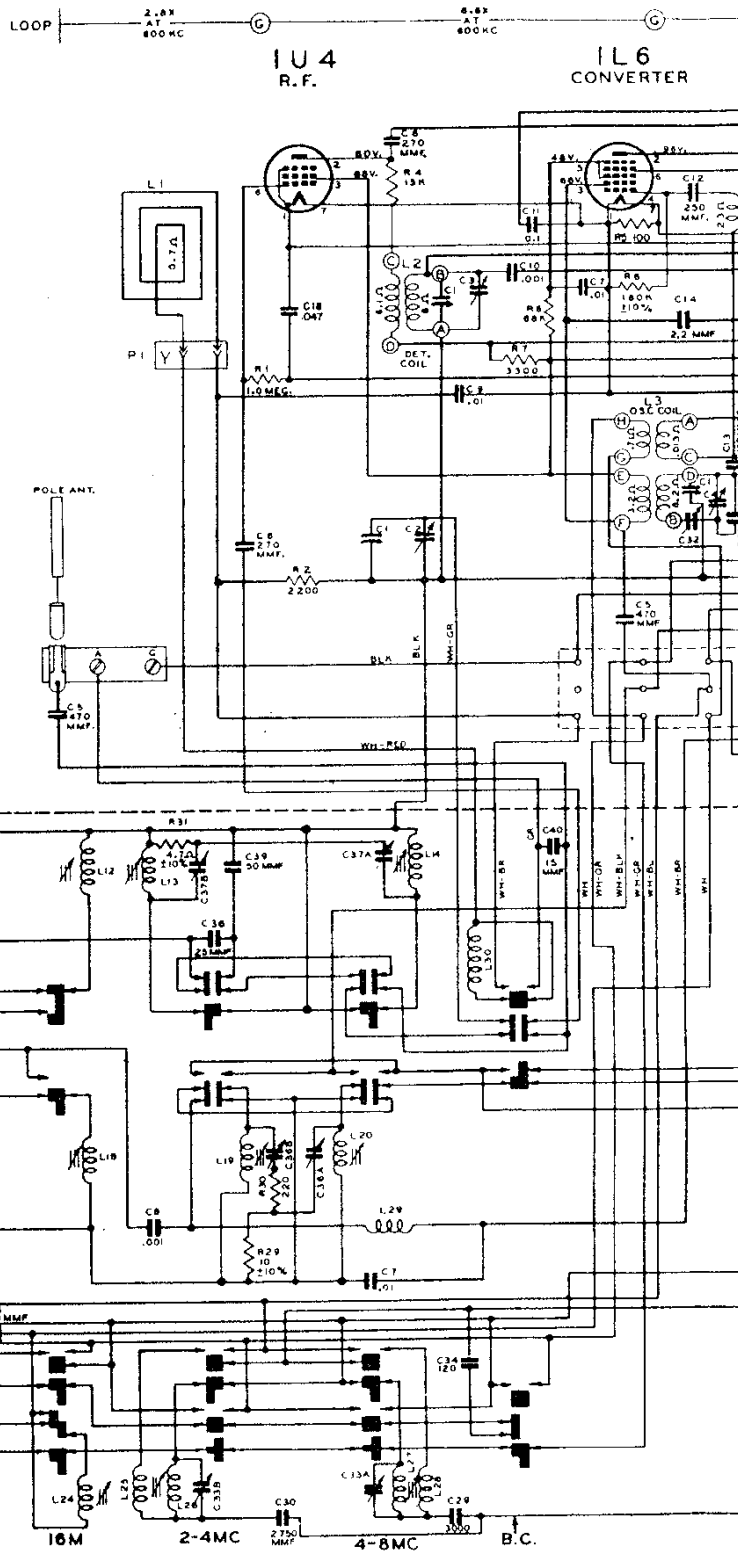
Chassis 5H40 features a high gain tuned RF stage ahead of a conventional superheterodyne circuit with band spread tuning on the 31, 25, 19 and 16 meter bands. There are two continuous coverage bands, one covering 2-4 megacycles and one covering 4-8 megacycles.

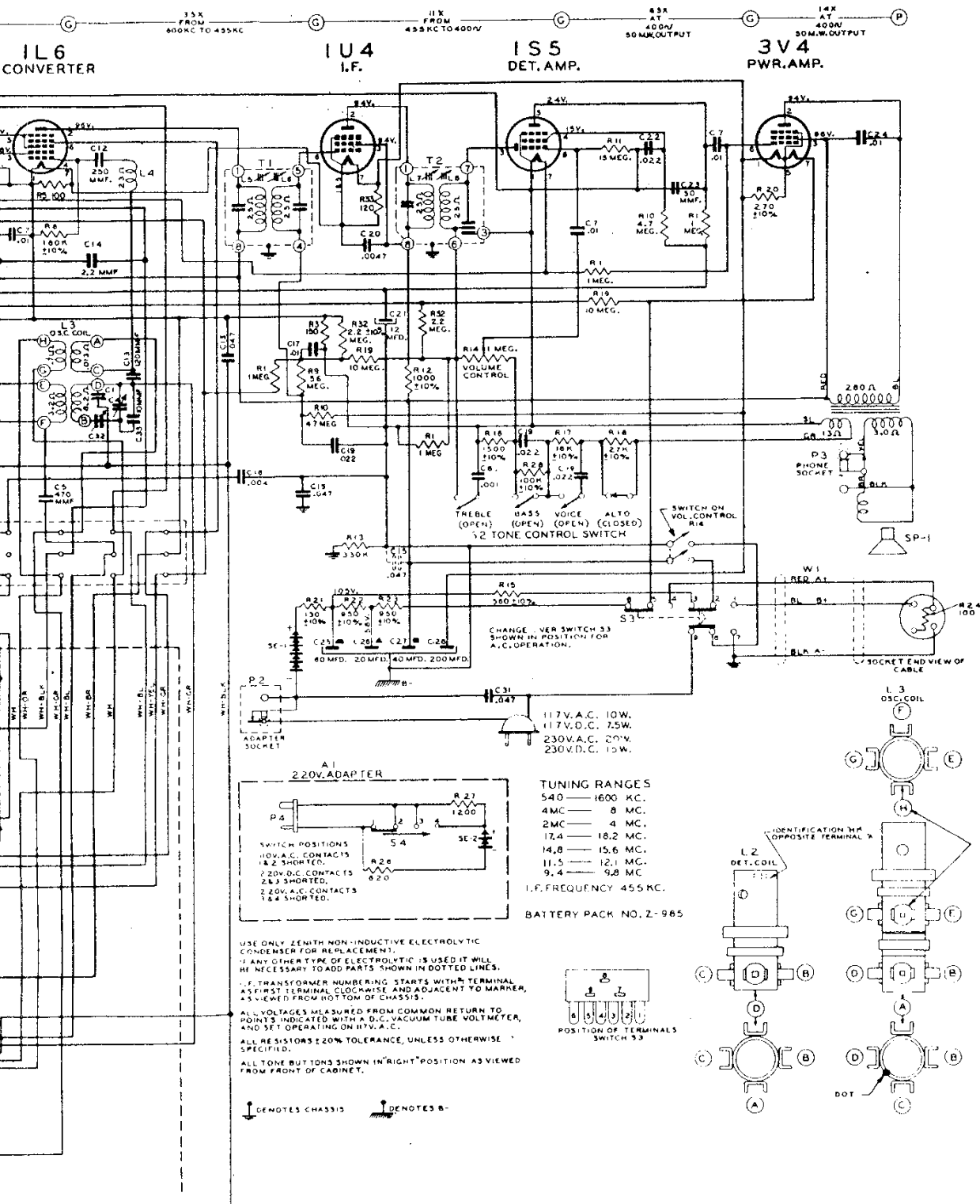
If removal of the chassis from the cabinet ever becomes necessary this should be done with care.

The alignment of chassis 5H40 is conventional. However, care must be exercised when making adjustments, and the alignment procedure must be followed exactly. Set the chassis over a metal plate approximately the same distance the battery pack is from the bottom of the chassis when it is in the cabinet. This procedure will introduce the approximate amount of metal in the field of the RF and oscillator coils as when the chassis is in the cabinet. A signal generator of reasonable accuracy and good attenuation must be used. An output meter (AC) of the copper oxide rectifier type with a range of 1 to 30 volts in several steps is necessary to get accurate output readings. Alignment wrenches should be of the non-metallic type, especially when making adjustments at the higher frequencies.

When reinstalling the chassis in the cabinet be careful not to disturb the cabling between the short wave coil assembly and chassis. Tune in a weak broadcast signal near 1400 Kc. and touch up trimmer C2. This will insure maximum performance after alignment.

The I.F. transformers incorporated in this receiver are of the new permeability tuned type. The advantage of an I.F. transformer of this type is its extreme stability under various humidity and temperature conditions. The upper coil is the secondary and the lower the primary. When adjusting these I.F. transformers the tuning wrench 68-19 can be inserted into the top slug, rotated until maximum output is obtained and then dropped down to the lower slug and the same operation repeated. The tuning wrench is so designed that turning one slug does not affect the adjustment of the other.





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PART NO.	DIAG. NO.	DESCRIPTION			
			139-96	Speaker Baffle	
			149-86	Iron Core (16 used)	
			196-174	Speaker Gasket	
			212-5	Selenium Rectifier	
			S-15785	Battery Cable & Socket Assembly	SE-2
			S-15715	Voltage Adapter Assembly	A1
DIAL ASSEMBLY					
12-1826		Pointer Shaft Bracket			
26-457		Dial Scale			
59-257		Dial Pointer			
76-621		Tuning Control Shaft			
80-69		Dial Cord Tension Spring (2 used)			
83-1865		Dial Scale Support Strip			
93-209		.031 x .140 x 7/16 Steel Washer-Cad (2 used on 26-457)	12-1082	Telescoping Ant. Mtg. Brkt.	
			14-1301	Cabinet for H500 Portable Model	
			16-676	Packing Carton - Complete	
			17-47	Telescoping Ant. Ret. Clamp	
114-157		6-32 x 1/2" Ig. x 1/4" Hex Hd. S.T. (2 used on 26-457)	19-134	Wavemagnet Cable Ret. Clip	
			19-188	Cable Retaining Clip	
114-248		6-20 x 5/16 Ig. x 1/4" Hex Hd. S. T. (used on 26-457)	36-46	Cabinet Handle	
			40-73	Cabinet Back Cover Hinge (2 used)	
188-128		Retaining Ring (1 ea. used on 76-621 & S-17798)	46-912	Band Switch Knob (7 used)	
			46-913	Tuning & Vol. Control Knobs (2 used)	
S-15781		Pointer Pulley Cord & Eyelet Assem. Short	54-295	Wavemagnet Ret. Nut (#6-32) (used on S-17747)	
S-15782		Pointer Pulley Cord & Eyelet Assem. Long		Wavemagnet Ret. Nut (#10-32) (used on S-17747)	
S-17798		Pointer Pulley & Shaft Assembly	54-296	Front Panel Escutcheon	
COILS & CHOKES					
95-1148	T1	1st. I. F. Transformer	57-1224	Emblem Plate	
95-1149	T2	2nd. I. F. Transformer	57-1225	Three Prong Plug (1 ea. used on S-15799 & S-15805)	
S-11952	L29	R. F. Shunt Coil Assembly	70-122	#6 x 5/16 R.P.W.S. Steel (2 used on 19-188)	
S-14403	L4	R. F. Choke Coil Assembly	70-168	#4 x 1/2" Phill. R.H. Wood Screw	
S-17709	L3	Oscillator Coil Assembly (B.C.)		Brass-Blk. Qx. (3 used on 57-1724)	
S-17710	L2	Detector Coil Assembly (B. C.)	70-169	#4 x 3/4" Phill. R.H. Wood Screw	
				Brass-Blk. Qx. (4 used on 57-1724)	
				Push Button Felt Strip	
				Handle Mtg. Stud (2 used)	
				Hexagon Washer Hd. S. T. Screw (2 used on Chassis Mtg.)	
				Door Latch (upper half)	
				Door Latch (lower half)	
				Strike Fastener (2 used)	
				Strike Fastener (2 used)	
				Snap Button (2 used on S-15805 & 2 used on S-17782)	
				Snap Button (4 used on S17747 & 2 used on 19-134 & S-17782)	
				Antenna Insulating Sleeve	
				Instruction Book & Station Log	
				Service Notes	
				Weather Bureau Bulletin	
				Short Wave Station List	
				Wavemagnet Suction Cup Assem. (2 used)	
				Antenna Knob & Latch Spring Assembly	
				Wavemagnet Cable Assembly	
				Telescoping Antenna Assembly	
				Wavemagnet Ext. Cable Assembly	
				Eyelet & Wire Assembly	
				Front Cover Hinge & Terminal Assem.(R.H.)	
				Front Cover Hinge & Terminal Assem.(L.R.)	
				Wavemagnet Assembly	
				Tube Holder Assembly	
FREQUENCY BAND SWITCH ASSEMBLY					
			12-1825	Band Switch Mtg. Brkt.	
			22-3	.01 Mfd. Ceramic	500V
			22-1390	C5	500V
			22-1392	C3	500V
			22-1433	C30	500V
			22-1761	C39	500V
			22-1953	C35	500V
			22-2127	C8	500V
			22-2279	C13	500V
			22-2280	C34	500V
			22-2281	C29	500V
			22-2283	C33A, 33B	500V
			22-2284	C36A, 36B	500V
			22-2285	C37A, 37B	500V
			63-1581	R31	4.7 Ohm W.W. 1/2W 10% Ins. Res.
			63-1701	R29	10 Ohm. 1/2W 10% Ins. Res.
			63-1758	R30	120 Ohm 1/2W 10% Ins. Res.
			85-502	S1	Band Switch
			149-96		Iron Core (1 used on S-17730 & S-17731)
			S-16047	L30	Antenna Loading Coil Assembly
			S-17688		Band Switch, Brkt. & Coil Assembly
			S-17714	L18	R.F. Coil Assembly (16M)
			S-17715	L17	R.F. Coil Assembly (19M)
			S-17716	L16	R.F. Coil Assembly (25M)
			S-17717	L15	R.F. Coil Assembly (31M)
			S-17718	L12	Ant. Coil Assembly (16M)
			S-17719	L11	Ant. Coil Assembly (19M)
			S-17720	L10	Ant. Coil Assembly (25M)
			S-17721	L9	Ant. Coil Assembly (31M)
			S-17722	L9	R.F. Coil Assembly (2-4 MC)
			S-17723	L20	R.F. Coil Assembly (4-8 MC)
			S-17724	L11	Ant. Coil Assembly (2-4 MC)
			S-17725	L14	Ant. Coil Assembly (4-8 MC)
			S-17726	L24	Osc. Coil Assembly (18M)
			S-17727	L23	Osc. Coil Assembly (25M)
			S-17728	L22	Osc. Coil Assembly (31M)
			S-17729	L21	Osc. Coil Assembly (31M)
			S-17730	L27, 28	Osc. Coil Assembly (4-8 MC)
			S-17731	L25, 26	Osc. Coil Assembly (2-4 MC)
MISCELLANEOUS					
11-104		Line Cord & Plug			
15-57		Cnp & Insulator (used on S-15785)			
44-17	P3	Headphone Jack			
49-668	SP-1	5 1/4" PM Speaker			
		Z.C.091 Cone			
78-274		Elect. Cond. Socket			
78-543		Four Contact Socket			
78-802	P1	Wavemagnet Socket	57-1564	Voltage Indicator Plate	
78-806		Miniature Tube Socket	58-182	Two Prong Plug	
78-817		Miniature Tube Socket	63-2155	Dual Resistor 620 Ohm 15W & 1200 Ohm - 7W	
78-844	P2	Adapter Socket (220V)		Three Position Switch	
78-845		Miniature Tube Socket (3 used)	85-473	Thumb Screw	
85-450	S3	Power Changeover Switch	112-784	Selenium Rectifier	
85-501	S2	Band Switch	212-9	Voltage Adapter Assem. (Complete)	
94-295		Gang Cond. & Spkr. Mtg. Bushing (6 used)	S-15715		
114-308		6-32 x 1 1/8" Ig. x 1/4" Fl. M.S. Steel (used on 212-10)			
125-81		Strain Relief Grommet - Male			
125-82		Strain Relief Grommet - Female			