



Zenith Radio Corp.			
	Model: H500	Chassis:	Year: Pre 1952
	Power:	Circuit:	IF:
	Tubes:		
	Bands:		
Resources			
Riders 22 (XXII) ZENITH 22-4			
Riders 22 (XXII) ZENITH 22-5			
Riders 22 (XXII) ZENITH 22-6			
Riders 22 (XXII) ZENITH 22-7			

MODEL H500.

Ch. 5H40

ALIGNMENT PROCEDURE

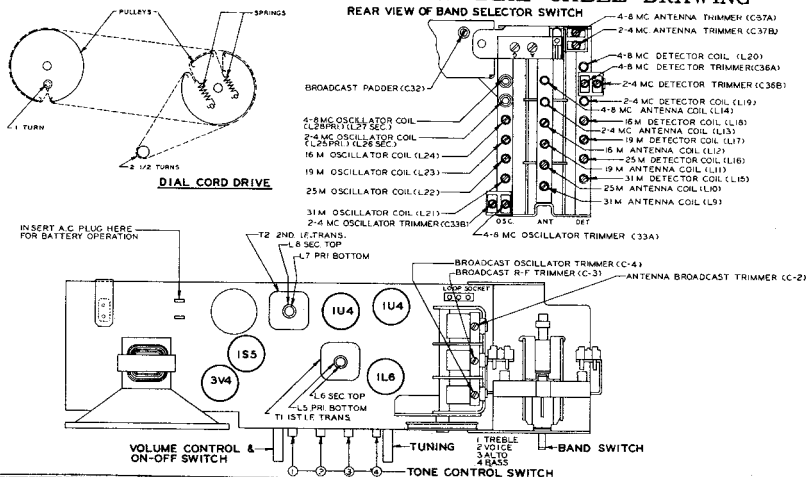
OPER.	CONNECT OSCILLATOR TO DUMMY ANTENNA	INPUT SIGNAL FREQ.	BAND	SET DIAL AT	TRIMMERS	PURPOSE
1	Positive lead of signal generator to converter grid through a .1 Mfd. condenser & negative lead to negative filament of 1L6 tube.	455 Kc	BC	600 Kc	L5, 6, 7, 8	Align 1. F.
2	One turn loop coupled loosely to 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, C37C		
10		2.1 Mc	2-4 Mc	Rock at 2.1 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



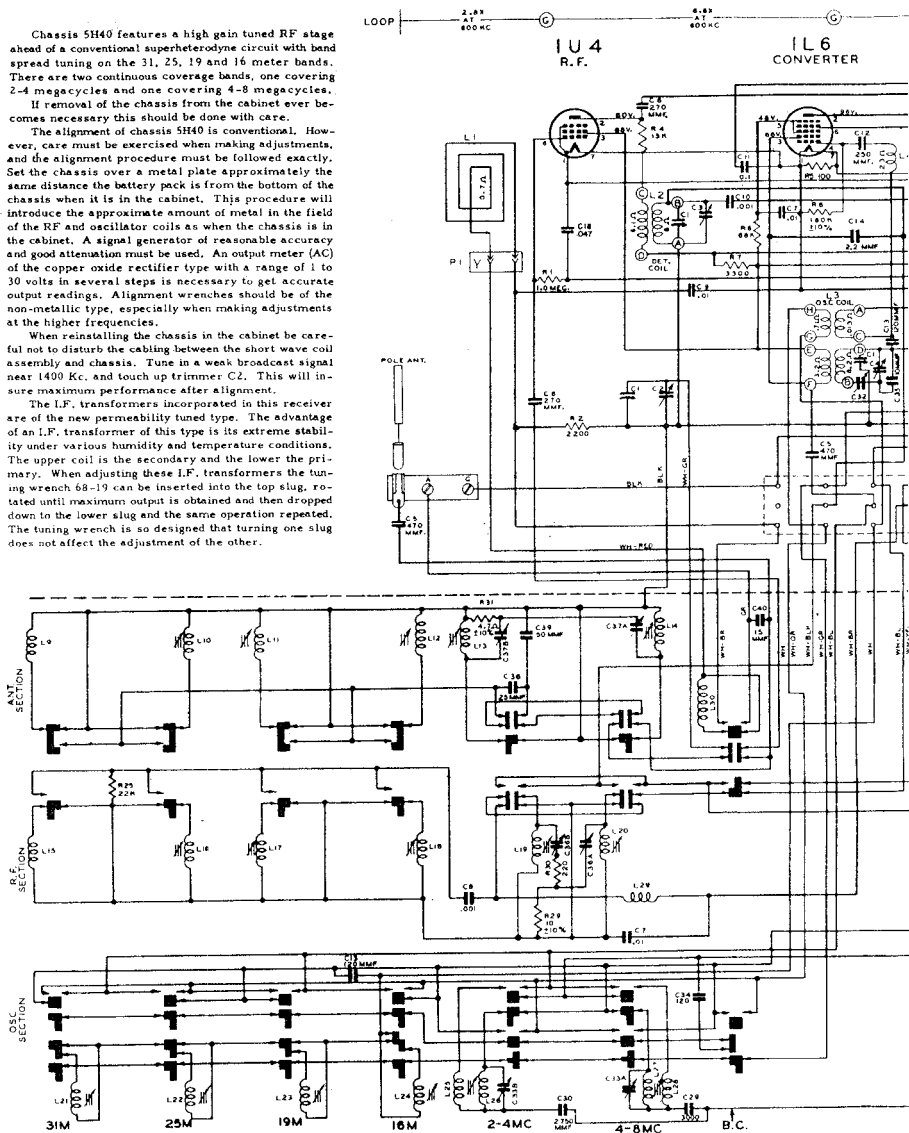
Chassis 5H40 features a high gain tuned RF stage ahead of a conventional superheterodyne circuit with band spread tuning on the 31, 25, 19 and 16 meter bands. There are two continuous coverage bands, one covering 2-4 megacycles and one covering 4-8 megacycles.

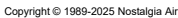
If removal of the chassis from the cabinet ever becomes necessary this should be done with care.

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 in 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.





PART NO. DIAG. NO.

DESCRIPTION

DIAL ASSEMBLY

12-1826		Pointer Shaft Bracket
26-457		Dial Scale
95-257		Dial Pointer
78-421		Tuning Control Shaft
80-49		Dial Cord Tension Spring (2 used)
83-1885		Dial Scale Support Strip
73-209		.31 x .149 x 7/16 Steel washer-Cad (2 used on 26-457)
114-157		6-32 x 1/2" lg. x 3/4" Hex Hd. S.T. (2 used on 26-457)
114-248		6-20 x 5/16 lg. x 1/4" Hex Hd. S. T. (2 used on 26-457)
188-128		Retaining Ring (1 ea. used on 76-421 & S-17798)
5-15781		Pointer Pulley Cord & Eyelet Assem. Short
5-15182		Pointer Pulley Cord & Eyelet Assem. Long
5-17798		Pointer Pulley / Shaft Assembly

COILS & CHOKES

95-1148	T1	1st. I. F. Transformer
95-1149	T2	2nd. I. F. Transformer
5-11952	L29	R. F. Shunt Coil Assembly
5-11403	L4	R. F. Choke Coil Assembly
5-17709	L3	Oscillator Coil Assembly (B.C.)
5-17710	L2	Detector Coil Assembly (B. C.)

CONDENSERS

22-3	C7	.01 Mfd. Ceramic (3 used)
22-4	C16	.01 Mfd. Ceramic
22-1390	C5	.475 Mfd. Mica
22-1674	C3	.50 Mfd. Ceramic
22-1741	C25, 26, 27 & 28	Elect. Cond. 10 Mfd.-150V & 40 Mfd.-150V, 20 Mfd.-150V & 200 Mfd.-150V
22-1763	C14	.01 Mfd. Molded
22-1775	C15	.01 Mfd. (2 used)
22-1777	C11	.1 Mfd.
22-1778		.047 Mfd. (Molded)
22-1779	C24	.01 Mfd.
22-1783	C20	.0047 Mfd.
22-1784	C9	.01 Mfd.
22-1844	C31	.047 Mfd.
22-1846	C17	.01 Mfd.
22-1886	C10	.001 Mfd. Ceramic
22-1951	C35	.1 Mfd. Ceramic
22-2094	C21	Rect. Cond. 12 Mfd. 150V
22-2098	G6	.270 Mfd. Mica (2 used)
22-2071	C19	.01 Mfd. (3 used)
22-2102	C22	.022 Mfd.
22-2126	C12	.100 Mfd. Ceramic
22-2127	C8	.001 Mfd. Ceramic
22-2279	C13	.120 Mfd. Ceramic
22-2282	G2	Single Section Trimmer
22-2286	G1	Three Section Variable

RESISTORS

63-1362	R22-R23	Two Section Cathodion
63-1743		100 Ohm 1/2W 10% Ins. Res.
63-1744	R24	100 Ohm 1/2W 20% Ins. Res.
63-1747		120 Ohm 1/2W 10% Ins. Res.
63-1750		150 Ohm 1/2W 10% Ins. Res.
63-1761	R20	210 Ohm 1/2W 10% Ins. Res.
63-1765	R12	1000 Ohm 1/2W 10% Ins. Res.
63-1762	R16	1500 Ohm 1/2W 10% Ins. Res.
63-1809	R2	2200 Ohm 1/4W 20% Ins. Res.
63-1807	R7	3300 Ohm 1/2W 20% Ins. Res.
63-1835	R4	15K Ohm 1/2W 10% Ins. Res.
63-1838	R18	18K Ohm 1/2W 10% Ins. Res.
63-1842	R5	22K Ohm 1/2W 20% Ins. Res.
63-1843	R19	27K Ohm 1/2W 10% Ins. Res.
63-1861	R6	68K Ohm 1/2W 20% Ins. Res.
63-1869	R28	100K Ohm 1/2W 10% Ins. Res.
63-1880	R8	180K Ohm 1/2W 10% Ins. Res.
63-1891	R11	330K Ohm 1/2W 20% Ins. Res.
63-1912	R1	1 Megohm 1/2W (used) 20% Ins. Res.
63-1926	R10	2.2 Megohm 1/2W 10% Ins. Res.
63-1940		4.7 1/2W (used) 20% Ins. Res.
63-1943	R9	5.6 1/2W 10% Ins. Res.
63-1954	R19	10 1/2W (used) 20% Ins. Res.
63-1961	R21	15 1/2W 20% Ins. Res.
63-2018	R21	330 Ohm 1W Ziphom 10%
63-2276	R14	Volume Control / Switch

MISCELLANEOUS

11-104		Line Cord & Plug
15-57		Cap & Insulator (used on S-15785)
49-667	P1	Headphone Jack
49-668	SP-1	5 1/4" Phn Speaker
78-274		ZC5041 Cone
78-541		Elect. Cond. Socket
78-802	P1	Four Contact Socket
78-806		Wavemagnet Socket
78-817		Miniature Tube Socket
78-844	P2	Adapter Socket (220V)
78-845		Miniature Tube Socket (3 used)
85-450	S3	Power Changerover Switch
85-501	S2	Band Switch
84-295		Gang Cond. & Sph. Mtg. Bushing (6 used)
116-108		6-32 x 1 1/8" lg. x 1/4" P1. M.S. Steel (used on 212-10)
125-83		Strain Relief Grommet - Male
125-92		Strain Relief Grommet - Female

139-96		Speaker Baffle
186-174		Iron Core (16 used)
212-5	SE-2	Speaker Gasket
S-15785	W1	Selenium Rectifier
S-15715	A1	Battery Cable & Socket Assembly
		Voltage Adapter Assembly

CABINET PARTS

12-1082		Telescoping Ant. Mtg. Brkt.
14-1081		Cabinet for H500 Portable Model
16-676		Grille in Cabinet - Complete
17-47		Telescoping Ant. Ret. Clamp
19-134		Wavemagnet Cable Ret. Clip
19-188		Cable Retaining Clip
30-46		Cabinet Handle
40-73		Cabinet Back Cover Hinge (2 used)
46-912		Band Switch Knob (1 used)
46-915		Tuning & Vol. Control Knob (2 used)
54-295		Wavemagnet Ret. Nut (#6-32) (used on S-17747)
54-296		Wavemagnet Ret. Nut (#10-32) (used on S-17747)
57-1224		Front Panel Kacchschon
57-1225		Emblem Plate
58-179		Three Prong Plug (1 ea. used on S-15799 & S-15805)
70-122		#6 x 5/16 R.P. W.S. Steel (2 used on 19-188)
70-168		#4 x 1/2" Phill. R.H. Wood Screw
		Brass-Bll. Ox. (4 used on 57-1724)
70-169		#4 x 1/4" Phill. R.H. Wood Screw
		Brass-Bll. Ox. (4 used on 57-1724)
83-1876		Push Button Fell Strip
97-187		Handle Mtg. Stud (2 used)
114-197		Hanson Washer Hd. S. T. Screw (2 used on Chassis Mtg.)
158-42		Door Latch (upper half)
158-43		Door Latch (lower half)
157-7		Strike Fastener (2 used)
157-8		Strike Fastener (2 used)
159-48		Snap Button (2 used on S-15805 & 2 used on S-17782)
159-49		Snap Button (4 used on 517747 & 2 used on 19-134 & S-17782)
199-119		Antenna, Insulating Sleeve
202-489		Instruction Book & Station Log
202-870		Service Notes
202-872		Weather Bureau Bulletin
202-880		Short Wave Station List
S-15635		Wavemagnet Section Cap Assem. (2 used)
S-15722		Antenna Knob & Latch Spring Assembly
S-15799		Wavemagnet Ant. Assembly
S-15802		Telescoping Antenna Assembly
S-15805		Wavemagnet Ext. Cable Assembly
S-15806		Eyelet & Wire Assembly
S-17743		Front Cover Hinge & Terminal Assem. (R.H.)
S-17744		Front Cover Hinge & Terminal Assem. (L.H.)
S-17747		Wavemagnet Assembly
S-17782		Tube Holder Assembly

FREQUENCY BAND SWITCH ASSEMBLY

12-1825		Band Switch Mtg. Brkt.
22-3	C7	.01 Mfd. Ceramic
22-1390	C5	.475 Mfd. Mica
22-1392	C1	.25 Mfd. Ceramic
22-1431	C30	270K Mfd. Mica
22-1761	C39	50 Mfd. Ceramic
22-1953	C35	10 Mfd. Ceramic
22-2127	C8	.001 Mfd.
22-2279	C13	.120 Mfd. Ceramic
22-2280	C14	.120 Mfd. Ceramic
22-2281	C29	100K Mfd. Mica
22-2283	C31A, 31B	Two Section Trimmer
22-2284	C16A, 36B	Two Section Trimmer
22-2285	C37A, 37B	Two Section Trimmer
63-1581	R1	4.7 Ohm W.W. 1/2W 10% Ins. Res.
63-1701	R28	10 Ohm 1/2W 10% Ins. Res.
63-1756	R20	210 Ohm 1/2W 10% Ins. Res.
85-502	S1	Band Switch
149-96		Iron Core (1 used on S-17710 & S-17731)
S-16047	L30	Antenna Loading Coil Assembly
S-16688		Band Switch, Brkt. & Coil Assembly
S-17114	L18	R.F. Coil Assembly (18M)
S-17115	L17	R.F. Coil Assembly (19M)
S-17116	L16	R.F. Coil Assembly (20M)
S-17117	L15	R.F. Coil Assembly (21M)
S-17118	L12	Ant. Coil Assembly (18M)
S-17119	L11	Ant. Coil Assembly (19M)
S-17120	L10	Ant. Coil Assembly (20M)
S-17121	L9	Ant. Coil Assembly (21M)
S-17122	L19	R.F. Coil Assembly (2-4 MC)
S-17123	L20	R.F. Coil Assembly (4-8 MC)
S-17124	L13	Ant. Coil Assembly (2-4 MC)
S-17125	L14	Ant. Coil Assembly (4-8 MC)
S-17126	L4	Osc. Coil Assembly (18M)
S-17127	L21	Osc. Coil Assembly (19M)
S-17128	L22	Osc. Coil Assembly (20M)
S-17129	L23	Osc. Coil Assembly (21M)
S-17130	L27, 28	Osc. Coil Assembly (4-8 MC)
S-17131	L25, 26	Osc. Coil Assembly (2-4 MC)

VOLTAGE ADAPTER

97-1354		Voltage Indicator Plate
98-180		Two Prong Plug
93-2565		Dist. Indicator 520 Ohm 15W & 1200 Ohm - 1W
112-784		Three Position Switch
212-94		Thumb Screw
212-9		Selenium Rectifier
S-15715		Voltage Adapter Assem. (Complete)