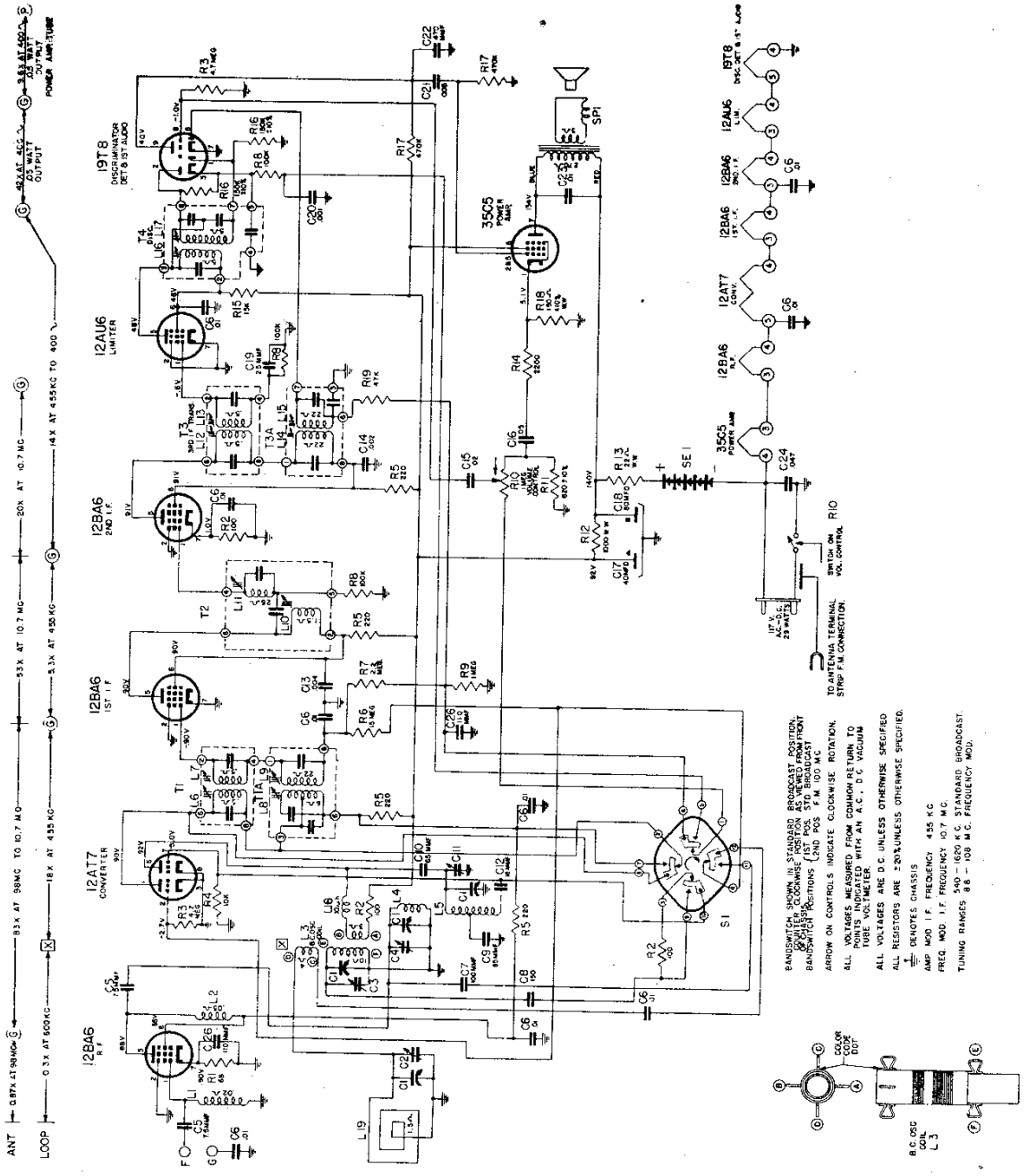
Zenith Radio Corp.

	Model: H723	**Chassis:**	**Year:** Pre 1951
	Power:	**Circuit:**	**IF:**
	Tubes:		
	Bands:		

Resources

- Riders Volume 21 - ZENITH 21-44
- Riders Volume 21 - ZENITH 21-45
- Riders Volume 21 - ZENITH 21-46

MODEL H723,
Ch. 7H04



MODEL H723,
Ch. 7H04

The 7H04 chassis incorporates a superheterodyne circuit with two stages of IF, on the FM Band, and two stages on the AM Band. There is one stage of RF amplification on the FM Band.

When adjustments are made on the 7H04 or any AC-DC chassis, a line isolation transformer (110-V input to 110-V output) is recommended in order to avoid a "hot" chassis. If an isolation transformer is not available, check the AC voltage between chassis and bench ground, and if there is any indication of voltage, reverse the plug before handling the set.

The IF transformers and the discriminator transformer are the new permeability tuned type. The advantage of an IF 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 IF and discriminator transformers, 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.

FM IF Alignment: Because of the wide band pass, it is desirable to use a FM signal generator and a cathode ray oscilloscope when aligning the FM IF channel. The instruction book for the Zenith Model 800 Signal Generator (Form Z8001) covers complete FM alignment procedure. If visual alignment equipment is unavailable, reasonably accurate alignment can be made by following the procedure outlined in this service note.

FM Discriminator Alignment: When the secondary of the discriminator is aligned (operation 5) use sufficient signal input to get a good positive and negative indication before setting the slug for zero reading. A center zero indicating meter is recommended for this adjustment, but is not absolutely necessary. Reversing the leads of a non-zero center meter, or observing closely when the meter starts to go to the left (negative) of zero will give the same results.

Alignment of this chassis will, in most cases, be unnecessary unless an IF or RF transformer is replaced or the adjustments have been tampered with.

Correct alignment can only be made if the following procedure is followed:

A vacuum tube voltmeter with an isolation resistor of 2,000,000 ohms in series with the hot lead will serve for FM adjustments. This lead should be shielded.

An AC output meter connected across the primary or secondary of the output transformer will be satisfactory for all AM adjustments.

The signal generator output should be kept just high enough to get an indication on the meter.

(a) Vacuum Tube Voltmeter Lug 7 on discriminator transformer to chassis (half discriminator load).

(b) Vacuum Tube Voltmeter Lug 5 on discriminator transformer to chassis (full discriminator load).

(c) Vacuum Tube Voltmeter from Limiter Grid to Chassis.

(d) Loosen Slugs by applying a hot iron to the cement.

DIAL ASSEMBLY

46-859	Band Switch Knob	
46-860	Tuning Control Knob	
46-900	Volume Control Knob	
59-251	Dial Pointer	
80-69	Dial Cord Tension Spring	
188-129	Retaining Ring (1 ea. used S-17334 & S-17467)	
S-17334	Tuning Shaft & Pulley Assem.	
S-17336	Tuning Shaft Brkt. & Ins. Strip Assem.	
S-17350	Dial Cord & Eyelet Assem.	
S-17467	Pointer Shaft, Brkt. & Pulley Assem.	

COILS & CHOKES

20-329-L1	F.M. Antenna Coil	
20-330-L2	R.F. Plate Load Coil	
20-331-L4	F.M. Mixer Coil	
20-333-L18	R.F. Choke Coil	
95-1102-T3A	3rd I.F. Transformer	455 KC
95-1150-T1T3	1st & 3rd I.F. "	10.7 MC
95-1153-T4	Discriminator "	10.7 MC
95-1250-T1A	1st I.F. "	455 KC
95-1251-T2	2nd I.F. "	10.7 MC & 455KC
S-17340-L3	B.C. Osc. Coil Assem.	

CONDENSERS

22-3-C6	.01 Mfd. Ceramic (disc) (9 Used)	500V
22-5-C26	110 Mmfd. Ceramic (disc) (2 Used) (or 22-1669)	500V
22-6-C22	470 Mmfd. Ceramic	500V
22-229-C21	.005 Mfd.	600V
22-448-C13	.004 Mfd.	600V
22-830-C15	.02 Mfd.	600V
22-1126-C23	.01 Mfd.	400V
22-1158-C16	.05 Mfd.	200V
22-1220-C14	.002 Mfd.	600V
22-1507-C19	25 Mmfd. Ceramic	500V
22-1669-C7	100 Mmfd. Ceramic	500V
22-1675-C8	150 Mmfd. Ceramic	500V
22-1676-C20	.001 Mfd. Ceramic	500V
22-1757-C17,C18	Elect. 40 Mfd. 150V - 80 Mfd.	
22-1775-C24	.047 Mfd.	400V
22-1852-C5	7.5 Mmfd. Ceramic (2 Used)	500V
22-2253-C11	Trimmer Cond, (Slug Tuned)	
22-2255-C1	Variable Gane (Two Sect. B.C. - Two Sect. FM)	
22-2256-C10	65 MMfd. Ceramic	500V
22-2257-C12	16 Mmfd. Ceramic	500V
22-2258-C9	85 Mmfd. Ceramic	500V

RESISTORS

63-686-R18	150 Ohm W.W. 1/2W 10% Ins. Res.
63-1450-R13	22 Ohm W.W. 1W 20% Ins. Res.
63-1527-R12	1000 Ohm W.W. 3W 20% Ins. Res.
63-1737-R1	68 Ohm 1/2W 20% Ins. Res.
63-1744-R2	100 Ohm 1/2W 20% Ins. Res.
63-1758-R5	220 Ohm 1/2W 20% Ins. Res. (3 Used)
63-1782-R11	820 Ohm 1/2W 10% Ins. Res.
63-1800-R14	2200 Ohm 1/2W 20% Ins. Res.
63-1828-R4	10K Ohm 1/2W 20% Ins. Res.
63-1835-R15	15K Ohm 1/2W 20% Ins. Res.
63-1856-R19	47K Ohm 1/2W 20% Ins. Res.
63-1870-R8	100K Ohm 1/2W 20% Ins. Res. (3 Used)
63-1876-R16	150K Ohm 1/2W 10% Ins. Res. (2 Used)
63-1898-R17	470K Ohm 1/2W 20% Ins. Res. (2 Used)
63-1912-R9	1 Megohm 1/2W 20% Ins. Res.
63-1926-R7	2.2 Megohm 1/2W 20% Ins. Res.
63-1940-R3	4.7 Megohm 1/2W 20% Ins. Res. (2 Used)
63-1961-R6	15 Megohm 1/2W 20% Ins. Res.
63-2143-R10	Vol. Control & Switch

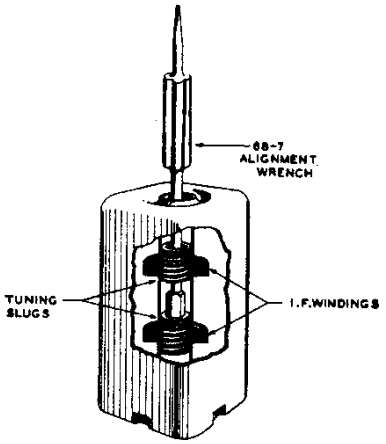
MISCELLANEOUS

11-85	Line Cord & Plug (6 ft. lg.)
12-1070	Wavemagnet Mtg. Brkt.
14-1272	Plastic Cabinet for H723 Table Model
16-656	Packing Carton
24-535	Line Cord Plug Cover
49-689-SP1	5-1/4" PM Speaker ZC5091 Cone
54-129	Speed Nut (9 Used on Mtg. Grille & Baffle)
54-271	6-32 X 1/4" Painut Steel (1 ea. used on I.F.)
57-1686	Emblem Plate
57-1690	Emblem Mtg. Plate
58-188	Two Print Plug (AC)

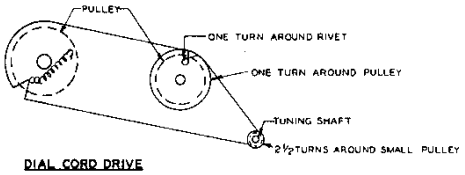
ALIGNMENT PROCEDURE

Operation	Connect Oscillator to	Dummy Antenna	Input Signal Frequency	Band	Set Dial To	Adj. Trimmers	Purpose
1	Pin 2-12AT7 Converter	.05 Mfd.	455 KC. Modulated	BC	600 Kc.	L8, 9, 11, 14, 15	Align I. F. channel for maximum output.
2	2 turns loosely cpld. to wavemagnet		1600 Kc. Modulated	BC	1600 Kc.	C3	Set oscillator to dial scale.
3	2 turns loosely cpld. to wavemagnet		1400 Kc. Modulated	BC	1400 Kc.	C2	Align antenna stage.
4 (a)	Pin 1 (grid) on 12AU6 limiter.	.05 Mfd.	10.7 Mc. Unmodulated	FM 100		L16 coil slug Primary discr.	Align primary of discriminator for maximum reading.
5 (b)	Pin 1 (grid) on 12AU6 limiter.	.05 Mfd.	10.7 Mc. Unmodulated	FM 100		L17 coil slug sec. of discr.	Adjust secondary of discriminator for zero reading.
6 (c)	Pin 1 (grid) on 12BA6 2nd IF.	.05 Mfd.	10.7 Mc. Unmodulated	FM 100		L12 and 13 Prim. and Sec. of 3rd IF trans.	Align 3rd IF transformer for maximum reading.
7 (c)	Pin 1 (grid) on 12BA6 1st IF.	.05 Mfd.	10.7 Mc. Unmodulated	FM 100		L10 Prim. of 2nd IF transformer.	Align 2nd IF transformer for maximum reading.
8 (c)	Pin 2 (grid) on 12AT7 converter tube socket.	.05 Mfd.	10.7 Mc. Unmodulated	FM 100		L6 and L7 Prim. and Sec. of 1st IF transformer.	Align 1st IF transformer for maximum reading.
9 (c)	Antenna Post FM (Remove line ant.)	270 ohms	98 Mc. Unmodulated	FM 100	98 Mc.	C11 Osc. Coil.	Set Oscillator to dial scale.
10 (c) (d)		270 ohms	98 Mc. Unmodulated	FM 100	98 Mc.	C4 Det. Coil.	Align det. stage to maximum reading.

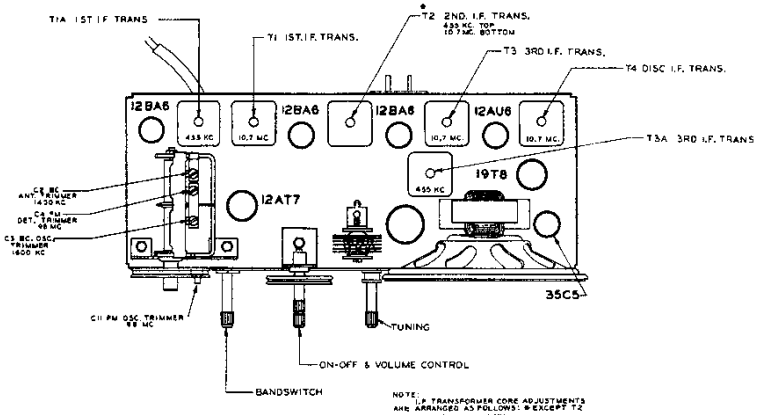
TUBE AND TRIMMER LOCATION



Detail of IF Transformer



DIAL CORD DRIVE



NOTE: I.F. TRANSFORMER CORE ADJUSTMENTS ARE ARRANGED AS FOLLOWS: * EXCEPT T2 PRIMARY ADJ. BOTTOM SECONDARY ADJ. TOP

78-787	Two Contact Socket (Cabinet Back)
78-806	Miniature Tube Socket
78-807	Miniature Tube Socket
78-869	Miniature Tube Socket
78-870	Miniature Tube Socket (2 Used)
78-871	Miniature Tube Socket
78-903	Miniature Tube Socket
83-1056	Wavemagnet Mtg. Strip
83-1829	Insulator Strip
85-493-S1	Band Switch
97-293	Chassis Mtg. Stud (2 Used)
110-152	Grille Cloth
112-281	#10 X 3/4" Oval Bind. Hd. S.T. Br. (2 Used Chassis Mtg.)
114-78	#8 X 5/16 Hex. Hd. Sl. S.T. (Used on Mtg. Wavemagnet)
114-356	#6-32 X 1-1/4" Hex. Hd. S.T. Cad. (Used on 212-7)
138-42	Cabinet Grill
139-91	Speaker Baffle
149-89	Iron Core (Used on S-17340)
159-69	Plug Button (4 Used to mt. back)
194-22	Insulator
196-153	Speaker Gasket
202-697	F.M. Instruction Book
202-841	Instruction Book
212-7-SE1	Selenium Rectifier
S-14527	Wavemagnet Lead & Stop Assem.
S-17364-L19	Wavemagnet Assem.
S-17366	Cabinet Back Assem. (Complete)